Response to Comments on the 2022 Proposed Rule

(August 31, 2022; 87 FR 53556)

Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Safer Communities by Chemical Accident Prevention

Docket Number EPA-HQ-OLEM-2022-0174
U.S. Environmental Protection Agency
Office of Emergency Management
December 15, 2023

TABLE OF CONTENTS

Introduction

This document, together with the preamble to the final rule on amendments to the Risk Management Program (RMP) regulations for safer communities by chemical accident prevention (SCCAP), presents the responses of the Environmental Protection Agency (EPA) to some of the public comments received on the RMP notice of proposed rulemaking (NPRM) (87 FR 53556).

EPA received a total of 494 discrete public comments deemed as substantive (i.e., the commenters presented both a position and a reasoned argument in support of the position) on the proposed rulemaking. Of the 494 comments, 370 were written submitted comments and 124 were from members of the public that provided verbal comments at the public hearings on September 26, 27, and 28, 2022. Of the 370, 142 were from 101 unique organizations, 6 were the result of various mass mail campaigns and contained numerous copies of letters or petition signatures (approximately 57,505 letters and signatures were contained in these several comments), and 31 were from individual citizens. Among the unique submissions, EPA received comments from industry groups, non-governmental organizations, environmental justice groups and frontline communities, academic institutions, State and local governments, Federal government groups, and private citizens. Following this introduction, Table 1, Index of Comment Submissions, identifies the organization, commenter name, and the comment number for the unique comment submissions summarized in this summary. The submissions included in this index reflect all unique submissions and a representative copy of each mass mail campaign form letter.

The purpose of this document is to provide a comprehensive summary of all arguments provided by commenters in response to the NPRM. However, it should not be assumed that the submission number references provided throughout the summary reflect an exhaustive list of commenters making each specific argument. Rather, the submission number references reflect example commenters providing the more detailed versions of each argument.

The responses presented in this document are intended to augment the responses to comments that appear in the preamble to the final rule and to address comments not discussed in the preamble to the final rule. Although portions of the preamble to the final rule are paraphrased in this RTC document, to the extent such paraphrasing introduces any confusion or apparent inconsistency, the preamble itself remains the definitive statement of the rationale for the revisions to the standards adopted in the final rule. This document, together with the preamble to the RMP final rule and related technical support documents, should be considered collectively as EPA's response to all of the significant comments submitted on EPA's 2022 RMP SCCAP proposal.

Table 1. Index of Comment Submissions

Organization	Commenter(s)	Comment Document(s)
Affonso, Jane	Jane Affonso	EPA-HQ-OLEM-2022-0174-0248
Agricultural Retailers Association (ARA)	Richard D. Gupton	EPA-HQ-OLEM-2022-0174-0127
		EPA-HQ-OLEM-2022-0174-0227
Alianza Nacional de Campesinas, Inc.	N/A	EPA-HQ-OLEM-2022-0174-0406
Alliance of Nurses for Healthy Environments (ANHE)	N/A	EPA-HQ-OLEM-2022-0174-0209
		EPA-HQ-OLEM-2022-0174-0141
Allied Universal Corporation	Jim Palmer	EPA-HQ-OLEM-2022-0174-0205
American Chemistry Council (ACC)	Trevor W. Hampton	EPA-HQ-OLEM-2022-0174-0215
		EPA-HQ-OLEM-2022-0174-0171
American Coatings Association	Rhett Cash and Suzanne Chang	EPA-HQ-OLEM-2022-0174-0196
American Forest & Paper Association (AF&PA)	Stewart Holm	EPA-HQ-OLEM-2022-0174-0126
		EPA-HQ-OLEM-2022-0174-0238
American Frozen Food Institute, Global Cold Chain Alliance, International Institute of Ammonia Refrigeration, North American Meat Institute, Refrigerating Engineers and Technicians Association	N/A	EPA-HQ-OLEM-2022-0174-0184
American Fuel & Petrochemical Manufacturers (AFPM)	Abigale Tardif	EPA-HQ-OLEM-2022-0174-0268
		EPA-HQ-OLEM-2022-0174-0129
American Gas Association (AGA)	Pamela A. Lacey	EPA-HQ-OLEM-2022-0174-0246
American Petroleum Institute (API)	Ron Chittim, Will Hupman	EPA-HQ-OLEM-2022-0174-0124
		EPA-HQ-OLEM-2022-0174-0233
		EPA-HQ-OLEM-2022-0174-0189
American Water Works Association (AWWA)	G. Tracy Mehan, III	EPA-HQ-OLEM-2022-0174-0239
		EPA-HQ-OLEM-2022-0174-0457
American Water Works Association, Association of Metropolitan Water Agencies, National Rural Water Association, National Association of Water Companies, National Association of Clean Water Agencies, and Water Environment Foundation	G. Tracy Mehan, III; Tom Dobbins; Robert Powelson; Adam Krantz; Matthew Holmes; Walter T. Marlowe	EPA-HQ-OLEM-2022-0174-0122
Anonymous public comment - 1	Anonymous	EPA-HQ-OLEM-2022-0174-0192
Aquino, Jill	Jill Aquino	EPA-HQ-OLEM-2022-0174-0143
Arndt, Dave	Dave Arndt	EPA-HQ-OLEM-2022-0174-0148

Association of American Railroads (AAR)	Theresa L. Romanosky	EPA-HQ-OLEM-2022-0174-0159
		EPA-HQ-OLEM-2022-0174-0200
Association of Metropolitan Water Agencies (AMWA)	Thomas Dobbins	EPA-HQ-OLEM-2022-0174-0197
Atkinson, Jayla	Jayla Atkinson	EPA-HQ-OLEM-2022-0174-0331
Attorneys General of New York, California, Connecticut, District of Columbia, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Mexico, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and Wisconsin, and the County Attorney of Harris County, Texas	N/A	EPA-HQ-OLEM-2022-0174-0444
Attorneys General of Oklahoma, Alabama, Arkansas, Georgia, Indiana, Kansas, Kentucky, Louisiana, Mississippi, South Carolina, Texas, and Utah	N/A	EPA-HQ-OLEM-2022-0174-0271
Blue Ridge Environmental Defense League	Mark E. Baker	EPA-HQ-OLEM-2022-0174-0164
Bluegreen Alliance	N/A	EPA-HQ-OLEM-2022-0174-0250
Brenntag North America, Inc. (Brenntag)	Shawn P. Wiram	EPA-HQ-OLEM-2022-0174-0458
Cary, Jillian	Jillian Cary	EPA-HQ-OLEM-2022-0174-0385
Center for Progressive Reform (CPR)	M. Isabelle Chaudry	EPA-HQ-OLEM-2022-0174-0447
Chemical Solvents, Inc. (CSI)	Terri Shimensky	EPA-HQ-OLEM-2022-0174-0226
Chicago Environmental Justice Network (CEJN)	Jason Clark	EPA-HQ-OLEM-2022-0174-0179
City of Aurora, Colorado	Sherry Scaggiari	EPA-HQ-OLEM-2022-0174-0257
Class of '85 Regulatory Response Group (Class of '85 or Group)	Debra J. Jezouit and Samantha Olson	EPA-HQ-OLEM-2022-0174-0267
Clean Air Now	Beto Lugo Martinez, Jayla Atkinson	EPA-HQ-OLEM-2022-0174-0219
Clean Harbors Environmental Services (CH)	Michael Crisenbery	EPA-HQ-OLEM-2022-0174-0181
CleanEarth4Kids.org	CleanEarth4Kids.org	EPA-HQ-OLEM-2022-0174-0252
Cleco Power LLC	Bill Matthews	EPA-HQ-OLEM-2022-0174-0242

Coalition for Responsible Waste Incineration (CRWI)	Melvin E. Keener	EPA-HQ-OLEM-2022-0174-0223
Coalition to Prevent Chemical Disasters	Anonymous	EPA-HQ-OLEM-2022-0174-0269
Coming Clean	N/A	EPA-HQ-OLEM-2022-0174-0258
Coming Clean et al.	Coming Clean et al.	EPA-HQ-OLEM-2022-0174-0270
Congress of the United States	Shelley Moore Capito, Cathy McMorris Rogers	EPA-HQ-OLEM-2022-0174-0477
CountryMark Cooperative	Kimberly Smock	EPA-HQ-OLEM-2022-0174-0259
County of Los Angeles Board of Supervisors	Holly Mitchell	EPA-HQ-OLEM-2022-0174-0120
Davis, Myles	Myles Davis	EPA-HQ-OLEM-2022-0174-0142
Dillow, Steve	Steve Dillow	EPA-HQ-OLEM-2022-0174-0131
Dossey, Michael	Michael Dossey	EPA-HQ-OLEM-2022-0174-0173
Earthjustice et al.	Emma Cheuse, Michelle Mabson, Robyn Winz and Victoria Huggett	EPA-HQ-OLEM-2022-0174-0475
		EPA-HQ-OLEM-2022-0174-0464
		EPA-HQ-OLEM-2022-0174-0465
		EPA-HQ-OLEM-2022-0174-0466
		EPA-HQ-OLEM-2022-0174-0467
		EPA-HQ-OLEM-2022-0174-0468
		EPA-HQ-OLEM-2022-0174-0469
		EPA-HQ-OLEM-2022-0174-0461
		EPA-HQ-OLEM-2022-0174-0462
		EPA-HQ-OLEM-2022-0174-0460
		EPA-HQ-OLEM-2022-0174-0472
		EPA-HQ-OLEM-2022-0174-0460
		EPA-HQ-OLEM-2022-0174-0474
		EPA-HQ-OLEM-2022-0174-0473
		EPA-HQ-OLEM-2022-0174-0471
		EPA-HQ-OLEM-2022-0174-0470
		EPA-HQ-OLEM-2022-0174-0463
		EPA-HQ-OLEM-2022-0174-0476
Edison Electric Institute (EEI)	N/A	EPA-HQ-OLEM-2022-0174-0244
EMCO Chemical Distributors, Inc. (EMCO)	Responsible Distribution® Code Coordinator for EMCO	EPA-HQ-OLEM-2022-0174-0180
Environmental Federation of Oklahoma (EFO)	Howard Ground	EPA-HQ-OLEM-2022-0174-0222
Environmental Justice Health Alliance for Chemical Policy	Environmental Justice Health	EPA-HQ-OLEM-2022-0174-0456

Reform (EJHA), Coming Clean et al.	Alliance for Chemical Policy Reform (EJHA), Coming Clean et al.	
Environmental Technology Council (ETC)	James A. Williams, II	EPA-HQ-OLEM-2022-0174-0262
Feitelberg, M.P.	M.P. Feitelberg	EPA-HQ-OLEM-2022-0174-0136
Gasparovic, Charles	Charles Gasparovic	EPA-HQ-OLEM-2022-0174-0151
Getting Residents Engaged in Empowering Neighborhoods (GREEN)	Cecilia Bautista, Jhoel Muniz, Victor Bustos, Adolfo Sierra, Yezenia Marrujo, Sandra Silva, Elizabeth Medina Muniz, Annette Martinez, Leonel FLores	EPA-HQ-OLEM-2022-0174-0156
Gillespie Consulting, LLC	Christopher J. Gillespie	EPA-HQ-OLEM-2022-0174-0221
GPA Midstream Association	Matt Hite	EPA-HQ-OLEM-2022-0174-0128
		EPA-HQ-OLEM-2022-0174-0207
Guerrero, Felicito	Felicito Guerrero	EPA-HQ-OLEM-2022-0174-0177
Harper, Keith	Harper, Keith	EPA-HQ-OLEM-2022-0174-0190
Harpole, George	George Harpole	EPA-HQ-OLEM-2022-0174-0107
Hawkins Inc.	Brent Schicker	EPA-HQ-OLEM-2022-0174-0217
Hind et al	Rick Hind et al.	EPA-HQ-OLEM-2022-0174-0139
Hind, Rick	Rick Hind	EPA-HQ-OLEM-2022-0174-0274
		EPA-HQ-OLEM-2022-0174-0459
Hunton Andrews Kurth LLP	Penny A. Shamblin	EPA-HQ-OLEM-2022-0174-0206
Illinois Fertilizer & Chemical Association (IFCA)	Kevin 'KJ' Johnson	EPA-HQ-OLEM-2022-0174-0225
Institute for Policy Integrity at New York University School of Law	N/A	EPA-HQ-OLEM-2022-0174-0266
Institute of Makers of Explosives (IME)	N/A	EPA-HQ-OLEM-2022-0174-0228
International Union, United Automobile, Aerospace & Agricultural Implement Workers of America - UAW	Ray Curry	EPA-HQ-OLEM-2022-0174-0183
International Dairy Foods Association (IDFA)	Danielle Quist	EPA-HQ-OLEM-2022-0174-0237

International Warehouse Logistics Association (IWLA)	N/A	EPA-HQ-OLEM-2022-0174-0231
J.R. Simplot Company (Simplot)	Alan L. Prouty	EPA-HQ-OLEM-2022-0174-0232
Kansas Agribusiness Retailers Association (KARA)	Randy Stookey	EPA-HQ-OLEM-2022-0174-0202
Kansas City Board of Public Utilities	Brittany Barrientos and Dennis Lane	EPA-HQ-OLEM-2022-0174-0261
Kelley, Terry	Terry Kelley	EPA-HQ-OLEM-2022-0174-0402
Kennecott Utah Copper LLC (KUC)	Mark Hayes	EPA-HQ-OLEM-2022-0174-0210
Landis, Lenore	Lenore Landis	EPA-HQ-OLEM-2022-0174-0145
League of Women Voters of Lake County	Mary Matthews	EPA-HQ-OLEM-2022-0174-0191
Learning Disabilities Association of America and Affiliates	Tracy Gregoire	EPA-HQ-OLEM-2022-0174-0249
Lish, Christopher	Christopher Lish	EPA-HQ-OLEM-2022-0174-0208
Louisiana Chemical Association (LCA)	Donald W. Fondel II	EPA-HQ-OLEM-2022-0174-0144
		EPA-HQ-OLEM-2022-0174-0263
Louisville Metro Air Pollution Control District	Rachael Hamilton	EPA-HQ-OLEM-2022-0174-0211
Makuch, Jad	Jad Makuch	EPA-HQ-OLEM-2022-0174-0480
Mass Comment Campaign sponsored by an unknown organization - 1 (22,607)	N/A	EPA-HQ-OLEM-2022-0174-0448
Mass Comment Campaign sponsored by an unknown organization - 2 (8,216)	N/A	EPA-HQ-OLEM-2022-0174-0449
Mass Comment Campaign sponsored by an unknown organization - 3 (5,314)	N/A	EPA-HQ-OLEM-2022-0174-0450
Mass Comment Campaign sponsored by an unknown organization - 4 (1,877)	N/A	EPA-HQ-OLEM-2022-0174-0451
Mass Comment Campaign sponsored by an unknown organization - 5 (31)	N/A	EPA-HQ-OLEM-2022-0174-0452
Mass Comment Campaign sponsored by Natural Resources Defense Council (NRDC) (19,492)	N/A	EPA-HQ-OLEM-2022-0174-0453
Meade, Melanie	Melanie Meade	EPA-HQ-OLEM-2022-0174-0383
Moms for a Nontoxic New York	Kathleen Curtis	EPA-HQ-OLEM-2022-0174-0409
Naples, Jean	Jean Naples	EPA-HQ-OLEM-2022-0174-0413
National Association of Chemical	Jennifer C. Gibson	EPA-HQ-OLEM-2022-0174-0234

Distributors (NACD)		EPA-HQ-OLEM-2022-0174-0100
National Association of SARA Title III Program Officials (NASTTPO)	N/A	EPA-HQ-OLEM-2022-0174-0241
National Education Association	Daaiyah Bilal-Threats	EPA-HQ-OLEM-2022-0174-0251
National Family Farm Coalition (NFFC)	Antonio Tovar	EPA-HQ-OLEM-2022-0174-0407
National Lime Association (NLA)	William Herz	EPA-HQ-OLEM-2022-0174-0213
National Mining Association (NMA)	Tawny A. Bridgeford	EPA-HQ-OLEM-2022-0174-0236
National Propane Gas Association (NPGA)	Michael A. Caldarera	EPA-HQ-OLEM-2022-0174-0247
National Taxpayers Union (NTU)	Pete Sepp & Alex Milliken	EPA-HQ-OLEM-2022-0174-0214
Natural Resources Defense Council (NRDC)	Jennifer Sass	EPA-HQ-OLEM-2022-0174-0255
New Jersey Department of Environmental Protection (NJDEP)	Paul Komosinsky	EPA-HQ-OLEM-2022-0174-0185
New Jersey Work Environment Council	Debra Coyle	EPA-HQ-OLEM-2022-0174-0203
		EPA-HQ-OLEM-2022-0174-0481
		EPA-HQ-OLEM-2022-0174-0178
New York City Department of Environmental Protection (DEP)	Paul Rush	EPA-HQ-OLEM-2022-0174-0230
North Carolina State Emergency Response Commission, Hazard Materials Committee	William C. Ray	EPA-HQ-OLEM-2022-0174-0165
North Dakota Department of Agriculture	Doug Goehring	EPA-HQ-OLEM-2022-0174-0245
Office of New York State Attorney General	Sarah Kam	EPA-HQ-OLEM-2022-0174-0135
Orum, Paul	Paul Orum	EPA-HQ-OLEM-2022-0174-0220
Paradies, Mark	Mark Paradies	EPA-HQ-OLEM-2022-0174-0108
Pollution Control Services (PCS), Harris County, Texas	Dr. Latrice Babin	EPA-HQ-OLEM-2022-0174-0198
Public Citizen 50	Adrian Shelley	EPA-HQ-OLEM-2022-0174-0254
Sata Fire Marshall		EPA-HQ-OLEM-2022-0174-0403
Shaut, Sara	Sara Shaut	EPA-HQ-OLEM-2022-0174-0276
Shudtz, Matthew		EPA-HQ-OLEM-2022-0174-0204
Skapik, Julia	Julia Skapik	EPA-HQ-OLEM-2022-0174-0392
Small Business Administration's Office of Advocacy (SBA)	Major L. Clark, III	EPA-HQ-OLEM-2022-0174-0188
Society of Chemical	Robert F.	EPA-HQ-OLEM-2022-0174-0275

Manufacturers & Affiliates (SOCMA)	Helminiak	
Steel Manufacturers Association (SMA), Specialty Steel Industry of North America (SSINA)	Eric Stuart and Joseph J. Green	EPA-HQ-OLEM-2022-0174-0212
Super, Katy	Katy Super	EPA-HQ-OLEM-2022-0174-0366
Texas Pipeline Association (TPA)	Thure Canon	EPA-HQ-OLEM-2022-0174-0256
The Chlorine Institute	Robyn Brooks	EPA-HQ-OLEM-2022-0174-0201
The Fertilizer Institute (TFI)	Reagan Giesenschlag	EPA-HQ-OLEM-2022-0174-0099
		EPA-HQ-OLEM-2022-0174-0229
Torian, Jason	Jason Torian	EPA-HQ-OLEM-2022-0174-0297
Torrance Refinery Action Alliance	N/A	EPA-HQ-OLEM-2022-0174-0176
		EPA-HQ-OLEM-2022-0174-0175
		EPA-HQ-OLEM-2022-0174-0153
		EPA-HQ-OLEM-2022-0174-0152
		EPA-HQ-OLEM-2022-0174-0163
		EPA-HQ-OLEM-2022-0174-0134
U. S. Chamber of Commerce et al.	Chad Whiteman	EPA-HQ-OLEM-2022-0174-0172
		EPA-HQ-OLEM-2022-0174-0146
		EPA-HQ-OLEM-2022-0174-0272
U.S. Conference of Mayors, National League of Cities, and National Association of Counties	N/A	EPA-HQ-OLEM-2022-0174-0243
U.S. PIRG Education Fund	Emily Rogers	EPA-HQ-OLEM-2022-0174-0264
		EPA-HQ-OLEM-2022-0174-0265
Union of Concerned Scientists	Darya Minovi, Andres Bachelet, Jessica Thomas	EPA-HQ-OLEM-2022-0174-0240
Union of Concerned Scientists, BlueGreen Alliance, California Communities Against Toxics, Clean Air Council, Coming Clean, Lone Star Chapter of Sierra Club, New Jersey Work Environment Council, Texas Environmental Justice Advocacy Services, Utah Physicians for a Healthy Environment	Genna Reed	EPA-HQ-OLEM-2022-0174-0123
United Association of Union Plumbers and Pipefitters, AFL-CIO	Gerard M. Waites & Kevin Dill	EPA-HQ-OLEM-2022-0174-0235
United States Steel Corporation (U. S. Steel)	Chris Hardin	EPA-HQ-OLEM-2022-0174-0253
United Steelworkers (USW)	Anna Fendley	EPA-HQ-OLEM-2022-0174-0216

University of California Irvine	N/A	EPA-HQ-OLEM-2022-0174-0174
University of Wisconsin-Madison	Douglas Reindl	EPA-HQ-OLEM-2022-0174-0193
Utility Solid Waste Activities Group (USWAG)	Daniel Chartier	EPA-HQ-OLEM-2022-0174-0224
Vasquez, Diana	Diana Vasquez	EPA-HQ-OLEM-2022-0174-0194
Wagner, Shealynn	Shealynn Wagner	EPA-HQ-OLEM-2022-0174-0273
Weld County Local Emergency Planning Committee (LEPC)	N/A	EPA-HQ-OLEM-2022-0174-0391
Wisconsin Department of Natural Resources (WDNR)	Gail Good	EPA-HQ-OLEM-2022-0174-0199
Woodbury, Eileen	Eileen Woodbury	EPA-HQ-OLEM-2022-0174-0137

1 General Feedback on the Proposed Rule

Comments associated with this issue are discussed in the sub-issues below.

1.1 General comments supporting/opposing the rulemaking

General comments in support of the proposed rule

Comment 1.1-01: Several commenters supported EPA's proposed rule to amend its Risk Management Program (RMP) regulations as a result of Agency review (0135, 0148, 0157, 0158, 0160, 0165, 0183, 0191, 0192, 0194, 0203, 0204, 0206, 0208, 0209, 0211, 0215, 0216, 0219, 0235, 0240, 0241, 0244, 0249, 0250, 0251, 0252, 0254, 0258, 0255, 0264, 0265, 0266, 0269, 0270, 0274, 0276, 0407, 0409, 0444, 0447, 0448, 0449, 0450, 0451, 0452, 0453, 0456, 0460, 0480). Many of the commenters also provided additional detailed comments which are categorized under the appropriate topics within this document.

> **EPA Response:** EPA appreciates the commenters' support. Because major and other serious and concerning RMP accidents continue to occur, EPA believes this final rule will help further protect human health and the environment from chemical hazards through advancement of process safety based on lessons learned.

General comments requesting improvements to the proposed rule

Comment 1.1-02: Several commenters requested EPA consider making the proposed rule stronger than it is currently written (0157, 0158, 0160, 0183, 0191, 0194, 0203, 0208, 0209, 0219, 0240, 0251, 0252, 0254, 0255, 0258, 0266, 0269, 0270, 0407, 0409, 0447, 0448, 0449, 0450, 0452, 0453, 0456, 0460). Several of these commenters provided detailed examples of recent accidents and incidents, including health impacts to the community dating back to 2004 that they hope stronger RMP regulations would prevent (0157, 0158, 0160, 0216, 0251 0266, 0269 0444, 0456, 0460). A few commenters suggested additional steps EPA should take in tandem with the proposed rule (0204, 0265, 0456).

One commenter stated that the current process puts the onus on community members in close proximity to facilities to protect themselves when it is EPA's responsibility to regulate these facilities and ensure that the public is safe. The commenter stated that there needs to be more enforcement by the Federal government to hold facilities accountable, especially in States lacking enforcement (0160).

Several commenters stated that the proposed rule relies too much on voluntary commitments from RMP facilities (0157, 0160). One commenter stated that the current process remains reactive rather than proactive – and corrective rather than preventative (0157).

One commenter suggested that in addition to evaluating new information from listening sessions, comment periods, and public hearings, EPA should consult and rely on longstanding evidence, information on safer chemical manufacturing alternatives, and requests for strong regulatory action when developing the final rule (0460).

One commenter asserted that EPA's RMP is inadequate in regulating high hazardous chemicals known to cause death, injury, and acute health hazards, which can contribute to serious long-term health problems like cancer. The commenter added that releases of these chemicals can cause serious harm and destroy ecological resources including contaminating water, killing wildlife and plants, and destroying farms and community gardens (0456).

One commenter suggested EPA incorporate the policy priorities in the Biden Administration's Executive Order 13990, including public health and safety, environmental justice and protection, science, and worker safety (0456).

> **EPA Response**: E.O. 13990 directed Federal agencies to review existing regulations and take action to address priorities established by the Biden Administration, which include bolstering resilience to the impacts of climate change and prioritizing environmental justice (EJ). As a result, EPA was tasked to review the current RMP regulations. EPA is amending its Risk Management Program regulations as a result of its review. EPA is finalizing several amendments to the RMP rule to further protect human health and the environment from RMP accidents through advancement of process safety based on lessons learned. The final rule's emphasis is on protecting communities most at risk of having an accidental release from a facility in their midst. Under the final rule, facilities in these communities will be required to do more to prevent chemical accidents, including conducting an STAA, more thorough incident investigations, and third-party audits. The final rule also includes new prevention provisions that have not been addressed in prior RMP rules, including empowering workers to make safety decisions and report non-compliance. The Agency is also increasing access to RMP facility information for fenceline communities in commonly spoken languages. EPA believes this final rule promotes transparency and gives more opportunities for the public and workers to be involved in accident prevention and emergency planning.
>
> EPA agrees assistance, outreach, and enforcement will help ensure compliance with the rule. For example, enforcement of the RMP regulation has and will continue to occur. Because of that fact, EPA expects most facilities will proactively make the necessary prevention improvements in order to comply with the rule and thus avoid enforcement. Enforcement of RMP facilities remains an Agency priority, as indicated by its adoption as a National Enforcement and Compliance Initiative (NECI) since 2017[1]. For additional information on the NECI, please refer to the final rule preamble, Section IV.B.

Comment 1.1-03: One commenter stated that the new RMP rule should include how to involve existing State and local agencies that already have some oversight responsibilities for hazardous chemical facilities and address EPA's role in training and supervision of local agency staff on the new rule's requirements (0402).

> **EPA Response:** On April 7, 2022, September 1, 2022, and September 5, 2023, EPA met with small governments concerning the regulatory requirements that might affect them.
>
> Further, the RIA associated with the rulemaking identifies and accounts for rule familiarization activities for RMP delegated State and county implementing agencies.

General comments opposing the proposed rule

Comment 1.1-04: Several commenters opposed EPA's proposed rule to amend its RMP regulations as a result of Agency review (0180, 0188, 0196, 0197, 0201, 0202, 0205, 0207, 0210, 0213, 0214, 0215, 0217, 0222, 0224, 0225, 0226, 0229, 0233, 0234, 0237, 0238, 0239, 0243, 0245, 0253, 0256, 0263, 0267, 0268, 0272, 0275, 0458, 0477). Many of the commenters also provided additional detailed comments, which are categorized under the appropriate topics

[1] https://www.epa.gov/enforcement/national-enforcement-and-compliance-initiative-reducing-risks-accidental-releases

within this document. Several commenters recommended EPA withdraw the proposed rule (0180, 0188, 0205, 0210, 0217, 0226, 0234, 0245, 0268, 0272, 0458).

> **EPA Response:** In the final rule, EPA is finalizing almost all of the proposed changes, with some modifications. Where EPA has finalized a modification to a proposed rule provision, the Agency's rationale is further explained in the final rule. EPA's responses to comments on specific provisions are summarized in the appropriate sections of this document, significant comments are also summarized in the final rule.

Comment 1.1-05: A few commenters opposed the proposed rule due to what the commenters asserted are vague standards and definitions that could create uncertainties (0233, 0239, 0243, 0268). One commenter noted that the proposed rule could create unintended issues that the proposed rule attempts to address (0263).

> **EPA Response:** Because major and other serious and concerning RMP accidents continue to occur, EPA believes that this final rule will help further protect human health and the environment from chemical hazards through advancement of process safety based on lessons learned. EPA believes this has and will continue to occur because of the performance-based nature of the regulation, and also because the requirements provide facility owners with latitude in their methods of implementing the requirements. This type of regulation does not create uncertainties or unnecessary burdens, but rather offers reasonable flexibilities in adopting the most effective measures to prevent and mitigate accidents. For example, while EPA requires implementation of at least one practicable passive measure, or its equivalent, the new STAA requirements are not prescriptive in nature as to what a facility can choose as its measure. The rule gives facilities flexibility and allows facility owners and operators to exercise reasonable judgement to determine what technology or risk reduction measures work best for their particular chemical uses, processes, or facility. The final rule's emergency exercise requirements also give owners and operators significant flexibility in establishing exercise schedules and exercise scenarios. Other provisions of the final rule afford similar flexibilities.

Comment 1.1-06: Several commenters asserted that there is no basis or evidence that the proposed rule is necessary (0180, 0188, 0197, 0210, 0214, 0217, 0224, 0225, 0226, 0233, 0234, 0238, 0239, 0253, 0256, 0268, 0458).

A couple of commenters suggested that the proposed rule is unnecessary because only a few facilities are in violation, and the commenters suggested that better enforcement is the better solution (0272, 0275).

A couple of commenters asserted that EPA's own data undermines, rather than makes the case, of this rulemaking as reportable accidents have continued to decline (0250, 0275). One commenter asserted that EPA provides no evidence or explanation that any of the proposed rule's provisions would have prevented any accident or would shorten highly complex litigation. The commenter stated that the proposed rule describes a single, arguably new incident (a fire and evacuation at a TCP Group facility in Port Neches), yet EPA offers no evidence that any aspect of the proposed rule would have stopped or mitigated the TCP Group facility incident (0207).

Another commenter stated that many of the proposed requirements could increase the risk of accidental releases, ignoring Congress' statutory intent for the RMP to reduce the accidental release risks. In assessing EPA's data, the commenter found that the current RMP requirements

have already been highly effective in reducing accidental chemical releases. The commenter expressed concern that the proposed rule will depart from a collaborative and data-driven process and focus on additional unnecessary regulatory mandates that could unintentionally increase risk levels (0215).

Another commenter rejected the approach of basing regulations on past performance because they are not predictive of future performance (0456).

> **EPA Response:** EPA disagrees that that there is no basis or evidence that the proposed rule is necessary. Congress charged EPA to promulgate reasonable regulations to provide to the greatest extent practicable for the prevention and detection of accidental releases. Even when EPA has discharged its mandatory duty under CAA section 112(r)(7)(B), the Agency retains the discretion to amend the regulations when they can be improved to further the intent of the statute. Therefore, when major concerning RMP accidents, including major accidents, continue to occur as they have, it is EPA's responsibility to further protect human health and the environment, if there are reasonable opportunities to do so. Many of the amendments being finalized in this action, some stronger than what was proposed, were informed by commenters, including many that suffer the consequences of accidents occurring at RMP facilities or work in RMP-covered processes. The amendments are also informed by RMP accident data which indicate trends in accident occurrence. For example, as discussed in the proposal, recent accidents highlight that while the annual count of accidents decreased overall between 2016 and 2020,[2] in 2019, the TPC Group explosion (TPC) and fire in Port Neches, Texas, reported the largest number of persons ever evacuated (50,000 people) as the result of an RMP-reportable incident, as well as $153 million in offsite property damage.[3] EPA did not conduct an inspection at TPC just prior to this accident because as indicated in the 2019 reconsideration rule, EPA prioritizes inspections at facilities that have had accidental releases. TPC had no recent prior RMP accidental release and was not otherwise due for inspection under EPA's routine oversight plan. Therefore, we believe our current enforcement resources, and even prioritizing inspections, are not capable of effectively addressing accident-prone facilities without additional regulatory requirements mandates. Had the provisions being finalized today been in effect prior to the TPC Group accident, the owner or operator of TPC Group, prior to the accident, would have been required to conduct an initial STAA evaluation and a practicability study on IST/ISD, and to implement at least one passive measure, or an inherently safer technology or design, or a

[2] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

[3] The U.S. Chemical Safety Board's TPC incident investigation report outlines the safety issues contributing to the incident, conclusions, recommendations, and key lessons for the industry. *https://www.csb.gov/tpc-port-neches-explosions-and-fire/*

combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure.[4]

While large events are rare, CAA section 112(r) was intended as a prevention program for large catastrophic releases as well as more accidental releases. Post-event compliance measures such as outreach and enforcement are "too little, too late" for such large, but rare, events. Therefore, this final rule provides additional prevention program provisions reasonably calculated for stationary sources handling dangerous chemicals to prevent potentially catastrophic incidents. EPA therefore believes the provisions of this final rule will be generally effective to help improve chemical process safety by preventing accidents that result in harm and damage; assist in planning, preparedness, and responding to RMP-reportable accidents; and improve public awareness of chemical hazards at regulated sources. Thus, these are necessary updates to the existing RMP rule to ensure chemical accident prevention and mitigation. Further, while many of the provisions of this final rule reinforce each other, it is EPA's intent that each one is merited on its own, and they are thus severable.

Comment 1.1-07: One commenter disagreed with EPA's claim that the number of accidents is declining. The commenter stated that this claim is based on data that are incomplete because of delayed reporting. The commenter highlighted from 2004-2015, there has been no significant change in accident rates. Furthermore, the commenter said that from years 2010-2015, there was a non-statistically significant increase in accident rates. The commenter added that 2015 is the most recent year for which data are complete when extracted from a database in the middle of 2021 because of the five-year reporting. The commenter further stated that the overall trend of the data does not capture low probability, high consequence events (0160). Another commenter stated that EPA's prior analysis regarding a potential recent incident decline is incorrect based on currently available data, and there has been no statistically significant decline in recent years. The commenter said that chemical disasters have increased in frequency, and existing RMP rules have failed to prevent a total of 1,568 harmful chemical disasters. The commenter stated that it is unclear how EPA can make conclusions about incident rates from absolute numbers since reporting was not required before the program and since incomplete data is available for a limited number of years (0460).

One commenter stated that past reported incident data is a poor predictor of major chemical disasters as they cannot reliably predict rare catastrophic releases. The commenter stated that past accidental releases cannot predict low probability, high consequence accidental releases such as, for example, intentional acts of sabotage. The commenter stated that the presence of inherent catastrophic dangers and potential consequences to communities is sufficient in and of itself for EPA to require preventive measures such as the assessment of available alternatives. The commenter added that risk assessments and cost benefit analyses based on the frequency or likelihood of accidents tend to sanction inaction and should not preempt an alternatives assessment which can generate solutions that reduce catastrophic hazards (0220).

[4] TPC Group would have been required to conduct an initial STAA evaluation because it had a covered process in NAICS 325. The practicability assessment and safeguard implementation would have been required since its 325 NAIS covered process was located within 1 mile of another facility having a process in NAICS 324/325. Additionally, note that TPC Group was not included in the Appendix A list of the SCCAP proposed rule Technical Background Document identifying facilities with processes with NAICS 324/325 within 1 mile of another facility with a process in 324/325 because after the accident, TPC no longer had a 325 process on site.

EPA Response: As an initial matter, EPA notes that these comments focus on the overall trend in accidental releases, largely due to delays in reporting; it does not dispute EPA's conclusions about the frequency of accidental releases in various sectors. In the SCCAP proposal, EPA acknowledged the likelihood of late-reported accidents affecting the last few years of data. Based on its prior experience, EPA judged that there would be a slight increase in the number of accidents in the last few years of data. The proposal further discussed that the more current accident data since the 2019 analyses shows that reliance on a declining trend in accidents and impacts to conduct selective, often post-incident oversight may prove insufficiently effective over time and make it difficult to stay ahead of reversals in trends (87 FR 53565).

Regarding statistical significance, EPA notes that is a technical term with a precise mathematical definition, namely, the probability under a given statistical model of a test statistic being more extreme than the observed test statistic. Historically, many scientists have called an experimental result statistically significant if this probability was lower than 5% (i.e., p-value less than 0.05). But statistical significance is a continuous spectrum rather than a binary yes/no choice, and there is no magic significance level that distinguishes results that are true (in this case, indicating a real decline in accidents) from those that are not. EPA does not believe that the Agency must meet a specified statistical significance level in order to take account of accident trend data.

But the important question is not whether EPA can show that the rate of decline in RMP facility accidents is at the 95% confidence level – a statistical measure that goes to the weight of the trend. Given the importance of the underlying effect – whether or not severe chemical accidents are declining – the appropriate question to ask is whether or not the observed trend has practical policy significance. With the relatively small sample size and high variability associated with RMP facility accidents, which ultimately depend on complex and often unpredictable interactions between human behaviors, management systems, and chemical processes, it is unsurprising that the accident trend does not conform to a tight statistical confidence level. The SCCAP proposal even highlighted recent accidents that showed EPA's 2019 improper reliance on only the annual count of total accidents to address the low probability, high-consequence nature of accidental releases. EPA sees no need to be held to a particular statistical metric, and purposefully did not attempt to bind itself to such. The fact that accidents continue to occur shows that we still have reason to exercise statutory authority to promulgate reasonable regulations to provide for the prevention and detection of those accidents to the greatest extent practicable when the opportunity exists to improve the performance of our regulatory program.

1.2 Regulatory process

Comments on the length of the comment period

Comment 1.2-01: One commenter supported maintaining the current 60-day comment period ending October 31, 2022. The commenter stated that extending the comment period by 60 days is an unjustified delay tactic, especially given that EPA held listening sessions in June 2021 and July 2021 in advance of the proposed rule and the current 60-day comment period will include opportunities for both oral and written comments (0123).

EPA Response: EPA appreciates the commenter's support. EPA did not extend the comment period beyond October 31, 2022.

Comment 1.2-02: Several commenters opposed maintaining the current comment period and urged EPA to extend the comment deadline by at least 60 days (0099, 0100, 0122, 0124, 0126, 0127, 0128, 0129, 0144, 0146, 0171, 0214, 0222, 0232, 0239, 0253, 0275, 0477). A couple of commenters expressed that the current comment period is insufficient to address all facets of the proposal, including addressing over 50 comment requests by EPA and reviewing nearly one hundred supporting documents and data provided by EPA (0100, 0124, 0127, 0129, 0144, 0229, 0232). Some commenters stated that EPA needs to consider the other EPA and Occupational Safety and Health Administration (OSHA) rules whose comment period is at the same time preventing full review of the proposal (0129, 0146, 0239). A couple of commenters from the water utility industry suggested that EPA needs to give more time for comments due to the many small entities in the industry (0122, 0239).

EPA Response: EPA disagrees that the Agency did not allow for meaningful and thorough public review of the proposal or for appropriate agency consideration of public comment.

The EPA was tasked to review the RMP rule by Executive Order 13990: Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. As part of this review, the agency held public listening sessions on June 16 and July 8, 2021, as well as an open comment period from May 28 to July 31, 2021. During the development of the proposed rule, the EPA met with a broad range of stakeholders, including those in the regulated community. The rulemaking process includes analyzing impacts to a variety of stakeholders, including small businesses, and state and local governments. The EPA considered all this input, and any additional comments received through official correspondence, prior to publishing the proposed rule.

Further, the Agency met the statutory requirement to provide a "reasonable period for public participation." The initial notice and comment period satisfied the requirements of CAA section 307(d) and other relevant rulemaking procedures that apply to this rulemaking. In addition to the proposed rule's 60-day public comment period, the EPA made a prepublication version available on our website on August 19, 2022, nearly two weeks before publication in the Federal Register on August 31, 2022. We also made critical supporting documents available on our website, including the regulatory impact analysis and the technical background document. Additionally, the prepublication version of the proposed rule contained numerous footnote references to supporting documents that are otherwise available, including reports of the Chemical Safety Board, EPA accident investigation reports, technical reports, and journal articles. After the proposed rule was made available, the EPA continued to have outreach meetings with various stakeholder groups to discuss the proposed provisions and listen to comments. The agency also held three public hearings during the public comment period on September 26, 27, and 28, 2022.

Considering the significant outreach efforts described above, as well as the substantial amount of supporting material in the public domain prior to publication of the proposed rule, the EPA believes that the comment period's closing date was sufficient. The Agency

believed that no extension of the comment period was necessary to provide the public with a meaningful opportunity to comment.

Comments related to stakeholder involvement

Comment 1.2-03: Several commenters suggested that EPA conduct additional coordination activities to support the rulemaking. In particular:

- A couple of the commenters suggested EPA seek information from the Chemical Safety Board (CSB) investigators (0456, 0460).
- One commenter suggested that EPA have the regulations reviewed by a Federal Advisory Committee (0127).
- Several commenters urged EPA to listen to individuals from affected communities and prioritize their commentary in further updating and strengthening the RMP (0157, 0158, 0160).
- One commenter commended EPA for hosting the virtual listening sessions in advance of the proposed rule. The commenter hoped EPA will keep the lived experiences of the workers and many members of the fenceline communities who testified at the listening sessions in mind as they work on this rule (0456).
- One commenter suggested that EPA evaluate new information from the NRC, including incident reports from the last five years (0456).

EPA Response: EPA believes it provided sufficient coordination activities to support the rulemaking. EPA held virtual public listening sessions on June 16 and July 8, 2021, and had an open docket for public comment (86 FR 28828). OSHA participated in the listening sessions to foster continued coordination with the EPA. After the request for public comment the Agency further held numerous outreach meetings with stakeholders. Following publication of the proposed rule, EPA held three public hearings (September 26, 27, and 28, 2022) and had a 60-day open public comment period. Participants in the virtual public listening sessions and hearings included a wide range of stakeholders including environmental and community groups, individual regulated facilities, industry groups, local and State governments, Federal agencies, and private citizens. Information collected through oral testimonies and written comments from the listening sessions and hearings respectively informed the proposed and final rules.

EPA will also further consider these comments as we develop complementary regulatory activities such as updating guidance and implementing and enforcing the RMP rule. 8

Other comments on EPA's rulemaking process

Comment 1.2-04: One commenter suggested that EPA make the rulemaking fact sheets on the proposed rule translated into Spanish well ahead of the virtual public hearing to improve accessibility in rulemaking. The commenter noted that the proposed rule fact sheet was not translated into Spanish until the day of the hearing (0270).

EPA Response: EPA appreciates the commenter's suggestions and recognizes the concern. EPA will consider this comment in future rulemaking activities.

1.3 Statutory authority

Comments that EPA has not fully exercised its statutory authority

Comment 1.3-01: A couple of commenters called on EPA to exercise its "full statutory authority" to issue measures that prevent disasters "to the "greatest extent practicable" (0456, 0460). One commenter noted that this section of the CAA does not require EPA to justify prevention measures through a cost-benefit analysis (0460).

EPA Response: Although EPA is authorized to promulgate regulations that provide for the prevention and detection of accidental releases to the greatest extent practicable, so too must these regulations be reasonable. The relevant statutory phrase describing EPA's authority to regulate under CAA section 112(r)(7)(B)(i), authorizes "reasonable regulations . . . to provide, to the greatest extent practicable," for the prevention and detection of and response to accidental releases of substances listed in 40 CFR 68.130. EPA interprets the term "practicable" in this context to include concepts such as cost-effectiveness of the regulatory and implementation approach, as well as the availability of relevant technical expertise and resources to the implementing and enforcement agencies and the owners and operators who must comply with the rule. Further, an interpretation of the statute that does not give meaning to the qualifier "reasonable" to the authority to regulate "to the greatest extent practicable," as the commenters suggest, would be inconsistent with the structure of the statute. The terms "reasonable" and "practicable" operate both as authorization for EPA's regulations and as limitations on the scope of EPA's authority under CAA section 112(r)(7)(B)(i), while the phrase "greatest extent practicable" directs EPA to select the regulatory option that "provide[s] the greatest level of practicable protection" from "among those regulatory options that are reasonable." 84 FR 69849 (Dec. 19, 2019); see also 87 FR 53566 (Aug. 31, 2022). To the extent both the 2019 compliance-driven and the 2022 rule-based, prevention-focused approaches are reasonable, the approach of this final rule would be more protective and therefore be "'to the greatest extent practicable' among the reasonable approaches.").

As recognized by the Supreme Court in *Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015), "reasonable regulation" generally involves some sort of examination of the benefits and the burdens of a rule. Nevertheless, the Court in *Michigan v. EPA* did not mandate a strict analysis of quantified cost and benefits and limit the Agency to adopting only those measures that have quantified costs exceeding benefits. In assessing the types of benefits EPA should consider in a rulemaking under CAA 112(r)(7), EPA recognizes that a major purpose of the accidental release provisions of the CAA is to help mitigate and prevent large scale catastrophic incidents that are rare and therefore difficult to quantify.[18] Both the Senate and the House committee reports on the Clean Air Act Amendments (CAAA) specifically identify the Union Carbide-Bhopal incident as one that demonstrated the need for the accidental release prevention provision (House Report at 155-57; Senate Report at 134-35, 143-44). The Congressional reports and floor debates also cite an EPA study identifying 17 events that, based only the volume and toxicity of the chemicals involved (and not accounting for factors such as location, climate, and operating conditions) had the potential for more damage than the Union Carbide-Bhopal incident. Therefore, when assessing the reasonableness of the benefits and burdens of various regulatory options, EPA places weight on both preventing more common accidental releases captured in the accident history portion of the RMP database while also placing weight on less quantifiable potential catastrophic events. Our judgment as to what regulations are "reasonable" is informed by both quantifiable and unquantifiable burdens and benefits.

Comments supporting EPA's use of its statutory authority

Comment 1.3-02: A couple of commenters concurred that EPA has ample authority to revise RMP regulations in the proposed rule (0183, 0266, 0444, 0456, 0460, 0480). One of the commenters urged EPA to enforce their regulatory authority under § 112(r) of the CAA to carry out their mission to protect the public's health and the environment in which we live and make communities safer by preventing and mitigating accidental releases of regulated substances (0480). Another commenter stated that, under the CAA, Congress directed OSHA to focus on workplace safety regulations and EPA to focus on public health and environmental impact mitigation. The commenter stated EPA has reasonably explained that the proposed rule does not conflict with the workplace safety regulations of OSHA, so EPA is not exceeding its statutory authority (0444).

> **EPA Response:** EPA agrees with these comments. EPA has an active program enforcing the General Duty Clause and the RMP, which together prevent and mitigate accidental releases. EPA has coordinated and consulted with OSHA in the development of 40 CFR part 68 and these amendments to the chemical accident prevention provisions to ensure that the rules are compatible and do not conflict.

Comments stating EPA has exceeded its statutory authority

Comment 1.3-03: Several commenters stated that in taking this proposed action, EPA is exceeding its statutory authority provided by § 112(r) of the CAA (0065, 0227, 0229, 0233, 0237, 0238, 0253, 0268, 0271, 0272, 0275, 0277). Several commenters stated that EPA is exceeding its statutory authority under the CAA as several provisions of the proposed rule drift into the lane of other agencies (0207, 0229, 0233, 0268, 0277).

A few commenters stated that EPA does not have jurisdiction over worker safety issues as that is reserved for OSHA (0202, 0233, 0268). A couple of commenters highlighted that, under the CAA § 112(r)(7), Congress directed EPA to prevent and mitigate public health and environmental impacts that could arise from accidental releases, which EPA addressed by issuing the initial RMP rule in 1996. The commenters noted that in its first RMP rulemaking, EPA recognized this division of statutory authority—OSHA's focus is on workplace impacts, while EPA's focus is on offsite consequences. The commenters said that in this proposed rule, EPA fails to respect the historical jurisdictional boundaries by layering novel requirements that conflict with OSHA regulations (0233, 0268).

Some commenters stated that OSHA is the proper statutory agency to implement virtually all aspects of process safety in the workplace in contrast to risk management regarding releases or emissions from facilities subject to RMP. The commenters noted that EPA's proposed rule encroaches on the PSM standard and other OSHA programs and EPA should not finalize any new RMP requirements directed solely to governing the internal aspects of covered processes that are intrinsic to on-site safety at workplaces (0229, 0232, 0233, 0253, 0272). One commenter noted that the CAA explicitly states that EPA must not use its authority to "proscribe or enforce standards or regulations affecting occupational health or safety." The commenter further stated that throughout the proposed rule, EPA explicitly cites worker safety measures to justify the proposed regulatory provision that extends existing OSHA standards and guidance. The commenter stated that citing worker safety as a basis for new RMP regulatory requirements crosses the line between EPA and OSHA, as OSHA has exclusive authority to address worker safety issues (0237).

EPA Response: EPA disagrees that it has exceeded its statutory authority in this way in this rulemaking. EPA acknowledges that both EPA and OSHA have separate mandates under the Occupational Safety and Health Act (29 U.S.C. 651), the CAA, and the requirements enacted in the CAAA. In the 1990s, both Agencies fulfilled their mandatory duties to promulgate and issue the rules required by CAA sections 112(r)(3)-(5) and 112(r)(7)(B), as well as section 304 of the CAAA. The focus of OSHA's regulations in the PSM standard is on workplace safety, while EPA's focus in the RMP regulations has been primarily on minimizing the public impacts of accidental releases through prevention and response. Today's rule maintains EPA's focus on minimizing the public impacts of accidental releases even as it also reduces impacts on facilities and workers. As explained throughout the proposal and in this final action, the OSHA PSM standard and EPA RMP regulations are closely aligned in content, policy interpretations, and enforcement. This is not surprising, as accident prevention steps that make a process safe for workers often will be similar, or the same as, steps that would prevent deleterious impacts on the public. Thus, enhancing the PHA through additional employee participation authority will enhance the chemical accident safety of the public. Congress recognized the RMP-PSM relationship by requiring EPA to coordinate its requirements with those of OSHA in developing accident prevention regulations and requiring OSHA to coordinate with EPA when developing its PSM standard (see CAA section 112(r)((7)(D) and CAAA section 304(a)). Therefore, since the inception of these regulations, EPA and OSHA have coordinated closely on their implementation in order to minimize regulatory burden and avoid conflicting requirements for regulated facilities. This coordination has continued throughout the development of this rule. Appendix A documents a series of meetings among staff from EPA and OSHA during SCCAP rule development.

Nothing in the structure of the 1990 CAA Amendments nor its legislative history suggests that only one agency is the exclusive, proper, or prime authority for chemical process safety. The statute required both EPA and OSHA to proceed with provisions to prevent chemical accidents. The Senate Report discusses the relationship and expertise of both agencies in the field of accident prevention, including the issue of whether OSHA should be the lead agency in the area, and noted that "EPA has developed considerable expertise in the area of accident prevention." (Senate Report at 244 -45). The Senate Report provides an extended discussion of the types of accident prevention authorities provided to EPA (see generally Senate Report at 237 – 45), including intrinsic systems designed into processes and extrinsic systems to be retrofitted to processes to prevent releases (Id. at 239). The approach of the bill was to require coordination among agencies rather than primacy or preemption. Sections 129(f)(1) and (2) of the Senate bill closely parallel section 112(r)(7)(A) and (B)(i), and section 129(f)(3) has the same consultation and coordination requirement for EPA with U.S. Department of Labor (DOL) and OSHA as CAA section 112(r)(7)(D). Therefore, the arguments raised by the commenters regarding "primary jurisdiction" and "lead" for OSHA on process safety do not reflect origins of the statutory provisions.

Nothing in the final rule impacts adversely OSHA's ability to regulate workplace safety or asserts "primary jurisdiction over workplace safety." 29 USC 653(b)(1) is a preemption provision that generally bars OSHA from acting on a workplace safety matter when is it is within the jurisdiction of another federal agency ("Nothing in this Act shall

apply to working conditions of employees with respect to which other Federal agencies, and State agencies acting under section 274 of the Atomic Energy Act of 1954, as amended (42 United States Code (U.S.C.) § 2021), exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health."). The House Report reflects a concern that the grant of authority to EPA to regulate accidental releases could be read as preempting OSHA's authority protect workers from chemical accidents. See House Report at 335-336. The provision in section 112(r)(7)(G) simply reflects that EPA, by regulating process safety under section 112(r), does not preempt OSHA's authority also to act. EPA "shall not . . . be deemed to be" setting occupational safety and health measures that potentially preempts OSHA. Id. Subparagraph (G) cannot be read to work a preemption of EPA's authority to act. EPA is well within its discretion and authority to promulgate the process safety provisions of the final rule.

Comment 1.3-04: One commenter stated that EPA does not have the statutory authority to include Fertilizer Grade Ammonium Nitrate (FGAN) under the RMP regulations because the safe and secure storage and handling of FGAN is the responsibility of OSHA. The commenter also stated that the RMP program should address the accidental releases into the air of hazardous chemicals in liquid or gas form (0227).

Another commenter stated that the scope of regulations for RMP chemicals used in agriculture (anhydrous ammonia and aqua ammonia) are already subject to EPA, OSHA, Department of Homeland Security (DHS) and Emergency Planning and Community Right-to-Know Act (EPCRA) requirements and expressed concern about confusion and contradicting requirements across these agencies' chemical safety rules (0232).

EPA Response: The SCCAP NPRM solicited input on upcoming potential additions the 40 CFR 68.130 list of regulated substances without proposing to list additional chemicals. In the final rule, EPA is not listing any additional chemicals. Issues regarding EPA's authority to list FGAN will be addressed in a future rulemaking if and when EPA makes a proposal to list FGAN. EPA acknowledges that there is both support and opposition to regulating ammonium nitrate (AN) and will consider these comments when determining whether to take further action on this issue. In the interim, EPA encourages fertilizer retailers to review and use existing guidance. OSHA compiles several resources on their Fertilizer Industry Guidance on Storage and Use of Ammonium Nitrate webpage at https://www.osha.gov/dep/fertilizer_industry/.

Comment 1.3-05: One commenter stated that the proposed definitions of active measures, passive measures, and procedural measures in 40 CFR § 68.3 exceed the statutory authority granted to EPA under the CAA. The commenter noted that the proposed definition of "active measures" introduces the ambiguous undefined concept of detecting and responding to process deviations. The commenter noted that the proposed definition of "passive measures" also introduces the ambiguous undefined concept of reducing the frequency or consequence of the hazard. The commenter also noted that the proposed definition of "procedural measures" introduces the ambiguous undefined concept of preventing or minimizing incidents (0238).

EPA Response: Beyond characterizing the definitions of passive, active, and procedural measure as introducing "ambiguous undefined concept[s]," the commenter claims that the ambiguity results in definitions that are beyond the scope of the CAA and the authority

granted to EPA. We address the purported ambiguities in the Amendments Rule Response to Comments document,[5] Section 2.3.2. Generally, EPA's definitions conform to the definitions used by CCPS, which is one of the industry-recognized expert bodies in the field of process safety. Without further explanation of why using commonly accepted definitions is beyond the scope of the CAA, EPA believes these responses demonstrate that that the terms are sufficiently clear to be within the scope of our authority under CAA 112(r)(7).

Comment 1.3-06: One commenter expressed concern that the proposed Process Hazard Analysis (PHA) requirements, including analyzing external events like natural hazards and risks posed by proximate facilities—exceed EPA's statutory authority and are otherwise arbitrary and capricious (0272).

One commenter suggested that the provisions to impose additional RMP requirements that incorporate climate change risks and impacts into regulations and prioritize environmental justice are beyond the statutory authority of EPA (0271). A couple of additional commenters noted that EPA does not have the statutory authority to address climate change through the RMP (0253, 0232). One of the commenters highlighted that the CAA requires the RMP to prevent, detect, and respond to the release of hazardous substances, which is unrelated to climate change (0232).

EPA Response: The manner in which the SCCAP rule addresses or considers climate change and risks posed by proximate facilities is to require consideration of potential accidental release- initiating events. The purpose of these provisions is not to prevent climate change or otherwise address the causes of climate change, nor are we requiring the regulated facility to prevent accidents at another facility.

In response to comments that the Agency does not have authorization from Congress to transform the PHA program to include natural hazards "caused by climate change or other triggering events," EPA disagrees. EPA has stated this provision makes more explicit what is already required in the RMP regulations. As noted in the proposed rule, since the 1996 RMP rule, EPA has said events such as floods and high winds should be considered as potential release-initiating events when conducting a PHA, and the RMP guidance further expands on this point. Furthermore, the hazard evaluation amplifications reflect existing industry practice, and therefore, EPA assumes that these hazard evaluation amplifications impose no new requirements or costs on facilities that are in compliance with the RMP rule and common industry practice. By amplifying and making more explicit the need to evaluate natural hazards as potential causes of releases, EPA expects those facilities that are currently not performing such evaluations will better understand what the rule requires. Additionally, each modification of the RMP rule that EPA proposed and is finalizing is based on EPA's rulemaking authority under CAA section 112(r)(7). EPA has outlined its authority for all the changes to the regulation in section III.C of this preamble.

[5] 2016. EPA Response to Comments on the 2016 Proposed Rulemaking Amending EPA's Risk Management Program Regulations.

Accidental releases caused by a release or accident at a second process or facility is commonly referred to as a "knock-on" release or incident. Knock-on effects are a well-recognized industry release scenario.[6]

Preventing and mitigating the impacts of accidental releases is the objective of CAA 112(r), and promulgating rules to prevent and mitigate the effects of accidental releases is explicitly authorized by CAA 112(r)(7). The SCCAP rule is a discretionary exercise of this authority. Because communities that are overburdened by the potential for accidental releases tend to be disproportionately minority and less wealthy, most rules exercising the grant of authority under CAA 112(r) to prevent accidental releases and mitigate their impacts will benefit such communities.

Other legal comments

Comment 1.3-07: A few commenters stated that they believe the proposal provides vague and insufficient information and justification to be legally defensible and a supplemental proposal is legally required (0232, 0253, 0272). One commenter criticizes "numerous data and information gaps" as well as comment solicitations for "missing data and information" that would potentially be used in a final rule. According to the commenter, such "open-ended requests for public input and vague proposed requirements limit the opportunity to meaningfully comment on the proposed requirements. The commenter asks that EPA provide a supplemental proposal and reopen the comment period to allow for comment on any new regulatory requirements or information EPA intends to rely on (0272).

EPA Response: EPA believes no supplemental proposal is needed to provide a meaningful opportunity for comment on the basis of and justification for the requirements adopted in the final rule. The commenter has not identified any impermissible vagueness in the proposed rule when the issues identified are read in the context of the whole notice.

The commenter cites comment solicitations made on 87 FR 53558 of the proposal as examples of "open-ended requests" and "vague proposed requirements." We note that this portion of the preamble of the proposed rule is a set of summaries of comment solicitations in the body of the preamble and not the detailed discussions explaining the requests, the issues involved, or the basis and purpose of the requirement and its statutory authority. The topic of "comment headings" was a requested way to reference topics in comments to simplify handling. Id. at 53557-58. The method is labelled as optional. We state, "Commentors should review the discussions in the preamble and may comment on any matter that is addressed by the proposed rule." Id. Citing this summary of comment solicitations elsewhere in the document rather than the substantive discussion from the body of the preamble is insufficient to establish lack of adequate notice of the matters for which EPA sought comment.

One such detailed discussion of the request for comments on "natural hazard resources such as databases, checklists, or narrative discussions" provides an understanding of both the requirement for assessing natural hazards as potential causes of accidental releases as well as the types of resources that would be helpful to sources seeking to comply with the requirement. The Agency explains that it will continue to rely on available industry guidance documents to evaluate compliance. We solicited comment on whether EPA

[6] As described in CCPS, *Guidelines for Siting and Layout of Facilities, 2nd Edition* (Hoboken, NJ: Wiley, 2018), *https://www.aiche.org/ccps/resources/publications/books/guidelines-siting-and-layout-facilities-2ndedition.*

should itself develop additional guidance beyond EPA's current general guidance to help regulated facilities comply with the natural hazard provision. We then solicit information on databases, checklists and the like that could support such compliance assistance materials. 87 FR 53569. Thus, in context, the cited comment solicitation is about potentially developing assistance material rather than the regulatory language establishing the requirement to evaluate natural hazards as potential causes for releases.

Other comment solicitations were for information that perhaps could have dissuaded EPA from promulgating a proposed amendment or modifying EPA's approach. For example, the comment solicitation regarding "any potential safety issues" associated with the proposed requirement for monitor back-up power is simply a request for information that may impact a safety-related balancing of concerns. 87 FR 53571.Were new information to come in from comments and lead the Agency not to adopt the proposed amendment due to safety concerns, arguably such information would have been of central relevance to the rule and not raised for comment. While the Agency may have been obligated to provide an opportunity for comment at that point, no such centrally relevant information was received. Similarly, EPA solicited comments supporting alternate distances between NAICS 324 and 325 processes that would have triggered certain STAA requirements; EPA did not change the distance from the proposed 1-mile. 87 FR 53580; see also 87 FR 53577. Rather than indicating some insufficiency of the proposal, these comment solicitations demonstrate the fairness of the process by pointing commenters towards potentially relevant issues. That is precisely the purpose of notice and comment.

The proposal drew robust substantive comment on the issues raised by the proposal. The volume and detail of the comments supports the adequacy of the notice. Finally, to the extent that the commenters contend that any provision of the final rule lacked notice of information of central relevance within the timeframes established by CAA 307(d)(7), the CAA provides a remedy procedure through the reconsideration process under CAA 307(d)(7)(B).

1.4 General regulatory overlap

General comments related to overlap with OSHA

Comment 1.4-01: Many commenters urged EPA to coordinate efforts with other agencies to ensure that any regulatory changes are consistent across different regulations, do not create unneeded confusion among regulated entities or federal, state, and local agencies, are not in conflict, duplicative, and burdensome, and do not inadvertently undo progress other agencies have made. The commenters stated that EPA should wait for OSHA to review and amend their rules first. The commenters were also concerned about inconsistent enforcement from inspectors from the two different agencies (0180, 0184, 0185, 0188, 0205, 0213, 0214, 0215, 0217, 0226, 0229, 0230, 0232, 0233, 0234, 0237, 0238, 0245, 0253, 0262, 0272, 0274, 0402, 0458).

Several commenters asked that EPA pause the RMP rulemaking to allow OSHA's review of the PSM standard to advance ahead of any major revisions to the RMP (0229, 0232, 0237, 0253, 0272). A couple of commenters similarly recommend that EPA wait until OSHA has finished its PSM rulemaking, so it can be subject to meaningful review, before moving ahead with the proposed rule (0214, 0232). One commenter pointed out issues that could occur if the RMP regulations are in flux while PSM requirements are changing. The commenter urged EPA to defer finalizing any changes to the RMP regulations until OSHA completes their specific action

noting that this will avoid confusion, duplication of requirements, and contradicting requirements across chemical safety rules (0229).

Several commenters requested that EPA harmonize its RMP requirements with OSHA's PSM standard (with one commenter pointing out that it is required by § 122(r)(7) (0184, 0188, 0215, 0217, 0229, 0233, 0234, 0237, 0238, 0253, 0272). A few commenters requested that EPA work closely with OSHA to ensure that the RMP and PSM regulatory programs remain complementary (0232, 0237, 0275). One commenter noted that there is no pending PSM proposal from OSHA that is available for public comment, much less a final rule. The commenter added that rushing to revise RMP ahead of OSHA's review would create more confusion, burdens, and potential safety risks for covered facilities, Local Emergency Planning Committees (LEPCs), and communities (0272).

Several commenters specifically noted instances of the duplicative requirements in the proposed rule and OSHA PSM standards (0217, 0234, 0237, 0245).

A couple of commenters noted that EPA's proposed rule amends what is necessary in site evaluations and pointed out that facilities covered by OSHA's PSM regulations already undergo similar facility siting requirements; the commenters stated that implementing this would be unnecessary and duplicative while creating opportunities for inconsistent enforcement between EPA and OSHA. The commenters expressed concern that requirements to coordinate with LEPCs in EPA's proposal would conflict with current OSHA regulations, are duplicative, and make it more difficult for facilities to comply. The commenters also stated that there should be one standard that facilities look to in order to ensure compliance and urged EPA to work with OSHA in the adoption of any new regulations related to emergency response (0217, 0234).

Some commenters pointed out that the requirement to include employees in written plans of action in EPA's proposal is duplicative of PSM as this is already required in PHAs. The commenters recommended that this requirement not be added to RMP regulations (0217, 0234, 0237).

> **EPA Response:** EPA believes that the facility siting regulatory text changes finalized today are compatible and do not conflict with the prevention provisions of OSHA's PSM regulations. Rather than propose additional requirements, EPA is instead expounding on the current regulatory text to ensure that siting evaluations properly account for hazards resulting from the location of processes, equipment, building, and proximate facilities, and their effects on the surrounding community. Further, EPA disagrees with comments that implementing the facility siting requirements would create the opportunity for inconsistent enforcement between EPA and OSHA. The OSHA PSM standard and RMP rule both require that facility siting be addressed as one element of a PHA (29 CFR 1910.119(e)(3)(v) and 40 CFR 68.67(c)(5)). In response to comments on the proposed PSM rule, OSHA indicated that facility siting should always be considered during PHAs and therefore decided to emphasize this element by specifically listing siting evaluation in regulatory text. EPA's approach to the siting requirement is consistent with its general approach to PSM in the 1996 RMP rule: sound, comprehensive PSM systems can protect workers, the public, and the environment. Therefore, compliance with RMP as amended by SCCAP and PSM and other relevant OSHA regulations should be possible. Lastly as with any RMP provision, if a regulated source is already subject to another requirement that duplicates a requirement found in the final rule, the source may use its compliance

with that other requirement to demonstrate compliance with the equivalent requirement in part 68.

Further, for many years, EPA and OSHA have established a regular meeting to consult with the DOL and coordinate the PSM and RMP programs, including but not limited to interpretation of overlapping regulatory provisions and the development of potential amendments to the rules. During several of these regular meetings (including but not limited to meetings on various dates in Appendix A to this document), staff from the agencies discussed the development of the RMP SCCAP Rule and potential issues to be addressed by EPA, and OSHA's intent to convene an informal stakeholder meeting in October 2022, as it explored potential regulatory amendments.

Each agency has distinct rulemaking procedures and the statute itself contemplates that the rulemakings may proceed on different schedules. OSHA's rulemaking under section 304 of the CAAA of 1990 was due within 1 year of enactment, while EPA's list rule was due 2 years after enactment and the RMP rule was due 3 years after enactment. Due to the statutory structure, it is not unreasonable for there to be some lack of synchronous process. Nevertheless, EPA has coordinated, and will continue to coordinate, with OSHA on revisions to the RMP rule and PSM standard to ensure RMP provisions do not contradict OSHA PSM requirements.

Regarding comments requesting that EPA withdraw its rulemaking and coordinate more closely with OSHA, EPA notes that it did coordinate with OSHA in the development of the proposed and final rules. However, EPA does not believe it is necessary for the Agency to conduct its rulemaking on exactly the same timeline as OSHA.

More specific comments related to overlap with OSHA

Comment 1.4-02: One commenter noted that the chemicals and processes used in manufacturing bleached pulp and paper products are regulated by OSHA's PSM program and requested that the RMP rule be harmonized with PSM requirements (0238).

EPA Response: EPA acknowledges that many chemicals and processes regulated by EPA RMP are also regulated by OSHA PSM, as has been the case since the inception of both programs. Nevertheless, EPA and OSHA have separate mandates under the Occupational Safety and Health Act (29 U.S.C. 651), the CAA, and the requirements enacted in the CAAA. In the 1990s, both Agencies fulfilled their mandatory duties to promulgate and issue the rules required by CAA sections 112(r)(3)-(5) and 112(r)(7)(B), as well as section 304 of the CAAA. The focus of OSHA's regulations in the PSM standard is on workplace safety, while EPA's focus in the RMP regulations has been primarily on minimizing the public impacts of accidental releases through prevention and response. Today's rule maintains EPA's focus on minimizing the public impacts of accidental releases even as it also reduces impacts on facilities and workers. As explained throughout the proposal and in this final action, the OSHA PSM standard and EPA RMP regulations are closely aligned in content, policy interpretations, and enforcement.

Further, for many years, EPA and OSHA have established a regular meeting to consult with the DOL and coordinate the PSM and RMP programs, including but not limited to interpretation of overlapping regulatory provisions and the development of potential amendments to the rules. During several of these regular meetings (including but not

limited to meetings on various dates in Appendix A to this document), staff from the agencies discussed the development of the RMP SCCAP Rule and potential issues to be addressed by EPA, and OSHA's intent to convene an informal stakeholder meeting in October 2022, as it explored potential regulatory amendments.

The RMP SCCAP rule does not subject additional chemicals or pulp and paper processes to the coverage by the RMP rule. NAICS 322 is not subject to the new STAA provisions. The only impacts on NAICS 322 processes would be from provisions that apply generally to Program 3 processes.

Other regulatory overlap comments

Comment 1.4-03: One commenter noted that EPA's proposed rule preamble doesn't mention significant regulatory programs of the Mine Safety and Health Administration (MSHA) which has a safety program that goes above and beyond what even OSHA requires to provide significant additional protections to mine workers. The commenter expressed support for not including additional protections for MSHA-regulated facilities in EPA regulation (0213).

EPA Response: These comments are outside of the scope of the proposed rule.

Comment 1.4-04: One commenter encouraged EPA to expand its efforts to ensure consistency and alignment of regulatory requirements with other programs including the Safe Drinking Water Act (SDWA) and America's Water Infrastructure Act (AWIA) to eliminate discrepancies, inconsistencies and ensure the cost of compliance will result in clear and commensurate benefits (0230).

EPA Response: The Agency notes that it is unclear from the submitted comment what specific discrepancies and inconsistencies exists that are cause for concern. Further, this final rule provides prevention program provisions reasonably calculated for facilities handling dangerous chemicals to prevent potentially catastrophic incidents. Because other EPA program requirements may have other purposes, it is not expected that provisions from other EPA programs will completely align. Nevertheless, to reduce administrative burden a facility is welcome to augment compliance with other similar programs to also comply with RMP.

Comment 1.4-05: Several commenters recommended that EPA amend 40 CFR § 68.215 so Title V air permits assure full RMP compliance to ensure that people living near RMP facilities that are also major sources of air pollution receive the full benefit of the Title V Clean Air Act (CAA) operating permit process (0270, 0409, 0413, 0219, 0264, 0456, 0460). A couple of commenters stated that such an action would increase enforceability, corrective action and accountability and assure full RMP compliance (0409, 0460). One commenter suggested that EPA simply include the monitoring and reporting that EPA adds in the new RMP rule as terms and conditions in a permit. The commenter noted that doing so would retain EPA's authority to review and determine whether to object to a permit for failure to incorporate the RMP rule and plan (0456).

Other commenters stated that prompt implementation and compliance design should be built into new rules so that air permits for major sources regulated by the RMP must include safety plans and incident reports (0413, 0208). Some commenters asked EPA to assure CAA Title V implementation of the RMP occurs rather than treat the RMP program as less important than other applicable clean air requirements, by revising 40 CFR § 68.215 so that permits for major air pollution sources that are also RMP facilities have sufficient terms to assure compliance with

the RMP rule, including adequate monitoring and reporting requirements (0219, 0270, 0456, 0460).

A couple of commenters stated that fully incorporating the RMP requirements under Title V would make the RMP requirements more understandable and more enforceable by community members and local governments by allowing community members to comment on and seek an EPA objection if the RMP was not fully implemented in the permit. Also, the commenters noted that including the RMP fully in Title V permits would give air permitting authorities more information and ability to assist with oversight of compliance, including by adding additional monitoring or reporting where there is need to do so to assure compliance and it would also allow air permitting authorities to simply implement the RMP rule and plan like other EPA clean air rules, and state implementation plans without adding any requirements if not needed (0456, 0460). One of the commenters said that incorporating RMP requirements under Title V would give States, local governments, workers, and community members the ability to enforce the RMP rules (0460).

One commenter stated that, given the significant problems under the existing RMP rule and the need for stronger compliance assurance to be built into the rules, the commenter urged EPA to reevaluate the old permitting rule (40 CFR § 68.215) and recognize that stronger implementation is needed under Title V. The commenter suggested a tailored approach to strengthen compliance at some of the most hazardous RMP facilities that are also major air sources subject to Title V (about 1,891 in the May 2021 RMP Database). The commenter added that it would apply to the industry sectors with the highest accident rates, e.g., petroleum refineries, chemical manufacturers, and pulp and paper mills – most of which are major air sources subject to Title V. The commenter asserted making this change would advance the prevention objective of § 112(r) and the goal of making the Title V permit the primary CAA blueprint or unified compliance guide for all sources, state permitting authorities, and the public. Without this change, the commenter said, the RMP will continue to be a neglected, harder to enforce, lower compliance program – which is directly contrary to the goal of CAA § 112(r) (0460).

> **EPA Response:** These comments are outside of the scope of the proposed rule.

Comment 1.4-06: One commenter specifically stated that while they support EPA efforts to improve process safety at regulated facilities, the proposed rule conflicts with New Jersey regulations in some areas. (0185).

> **EPA Response:** When developing this rulemaking, EPA had the authority to include multiple factors when determining what is reasonable, such as frequency of RMP accidents or proximity to both nearby communities and other RMP facilities that could, as a result, make the communities and other facilities be more susceptible when it comes to being exposed to a worst-case scenario. EPA acknowledges that certain aspects of the final rule's requirements may or may not appear in other regulations that cover limited subsets of regulated facilities.

1.5 General applicability

General applicability comments

Comment 1.5-01: One commenter said that applicability of the different Program Levels in RMP regulations should be based on four factors: product, threshold quantity, type of process the facility does and whether it is near population centers. The commenter urged EPA to focus on

the location of the facility noting that facilities located closer to more populated areas storing an RMP regulated product above the TQ are likely to pose a greater risk of causing death, injury, or serious adverse effect, while facilities located in more rural areas with lower populations are likely to pose a lower risk (0227).

> **EPA Response:** The current RMP rule defines three Program levels based on processes' relative potential for public impacts and the level of effort needed to prevent accidents. EPA believes these factors the commentor suggests are to an extent embedded in how EPA currently defines Program Levels. For more details see, 40 CFR 68.10(g)-(i).
>
> Further, in this final rule, EPA is emphasizing the regulatory requirement to evaluate hazards associated with stationary source siting. EPA agrees that amending the regulatory text to make more explicit the requirement that process hazard evaluations for both Program 2 (hazard review) and Program 3 (PHA) include in the siting evaluation the placement of processes, equipment, buildings, and hazards posed by proximate facilities, and accident release consequences posed by proximity to the public, will help ensure the protection of human health and the environment. As discussed in the proposal, siting of processes and equipment within a stationary source can impact the surrounding community, not only through the proximity of the accidental release to offsite receptors adjacent to the facility boundary (e.g., people, infrastructure, environmental resources), but also through increasing the likelihood of a secondary ''knock-on'' release by compromising nearby processes. Accidental releases caused by a release or accident at a second process or facility is commonly referred to as a "knock-on" release or incident. Knock-on effects are a well-recognized industry release scenario.[7]

Comments on the applicability of the proposed rule to specific industries

Comment 1.5-02: One commenter supported the current criteria used by EPA to determine the Program Level for certain processes and facilities and the existing Program Level 2 requirements for agricultural retail facilities as it usually invokes the storage and handling of a single product —anhydrous ammonia. The commenter added that the storage and handling of anhydrous ammonia are relatively simple compared to complex processing involving multiple chemicals at a manufacturing facility. The commenter also noted that adding significant additional regulatory requirements on agricultural retailers could reduce availability of a critical fertilizer product (0227).

> **EPA Response:** EPA appreciates the commenters' support.

Comment 1.5-03: One commenter suggested EPA focus on the types of products being stored at a facility, rather than focusing on the type of ownership of the facility. The commenter stated that, for example, when anhydrous ammonia is held by farmers, it is exempt from all provisions of the RMP regulations. The commenter pointed out that there are many large farming operations storing as much or more anhydrous ammonia than an independent agricultural retail dealer, adding that the risk of accidental release from anhydrous ammonia is as great or greater from these nonregulated facilities. The commenter stated that exemptions for farmers should be repealed (0227).

> **EPA Response:** These comments are outside of the scope of the proposed rule.

[7] As described in CCPS, *Guidelines for Siting and Layout of Facilities, 2nd Edition* (Hoboken, NJ: Wiley, 2018), *https://www.aiche.org/ccps/resources/publications/books/guidelines-siting-and-layout-facilities-2ndedition*.

Comment 1.5-04: One commenter stated that when reading the general applicability of the proposed rule, it was unclear if tank farms would be required to submit an RMP, since oil and gas production facilities are exempt. However, the commenter stated that if gasoline or jet fuel tank farms are exempt, they request that they be added to the list of industries covered by the RMP (0160).

Another commenter requested clarification concerning the nature of facilities to which the proposed rule would apply, asking if the proposed rule would apply to large-scale agricultural operations. The commenter pointed out that farmworkers often live nearby or on-site of these operations (0406).

One commenter asked EPA to clarify by response to comment and/or preamble discussion that biogas from the anaerobic digestion of dairy and swine that is stored in a digester is exempt due to qualifying as reservoirs of naturally occurring hydrocarbons and/or due to non-volatile flammability characteristics analogous to exempt Naturally Occurring Hydrocarbon Mixtures. The commenter also pointed out that EPA does not define naturally occurring hydrocarbon reservoirs in the regulations, noting that a digester should qualify as a reservoir. To support their assertion, the commenter presented a technical analysis that confirmed dairy and swine biogas have a low potential for vapor cloud explosion and thus should be exempt (0206).

> **EPA Response:** Table 1 in the proposed and final rule preambles provide industrial sectors and the associated North American Industry Classification System (NAICS) codes for entities potentially affected by the final action as there are many factors that determine RMP applicability such as the type of facility, regulated substance, threshold quantity, type of process and consideration of exemptions. The SCCAP rule does not alter the applicability of the RMP rule. Please refer to 40 CFR Part 68.10 to determine applicability to the RMP rule. EPA's guidance[8] and contacting RMP regional contacts[9] should also be useful in determining applicability.

Comment 1.5-05: One commenter requested that EPA remove North American Industry Classification System (NAICS) codes 32741 and 212312 from the applicability section of the RMP rule since the commenter is not aware of any significant accidents involving EPA regulated substances above threshold quantities at lime plants or the limestone quarries that supply them (0213).

> **EPA Response:** CAA section 112(r)(7)(B) requires the RMP rule to apply to all stationary sources with more than a threshold quantity of a regulated substance. Certain types of processes have specific exemptions in the statute (see CAA 112(r)(4)(B)) while EPA is permitted to exempt substances when held under certain conditions (see CAA 112(r)(5)). Nothing in the statute provides authority to exempt either NAICS 32741 or 212312 from the general applicability provisions.
>
> The fact that accidents continue to occur shows that we still have reason to exercise statutory authority to promulgate reasonable regulations to provide for the prevention and detection of those accidents to the greatest extent practicable when the opportunity exists to improve the performance of our regulatory program. When determining what is "reasonable" when developing regulations under CAA section 112(r)(7)(B)(i), EPA acknowledges that some facilities are less likely to have an accidental release than others

[8] https://www.epa.gov/sites/default/files/2013-10/documents/chap-01-final.pdf
[9] https://www.epa.gov/rmp/epa-regional-rmp-contacts

and that the statute gives the Agency the authority to distinguish among classes of facilities. When developing this rulemaking, EPA therefore had the authority to include multiple factors when determining what is reasonable, such as frequency of RMP accidents or proximity to both nearby communities and other RMP facilities that could, as a result, make the communities and other facilities be more susceptible when it comes to being exposed to a worst-case scenario. For example, as mentioned in the proposed rulemaking, the per facility accident rate between 2016 and 2020[10] for all regulated facilities was 3 percent (n = 382 facilities reporting at least one accident out of 12,855 unique facilities reporting between 2016 and 2020), the sector accident rates (number of unique facilities with accidents per sector divided by the number of unique facilities in each sector) for petroleum and coal manufacturing were seven times higher (23 percent, n = 41 out of 177) and two times higher for chemical manufacturing (6 percent, n = 96 out of 1631). Also, based on accidents occurring between 2016 and 2020, communities located near facilities in NAICS 324/325 that are located within 1 mile of another 324/325 facility are 1.5 times more likely to have been exposed to accidents at these facilities as compared to communities near facilities in NAICS 324/325 that are not located within 1 mile of another 324/325 facility (87 FR 53578)[11]. Also mentioned in the proposed rulemaking, these surrounding communities would benefit from rule-based prevention prior to incidents, rather than the case-by-case oversight approach of the 2019 reconsideration rule (87 FR 53565).

Comment 1.5-06: One commenter suggested that EPA provide an exemption for batch manufacturing processes from provisions of the rule related to STAA, third-party audits, and fenceline monitoring because these provisions will not have a positive impact and waste resources better directed by the facility (0275).

EPA Response: EPA disagrees with the suggestion to exempt batch toll manufacturers from specific requirements. In regard to STAA, safer technology alternatives include many options beyond chemical substitution. IST could involve minimization of stored raw material chemicals, making process changes that make it less likely to release the chemical (moderation), or reducing complexity in the process that could make accidents more likely (simplification). Therefore, even where a contractual relationship or regulation requires a regulated batch toll manufacturing facility to use a particular regulated substance in specified quantities, owners and operators of batch toll manufacturing facilities should still consider other potential IST measures besides

[10] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

[11] In the SCCAP proposal, EPA acknowledged the likelihood of late-reported accidents affecting the last few years of data. Based on its prior experience, EPA judged that there would be a slight increase in the number of accidents in the last few years of data.

chemical substitution. Toll manufacturers may use RMP chemicals for purposes in addition to making a formulated product, such as for cleaning equipment, wastewater treatment or refrigeration, for which chemical substitution may not be prohibited by regulation or contractual relationship.

Additionally, under the STAA requirements applicable facilities would still need to consider and implement, if practicable, other safeguards to reduce risks, including at least one passive measure, or an inherently safer technology or design, or a combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure. EPA believes that measures lower on the hierarchy of controls, passive, active and procedural measures, when implemented appropriately, can be used to help operate a hazardous chemical process safely and can also reduce hazard risks of that process. When compared with IST, these measures could also more likely be added, modified, and improved at variable chemical operations such as batch toll manufacturing facilities.

In regard to third-party audits, EPA is finalizing an approach that allows owners or operators to meet their third-party auditing obligations either by:

- Engaging third-party auditors meeting all applicable competency and independence criteria, as originally proposed, or
- By assembling an auditing team which is led by a third-party auditor but may include other audit team members. The audit team may be comprised of:
    - A team leader – this must be an employee of the third-party auditor firm who meets all of the competency and independence criteria of the rule;
    - Other employees of the third-party auditor firm – these personnel must meet the independence criteria of the rule; and
    - Other personnel not employed by the third-party auditor firm (e.g. facility personnel or employees of another consulting firm with specialized expertise) – these personnel are not required to meet the competency and/or independence criteria of the rule.

EPA believes that allowing facility personnel and other knowledgeable but independent contractors and consultants to participate in the audit would improve the audit teams' performance and outcomes. This approach will allow qualified personnel with critical sector or facility-specific experience to participate in the audit and enable facility personnel to provide input during the compliance audit. EPA also notes that having a third-party conduct a compliance audit does not preclude the facility from conducting an in-house compliance audit in tandem. If the goal is to ensure that preventative measures are in place to prevent future accidents, EPA hopes that a facility would want to implement all such measures to ensure it is compliant.

EPA further notes that these independence requirements were simplified and streamlined from the 2017 rule, which included a limitation for auditors who conducted consulting type services for the owner or operator within the last two years, or for a period of at least 2 years following the audit report. EPA believes the provision, as adopted, ensures additional available independent auditors to act in an independent and impartial manner, allowing more flexibility in choosing auditors.

Lastly, as stated in the SCCAP proposal, EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. While EPA is considering this issue for a future action, it is beyond the scope of this rulemaking.

Comment 1.5-07: Citing the water sector's demonstrated record of safety under the existing RMP rule, another commenter asked how additional regulatory requirements could meaningfully reduce the risk or reportable incidents beyond the sector's extremely low baseline. The commenter called on EPA to recognize differences in water sector size, operations, processes, class, and categories of sources when developing the RMP requirements and provide additional regulatory flexibilities. The commenter added that new regulatory requirements that constrain operational choices regarding water contamination control technologies must be carefully weighed again a continued ability to provide these services without compromising public health. The commenter recommended that EPA tailor the RMP regulatory requirements to account for the water sector's differentiated characteristics. The commenter added that this approach would classify facilities under NAICS codes 22131 and 22132 under a "lowest risk" subset of EPA's existing "simple process" category (0239).

EPA Response: Initially, EPA notes that the requirements related to STAA only apply within the chemical manufacturing sector and the petroleum refining sector, not the water sector. Furthermore, the requirements related to root cause incident investigation and third-party audits only apply to sources that have had accidental releases. Thus, regardless of accident history of the water sector, only those facilities within the sector with a demonstrated record of safety failures will be impacted by these major changes to the prevention program. There are no constraints on technologies for the water sector under the new regulatory requirements. To the extent that water facilities meet the criteria for Program 1, the "lowest risk" program level, individual facilities may comply with that program for their prevention and response activities. With respect to Program 2 and Program 3 classification, while generally Program 2 facilities experience fewer accidents based on historic accident rates, the classification of water facilities as Program 2 or Program 3 processes depends on whether the state has an authorized OSH program rather than risk water treatment processes present. Retaining water facilities as Program 3 when otherwise a PSM program would apply generally simplifies compliance for regulated sources.

The fact that accidents continue to occur shows that we still have reason to exercise statutory authority to promulgate reasonable regulations to provide for the prevention and detection of those accidents to the greatest extent practicable when the opportunity exists to improve the performance of our regulatory program. When determining what is "reasonable" when developing regulations under CAA section 112(r)(7)(B)(i), EPA acknowledges that some facilities are less likely to have an accidental release than others and that the statute gives the Agency the authority to distinguish among classes of facilities. When developing this rulemaking, EPA therefore had the authority to include multiple factors when determining what is reasonable, such as frequency of RMP accidents or proximity to both nearby communities and other RMP facilities that could, as a result, make the communities and other facilities be more susceptible when it comes to being exposed to a worst-case scenario. For example, as mentioned in the proposed

rulemaking, the per facility accident rate between 2016 and 2020[12] for all regulated facilities was 3 percent (n = 382 facilities reporting at least one accident out of 12,855 unique facilities reporting between 2016 and 2020), the sector accident rates (number of unique facilities with accidents per sector divided by the number of unique facilities in each sector) for petroleum and coal manufacturing were seven times higher (23 percent, n = 41 out of 177) and two times higher for chemical manufacturing (6 percent, n = 96 out of 1631). Also, based on accidents occurring between 2016 and 2020, communities located near facilities in NAICS 324/325 that are located within 1 mile of another 324/325 facility are 1.5 times more likely to have been exposed to accidents at these facilities as compared to communities near facilities in NAICS 324/325 that are not located within 1 mile of another 324/325 facility (87 FR 53578)[13]. Also mentioned in the proposed rulemaking, these surrounding communities would benefit from rule-based prevention prior to incidents, rather than the case-by-case oversight approach of the 2019 reconsideration rule (87 FR 53565).

Comment 1.5-08: Pointing to current data on incidents by NAICS or industry sector code showing reported human or ecological harm, another commenter stated that the data show that EPA must ensure strong new prevention measures to cover the chemical manufacturing sector, petroleum refinery and oil and gas sector, pulp and paper sector, farm supplies and industrial agricultural sector (including fertilizer and pesticide production), and the water supply and sewage treatment sector. The commenter added that each of these sectors have some of the largest share of reported harm incidents. The commenter added that EPA should provide protection for more people and more communities from chemical disasters by expanding the program's coverage to more chemicals and hazardous facilities, including their distribution network (0456).

EPA Response: When major concerning RMP accidents, including major accidents, continue to occur as they have, it is EPA's responsibility to further protect human health and the environment, if there are reasonable opportunities to do so. Many of the amendments being finalized in the SCCAP final rule, some stronger than what was proposed, were informed by commenters, including many that suffer the consequences of accidents occurring at RMP facilities or work in RMP-covered processes. The amendments are also informed by RMP accident data which indicate trends in accident occurrence.

[12] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

[13] In the SCCAP proposal, EPA acknowledged the likelihood of late-reported accidents affecting the last few years of data. Based on its prior experience, EPA judged that there would be a slight increase in the number of accidents in the last few years of data.

For example, for the final rule, EPA is expanding the initial STAA evaluation to all Program 3 facilities with NAICS 324 and 325 processes. EPA believes that high RMP accident frequency among NAICS 324 and 325 processes as shown by recent data[14] presented in the proposed rule, is reasonable justification for requiring RMP owners and operators to evaluate safer technologies and alternatives to help prevent accidental releases. EPA notes that because it has provided justification for applying the STAA requirement to facilities with NAICS 324 and 325 processes, it does not believe that the final provisions have been limited arbitrarily, or that the Agency's decision to limit applicability of the STAA provisions to the petroleum refining and chemical manufacturing sectors implies that other sectors do not have viable safer technology alternatives. EPA notes that sources involved in complex manufacturing operations have the greatest range of opportunities to identify and implement safer technologies, particularly in the area of inherent safety, because these sources generally produce, transform, and consume large quantities of regulated substances under sometimes extreme process conditions and using a wide range of complex technologies. Therefore, such sources can often consider the full range of inherent safety options, including minimization, substitution, moderation, and simplification, as well as passive, active, and procedural measures. Further, EPA notes that RMP facilities in the selected sectors have been responsible for a relatively large number of accidents, deaths, injuries, and property damage and have significantly higher accidents rates as compared to other sectors. Refineries and chemical manufacturer facilities that have had accidents in the past 5 years, are responsible for 42% of the total accidents from RMP-covered sources over the period from 2016-2020, and 83% of the accident damage, which supports additional requirements beyond STAA (i.e., a practicability assessment and the implementation requirement). Concentrating the most demanding requirements on this subset of sources recognizes the track record of heightened risk presented by these sources to their nearby communities. Other sectors, including those mentioned by the commentor, such as industrial agriculture and the water supply and sewage treatment sectors have had lower accident rates (i.e., average number of accidents per facility) in the past 5 years when compared to the refining and chemical manufacturing sectors.[15] The pulp and paper sector (NAICS 322) is an exception to the lower accident rate; however EPA did not apply STAA to this sector based on the overall small number of accidents at these facilities in the last 5 years.

Comment 1.5-09: One commenter, citing data from the Technical Background Document, questioned the need for RMP requirements for the fossil-based power generation industry given the rare incidence of accidents and the increasing retirement of old and inefficient coal-based electric generating units in the U.S. (0244).

EPA Response: The fact that accidents continue to occur shows that we still have reason to exercise statutory authority to promulgate reasonable regulations to provide for the prevention and detection of those accidents to the greatest extent practicable when the opportunity exists to improve the performance of our regulatory program. When

[14] Such data are also consistent with accident frequency data that formed part of the basis for the STAA applicability provisions in the 2017 Amendments rule. See 81 Fed. Reg. 13668-69 (March 14, 2016) (Amendments rule NPRM); 82 Fed. Reg. 4632-34 (January 13, 2017).

[15] Regulatory Impact Analysis: Safer Communities by Chemical Accident Prevention: Final Rule, Exhibit 3-13. This document is available in the docket for this rulemaking (EPA-HQ-OLEM-2022-0174).

determining what is "reasonable" when developing regulations under CAA section 112(r)(7)(B)(i), EPA acknowledges that some facilities are less likely to have an accidental release than others and that the statute gives the Agency the authority to distinguish among classes of facilities. When developing this rulemaking, EPA therefore had the authority to include multiple factors when determining what is reasonable, such as frequency of RMP accidents or proximity to both nearby communities and other RMP facilities that could, as a result, make the communities and other facilities be more susceptible when it comes to being exposed to a worst-case scenario. For example, as mentioned in the proposed rulemaking, the per facility accident rate between 2016 and 2020[16] for all regulated facilities was 3 percent (n = 382 facilities reporting at least one accident out of 12,855 unique facilities reporting between 2016 and 2020), the sector accident rates (number of unique facilities with accidents per sector divided by the number of unique facilities in each sector) for petroleum and coal manufacturing were seven times higher (23 percent, n = 41 out of 177) and two times higher for chemical manufacturing (6 percent, n = 96 out of 1631). Also, based on accidents occurring between 2016 and 2020, communities located near facilities in NAICS 324/325 that are located within 1 mile of another 324/325 facility are 1.5 times more likely to have been exposed to accidents at these facilities as compared to communities near facilities in NAICS 324/325 that are not located within 1 mile of another 324/325 facility (87 FR 53578)[17]. Also mentioned in the proposed rulemaking, these surrounding communities would benefit from rule-based prevention prior to incidents, rather than the case-by-case oversight approach of the 2019 reconsideration rule (87 FR 53565).

CAA section 112(r)(7)(B) requires the RMP rule to apply to all stationary sources with more than a threshold quantity of a regulated substance. Certain types of processes have specific exemptions in the statute (see CAA 112(r)(4)(B)) while EPA is permitted to exempt substances when held under certain conditions (see CAA 112(r)(5)). Nothing in the statute provides authority to exempt fossil-based power generation industry from the general applicability provisions.

Suggestions for a performance-based or compliance-based approach

Comment 1.5-10: Several commenters suggested that instead of requiring new regulations for all facilities covered by RMP, EPA should instead focus on facilities that are noncompliant and/or experiencing the majority of accidents. The commenters stated that a compliance-driven approach would accomplish EPA's regulatory objectives without burdening regulated facilities

[16] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

[17] In the SCCAP proposal, EPA acknowledged the likelihood of late-reported accidents affecting the last few years of data. Based on its prior experience, EPA judged that there would be a slight increase in the number of accidents in the last few years of data.

(0180, 0205, 0226, 0458, 0275). Some of the commenters also pointed out that when applying the 3% accident rate for facilities between 2016 to 2020 to the 11,740 total facilities, only about 350 facilities experienced accidents in that timeframe, adding that this number is an overestimate as it does not account for facilities with multiple releases (0180, 0205, 0226, 0458).

One commenter suggested that instead of wholesale or sector-wide regulatory revisions, EPA should consider a more robust inspection and compliance assistance approach to ensure the existing regulations are properly implemented at outlier facilities. The commenter stated that the RMP data show the existing rule is effective. The commenter pointed out that when incidents do occur, they have been concentrated among just a few facilities--RMP-reportable accidents occurred at only 3% of all RMP covered facilities. The commenter added that EPA also reported that only 0.5% of all facilities had multiple accidents in the preceding 5-years, which represents an improvement over the 2% of facilities reporting multiple accidents in the 10-year period noted in the 2019 rule. The commenter stated that as a practical matter, EPA's proposal to overhaul the RMP regulations is not going to help facilities continue the downward trend of incidents (0268).

One commenter asked EPA to consider if it should issue more targeted regulations aimed at particular facilities that pose a larger threat to public safety or have specific concerns that are not addressed by the existing regulations (0239).

Several commenters suggested that EPA adopt a severe violator enforcement program like the one in place at OSHA. The commenters noted that this focus would make EPA's efforts more concentrated and effective while not unduly burdening compliant facilities (0180, 0205, 0226, 0458).

> **EPA Response:** EPA agrees assistance, outreach, and enforcement will help ensure compliance with the rule. For example, enforcement of the RMP regulation has and will continue to occur. Because of that fact, EPA expects most facilities will proactively make the necessary prevention improvements in order to comply with the rule and thus avoid enforcement. Enforcement of RMP facilities remains an Agency priority, as indicated by its adoption as a National Enforcement and Compliance Initiative (NECI) since 2017. The goal of this NECI is to reduce the risk to human health and the environment by decreasing the likelihood of chemical accidents. Activities under the initiative include having regulated facilities and industry associations work to improve safety; increase compliance with RMP; and promote coordination and communication with State and local responders and communities. The capacity built by the NECI will continue to benefit oversight by EPA and its partner implementing agencies even after the NECI.
>
> However, when major concerning RMP accidents, including major accidents, continue to occur as they have, it is EPA's responsibility to further protect human health and the environment, if there are reasonable opportunities to do so. Many of the amendments being finalized in this action, some stronger than what was proposed, were informed by commenters, including many that suffer the consequences of accidents occurring at RMP facilities or work in RMP-covered processes. The amendments are also informed by RMP accident data which indicate trends in accident occurrence. For example, as discussed in the proposal, recent accidents highlight that while the annual count of accidents decreased overall between 2016 and 2020,[18] in 2019, the TPC Group (TPC)

[18] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the

explosion and fire in Port Neches, Texas, reported the largest number of persons ever evacuated (50,000 people) as the result of an RMP-reportable incident, as well as $153 million in offsite property damage.[19] EPA did not conduct an inspection at TPC just prior to this accident because as indicated in the 2019 reconsideration rule, EPA prioritizes inspections at facilities that have had accidental releases. TPC had no recent prior RMP accidental release and was not otherwise due for inspection under EPA's routine oversight plan. Therefore, we believe our current enforcement resources, and even prioritizing inspections, are not capable of effectively addressing accident-prone facilities without additional regulatory requirements mandates.

While large events are rare, CAA section 112(r) was intended as a prevention program for large catastrophic releases as well as more common accidental releases. Post-event compliance measures such as outreach and enforcement are "too little, too late" for such large, but rare, events. Therefore, this final rule provides additional prevention program provisions reasonably calculated for stationary sources handling dangerous chemicals to prevent potentially catastrophic incidents. EPA therefore believes the provisions of this final rule will be generally effective to help improve chemical process safety by preventing accidents that result in harm and damage; assist in planning, preparedness, and responding to RMP-reportable accidents; and improve public awareness of chemical hazards at regulated sources. Thus, these are necessary updates to the existing RMP rule to ensure chemical accident prevention and mitigation. Further, while many of the provisions of this final rule reinforce each other, it is EPA's intent that each one is merited on its own, and they are thus severable.

General comment in support of expanding coverage

Comment 1.5-11: A few commenters requested that EPA expand coverage of the rules to more facilities and more chemicals and reduce the chemical thresholds for RMP coverage (0241, 0270, 0448). The commenters asked EPA to expand the coverage of facilities so that a facility covered in part under the RMP must be covered in full. The commenters pointed out that incidents have occurred at facilities that are only partially covered which have caused fires and explosions involving the rest of the facility; the commenters concluded that EPA must expand coverage so any facility covered in part is fully covered by the RMP rules (0240, 0241, 0270, 0456).

One commenter urged EPA to revise the definition of "covered facility" to provide a fenceline-to-fenceline approach, to ensure sites with regulated materials are required to comprehensively account for the full range of potential consequences associated with an incident or release of hazardous chemicals. The commenter pointed to the Environmental Justice Health Alliance for

RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

[19] The U.S. Chemical Safety Board's TPC incident investigation report outlines the safety issues contributing to the incident, conclusions, recommendations, and key lessons for the industry. *https://www.csb.gov/tpc-port-neches-explosions-and-fire/*

Chemical Policy Reform that states "the assumption that a potential fire, explosion or other major incident will only involve one chemical, or one part of the facility, is absurd" (0241).

EPA Response: These comments are outside the scope of the proposed rule.

Comment 1.5-12: One commenter stated that the TQ of many of the regulated hazards are unreasonably high, adding that the high TQ exempts many facilities from RMP requirements, leading to accidents that could have been mitigated (0456).

EPA Response: These comments are outside the scope of the proposed rule.

Comments on the definition of "stationary source"

Comment 1.5-13: Several commenters asked EPA to redefine the definition of "stationary source" so the entire facility must comply with RMP requirements if any part of it is covered (0208, 0240, 0270, 0449).

One commenter urged EPA to continue to recognize that more dilute solutions and mixtures of Hydrogen chloride (HCl) and HF do not present facility risks warranting inclusion in the RMP program and maintain EPA's current threshold concentrations and volumes for HCl and HF. The commenter stated that, while HCl and HF are both regulated substances under EPA's RMP regulations, steel manufacturers have generally not been subject to the RMP standard because they use HCl and HF in concentrations lower than the threshold concentrations (37% for HCl and 50% for HF). The commenter stated the 1995 establishment of the 50% threshold concentration for HF and the 1997 establishment of a threshold concentration for HCl at 37% based on a finding that lower concentrations of HF did not present risks that warranted triggering RMP program coverage. The commenters claimed that extending the RMP program to low-risk facilities that only use more dilute concentrations of HCl and HF would create regulatory inconsistency and confusion without improving industrial safety. The commenter supported the Agency's proposed rule recognizing that no new evidence or data exists called into question the protectiveness of the current threshold RMP concentrations for HF and HCl (0212).

EPA Response: These comments are outside the scope of the proposed rule.

2 Natural Hazards

Comments associated with this issue are discussed in the sub-issues below.

2.1 Proposed approach

General comments on the natural hazard assessments requirement

Comment 2.1-01: Many commenters expressed support for EPA requiring facilities to conduct natural hazard assessments, since natural hazards have the potential to initiate accidents at RMP facilities (0139, 0141, 0158, 0160, 0173, 0177, 0192, 0194, 0203, 0204, 0208, 0209, 0216, 0219, 0221, 0228, 0235, 0240, 0241, 0247, 0249, 0250, 0252, 0254, 0255, 0257, 0258, 0264, 0266, 0269, 0270, 0392, 0402, 0409, 0413, 0444, 0447, 0448, 0456, 0460). A few commenters asserted that natural hazard assessments can protect workers and surrounding communities (0245, 0460).

One commenter suggested that EPA require that RMP facilities act to address all natural hazard threats as they will only worsen in the face of climate change. The commenter also suggested that the requirement should apply to all RMP facilities (0270). One commenter identified

concerns of public health impacts from wildfires that may impact RMP facilities (0177). Another commenter mentioned the need to prepare facilities for future climate impacts (0452) Another commenter described the risk of a catastrophic event caused not only by accidents and human error, but also from terrorism and natural disasters, which the commenter claimed cannot be mitigated (0248).

Several commenters expressed opposition to the inclusion of natural hazard assessments in the proposed rule due to unclear language, impractical requirements, or duplications with other rules (0125, 0180, 0181, 0184, 0190, 0197, 0205, 0207, 0215, 0217, 0223, 0226, 0229, 0230, 0232, 0233, 0237, 0238, 0239, 0243, 2053, 0261, 0263, 0267, 0268, 0272, 0275, 0458).

Several commenters stated that EPA has not provided sufficient justification for these new requirements (0207, 0215, 0232, 0239, 0253, 0272). One of the commenters stated that EPA has not indicated why the existing regulations are inadequate (0239). Several commenters agreed with the language EPA included in the proposed rule, which noted that facilities are managing natural hazards well, and therefore the commenters suggested that additional requirements are not necessary (0207, 0229, 0237, 0238, 0272).

A few commenters stated that EPA provides no information demonstrating that process safety analyses are not currently "properly evaluated and managed" or that the proposed new requirements would reduce the number of natural hazard incidences, or their consequences, in any way (0207, 0215, 0237).

One commenter noted that EPA indicated in the proposed rule that the requirement for natural hazard assessment is already implicitly included in the existing RMP rules, therefore it would be more effective to develop and maintain additional guidance and tools to help facilities comply with the existing rule instead of changing the regulatory language (0230).

> **EPA Response:** EPA agrees that natural hazards are hazards for chemical facilities because they have the potential to initiate accidents that threaten human health and the environment and disagrees with comments that the Agency did not provide sufficient justification for the new requirements. In the proposal, the Agency provided data which indicate that, while not all, *some* RMP accidents are being reported as having a natural cause as the initiating event and include unusual weather conditions as a contributing factor.[20] EPA believes that adding clarifying language to a provision is a simple way to promote awareness of these potential accidents which should help prevent some. Additionally, EPA agrees that climate change increases the threat of extreme weather as a natural hazard and should be taken into account at covered facilities when evaluating hazard frequency and severity. EPA is finalizing a modified version of the proposed provisions because the Agency believes that making the requirement more explicit to evaluate natural hazards, which includes taking into account climate change, in hazard evaluations for Program 2 and Program 3 RMP-regulated processes will ensure that the threats of natural hazards are properly evaluated and managed to prevent or mitigate releases of RMP-regulated substances at covered facilities. EPA has modified the definition of natural hazard to reflect the definition developed by FEMA: "meteorological, climatological, environmental or geological phenomena that have the potential for negative impact, accounting for impacts due to climate change. Examples of

[20] Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022).

such hazards include, but are not limited to, avalanche, coastal flooding, cold wave, drought, earthquake, hail, heat wave, hurricane, ice storm, landslide, lightning, riverine flooding, strong wind, tornado, tsunami, volcanic activity, wildfire, and winter weather." Use of the FEMA definition promotes consistency across the federal government on this key definition. EPA agrees that adopting this provision will better protect communities from these accidental releases.

Further, EPA's goal of this provision is to better reflect the Agency's longstanding regulatory requirement, rather than to impose additional regulatory requirements (and thus potential additional costs) that conflict with the OSHA PSM regulatory requirements. EPA has coordinated with OSHA throughout the rulemaking process to ensure the intent of adding explicit natural hazard regulatory text does not create conflicting requirements between the two regulatory programs.

Comment 2.1-02: One commenter asserted that improving the resilience of facilities to extreme weather events is warranted because of the direct, substantial, and cumulative risk to communities with EJ concerns that are more likely to be located in areas susceptible to flooding (0444). The commenter asserted that these risks are not theoretical but have happened. For example, the commenter mentioned that low-income and communities of color are more likely to be in areas susceptible to flooding (0444).

Another commenter stated that natural disaster planning should account for the fact that dozens of facilities often shutdown simultaneously as a storm such as a hurricane approaches and the cumulative impact of these shutdowns is felt by environmental justice communities. The commenter stated they believe that natural hazard planning should account for the potential of these cumulative impacts (0254).

EPA Response: In response to the comment that improving the resilience of facilities to extreme weather events is warranted due to the risk posed to communities with EJ concerns, EPA agrees that accidental releases of regulated chemicals from RMP-regulated facilities likely pose disproportionate risks to historically marginalized disadvantaged and overburdened communities. EPA expects that the benefits of this clarified provision may lower potential exposure for fenceline communities with historically underserved and overburdened populations by reducing disproportionate damages that RMP-reportable accidents might otherwise inflict on those populations.

Comment 2.1-03: One commenter suggested that the determination of whether or not to implement additional layers of protection from natural hazards should be left to the facility, and not subject to regulatory scrutiny (0215).

EPA Response: In response to comments that the determination of whether to implement additional layers of protection from natural hazards should be left to the facility and not subject to regulatory scrutiny, EPA notes that it is not requiring implementation of protective measures identified under a natural hazard assessment as part of a hazard review or PHA. At this time, EPA is simply emphasizing the already-existing requirement that the evaluation of natural hazards be explicitly included in hazard reviews and PHAs for Program 2 and Program 3 RMP-regulated processes. The Agency expects stationary source management to make reasonable decisions based on the information collected through this provision, like other provisions in the PHA. EPA acknowledges that natural hazards and process operations vary throughout the United

States, and implementation of protective measures will therefore also vary among RMP processes. However, because the RMP rule is performance-based, EPA believes that all regulated RMP facilities can ultimately be successful in addressing natural hazards for their locations within their risk management programs.

Comment 2.1-04: One commenter expressed concern that EPA's plan to "periodically collate and review inspection findings" will not support the integration of natural hazard risk assessments into RMPs, and EPA should devote resources to conducting inspections and enforcement (0241).

EPA Response: Enforcement of RMP facilities remains an Agency priority, as indicated by its adoption as a National Enforcement and Compliance Initiative (NECI) since 2017. The goal of this NECI is to reduce the risk to human health and the environment by decreasing the likelihood of chemical accidents. Activities under the initiative include having regulated facilities and industry associations work to improve safety; increase compliance with RMP; and promote coordination and communication with State and local responders and communities. The capacity built by the NECI will continue to benefit oversight by EPA and its partner implementing agencies even after the NECI.

Specific comments in support of natural hazards as a driving force for chemical accidents

Comment 2.1-05: Several commenters provided examples or data that supported claims that natural hazards or climate change-related hazards can be a driving force for chemical accidents (0216, 0192, 0444, 0460). Several commenters provided examples of the types of natural disasters that could result in chemical accidents, or have resulted in chemical accidents (0245, 0460, 0216, 0444).

- One commenter noted that as a result of chemical disasters due to Hurricane Harvey, communities suffered spikes in unhealthy levels of ozone; releases of toxic air pollutants that can cause cancer, neurological harm, and trouble breathing; and releases of contaminants, including hundreds of thousands to millions of pounds of air pollutants (0460).
- One commenter noted that North Dakota has several anhydrous ammonia facilities that reside within city limits, therefore natural hazard planning would increase public awareness and emergency planning (0245).
- One commenter described that during Hurricane Harvey in 2017, many refineries, chemical, and petrochemical facilities were forced to shut down due to the severe flooding, and experienced damage that resulted in the release of chemicals into the environment for up to weeks afterwards. The commenter also noted that some facilities continued production during Hurricane Harvey despite warnings of flooding conditions. The commenter suggested that the emergency planning activities conducted as a part of the natural hazards analysis will result in safer control and shutdown of the facilities, decreased potential for damage and subsequent releases from facilities (0216).
- One commenter described the Arkema accident following Hurricane Harvey, resulting in injuries to workers and first responders. The commenter said that a CSB report on the Arkema fire noted the increasing risk of severe weather poses for chemical facilities and recommended that facilities perform analyses to determine potential impacts from extreme events and the adequacy of safeguards (0444).

- One commenter described an incident where winter storms in Texas caused many facilities to shut down after losing power, and 194 facilities released at least 3.5 million pounds of toxic chemicals (0460). The commenter suggested that these types of incidents caused by natural disasters should be categorized as near misses, instead of allowing facilities to report force majeure (0460).

  EPA Response: EPA agrees with the comments that suggest natural hazards, including climate change-related hazards, can be a driving force behind chemical accidents, even though some of the specific examples provided in the comments did not involve RMP-reportable accidental releases of regulated substances. As discussed in the 2022 SCCAP proposal, EPA's recent review of the RMP National Database indicates that when reporting accidents, some RMP facilities report ''natural'' and ''unusual weather conditions'' as the respective initiating event or as a contributing factor to their accidents. According to the Agency's data from 2004–2020,[21] facilities reported 38 RMP-reportable accidents as having a natural cause as the initiating event of their accident and another RMP reportable accidents as having unusual weather conditions as a contributing factor of their accident.[22]

Specific comments in opposition to natural hazards as a driving force for chemical accidents

Comment 2.1-06: Several commenters asserted that the number of accidental releases caused by natural hazards was small compared to other causes and compared to how many natural hazards occur daily, and therefore does not justify EPA adding additional requirements for assessing natural hazards or other external events (0215, 0237, 0238, 0239, 0268[23], 0272). A couple of commenters noted that less than 2% of RMP reported incidents between 2015 and 2022 had a natural cause as the initiating event (0215, 0268). A couple of commenters stated that natural hazards and unusual weather conditions were involved in about 4% of reported between 2016 and 2020 (0238, 0272). A couple of commenters noted that according to a U.S. Government Accountability Office (GAO) report, EPA found only two accidental releases at facilities following major natural disasters, neither of which were RMP-related (0239, 0268). One of the commenters noted that the small number of accidents may be attributed to the effectiveness of existing regulations and voluntary measures regarding emergency planning (0268).

> **EPA Response:** In the 2022 SCCAP proposal, the Agency provided data which indicate that, while not all, *some* RMP accidents are being reported as having a natural cause as the initiating event and include unusual weather conditions as a contributing factor. EPA believes that adding clarifying language to a provision is a simple way to promote awareness of these potential accidents which should help prevent some. Additionally, EPA agrees that climate change increases the threat of extreme weather as a natural hazard and should be taken into account at covered facilities when evaluating hazard

[21] Because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting the last few years of data because some facilities may have not reported their RMP accidents as they are required to do. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

[22] Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022).

[23] Docket 0268 included language that was assumed to be a typo, based on the context of the rest of the comment. The commenter said "Such a small universe of accidents does justify EPA imposing the far-reaching proposed changes to evaluate undefined 'external events' in PHAs." However, based on the context of the remainder of the comment it was assumed that the commenter meant "...does **not** justify EPA…"

frequency and severity. EPA is finalizing the proposed provisions because the Agency believes that making the requirement more explicit to evaluate natural hazards, which includes taking into account climate change, in hazard evaluations for Program 2 and Program 3 RMP-regulated processes will ensure that the threats of natural hazards are properly evaluated and managed to prevent or mitigate releases of RMP-regulated substances at covered facilities. EPA agrees that doing so will better protect surrounding communities from these types of incidents.

Comments on PHA requirements and other regulations

Comment 2.1-07: Several commenters noted that the natural hazard assessment provisions are already considered in the process hazard analysis (PHA) or other current regulations and are, therefore, redundant (0125, 0184, 0190, 0205, 0207, 0217, 0230, 0238, 0233, 0239, 0263, 0275). Several commenters indicated that the natural hazard provisions in the proposed rule overlap with or are redundant of existing OSHA regulations and recommended that EPA not conflict or compete with OSHA standards, as including them in EPA's rules would create duplicative work for facilities and introduce uneven enforcement between the two agencies (0125, 0180, 0192, 0205, 0215, 0266, 0268, 0458). Another commenter noted that natural hazards are characterized differently in the OSHA standards and EPA's proposed rule and urged EPA to use parallel language with OSHA to address the same topic (0215). One commenter suggested that EPA not include natural hazard assessment requirements, and instead allow OSHA to continue oversight (0205).

Another commenter stated that EPA has not provided an explanation to why the text requiring analyzing external and triggering events that could lead to "any" accidental release is more strict than the current PHA requirement to analyze incidents that had a potential for a catastrophic release (0268).

EPA Response: EPA disagrees that the natural hazard assessment provisions are redundant and will result in uneven enforcement due to them already being considered in both the PHA requirements and current OSHA regulations. EPA's goal of this provision is to better reflect the Agency's longstanding regulatory requirement, rather than to impose additional regulatory requirements (and thus potential additional costs) that conflict with the OSHA PSM regulatory requirements. In fact, EPA has coordinated with OSHA throughout the rulemaking process to ensure the intent of adding explicit natural hazard regulatory text does not create conflicting requirements between the two regulatory programs.

Comment 2.1-08: One commenter stated that the process to evaluate external hazards would be overly burdensome for facilities, given the magnitude of potential external events that would need to be considered. The commenter suggested EPA not require the external hazard analysis as a part of the PHA process, to allow facilities to find an appropriate team to conduct the analysis (0233). Another commenter stated that the documentation to meet the requirement would result in a long list of recommendations and justifications for addressing a long list of external events, diluting the value of the content in RMPs report to EPA (0268).

Some commenters asserted that the proposed rule goes beyond the traditional scope of PHAs as PHAs cover hazards "of" or "in" the process, not external events that are hazards "to" the process (0229, 0232, 0268). One commenter stated that considering "external events" unjustifiably expands the scope of the PHA by covering hazards "to" the process, instead of "of"

the process, which EPA lacks the statutory authorization to do and has not provided sufficient basis for (0253). Another commenter stated that EPA does not have authorization from Congress to transform the PHA program to include natural hazards "caused by climate change or other triggering events" and that the proposed requirements conflict with OSHA's standards and lack justification (0268).

Another commenter stated that EPA has not provided an explanation to why the text requiring analyzing external and triggering events that could lead to "any" accidental release is more strict than the current PHA requirement to analyze incidents that had a potential for a catastrophic release (0268).

> **EPA Response:** EPA acknowledges that analysis of external events identified in the 2022 SCCAP proposal may have been broader than expected. EPA is therefore revising the regulatory language in the final rule to focus on natural hazards rather than external hazards.'
>
> In response to comments that the natural hazard assessment provisions are overly burdensome to facilities, and that the Agency does not have authorization from Congress to transform the PHA program to include natural hazards "caused by climate change or other triggering events", EPA disagrees. EPA has stated this provision makes more explicit what is already required in the RMP regulations. As noted in the proposed rule, since the 1996 RMP rule, EPA has said events such as floods and high winds should be considered as potential release-initiating events when conducting a PHA, and the RMP guidance further expands on this point. Furthermore, the hazard evaluation amplifications reflect existing industry practice, and therefore, EPA assumes that these hazard evaluation amplifications would impose no new requirements or costs on facilities that are in compliance with the RMP rule and common industry practice. By amplifying and making more explicit the need to evaluate natural hazards as potential causes of releases, EPA expects those facilities that are currently not performing such evaluations will better understand what the rule requires. Additionally, each modification of the RMP rule that EPA proposed and is finalizing is based on EPA's rulemaking authority under Clean Air Act (CAA) section 112(r)(7). EPA has outlined its authority for all the changes to the regulation in section III.C of the SCCAP Final Rule preamble.

Comment 2.1-09: A few commenters identified potential overlap between the proposed rule and other requirements for the water sector, and expressed concern that the proposed rule will result in overly burdensome reporting requirements (0197, 0239, 0243). One of the commenters noted that a proposed rule from EPA's Office of Land and Emergency Management (OLEM) under the Clean Water Act (CWA) Hazardous Substances Worst-Case Discharge Planning rule will require water utilities to plan for climate and other natural hazards (0197). A couple of commenters noted that community water systems are already required to consider natural hazard threats and climate risks and are incentivized to take action to improve resilience under AWIA, and additional requirements under this regulation would be confusing and result in significant costs that would be passed onto ratepayers, without an impact on incident rates (0239, 0243).

A few commenters noted that Resource Conservation and Recovery Act (RCRA)-permitted facilities are required to have contingency plans that address emergency scenarios listed in the proposed rule and requested that RCRA-permitted facilities be exempt from the natural hazards assessment requirement (0181, 0223, 0262).

EPA Response: EPA has stated this provision makes more explicit what is already required in the RMP regulations. As noted in the proposed rule, since the 1996 RMP rule, EPA has said events such as floods and high winds should be considered as potential release-initiating events when conducting a PHA, and the RMP guidance further expands on this point. Furthermore, the hazard evaluation amplifications reflect existing industry practice, and therefore, EPA assumes that these hazard evaluation amplifications would impose no new requirements or costs on facilities that are in compliance with the RMP rule and common industry practice. By amplifying and making more explicit the need to evaluate natural hazards as potential causes of releases, EPA expects those facilities that are currently not performing such evaluations will better understand what the rule requires.

Further, the RMP rule applies to accidental releases of RMP regulated substances to the air. Because other EPA programs requirements may have other purposes, the Agency does not believe any RMP regulated facility should be exempt from this RMP requirement. A facility is welcome to augment an existing plan with the required program elements to reduce their administrative burden. To the extent that planning activities under AWIA or other programs address the risks of natural hazards on RMP processes required to be assessed under the SCCAP rule amendments, owners and operators may rely on activities under those other programs developing RMP compliance programs.

Comments on specific language in the proposed rule

Comment 2.1-10: A couple of commenters expressed support for the inclusion of natural hazard analysis but recommended that EPA clarify the language in the proposed rule to better define natural hazards and climate-related hazards (0207, 0266). One of the commenters suggested that the definition of natural hazards assessments provided in the Center for Chemical Process Safety's (CCPS) "Guidelines for Hazard Evaluation Procedures" 3rd edition (2008) is suitable (0207).

EPA Response: In response to the comments requesting that EPA better define natural hazards and climate-related hazards, EPA notes that it has revised its definition to be more closely aligned with language used in the Federal Emergency Management Agency's (FEMA) National Risk Index (NRI)[24] and Climate Essentials for Emergency Managers[25] resources. For this final rule, EPA is defining natural hazards to mean meteorological, climatological, environmental, or geological phenomena that have the potential for negative impact, accounting for impacts due to climate change. Examples of such hazards include, but are not limited to, avalanche, coastal flooding, cold wave, drought, earthquake, hail, heat wave, hurricane, ice storm, landslide, lightning, riverine flooding, strong wind, tornado, tsunami, volcanic activity, wildfire, and winter weather. EPA believes CCPS' definition and guidance[26] presented in the SCCAP proposal, is still useful for facilities' evaluation of natural hazards for process safety, however, the Agency believes these FEMA resources reflect a more comprehensive base to identify, evaluate and understand relative natural hazard risk, particularly how natural hazards must account for a changing climate. For example, the NRI identifies 18 specific natural

[24] *https://hazards.fema.gov/nri/natural-hazards*

[25] *https://www.fema.gov/sites/default/files/documents/fema_climate-essentials_072023.pdf*

[26] CCPS, *CCPS Monograph: Assessment of and Planning For Natural Hazards* (American Institute of Chemical Engineers, 2019), https://*www.aiche.org/sites/default/files/html/536181/NaturalDisaster-CCPSmonograph.html*

hazards, which EPA has identified in its definition, that are further supported as their designation as natural hazards and are able to be represented in terms of expected annual loss, which incorporate data exposure, annualized frequency, and historic loss ratio.[27] Additionally, the Climate Essentials for Emergency Managers points to many climate change resources including the Climate Risk & Resilience Portal[28] and the Climate Mapping for Adaption and Resilience Tool[29] that allows users to examine simulated future climate conditions associated with the natural hazards identified in the NRI.

Comment 2.1-11: Several commenters requested that EPA provide a clear, specific, and narrow definition for the types of events that will be covered by the new definition of natural hazards and climate change (0239, 0243, 0268, 0272). A couple of commenters indicated the vague language raises due process concerns and could result in litigation from outside groups (0239, 0272).

One commenter suggested that the reference to external events be removed because it is an undefined and vague term. The commenter added that the proposed requirement that the PHA include natural hazards "caused by climate change or other triggering events" is overly broad in that it appears to include events that go well beyond the proposed definition of natural hazards. The commenter stated that these broadly-defined and ambiguous terms in the regulatory text could lead to an infinite list of external events and associated recommendations from the PHA a facility must consider. Similarly, the commenter stated that the term "climate change and other triggering events" could result in inspectors having multiple findings of things that were outside of what the facility considered a results of climate change. The commenter urged EPA to provide much-needed clarity and explanation for the proposed language (0268).

A few commenters raised concerns about the long list of possible events facilities would have to assess and the lack of staff expertise to assess impacts (0207, 0237, 0261). One of the commenters asserted that the language is too broad and could be interpreted to also include events like terrorist attacks, riots, lightning strikes, or airplane crashes (0207). Another commenter suggested that EPA revise language in the proposed rule and refer to "reasonably foreseeable" or "applicable natural hazards" to prevent facilities from assessing impacts from potential natural hazards that are unlikely in their area, such as blizzards in Florida or tsunamis in Ohio (0275). One commenter asserted that the vague definition creates the possibility of non-compliance based on unknown or uncertain events (0261).

A couple of commenters noted that the definition of "climate change" is vague and requires additional clarification (0184, 0253). One of the commenters (0253) noted that EPA does not provide a definition of "climate change" and what should be addressed in an assessment. Conversely, a couple of commenters suggested that the regulatory language "caused by climate change" is too narrow and may exclude the consideration of some extreme events since it may be difficult to prove that an event was caused by climate change. The commenter recommended that EPA broaden the regulatory language to refer to natural hazards that are "caused or exacerbated by climate change" (0266, 0444).

One commenter recommended using "extreme weather events" in lieu of "those caused by climate change" in the final rule, due to the uncertainty of the types of effects of climate change

[27] https://hazards.fema.gov/nri/natural-hazards
[28] https://disgeoportal.egs.anl.gov/ClimRR/
[29] https://resilience.climate.gov/

(0193). Another commenter stated that there is no explanation how a facility can distinguish, or if it is required to distinguish, between weather events and "those caused by climate change" (0207).

A couple of commenters stated that EPA has provided no rationale for facilities to separately identify natural hazards caused by climate change, and there is no basis in the RMP to identify a cause of an external hazard, only to consider hazards to the process itself (0267, 0268).

> **EPA Response:** In response to the comments that the reference to external events should be removed because it is vague and overly broad, EPA acknowledges that analysis of external events may be broader than expected. EPA is therefore revising the proposed regulatory language in the final rule to focus on natural hazards rather than external hazards. Additionally, EPA is including "exacerbate" as an influence of an accident from natural hazards in addition to "cause" to further clarify the regulatory language. As a few commenters discussed, and EPA agrees, in some cases natural hazards can be a contributing factor for accidental releases, making them more extreme or likely, rather than causing them independently. Finally, EPA is removing the description of 'climate change' in the hazard evaluation regulatory language to eliminate redundancy, as EPA is defining natural hazard as taking into account climate change impacts.

Comment 2.1-12: One commenter stated that EPA has not explained how a facility could comply with the natural hazard assessment requirements in the proposed rule (0272).

> **EPA Response:** EPA has stated this provision makes more explicit what is already required in the RMP regulations. At this time, EPA is simply emphasizing the already-existing requirement that the evaluation of natural hazards be explicitly included in hazard reviews and PHAs for Program 2 and Program 3 RMP-regulated processes. EPA continues to expect facilities to utilize all available resources to properly evaluate what natural hazards could potentially trigger accidental releases from their regulated processes. EPA understands that natural hazards and process operations vary throughout the United States. However, because the RMP rule is performance-based, EPA believes that all regulated RMP facilities can be successful in addressing natural hazards within their risk management programs.

Comments on coordination with local, State, or regional organizations

Comment 2.1-13: One commenter noted that EPA's findings on risks to facilities from natural hazards is consistent with States' and municipalities' analysis. The commenter noted that several States have already taken steps to require facilities to consider threats from extreme weather, including Massachusetts and New York (0444).

One commenter noted that several states have already taken steps to require facilities to consider threats from extreme weather. The commenter identified that the Massachusetts Environmental Policy Act Office's Interim Protocol on Climate Change Adaptation and Resiliency requires that all new projects to consider adaptation strategies to mitigate risks from sea level rise/storm surge, extreme precipitation, and extreme heat. The commenter also noted that New York's Climate Leadership and Community Protection Act requires applicants for major permits issued by the Department of Environmental Conservation to demonstrate that climate change risks are being considered (0444).

EPA Response: EPA agrees with the comment that the Agency's findings on risks to facilities from natural hazards is consistent with those of States that already require facilities to consider threats from extreme weather. However, because not all States require facilities to consider natural hazards, and because EPA continues to see natural hazards as a factor in RMP accidents, the Agency believes the requirement to evaluate and control natural hazards should be explicitly stated in the RMP regulation. Moreover, EPA notes that doing so is consistent with other countries that are also expanding efforts to address natural hazards at chemical facilities, as discussed in the 2022 SCCAP proposed rule (87 FR 53568). EPA also notes that it has revised its definition to be more closely aligned with language used in the Federal Emergency Management Agency's (FEMA) National Risk Index (NRI) [30] and Climate Essentials for Emergency Managers[31] resources.

Comment 2.1-14: One commenter recommended that EPA require facilities to include hazards identified in applicable local, State, or regional hazard mitigation plans in their risk assessments to ensure consistency with existing plans and ensure all applicable hazards are identified. The commenter suggested that facilities should reach out to LEPCs as well as State and local emergency planners to educate them about natural hazard risks to their facilities. The commenter noted that an Arkema facility did not include flooding impacts in its worst-case scenario analysis because it was unaware that it was in a FEMA floodplain. The commenter suggested that Program 3 facilities should be required to seek participation in regional or State hazard mitigation planning efforts, and Program 2 facilities should request to be invited to participate, and if they are invited, should be required to participate in regional or state planning efforts. The commenter also recommended that EPA coordinate RMP risk data mapping with state and local governments to help facilities identify relevant hazards (0241).

One commenter stated that EPA did not consider how State and local building codes require facilities to address impacts from natural hazards in the requirements in the proposed rule (e.g., site standards for wind, snow, and seismic load; clean-up after a storm; food rations for ride out teams) (0268).

EPA Response: EPA believes the Agency's findings on risks to facilities from natural hazards is consistent with those of States and locals that already require facilities to consider threats from extreme weather. However, because not all States and local programs require facilities to consider natural hazards, and because EPA continues to see natural hazards as a factor in RMP accidents, the Agency believes the requirement to evaluate and control natural hazards should be explicitly stated in the RMP regulation.

EPA maintains that it is very important to ensure that Local Emergency Planning Committees (LEPCs) or local emergency response officials have the information necessary for developing local emergency response plans; however, EPA believes it is not necessary to specify in the RMP rule the types or format of information that LEPCs or emergency response officials may request. Section 303(d)(3) of the Emergency Planning and Community Right to Know Act already provides the necessary authority to allow LEPCs to request information needed to develop the local emergency response plan. Furthermore, as part of the annual coordination between facilities and local

[30] https://hazards.fema.gov/nri/natural-hazards
[31] https://www.fema.gov/sites/default/files/documents/fema_climate-essentials_072023.pdf

emergency responders, responders may obtain information on hazards identified as appropriate.

EPA continues to expect facilities to utilize all available resources to properly evaluate what natural hazards could potentially trigger accidental releases from their regulated processes. EPA understands that natural hazards and process operations vary throughout the United States. However, because the RMP rule is performance-based, EPA believes that all regulated RMP facilities can be successful in addressing natural hazards within their risk management programs. Additionally, EPA will update the current hazard evaluation guidance and initiate ways to share natural hazard resources with facility owners and operators to help them identify and evaluate potential natural hazard risks.

Comments on mitigation measures

Comment 2.1-16: Several commenters requested that EPA require facilities to implement natural hazard mitigation measures that were identified as a part of the assessments to prevent the double impact from chemical disasters during natural disasters (0141, 0177, 0194, 0209, 0219, 0250, 0252, 0255, 0264, 0269, 0392, 0444, 0447, 0456, 0460). One commenter noted that the IPCC 2022 report references infrastructure failures caused by flooding and the need to account for NaTech disasters and the risks posed to urban communities (0460).

Some commenters suggested EPA require facilities to report on implemented mitigation measures (0252, 0264, 0269, 0460). Another commenter suggested that EPA require facilities adopt intense heat and drought mitigation plans (0177).

Some commenters suggested EPA require facilities to report on implemented mitigation measures (0252, 0264, 0269, 0460). Another commenter suggested that EPA require facilities adopt intense heat and drought mitigation plans (0177).

EPA Response: EPA is not requiring implementation of natural hazard mitigation measures. At this time, EPA is simply emphasizing the already-existing requirement that the evaluation of natural hazards be explicitly included in hazard reviews and PHAs for Program 2 and Program 3 RMP-regulated processes. The Agency expects stationary source management to make reasonable decisions based on the information collected through this provision, like other provisions in the PHA. EPA acknowledges that natural hazards and process operations vary throughout the United States, and implementation of protective measures will therefore also vary among RMP processes. However, because the RMP rule is performance-based, EPA believes that all regulated RMP facilities can ultimately be successful in addressing natural hazards for their locations within their risk management programs.

Support for climate change-related hazard assessments

Comment 2.1-17: Several commenters expressed support for the inclusion of climate change-related hazard assessments in the proposed rule due to the increasing risk that extreme weather events will be more severe and more frequent due to climate change, which could result in chemical accidents (0135, 0141, 0143, 0177, 0194, 0208, 0221, 0240, 0250, 0251, 0252, 0266, 0269, 0392, 0413, 0444, 0450, 0452, 0460).

Several commenters noted that according to a 2021 report co-authored by Union of Concerned Scientists, Center for Progressive Reform, and Earthjustice, about one third of the nation's RMP

facilities are located in climate vulnerable areas and are at an increased risk from climate impacts (0141, 0221, 0240, 0250, 0251, 0252, 0269, 0392, 0444, 0460).

A couple of commenters provided examples of the types of natural disasters that may become more frequent or extreme due to climate change (0392, 0460). One of the commenters described an explosion and fire at the Arkema chemical plant following flooding from Hurricane Harvey that caused 21 people to seek medical care and 200 nearby residents to evacuate (0392). Another commenter provided an example of a heat wave in the Pacific Northwest that caused the RMP-covered Dyno chemical plant to lose power, and there was concern about the potential for a major ammonia release (0460).

One commenter stated that at a minimum, the new rule must require RMP facilities to consider climate change and natural disasters in every aspect of risk management (0456).

A few commenters mentioned preventing "double disasters," or cascading impacts of chemical accidents on top of the effects of extreme events, in their support of the climate change-related hazard assessments (0208, 0413, 0449, 0460).

One commenter noted that assessments of climate change risks are essential to understand the costs and benefits of potential mitigation measures, enabling facilities to select the welfare-maximizing measures that account for all impacts to the environment and public health (0266).

Another commenter stated that the healthcare system now needs to be prepared for the increase in climate events and the potential resulting chemical disasters which is putting strain on an already overburdened system (0452).

A couple of commenters recommended that EPA should do more to require facilities to prepare for climate-driven extreme weather events and power loss (0219, 0444). One of the commenters stated that with the increased frequency of climate change extreme weather events, increased incidences of flooding and natural disasters should be accounted for in the RMP for all facilities (0219).

> **EPA Response**: EPA agrees that climate change increases the threat of extreme weather as a natural hazard and should be taken into account at covered facilities when evaluating hazard frequency and severity. As discussed in the SCCAP proposal, RMP data indicate that the locations of many RMP facilities leave them exposed to natural hazards, and new studies show that the threat of natural hazards, including climate-related hazards, is increasing.[32] Therefore, EPA is finalizing the proposed provisions because the Agency believes that making the requirement more explicit to evaluate natural hazards, which includes taking into account climate change, in hazard evaluations for Program 2 and Program 3 RMP-regulated processes will ensure that the threats of natural hazards are properly evaluated and managed to prevent or mitigate releases of RMP-regulated substances at covered facilities. EPA agrees that doing so will better protect surrounding communities from these types of incidents.

Opposition to climate change-related hazard assessments

[32] Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022); 87 FR 53568.

Comment 2.1-18: Several commenters opposed the inclusion of climate change-related assessments in the proposed rule (0180, 0193, 0207, 0208, 0217, 0233, 0234, 0237, 0238, 0239, 0253, 0268, 0275).

One commenter stated that climate change is not a discrete natural event that can be evaluated, like lightning, tornadoes, or floods (0238). A couple of commenters noted that climate change develops slowly over multiple decades, not the 5-year horizon of hazard evaluations (0238, 0268).

One commenter suggested that the addition of climate change hazard analysis is driven by the administration's focus on climate change, and not because of an identified issue that needs to be addressed (0239).

> **EPA Response:** In the proposal, the Agency provided data which indicate that, while not all, some RMP accidents are being reported as having a natural cause as the initiating event and include unusual weather conditions as a contributing factor. EPA believes that adding clarifying language to a provision is a simple way to promote awareness of these potential accidents which should help prevent some. Additionally, EPA agrees that climate change increases the threat of extreme weather as a natural hazard and should be taken into account at covered facilities when evaluating hazard frequency and severity. EPA is finalizing the proposed provisions because the Agency believes that making the requirement more explicit to evaluate natural hazards, which includes taking into account climate change, in hazard evaluations for Program 2 and Program 3 RMP-regulated processes will ensure that the threats of natural hazards are properly evaluated and managed to prevent or mitigate releases of RMP-regulated substances at covered facilities. EPA agrees that doing so will better protect surrounding communities from these types of incidents.

Comment 2.1-19: Several commenters expressed concerns about the burden a climate change hazard analysis would put on facilities (0180, 0217, 0234, 0268). One of the commenters stated that it is unreasonable for EPA to expect facilities to predict all potential external hazards to a process, as facilities are not equipped to predict future natural hazards, therefore such an assessment would be overly burdensome (0268). Several commenters stated that without a defined method of determining what hazards climate change could cause, this assessment would be a monumental task due to the many variables that must be considered (0180, 0184, 0205, 0217, 0226, 0234, 0458). One commenter noted that it is not climate change that directly causes the risk, but the natural disaster itself, and therefore the final rule should refer to the natural disaster (e.g., high winds, storm surge, flooding) (0275).

> **EPA Response:** EPA disagrees that this regulatory text change is overly burdensome. EPA has stated this provision makes more explicit what is already required in the RMP regulations. As noted in the proposed rule, since the 1996 RMP rule, EPA has said events such as floods and high winds should be considered as potential release-initiating events when conducting a PHA, and the RMP guidance further expands on this point. Furthermore, the hazard evaluation amplifications reflect existing industry practice, and therefore, EPA assumes that these hazard evaluation amplifications impose no new requirements or costs on facilities that are in compliance with the RMP rule and common industry practice. By amplifying and making more explicit the need to evaluate natural hazards as potential causes of releases, EPA expects those facilities that are currently not

performing such evaluations will better understand what the rule requires. Additionally, EPA will update the current hazard evaluation guidance and initiate ways to share natural hazard resources with facility owners and operators to help them identify and evaluate potential natural hazard risks.

EPA notes that it has revised its definition of natural hazard to be more closely align with language used in the Federal Emergency Management Agency's (FEMA) National Risk Index (NRI)[33] and Climate Essentials for Emergency Managers[34] resources. For this final rule, EPA is defining natural hazards to mean meteorological, climatological, environmental, or geological phenomena that have the potential for negative impact, accounting for impacts due to climate change. Examples of such hazards include, but are not limited to, avalanche, coastal flooding, cold wave, drought, earthquake, hail, heat wave, hurricane, ice storm, landslide, lightning, riverine flooding, strong wind, tornado, tsunami, volcanic activity, wildfire, and winter weather. EPA believes CCPS' definition and guidance[35] presented in the SCCAP proposal, is still useful for facilities' evaluation of natural hazards for process safety, however, the Agency believes these FEMA resources reflect a more comprehensive base to identify, evaluate and understand relative natural hazard risk, particularly how natural hazards must account for a changing climate. For example, the NRI identifies 18 specific natural hazards, which EPA has identified in its definition, that are further supported as their designation as natural hazards and are able to be represented in terms of expected annual loss, which incorporate data for exposure, annualized frequency, and historic loss ratio.[36] Additionally, the Climate Essentials for Emergency Managers points to many climate change resources including the Climate Risk & Resilience Portal[37] and the Climate Mapping for Adaption and Resilience Tool[38] that allows users to examine simulated future climate conditions associated with the natural hazards identified in the NRI.

Additionally, for this final rule, EPA is including "exacerbate" as an influence of an accident from natural hazards in addition to "cause" to further clarify the regulatory language. EPA believes that in some cases natural hazards can be a contributing factor for accidental releases, making them more extreme or likely, rather than causing them independently. Further, EPA is removing the description of climate change in the hazard evaluation regulatory language to eliminate redundancy, as EPA is defining natural hazard as taking into account climate change impacts.

Comment 2.1-20: One commenter requested that EPA acknowledge that there is no currently proven methodology for addressing climate-related risks to petrochemical facilities (0233).

EPA Response: EPA acknowledges that natural hazards and process operations vary throughout the United States, and implementation of protective measures will therefore also vary among RMP processes. However, because the RMP rule is performance-based,

[33] *https://hazards.fema.gov/nri/natural-hazards*
[34] *https://www.fema.gov/sites/default/files/documents/fema_climate-essentials_072023.pdf*

[35] CCPS, *CCPS Monograph: Assessment of and Planning For Natural Hazards* (American Institute of Chemical Engineers, 2019), https://*www.aiche.org/sites/default/files/html/536181/NaturalDisaster-CCPSmonograph.html.*

[36] *https://hazards.fema.gov/nri/natural-hazards*
[37] *https://disgeoportal.egs.anl.gov/ClimRR/*
[38] *https://resilience.climate.gov/*

EPA believes that all regulated RMP facilities can ultimately be successful in addressing natural hazards for their locations within their risk management programs.

Other recommendations for natural hazard requirements

Comment 2.1-21: Several commenters requested that EPA bolster natural hazard assessment requirements as described below:

- One commenter suggested that EPA require that hazard evaluations use up-to-date projections of climate risks and prescribe specific types of analysis and consultation to assess hazards to environmental justice communities (0148).
- One commenter urged EPA to require RMP facilities to integrate climate resiliency and mitigation. The commenter highlighted how much of the devastation from Hurricane Harvey was to low-income communities of color. The commenter noted that the full extent of damage from Hurricane Harvey was hard to assess because of data gaps caused by inadequate monetary reporting and lax environmental regulation (0157).
- One commenter suggested that natural hazard planning should also take into account cumulative impacts to communities of the simultaneous shutdown of multiple facilities as storms such as hurricanes approach (0254).
- One commenter stated that the rule should also require facilities to account for the cumulative health impacts in their plans, evaluations, assessments, and siting considerations (0447).
- One commenter stated that the RMP rule should reflect the cumulative impacts from clusters of RMP and hazardous non-RMP facilities. The commenter pointed out that although the proposal requires that facilities conduct an evaluation and document the hazards associated with their proximity to surrounding communities, it doesn't require a cumulative impacts assessment or that these hazards are eliminated. The commenter asserted that this ignores the tremendous body of scientific evidence demonstrating that communities of color and low-income communities face disproportionately extreme threats to their health from their environments, thus EPA should amend the RMP rule to address cumulative impacts and require facilities to eliminate the hazards that account for cumulative health impacts (0255).

  EPA Response: EPA agrees that accidental releases of regulated chemicals from RMP-regulated facilities likely pose disproportionate risks to historically marginalized communities. Nevertheless, EPA acknowledges that natural hazards and process operations vary throughout the United States, and implementation of protective measures will therefore also vary among RMP processes. However, because the RMP rule is performance-based, EPA believes that all regulated RMP facilities can ultimately be successful in addressing natural hazards for their locations within their risk management programs. EPA expects that the benefits of this clarified provision may lower potential exposure for fenceline communities with historically underserved and overburdened populations by reducing disproportionate damages that RMP-reportable accidents might otherwise inflict on those populations.

Comment 2.1-22: One commenter recommended that "geologic hazards" be excluded from the definition of a natural hazard, as they are known at the time a facility is located, designed, and constructed. The commenter also suggested that "dam rupture" be excluded from the definition of geologic hazard, as dams are subject to safety regulations and inspections (0238).

EPA Response: EPA disagrees geological hazards and dam rupture should be excluded from the definition of a natural hazards. Natural hazards (*e.g.*, extreme temperatures, high winds, floods, earthquakes, wildfires) are hazards for chemical facilities because they have the potential to initiate accidents and challenge hazardous chemical process equipment and operations. If not properly managed, these hazards can trigger chemical accidents that threaten human health and the environment. EPA notes that it has revised its definition of natural hazard to be more closely aligned with language used in the Federal Emergency Management Agency's (FEMA) National Risk Index (NRI)[39] and Climate Essentials for Emergency Managers[40] resources. For this final rule, EPA is defining natural hazards to mean meteorological, climatological, environmental, or geological phenomena that have the potential for negative impact, accounting for impacts due to climate change. Examples of such hazards include, but are not limited to, avalanche, coastal flooding, cold wave, drought, earthquake, hail, heat wave, hurricane, ice storm, landslide, lightning, riverine flooding, strong wind, tornado, tsunami, volcanic activity, wildfire, and winter weather. EPA believes CCPS' definition and guidance[41] presented in the SCCAP proposal, is still useful for facilities' evaluation of natural hazards for process safety, however, the Agency believes these FEMA resources reflect a more comprehensive base to identify, evaluate and understand relative natural hazard risk, particularly how natural hazards must account for a changing climate. For example, the NRI identifies 18 specific natural hazards, which EPA has identified in its definition, that are further supported as their designation as natural hazards and are able to be represented in terms of expected annual loss, which incorporate data exposure, annualized frequency, and historic loss ratio.[42] Additionally, the Climate Essentials for Emergency Managers points to many climate change resources including the Climate Risk & Resilience Portal[43] and the Climate Mapping for Adaption and Resilience Tool[44] that allows users to examine simulated future climate conditions associated with the natural hazards identified in the NRI.

Comment 2.1-23: One commenter noted that EPA must finalize provisions related to Natural and Technological (NaTech) disasters in response to reports and recommendations from EPA's Office of Inspector General and Office of Enforcement and Compliance Assurance (OECA), the CSB, and the Center for Chemical Process Safety (CCPS), all of which have acknowledged the need to assess, prevent, and mitigate NaTech risks (0460).

EPA Response: EPA agrees with these comments and in the SCCAP proposal EPA acknowledged the aforementioned new studies showing that the threat of natural hazards is increasing. EPA is finalizing the proposed provisions because the Agency believes that making the requirement more explicit to evaluate natural hazards in hazard evaluations for Program 2 and Program 3 RMP-regulated processes will ensure that the threats of natural hazards are properly evaluated and managed to prevent or mitigate releases of RMP-regulated substances at covered facilities.

---

[39] *https://hazards.fema.gov/nri/natural-hazards*

[40] *https://www.fema.gov/sites/default/files/documents/fema_climate-essentials_072023.pdf*

[41] CCPS, *CCPS Monograph: Assessment of and Planning For Natural Hazards* (American Institute of Chemical Engineers, 2019), https://*www.aiche.org/sites/default/files/html/536181/NaturalDisaster-CCPSmonograph.html*

[42] *https://hazards.fema.gov/nri/natural-hazards*

[43] *https://disgeoportal.egs.anl.gov/ClimRR/*

[44] *https://resilience.climate.gov/*

2.2 Additional guidance for assessing natural hazards

Comments in support of additional guidance

Comment 2.2-01: Several commenters expressed support for the development of additional guidance to assist facilities in conducting natural hazard and climate-related hazard analysis (0173, 0215, 0241, 0261, 0265, 0266, 0444, 0460). One commenter asserted that additional guidance for assessing natural hazards is needed to ensure that facilities take all appropriate risks into account (0265). One commenter noted that without specific guidance, asking facilities to anticipate complex climate cycles and their increased variability is overly burdensome. The commenter stated that an agency must give "fair notice" of conduct it expects a regulated entity to adhere to. Therefore, guidance is necessary, instead of suggesting that regulated facilities use "all available resources" (0232). Another commenter recommended that EPA provide direct technical advice to facilities to ensure they are compliant with the new regulation, and use the experience and lessons learned from providing the advice to inform a guidance document (0460).

> **EPA Response:** EPA appreciates the commenters' support and suggestions for guidance related to assessing natural hazards and will consider them during future guidance development.

Comment 2.2-02: Several commenters suggested that additional guidance be provided on the following topics:

- A few commenters stated that guidance is needed to better define the analysis that must be conducted and to identify recommended assessment methods (0173, 0261, 0267). One commenter requested additional guidance or regulations on local and regional climate data, data availability, and how to define an adequate review of climate change-related hazards. The commenter requested that EPA identify recommended data sets that facilities should use and ensure that data sets are regularly updated and use the best available science (0266).
- Another commenter suggested that EPA develop an information clearinghouse to track common deficiencies found during inspections related to natural hazard and climate change hazard assessments that can be used by facilities to improve compliance and ensure critical hazards are included in emergency preparedness and planning efforts (0241).
- One commenter suggested that EPA should develop guidance and training for inspectors, so they are informed on what constitutes an adequate climate-related hazard assessment (0266).
- One commenter requested clarification on what it means for RMP-regulated sources to account for climate change and requested EPA provide guidance on how to anticipate such effects to assist sources with meeting EPA's expectations (0229).
- One of the commenters stated that guidance should define "reasonably anticipated external events" used in the proposed rule (0173).
- One of the commenters suggested that EPA develop a comprehensive report on the types of natural hazards that have occurred and impacted facilities (0192).
- One commenter suggested that EPA could create a central online repository for existing guidance documents from industry (0215).

- One commenter recommended improving upon the AIChE and CCPS guidelines by including guidance on how to model future climate conditions and consider impacts to natural hazards (0204).

Several commenters provided suggestions regarding the content of guidance:

- One commenter suggested that any guidance encourage facilities to base analysis on hydrological modeling, including a review of assets that may be susceptible to high water levels and wave action in the 1% and 0.2% annual probability (i.e., 100-year and 500-year) flooding events. The commenter suggested that modeling could include additional analysis of the impacts NBS would have on flood levels, as well as evaluate how future conditions may change due to climate change (0204).
- One commenter suggested that EPA develop guidance at a granular level for facilities. The commenter offered that EPA should set standards for whether or not a facility should assess a flooding hazard based on if they are in a floodplain, or specifying a specific flood intensity (e.g., 100-year flood) that would increase in frequency (0261). Another commenter echoed that EPA take a regional, sector-specific approach to providing guidance to facilities on how to address natural hazards (0261).
- One commenter stated that it is important for any guidance to be easy-to-use, specific, and regionally-based (0230).

  EPA Response: EPA appreciates the commenters' suggestions for guidance related to assessing natural hazards and will consider them during future guidance development.

Other comments on additional guidance

Comment 2.2-03: One commenter noted that industry guidance already exists on facility natural hazard analysis, including the guidance issued by the CCPS in response to the U.S. CSB recommendation for guidance in the Arkema accident report (0444).

Another commenter asserted that the development of guidance and standards should be done by standard-setting organizations such as the American Institute of Chemical Engineers (AIChE) and its CCPS, and the American Petroleum Institute (API), as these organizations have technical expertise that EPA lacks (0215).

> **EPA Response:** EPA acknowledges there is already industry guidance on facility natural hazard analysis. EPA continues to expect facilities to utilize all available resources to properly evaluate what natural hazards could potentially trigger accidental releases from their regulated processes.

Comment 2.2-04: One commenter suggested that the compliance dates should not be changed based on when the guidance is issued (0460).

> **EPA Response:** EPA is simply emphasizing the already-existing requirement that the evaluation of natural hazards be explicitly included in hazard reviews and PHAs for Program 2 and Program 3 RMP-regulated processes. EPA continues to expect facilities to utilize all available resources to properly evaluate what natural hazards could potentially trigger accidental releases from their regulated processes.

Comment 2.2-05: Another commenter suggested that EPA should encourage local jurisdictions and FEMA and other entities such as FM Global to review and update flood maps considering climate change impacts, as existing maps may be outdated. The commenter noted that facilities

should not be required to speculate about potential flood risks from climate change that are not reflected in flood maps (0215).

> **EPA Response:** EPA appreciates the suggestion. EPA has and will continue to partner with States and local jurisdictions when implementing the RMP rule.

2.3 Natural hazard resources

Comment 2.3-01: Many commenters suggested resources for consideration by EPA, including:

- A couple of commenters suggested that EPA utilize the National Oceanic and Atmospheric Administration's (NOAA) Climate Mapping for Resilience and Adaptation Portal, which provides scientific evidence of climate-related hazards happening in real-time in the U.S., in addition to information on climate-related risks based on National Climate Assessment data (0266, 0460). A few commenters suggested that EPA utilize NOAA's Atlas 14 updated rainfall data, to provide facilities with updated precipitation estimates (0208, 0254, 0450).
- A couple of commenters suggested the FEMA National Risk Index (NRI) for Natural Hazards, which identifies communities most at risk from 18 natural hazards with 8 index ratings (0165, 0460). One of the commenters noted that the FEMA NRI tool also provides information on the level of expected annual loss, social vulnerability, and community resilience from hazards (0460). Another commenter offered that facilities could use the natural hazard risk component of the FEMA NRI in the hazard analysis and address hazards through mitigation and emergency response planning when the index is relatively moderate or higher (0165).
- One commenter recommended the 2021 and 2022 NRC datasets be used, which include additional releases and near misses related to hurricanes and other natural hazards. The commenter also recommended that facilities use the Climate Adaptation Implementation Plans issued by EPA program offices and regional offices to assess climate change-related risks (0460).
- One commenter suggested the U.S. Army Engineer Research and Development Center's (ERDC) *International Guidelines on Natural and Nature-Based Features for Flood Risk Management* (0204).
- One commenter recommended utilizing the AIChE 2019 publication *Manage the Risks of Severe Wind and Flood Events* (Liserio, F. and Mahan, P) (0215).
- A couple of commenters recommended that EPA use the list in the U.S. Government Accountability Office's (GAO) 2022 report, "Chemical Accident Prevention: EPA Should Ensure Regulated Facilities Consider Risks from Climate Change" (0240, 0460). One of the commenters also recommended using the list in the 2021 report, "Preventing Double Disasters," from David Flores et al. (0460).

> **EPA Response:** EPA appreciates the commenters' suggestion for additional resources for consideration related to natural hazards assessment and will consider them during future guidance development.

2.4 Specify areas most at risk from climate or other natural events

Comments in support of specifying areas most at risk

Comment 2.4-01: Several commenters expressed support for EPA specifying areas most at risk from climate or other natural events (0201, 0240, 0266, 0447, 0460). One of the commenters

indicated that adopting the list of areas exposed to heightened risk of wildfire, flooding, storm surge, or coastal flooding is necessary because facilities would face difficulties in assessing future climate risks without this additional guidance from EPA (0201).

A couple of commenters suggested that the list of at-risk facilities or geographic areas should be regularly updated using the latest available data (0240, 0460).

A couple of commenters clarified that such a list of at-risk areas should not be used to limit the number of facilities that are required to conduct a natural hazard or climate change hazard analysis (0266, 0460).

> **EPA Response:** While EPA agrees it could be useful to specify areas most at risk from natural events and identify sources with heightened risk of climate events, EPA is not finalizing a regulatory provision that will adopt these approaches at this time. Rather, EPA will use these comments, as well as those received on guidance development, to update the current hazard evaluation guidance and initiate ways to share natural hazard resources with facility owners and operators to help them identify and evaluate potential natural hazard risks. EPA expects to develop and release this guidance approximately one year after this final rule. The SCCAP proposed rule identified relevant new studies for RMP facilities and the threat of natural hazards to them. Those studies included the Center for Progressive Reform, Earthjustice, and the Union of Concerned Scientists', report "Preventing Double Disasters[45]" and the Government Accountability Office's report "Chemical Accident Prevention: EPA Should Ensure Regulated Facilities Consider Risks from Climate Change[46]". EPA also believes CCPS' guidance presented in the SCCAP proposal, is still useful for facilities' evaluation of natural hazards for process safety. Lastly, EPA now also recognizes the identification of hazards in FEMA's NRI[47] and Climate Essentials for Emergency Managers[48] as the most comprehensive foundation to identify, evaluate and understand relative natural hazard risk, particularly how natural hazards must account for a changing climate. EPA intends to incorporate and further evaluate other resources as a minimum in its guidance and expects that information available in these resources can be helpful to be consulted to complement a facility's more localized information available from the state and local government.

Comments in opposition to specifying areas most at risk:

Comment 2.4-02: A couple of commenters opposed the natural hazards assessment in the proposed rule but indicated that if those provisions end up in the final rule, EPA should develop a list of at-risk facilities or geographic areas so facilities will know what specific hazards to address (0230, 0275).

A couple of commenters expressed opposition to the development of a list of geographic areas at most risk from natural hazards or climate-related hazards (0215, 0233). One of the commenters indicated that such a list is not necessary because facilities in these areas are generally aware of

---

[45] David Flores, et al., Preventing ''Double Disasters'' (2021), *https://www.ucsusa.org/sites/default/files/2021-07/preventing-double-disasters%20FINAL.pdf.*

[46] U.S. Government Accountability Office, Chemical Accident Prevention: EPA Should Ensure Regulated Facilities Consider Risks from Climate Change (2022), *https://www.gao.gov/assets/gao-22-104494.pdf*

[47] *https://hazards.fema.gov/nri/*

[48] *https://www.fema.gov/sites/default/files/documents/fema_climate-essentials_072023.pdf*

the potential for those hazards. The commenter stated that EPA has not demonstrated sufficient need to apply geographic distinctions as a part of the regulatory approach (0215).

One commenter stated that according to the Intergovernmental Panel on Climate Change's reporting, there are challenges with attributing events to climate change; therefore, the commenter stated that they oppose EPA specifying geographic areas most at risk from climate impacts (0233).

One commenter stated that since the frequency and intensity of NaTech disasters is increasing, an area that is not currently considered high risk could become high risk. The commenter suggested that the absence of a demonstrated link with climate risk in a specific area could be due to a lack of available data (0460). Another commenter suggested that even if EPA identifies facilities with known climate hazards, facilities not on the list should still be required to conduct an analysis based on available science to determine if they face climate hazards (0266).

> **EPA Response:** In the proposed rule, EPA requested comment on whether the Agency should specify geographic areas most at risk from climate or other natural events by adopting the list of areas exposed to heightened risk of wildfire, flooding storm surge, or coastal flooding. EPA is not finalizing a regulatory provision that will adopt this approach at this time. Rather, EPA will use these comments, as well as those received on guidance development, to update the current hazard evaluation guidance and initiate ways to share natural hazard resources with facility owners and operators to help them identify and evaluate potential natural hazard risks. EPA expects to develop and release this guidance approximately one year after this final rule. The SCCAP proposed rule identified relevant new studies for RMP facilities and the threat of natural hazards to them. Those studies included the Center for Progressive Reform, Earthjustice, and the Union of Concerned Scientists', report "Preventing Double Disasters[49]" and the Government Accountability Office's report "Chemical Accident Prevention: EPA Should Ensure Regulated Facilities Consider Risks from Climate Change[50]". EPA also believes CCPS' guidance presented in the SCCAP proposal, is still useful for facilities' evaluation of natural hazards for process safety. Lastly, EPA now also recognizes the identification of hazards in FEMA's NRI[51] and Climate Essentials for Emergency Managers[52] as the most comprehensive foundation to identify, evaluate and understand relative natural hazard risk, particularly how natural hazards must account for a changing climate. EPA intends to incorporate and further evaluate other resources as a minimum in its guidance and expects that information available in these resources can be helpful to be consulted to complement a facility's more localized information available from the state and local government.
>
> Further, the SCCAP proposed rule identified relevant new studies showing that the threat of natural hazard is increasing. These studies include the Center for Progressive Reform, Earthjustice, and the Union of Concerned Scientists,' report "Preventing 'Double

[49] David Flores, et al., Preventing ''Double Disasters'' (2021), *https://www.ucsusa.org/sites/default/files/2021-07/preventing-double-disasters%20FINAL.pdf*.
[50] U.S. Government Accountability Office, Chemical Accident Prevention: EPA Should Ensure Regulated Facilities Consider Risks from Climate Change (2022), *https://www.gao.gov/assets/gao-22-104494.pdf*
[51] *https://hazards.fema.gov/nri/*
[52] *https://www.fema.gov/sites/default/files/documents/fema_climate-essentials_072023.pdf*

Disasters"[53]; the Government Accountability Office's report "Chemical Accident Prevention: EPA Should Ensure Regulated Facilities Consider Risks from Climate Change"[54]; and the 2018 National Climate Assessment[55]. These resources can complement a facility's more localized information available from the state and local government.

2.5 Require sources in areas exposed to heightened risk to conduct hazard evaluations associated with climate or earthquakes

Comment 2.5-01: Several commenters recommended that EPA expand natural hazard and climate hazard requirements to all facilities (0203, 0221, 0240, 0250, 0255, 0266, 0270, 0409, 0456, 0460). One of the commenters noted that while Program 1 facilities make up only 3% of the total RMP facilities, they have reported weather-related accidents between 2004 and 2020 and are at risk from climate change-related risks (0240). A couple of commenters suggested that EPA expand coverage of regulations to facilities in areas of heightened risk of natural disasters (0447, 0460).

One commenter noted that the Chemical and Safety Board (CSB) has highlighted the need for facilities to address extreme weather. The commenter noted that international bodies have taken steps to address this; the European Union's Seveso III Directive requires operators to consider natural disasters in risk management and identify compounding impacts that natural disasters may have on facility accidents (0456).

EPA Response: In the proposed rule, EPA requested comment on whether the Agency should require sources in areas exposed to heightened risk of wildfire, flooding, storm surge, coastal flooding, or earthquake, to conduct hazard evaluations associated with climate or earthquake as a minimum, while also requiring all sources to consider the potential for natural hazards unrelated to climate or earthquake in their specific locations. EPA is not finalizing a regulatory provision that will adopt this approach at this time. Rather, EPA will use these comments, as well as those received on guidance development, to update the current hazard evaluation guidance and initiate ways to share natural hazard resources with facility owners and operators to help them identify and evaluate potential natural hazard risks. EPA expects to develop and release this guidance approximately one year after this final rule. The SCCAP proposed rule identified relevant new studies for RMP facilities and the threat of natural hazards to them. Those studies included the Center for Progressive Reform, Earthjustice, and the Union of Concerned Scientists', report "Preventing Double Disasters[56]" and the Government Accountability Office's report "Chemical Accident Prevention: EPA Should Ensure Regulated Facilities Consider Risks from Climate Change[57]". EPA also believes CCPS' guidance presented in

---

[53] David Flores, et al., *Preventing Double Disasters*' (2021), *https://www.ucsusa.org/sites/default/files/2021-07/preventing-double-disasters%20FINAL.pdf.*

[54] U.S. Government Accountability Office, *Chemical Accident Prevention: EPA Should Ensure Regulated Facilities Consider Risks from Climate Change* (2022), *https://www.gao.gov/assets/gao-22-104494.pdf.*

[55] U.S. Global Change Research Program, *Fourth National Climate Assessment* (2018), h*ttps://nca2018.globalchange.gov/.*

[56] David Flores, et al., Preventing ''Double Disasters'' (2021), *https://www.ucsusa.org/sites/default/files/2021-07/preventing-double-disasters%20FINAL.pdf.*

[57] U.S. Government Accountability Office, Chemical Accident Prevention: EPA Should Ensure Regulated Facilities Consider Risks from Climate Change (2022), *https://www.gao.gov/assets/gao-22-104494.pdf*

the SCCAP proposal, is still useful for facilities' evaluation of natural hazards for process safety. Lastly, EPA now also recognizes the identification of hazards in FEMA's NRI[58] and Climate Essentials for Emergency Managers[59] as the most comprehensive foundation to identify, evaluate and understand relative natural hazard risk, particularly how natural hazards must account for a changing climate. EPA intends to incorporate and further evaluate other resources as a minimum in its guidance and expects that information available in these resources can be helpful to be consulted to complement a facility's more localized information available from the state and local government.

With respect to Program 1 processes, while the processes themselves may be vulnerable to climate-related events and other natural hazards, the criteria for Program 1 ensures that the public would not be impacted by accidental releases from these processes.

3 Power Loss

Comments associated with this issue are discussed in the sub-issues below.

3.1 Proposed approach

General comments on requiring hazard evaluations to explicitly address the risk of power failure, as well as standby or emergency power systems

Comment 3.1-01: A couple of commenters supported the proposal requiring facilities to consider loss of power (0135, 0250). One commenter agreed with EPA's approach to add regulatory text to emphasize that loss of power is among the hazards that must be addressed within hazard review (0257). One commenter supported the regulations change as currently stated, i.e., as a requirement for consideration of the potential for loss of power (0215). A few commenters expressed support for facilities having contingency plans to handle potential power loss (0184, 0270, 0444). A few commenters discussed EPA's proposal to emphasize that PHAs identify and address natural hazards, loss of power that could lead to catastrophic consequences, and facility siting in accordance with accepted industry guidelines and had no objections to the proposal (0228, 0263, 0460). One of the commenters noted that EPA must respond and incorporate this recommendation fully (0460). One commenter stated that they did not oppose requiring hazard reviews and PHAs to address power loss, but noted that in many cases, a company's RMP already considers both natural hazards and power loss (0275).

One commenter noted that power loss has been identified as the cause of hazardous chemical releases, such as the Shell East Site and Arkema incidents, and stated it is clear that more stringent requirements are needed (0270).

Another commenter noted that power loss has caused or contributed to thousands of NRC reported incidents, including chemical disasters. The commenter supports including an amendment to fulfill EPA's statutory duty to promulgate rules that provide, "to the greatest extent practicable, for the prevention and detection of accidental releases" (0460).

One commenter urged EPA to finalize and strengthen its proposal to assure a full assessment of natural hazard-linked chemical disasters and implementation of all feasible prevention and

[58] *https://hazards.fema.gov/nri/*
[59] *https://www.fema.gov/sites/default/files/documents/fema_climate-essentials_072023.pdf*

disaster prevention measures, which include backup power, safer startup or shutdown, and repair of aging infrastructure (0413).

Two commenters stated that EPA should do more to require all RMP facilities to prepare for climate-driven extreme weather events and power loss (0240, 0392).

One commenter supported the requirements and stated that evidence shows that at least one-third of all RMP facilities are in areas facing high climate risks (0252). Another commenter supported that RMP should require that all facilities take action to prepare for climate hazards, including things like enough back-up power to safely run or shutdown the entire facility when the power goes out (0255).

One commenter supported requiring Program 2 and 3 facilities to include explicit considerations of power loss in hazard reviews and process hazard analyses.

One commenter noted that RMP facilities should be expressly required to analyze hazards associated with power loss. The commenter stated that the lack of reliable backup or emergency power at RMP facilities is a longstanding problem. The commenter stated that lack of an explicit requirement that RMP facilities plan for a sudden loss in power has resulted in accidents such as the 2017 Arkema Crosby facility fire, where extensive flooding from Hurricane Harvey caused the facility's refrigeration system to fail, leading to the combustion of organic peroxides (0444).

Several commenters expressed that EPA has not provided data showing that power loss is a significant cause of accidents, and therefore the proposed rule is unwarranted (0232, 0237, 0238, 0268, 0272). One of the commenters stated that EPA provides no supporting examples in the preamble of an RMP accident related to power loss during these natural hazard events (0238). Another commenter noted that the RMP data over the 16-year period identified only 20 accidents linked to power loss, and none of these resulted in injuries to the public, offsite deaths, or offsite property damage (0268).

One commenter stated that the new chemical disaster prevention rule must require RMP facilities to have functioning backup power generators, microgrids, and other available forms of additional on-site power to ensure full backup power capacity needed for safety reasons. The commenter stated that the proposed rule must also require RMP facilities to report on the reliability of their backup power and infrastructure. The commenter mentioned the Arkema disaster and the European Union's (EU) Seveso III Directive in detail (0456).

> **EPA Response:** EPA agrees that power loss can threaten RMP-regulated processes and cause accidental releases if not properly managed, and therefore disagrees that the provisions are unwarranted. In the proposed rule, EPA provided data showing that power loss has resulted in serious accidental release incidents at RMP-regulated facilities (87 FR 53569), and EPA believes making more explicit this already-existing accident prevention program requirement to evaluate hazards of the process[13] will ensure that threats of power loss are properly evaluated and managed to prevent or mitigate releases of RMP-regulated substances at covered facilities. Therefore, EPA is finalizing the proposed revisions.
>
> EPA is not requiring implementation of standby or emergency power for the entirety of an RMP process at this time. However, the Agency is requiring the source to consider the appropriateness of backup power for the entirety of their process and to explain decisions not to implement backup power to that scale. There may be situations where backup

power is not critical to chemical release prevention, so the rule provides sources the opportunity to explain their decision-making. Such an approach is consistent with the performance-based structure of the rule that relies on examination of process safety issues by the source, rational decision-making on the part of owners and operators, and oversight by implementing agencies through compliance assistance and enforcement and the public through disclosure.

Specific comments in opposition to the proposed rule

Comment 3.1-02: Many commenters opposed the proposed power loss requirements due to commenter's concerns that RMP data do not justify the requirements, as explained below.

A few commenters stated that from 2016-2020, only 7 out of 448 reported accidents were linked to power loss (0237, 0268, 0272). One of the commenters asserted that perhaps recognizing that the RMP data fails to show a power loss problem, EPA arbitrarily cherry picked the data in two respects. The commenter stated that EPA used RMP data back to 2004 to justify addressing power loss but insisted on using a 2016-2020 range for the same data in justifying other aspects of the proposed rule. The commenter stated that no explanation appears in the record to explain this arbitrary difference in methodology, but it again has the effect of increasing the number of incidents tied to power loss (0268). Another commenter discussed in detail that only 7 accidents could be attributed to loss of power and none of those cases resulted in off-site property damage or injuries (0237).

One commenter stated there is no evidence of a deficiency to warrant the proposed power loss requirements. The commenter noted that EPA's proposal references 3,077 reported accidents from 2004 to 2020 that were associated with power loss, but, tellingly, it acknowledges that most did not involve RMP chemicals, processes, or accidental releases as defined in CAA § 112(r)(2). The commenter stated that EPA's lack of data on RMP-specific performance and enabling conditions is a fundamental defect (0215).

One commenter expressed that information provided in the preamble does not justify elevating power loss to an explicit hazard evaluated in hazard reviews and PHAs. The commenter stated that accidents that predate EPA's RMP accident data do not capture the safety improvements resulting from more than 20 years of RMP implementation, mentioning the 2010 Millard Refrigerated Services accident as an example. The commenter also stated that the data and examples provided by EPA in the preamble do not support adding power loss to the hazards evaluated in hazard reviews and PHAs (0238).

One commenter expressed that there were flaws in EPA's analysis including how EPA determined that 392 entities will need to implement backup power using a small generator or offered no assessment of the feasibility of requiring facilities to operate independently of the power grid. The commenter also opposed EPA's review and justification for this provision and stated that it also transfers significant burden from traditional power generators and distributors to RMP facilities. The commenter stated that RMP facilities are not responsible for the reliability and integrity of the power grid. The commenter also stated they would like EPA to remove the requirement of perimeter monitoring equipment (0239).

One commenter stated the Arkema accident does not support the requirement to include power loss in the PHA. The commenter noted that, as stated in the CSB Incident Report, the Arkema PHA included three layers of protection from loss of power (0238).

One commenter stated that under the current regulatory text, it is unclear whether there exists a requirement for a hazard review or PHA to consider the risks of a potential loss of power (0215).

EPA Response: EPA believes that power loss can threaten RMP-regulated processes and cause accidental releases if not properly managed, and therefore believes that the provisions are warranted. In the proposed rule, EPA provided data showing that power loss has resulted in serious accidental release incidents at RMP-regulated facilities. Also, the accidents described in the SCCAP proposal —all associated with power failure—are examples of these situations and their potential severity. They also highlight the in-depth evaluation needed to prevent loss of power from resulting in an accidental release.

While EPA cited NRC statistics that include incidents that would not be accidental releases of regulated substances from processes subject to the RMP rule, we also cited RMP data and incidents (87 FR 53570). EPA believes the NRC data helps to demonstrate the connection between the loss of power, loss of containment, and release of chemicals into the environment. Further, while the cited RMP accidents associated with power loss was from 2004, over one third of the listed accidents (7 of 20) was from the 2016-2020 range,[60] indicating these types of accidents are still occuring as often as in previous time periods.

Therefore, EPA believes making more explicit this already-existing Program 2 hazard review and Program 3 process hazard analysis prevention program requirement to evaluate hazards of the process will ensure that threats of power loss are properly evaluated and managed to prevent or mitigate releases of RMP-regulated substances at covered facilities. Therefore, EPA is finalizing the proposed regulatory text revisions.

EPA recognizes that safety improvements may have been made over the period for which we have accident information. To the extent that these improvements establish that individual sources have adequate protection from power loss and have determined that power loss does not present a risk of accidental release, such sources should be minimally impacted operationally and in terms of capital costs by the provision adopted in this rule.

Nothing in this rule makes individual sources responsible for the reliability and integrity of the power grid. However, the owner or operator of a source subject to the RMP provision is required "to prepare and implement a risk management plan to detect and prevent or minimize accidental releases of such substances from the stationary source." CAA 112(r)(7)(B)(ii). The purpose of evaluating the consequences of the loss of power on the potential for an accidental release and identifying whether such a scenario needs to be addressed as part of a risk management program is to fulfill a responsibility of the owner or operator under this statutory provision. An owner or operator cannot escape

[60] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

their duty to make their facility safe by saying the grid failed and I have no responsibility for the consequences of that failure on the regulated processes at my source.

Additionally, in this final rule EPA is requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes and has amended regulatory language to reflect the requirement. EPA believes that doing so will help ensure compliance with the intent of the rule and ensure that the RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. While the Agency acknowledges that there may be processes that do not require backup power, the Agency believes that once a facility has made and documented the determination that it is appropriate to have monitors for accidental releases, then ensuring their operation through requiring backup power is an appropriate operational requirement.

Further, the RIA for the proposed and final SCCAP rule explains that EPA estimated 392 facilities will be required to implement backup power for perimeter monitoring, which is the number of active Program 2 and 3 facilities in the RMP database (as of December 31, 2020) that report having perimeter monitors, a cooling loss hazard (as a proxy for power loss being a major hazard), and no backup power in their RMP.

Lastly, many continuous emissions monitoring systems have low power requirements.[61] EPA updated the estimated costs for this provision in the SCCAP final rule RIA. The proposed rule estimated a cost of $1,000 per facility for backup power for monitoring equipment. The final rule increased the estimated cost to $3,300 per facility in any given year based on generator pricing and sensor power requirement information from commercial websites, as well as an example of the number of perimeter monitors at a facility. EPA assumes the typical facility's perimeter monitoring system will require a 1 kW backup generator, but facilities may purchase a slightly more powerful model. EPA assumes a facility will pay $3,000 to purchase and install such a small generator based on identifying an 8.5kW home generator listed for slightly below $3,000. EPA assumes a 5-year life for the generator, so facilities will purchase a new generator or make repairs of equivalent cost every 5 years. EPA assumes annual operation and maintenance costs of 10% of purchase and installation costs, or $300 per year. See Section 4.4.6 of the RIA for more detail on the estimated costs.

Comment 3.1-03: One commenter noted that the preamble also discusses a European Union (EU) study of power failures worldwide on chemical facilities. The commenter stated that the EU study on worldwide power failures and the impact to worldwide chemical facilities is irrelevant in the context of developing RMP regulations applicable to chemical facilities located in the United States (0238).

EPA Response: EPA disagrees that the EU study on learning from incidents involving power supply failures is irrelevant in developing amendments to the RMP regulations. While the regulatory requirements around the world may differ, absent a showing that

[61] Power requirements for a variety of continuous emissions monitoring systems can be found in reports at https://www.epa.gov/emc/emc-continuous-emission-monitoring-systems. For example, Ammonia CEMS specification tables list power requirements, http://www.epa.gov/sites/default/files/2020-08/documents/04-nh3_cems.pdf .

domestic facilities are meaningfully technologically different from those in the EU study in how they handle chemicals in processes that rely on power, EPA may appropriately rely on the study to help us in identify the potential impacts of power failures on chemical handling. As noted in the report, "The accident descriptions and lessons learned are reconstructed from accident reports submitted to the EU's Major Accident Reporting System at https://emars.jrc.ec.europa.eu as well as other open sources. EMARS consists of over 1100 reports of chemical accidents contributed by EU Member States and OECD Countries." The EMARS system includes accidents that occurred in the United States (an example from the United States, found in EMARS) is even featured in the study).

Additionally, the United States is an OECD country and EPA participates on the OECD steering committee of the Working Party for Chemical Accidents. OECD describes the focus of the program as one that concerns everyone who uses or handles hazardous chemicals, works in a chemical plant, or lives near one and helps public authorities, industry, labour and other interested parties prevent chemical accidents and respond appropriately if one occurs.[62]

Comment 3.1-04: One commenter stated that the current proposed rule creates new obligations that are unlawful and arbitrary. The commenter also noted that EPA ignores its obligation to fully consider costs of the proposed requirements and fails to consider feasibility issues for facilities that may trip Safety Instrumented Systems (SIS) before back-up power can come online (0268).

EPA Response: Each modification of the RMP rule that EPA proposed and is finalizing is based on EPA's rulemaking authority under CAA section 112(r)(7). Both paragraph (A) and subparagraph (B)(i) of section 112(r)(7) explicitly grant EPA the authority to require monitoring for accidental releases. See CAA section 112(r)(7)(A)) (EPA "authorized to promulgate release prevention, detection, and correction requirements which may include monitoring"); CAA section 112(r)(7)(B)(I) (as appropriate, the accidental release regulations shall cover the use, operation, and upkeep of equipment to monitor accidental releases). The original rule established, through its statutory authority, the requirement to monitor for accidental releases to help prevent and mitigate releases. Therefore, backup and emergency power system requirements being finalized in this rule simply ensure proper operation of monitors and continuous compliance with the existing requirement.

In regard to costs, EPA updated the estimated costs for this provision in the SCCAP final rule RIA. The proposed rule estimated a cost of $1,000 per facility for backup power for monitoring equipment. The final rule increased the estimated cost to $3,300 per facility in any given year based on generator pricing and sensor power requirement information from commercial websites, as well as an example of the number of perimeter monitors at a facility. EPA assumes the typical facility's perimeter monitoring system will require a 1 kW backup generator, but facilities may purchase a slightly more powerful model. EPA assumes a facility will pay $3,000 to purchase and install such a small generator based on identifying an 8.5kW home generator listed for slightly below $3,000. EPA assumes a 5-year life for the generator, so facilities will purchase a new generator or make repairs of equivalent cost every 5 years. EPA assumes annual operation and maintenance costs of

[62] https://www.oecd.org/chemicalsafety/chemical-accidents/

10% of purchase and installation costs, or $300 per year. See Section 4.4.6 of the RIA for more detail on the estimated costs.

Comments on inconsistencies with OSHA

Comment 3.1-05: A couple commenters expressed that EPA's proposal to explicitly require evaluation of standby and emergency power systems diverges with OSHA's PSM requirements in the PHA. The commenter stated that this proposal would inappropriately create an inconsistency between the two regulatory programs, injecting ambiguity and uncertainty into the PHA process (0268). Another commenter urged EPA to not include these additional provisions in RMP regulations and instead allow OSHA to continue its oversight of these hazards (0205). Another commenter stated that OSHA has authority over onsite equipment and has issued guidance on power loss (0253).

Many commenters additionally claimed that the provisions for air pollution control or monitoring equipment to have backup power are already included in OSHA's PSM standards. The commenters claimed that having this requirement included in RMP in addition to PSM would create duplicative work for facilities while also creating the opportunity for uneven enforcement of these provisions from the two agencies. The commenters urged EPA to not include these provisions in RMP regulations and instead allow OSHA to continue its oversight of these hazards (0180, 0205, 0217, 0234, 0226, 0458).

One of the commenters expressed that the proposal would break with PSM and would upend the longstanding harmonization between RMP and PSM by mandating backup power for monitoring equipment (0272). Some commenters stated issues with unclear language, impractical requirements, and duplicative work in the proposed changes to hazard evaluation (0205, 0217, 0234). One of the commenters suggested that having these categories included in RMP in addition to PSM would create duplicative work for facilities while also creating the opportunity for uneven enforcement of these provisions from OSHA and EPA (0205).

One commenter also noted that OSHA has authority over onsite equipment and has issued guidance on power loss, and OSHA also declined to impose an explicit requirement for facilities to evaluate power loss in PHAs in its 1992 PSM standards (0232).

One commenter noted that the proposed rule ignores that if the site identifies the possibility of power loss, it would be addressed in the PHA process already (0268).

> **EPA Response:** In response to comments that the requirements would create inconsistency between EPA and OSHA regulatory programs, EPA seeks only to better reflect its longstanding regulatory requirement that loss of power is among the hazards that must be addressed within hazard evaluations, rather than impose additional regulatory requirements (and thus potential additional costs) that conflict with the OSHA PSM regulatory requirements. In fact, EPA has coordinated with OSHA throughout the rulemaking process to ensure the intent of adding specificity and clarification to the RMP regulations does not create conflicting requirements with OSHA's PSM standard.

Other recommendations for the proposed rule

Comment 3.1-06: One of the commenters noted that the proposed rule should recognize that the impact of power loss can vary among different types of facilities (0184). One commenter stated that EPA does not consider the extent to which risk and mitigation strategies vary among different types of facilities, mentioning loss of power at dairy facilities as an example (0237).

EPA Response: EPA is not requiring implementation of standby or emergency power for the entirety of an RMP process at this time. However, the Agency is requiring the source to consider the appropriateness of backup power for their process and to explain decisions not to implement backup power. There may be situations where backup power is not critical to chemical release prevention, so the rule provides sources the opportunity to explain their decision-making. Such an approach is consistent with the performance-based structure of the rule that relies on examination of process safety issues by the source, rational decision-making on the part of owners and operators, and oversight by implementing agencies through compliance assistance and enforcement and the public through disclosure. EPA takes a slightly different approach with respect to backup power for monitors. EPA is requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes and has amended regulatory language to reflect the requirement. EPA believes that doing so will help ensure compliance with the intent of the rule and ensure that the RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. While the Agency acknowledges that there may be processes that do not require backup power, the Agency believes that once a facility has made and documented the determination that it is appropriate to have monitors for accidental releases, then ensuring their operation through requiring backup power is an appropriate operational requirement.

Comment 3.1-07: One commenter asserted that all stationary sources with processes subject to Program 2 and/or 3 requirements should develop Power Disruption Plans. The commenter discussed the 2001 General Chemical incident in detail. The commenter urged that power loss evaluation needs to be required in PHAs and hazard reviews exempt from "double jeopardy" language to ensure adequate evaluation (0173).

Another commenter supported explicitly requiring Program 2 hazard reviews to address power loss and safeguards used or needed to control the hazards or prevent equipment malfunction or human error including standby or emergency power systems. The commenter also strongly supported explicitly requiring Program 3 process hazard analyses to address engineering and administrative controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies to provide early warning of releases and standby or emergency power systems (0460).

EPA Response: EPA appreciates the support for making more explicit the already-existing Program 2 and Program 3 accident prevention program requirement to ensure that threats of power loss are properly evaluated and managed to prevent or mitigate releases of RMP-regulated substances at covered facilities.

This existing provision requires facilities with Program 2 and Program 3 processes to consider the appropriateness of backup power for their process and to explain decisions not to implement backup power. There may be situations where backup power is not critical to chemical release prevention, so the rule provides sources the opportunity to explain their decision-making and seek out solutions to best manage their hazards. EPA contemplates that formal Power Disruption Plans could be a solution of the evaluation.

The comment did not explain its use of the phrase "double jeopardy", nor does it have a common meaning in the context of process safety. Therefore, the comment lacks the specificity necessary for EPA to respond.

Comment 3.1-08: Another commenter stated that a requirement to evaluate the risk of power loss during extreme weather events should include a continuing obligation to re-evaluate the risk as climate change continues to alter floodplains and rainfall depths for 100-year events. The commenter stated that climate change is expected to cause more extreme weather, increasing the risk that facilities will lose power that may be needed to run systems to prevent chemical releases (0444).

EPA Response: The PHA and the hazard review are required to be performed every 5 years. The requirement to evaluate the need for backup power is part of PHAs and hazard reviews, thus would be continuing obligations. To the extent that natural hazards are exacerbated over time by climate change, the potential for such hazards to change the need for backup power would be incorporated into such periodic evaluations.

Comment 3.1-09: One commenter noted that EPA must clarify the date by which compliance with the power loss assessment is required and must "assur[e] compliance as expeditiously as practicable." The commenter noted that EPA must clarify how 40 CFR § 68.190(b) interacts with 40 CFR § 68.10(i) and "assur[e] compliance as expeditiously as practicable." The commenter noted, for example, if the proposed rule is finalized in 2023 and compliance is required by 2027, but 40 CFR § 68.190(b) requires revision by 2025, the current proposal should clarify that the 2025 revised RMP must comply (0460).

EPA Response: EPA notes the SCCAP final rule regulatory text addition of evaluation of standby or emergency power systems as a listed hazard for evaluation in hazard evaluations is not requiring additional regulatory requirements from what already exists in the RMP regulations. The current RMP rule's PHA requirements include determining and evaluating the hazards of the process" as well as "engineering … controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies." (40 CFR 68.67(c)(1),(3)). Loss of power is one such hazard, and backup power is an engineering control applicable to the hazard and detection methodologies. Similar but less detailed requirements apply to Program 2 processes (40 CFR 68.50(a)). The hazard evaluation requirements reflect not only the OSHA and EPA rules but also existing industry recommended practices, and therefore, EPA assumes that these hazard evaluation amplifications impose no new requirements or costs on facilities. Thus, EPA expects facilities to continue to use available resources to properly evaluate whether power loss is a hazard to their process and, if so, implement appropriate controls to prevent or reduce that hazard. Compliance for this provisions is therefore already required and should be updated on their normal schedule.

Regarding the compliance date for requiring standby or backup power for continuous operation of air monitoring equipment associated with prevention and detection of accidental releases from covered processes, EPA has adopted the three-year compliance date and has amended the regulatory language. EPA believes three years will allow time to evaluate and secure standby or backup power needs for air monitoring equipment and assure their safe operation.

Comment 3.1-10: A couple of commenters urged EPA to require facilities to evaluate their ability to prevent a chemical release in the event the duration of a power loss exceeds the extent of a facility's backup power capacity and/or in scenarios when extreme weather events incapacitate such backup power systems (0241, 0392).

> **EPA Response:** EPA is not requiring implementation of standby or emergency power for the entirety of an RMP process at this time. However, the Agency is requiring the source to consider the appropriateness of backup power for their process and to explain decisions not to implement backup power. There may be situations where backup power is not critical to chemical release prevention, so the rule provides sources the opportunity to explain their decision-making. Such an approach is consistent with the performance-based structure of the rule that relies on examination of process safety issues by the source, rational decision-making on the part of owners and operators, and oversight by implementing agencies through compliance assistance and enforcement and the public through disclosure.

Proposed regulatory text changes

Comment 3.1-11: Several commenters proposed specific regulatory language changes, as described below.

One commenter proposed adding "…and standby or emergency power systems" to the current wording of 40 CFR § 68.67I(3) and removing "Acceptable detection methods might include process monitoring and control instrumentation with alarms, and detection hardware such as hydrocarbon sensors." The commenter suggested this change in regulatory text, as it would remove from the regulatory text the parenthetical clarification in § 68.67I(3) that "process monitoring and control instrumentation with alarms, and detection hardware such as hydrocarbon sensors" are "acceptable detection methods" (0233).

One commenter stated that the language "other triggering events" is problematic due to its ambiguity. The commenter expressed that the Agency has proposed adding "power loss" to risk management plan reporting under § 68.170I(7) and § 68.175I(8), but no specific linkage has been made to the loss of power as an event to be considered during hazard evaluations or hazard analyses. The commenter proposed revising both § 68.67I(8) and the related provision in § 68.50(a)(5) as follows (0193):

> (8) External events such as natural hazards, extreme weather events, and loss of power, ~~including those caused by climate change or other triggering events~~ that could ~~lead to~~ result in an accidental release;

A couple of commenters suggested a change to the wording from "standby or backup power" to "a plan to account for loss of power" (0184, 0237).

Another commenter recommended that EPA add appropriate language that a regulatory agency assesses natural hazards, power loss, and stationary source siting when performing a hazard review (0245).

> **EPA Response:** EPA appreciates the commenters' suggestions. EPA is finalizing the power loss provisions from the proposed rule with modifications explained in the preamble.

3.2 Require backup power systems for air pollution control or monitoring equipment

Comments in support of backup power system requirements

Comment 3.2-01: Several commenters supported EPA the requirement under the proposed rule that ensures backup power for existing air monitors (0252, 0254, 0269, 0270, 0409).

One commenter asserted that the proposed natural hazards requirements and backup power system requirements for air monitoring equipment are eminently reasonable responses to the increasing frequency and severity of extreme weather events (0235).

> **EPA Response:** EPA appreciates the support. EPA seeks to better reflect its longstanding regulatory requirement further protect human health and the environment.

Recommendations for expansion of scope of backup power requirements

Comment 3.2-02: Several commenters recommended that EPA expand the scope of the backup power systems requirements, as described below.

A couple of commenters urged EPA to require facilities to have backup power systems, generally (0141, 0191). Several commenters urged EPA to require facilities to implement external hazard mitigation and have backup power systems (0135, 0157, 0209, 0254, 0409, 0448, 0449, 0453, 0460).

A few of the commenters requested that the requirement be extended to additional fenceline monitoring that the commenters requested that EPA add to the proposed rule. The commenters suggested that EPA also require facilities to have enough back-up to safely run or shut down the entire facility in the event of power loss (0252, 0264, 0269).

A few commenters suggested that EPA should do more to require the adoption of chemical release prevention practices that can withstand the risk of climate- and natural disaster-related hazards like requiring facilities to implement natural hazard mitigation and backup power systems for all RMP process equipment (0219, 0252, 0269). A few commenters similarly requested that EPA require backup power for all process equipment (0208, 0254, 0450).

One commenter requested that EPA require facilities that have identified a heightened risk from natural hazards to also implement backup power (0240).

One commenter requested that EPA require all Program 2 and Program 3 facilities that have identified natural hazards risks in hazard reviews to implement backup power systems not just for monitors (0250).

One commenter requested that EPA require back-up power generally and fenceline monitoring, because the risks are too high to rely on only voluntary implementation, guidance, or trade association best practices. The commenter stated that assuring fenceline monitoring and back-up power generally would go farther toward protecting communities in a large-scale discharge scenario than back-up power for existing monitors alone (0460).

One commenter requested that EPA strengthen the proposed rule to require expanded fenceline monitoring and adequate backup power for air monitors to operate continuously and that this be documented in a written plan that includes the location of the monitors (0255).

One commenter stated that EPA should require implementation of all practicable power loss mitigation – including back-up power for all equipment connected to RMP processes that could

cause an RMP chemical release. The commenter stated that, in view of the strong evidence showing the value in implementation of all practicable NaTech mitigation (including for power loss), EPA must require such implementation (0460).

One commenter urged EPA to broaden the requirement to apply to any equipment relied on by a facility to prevent an accidental release from a process with RMP-regulated substances. The commenter claimed that EPA's statutory directive to issue regulations that prevent and mitigate accidents "to the greatest extent practicable," 42 U.S.C. § 412(r)(7)(B), requires the Agency to do more. The commenter suggested that, if it is practicable for facilities to have backup power where power is necessary to prevent a release, the facility should be required to take that step. The commenter agreed that risk management plans should document decisions by an owner or operator not to implement measures to address loss of power, but facilities that should not have the option to decline to adopt practicable measures (0444).

One commenter suggested that EPA require facilities to have safety or some sort of standard across machines so the consequences of power loss can continue to be monitored and prevented (0192).

> **EPA Response:** EPA is not requiring implementation of standby or emergency power for the entirety of an RMP process at this time. However, the Agency is requiring the source to consider the appropriateness of backup power for their process and to explain decisions not to implement backup power. There may be situations where backup power is not critical to chemical release prevention, so the rule provides sources the opportunity to explain their decision-making. Such an approach is consistent with the performance-based structure of the rule that relies on examination of process safety issues by the source, rational decision-making on the part of owners and operators, and oversight by implementing agencies through compliance assistance and enforcement and the public through disclosure. EPA takes a slightly different approach with respect to backup power for monitors. EPA is requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes and has amended regulatory language to reflect the requirement. EPA believes that doing so will help ensure compliance with the intent of the rule and ensure that the RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. While the Agency acknowledges that there may be processes that do not require backup power, the Agency believes that once a facility has made and documented the determination that it is appropriate to have monitors for accidental releases, then ensuring their operation through requiring backup power is an appropriate operational requirement.
>
> Further, as stated in the SCCAP proposal, EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. While EPA is considering this issue for a future action, it is beyond the scope of this rulemaking.

Recommendations for exceptions to the backup power requirements

Comment 3.2-03: One commenter stated that industrial refrigeration facilities should not have requirements for backup power imposed on them. The commenter noted that ammonia refrigeration systems are typically designed to International Institute of Ammonia Refrigeration

(IIAR) standards, and when these standards are properly applied, the systems "fail safe" when they are subjected to power loss (0190).

A couple of commenters stated that having standby or backup power for an ammonia refrigeration system is not necessary because the loss of power should not lead to a refrigerant release, only loss of refrigeration. The commenters believed that a requirement to install backup power for ammonia detectors may be difficult for facilities to comply with because the detection system is connected to other safety systems such as alarms and the ventilation system, meaning that the ventilation system and alarms would also need to be connected to the backup power supply (0184, 0237). One of the commenters claimed that explicitly requiring standby or backup power is unnecessarily limiting (0184). The other commenter believed that explicitly requiring standby or backup power would require a facility constructed according to IIAR Standards to invest in an unreasonable and unnecessary capital expense (0237).

> **EPA Response:** EPA is not requiring implementation of standby or emergency power for the entirety of an RMP process at this time. However, the Agency is requiring the source to consider the appropriateness of backup power for their process and to explain decisions not to implement backup power. There may be situations where backup power is not critical to chemical release prevention, so the rule provides sources the opportunity to explain their decision-making. Such an approach is consistent with the performance-based structure of the rule that relies on examination of process safety issues by the source, rational decision-making on the part of owners and operators, and oversight by implementing agencies through compliance assistance and enforcement and the public through disclosure. EPA takes a slightly different approach with respect to backup power for monitors. EPA is requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes and has amended regulatory language to reflect the requirement. EPA believes that doing so will help ensure compliance with the intent of the rule and ensure that the RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. While the Agency acknowledges that there may be processes that do not require backup power, the Agency believes that once a facility has made and documented the determination that it is appropriate to have monitors for accidental releases, then ensuring their operation through requiring backup power is an appropriate operational requirement.
>
> Further, in the SCCAP proposal, the Agency indicated that some industry standards already require continuous monitoring of process chemicals. For example, the International Institute of Ammonia Refrigeration's (IIAR's) ''Minimum Safety Requirements for Existing Closed Circuit Ammonia Refrigeration Systems'' requires facilities with ammonia refrigeration systems to provide a means for monitoring the concentration of an ammonia release in the event of a power failure.[63]

Comment 3.2-04: A few commenters, who operate RCRA and Maximum Achievable Control Technology (MACT) Subpart EEE permitted units, noted that if a facility loses electricity, their unit shuts down, and an emergency vent opens to prevent an explosion or equipment damage

[63] IIAR, IIAR–9–2020 Minimum Safety Requirements for Existing Closed Circuit Ammonia Refrigeration Systems 7.4.7.2.

(0181, 0223, 0262). A couple of the commenters stated that monitoring equipment also shuts down, and that this scenario is covered in the MACT EEE required startup, shutdown and maintenance plan. The commenters stated that it is not economically practical nor is it safe to develop backup power systems for incinerator's air pollution control systems due to the large electrical load requirements. The commenters requested an exemption for RCRA-permitted incinerators be written into the regulation (0181, 0262). One commenter claimed that there would be at least 30 seconds to several minutes before any diesel generated backup power could come online, which the commenter claimed would not be fast enough to forestall the regulatorily-required automatic shutdown. The commenter stated that the large amounts of power required to run high-horsepower equipment makes battery backup infeasible, meaning that the proposed requirement would require hazardous waste combustors to keep an on-site diesel generator operating all the time for the few instances when the power grid goes down. The commenter claimed that this does not make sense from either an economic or environmental standpoint. The commenter suggested that 40 CFR Part 63 Subpart EEE and RCRA Subtitle C sources be excluded from any regulations requiring backup power (0223).

> **EPA Response:** As an initial matter, EPA notes that emergency vent emissions that are designed to prevent catastrophic events were not intended to be deemed accidental releases and were intended to be addressed under the NESHAP and incinerator program. Senate Report at 210. Furthermore, to the extent that RCRA-regulated and subpart EEE units are otherwise subject to 40 CFR part 68, adoption of backup power for controls of emissions that are not accidental releases is not mandated by the final rule. EPA does ask that stationary sources with covered processes assess whether backup power for such processes is appropriate. Some of the observations about the problems with providing backup power to processes to prevent accidental releases may be relevant to site-specific decisions. The rule simply requires a source to explain in writing its decision not to adopt backup power.

Comment 3.2-05: A couple of commenters discussed information about facilities and Reciprocating Internal Combustion Engine (RICE) regulations (0197, 0239). One of the commenters questioned whether EPA considered how new aspects of this proposed rule could affect a facility with respect to RICE regulations, which limit the amount of time backup power can run and requires certain maintenance that facilities must comply with (0197). Another commenter noted that EPA offers no assessment of the feasibility of requiring facilities to operate independently of the power grid, nor any consideration of the restrictions imposed by the CAA for RICE and other stationary engine regulations that restrict operation of emergency generators (0239).

> **EPA Response:** The rule does not require installing air pollution control equipment for accidental releases, nor does it require backup power for pollution controls of non-accidental emissions regulated under the NESHAP program. Furthermore, we note that flammable substances used as fuel, such as methane, are exempt from threshold determination under 40 CFR 68.126. To the extent that a source is subject to both the RICE requirements and the RMP rule, it may explain its decision in writing not to adopt air pollution control requirements for equipment to control accidental releases by explaining that requirements of the RICE rule would make adoption of control equipment specifically for accidental releases impracticable.

Recommendations for ways to strengthen the backup power requirements

Comment 3.2-06: A couple of commenters suggested that any power loss be treated as a foreseeable accident that could be accounted for with backup power (0254, 0452). A few commenters recommended that EPA should require facilities to have enough backup power to safely run or shut down the entire facility in the event of power loss (0250, 0270).

> **EPA Response:** In response to the comments requesting that EPA require facilities to have enough backup power to safely run in the event of power loss, EPA is not requiring implementation of standby or emergency power for the entirety of an RMP process at this time. However, the Agency is requiring the source to consider the appropriateness of backup power for their process and to explain decisions not to implement backup power. There may be situations where backup power is not critical to chemical release prevention, so the rule provides sources the opportunity to explain their decision-making. Such an approach is consistent with the performance-based structure of the rule that relies on examination of process safety issues by the source, rational decision-making on the part of owners and operators, and oversight by implementing agencies through compliance assistance and enforcement and the public through disclosure. EPA takes a slightly different approach with respect to backup power for monitors. EPA is requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes and has amended regulatory language to reflect the requirement. EPA believes that doing so will help ensure compliance with the intent of the rule and ensure that the RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. While the Agency acknowledges that there may be processes that do not require backup power, the Agency believes that once a facility has made and documented the determination that it is appropriate to have monitors for accidental releases, then ensuring their operation through requiring backup power is an appropriate operational requirement.

Comment 3.2-07: One commenter strongly supported the proposed requirements for backup power systems but stated that the proposed amendments to 40 CFR 68.50 and 68.67 are extremely vague. The commenter requested that the amendments clearly require standby or backup power for the relevant air pollution control and monitoring equipment and claimed that failing to finalize such requirements would not satisfy the Act's directive to assure prevention, detection, response, and harm minimization "to the greatest extent practicable," and would therefore be arbitrary and capricious (0460).

> **EPA Response:** In response to the comment that the amendments to 40 CFR 68.50 and 68.67 are vague, EPA again notes these amplifications are already preexisting requirements. Also, EPA's general approach in 40 CFR part 68 has been to recognize that process safety requires owners and operators to exercise reasonable judgement in making their facility safer. Therefore, EPA has, and continues to, allow substantial flexibility for sources on how to comply with the RMP rule. As noted in the proposal, EPA believes many facilities are already managing the hazard of power loss well and thus does not believe the amplification of power loss in the hazard evaluation regulatory text will negatively affect evaluation of this hazard. The final SCCAP rule requires backup power for equipment that monitors for accidental releases of regulated substances from processes subject to the RMP rule.

Comment 3.2-08: One commenter stated that facilities should provide information to local responders about their backup power capabilities during a hazard event, including the backup generation source, fuel type, capacity (operational hours), and process consequences for extended power loss. The commenter stated that the information provided should address how long a facility can maintain the RMP process(es) safely with backup power (0165).

> **EPA Response:** In response to the comment that facilities should provide local responders with their backup power capabilities during a hazard event, EPA maintains that it is very important to ensure that Local Emergency Planning Committees (LEPCs) or local emergency response officials have the information necessary for developing local emergency response plans; however, EPA believes it is not necessary to specify in the RMP rule the types or format of information that LEPCs or emergency response officials may request. Section 303(d)(3) of the Emergency Planning and Community Right to Know Act already provides the necessary authority to allow LEPCs to request information needed to develop the local emergency response plan. Furthermore, as part of the annual coordination between facilities and local emergency responders, responders may obtain information on backup power as appropriate.

Comment 3.2-09: One commenter recommended that EPA entirely remove the provision "not all RMP-regulated processes will need emergency backup power (for example, certain RMP-regulated storage processes)" from any final rule. The commenter expressed that to the extent EPA does retain a version of this requirement, the commenter encouraged EPA to expressly include exceptions in the regulatory text (0239).

> **EPA Response:** EPA disagrees that it should provide exceptions or exemptions for certain facility processes from backup power requirements in regulatory text. The Agency is requiring the source to consider the appropriateness of backup power for their process and to explain decisions not to implement backup power. There may be situations where backup power is not critical to chemical release prevention, so the rule provides sources the opportunity for the source to explain their decision-making. Such an approach is consistent with the performance-based structure of the rule that relies on examination of process safety issues by the source, rational decision-making on the part of owners and operators, and oversight by implementing agencies through compliance assistance and enforcement and the public through disclosure. EPA takes a slightly different approach with respect to backup power for monitors. EPA is requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes and has amended regulatory language to reflect the requirement. EPA believes that doing so will help ensure compliance with the intent of the rule and ensure that the RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. While the Agency acknowledges that there may be processes that do not require backup power, the Agency believes that once a facility has made and documented the determination that it is appropriate to have monitors for accidental releases, then ensuring their operation through requiring backup power is an appropriate operational requirement.

Comment 3.2-10: One commenter suggested that EPA specify an appropriate compliance deadline for backup power requirements no later than three years from the date of promulgation (0444).

EPA Response: EPA has adopted the three-year compliance date and has amended the regulatory language. EPA believes three years will allow time to evaluate and secure standby or backup power needs for air monitoring equipment and assure their safe operation.

Backup power requirements exceed the scope of RMP

Comment 3.2-11: A few commenters stated that EPA's proposal to explicitly require back-up and emergency power systems exceeds the scope of RMP without proper justification (0232, 0253, 0272). One commenter expressed concern that the proposed backup power requirements exceed EPA's statutory authority and lack a reasoned basis (0207). A couple of commenters also questioned whether EPA's statutory authority allows it to require such actions. The commenters contended that air emission monitoring equipment is typically regulated under other EPA CAA regulatory programs (New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants, and Title V permitting program). The commenters requested that EPA explicitly explain its statutory authority under CAA § 112I to mandate this requirement and allow for meaningful public comment (0229, 0232). Based on this, one of the commenters believed the proposed rule should not be finalized (0229). Both commenters requested that, if EPA moves forward with a final rule, a detailed clarification on what is meant by this provision would be needed, including extensive guidance on which systems require standby or backup power and that "air pollution control or monitoring equipment" would be well defined to ensure facilities understand what is considered control and monitoring equipment (0229, 0232). Another commenter expressed that if EPA intended to require back up power for monitoring each system during power outages, it would not only exceed EPA's authority under RMP but would impose a significant cost not considered by the Agency (0268).

One commenter further elaborated that the statute authorizes EPA "to promulgate release prevention [and] detection … requirements which may include monitoring," for "regulated substances" 42 U.S.C. § 7412(r)(7)(A). The commenter claimed that the Proposed Rule makes no distinction between equipment monitoring regulated substances and unregulated substances under the RMP program and that the RMP statute does not provide EPA with any authority over pollution controls regardless of what type of substance they control. The commenter recommended that, to the extent that EPA wishes to mandate backup power for emission controls and monitoring equipment, these issues should be addressed under the appropriate CAA program (Title V or New Source Review) (0207).

A couple of commenters stated that a focus on maintaining air pollution control or monitoring equipment during a power loss, while important, may detract from the fundamental purpose of the RMP (0229, 0232).

EPA Response: EPA notes that the requirement for backup power for air pollution control or monitoring equipment only applies to equipment associated with prevention and detection of accidental releases of regulated substances from processes subject to 40 CFR part 68. Therefore, EPA disagrees that the backup and emergency power system requirements exceed the scope of the RMP rule and EPA's statutory authority and also disagrees that the monitoring requirements may detract from the fundamental purpose of the RMP rule. Each modification of the RMP rule that EPA proposed and is finalizing is based on EPA's rulemaking authority under CAA section 112I(7). Both paragraph (A) and subparagraph (B)(I) of section 112I(7) explicitly grant EPA the authority to require

monitoring for accidental releases. See CAA section 112I(7)(A) (EPA "authorized to promulgate release prevention, detection, and correction requirements which may include monitoring"); CAA section 112I(7)(B)(I) (as appropriate, the accidental release regulations shall cover the use, operation, and upkeep of equipment to monitor accidental releases). The original rule established, through its statutory authority, the requirement to monitor for accidental releases to help prevent and mitigate releases. Therefore, backup and emergency power system requirements being finalized in this rule simply ensure proper operation of monitors and continuous compliance with the existing requirement.

Other comments in opposition to the backup power requirements

Comment 3.2-12: A couple of commenters claimed that EPA made an unjustified assumption in the preamble of the proposed rule that facilities will remove air monitoring and control equipment from service prior to a natural disaster to evade monitoring requirements. The commenters stated that the suggestion that facilities will attempt to evade regulatory agency requirements in the event of a natural disaster is improper and inappropriate (0229, 0232).

A couple of commenters echoed that there is no support for EPA's concern that facilities will use extreme weather events as a pretext for disabling monitoring equipment and evading monitoring equipment (0230, 0239).

Conversely, one commenter recommended the need for penalties for regulated facilities for intentionally removing air monitors from service. The commenter added that regulated facilities should have backup power for air monitors to operate continuously (0255). A couple of commenters requested that EPA take needed enforcement steps (0250, 0264). A couple of commenters requested that EPA include penalties suitable to prevent monitor shutdown (0270, 0409). One of the commenters pointed to EPA's recognition of intentional dismantling of monitoring equipment and based on these events, the commenter called for EPA to include penalties sufficient to deter companies from intentionally turning off their existing air monitors and removing them from service, whether because of the presence of a natural hazard or not (0270).

Several commenters stated that requirements for air pollution control or monitoring equipment to have backup power if they are associated with the prevention/detection of an accidental release from an RMP-regulated process are already covered by process hazard analyses (PHAs). The commenters claimed that applying back up power broadly as a part of a risk-based regulation would require facilities that do not need such safeguards, as determined by their PHA, to implement costly measures unnecessarily (0180, 0205, 0217, 0234, 0226, 0458).

EPA Response: In response to comments regarding facilities' removal of air monitoring equipment, EPA notes that the final rule is revising 40 CFR 68.52(b)(9) and 68.69(a)(4) to require documentation of the removal of monitoring equipment for accidental releases during disasters in facility operating procedures. In doing so, the Agency addresses the concern that the threat of extreme weather events has, and will continue to be, used by some owners or operators to justify disabling equipment designed to monitor and detect chemical releases of RMP-regulated substances at their facility (87 FR 53571). To prevent accidental releases, RMP owners or operators are required to develop a program that includes monitoring for such releases. EPA does not believe all natural disasters should be treated as an exception to this requirement. However, EPA understands that, in some situations, such as hurricane winds, there is a potential for damage to, or by,

monitoring equipment if not secured and allows a source to shut down monitoring equipment in such cases provided that an explanation is included in its RMP. We believe the requirement for documentation when a source shuts down accidental release monitoring equipment properly allows for necessary shutdowns while allowing for oversight of any abuse.

Comment 3.2-13: One commenter opposed across-the-board requirement that RMP facilities maintain backup power capability because the need for such capability depends entirely on the nature of the processes being run at a facility (0275).

One commenter claimed that providing standby or backup power for air pollution control or detection equipment for all stationary sources is not always practical or necessary. The commenter noted that certain engineering controls can adequately mitigate risk without power, such as processes with valves that open or close automatically to a safe position in the event of a power loss, and that alternatives to providing emergency power to cool chemicals during adverse weather exist, including transferring them off-site (0215).

> **EPA Response:** EPA is not requiring implementation of standby or emergency power for the entirety of an RMP process at this time. However, the Agency is requiring the source to consider the appropriateness of backup power for their process and to explain decisions not to implement backup power. There may be situations where backup power is not critical to chemical release prevention, so the rule provides sources the opportunity to explain their decision-making. Such an approach is consistent with the performance-based structure of the rule that relies on examination of process safety issues by the source, rational decision-making on the part of owners and operators, and oversight by implementing agencies through compliance assistance and enforcement and the public through disclosure. EPA takes a slightly different approach with respect to backup power for monitors. EPA is requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes and has amended regulatory language to reflect the requirement. EPA believes that doing so will help ensure compliance with the intent of the rule and ensure that the RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. While the Agency acknowledges that there may be processes that do not require backup power, the Agency believes that once a facility has made and documented the determination that it is appropriate to have monitors for accidental releases, then ensuring their operation through requiring backup power is an appropriate operational requirement. If a process has powerless controls (e.g., passive mitigation) that prevent an accidental release during power loss, then no power would be needed as part of the accidental release emission control equipment, and no backup power would need to be provided.

Comment 3.2-14: One commenter, stating that their air pollution control or monitoring equipment is powered by the same facility electrical distribution system powering all other operations, claimed that installing a separate electrical system to provide backup power to air pollution monitoring equipment was unnecessary and would be extremely difficult to implement at an existing facility. The commenter claimed that the cost to install and maintain an independent electrical system capable of supplying backup power to air pollution control or monitoring equipment was not properly considered or justified. The commenter stated that the

source of standby or backup power would necessarily be a fossil-fueled internal combustion engine requiring routine testing and generating undesirable emissions in conflict with the climate change mitigation goals of Executive Order 13990 (0238).

Another commenter stated the requirement to implement the changes to require air pollution or monitoring equipment associated with prevention and detection of accidental releases without full consideration of the benefits and practicability of doing so on a facility-specific basis is troublesome (0230).

> **EPA Response:** In this final rule EPA is requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes and has amended regulatory language to reflect the requirement. EPA believes that doing so will help ensure compliance with the intent of the rule and ensure that the RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. While the Agency acknowledges that there may be processes that do not require backup power, the Agency believes that once a facility has made and documented the determination that it is appropriate to have monitors for accidental releases, then ensuring their operation through requiring backup power is an appropriate operational requirement.
>
> EPA updated the estimated costs for this provision in the SCCAP final rule RIA. The proposed rule estimated a cost of $1,000 per facility for backup power for monitoring equipment. The final rule increased the estimated cost to $3,300 per facility in any given year based on generator pricing and sensor power requirement information from commercial websites, as well as an example of the number of perimeter monitors at a facility. EPA assumes the typical facility's perimeter monitoring system will require a 1 kW backup generator, but facilities may purchase a slightly more powerful model. EPA assumes a facility will pay $3,000 to purchase and install such a small generator based on identifying an 8.5kW home generator listed for slightly below $3,000. EPA assumes a 5-year lifespan for the generator, so facilities will newly purchase or make repairs of equivalent cost every 5 years. EPA assumes ordinary annual operation and maintenance costs of 10% of purchase and installation costs, or $300 per year and that many continuous emissions monitoring systems have low power requirements.[64] Section 4.4.6 of the RIA for more detail on the estimated costs.

Comment 3.2-15: One commenter claimed that the proposed rule failed to provide a reasoned basis for imposing the backup power requirements, stating that the proposed rule never attempted to provide any data supporting these requirements and that Appendix A to the Technical Support Document do not appear to identify any accidents caused by a loss of power. The commenter believed that EPA justified the proposal based on what the commenter claimed were unsubstantiated concerns "that air monitoring and control equipment is often removed from service" at unidentified facilities "before natural disasters" or that owners and operators may "conceivably in some cases" use a loss of power to intentionally "evade monitoring

---

[64] Power requirements for a variety of continuous emissions monitoring systems can be found in reports at https://www.epa.gov/emc/emc-continuous-emission-monitoring-systems. For example, Ammonia CEMS specification tables list power requirements, http://www.epa.gov/sites/default/files/2020-08/documents/04-nh3_cems.pdf .

requirements." The commenter referred to EPA's discussion of anecdotes and NRC reporting to argue that power loss may lead to releases of regulated substances but claimed that such justification falls apart with EPA's noting that "most of these incidents" used to justify the new requirements "did not involve RMP chemicals, processes, or accidental releases." The commenter requested that, to support the proposed requirements, EPA must provide relevant data (0207).

> **EPA Response:** Both paragraph (A) and subparagraph (B)(i) of CAA section 112(r)(7) explicitly grant EPA the authority to require monitoring for accidental releases. See CAA section 112(r)(7)(A)) (EPA "authorized to promulgate release prevention, detection, and correction requirements which may include monitoring"); CAA section 112(r)(7)(B)(I) (as appropriate, the accidental release regulations shall cover the use, operation, and upkeep of equipment to monitor accidental releases). The original rule established, through its statutory authority, the requirement to monitor for accidental releases to help prevent and mitigate releases. Therefore, backup and emergency power system requirements being finalized in this rule simply ensure proper operation of monitors and continuous compliance with the existing requirement.
>
> Further, the 2022 SCCAP proposed rule and the accompanying Technical Background Document show that past accidents have been caused by power failure, and the backup power provisions target these events. Based on RMP-reportable accident and other data from RMP regulated industry sectors[65], chemical accidents can impose substantial costs on firms, employees, emergency responders, the community, and the broader economy. Reducing the risk of such accidents, the severity of the impacts when accidents occur, and improving information availability, as the provisions of this final rule intend, will provide benefits to the potentially affected members of society.
>
> Lastly, in response to comments regarding facilities' removal of air monitoring equipment, EPA notes that the final rule is revising 40 CFR 68.52(b)(9) and 68.69(a)(4) to require documentation of the removal of monitoring equipment for accidental releases during disasters in facility operating procedures. In doing so, the Agency addresses the concern that the threat of extreme weather events has, and will continue to be, used by some owners or operators to justify disabling equipment designed to monitor and detect chemical releases of RMP-regulated substances at their facility (87 FR 53571). To prevent accidental releases, RMP owners or operators are required to develop a program that includes monitoring for such releases. EPA does not believe all natural disasters should be treated as an exception to this requirement. However, EPA understands that, in some situations, such as hurricane winds, there is a potential for damage to, or by, monitoring equipment if not secured and allows a source to shut down monitoring equipment in such cases provided that an explanation is included in its RMP.

Comment 3.2-16: One commenter opposed the proposed requirements for backup power for air pollution control or monitoring equipment, noting that a PHA may conclude that backup power is appropriate for monitoring equipment but in many other processes, the relevant reaction may

[65] Marsh JLT Specialty, "100 Largest Losses in the Hydrocarbon Industry," 27th Edition, March 2022. Accessed from https://www.marsh.com/uk/industries/energy-and-power/insights/100-largest-losses.html. Marsh provides estimates of large property damage losses in the hydrocarbon industry from 1974 to 2021 in current and 2021 dollars and in a few cases, business loss costs.

simply cease if electric power is no longer available. The commenter believed there would be no reason to continue powering air pollution control devices or monitors in such a case (0275).

Two commenters stated that the requirement for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes to have standby or backup power does not seem to be expressed anywhere in the proposed regulatory text (0215, 0275). One of the commenters stated that if EPA intends to require standby or backup power for air pollution control or detection equipment in all circumstances, the regulatory text should make that clear. The commenter also stated that as with any new regulatory requirements, EPA must provide adequate justification and address the costs and benefits in its economic analysis of the proposed rule (0215).

> **Response:** To prevent accidents, RMP owners or operators are required to develop a program that includes monitoring for accidental releases. EPA does not believe natural disasters should be treated as an exception to this requirement. A large-scale natural disaster may threaten multiple RMP facilities in a community simultaneously, regardless of the process being operational, leaving communities to endure the direct effects of a natural disaster without receiving warning of associated chemical releases. EPA wants to ensure RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. EPA is therefore requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes. If a process has powerless controls (e.g., passive mitigation) that prevent an accidental release during power loss, then no power would be needed as part of the accidental release emission control equipment, and no backup power would need to be provided.

Requests for clarification

Comment 3.2-17: One commenter requested that EPA clarify its proposal with respect to standby or backup power for air pollution control or monitoring equipment. The commenter noted the intent in the proposed rule's preamble to require air pollution control or monitoring equipment associated with prevention and detection of accidental releases to have standby or backup power. The commenter claimed that there is no reference in the proposed revisions to the regulatory text to air pollution control or monitoring equipment. The commenter claimed that hazard evaluations for Program 2 and 3 facilities would have to specifically address standby or emergency power systems for hazard prevention-related equipment, but that it was not clear from the proposed regulatory text that such provisions would necessarily require backup power for air pollution control equipment nor what the relevant types of equipment would be. The commenter believed that the lack of details and ambiguity in the proposed rule meant that they had not been provided a meaningful opportunity to comment (0233).

> **EPA Response:** This was erroneously omitted in the SCCAP proposal. EPA has included in the SCCAP final rule regulatory text at 40 CFR 68.50(a)(3) and 68.67(c)(3) the requirement for monitoring equipment associated with prevention and detection of accidental releases from covered processes to have standby or backup power.

Comment 3.2-18: Another commenter stated that the proposed rule's analysis of the power loss issue is ambiguous and should be clarified in a supplemental notice of proposed rule. The commenter also requested that EPA provide additional clarification for the type of equipment the

proposed rule is meant to address. The commenter noted that there are many examples of air monitoring systems used to detect accidental releases and it is not clear which equipment EPA is referring to concerning its stated expectation for standby/emergency power (0268).

EPA Response: EPA believes no supplemental proposal is needed to provide a meaningful opportunity for comment on the basis of and justification for the power loss requirements adopted in the final rule. The proposal drew robust substantive comment on the power loss provisions raised by the proposal. The volume and detail of the comments supports the adequacy of the notice. To the extent that the commenters contend that any provision of the final rule lacked notice of information of central relevance within the timeframes established by CAA 307(d)(7), the CAA provides a remedy procedure through the reconsideration process under CAA 307(d)(7)(B).

In the proposed rule, EPA provided data showing that power loss has resulted in serious accidental release incidents at RMP-regulated facilities, and EPA believes making more explicit the already-existing accident prevention program requirement to evaluate hazards of the process will ensure that threats of power loss are properly evaluated and managed to prevent or mitigate releases of RMP-regulated substances at covered facilities. Further, EPA is not requiring implementation of standby or emergency power for the entirety of an RMP process at this time. The Agency requires the source to consider the appropriateness of backup power for their process and to explain decisions not to implement backup power. There may be situations where backup power is not critical to chemical release prevention, so the rule provides sources the opportunity to explain their decision-making. Such an approach is consistent with the performance-based structure of the rule that relies on examination of process safety issues by the source, rational decision-making on the part of owners and operators, and oversight by implementing agencies through compliance assistance and enforcement and the public through disclosure.

EPA takes a slightly different approach with respect to backup power for monitors. EPA is requiring standby or backup power for air pollution control or monitoring equipment associated with prevention and detection of accidental releases from RMP-regulated processes and has amended regulatory language to reflect the requirement. EPA believes that doing so will help ensure compliance with the intent of the rule and ensure that the RMP-regulated substances at covered processes are continually being monitored so that potential exposure to chemical substances can be measured during and following a natural disaster. While the Agency acknowledges that there may be processes that do not require backup power, the Agency believes that once a facility has made and documented the determination that it is appropriate to have monitors for accidental releases, then ensuring their operation through requiring backup power is an appropriate operational requirement.

Conforming to the performance-based nature of the RMP rule, the existing RMP regulations allow facility owners or operators to choose how they will detect releases at their facility.[66] Due to the numerous RMP-regulated substances—and different technologies and methods available of accurately detecting those substances—EPA expects facilities to identify the most effective method of detecting releases of their

[66] See 40 CFR 68.50(a)(4), (40 CFR 68.65(d)(1)(viii)), (40 CFR 68.67(c)(3)).

specific substances, from their specific process operations, based on RAGAGEP. For example, EPA would expect facilities with anhydrous ammonia in ammonia refrigeration systems to adopt IIAR 9–2020, ‘‘Minimum System Safety Requirements for Existing Closed-Circuit Ammonia Refrigeration Systems’’ (specifically, section 7.3.12)[67], to address the specific requirements for ammonia detection and alarms in machinery rooms. For water and wastewater treatment facilities using gaseous chlorine, EPA would expect adoption of the Chlorine Institute’s ‘‘Pamphlet 73, Atmospheric Monitoring Equipment for Chlorine.[68] Nevertheless, whichever monitoring system identified and used, if it requires power to operate, EPA is requiring those monitors to have backup or standby power.

4 Stationary Source Siting

Comments associated with this issue are discussed in the sub-issues below.

4.1 Proposed approach

Comments in support of amending the regulatory text defining stationary source evaluations for Program 2 and 3 processes

Comment 4.1-01: A few commenters expressed support for EPA’s proposal to amend regulatory text for Program 2 and 3 processes to define stationary source siting evaluations as including placement of processes, equipment, buildings, and hazards posed by proximate facilities and accident release consequences posed by proximity to the public (0228, 0444, 0460, 0275). One commenter stated that doing so would ensure the protection of human health and the environment (0257).

A couple of commenters noted that the proposed siting requirements are more of a clarification to current regulations (0181, 0262).

> **EPA Response:** EPA agrees that amending the regulatory text to make more explicit the requirement that process hazard evaluations for both Program 2 (hazard review) and Program 3 (PHA) include in the siting evaluation the placement of processes, equipment, buildings, and hazards posed by proximate facilities, and accident release consequences posed by proximity to the public, will help ensure the protection of human health and the environment. As discussed in the proposal, siting of processes and equipment within a stationary source can impact the surrounding community, not only through the proximity of the accidental release to offsite receptors adjacent to the facility boundary (e.g., people, infrastructure, environmental resources), but also through increasing the likelihood of a secondary “knock-on” release by compromising nearby processes. The proposal offered several examples of accidental releases which illustrate the significant effects of the lack of sufficient distance between the source boundary and neighboring residential areas.

Comment 4.1-02: One commenter stated that EPA should require implementation of stationary source siting recommendations found in the analysis to the greatest extent practicable to assure

[67] IIAR, *ANSI/IIAR Standard 9–2020* (2020).

[68] The Chlorine Institute, *Pamphlet 73, Atmospheric Monitoring Equipment for Chlorine* (2021), https://bookstore.chlorineinstitute.org/pamphlet-73-atmospheric-monitoring-equipment-for-chlorine.html?Session_ID=66da3abed669d2ecb4448e5c1c17ba5e

protection for fenceline communities (0460). Similarly, another commenter suggested that if it is practicable for a facility to take an action to eliminate or lessen hazards associated with RMP processes through different siting, it should be required to do so (0444).

> **EPA Response:** In response to comments that EPA should require implementation of stationary source recommendations, EPA notes that, at this time, the Agency is only choosing to make more explicit what is required to be addressed in a stationary source siting evaluation. Rather than propose additional requirements, EPA is instead expounding on the current regulatory text to ensure that siting evaluations properly account for hazards resulting from the location of processes, equipment, building, and proximate facilities, and their effects on the surrounding community. EPA continues to believe the performance-based nature of both this provision and the overall rule allow facility owners and operators to reasonably determine what risk reduction measures work best for their particular chemical use, process, or facility.

General comments in opposition to stationary siting requirements

Comment 4.1-03: Several commenters stated that implementing facility siting requirements is unnecessary and duplicative because facilities covered by OSHA's PSM regulations already undergo similar requirements. The commenters stated that this creates the opportunity for inconsistent enforcement between EPA and OSHA (0180, 0205, 0207, 0217, 0226, 0229, 0232, 0234, 0253, 0458).

One commenter noted that they supported EPA's decision in the previous rule not to add facility siting requirements. The commenter suggested that the new RMP rule not include specific siting requirements (0238).

One commenter suggested that the proposed siting requirements not be too prescriptive because stationary source siting is a complex issue. The commenter also suggested that EPA should avoid diverting RMP compliance personnel and resources away from the most critical incident prevention activities (0215).

Another commenter suggested that EPA focus on developing and maintaining additional guidance and tools to assist regulated facilities to comply with the already-existing requirements rather than change the regulatory language (0230).

Another commenter expressed concern about EPA's statement that it is not proposing additional requirements but simply making "more explicit what is required to be addressed in a stationary source siting evaluation." The commenter suggested that EPA refrain from adding any burdens to facilities while amending this language (0197).

> **EPA Response:** EPA notes that, at this time, the Agency is only choosing to make more explicit what is required to be addressed in a stationary source siting evaluation. Rather than propose additional requirements, EPA is instead expounding on the current regulatory text to ensure that siting evaluations properly account for hazards resulting from the location of processes, equipment, building, and proximate facilities, and their effects on the surrounding community.
>
> EPA disagrees with comments that implementing the facility siting requirements would create the opportunity for inconsistent enforcement between EPA and OSHA. The OSHA PSM standard and RMP rule both require that facility siting be addressed as one element of a PHA (29 CFR 1910.119(e)(3)(v) and 40 CFR 68.67(c)(5)). In response to comments

on the proposed PSM rule, OSHA indicated that facility siting should always be considered during PHAs and therefore decided to emphasize this element by specifically listing siting evaluation in regulatory text. EPA's approach to the siting requirement is consistent with its general approach to PSM in the 1996 RMP rule: sound, comprehensive PSM systems can protect workers, the public, and the environment.

EPA expects facilities to continue to use available resources and any additional industry-specific guidance to properly evaluate siting hazards.

Comment 4.1-04: A couple of commenters stated that it is impracticable for EPA to require existing facilities to move processes to comply with any new siting requirements. The commenters suggested that EPA clarify that these requirements do not apply to existing facilities (0242, 0267). One commenter stated that imposing new siting requirements after a facility has been established would raise fundamental fairness issues, as well as possible regulatory "takings" issues, potentially requiring compensation to the affected sources (0229). One commenter stated that conducting a siting analysis is a significant undertaking for existing sources who do not have potential to cause offsite consequences. The commenter stated that it would be a costly and arduous undertaking to determine exactly what facilities are proximate and understand their internal operations. The commenter requested that EPA clarify whether an evaluation of the accidental release consequences posed by proximity would be necessary if a facility does not have the potential to cause offsite consequences (0261).

Another commenter stated that PHA currently requires evaluation of stationary source siting, and most companies perform siting studies using industry guidance such as the API RP 752 and 753 or the CCPS Guidelines that evaluate onsite receptors – not offsite. The commenter noted that none of these recommended practices and guidance documents require facilities to move existing equipment (0268).

EPA Response: EPA disagrees that it is impracticable to require existing facilities to comply with siting requirements. EPA notes that there is a breadth of guidance on siting, and the Agency therefore believes there is adequate information available for facilities to comply with the proposed text in this final rule. EPA expects facilities to continue to use available resources and any additional industry-specific guidance to properly evaluate siting hazards. The rule does not mandate that existing sources modify their footprint as a result of a siting analysis. The approach taken in this rule is similar to how hazard evaluations have proceeded in the past: require the analysis of hazards and rely upon owners and operators to use the information reasonably when determining what measures should be undertaken. The Agency also notes that Program 1 processes are not covered by this requirement; Program 2 and 3 sources subject to this requirement will have undertaken offsite consequence analyses and determined that they may have offsite impacts that disqualify them from Program 1. Finally, while EPA has in the past discussed the potential for requiring minimal setbacks and other specific location restrictions, notwithstanding local zoning, the siting requirement in this rule does not contain such a restriction on location.

Comment 4.1-05: Another commenter noted that the Texas Commission on Environmental Quality (TCEQ) has said repeatedly that it does not address siting in permitting decisions. The commenter stated that this is one reason that the Agency has been completely unwilling to address cumulative impacts in permitting (0254).

EPA Response: While EPA has in the past discussed the potential for requiring minimal setbacks and other specific location restrictions, notwithstanding local zoning, the siting requirement in this rule does not contain such restrictions on location.

Comments addressing consideration of proximate facilities

Comment 4.1-06: Several commenters expressed concern that EPA did not define the term "proximate facilities" (0180, 0205, 0217, 0226, 0232, 0234, 0237, 0253, 0272, 0458). Many commenters were also concerned that when these facilities are identified, it is not practical to expect them to share information with each other due to confidential business information (CBI) and security concerns (0173, 0180, 0205, 0217, 0223, 0226, 0229, 0232, 0233, 0234, 0458). One of the commenters suggested that EPA update the regulatory text to make an allowance for instances where neighboring facilities do not cooperate in the siting evaluation (0233).

Several commenters requested additional clarification about the proximate facility requirements. One commenter noted that the proposal fails to specify what type of facilities are to be considered proximate because the preamble could be read to suggest that a proximate facility include both RMP-covered and non-RMP facilities. The commenter also stated that the proposal fails to address several practical questions that make this kind of kind of hazard assessment an impossible task, including (0268):

- What authority would allow a PHA team to compel a proximate facility to provide information?
- How would the PHA team address the potential sharing of proprietary information and/or trade secrets?
- How would information sharing be conducted while protecting against antitrust concerns and other issues?

Another commenter requested that EPA explain how it intends the offsite factors of the proposed requirements to work and why they are necessary. The commenter noted that it is unclear how EPA anticipates that a hazard review or PHA team will consider hazards posed by proximate facilities. The commenter stated that a stationary source will not have sufficient information to evaluate hazards from proximate facilities and it will not be able to prevent or mitigate the consequences of an accidental release from a proximate facility (0215).

Another commenter questioned what happens if one or more of the proximate facilities change owners, change operations, or even sell or vacate the premises. The commenter also stated this plan would seem to have any real force only for the initial review of a yet-to-be constructed RMP facility, as such facilities would be able to move during construction processes, equipment, buildings to where they would avoid or minimize the hazards posed to/by proximate facilities (0261).

EPA Response: In response to the comments regarding the definition of "proximate facilities" and CBI, EPA notes that the provision is for facility owners and operators to be aware of and consider the apparent presence of facilities (RMP regulated or otherwise) within release impact zones that could occur from their facility, and how those releases would be affected because of the presence of nearby facilities. While EPA encourages sharing of chemical and process information between facilities, particularly for emergency response purposes, EPA does not believe this is required in order to comply with the provision. Nevertheless, when conducting siting evaluations, EPA would

reasonably expect sources to consult publicly accessible information on nearby sources, such as RMPs and information available through LEPCs. This type of information is not CBI.

Comment 4.1-07: Another commenter questioned EPA's proposal that an expanded source siting evaluation is needed to effectively create a boundary between a facility and proximate facilities. The commenter expressed that creating federal siting boundaries falls outside EPA's authority to address accidental releases (0272).

EPA Response: EPA notes that, at this time, the Agency is only choosing to make more explicit what is required to be addressed in a stationary source siting evaluation. Rather than propose additional requirements, EPA is instead expounding on the current regulatory text to ensure that siting evaluations properly account for hazards resulting from the location of processes, equipment, building, and proximate facilities, and their effects on the surrounding community. EPA notes that the provision is for facility owners and operators to be aware of and consider the apparent presence of facilities within release impact zones that could occur from their facility, and how those releases would be affected because of the presence of nearby facilities. EPA continues to believe the performance-based nature of both this provision and the overall rule allow facility owners and operators the discretion to determine what risk reduction measures work best for their particular chemical use, process, or facility. No provision of this rule requires creating or adjusting boundaries of facilities. EPA simply requires some cognizance of the potential impacts of proximate facilities on the hazards of the regulated source.

Comments addressing consideration of accident release consequences

Comment 4.1-08: One commenter expressed concern over EPA's proposal that a hazard review or PHA team consider "potential accidental release consequences to nearby public and environmental receptors." The commenter stated that it is unclear how hazard review or PHA team members, who are working to identify means to prevent or mitigate accidental releases, would change the hazard review or PHA by knowing that an accidental release could have offsite consequences (0215).

EPA Response: As discussed in RMP guidance and in the SCCAP proposal, the requirement to consider stationary source siting during the process hazard analysis means that you should consider the location of the covered vessels and evaluate whether their location creates risks for offsite public or environmental receptors, as well as onsite receptors. This analysis should consider the proximity of the vessels that could lead to a release of a regulated substance. The analysis may be done qualitatively. The analysis addresses whether the location of the vessels creates risks that could be reduced by changing the location or taking other actions, such as installing mitigation systems. As with other aspects of the RMP rule, EPA expects regulated facilities to rely on industry guidance to help adequately address stationary source siting in PHAs. The SCCAP proposal offered examples of relevant industry guidance on siting considerations are available to facility owners and operators.

EPA notes that, at this time, the Agency is only choosing to make more explicit what is required to be addressed in a stationary source siting evaluation. Rather than propose additional requirements, EPA is instead expounding on the current regulatory text to ensure that siting evaluations properly account for hazards resulting from the location of

processes, equipment, building, and proximate facilities, and their effects on the surrounding community.

Comment 4.1-09: Some commenters expressed concern about EPA's use of inapposite incidents as justification for the proposed siting requirements (0207, 0232, 0253, 0268, 0272). One of the commenters noted that only one of the seven examples occurred since the 2019 rule took effect and it was an incident outside the United States where similar zoning ordinances either do not exist or differ significantly and another example did not include a release (0268). Another commenter suggested that EPA should issue a supplemental proposed rule clearly explaining the rationale, particularly why the existing regulatory language is deficient and how the new proposed requirement could reduce accidents, and EPA's legal authority for doing so (0207). One commenter stated that incidents in foreign countries subject to different legal systems provide no grounds to regulate U.S. based facilities (0272).

EPA Response: The proposal offered several examples of accidental releases to illustrate the significant effects of the lack of sufficient distance between the source boundary and neighboring residential areas. Additionally, in the proposal EPA provided EPA RMP and OSHA PSM enforcement actions that showed despite enforcement and the consequences of catastrophic accidents, issues of siting continue to threaten process safety. We did not restrict our review of accidents to post-2019 incidents. We do not argue that solely post-2019 incidents justify our change of position regarding whether rule amendments are necessary. Therefore, we appropriately looked at more than just post-2019 incidents.

Consideration of siting has always been a core element of both the PSM standard and the RMP rule. Siting relates to potential effects of releases and a program to prevent and mitigate the impacts of release (CAA 112(r)(7)(B)(ii). EPA believes that amending the regulatory text to make more explicit the requirement that process hazard evaluations for both Program 2 (hazard review) and Program 3 (PHA) include in the siting evaluation the placement of processes, equipment, buildings, and hazards posed by proximate facilities, and accident release consequences posed by proximity to the public, will help ensure the protection of human health and the environment. As discussed in the proposal, siting of processes and equipment within a stationary source can impact the surrounding community, not only through the proximity of the accidental release to offsite receptors adjacent to the facility boundary (e.g., people, infrastructure, environmental resources), but also through increasing the likelihood of a secondary ''knock-on'' release by compromising nearby processes.

Comment 4.1-10: One commenter stated that EPA asserts "accidents continue to happen" as a reason for requiring siting evaluation to "ensure protection of human health and the environment." The commenter expressed that while Congress designed the program to prevent and mitigate the impacts of accidental releases, it did not require or assume no accidents (0268).

EPA Response: Congress charged EPA to promulgate reasonable regulations to provide to the greatest extent practicable for the prevention and detection of accidental releases. Even when EPA has discharged its mandatory duty under CAA section 112(r)(7)(B), the Agency retains the discretion to amend the regulations when they can be improved to further the intent of the statute. Therefore, when major concerning RMP accidents, including major accidents, continue to occur as they have, it is EPA's responsibility to further protect human health and the environment, if there are reasonable opportunities to

do so. EPA believes that amending the regulatory text to make more explicit the requirement that process hazard evaluations include in the siting evaluation the placement of processes, equipment, buildings, and hazards posed by proximate facilities, and accident release consequences posed by proximity to the public, will help ensure the protection of human health and the environment.

Comment 4.1-11: The commenter also noted that EPA claims the proposed rule is needed to address the increased likelihood of knock-on secondary releases by a nearby process. The commenter stated that even though the preamble suggests such releases are common, it does not include concrete examples. The commenter mentioned that EPA references two source siting enforcement actions against facilities that had no reported incidents. The commenter suggested that these anecdotal references are insufficient basis for EPA to change nearly 30 years of source siting requirements rooted in the PSM regulations (0268).

EPA Response: The proposal offered several examples of accidental releases to illustrate the significant effects of the lack of sufficient distance between the source boundary and neighboring residential areas. Additionally, in the proposal EPA provided EPA RMP and OSHA PSM enforcement actions that showed despite enforcement and the consequences of catastrophic accidents, issues of siting continue to threaten process safety.

EPA believes there are good reasons for the stationary source siting regulatory text changes and all the provisions adopted in this final rule. Accidental releases remain a significant concern to communities and cost society more than $540 million yearly.[69]

Further, EPA notes that knock-on effects are a well-recognized industry release scenario.[70] While not many recent catastrophic accidents may have occurred under this scenario, research indicates that chemical industries are evolving toward facility clusters handling increasing amounts of hazardous substances, therefore emphasis should continually be focused on major chemical risks and on domino events which can eventually lead to catastrophic knock-on accidents.[71] EPA must prioritize this scenario to help protect human health and the environment from major catastrophic releases.

Comments on zoning concerns

Comment 4.1-12: Several commenters expressed concerns about the siting for a new facility or facility expansion and local zoning regulations (0230, 0237, 0239, 0268). One of the commenters noted that the proposed requirements should be narrowly interpreted to preserve local zoning authority (0268). Another commenter mentioned that neither the facility nor EPA have any authority or control over local zoning ordinances that may have allowed development within an area that EPA's new criteria may deem to have inappropriate buffers or setbacks (0239). Another commenter stated that the facility siting provision could negatively affect where facilities could be built, depending on the distance between a facility process and off-site populations. The

[69] A full description of costs and benefits for this final rule can be found in the Regulatory Impact Analysis: Safer Communities by Chemical Accident Prevention: Final Rule. This document is available in the docket for this rulemaking (EPA-HQ-OLEM-2022-0174).

[70] As described in CCPS, *Guidelines for Siting and Layout of Facilities, 2nd Edition* (Hoboken, NJ: Wiley, 2018), *https://www.aiche.org/ccps/resources/publications/books/guidelines-siting-and-layout-facilities-2ndedition.*).

[71] G.L.L. Reniers, W. Dullaert, *Knock-on accident prevention in a chemical cluster*, Expert Systems with Applications 34 (2008) 42–49.

commenter encouraged EPA to consider a policy restricting outside populations from building close to a facility which could interfere with real estate plans and impact local building regulations (0184).

One commenter recommended that EPA issue guidance on zoning and planning for emergency planning districts. The commenter noted that there are few resources available to address lack of sufficient distance between the source boundary and neighboring residential areas for facilities that fall under RMP and EPCRA and collaboration between local hazardous material coordinators and planning and zoning (0165).

> **EPA Response:** While EPA has in the past discussed the potential for requiring minimal setbacks and other specific location restrictions, notwithstanding local zoning, the siting requirement in this rule does not contain such a restrictions on location.
>
> In the SCCAP proposal, EPA identified relevant industry guidance on siting considerations available to facility owners and operators. As with other aspects of the RMP rule, EPA expects regulated facilities to rely on industry guidance to help adequately address stationary source siting in PHAs. Additionally, EPA appreciates the suggestion to issue further siting emergency planning guidance and will consider the idea for future RMP activities.

Recommended additions or expansions of stationary source requirements or guidance

Comment 4.1-13: Several commenters provided specific recommendations that EPA expand or revise the scope of stationary source requirements or guidance, including the following:

- Some commenters suggested that EPA immediately redefine "stationary source" to ensure that the entire facility must comply with RMP requirements if any part of it is covered (0252, 0264, 0269, 0460). One commenter stated that EPA should expand coverage of the program by redefining the definition of "stationary source" (0160).
- One commenter requested that a definition of "facility" should be provided for clarity on the distinction between a stationary source and a facility (0185).
- One commenter suggested that EPA should strengthen the required hazard evaluation by mandating consideration of all hazardous substances stored at a facility, as well as cascading effects on co-located or proximate facilities (0148). Another commenter similarly recommended that EPA add appropriate language that a regulatory agency assess stationary source siting when performing a hazard review. The commenter stated that conscientiously assessing and planning for these specific hazards would increase awareness and emergency planning (0245).
- Some commenters suggested that EPA require facilities to evaluate cumulative impacts in the siting evaluation and alleviate the hazards identified in the siting evaluation. The commenters also suggested that EPA specify the various cumulative impacts that the facility should consider in the evaluation (0208, 0240, 0449, 0453).
- One commenter suggested that EPA should consider setback or buffer requirements between RMP sites. The commenter noted that the setbacks should apply facility to facility, facility to adjacent incompatible land use, and site to site within one facility. The commenter suggested that facilities be required to evaluate changes and additions to existing land uses surrounding their facilities on a periodic basis; every two years would be appropriate (0241).

- One commenter mentioned that the Global Home of Chemical Engineers AIChE CCPS *Guidelines for Siting and Layout of Facilities* is a useful tool for enhanced hazard review and PHA. The commenter noted that the AIChE CCPS facility siting guidelines encourage facility owners and operators to analyze natural hazards such as severe storms and flooding primarily in initial site selection. The commenter suggested that EPA could improve upon the AIChE CCPS guidelines by providing guidance to facility owners on how to model future climate conditions and their impacts on natural hazards (0204).
- One commenter requested that EPA review industry guidance and ensure that site layout distances and standards used by owners or operators are consequence-based (not risk-based), include cumulative impacts assessments, and are adequate to protect the public, infrastructure, and environmental receptors against potential worst-case releases (0220).
- Referring to EPA's proposal to require facilities to conduct siting evaluations, one commenter stated that EPA missed an opportunity to incorporate a substantive assessment of cumulative impacts. The commenter urged EPA to incorporate more explicit requirements for identifying, evaluating, and addressing facility siting harms during the PHA, rather than relying on industry guidance to address stationary source siting. In particular, the commenter suggested that Proposed Rule can be strengthened by providing guidance to facilities on comprehensively assessing cumulative impacts in siting evaluations and requiring facilities to implement measures to alleviate hazards to fenceline communities (0240).

  EPA Response: EPA notes that, at this time, the Agency is only choosing to make more explicit what is required to be addressed in a stationary source siting evaluation. Rather than propose additional requirements, EPA is instead expounding on the current regulatory text to ensure that siting evaluations properly account for hazards resulting from the location of processes, equipment, building, and proximate facilities, and their effects on the surrounding community. EPA continues to believe the performance-based nature of both this provision and the overall rule allow facility owners and operators the discretion to determine what risk reduction measures work best for their particular chemical use, process. EPA appreciates the suggestions for further guidance and will consider them for future RMP activities.

Comment 4.1-14: A few commenters requested clarity on the proposed requirements (0460, 0239). One commenter mentioned that by failing to specify what constitutes an evaluation in the rule, EPA is allowing facilities to rely on a potentially inadequate evaluation. The commenter suggested that a clear explanation of essential components would make it easier for facilities to understand and fulfill their obligations and for EPA to enforce them (0460). Another commenter suggested that EPA provide additional information indicating how it believes existing facilities can meet the new requirements and make clear that facilities are not required to take any steps that would conflict with other legal and regulatory requirements (0239).

EPA Response: As discussed in RMP guidance and in the SCCAP proposal, the requirement to consider stationary source siting during the process hazard analysis means that you should consider the location of the covered vessels and evaluate whether their location creates risks for offsite public or environmental receptors, as well as onsite receptors. This analysis should consider the proximity of the vessels that could lead to a release of a regulated substance. The analysis may be done qualitatively. The analysis addresses whether the location of the vessels creates risks that could be reduced by

changing the location or taking other actions, such as installing mitigation systems. As with other aspects of the RMP rule, EPA expects regulated facilities to rely on industry guidance to help adequately address stationary source siting in PHAs. The SCCAP proposal offered examples of relevant industry guidance on siting considerations are available to facility owners and operators.

EPA notes that, at this time, the Agency is only choosing to make more explicit what is required to be addressed in a stationary source siting evaluation. Rather than propose additional requirements, EPA is instead expounding on the current regulatory text to ensure that siting evaluations properly account for hazards resulting from the location of processes, equipment, building, and proximate facilities, and their effects on the surrounding community.

EPA will consider these comments further when determining whether to develop additional guidance on stationary source siting requirements.

5 Hazard Evaluation Recommendation Information Availability

Comments associated with this issue are discussed in the sub-issues below.

5.1 Proposed approach

Comments in support of information availability requirements

Comment 5.1-01: Several commenters expressed support for including recommendations from hazard evaluations of natural hazards, loss of power, and facility siting that were not adopted in a facility's risk management plan (0192, 0203, 0240, 0444, 0460). A couple of the commenters suggested that facilities should be required to implement practicable recommendations (0444, 0460).

Another commenter stated that failing to finalize the proposal would be arbitrary and capricious because owners and operators can continue to ignore recommendations from hazard evaluations with no justification, even if the recommendations are feasible and effective (0460). One commenter strongly supported EPA's decision to require RMP facilities to report declined recommendations in hazard evaluations, but also suggested there should be a baseline checklist of natural hazard mitigation measures (0240).

A couple of commenters expressed agreement with EPA's approach to require facilities to provide justification for why they did not implement recommendations from the hazard review (0173, 0257).

> **EPA Response:** EPA believes that finalizing the hazard evaluation recommendation information availability provisions will enable the public to ensure facilities have conducted appropriate evaluations to address potential hazards that can affect communities near the fenceline of facilities. At this time, EPA is not requiring facilities to implement practicable recommendations from natural hazard, power loss, and siting hazard evaluations, as long as facilities list in their risk management plans the recommendations that were not implemented and the justification for those decisions.

Comments in opposition to information availability requirements

Comment 5.1-02: Several commenters expressed concern that there is no reasonable explanation for requiring the reporting of declined recommendations. The commenters stated that the proposed PHA changes require new reporting obligations that are unnecessary and have not been fully analyzed (0232, 0238, 0253, 0268, 0272).

A few commenters asserted that the proposed requirements are unnecessary because this information is already documented as part of the PHA or Layers of Protection Analysis (LOPA) and adding it to the RMP only produces double documentation without added benefit (0181, 0223, 0262).

One commenter expressed concern about a mandate that that would require RMP-regulated facilities to justify when facility siting hazard evaluation recommendations are not adopted. The commenter suggested that implementation (or not) of recommendations identified in a facility siting should be at the discretion of an owner/operator (0263).

> **EPA Response:** EPA disagrees that the requirements are unnecessary and provide no benefits. EPA believes the requirements are important to help the public understand how facilities address the hazards that may affect their community to keep the risk at or below an "acceptable level," which include adherence to RAGAGEP, and the reasonable judgments and efforts of compliance programs aimed at preventing or mitigating accidental releases.

Comment 5.1-03: Several commenters expressed concern that listing recommendations that are not adopted in risk management plans with justification is unnecessary with little benefit (0180, 0205, 0217, 0223, 0226, 0234, 0458). A few commenters similarly suggested that there is no evidence that requiring individual facilities to provide such documentation will reduce accident rates and may lead some to believe that it is possible to eliminate all risks, including potential risks, which could lead to a release (0210, 0230, 0233).

One commenter stated that it is unusual for a site to decline to implement a hazard review or PHA recommendation involving natural hazards, power loss or siting. The commenter expressed concern that being required to describe it in a risk management plan would only draw attention to an idea that was not well-founded (0275).

> **EPA Response:** In response to comments that requiring such documentation will not reduce accident rates, EPA believes that when local citizens have adequate information and knowledge about the risks associated with facility hazards, facility owners and operators may be motivated to further improve their safety performance in response to community oversight. At a minimum, better community understanding of identified hazards and remedies not implemented will promote better community emergency planning. EPA also believes the requirements are important to help the public understand how facilities address the hazards that may affect their community to keep the risk at or below an "acceptable level," which include adherence to RAGAGEP, and the reasonable judgments and efforts of compliance programs aimed at preventing or mitigating accidental releases.
>
> Further, the final rule will require owners and operators to choose one of four pre-selected categories, such as those in OSHA's 1994 Compliance Directive[72], to makes it easier for owners and operators to understand and comply with their duties. EPA is not

[72] https://www.osha.gov/sites/default/files/enforcement/directives/CPL02-02-045_CH-1_20150901.pdf

requiring narrative explanations to be reported as there is concern that such explanations may be greatly inconsistent as they would require large amounts of technically challenging and varying information to be comparably condensed. The Agency believes the four pre-selected categories ensures a balanced approach to providing beneficial data to the public as well as a straightforward method of reporting for facility owners/operators.

Comment 5.1-04: Several commenters stated that EPA did not consider the labor costs and time that would be devoted to preparing a written justification for rejected recommendations (0232, 0238, 0253, 0268, 0272). One of the commenters stated that the time and resources could be better spent on implementing accepted recommendations (0268).

One commenter suggested that if PHAs are not conducted at the same frequency as the RMP 5-year renewal, the RMPs will need constant updating to incorporate this information as each PHA revalidation is completed (0181).

EPA Response: In response to comments that EPA did not consider the costs of preparing written justifications for rejected recommendations, EPA notes that the RIA for the final rule estimates anticipated costs for preparing written justifications. EPA believes the requirements are important to help the public understand how facilities address the hazards that may affect their community to keep the risk at or below an "acceptable level," which include adherence to RAGAGEP, and the reasonable judgments and efforts of compliance programs aimed at preventing or mitigating accidental releases.

EPA notes that under 40 CFR 68.190(b), the owner or operator must review, update, and resubmit their RMP at least once every five years, *or* within six months of a change that requires a revised PHA or hazard review (or due to other reasons), not for both reasons. A facility would be expected to include declined recommendations in their resubmission that resulted from a completed PHA. The next resubmission could then be expected in the next five years, similar to the schedule of the PHA. If PHAs are done more often than 5 years, the facility would already be reviewing, updating, and resubmitting their RMP on that lesser frequency. EPA believes this additional information would be minimal burden if the facility is already resubmitting all their RMP information of a greater frequency.

Comment 5.1-05: Some commenters asserted that the hazard evaluation information availability requirements will likely cause facilities to consider a narrower scope of recommendations to avoid making this exercise more burdensome. The commenters also suggested that this requirement is duplicative because facilities already have to justify why recommendations are not being taken when they submit PHAs (0180, 0205, 0217, 0226, 0234, 0458). Similarly, one commenter expressed concern that the proposed requirement will discourage facility leaders from pushing their PHA/LOPA teams from identifying unmitigated hazards to limit the amount of information they are required to report to EPA (0181). Another commenter recommended that EPA make clear that an appropriately justified denial during initial review of a facility's RMP plan should not have to be re-justified in subsequent reviews of the plan (0261).

Another commenter recommended that the implementation (or not) of recommendations identified in an STAA, hazard evaluation or facility siting should be at the discretion of an owner/operator (0263).

One commenter stated that EPA is effectively imposing IST analysis on Program 2 and Program 3 facilities, referring to the proposal that facilities would be required to either implement recommendations from hazard evaluations or justify in their risk management plans the recommendations that were not adopted. The commenter added that existing regulations already require these facilities to consider multiple risks that may impact operations. The commenter stated that documenting recommendations not adopted ignores the significant decrease in accident rates facilities have already achieved under existing RMP regulations and creates an unnecessary burden not expected to change accident rates. In addition, the commenter said that EPA's proposal creates significant enforcement risks from both EPA and citizen groups, as the proposed rule could subject RMP facilities to unreasonable expectations to eliminate all risks, which is neither technically nor financially feasible (0239).

> **EPA Response:** In response to the comments that the requirement will discourage facilities from considering recommendations and identifying unmitigated hazards, EPA notes that the hazard evaluation requirements for Program 2 (40 CFR 68.50) and Program 3 (40 CFR 68.67) processes remain unchanged – to identify, evaluate, and control hazards involved in the process, assuring the recommendations are resolved in a timely manner. When facilities fail to conduct these activities, they will not be in compliance with the hazard evaluation provisions. EPA believes the flexibility permitted in hazards evaluations, that is, allowing facility owners and operators to choose which recommendations will be implemented, is the best approach for exercising reasonable judgement to determine what risk reduction measures work best for their particular chemical use, process, or facility. The exercise of explaining the rationale for declining recommendations will help assure the decisions are reasonable. However, EPA views choosing to leave hazards unaddressed out of fear of public scrutiny as not exercising reasonable judgement, particularly when it may leave the process more vulnerable to accidental releases.

Comment 5.1-06: One commenter stated that the following elements in Sections 7 and 8 related to the PHA and hazard review pose a potential security risk: major hazards identified, process controls, mitigation systems in use, monitoring detection systems in place, and changes made since the last PHA or hazard review. The commenter stated that these elements provide too much insight into facility design, operation, and mitigation strategies that can be potentially exploited. The commenter also stated that specific information regarding security threats is held by DHS, and providing documented security threats, or security risks from prior incidents or near misses, provides a road map for bad actors and propagates future security threats (0238).

> **EPA Response:** The RMP rule already requires regulated facilities to provide in the RMP, specific information that applies to their hazard evaluation. This information includes the expected date of completion of any changes resulting from the hazard review; major hazards identified; process controls in use; mitigation systems in use; (5) monitoring and detection systems in use; and (6) changes since the last hazard review. As no changes to these reported data elements were proposed, comments specific to these elements are outside the scope of this rulemaking.
>
> EPA did however propose to require that risk management plans under 40 CFR 68.170(e)(7) and 68.175(e)(8) include declined natural hazard, power loss, and siting hazard evaluation recommendations and their associated justifications. In addition to the proposed approach, EPA requested comment on whether the Agency should require

declined natural hazard, power loss, and siting hazard evaluation recommendations to be included in narrative form and whether the Agency should provide specific categories of recommendations for facilities to choose from when reporting or allowing the owner or operator to post this information online and provide a link to their information within their submitted RMP. Further, EPA requested comment on methods to provide justification for declining relevant hazard evaluation recommendations.

EPA believes that requiring owners and operators to choose one of four pre-selected categories makes it easier for owners and operators to understand and comply with their duties and is thus finalizing this component in the rule. EPA is not requiring narrative explanations to be reported as there is concern that such explanations may be greatly inconsistent as they would require large amounts of technically challenging and varying information to be comparably condensed. The Agency believes the four pre-selected categories ensures a balanced approach to providing beneficial data to the public as well as a straightforward method of reporting for facility owners/operators.

Comments on the availability of information to the public

Comment 5.1-07: Several commenters expressed concerns about availability of hazard evaluation information to the public, as described below.

A few commenters noted that process hazard analyses (PHAs) and hazard review are highly technical and complicated internal documents that can be easily misconstrued by the public (0184, 0210, 0233, 0237). A couple of commenters mentioned that sharing such information with the public could open facilities to unnecessary liability and create security vulnerabilities, particularly for chemicals of interest to DHS (0184, 0237). One commenter mentioned that EPA provided no evidence that public access to lists of declined hazard evaluations will in any way aid in improving facility safety (0233).

One commenter expressed concern that the disclosure of whether to accept or reject a safety program would ultimately affect the facility's discretion over how best to handle safety on its worksite. The commenter suggested that posting this information online or in the RMP would conflict with Congressional intent to protect this information by revealing to the public security-related information (0215).

One commenter stated that their member companies continuously engage with the communities in which they operate and provide information to the community about various aspects of their business operations and receive feedback from the community. The commenter stated that this approach allows for increased levels of understanding by all parties, without the risk that the public will misunderstand a rejected recommendation (0262).

A few commenters recommended that the information be made available to first responders and LEPCs upon request, but not made generally available (0165, 0184, 0237).

EPA Response: The final rule will require owners and operators to choose one of four pre-selected categories to make it easier for owners and operators to understand and comply with their duties. EPA is not requiring narrative explanations to be reported as there is concern that such explanations may be greatly inconsistent as they would require large amounts of technically challenging and varying information to be comparably condensed. The Agency believes the four pre-selected categories ensures a balanced

approach to providing beneficial data to the public, allowing a straightforward method of reporting for facility owners/operators, as well as reducing security related concerns.

EPA believes the flexibility permitted in hazards evaluations, that is, allowing facility owners and operators to choose which recommendations will be implemented, is the best approach for exercising reasonable judgement to determine what risk reduction measures work best for their particular chemical use, process, or facility. However, EPA views choosing to leave hazards unaddressed out of fear of public scrutiny as not exercising reasonable judgement, particularly when it may leave the process more vulnerable to accidental releases.

EPA believes the requirements are important to help the public understand how facilities address the hazards that may affect their community to keep the risk at or below an "acceptable level," which include adherence to RAGAGEP, and the reasonable judgments and efforts of compliance programs aimed at preventing or mitigating accidental releases. EPA believes that when local citizens have adequate information and knowledge about the risks associated with facility hazards, facility owners and operators may be motivated to further improve their safety performance in response to community oversight. At a minimum, better community understanding of identified hazards and remedies not implemented will promote better community emergency planning.

Lastly, EPA disagrees that information relating to declined recommendations from hazard evaluations create security vulnerabilities or conflict with Congressional intent to protect information. The information disclosures that will be required by the final rule are fully consistent with the statutes and regulatory programs that address security vulnerabilities. CSISSFRRA specified that portions of RMPs containing "offsite consequence analysis information" (OCA Information), any electronic data base created from those portions, and any statewide or national ranking derived from such information is subject to restrictions on disclosure (CAA 112(r)(7)(H)(i)(III) and 112(r)(7)(H)(v)). Regulations promulgated jointly by EPA and the Department of Justice further define OCA Information in 40 CFR 1400.2(j). The final rule will not require disclosure of release scenarios or rankings based on such scenarios, nor will it make available any information based on such scenarios. The CIIA restricts information "not customarily in the public domain." CFATS creates a category of information, Chemical-terrorism Vulnerability Information (CVI), which further restricts certain information generated to implement CFATS (see 6 CFR 27.400). In promulgating CFATS, DHS announced its intent to preserve Federal release disclosure, emergency planning, and accident prevention statutes, including EPCRA and CAA 112(r) (72 FR 17714, April 9, 2007). The information that will be required to be disclosed by this rule largely draws on information otherwise in the public domain and simplifies the public's access to it. It is important to also note that EPA worked closely with Federal partners, including the DHS and the Federal Bureau of Investigation (FBI), to develop information availability requirements that strike a balance between security concerns and the need for sharing chemical hazard information with the public.

Comments with requests for clarification or recommendations

Comment 5.1-08: One commenter requested clarification on the hazard evaluation recommendations. The commenter questioned whether the recommendations include all hazards

related to natural hazards, loss of power, and facility siting currently at the facility and how the facility is actively or will address the recommendation; or will the recommendations only include gaps identified in the evaluation (0165).

> **EPA Response:** The requirement finalized in this rule will require owners and operators to list in their risk management plans only the recommendations from their natural hazard, loss of power, and siting hazard evaluations that were not adopted and the justification for those decisions. However, EPA notes under 40 CFR 68.170(e)(2) and 68.175(e)(2) facilities have always been required to report in their RMP major hazard identified in the most recent PHA.[73]

Comment 5.1-09: One commenter suggested that EPA coordinate hazard evaluations information availability requirements with OSHA (0215).

> **EPA Response:** For many years, EPA and OSHA have established a regular meeting to consult with the DOL and coordinate the PSM and RMP programs, including but not limited to interpretation of overlapping regulatory provisions and the development of potential amendments to the rules. During several of these regular meetings (including but not limited to meetings on various dates in Appendix A to this document), staff from the agencies discussed the development of the RMP SCCAP Rule and potential issues to be addressed by EPA. These discussions included the hazard evaluation information availability requirements.

5.2 Methods

Comment 5.2-01: A few commenters expressed support for using categories, such as those in OSHA's 1994 Compliance Directive, for declining to adopt a PHA recommendation (0173, 0261, 0460). One of the commenters noted that requiring owners and operators to choose one of four pre-selected categories makes it easier for owners and operators to understand and comply with their duties. The commenter suggested that EPA should not include alternative categories or a catch-all "other" category because doing so would dilute the purpose of the amendment by allowing facilities to decline recommendations for potentially insufficient reasons (0460). Another commenter recommended the use of specific categories for documenting justifications, which would result in ease of use and general consistency, for both the regulated community and those seeking information. The commenter noted that it may be necessary to allow a category of "other" where narrative information can be added if a recommendation does not fit any of the listed categories (0230).

Another commenter expressed concern that the list of possible natural hazards, loss of power, and siting evaluation recommendations that might not be adopted could be expansive; therefore, the commenter suggests EPA should provide specific categories of recommendations for facilities to choose from when reporting (0261). A commenter recommended that EPA require owners and operators to include not only documentation that one of the four justifications is met, but also a narrative explaining how the documentation shows that the justification has been met (0460). Conversely, another commenter noted that requiring covered facilities to provide declined hazard evaluation recommendations in narrative form is an unnecessary intrusion into internal practices at a facility that does not improve that facility's safety (0215).

[73] Preselected categories are offered for this input. For more detail see the RMP *eSubmit Users Manual, https://www.epa.gov/system/files/documents/2022-11/RMP%20eSubmit%20User%20Manual%20%28October%202022%29.pdf (pages 96-97)

One commenter noted that the proposed requirement for selection of "preselected categories" does not appear in the proposed regulatory text and recommended that if EPA intends to make the use of these categories mandatory, it must put them into the regulatory text. The commenter also noted that these categories are good conclusions for internal facility evaluations that assess complex considerations, but they provide little to no useful information to LEPCs and local communities (0215).

One commenter stated that the proposed list of justifications for not adopting a recommendation includes "the recommendation is infeasible", but the term "infeasible" is not defined. The commenter recommended that EPA consider whether the term "not practicable" should be used instead since a new definition of "practicability" is also being proposed (0230).

> **EPA Response:** EPA agrees that requiring owners and operators to choose one of four pre-selected categories makes it easier for owners and operators to understand and comply with their duties and is thus finalizing this component in the rule. EPA is not requiring narrative explanations to be reported as there is concern that such explanations may be greatly inconsistent as they would require large amounts of technically challenging and varying information to be comparably condensed. The Agency believes the four pre-selected categories ensures a balanced approach to providing beneficial data to the public as well as a straightforward method of reporting for facility owners/operators. While EPA is not adding the categories to the regulatory text, EPA will plan to revise its online RMP submission system, RMP*eSubmit,[16] to include the categories[74], similar to those in OSHA's 1994 Compliance Directive, which will mimic the approach for other data components required by 40 CFR 68.170 and 40 CFR 68.175. Sources will therefore be able to update their RMPs with the information once the additional data field is incorporated into the system, and in accordance with applicable compliance dates. EPA also plans to update the RMP*eSubmit User's Manual[17] to provide guidance for entering declined recommendations and applying these categories to them.

Comment 5.2-02: One commenter recommended that the information be presented in a public and easily accessible space across many different sites and locations (0192). Similarly, another commenter suggested that owners of RMP facilities should be obligated to post hazard-related information online and provide a link in risk management plans so responders and local communities can access this information (0444).

> **EPA Response:** The final rule will require owners and operators to choose one of four pre-selected categories, such as those in OSHA's 1994 Compliance Directive[75], to make it easier for owners and operators to understand and comply with their duties. EPA is not requiring narrative explanations to be reported as there is concern that such explanations may be greatly inconsistent as they would require large amounts of technically challenging and varying information to be comparably condensed. The Agency believes the four pre-selected categories ensures a balanced approach to providing beneficial data to the public, allowing a straightforward method of reporting for facility owners/operators, as well as reducing security related concerns.

[74] These changes will be made to the submission system prior to the 4-year compliance date as described further in section IX.C.8. of the preamble to the final rule.
[75] https://www.osha.gov/sites/default/files/enforcement/directives/CPL02-02-045_CH-1_20150901.pdf

EPA will plan to revise its online RMP submission system, RMP*eSubmit, to include the categories[76], which will mimic the approach for other data components required to be reported in the RMP by 40 CFR 68.170 and 40 CFR 68.175. Additionally, under this final rule, information available to the public under 40 CFR 68.210(d) will include declined recommendations from hazard evaluations, power loss, and stationary source siting. The Agency believes that including this information in the RMP will ultimately enable the public to ensure facilities have conducted appropriate evaluations to address potential hazards that can affect communities near facility fencelines.

6 Safer Technology and Alternatives Analysis (STAA)

Comments associated with this issue are discussed in the sub-issues below.

6.1 Proposed approach

General support for STAA provisions

Comment 6.1-01: A few commenters expressed general support for STAA requirements.

Referring to the White House announcement on the expansion of the Industrial Control Systems (ICS) Cybersecurity Initiative to include the chemical sector with a focus on high-risk facilities, one commenter said that DHS is legally barred from requiring IST or any specific security measure. The commenter pointed out that this is an opportunity for EPA to step forward as the only federal agency with the legal authority to require high risk facilities to switch to safer alternatives, which will make them less attractive terrorism targets and vastly reduce the consequences of an attack (0274).

One of the commenters reiterated that safer technology is standard as a best practice and that both EPA and OSHA have stated IST/ISD is the first choice for managing chemical hazards and risks (0240).

One commenter stated that the data on facilities prone to climate risk and RMP incidents related to extreme weather and power loss demonstrate that there is a strong need to restore STAA and other prevention measures previously rescinded (and further strengthen them). The commenter further elaborated that climate threats increase the need for stronger prevention across the board in the RMP program – to assess and eliminate hazards, to improve safety audits and incident investigation, and to strengthen all other components of the program addressed in the proposed rule (0460).

One commenter highlighted the 2019 explosion at the Philadelphia Energy Solutions oil refinery as disaster proving the need for stronger RMP regulations (0447). Another commenter felt a recent spill near the Huron River supports the requirement to seriously examine less-bad alternatives to industrial processes (0142).

One commenter shared that STAA analysis prompted 41% of 91 facilities covered by the New Jersey Toxic Catastrophe Prevention Program, which requires STAA analysis, to implement or to schedule implementation of one or more safety measures following their most recent review. The commenter stated that while 70 of the 118 safety measures implemented or scheduled were

[76] These changes will be made to the submission system prior to the 4-year compliance date as described further in section IX.C.8. of the preamble to the final rule.

in chemical production or oil refining, 48 safety measures were implemented or scheduled in other sectors, including ammonia refrigeration and water/wastewater treatment (0178).

One commenter urged EPA to coordinate efforts with other EPA departments, such as the Office of Chemical and Safety, so that chemicals that could cause catastrophic hazards are banned. The commenter stressed that safer alternative requirements are essential, and EPA should strengthen enforceability, corrective action, and accountability (0158).

> **EPA Response:** Based on comments on both the proposed options and the alternative approaches presented, EPA is finalizing the proposed provisions for STAA with the following modifications:
>
> - Revising 40 CFR 68.67(c)(9) to expand the STAA evaluation to all regulated facilities with Program 3 processes in NAICS codes 324 and 325.
> - Revising 40 CFR 68.67(c)(9)(ii) to expand the IST/ISD practicability assessment to regulated facilities with Program 3 processes in NAICS codes 324 and 325 that also have had at least one RMP-reportable accident under 40 CFR 68.42 since the facility's most recent PHA.
> - Adding 40 CFR 68.67(h) to require implementation of at least one passive measure at an applicable facility, or an inherently safer technology or design, or a combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure.

General opposition to or recommended revisions for STAA provisions

Comment 6.1-02: Several commenters urged EPA to continue rejecting IST requirements as it has historically been doing (0173, 0184, 0202, 0205, 0207, 0215, 0227, 0229, 0230, 0233, 0266, 0261, 0268, 0271, 0272, 0275). One commenter said that in the first issued RMP regulations in 1996, EPA decided not to mandate IST analysis. The commenter stated that the same fundamental issues and problems stand today (0227).

Several commenters support EPA's IST requirements but recommended that EPA make some adjustments (0107, 0148, 0257, 0444).

One commenter stated that the currently approved PHA methodologies already provide successful risk mitigation, and IST requirements would duplicate this effort (0263). One of the commenters stated that ambiguities in the proposed STAA requirements would make compliance difficult (0215).

Another commenter stated that inherent safety of an alternative is a relative concept that is dependent on the hazard assessed and the current technology being used at a facility and has little practical application in the hazard evaluation context. The commenter added that there is no "zero-risk" technology that will be the inherently safer alternative under every circumstance and by mandating alternative analysis, EPA is encouraging facilities to consider active risk-shifting (0233).

Another commenter stated that different state agencies use different terms to describe IST and inherently safer design (ISD), and EPA proposing to use STAA adds to the confusion (0173).

> **EPA Response:** EPA believes that where feasible, reducing or eliminating hazards through change in materials, chemistry, or process variables is preferable to adding layers of safety to a process. While layers of passive, active or procedural controls will reduce

the risk, they will do nothing to reduce the nature of the hazard itself. Failure of control devices or human error can result in an accidental release. However, inherent safety seeks to preferentially remove the hazard at the source, as opposed to accepting the hazard and attempting to mitigate the effects. In addition to eliminating or reducing a hazard, IST can also minimize the impact of a release or terminate the accident sequence before there are major impacts on people, property or the environment. The PHA can and should consider IST as hazard reduction or risk management measures where feasible and appropriate. Opportunities for the application of the inherently safer strategy of simplification can be evaluated for each safety device or procedure during a PHA as well as in review of mechanical integrity program practices and procedures.

Regarding the safeguard implementation provision of the rule, EPA acknowledges that the requirement to control hazards has been a PHA requirement since the inception of the rule. Therefore, some passive (or equivalent) safeguards to control hazards are likely already in place within facility processes. Facilities that have already implemented passive measures or an equivalent level of risk reduction should document their implementation in their next PHA, determine whether there is additional information that should be considered in their STAA, and continue to consider additional passive (or equivalent) measures during subsequent PHA re-validation cycles.

Comment 6.1-03: A couple of commenters urged EPA to use correct assumptions for incident data when determining STAA requirements (0270, 0274). For example, one of the commenters highlighted that the low-probability, but high-consequence events cannot be reliably predicted by looking at an overall trend. The commenter recommended EPA review the incident data in a way that best reflects the reality of the hazard impacts to workers and communities on the fenceline and nearby (0270).

One commenter said that STAA requirements have not been proven to have any measurable risk reduction benefits. The commenter highlighted EPA's failure to analyze recent changes in accident rates in jurisdictions with STAA or STAA-like requirements to confirm the effectiveness of STAA in preventing accidents. For example, a fresh analysis of new data from the implementation of the California Refinery Process Safety Management (CALPSM) and CalARP requirements—finalized shortly after the issuance of the 2017 RMP Amendments final rule—could inform EPA's understanding of the efficacy of inherent safety analyses (0233).

EPA Response: EPA disagrees with commenters indicating implementation of STAA measures has no proven benefits. A review of corrective actions following RMP accidents provides insight that practicable methods to address hazards are not infrequently found after accidents, which suggests the rule could be strengthened by providing incentives to implement those controls in advance of the accident. In reviewing RMP data from facilities subject to the practicability assessment and this STAA safeguard implementation provision (621 facilities), 59 percent of facilities indicated in their most recent PHA, some type of change was implemented. On average, 1.2 process safety changes[77] were implemented because of the PHA, but of those facilities having accidents (16.8 percent), an average of 2.2 process safety changes were made after an

[77] Changes include chemical reduction, chemical increase, change in process parameters, installation of process controls, installation of process detection, installation of perimeter monitoring, installation of mitigation systems, revised maintenance, revised training, revised operating procedures, or other changes not included in these categories. These change categories are those reported in RMPs under 40 CFR 68.175(e)(6).

accident occurred.[78] This review was one piece of evidence supporting EPA's reasoned judgment that the risk reduction benefits of the STAA implementation justified the costs. Therefore, as RMP facility process change data has shown, EPA expects there are benefits to make risk reduction changes through the PHA prior to an accident occurring.

Regarding the California regulation, Process Safety Management for Petroleum Refineries, CCR Title 8 §5189.1[79], EPA met with the California Department of Industrial Relations (CalDIR) prior to development of the proposal to discuss the effectiveness of the new regulation. CalDIR also gave verbal remarks and submitted comments in response to the "Notice of virtual public listening sessions; request for public comment" (86 FR 28828).[80] CalDIR's comments referenced their new regulations. EPA reviewed and considered those comments for the SCCAP proposal.

Comment 6.1-04: A few commenters suggested EPA strengthen the STAA to protect more workers and address environmental justice (0152, 0183, 0203, 0456). One commenter specifically discussed reproductive health, requesting that EPA require all facilities regulated under the proposed rule to implement inherently safer chemicals and processes because it would support the reproductive health of facility workers, fenceline communities, and across the supply chain (0160).

One commenter stated that by requiring only a narrow subset of high hazard facilities to conduct STAAs, the current proposal fails to address environmental justice disparities around many types of RMP facilities--disparities in terms of housing value, household income, race and ethnicity, education levels, and poverty which are consistently found near many high-hazard facilities, not just those 5% of facilities where EPA plans to require an STAA. The commenter further stated that less than 9% of the workers employed at RMP sites would be protected from a chemical release by the proposed STAA requirements (0203).

In an analysis performed by one commenter, they found a failure of the STAA program to have a meaningful impact on environmental justice, which the commenter stated indicates the need to increase the coverage of STAA (0183).

EPA Response: EPA has considered impacts and risks to local communities, including communities with EJ concerns and fenceline communities throughout the rulemaking process. EPA believes that the final STAA provisions makes significant improvements to protect fenceline communities.

Further, EPA expects the final rule provisions, including STAA, to reduce baseline damages that are not quantified. These damages include potential health risks from toxic chemical exposure, lost productivity at affected facilities, emergency response costs, transaction costs from potential subsequent legal battles, property value losses in nearby neighborhoods, environmental damage and costs of evacuation and sheltering-in-place events, and others. They have not been quantified because there is either limited or no information in the RMP data that could allow for precise quantification. However, in some cases, these damages could be even more detrimental to the facility and community

[78] The list of RMP facilities whose most current RMP plans (as of December 31, 2020) were reviewed is provided in the docket for this rulemaking, EPA-HQ-OLEM-2022-0174, *RMP facilities in PHA_accident change analysis*.
[79] https://www.dir.ca.gov/title8/5189_1.html;
[80] https://www.regulations.gov/comment/EPA-HQ-OLEM-2021-0312-0069

than those damages that can be quantified. More detail of this discussion is included in Chapter 6 of the RIA.

The Agency believes the focused approach for STAA is appropriate. The 5 percent of sources mentioned by the commenter, augmented by those refineries and chemical manufacturer sources that have had accidents in the past 5 years, are responsible for 42% of the total accidents from RMP-covered sources over the period from 2016-2020, and 83% of the accident damage, which supports additional requirements beyond STAA (i.e., a practicability assessment and the implementation requirement). Concentrating the most demanding requirements on this subset of sources recognizes the track record of heightened risk presented by these sources to their nearby communities. Also, close co-location of sources in NAICS codes 324 and 325 further increases the risk to the public that may be potentially exposed to a release from multiple sources. In these sectors, the worst-case scenarios of 80 percent of sources extend at least 1 mile, therefore the communities surrounding these sources will typically face multiple threats. EPA's analysis to identify these communities[81] show that the communities near RMP facilities and facilities with RMP-reportable accidents have higher percentages of low-income individuals and Black (non-Hispanic) and Hispanic residents compared to the national comparison group. This analysis suggests that the benefits of the provisions, including STAA, may reduce potential exposure for communities with higher percentages of Black (non-Hispanic), Hispanic and low-income populations.

Comment 6.1-05: One commenter requested that EPA require a third-party review of the STAA (0120).

EPA Response: The finalized STAA provisions do not require the STAA or its documentation within the PHA to be automatically submitted and reviewed by EPA or anyone else, but such analysis or documentation must be kept as records under the recordkeeping requirements of § 68.200 and be available for inspection or review by EPA.

However, under the third-party audit provisions finalized today, a third-party audit of a STAA could occur. Third-party audits include auditing the facility's RMP prevention program which is inclusive of the PHA and STAA if applicable. For the final rule, two audit criteria would trigger a third-party audit, one accidental release within five years meeting the criteria in 40 CFR 68.42(a), or when an implementing agency requires one.

6.2 General STAA provision comments

6.2.1 Require STAA as part of PHA

Support for requiring STAA as part of PHA

Comment 6.2.1-01 A couple of commenters stated that they support EPA's proposal that owners and operators of RMP-covered facilities be required to include consideration and documentation of the feasibility of applying safer technologies and alternatives in their process hazard analyses (PHAs) (0173, 0183). One of the commenters stated, however, that only doing STAAs within the PHA will limit the effectiveness of the evaluations, and therefore, STAA should be evaluated within the PHA process as well as outside of the PHA in a separate study to evaluate each

[81] Regulatory Impact Analysis: Safer Communities by Chemical Accident Prevention: Final Rule, Chapter 9. This document is available in the docket for this rulemaking (EPA-HQ-OLEM-2022-0174).

existing process (0173). One commenter stated that the proposed STAA requirements cannot be done just once because facilities could have fluctuating inventories (0231).

Conversely, some commenters expressed opposition to EPA requiring a mandatory STAA component in PHA (0227, 0229, 0232, 0233, 0272). One of the commenters said that the proposed rule's STAA requirements do not acknowledge the value of the PHA risk assessment function (0201).

Another commenter stated that the analysis of passive measures, active measures, and procedural measures already occurs as part of the PHA, as required by 40 CFR §§ 68.67(c)(3), (4), (6), and (7), and no modification of the current regulations is thus required to ensure that this analysis occurs (0233). The commenter also added that STAA requirements will detract from and reduce the effectiveness of PHAs as it will divert resources from PHA processes that are currently working well at regulated facilities. The commenter stated the effectiveness of a PHA depends heavily upon the availability of high-quality process safety information (PSI), yet the proposed rule provides no direction on how the PHA team is to assemble the PSI needed to perform the STAA. The commenter explained that facilities would not normally have information about processes not in use there. The commenter added this detracts from the PHA focus on existing facility processes and potentially reduces the effectiveness of the analysis (0233).

One commenter stated that some RMP facilities may already be evaluating safer alternatives in the absence of a formal STAA requirement. The commenter suggested EPA strengthen its definitions, reporting, and documentation of IST analysis within the RMP program (0220).

One commenter questioned whether the design of requiring co-located facilities to conduct STAA might create an incentive for densely co-located facilities to pool their resources for investigation, piloting, or implementation of landscape-scale NBS, such as mangroves, living shorelines, barrier islands, and other NBS that could be established in the Gulf Coast region (0204).

> **EPA Response:** EPA believes that STAA analysis can be incorporated in the existing RMP PHAs by using PHA techniques such as the Hazard and Operability Study, What-If? Method, checklists, a combination of these, or other appropriate equivalent methodologies. (See 40 CFR 68.67(b)). These techniques themselves are not requirements, but tools available to help the facility owner or operator to identify, evaluate, and control the hazards involved in the process. The Agency also notes that, when EPA previously considered an IST requirement, commenters noted that "PHA teams regularly suggest viable, effective (and inherently safer) alternatives for risk reduction," and EPA observed that "good PHA techniques often reveal opportunities for continuous improvement of existing processes and operations" (61 FR 31699-700).
>
> Therefore, EPA agrees with commenters expressing support for including a STAA in the PHA and disagrees with commenters that argue it is not appropriate to include a STAA in the PHA. In fact, the RMP PHA requirements include other aspects of analysis that are typically associated with process design. For example, the PHA must also address stationary source siting issues, which involve the location and proximity of the source relative to local populations.
>
> Nevertheless, EPA agrees that for situations where a STAA involves a novel process that is entirely different from the current process, the process design must exist or be

developed within the industry, and PSI be compiled, to conduct a PHA for this new process. EPA does not expect facility owners or operators to research and create new processes or conduct research into all possibilities for the use of new chemicals. Instead, the STAA should focus on the industry known and existing substitute processes and chemicals that have been demonstrated to be safe in commercial use.

If a facility is considering an IST chemical substitution or process change from their STAA that involves a significant redesign of their process, such efforts involved with redesign and its evaluation may need to be undertaken as part of a practicability study. The definition of practicability allows for consideration of technological factors, which could include whether the potential safer alternative can be designed and operated to meet the process functions needed. However, not all IST involves substituting a chemical or an entirely new process. Also, there are other types of IST measures (minimization, moderation or simplification) that can be considered to address various points within the current process where hazards and risks exist.

Facilities may, if desired, conduct a separate STAA analysis of each entire process, outside of the PHA process, as long as it is done in the same timeframe as the PHA, and the results are documented. If a facility does not have staff capable to identify and evaluate alternatives, the facility owner or operator may obtain outside assistance from engineering firms or consultants. Furthermore, the Agency has accounted for the technical capabilities of facilities in the sectors targeted for STAA when determining reasonable requirements that provide for the prevention of accidents to the greatest extent practicable.

Due to the performance-based approach of the current RMP PHA requirements at 40 CFR 68.67(c)(3), to identify, evaluate, and control the hazards involved in the process, EPA believes some facilities may have already performed a STAA-type analysis as part of their PHA. If the facility has already performed such STAA analysis in the past, then the owner or operator should consider these analyses when updating or revalidating their PHAs and determine whether there is new information that should be considered as part of conducting the current STAA.

Comment 6.2.1-02: One commenter said that requiring STAA as part of the PHA exceeds EPA's authority under CAA § 112(r) to dictate RMP facility design and if Congress intended to grant such authority it would have expressly done so (0272).

Some of the commenters asserted that EPA does not have the statutory authority, under § 112(r) of the CAA, to impose facility design requirements at any stage of a regulated facility's lifespan, much less for existing facilities (0207, 0215, 0232, 0268).

One commenter supported limiting STAA requirements to just NAICS codes 324 and 325 but voiced concern on the authority and rationality of EPA imposing STAA requirements in general (0207).

EPA Response: The Agency disagrees with the comments that the CAA does not authorize the STAA provisions of this final rule. Both paragraphs (A) and (B) of CAA section 112(r)(7) authorize STAA and IST in particular. EPA cited all of section 112(r)(7) as authority for "[e]ach of the portions of the Risk Management Program rule we propose to modify" (81 FR 13646; March 14, 2016). The authority section for 40 CFR

part 68 references CAA section 112(r) and is not limited to particular paragraphs. The proposed rule also noted that paragraph 112(r)(7)(A) had been invoked in the rulemaking petition on IST and is an express grant of authority for regulation of design and operations. The statute explicitly provides the Administrator with the authority to promulgate "design, equipment, work practice, and operational requirements" in CAA section 112(r)(7)(A), as well as requirements for "preventing accidental releases of regulated substances, including safety precautions and maintenance" in CAA section 112(r)(7)(B)(ii)(II). The regulation promulgated in this final rule simply imposes standards on continuing safe operations and equipment. Furthermore, the regulations required by CAA section 112(r)(7)(B)(i), "shall cover the use, operation, repair, replacement, and maintenance of equipment to monitor, detect, inspect, and control" accidental releases of regulated substances as appropriate (emphasis added). Terms such as "use" and "operation" necessarily allow EPA to address ongoing activities and not simply the pre-construction phase, and "replacement" of "equipment" to "control" releases authorizes EPA to require upgrades to release prevention measure such as practicable passive control measures. As discussed above, the Conference Report and the Senate Report provide ample support for requiring implementation of process and control measures to lessen the likelihood and impact of accidental releases.

Therefore, EPA provided sufficient notice that the Agency contemplated action under any authority under CAA section 112(r)(7). Nevertheless, EPA also views its authority to require STAA assessments or an IST review, or implementation of safeguards to reduce risk as being consistent with paragraph 112(r)(7)(B). Under paragraph (B)(i), EPA has authority to develop "reasonable regulations . . . for the prevention of accidental releases." The reduction in severity of conditions in a process plainly impacts the accidental release conditions and thus the modeling called for in section 112(r)(7)(B)(ii)(I). Moreover, section 112(r)(7)(B)(ii)(II) specifically mentions that prevention programs in risk management plans shall provide for "safety precautions;" STAA measures are a type of safety precaution. Finally, as noted in the preamble, the Conference Report for the 1990 CAAA and the Senate Report both demonstrate that Congress intended the regulations to prioritize STAA as a prevention measure.

Comment 6.2.1-03: One commenter recommended that EPA add a requirement for facilities to verify the adequacy of the PHA for the process and correct the PHA as needed (0173). Another commenter said that industry should pivot to require a STAA that can advise on safer chemicals that can be used (0383).

EPA Response: The RMP rule has had a longstanding requirement at 40 CFR 68.67(f) for owners and operators to, at least every five (5) years, update and revalidate the PHA by a team, to assure that the process hazard analysis is consistent with the current process.

Further, EPA considers safer technology alternatives analyses to include many options beyond chemical substitution. EPA expects STAA to be inclusive of the full range of inherent safety options, including minimization, substitution, moderation, and simplification, as well as passive, active, and procedural measures.

6.2.2 Costs of implementing STAA as part of PHA

Comment 6.2.2-01: A few commenters stated that mandating a full IST or ISD review would require a completely different PHA team, extensively increase the time and resources necessary to complete a PHA, require the PHA team to perform hazard assessments of ever-changing technology they may not be familiar with, and dilute a PHA's core purpose (0229, 0232, 0233).

A couple of commenters stated that the requirement to perform STAA for every existing RMP is costly, takes time and resources, and may not result in improvement (0188, 0215).

One commenter lamented the resources and time they could better use elsewhere than in conducting an STAA (0205).

Some other commenters stated that since EPA states RMP accidents are exceedingly rare, the financial burden of requiring STAA is unnecessary to impose (0180, 0197, 0205, 0217, 0226, 0234, 0458).

> **EPA Response:** In response to comments concerning costs for implementing STAA measures, EPA believes there is an overemphasis on initial costs leading to less consideration of safer, reliable methods to reduce process risks. CCPS' 2019, "Guidelines for Inherently Safer Chemical Processes, A Life Cycle Approach," discusses the tradeoff of initial and operating costs of implementing different STAA measures. CCPS indicates that while inherently safer and passive measures do tend to have higher initial capital costs, operating costs are usually lower than those for the other measures. For active measures as compared to inherently safer and passive measures, reliability is typically lower, and complexity is greater. Operating costs are also actually likely to be the greatest for active solutions. While procedural measures are most often tempting solutions due to their initial very low capital cost and typically lower complexity, they are often also the least reliable and should be considered only after other solutions have been explored. Similarly, EPA believes passive measures (or active/procedural equivalent) measures that reduce risk and are practicable should be implemented.
>
> The Agency is not requiring formal practicability assessments (as is now required for IST) for passive, active, or procedural measures. Since evaluation of passive, active and procedural measures have been a part of the RMP rule, leading to implementation of some, it is expected that the determination of their practicability already occurs. The Agency believes the requirement to determine what actions are to be taken in 40 CFR 68.67(e) suffices as a practicability determination for the less extensive upgrades or changes to the process as compared to IST. However, to ensure the assessment determining a measure is not practicable complies with the final rule definition, sources will be required to document this conclusion to the implementing agency's satisfaction; this requirement will help ensure costs alone are not the sole factor in determining practicability.
>
> In response to comments that a full IST or ISD review will extensively increase time and resources, EPA notes that the requirement to control hazards has been a PHA requirement since the inception of the rule, requiring sources to "identify, evaluate and *control* the hazards involved in the process." An industry commenter even stated that the analysis of passive measures, active measures, and procedural measures already occurs as part of the PHA.[82] Additionally, RMP data show that some facilities already implement IST/ISD and

[82] EPA-HQ-2022-0174-0233

safeguards to control hazards within their facility processes[83]. Therefore, EPA rejects the suggestion that the inclusion of STAA measures in PHAs is a radical departure from the purpose of PHAs as well as the way they are performed. The main innovations of this provision are simply putting into the RMP rule the well-known industry concept of hierarchy of controls[84] in an STAA analysis, formal practicability assessments, documentation of rejected practicable ISTs, and implementation of at least one mitigation measure at a facility. As these provisions are only applied to subsets of RMP facilities, the provisions ensure complex process are continually generating safer design and technology information based on lessons learned and that there is continuous improvement at risky facilities.

Finally, EPA provides an estimate of the costs of the STAA provisions in the RIA.

Comment 6.2.2-02: A couple of commenters expressed that STAA is inappropriate and cost-prohibitive for existing processes, and the commenters stated that STAA is better suited for new or redesigned processes (0215, 0238).

EPA Response: To the extent that particular measures are cost-prohibitive, the rule allows for that to be a factor in assessing whether a measure is practicable.

Comment 6.2.2-03: A couple of commenters stated that the STAA provisions would not be cost-effective. The commenters stated that the STAA represents 70% of the total costs EPA estimates apply to the proposed rule (0215, 0268). One of the commenters stated that EPA should have considered a less expensive version of the STAA provision when preparing its lower cost alternatives analysis. The commenter stated that the high-cost and low-cost regulatory alternatives in the proposed rule keep the STAA costs unchanged but considers lower cost alternatives for root cause analysis, third-party audits, and employee participation (0268).

The commenters stated that the proposed STAA requirement is solely for consideration of possible alternatives and has unproven and unquantified benefits that do not justify the annual cost of $51.8 million (0215, 0268). One of the commenters added that EPA stated that they expect “some portion of future damages would be prevented through implementation of a final rule,” but they did not identify any benefits specifically tied to the STAA provision. The commenter stated that there is consensus on the theoretical value of STAA as a tool to inform future investment decisions and said that once a facility has committed to a particular production technology, STAA is not particularly useful nor informative (0215).

One commenter stated that the costs of transitioning to safer alternatives are also not sufficiently weighed against the costs of a major incident. The commenter said that in the proposed rule EPA stated that “the known costs of certain STAA changes range from less than $1,000 to over $100 million.” The commenter provided an example that at California refineries, research indicates that safety improvements could avoid major incidents costing owners $220 million on average.

[83] See section V.B.3.d. ii. for more a more detailed description of the data analysis. The data is also included in the docket for this action, EPA-HQ-2022-0174.

[84] Safety experts have developed a way to group types of controls in an order or ‘‘hierarchy of controls’’ that prefers those that are least likely to fail. As discussed in more detail in the 2022 SCCAP proposed rule (87 FR 53575), controls that eliminate the hazard are preferred over those that do not require power or activation, which are preferred over those that do require power or activation, which are preferred over those that depend simply on rules of operation.

The commenter also noted that this figure does not include costs to society, such as human lives, economic stress, and health care and emergency service costs (0240).

Several commenters expressed concern that EPA has not proven the feasibility nor benefit of STAA in reducing RMP-applicable incidents (0205, 0215, 0233, 0268, 0271).

> **EPA Response:** EPA disagrees that the benefits of the STAA requirements do not justify the costs. EPA believes that the STAA should identify potential IST process changes that, if implemented, would result in owners or operators using less hazardous substances, minimizing the amount of regulated substances present in a process, moderating process conditions and reducing process complexity. The STAA also should identify potential passive, active, or procedural safeguards that, when implemented, will result in changes to make processes safer. Such changes help reduce the prevalence of higher risk processes and thereby prevent accidents by either: (1) eliminating the possibility of an accidental release entirely, by making a process more fault-tolerant, such that a minor process upset, or equipment malfunction does not result in a serious accidental release; and (2) reducing the severity of releases that do occur.
>
> RMP accident data show past accidents have generated highly variable impacts, so the impacts of future accidents are difficult to predict. Nevertheless, it is clear from RMP accident data[85] and other relevant data from RMP regulated industry sectors,[86] that chemical accidents can impose substantial costs on firms, employees, emergency responders, the community, and the broader economy. Because major and other concerning RMP accidents continue to occur, by lowering risk of accidents, the benefits include: reductions in the number of fatalities and injuries both onsite and offsite and residents evacuated or otherwise inconvenienced by sheltering in place; reductions in the damage caused to property onsite and offsite of the facility including damages to product, equipment, and buildings; reductions in damages to the environment and ecosystems; and reductions in resources diverted to extinguish fires and clean up affected areas. Preventing serious accidents avoids numerous direct costs, including worker, responder, and public fatalities and injuries, public evacuations, public sheltering in place, and property and environmental damage. It also avoids indirect costs, such as lost productivity due to lost or damaged property and business interruption both onsite and offsite, expenditure of emergency response resources and attendant transaction costs, and reduced offsite property values. Actions that prevent or reduce the severity of accidents in RMP-covered processes are also likely to prevent or mitigate non-RMP accidents at the same facilities because the same or similar actions can be taken for processes and equipment not subject to the regulation, often at minimal additional cost.
>
> Further, for IST/ISD practicability and implementation of certain measures, EPA recognizes facilities will most likely implement IST/ISD when an IST/ISD's net cost is less than a passive measure's cost. The Agency assumes owners and operators will likely explore specific benefits to their facility when making decisions and expects the evaluation to consider several factors, such as:

[85] EPA estimated monetized damages from RMP facility accidents of $540.23 million per year.

[86] Marsh JLT Specialty, "100 Largest Losses in the Hydrocarbon Industry," 27th Edition, March 2022. Accessed from https://www.marsh.com/uk/industries/energy-and-power/insights/100-largest-losses.html. Marsh provides estimates of large property damage losses in the hydrocarbon industry from 1974 to 2021 in current and 2021 dollars and in a few cases, business loss costs.

- Operating and Maintenance (O&M) cost – IST/ISD may have a change in O&M costs compared to passive measures. For example, chemicals used in the process may change, which could cause changes in recurring input costs, including potentially lower those costs.
- Productivity improvements – IST/ISD could result in productivity improvements from more efficient process and changes to input costs.
- Safety improvements – IST/ISD may reduce risks of an accident more than would a passive-equivalent measure. A lower accident risk will result in facility safety benefits and social benefits from fewer accidents.
- Capital/facility reduced losses – Similar to safety, a lower accident risk will reduce losses to capital as well as shorter than expected facility shutdown time from accidents.

These facility specific factors will further help owners and operators identify facility-specific benefits associated with the costs to comply with this provision. EPA continues to believe the performance-based nature of both this provision and the overall rule allow facility owners and operators the discretion to determine which IST/ISDs and passive, active and procedural safeguard measures work best for their particular chemical use, process, or facility and for protecting the community potentially affected.

EPA disagrees that the benefits of the STAA requirements are unproven. Since 1996, EPA has seen that advances in ISTs and safer alternatives are becoming more widely available and are being adopted by some companies. Voluntary implementation of some ISTs has been identified through surveys and studies and potential opportunities have been identified through EPA enforcement cases and the U.S. Chemical Safety and Hazard Investigation Board (CSB) incident investigations. As discussed in the 2017 amendments rule (82 FR 4645; Jan. 13, 2017), the Contra Costa County Health Services and New Jersey Department of Environmental Protection (NJDEP) IST regulations have resulted in some facilities adopting IST measures.

EPA disagrees that STAA is not useful or informative for facilities that have committed to a particular production technology. Innovations and research in chemical process safety have evolved and continue to evolve. For those facilities who have not considered adopting any IST or have only done so in limited fashion, EPA believes that there is value in requiring facilities with regulated substances to evaluate whether they can improve risk management of current hazards through potential implementation of ISTs or risk management measures that are more robust and reliable than ones currently in use at the facility. For those facilities who have already considered IST, EPA believes facilities should re-evaluate whether any improvements in hazard or risk reduction can be made.

In response to the comment that EPA did not identify any benefits specifically tied to the STAA provision, EPA was able to qualitatively judge that the risk reduction from STAA implementation[87] reasonably justified the costs. In principle, the STAA eliminates or minimizes the opportunities for a chemical release because identification and implementation of "safer" technologies and alternatives, should result in a hazard or risk reduction for a particular RMP chemical or process. EPA recognizes that neither IST nor

[87] This is further discussed in greater detail in Chapter 6 of the RIA.

other procedural, active, or passive measures alone will eliminate all hazards or risks and that reliance on a combination of risk reduction measures will probably be needed for other points in a process.

Comment 6.2.2-04: One commenter stated that EPA failed to consider scenarios in which the proposed rule would lead to a refinery shut down. The commenter discussed many factors that may contribute to such a decision, including the high capital cost relative to capital employed, limits on the capacity needed, and lack of space to install necessary equipment. The commenter stated that unit shutdown could cost an estimated $30 million due to decontamination, demolition, and hazardous waste processing. Relatedly, the commenter claimed that EPA failed to consider other impacts associated with refineries shutting down HF alkylation units such as the costs, risks, uncertainties, and environmental impacts associated with imported alkylate. The commenter believed that the loss of half of the United States' alkylation capacity would severely curtail the domestic production of gasoline, leading to replacement by imports (0268).

The commenter also claimed that a wholesale replacement of U.S. refineries' HF alkylation capacity with new sulfuric acid alkylation units would involve significant expense, a total capital investment cost of $15 to 45 billion, as well as practical difficulties and would likely not result in risk reduction to the public or environment, especially when compared to the cost or benefit of alternative courses of action (0268).

Another commenter was additionally concerned that EPA's economic justifications for its policy choices, particularly its focus on HF alkylation, departed from the actual cost of alternative technology replacements (0477).

Conversely, another commenter suggested that the cost of HF alternatives was not prohibitive when compared to the earnings of the refinery owners (0254). One commenter recommended that conversion of HF alkylation units meeting established criterion could be funded with infrastructure funds (0134).

Another commenter claimed that data show that HF alkylation processes are well managed by refiners. The commenter said EPA's 1993 report on HF and the continuous improvement of industry-developed HF management policy API Recommended Practice 751 (RP 751). The commenter stated that RP 751 is recognized by OSHA and the CSB as providing effective guidance for the safe operation of HF alkylation units and management of HF catalyst. The commenter claimed that there have never been life-threatening injuries to people in surrounding communities stemming from HF-related incidents at refineries, which the commenter stated was because of multiple layers of mitigation technologies and emergency procedures. The commenter claimed that the benefits of STAA are flawed because the commenter said that EPA failed to consider the measures taken at facilities that follow or audit against API 751 (0268).

EPA Response: EPA notes that HF is an extremely toxic chemical used for alkylation at 27 percent of facilities in NAICS 324 (45 of 163). EPA is requiring that all HF alkylation processes at petroleum refineries (NAICS 324) conduct an initial STAA evaluation, a practicability assessment for IST/ISD, and implementation of at least one passive measure (or combination of active or procedural measures equivalent to the risk reduction of a passive measure), primarily due to recent incidents where HF was nearly released when there were explosions, fires, and other releases that could have triggered releases of HF. While API RP 751 offers industry guidance to help safely manage HF alkylation process and its hazards, those process hazards still exist. In contrast, there are recognized

potentially safer chemical alternatives available for HF alkylation that have been successfully implemented by refineries, such as sulfuric acid alkylation, ionic liquid alkylation, or solid acid catalyst alkylation. These eliminate the hazard. With several known alternatives and with recent incident history, EPA believes the process of HF alkylation merits a rule-based prevention approach rather than only selective oversight. In response to the comments urging EPA to require facilities to switch from HF to a safer alternative whenever feasible, the practicability of these potentially safer alternatives is situation-specific, and owners and operators are usually in the best position to make these determinations.

We note that the final rule will not require any refinery to stop using hydrofluoric acid alkylation. The approach adopted today does not require a facility to implement a hazard reduction approach beyond what is to the greatest extent practicable among the reasonable options. The rule only asks that sources periodically assess the practicability of ISTs/ISDs, and if they identify a practicable technology and do not adopt it, to explain why in writing. Life cycle of units, costs of replacement, uncertainty about scaling, length of experience with the alternate technology can all be factors in rejecting a technology. EPA recognizes that the factors cited in the comments may lead to limited adoption of ISTs/ISDs at this time. EPA has rejected mandating adoption of alternative ISTs but we require periodic re-examination. By limiting our mandate to study the practicability of ISTs/ISDs periodically, we believe we will promote more informed safety decisions and adoption of new technologies where fresh information over time demonstrates adoption is practicable.

Furthermore, EPA notes that in addition to potentially threatening lives and causing harm to property and the environment, serious accidents at petroleum refineries can result in lost production capacity that results in increased gasoline prices. For example, the proposed rule's RIA discusses a February 18, 2015, accident at the ExxonMobil refinery in Torrance, California that cost consumers more than $2.4 billion in increased gasoline prices due to the shutdown of a production unit. EPA believes that the proposed safer technologies and alternatives analysis provision has the potential to help avoid serious accidental releases like these and the associated harms to consumers and communities.

6.2.3 Hydrogen fluoride (HF)

Support for proposed requirements for NAICS 324 facilities using HF

Comment 6.2.3-01: Several commenters stated a range of concerns regarding the dangers of HF (0131, 0134, 0145, 0174, 0216, 0248, 0385, 0444, 0456). A few of the commenters specifically referenced near misses or releases of HF and their associated harms and costs (0131, 0216, 0444). One commenter discussed the dangers of HF and the risks to communities, workforces, wildlife, hospitals, and first responders (0134). One commenter stated that earthquakes could cause the release of HF from refineries (0131). Another commenter supported the proposed rule's recognition of the escalating threat of climate disaster (0174). One commenter said the prevalence of refineries using HF near urban centers (0385). Another commenter stated their concerns regarding the hazards of HF, specifically the dangers for nearby school children and a lack of emergency preparedness in schools (0145).

A couple of commenters discussed the presence of commercially proven safer alternatives to HF (0134, 0174). A couple of commenters pointed to many safer alternatives available, such as using solid or liquid ionic catalysts (0385, 0444).

One commenter discussed a 2022 CSB report that identified four alternative technologies to HF, three of which were already in use and one operating at commercial scale. The commenter also discussed SCAQMD's reports indicating progress in alternative alkylation technologies, including ionic liquid alkylation and ionikylation (0444).

One commenter discussed significant testimony highlighting the ability for refineries to phase out the use of HF. The commenter believed that information from industrial facilities completing such phase out presented an important example of what EPA's rules should require (0456). Another commenter stated that some refineries are already phasing out the use of HF as an unnecessary catalyst (0392).

One commenter discussed the successful implementation of ionic liquid technology to eliminate the use of HF (0216).

One commenter stated that local regulations attempting to require conversion from HF have not been successful (0152).

One commenter said the prevalence of refineries using HF near urban centers (0385). Another commenter stated their concerns regarding the hazards of HF, specifically the dangers for nearby school children and a lack of emergency preparedness in schools (0145).

One commenter appreciated the proposed rule's recognition of the dangers presented to workers and communities with respect to the use of HF and supported the elimination of HF once feasible and practicable safer alternatives are identified and commercially available. The commenter stated the importance of working with regulators and the industry to make transitions when reasonable and feasible without refinery closures or job loss (0216).

> **EPA Response:** EPA notes that HF is an extremely toxic chemical used for alkylation at 27 percent of facilities in NAICS 324 (45 of 163). EPA is requiring that all HF alkylation processes at petroleum refineries (NAICS 324) conduct an initial STAA evaluation, a practicability assessment for IST/ISD, and implementation of at least one passive measure (or combination of active or procedural measures equivalent to the risk reduction of a passive measure), primarily due to recent incidents where HF was nearly released when there were explosions, fires, and other releases that could have triggered releases of HF. While API RP 751 offers industry guidance to help safely manage HF alkylation process and its hazards, those process hazards still exist. In contrast, there are recognized potentially safer chemical alternatives available for HF alkylation that have been successfully implemented by refineries, such as sulfuric acid alkylation, ionic liquid alkylation, or solid acid catalyst alkylation. These eliminate the hazard. With several known alternatives and with recent incident history, EPA believes the process of HF alkylation merits a rule-based prevention approach rather than only selective oversight. In response to the comments urging EPA to require facilities to switch from HF to a safer alternative whenever feasible, the practicability of these potentially safer alternatives is situation-specific, and owners and operators are usually in the best position to make these determinations.

Comment 6.2.3-02: Another commenter was concerned that the proposed rule did not consider the national security threat of HF facilities and that communities surrounding HF alkylation units are important for national defense. The commenter claimed that MHF is similar to and as hazardous as HF. The commenter stated that HF cannot be sufficiently mitigated, and that communities surrounding HF alkylation units rank high for environmental justice burdens and are important for national defense (0134).

One commenter discussed specific HF refineries vulnerable to accidents, natural disasters, and intentional acts, and that sites within the "vulnerability zone", which may be frequented by those who are more susceptible to the health effects of MHF of a refinery have no effective way to protect themselves against MHF release. The commenter was concerned that the proposed rule ignores warnings by national security experts (0174).

> **EPA Response:** While we recognize that facilities handling RMP regulated substances generally and HF in particular pose a threat to communities in the case of deliberate, criminally caused releases, it is important to note that accidental releases occur much more often than intentional events (about 100 per year using EPA RMP-reportable accidents), whether HF, MHF[88] or any other RMP regulated substance. With over 20 years of data now, EPA believes it to be appropriate to base, and therefore has based many of the finalized provisions on prior accident information. We also recognize that, after 9/11, Congress enacted and periodically reauthorized a specific regulatory program for addressing the national security risks from chemical facilities (CFATS). Given our statutory mandate, we emphasize regulation of accidental releases while we ensure that our regulations are compatible with those of DHS.
>
> Nevertheless, the RMP rule does not ignore security issues and the potential for 3rd party intentional acts to cause releases that are unexpected and unintended from the perspective of the owner or operator of a stationary source. There have always been RMP provisions that help to safeguard chemicals and prevent unauthorized entry into chemical process areas. For example, the RMP rule requires a facility owner or operator to develop and implement safe work practices to provide for the control of hazards during operations (40 CFR 68.69(d). The rule also requires facility owner and operators to develop and implement written operating procedures to address and provide clear instructions for the quality control of raw materials and control of hazardous material inventories (40 CFR 68.69(a)(3)(iv).
>
> It is also important to note that DHS promulgated CFATS in accordance with the Homeland Security Appropriations Act of 2007, owing to insufficient security at industrial facilities. CFATS imposes comprehensive federal security regulations (6 CFR Part 27) for high-risk chemical facilities. The CFATS program generally requires any facility in possession of a chemical of interest above a certain threshold quantity to report its chemical holdings and other data to DHS- hydrogen flouride is a chemical of interest for the CFATS program. After receiving this information, DHS determines a facility's risk level. High-risk facilities must address comprehensive security measures across the CFATS program's 18 risk-based performance standards (CFATS standards). EPA has

[88] Modified HF (MHF) is a mixture of pure HF with another chemical (sulfolane) that is intended to reduce the dispersion of HF in the event of an accidental release. To the extent such mixtures exceed the above concentration and threshold quantity criteria, the mixture would be covered under the RMP rule.

been and will continue to work with DHS, DOJ, and other Federal partners on identifying risks and find regulatory solutions that address accident prevention.[89]

Regarding environmental justice, EPA acknowledges that accidental releases of regulated chemicals from facilities regulated by this action will likely pose disproportionate risks to historically marginalized communities. However, EPA believes that in addition to requiring facilities in NAICS 324 and 325 with HF alkylation processes to conduct a STAA evaluation, practicality assessment and implement safeguards, several other provisions in this final action will benefit underserved populations near facilities with HF processes, such, increased information availability for fenceline communities, backup power for perimeter monitoring, conducting root cause analyses and third-party audits for facilities that have reported accidents, and improving community notification and related response planning.

Opposition to proposed requirements for NAICS 324 facilities using HF

Comment 6.2.3-03: One commenter urged EPA not to advance requirements specific to HF alkylation units. The commenter claimed that EPA has no legal authority to mandate STAA on existing processes and that the proposed STAA requirements on all HF alkylation processes at petroleum refineries are arbitrary and unlawful. The commenter claimed that EPA did not provide a meaningful account of the benefits associated with this requirement and failed to state specifically how this requirement would fulfill any statutory requirements of the RMP and has little or no data to support its proposal. The commenter further claimed that the data indicates that the industry is safely managing the risks with HF (0268).

EPA Response: EPA notes that HF is an extremely toxic chemical used for alkylation at 27 percent of facilities in NAICS 324 (45 of 163). EPA is requiring that all HF alkylation processes at petroleum refineries (NAICS 324) conduct an initial STAA evaluation, a practicability assessment for IST/ISD, and implementation of at least one passive measure (or combination of active or procedural measures equivalent to the risk reduction of a passive measure), primarily due to recent incidents where HF was nearly released when there were explosions, fires, and other releases that could have triggered releases of HF. While API RP 751 offers industry guidance to help safely manage HF alkylation process and its hazards, those process hazards still exist. In contrast, there are recognized potentially safer chemical alternatives available for HF alkylation that have been successfully implemented by refineries, such as sulfuric acid alkylation, ionic liquid alkylation, or solid acid catalyst alkylation. These eliminate the hazard. With several known alternatives and with recent incident history, EPA believes the process of HF alkylation merits a rule-based prevention approach rather than only selective oversight.

EPA summarized its legal authority for the various provisions of this final rule in the preamble to the proposed rule, specifically identifying STAA as a prevention measure authorized under CAA section 112(r)(7) (87 FR 53563-64; Aug. 31, 2022). EPA's legal authority to require an STAA evaluation and implementation of reasonable STAA measures is well-established under both paragraphs (A) and (B) of CAA section 112(r)(7). In authorizing rules for the prevention of accidental releases of regulated substances, subparagraph (A) of section 112(r)(7) specifically allows for rules that address design, equipment, and operations while permitting EPA to distinguish among classes of

[89] Including but not limited to meetings on various dates in Appendix B to this document.

facilities based on factors "including, but not limited to . . . location [and] process." This language authorizes EPA to put restrictions on and impose requirements for permissible design of a process and the types of equipment used as well as continuing operation of such designs and technologies. With respect to HF alkylation processes, not only does the statute authorize consideration of location when identifying classes to regulate, it also provides that EPA may consider the "potency of substances" when making distinctions among facilities that are covered by regulations under section 112(r)(7)(A). As discussed in the proposed rule, HF is a particularly potent regulated substance. 87 FR 53576 (Aug. 31, 2022).

In addition to the authority granted by subparagraph (A), the authority in subparagraph (B) to develop "reasonable regulations [that] provide, to the greatest extent practicable, for the prevention and detection of accidental releases" authorizes reasonable regulations to mandate examination of potential methods to prevent releases, to examine the practicability of alternative designs and technologies, and to require adoption of release prevention measures when practicable. Many of the same terms appear in both subparagraph (B)(i) as in subparagraph (A) – the requirement to cover ongoing operations, the authority to recognize "differences in … operations, processes and class … of sources," while also granting authority to regulate "use" of regulated substances. Subparagraph (7)(B)(ii) authorizes rules to "minimize" accidental releases, which encompasses a mandate to implement practicable passive mitigation measures or their equivalent active and procedural measures. STAA is a "safety precaution" under the prevention program. CAA 112(r)(7)(B)(ii)(II).

As noted in the 2017 amendments rule (82 FR 4630; Jan 13, 2017), both the Conference Report for the 1990 CAAA[34] and the 1989 Senate Report related to the CAAA[35] provide substantial support for the concepts of STAA. The Conference Report included support for "a review of the efficacy of various prevention and control measures, including process changes or substitution of materials" (Conference Report pp. 340-41). Further, the Senate Report supported "release prevention measures" that contemplate IST and STAA (Senate Report p. 242). While neither the 1996 RMP rule nor the 2019 reconsideration rule required IST or STAA, neither action based those decisions on a lack of authority under CAA section 112(r)(7) to require examination of safer alternatives at either existing or new processes.

Furthermore, in discussing the purpose of the chemical accident provisions, the Senate Report identified a preference for measures that promote safer technologies to those that merely mitigate or respond to releases (pp. 208-209):

> Systems and measures which are effective in preventing accidents are preferable to those which are intended to minimize the consequences of a release. Measures which entirely eliminate the presence of potential hazards (through substitution of less harmful substances or by minimizing the quantity of an extremely hazardous substance present at any one time), as opposed to those which merely provide additional containment, are the most preferred.

The Senate Report is entirely consistent with a preference for the hierarchy of controls that forms the basis of STAA.

Comment 6.2.3-04: One commenter said that EPA stated that many facilities with RMP processes already have the appropriate measures to identify, reduce, and mitigate the threat of an accidental release before it happens. The commenter pointed to petroleum refiners' safety practices and standards and cited decreases in process safety events at refineries and at petrochemical facilities since 2011. The commenter was concerned that EPA's focus on HF alkylation units may increase risk because of the introduction of duplicate and arbitrary stop work provisions or requiring facilities to conduct frivolous and expensive alternative technology analyses would harm existing risk reduction efforts (0477). The commenter requested that proposed updates to the RMP be supported by strong data and evidence and that they also not compromise safety nor adversely impact U.S. energy and economic security (0477).

> **EPA Response:** The Agency retains substantial flexibility for owners and operators to select among measures they deem appropriate for their stationary sources. While the number of significant accidental releases overall and within the refinery sector appears to have declined, refineries in particular remain one of the sectors with the most significant accidental releases per facility. The Agency believes the modifications of the RMP rule promotes additional safety and will lead to a further decline in accidents. Provisions like STAA focus on regulated industry sectors that pose high risk and, with respect to HF alkylation, have deployed ISTs/ ISDs. While some ISTs/ISDs may not be practicable at some or even most sources that currently use HF alkylation, the practicability of alternatives may change over time, therefore periodic practicability assessments are appropriate. Nothing in the rule requires adoption of an IST that is not practicable, and the rule allows owners and operators to not adopt practicable ISTs if they document their reasons. Energy security may be raised as part of a practicability analysis. The analyses required for HF Alkylation processes at refineries integrate well with and strengthen PHAs so they should complement existing risk reduction efforts.
>
> Stop work issues are addressed in section V.E. of the final rule preamble and section 9.3 of this Response to Comment document.

Comment 6.2.3-05: A few commenters addressed the underlying data supporting EPA's proposed HF requirements.

One commenter requested that EPA exclude precautionary events (e.g., shelter-in-place) to meaningfully determine incidents with significant offsite impacts. The commenter additionally claimed that, when compared to HF releases between 2016 and 2020, there were significantly more releases of ammonia and chlorine. The commenter claimed that this indicated that EPA's focus on HF alkylation in the refining industry was misguided. The commenter stated that EPA provided no comparison of refinery facilities to other facilities utilizing HF and claimed that the lack of comprehensive data undermined the public's opportunity to meaningfully comment on the proposal. The commenter believed that EPA's targeted application of STAA to NAICS 324 facilities with HF alkylation processes was arbitrary, based on flawed assumptions, and missing analyses (0268).

The commenter cited their analysis of RMP data between 2016 and 2020 for the refining industry, claiming that the industry accounted for less than one-quarter of the RMP-reportable accidents involving HF and stated that the refining industry accounted for less than 1% of the mass of HF released following these events. The commenter claimed that data showed that incidents of HF releases at refineries went down after API 751 was first issued as well as after

the 2007 and 2013 updates and that, of the 46 RMP-reportable incidents involving the release of HF at NAICS 324 facilities included in EPA data from 2004-2020, over 60% resulted in the release of 1 pound of HF or less. The commenter claimed that between 2016 and 2020, there have been only 4 incidents involving HF and none resulted in injuries to the public, offsite deaths, offsite property damage, shelter-in-place, or evacuations. The commenter discussed several distinct updates to API 751 practices including a special emphasis inspection program to inspect all carbon steel components for five HF corrosion zones (0268).

One commenter claimed that EPA had provided little to no data to back up the need for these massive regulatory changes against industries already working to make operations safer under existing RMP regulations regarding consideration of safer alternatives to HF for all facilities with petroleum and coal product processes. The commenter recommended that the most effective way for EPA to improve safety is to focus their efforts on existing enforcement efforts and increased compliance assistance (0227).

A couple of commenters were concerned about the dangers of transporting HF and chemicals of similar hazard (0134, 0248). One of the commenters stated that the danger of transporting these chemicals on roadways was serious and widespread (0248). One commenter stated concerns raised in EPA's 1993 HF Study, hazards of HF and its fate and transport characteristics, the CSB's 2019 call to update the Study and determine if commercially viable and safer alkylation technologies exist for refineries and discussed a previous challenge that the CSB faced obtaining information regarding an HF incident. The commenter said the CSB's evaluation of common alkylation unit safety measures for HF and claimed that two of these measures had the potential to fail because they must be triggered by a person or technology (0444).

> **EPA Response:** EPA is requiring that all HF alkylation processes at petroleum refineries (NAICS 324) conduct an initial STAA evaluation, a practicability assessment for IST/ISD, and implementation of at least one passive measure (or combination of active or procedural measures equivalent to the risk reduction of a passive measure), primarily due to recent incidents where HF was nearly released when there were explosions, fires, and other releases that could have triggered releases of HF. HF is an extremely toxic chemical that is lethal at 30 ppm and is covered by RMP when more than 1,000 pounds are used in a process. This extremely toxic chemical is used for alkylation at 27 percent of facilities in NAICS 324 (45 of 163). Other substances such as chlorine and ammonia are among the most ubiquitous chemicals on the RMP regulated substances list so it is expected, all things being equal, they would be involved in more accidents. The number of releases from facilities handling ammonia and chlorine does not indicate anything about the frequency of accidents on a per facility basis, nor the availability of alternatives, nor the potential for impacts of individual releases.
>
> While API RP 751 offers industry guidance to help safely manage HF alkylation process and its hazards, those process hazards still exist. In contrast, there are recognized potentially safer chemical alternatives available for HF alkylation that have been successfully implemented by refineries, such as sulfuric acid alkylation, ionic liquid alkylation, or solid acid catalyst alkylation. These eliminate the hazard. With several known alternatives and with recent incident history, EPA believes the process of HF alkylation merits a rule-based prevention approach rather than only selective oversight. EPA notes however that the practicability of these potentially safer alternatives is situation-specific, and owners and operators are usually in the best position to make these

determinations. Therefore, the rule does not categorically ban HF Alkylation or otherwise require switching to another technology. The rule simply requires periodic assessment of whether the state of the technology has become practicable at the source, and if it has, an explanation if the source elects not to adopt it.

EPA acknowledges that it did not conduct a comparison among the various types of processes that use HF when it identified HF alkylation processes at refineries as one of the types of sources that must perform a practicability assessment, STAA, and comply with the safeguard implementation requirement. As EPA stated in the preamble, HF alkylation was selected because there are widely recognized potentially safer alternatives, and recent accident history shows several near-catastrophes. We note that some of these near catastrophes, like the Husky Refinery incident in Superior, WI, did not involve a release of HF and so would be omitted from the commenter's list of incidents involving HF; rather, they involved an incident where a vessel containing HF was well within the blast distance of an exploded process and had the potential for a knock-on release. Similarly, other instances like the PES incident in Philadelphia, PA, raise concern about HF processes at refineries. In that case, but for timely human intervention, a massive quantity of HF would have been released. The CSB has recommended further regulation of HF alkylation in several reports. As reflected in the STAA safeguard implementation provision for HF alkylation processes, EPA agrees with CSB's recommendation, which reflects that solely relying on voluntary implementation of STAA measures is not reasonable and would be inadequate to prevent accidents "to the greatest extent practicable." This is particularly true when safeguards are identified and generally deemed practicable, but not implemented. While today's rule does not go as far as banning HF alkylation, it provides for further safety at these processes.

Comment 6.2.3-06: Several commenters addressed the feasibility of HF alternative technologies.

One commenter questioned EPA's focus on ending the HF alkylation process in the name of safety. The commenter said that sulfuric acid comes with its own associated risks, uses approximately 200 times more acid than HF alkylation, and requires additional acid storage tanks for both fresh and spent acid. The commenter stated that many refineries do not have the capability to conduct sulfuric acid alkylation on-site and must use a third-party, offsite facility, which the commenter stated would entail transport by railcar or truck, leading to high volumes of sulfuric acid in trucks and further adding to the potential for an accident to occur. The commenter claimed that many of the proposed rule's suggested alternatives have not been demonstrated at scale and that the proposed rule does not discuss the risks associated with alternative technologies. The commenter believed that risk shifting to alternative technology is inappropriate without considering potential adverse consequences of the replacements (0477).

Another commenter stated that sulfuric acid is still a hazardous chemical that can result in severe consequences and claimed that the aggregate risk between sulfuric and HF alkylation are relatively equal given all the safety and mitigation measures employed at refineries. The commenter claimed that a parity of risks between the two indicated that there are no benefits attributed to EPA's proposed requirement to switch. The commenter stated that the proposed rule may suggest alternatives that potentially pose a greater risk than HF. The commenter claimed that it was premature and dereliction of EPA's duty to suggest alternatives that had not been

evaluated for potential hazards. The commenter requested that EPA strip such alternatives from the proposed rule record (0268).

Another commenter stated that, once a facility is up and running, most alternative technologies are no longer feasible to implement, particularly for refinery fuel alkylation. The commenter claimed that, in nearly all cases, new technology cannot be slotted in without reconstructing individual units and potentially reconfiguring entire facilities, which would come with major costs and the potential to severely impact U.S. fuel supplies. The commenter believed that the proposed rule imposes unjustified and underestimated costs on HF alkylation facilities. The commenter suggested allowing facilities to use resources to continue to utilize the PHA process and standards to reduce risk (0268). The commenter claimed that EPA did not consider the feasibility of HF alternatives and conduct a risk-switching analysis and therefore that EPA lacked a reasoned basis to impose a STAA. The commenter stated that EPA had not analyzed the risks, unintended consequences, and feasibility of switching HF alkylation facilities to the alternatives referenced. The commenter claimed that solid acid is not commercially viable, and that ionic-liquids alkylation is in its infancy, and that EPA did not analyze or explain the hazards of these alternatives in the proposal (0268).

The commenter stated that replacing an HF unit with an alternative catalyst unit is complicated because of the fact that HF is a lower volume catalyst. The commenter claimed that HF units tend to be much smaller in size than sulfuric acid alkylation units to produce the same volume of alkylate. The commenter claimed that sulfuric acid alkylation uses approximately 200 times more acid than HF alkylation and requires additional storage tanks for both fresh and spent acid, in addition to significant capital and investment costs for replacement that may be more than many refineries can afford. The commenter also stated the differing needs for catalyst regeneration and claimed that a catalyst overhaul would need to be paired with other modifications throughout a refinery to accommodate new technology (0268).

> **EPA Response:** While API RP 751 offers industry guidance to help safely manage HF alkylation process and its hazards, those process hazards still exist. In contrast, there are recognized potentially safer chemical alternatives available for HF alkylation that have been successfully implemented by refineries, such as sulfuric acid alkylation, ionic liquid alkylation, or solid acid catalyst alkylation. These eliminate the hazard. With several known alternatives and with recent incident history, EPA believes the process of HF alkylation merits a rule-based prevention approach rather than only selective oversight. EPA notes however that the practicability of these potentially safer alternatives is situation-specific, and owners and operators are usually in the best position to make these determinations. Therefore, the rule does not categorically ban HF Alkylation or otherwise require switching to another technology. The rule simply requires periodic assessment of whether the state of the technology has become practicable at the source, and if it has, an explanation if the source elects not to adopt it.
>
> Regarding the potential alternative technology of sulfuric acid alkylation, the final rule allows for consideration of many of the factors identified in the comments when assessing the practicability of the technology at a particular source. For example, the comments identify the need for substantial volumes of sulfuric acid in such a process. In a particular location, that may not be available absent substantial risk transfer as the comment suggests (e.g., train shipment of substantial volumes of sulfuric acid). The rule allows for consideration of the potential for risk transfer, supply chain limitations, and the

need to address security implications of any change when assessing practicability at the source level and the rejection of technologies. See 82 FR 4643 (risk transfer), 4648 (supply chain), and 4649 (security).

Recommended revisions to proposed requirements for NAICS 324 facilities using HF

Comment 6.2.3-07: Many commenters urged EPA to require the elimination of HF.

A few commenters urged EPA to strengthen the proposed rule by requiring facilities to switch from HF or other acutely toxic substances to a safer alternative whenever feasible, since safer alternatives are available (0134, 0158, 0248, 0255, 0120, 0456). Several commenters supported the idea that the history of HF use and accidents supported the idea that stronger EPA action was necessary to protect communities (0134, 0174, 0216, 0456, 0460). A couple commenters recommended the RMP require facilities to transition away from extremely harmful alternatives, such as hydrofluoric acid, to safer alternatives (0157, 0160).

Some commenters were concerned that the proposed rule leaves the continued use of HF up to owners/operators (0134, 0156, 0174, 0456).

One of the commenters cited the CSB's 2022 report recommendations that HF in remaining alkylation units in the U.S. be eliminated and replaced, if necessary, with less hazardous chemicals that are consistent with ISD. The commenter described STAA as the foundation of the workplace hierarchy of controls and asked the proposed rule to go further to require implementation (0255).

One commenter stated that the proposed rule was not comprehensive enough to adequately mitigate the inherent risks associated with using HF. The commenter stated that asking these facilities to merely consider switching from HF alkylation to safer alternatives and requiring them to include an STAA as part of their PHA was not enough to eliminate the inherent risk of having HF onsite (0385).

A couple of commenters recommended that the use of HF in refineries be banned (0208, 0385). One of the commenters urged EPA to establish an aggressive timeline to phase out HF's use and said that further study is a waste of time (0208). Another commenter contended that adding a larger scale ban of HF across all the oil refineries in the U.S. would safeguard millions of Americans from facing disaster in the event of an accidental release (0385). One commenter requested that safer alternatives to HF be implemented across all oil refineries in the United States (0385). Another commenter generally supported the study of safer chemical and process alternatives but recommended that, in the case of HF, safer alternatives should be required at refineries now (0254). One commenter highlighted an example of a worker at a chemical plant who was exposed to HF fumes and died as a result (0157).

One commenter claimed that the proposed rule does not provide a pathway for the replacement of chemicals like HF due to the provision leaving the decision of whether to implement commercially proven alternatives to the owners. The commenter was concerned that facilities could state that an alternative is not practical if a third-party audit and conversion are not required. The commenter claimed that California's required STAA has had little to no effect as evidence supporting this concern (0134).

Some commenters expressed support for a proposed rule that would require an audited assessment of safer alternatives. The commenters also expressed support for a proposed rule that would prioritize conversion away from the use of toxic chemicals like HF and provide clear

deadlines for conversion (0131, 0145, 0156, 0174). One of the commenters said the proposed rule seems to do little to address chemicals that can cause mass casualties since it leaves continued use of dangerous chemicals to facility owners (0131).

Another commenter stated the CSB's recognition that a small number of refineries have moved forward with phasing out HF, but the vast majority have not taken these steps on their own (0460).

Some commenters stated that only EPA possessed the authority and/or responsibility to eliminate the use of HF and that it should do so (0134, 0152, 0385, 0444). One of the commenters claimed that the history of HF releases and near-releases at refineries shows that EPA can best drive the eventual phase out of HF alkylation and that the groundwork is laid for EPA to take such action. The commenter said that, while local agencies and the CSB have done much to promote HF safety, only EPA could effectively compel the industrywide effort needed to eliminate HF alkylation nationwide. The commenter pointed to the South Coast Air Quality Management District's (SCAQMD) actions to allow refineries to convert to a modified form of HF and implement harm mitigation measures. The commenter stated that SCAQMD's actions supported their claim that local agencies themselves were unlikely to compel the implementation of safer alternatives to HF alkylation though they could advance incremental gains (0444).

Another commenter claimed, regarding the proposed rule allowing the continued use of HF/MHF, that Federal action is required because it is a national security threat. The commenter also stated that the danger cannot be sufficiently mitigated as shown by the numerous near misses (0134).

> **EPA Response:** In response to the comments urging EPA to require facilities to switch from HF to a safer alternative whenever feasible, the practicability of these potentially safer alternatives is situation-specific, and owners and operators are usually in the best position to make these determinations.

Comment 6.2.3-08: One commenter recommended that as part of each PHA, the facility identify all alternative alkylation technologies or other ISD that are currently in operation and identify all refineries where that technology is in use or is being implemented. The commenter recommended that the facility gather enough information about each alternative to evaluate the feasibility and practicability of implementation. The commenter recommended that, for each inherently safer alternative to HF alkylation, the facility thoroughly determine and document the practicability of replacing HF alkylation with that technology and for each technology, whether implemented or not, the facility include documentation in its process hazard analysis and submit the full analysis to EPA. The commenter recommended that EPA maintain a database of alternative alkylation technologies with non-propriety information publicly available. The commenter finally recommended that the facility comply with the assessment team requirements specified in § 68.67(9)(iii) (0444).

> **EPA Response:** EPA is requiring that all HF alkylation processes at petroleum refineries (NAICS 324) conduct an initial STAA evaluation, a practicability assessment for IST, and implementation of at least one passive measure (or combination of active or procedural measures equivalent to the risk reduction of a passive measure), primarily due to recent incidents where HF was nearly released when there were explosions, fires, and other releases that could have triggered releases of HF.

EPA is not requiring the full STAA or its documentation within the PHA to be automatically submitted to EPA nor to anyone else, but such analysis or documentation must be kept as records under the recordkeeping requirements of § 68.200 and be available for inspection or review by EPA. EPA is however requiring that basic information on IST, facility information, categories of safer design identified and implemented and causal factor for initiating safer design implementation be provided in the RMP submission in accordance with 40 CFR 68.175(e)(7). Facilities must provide in their RMP any IST/ISD measures implemented since the last PHA, if any, and the technology category (substitution, minimization, simplification and/or moderation). These technology transfer provisions apply to all facilities required to conduct any component of STAA (evaluation or practicability) under the final rule. This reporting is also voluntary for all other facilities, including deregistered facilities, by which EPA expects to capture useful information about how some facilities, on their own accord, choose to make their processes safer.

Comment 6.2.3-09: Some commenters were concerned about the impacts of HF upon communities with environmental justice concerns (0120, 0134, 0174, 0248). One of the commenters supported the proposed rule's recognition of the danger of HF to communities with environmental justice concerns (0174). One commenter was concerned that the proposed rule would fall short for communities with environmental justice concerns, specifically those living near HF refineries (0248). One commenter discussed two refineries in California using MHF/HF and their location adjacent to underserved communities that already bear a disproportionate pollution burden and have residents who are especially vulnerable to pollution (0120). Another commenter said that communities surrounding HF alkylation units rank high for environmental justice burdens (0134).

Another commenter recommended that the proposed rule require that facilities inform the public about the presence of hazardous chemicals like HF in a systematic manner. The commenter also stated that the communities surrounding these refineries rank high in environmental justice concerns (0134).

EPA Response: EPA has considered impacts and risks to local communities, including communities with EJ concerns and fenceline communities throughout the rulemaking process. EPA acknowledged in the proposal that although the per facility accident rate between 2016 and 2020[90] for all regulated facilities was 3 percent (n = 382 facilities reporting at least one accident out of 12,855 unique facilities reporting between 2016 and 2020), the sector accident rates (number of unique facilities with accidents per

[90] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

sector divided by the number of unique facilities in each sector) for petroleum and coal manufacturing were seven times higher (23 percent, n = 41 out of 177) (87 FR 53578).[91] HF is an extremely toxic chemical used for alkylation at 27 percent of petroleum refining facilities (45 of 163). EPA believes that the final HF provisions makes significant improvements to protect fenceline communities.

6.3 STAA evaluation

General recommendations for revisions to STAA evaluation requirements without reference to applicability or geography

Comment 6.3-01: One commenter suggested requiring Program 2 and Program 3 process to consider STAA during the design and development of new RMP processes (0215). A couple of commenters stated that STAA should be completed in the design phase of a process and the reasons different technologies are not implemented after a facility is already built are complex – ranging from chemical production or storage capability to life expectancy of operating equipment, capital expenditures, and market demands (0201, 0233).

> **EPA Response:** In response to the comments that the STAA requirement should be limited to the design and development phases of new Program 2 and Program 3 processes, EPA disagrees. While the greatest potential opportunities for using IST may exist early in process design and development, many IST options may still be practicable after the initial design phase. Furthermore, STAA involves more than just IST. Safer technology alternatives also include passive measures, active measures, and procedural measures, and these measures can be modified and improved after the initial design of a facility. EPA notes that while many RMP-regulated facilities were originally constructed decades ago, major enhancements have been reported in some plants that have been operating for many years. Moreover, to the extent that particular measures are cost-prohibitive, the rule allows for that to be a factor in assessing whether a measure is practicable.

Comment 6.3-02: Another commenter suggested that processes governed by external specifications be exempt from the STAA requirement. These include those governed by government or contractual approvals or requirements. The commenter mentioned that pharmaceutical and pesticide manufacture are regulated by the FDA, EPA, and other regimes, where manufactures are contractually or regulatorily obligated to follow manufacturing specifications. The commenter stated that conducting a STAA on these processes wastes resources and time as the processes are specified in these various regulations. Furthermore, the commenter stated other cases where STAA requirements are burdensome include toll and other contract manufacturers, as the customer specifies the manufacturing process. The commenter stated that customers are FDA and EPA regulated, and any changes to these processes would violate the contract. The commenter expressed concern that manufacturers would need to attempt to convince their customers to use different processes, and in retaliation, customers would find other manufacturers who do not follow these standards or in other countries where standards are

[91] The list of these accidents and their details can be found in the Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022), Appendix A, https://www.regulations.gov/document/EPA-HQ-OLEM-2022-0174-0065. These accidents are specifically identified in Column BZ.

less stringent. Finally, the commenter expressed concern that STAA analysis would extend the lead time needed, particularly for short contracts, for manufacturers to start work (0275).

EPA Response: EPA disagrees that processes governed by external specifications should be exempt from the STAA requirement. Regarding STAA, safer technology alternatives include many options beyond chemical substitution. IST could involve minimization of stored raw material chemicals, making process changes that make it less likely to release the chemical (moderation), or reducing complexity in the process that could make accidents more likely (simplification). Therefore, even where a contractual relationship or regulation requires a regulated facility to use a particular regulated substance in specified quantities, owners and operators of facilities should still consider other potential IST measures besides chemical substitution. Use of RMP chemicals for purposes in addition to making a formulated product, such as for cleaning equipment, wastewater treatment or refrigeration, for which chemical substitution may not be prohibited by regulation or contractual relationship.

Additionally, under the STAA requirements applicable facilities would still need to consider and implement, if practicable, other safeguards to reduce risks, including at least one passive measure, or an inherently safer technology or design, or a combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure. EPA believes that measures lower on the hierarchy of controls, passive, active and procedural measures, when implemented appropriately, can be used to help operate a hazardous chemical process safely and can also reduce hazard risks of that process. When compared with IST, these measures could also more likely be added, modified, and improved at variable chemical operations governed by external specifications.

The Agency retains substantial flexibility for owners and operators to select among passive measures they deem appropriate for their stationary sources. The final rule allows for consideration of factors highlighted in the 2017 amendments rule like chemical formula specifications for toll manufacturers, the potential for risk transfer, supply chain limitations, and the need to address security implications of any change when assessing whether to reject particular passive measures. See 82 FR 4635-36 (toll manufacturers), 4643 (risk transfer), 4648 (supply chain), and 4649 (security). To the extent that external specifications and regulations prohibit certain chemical substitutions and other technological changes, such requirements maybe considered when assessing the practicability of ISTs, ISDs, and other changes or when rejecting otherwise practicable changes.

Comment 6.3-03: One commenter stated that, based on experience with IST reporting in New Jersey, EPA should clarify that IST/ISD does not include any technology or practice that is not itself integral to, inseparable from, and necessary for the operation of a process. The commenter said that this will disqualify add-on controls, such as warning systems, from being reported as IST/ISD (0203).

EPA Response: EPA believes that determining effective risk management strategies for a facility is a site-specific determination and EPA encourages any improvement that could lead to inherently safer conditions. Therefore, EPA is finalizing the definition of IST/ISD as proposed, to mean risk management measures that minimize the use of

regulated substances, substitute less hazardous substances, moderate the use of regulated substances, or simplify covered processes in order to make accidental releases less likely, or the impacts of such releases less severe. EPA based this definition of IST or ISD on the four inherently safer strategies as explained in the Inherently Safer Chemical Processes: A Life Cycle Approach by CCPS.[92] These four types of strategies have been widely recognized by the industry and best encompass the concepts and principles of applying inherent safety, which focuses on eliminating or reducing the hazards associated with a set of conditions.

As the 2010 CCPS Final Report: Definition for Inherently Safer Technology (IST) in Production, Transportation, Storage and Use[93] states:

> "IST (Inherently Safer Technology), also known as Inherently Safer Design (ISD), permanently eliminates or reduces hazards to avoid or reduce the consequences of incidents. IST is a philosophy, applied to the design and operation life cycle, including manufacture, transport, storage, use, and disposal. IST is an iterative process that considers such options, including eliminating a hazard, reducing a hazard, substituting a less hazardous material, using less hazardous process conditions, and designing a process to reduce the potential for, or consequences of, human error, equipment failure, or intentional harm." (emphasis added)

The CCPS guidance is organized by these four strategies and provides many examples of each type of strategy. NJDEP also uses descriptions of the four strategies to identify available IST alternatives in their IST review requirements.[94] Although some NJ facilities may have reported some controls that others might not strictly view as IST, EPA does not believe that IST should be limited only to chemical substitution and process changes. Changes involving transportation of chemicals and storage location are also cited in the checklist because inherent safety can involve reduction of hazard and does not require complete elimination of a hazard.

Comment 6.3-04: One of the commenters said that owners and operators do not have expertise in IST and have been dismissive of ISTs because of their high costs. The commenter recommended including IST vendors (e.g., Honeywell for ISOALKY ionic liquid alkylation) on the STAA team, along with owners and operators, to demonstrate the low cost and high performance of their technologies (0107).

> **EPA Response:** The final rule will provide facility owners or operators the flexibility to use facility personnel with expertise and experience with facility processes and their industry to conduct STAAs and determine the practicability of IST/ISD considered. EPA believes that the facility has the expertise and resources to determine whether implementation of any IST or ISD should be undertaken, taking into the five practicability factors (*i.e.*, economic, environmental, legal, social and technological) for evaluating the appropriateness of implementing for potential IST measures because some

[92] CCPS. 2009, Inherently Safer Chemical Processes: A Life Cycle Approach. 2nd ed., https://www.regulations.gov/document?D=EPA-HQ-OEM-2015-0725-0253

[93] CCPS. July 2010. Final Report: Definition for Inherently Safer Technology in Production, Transportation, Storage, and Use, https://www.regulations.gov/document?D=EPA-HQ-OEM-2015-0725-0274

[94] NJDEP TCPA. March 29, 2012. NJ Title 7, Chapter 31 TCPA Program Consolidated Rule Document http://www.nj.gov/dep/rules/rules/njac7_31.pdf .

IST can involve significant costs or involve impacts that go beyond the facility. These factors are recognized and further discussed in in CCPS' 2019, "Guidelines for Inherently Safer Chemical Processes, A Life Cycle Approach," 3rd edition, and NJDEP's Guidance for Toxic Catastrophe Prevention Act (TCPA), "Inherently Safer Technology (IST) Review," Attachment 1 "Feasibility guidance."[95]

EPA expects that, as appropriate, PHA teams will consult with vendors of widely known alternative technologies when assessing the practicability of ISTs/ISDs.

Comment: 6.3-05: Several commenters suggested edits to the draft outline of STAA information collection found in the Technical Background Document, which include:

- Strengthen definition of safer technologies to align with best practices, including CalPSM rules (0460)
- Expand the "technology transfer" provision to include wastewater and water treatment plants (0460)
- Require all sections to be completed, some are currently marked "optional" (0460, 0220)
- Ensure STAA clearinghouse data collected includes narrative text, additional data points, and no data suggested as "optional" (0460)
- Include open text description for elements 2.b.i through 2.b.iv to eliminate distortion of reporting if some include open text and some do not (0220)
- Element 2.b.i. and 3.i. should include open text description of substitution (0220)
- Element 2.b.iii. and 3.iii should include open text description of minimization (0220)
- For internal consistency, elements 2.b.i through 2.b.iv and 3.i through 3.iv should refer to substitution, moderation, minimization, or simplification "…of substance or process…". (0220)
- For consistency with proposed regulatory text at 68.67(c)(9)(ii), consider adding to the elements under 2.d. "Methods used to determine practicability". (0220)
- To elicit greater depth of reporting:
    - Add "avoided costs" to element 3.vii. "Estimated cost savings and avoided costs from implementation" (0220)
    - Add "avoided costs" to 4.b. "Cost savings or avoided costs (Y/N)" (0220)
    - Insert another element in section 4 "Community expectations (Y/N)" (0220)
    - Consider adding to section 4 "business opportunities," "operational efficiencies," and "security considerations" as causal factors for safer design. (0220)
    - Element 3.vi. should refer to the safer design "implemented." (0220)

EPA Response: Regarding the STAA technology transfer EPA is requiring that basic information on IST, facility information, categories of safer design identified and implemented and causal factor for initiating safer design implementation be provided in the RMP submission in accordance with 40 CFR 68.175(e)(7). Facilities must provide in their RMP any IST/ISD measures implemented since the last PHA, if any, and the technology category (substitution, minimization, simplification and/or moderation).

[95] https://www.nj.gov/dep/enforcement/tcpa/downloads/istguidance_rev2.pdf

These technology transfer provisions apply to all facilities required to conduct any component of STAA (evaluation or practicability) under the final rule. This reporting is also voluntary for all other facilities, including deregistered facilities, by which EPA expects to capture useful information about how some facilities, on their own accord, choose to make their processes safer. EPA appreciates the suggestions and will consider them for when developing the RMP*eSubmit User's Manual[96] which will include how the fields for the reporting will appear on the online system.

6.3.1 STAA applicability

Comments suggesting expansion of STAA applicability

Comment 6.3.1-01: Numerous commenters expressed support for the broadening of the scope of industries and facilities for which STAA should be required (0135, 0139, 0158, 0160, 0173, 0178, 0183, 0185, 0203, 0208, 0209, 0216, 0219, 0220, 0240, 0250, 0252, 0255, 0264, 0269, 0270, 0274, 0366, 0383, 0409, 0413, 0444, 0448, 0456, 0460). Some of the commenters highlighted that the proposed rule would only require approximately 5% of RMP facilities to conduct STAAs, which is a small subset of facilities (0160, 0203, 0250, 0252, 0264). Some of the commenters suggested EPA require all RMP facilities to develop a hierarchy of hazard controls in sequence and priority order to eliminate risks of catastrophic releases (0203, 0250, 0255, 0456).

Another commenter added performing the STAA and reporting results on this would be valuable across all the nearly 12,000 facilities and useful to both to provide information to facilities themselves and to workers inside advocating for safety, and to provide information to EPA and the public on what is currently available (0460).

One commenter suggested that EPA require Program 2 and 3 facilities to implement feasible safer alternatives with worker participation (0139).

Many commenters also requested broadening the scope to require STAA for all RMP facilities (0139, 0178, 0183, 1085, 0219, 0240, 0252, 0255, 0269, 0270, 0274, 0366). One commenter specified covering all RMP facilities is important because all RMP-regulated facilities by nature use or store extremely hazardous substances in quantities that can pose severe risks to workers, neighbors, and emergency responders (0183).

Another commenter urged EPA to require STAA as part of the PHA for all Program 3 facilities, regardless of their proximity to other RMP-covered facilities (0216).

A couple of commenters specified that thresholds to be covered by the RMP should be reduced, and more chemicals should be covered. In addition, the commenters requested that STAA requirements be extended to ensure that facilities only partially covered by the current RMP are entirely covered under the proposed rule (0255, 0409).

A couple of commenters stated that in addition to broadening the scope of industries, there should also be requirements to repeat the STAA periodically to capture new technologies that may not have been available during the previous analysis (0185, 0274).

One commenter said that in New Jersey's TCPA program targeting risk reduction, facilities are required to identify cost effective and technically feasible alternatives in IST analyses. The

[96] https://www.epa.gov/system/files/documents/2022-11/RMP%20eSubmit%20User%20Manual%20%28October%202022%29.pdf

commenter added that facilities in the chemical, water and wastewater, refinery, food (refrigeration), power, and other industries have identified and implemented a significant number of IST measures, demonstrating its value across all regulated sectors and that the sectors should not be limited as proposed (0185).

A couple of commenters said an expanded scope would cover more facilities near communities facing severe cumulative impacts of pollution and that are in areas facing worsening storms and increasing vulnerability to the effects of climate change (0366, 0460). One of the commenters explained that an empty chemical storage tank recently exploded at one of the 37 RMP facilities in their area. The commenter added that under the current draft rule, the facility where this occurred would not need to complete a STAA, and that EPA must mandate STAA analysis and implementation at all facilities because the facilities will not do so voluntarily. The commenter further stated EPA needs to reassure residents of all communities that the facilities are taking all actions possible for the safety of their workers, neighbors, and environment (0366).

One commenter was similarly concerned that other industries that have both catastrophic release potential and safer alternatives are not covered by the STAA requirement. The commenter recommended that EPA review literature on cost-effective safer processes adopted by facilities that are compiled in a series of reports by the Center for American Progress, starting with the 2006 report, Preventing Toxic Terrorism. The commenter claimed that Program 2 facilities pose hazards to millions and have cost-effective safer alternatives operating at hundreds of these facilities (0139).

Several commenters stated the proposal greatly narrows the scope of coverage to only 5% of RMP facilities (0178, 0240, 0252, 0255, 0269, 0270). Several commenters discussed facility exemptions (0240, 0255, 0270). One commenter identified two case studies of RMP facilities with poor safety records that would be exempt from STAA and would continue to decline safer alternatives as viable options (0270). One commenter claimed that the proposed rule did not reflect the Agency's own guidance because it would exempt roughly 95 percent of RMP facilities from conducting a STAA, including those facilities prone to releases. The commenter stated that RMP-reportable accidents between 2004 and 2020 were at facilities that would not be required to complete a STAA under the proposed rule (0240).

> **EPA Response:** EPA agrees in part with commenters requesting that the applicability of the STAA provision be expanded to apply to more facilities compared to the requirements included in the proposed rule. In this final rule, EPA is expanding the initial STAA evaluation to all Program 3 facilities with NAICS 324 and 325 processes. EPA believes that high RMP accident frequency among NAICS 324 and 325 processes as shown by recent data[97] presented in the proposed rule, is reasonable justification for requiring RMP owners and operators to evaluate safer technologies and alternatives to help prevent accidental releases. As noted in the proposed rule, between 2016 and 2020[98],

[97] Such data are also consistent with accident frequency data that formed part of the basis for the STAA applicability provisions in the 2017 Amendments rule. See 81 Fed. Reg. 13668-69 (March 14, 2016) (Amendments rule NPRM); 82 Fed. Reg. 4632-34 (January 13, 2017).

[98] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and

sector accident rates (unique facilities having accidents) for NAICS 324 and 325 were, respectively, seven times higher (23 percent, n = 41 out of 177) and two times higher (6 percent, n = 96 out of 1631) than the rate for all RMP-regulated facilities (87 FR 53578).[99] By expanding applicability of the STAA evaluation to these additional NAICS 324 and 325 processes, EPA expects to also capture complex facilities in less facility-dense areas that nonetheless may cause significant harm to human health and the environment.

In response to the comment stating that EPA has failed to justify excluding any hazardous facilities where safer technologies or alternatives are available, EPA notes that it has provided justification for applying the STAA requirement to facilities with NAICS 324 and 325 processes and does not believe that the final provisions have been limited arbitrarily, or that the Agency's decision to limit applicability of the STAA provisions to the petroleum refining and chemical manufacturing sectors implies that other sectors do not have viable safer technology alternatives. EPA notes that sources involved in complex manufacturing operations have the greatest range of opportunities to identify and implement safer technologies, particularly in the area of inherent safety, because these sources generally produce, transform, and consume large quantities of regulated substances under sometimes extreme process conditions and using a wide range of complex technologies. Therefore, such sources can often consider the full range of inherent safety options, including minimization, substitution, moderation, and simplification, as well as passive, active, and procedural measures. Further, EPA notes that RMP facilities in the selected sectors have been responsible for a relatively large number of accidents, deaths, injuries, and property damage and have significantly higher accidents rates as compared to other sectors. The 5 percent of sources mentioned by the commenters, augmented by those refineries and chemical manufacturer sources that have had accidents in the past 5 years, are responsible for 42% of the total accidents from RMP-covered sources over the period from 2016-2020, and 83% of the accident damage, which supports additional requirements beyond STAA (i.e., a practicability assessment and the implementation requirement). Concentrating the most demanding requirements on this subset of sources recognizes the track record of heightened risk presented by these sources to their nearby communities.

While EPA is not requiring all Program 3 sources, or all sources in industry sectors where feasible safer technology alternatives have been identified to perform a STAA, the Agency encourages such sources to consider performing a STAA, and to determine practicability of IST or ISD considered, even if they are not subject to the STAA provisions of the final rule. EPA expects guidance for this provision and the data resulting from the STAA Technology Transfer described in section V.B.e. of the final rule preamble will be useful for all facilities to adopt to identify potential IST/ISD and safeguards. As noted in the preamble of the 2016 proposed amendments rule, provisions in the existing rule provides several incentives to encourage the use of STAA and the

operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

[99] The list of these accidents and their details can be found in the Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022), Appendix A, https://www.regulations.gov/document/EPA-HQ-OLEM-2022-0174-0065. These accidents are specifically identified in Column BZ.

adoption of safer technologies, including having applicability based on a chemical threshold, allowing a source to take credit for passive mitigation in calculating its worst-case scenario and both passive and active controls when calculating its alternative scenarios (81 FR 13663; Mar. 14, 2016). Consistent with EPA's general approach to the RMP regulations, the Agency allows flexibility for owners and operators to adopt various methods to meet performance standards, with more specific, demanding standards for sources that pose a greater likelihood of an accidental release and have greater complexity, and for sources that pose a greater risk to nearby communities.

In the final rule, the definition of the 1-mile radius is relevant to the applicability of the IST/ISD practicability assessment and safeguard implementation only. Acknowledging that refineries and chemical manufacturers have sector accident rates that are higher than the general rates for RMP-covered facilities, close co-location of sources in NAICS codes 324 and 325 further increases the risk to the public that may be potentially exposed to a release from multiple sources. It is appropriate to increase the stringency and transparency of the requirement for so situated sources.

Opposition or suggested revisions to STAA applicability provisions

Comment 6.3.1-02: Several commenters expressed support for not broadening the scope of the industries and facilities for which STAA should be required (0180, 0181, 0197, 0205, 0217, 0226, 0230, 0234, 0261, 0262, 0458). One of the commenters stated they support the approach to focus requirements on the industry sectors mentioned where implementation is anticipated to be effective (0230). Many commenters urged EPA to not broaden the scope of STAA to additional facilities due to insufficient data linking lower incident rates with additional STAA (0180, 0205, 0217, 0226, 0230, 0234, 0262, 0458). One of the commenters added that with extremely low baseline incident rates, there is not much room for additional risk reduction to justify expending resources critical to other safety needs, and any changes will be so slight they may be unmeasurable (0197).

A few commenters agreed with EPA statement that STAA would likely not be effective at reducing accident rates and for this reason they do not believe it necessary to include other sectors (0181, 0230, 0262). One commenter stated the additional mandate is unnecessary because much of the regulated community is already evaluating best practices under the existing regulatory framework and is implementing changes when and as appropriate (0230). One commenter stated that STAA cannot be done just once at a 3PL warehouse facility due to the fluctuations in products and inventory stored (0231).

One commenter expressed disdain at the use of NAICS codes for federal regulation processes, citing they were created for the collection, tabulation, presentation, and analysis of statistical data that show the economic status of the United States (0227).

Another commenter stated that STAA regulations are deeply flawed, and EPA should not expand their applicability (0207).

EPA Response: While EPA is not requiring all Program 3 sources, or all sources in industry sectors where feasible safer technology alternatives have been identified to perform a STAA, the Agency encourages such sources to consider performing a STAA, and to determine practicability of IST or ISD considered, even if they are not subject to the STAA provisions of the final rule. EPA expects guidance for this provision and the

data resulting from the STAA Technology Transfer described in section V.B.e. of the final rule preamble will be useful for all facilities to adopt to identify potential IST/ISD and safeguards. As noted in the preamble of the 2016 proposed amendments rule, provisions in the existing rule provides several incentives to encourage the use of STAA and the adoption of safer technologies, including having applicability based on a chemical threshold, allowing a source to take credit for passive mitigation in calculating its worst-case scenario and both passive and active controls when calculating its alternative scenarios (81 FR 13663; Mar. 14, 2016). Consistent with EPA's general approach to the RMP regulations, the Agency allows flexibility for owners and operators to adopt various methods to meet performance standards, with more specific, demanding standards for sources that pose a greater likelihood of an accidental release and have greater complexity, and for sources that pose a greater risk to nearby communities.

Further, as stated in the proposal, EPA used accident history data to provide insight into the probability with which these accidents have actually occurred to support requiring STAA analysis for portions of particular industries. However, EPA recognizes that substance and process-specific accident history may not always be an appropriate metric for probability of an accident or the risk communities face. For example, the consequences of an HF release are so potentially catastrophic, and with known alternatives existing, EPA is now requiring that facilities with HF alkylation evaluate and document STAA as part of their PHA. In this case, EPA focused on numerous accidental releases that had the potential to cause a secondary release of HF from alkylation units rather than actual HF releases and their consequences.

Comment 6.3.1-03: One commenter that EPA's decision to narrow the scope of the STAA requirement to facilities with NAICS 324 and 325 processes within one mile of one another was arbitrary, relied on insufficient data, and was unnecessarily difficult to enforce. The commenter said that evidence suggested that there was a five-year lag in RMP reporting and therefore that accident data between 2017 to 2020 was incomplete and should not be relied upon for establishing a threshold in the proposed rule (240).

Another commenter stated that the calculation to support the claim that the accident rate for NAICS Code 325 is twice that for the industry is unclear. The commenter calculated that enhanced enforcement of RMP requirements on a small percentage of NAICS Code 325 facilities would greatly reduce the number of reported incidents without any changes to RMP regulations The commenter also provided detailed statistics disputing EPA's claim that the accident rate for NAICS Code 325 is twice that for the industry (0215). One commenter stated they have many member Program 3 facilities located within a mile of another NAICS Code 325 facility (0275).

One commenter appreciated EPA's approach to address the potential for densely co-located facilities in the given NAICS codes to cause a knock-on release and exacerbate the potential harm but recommended that STAA applicability should be a question of industry. The commenter claimed that, by limiting the applicability to petroleum refining and chemical manufacturing facilities by any distance, a double standard in safety would emerge in industries because of the location of where the process takes place (0179).

A couple of commenters indicated the proposal did not provide meaningful calculations, data, and analysis to support the proposed requirements (0215, 0268). One commenter stated that an

additional public comment period should be required for filling in the significant missing data and gaps of information in the proposed rule. The commenter identified the following examples as the missing information (0268):

- EPA failed to provide a list and its associated NAICS codes for the 12,855 unique facilities reporting between 2016 and 2020.
- Some accidents are duplicated in the list of "unique" accidents provided by EPA.
- Some facilities in "facility-dense" areas are duplicated in the list of NAICS 324/325 facilities located within 1-mile of another NAICS 324/325 facility.
- A single outlier event on November 27, 2019, has skewed the data such that EPA identified a trend of "considerably larger offsite impacts," including "over 153 million dollars in offsite property damage" for facilities in "facility-dense" areas. This one incident accounts for all of the property damage, but EPA has not acknowledged this. A single event does not indicate a trend.
- EPA failed to present any data to support their claim that "densely co-located" facilities have an increased potential for a release at a second facility. In addition, they did not justify its claim that the alleged increased potential is applicable to facilities with one, two, or more adjacent facilities to warrant a "densely co-located" designation.

EPA Response: As noted in the proposed rule, between 2016 and 2020, sector accident rates (unique facilities having accidents) for NAICS 324 and 325 were, respectively, seven times higher (23 percent, n = 41 out of 177) and two times higher (6 percent, n = 96 out of 1631) than the rate for all RMP-regulated facilities (87 FR 53578).[100] The docket provides instructions on how to receive the RMP Database data from August 1, 2021 which was the starting point of EPA's analysis.[101]

We note the comment about the reliability of accident information for recent periods claims there is an undercount but does not claim the distribution among sectors changes as late reports come in. Moreover, the distribution of significant accidental releases seems consistent over time. We also note the comment disputing the accident rate for NAICS 325 counters with summary points on an analysis of accidents since 2004 rather than the most recent 5-year time frame EPA reviewed. EPA is unable to validate the points raised as detail supporting the summary analysis was not provided to the level that EPA provided for the five-year period.

By expanding applicability of the STAA evaluation to all NAICS 324 and 325 processes, EPA expects to also capture complex facilities in less facility-dense areas that nonetheless may cause significant harm to human health and the environment In the final rule, we retain the 1-mile and the HF alkylation process focus and include a source-specific criterion of a petroleum refining or chemical manufacturing process having had a recent accident, for additional STAA requirements (a practicability assessment and safeguard implementation). The sources covered by these criteria represent heightened

[100] The list of these accidents and their details can be found in the Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022), Appendix A, https://www.regulations.gov/document/EPA-HQ-OLEM-2022-0174-0065. These accidents are specifically identified in Column BZ.
[101] https://www.regulations.gov/document/EPA-HQ-OLEM-2022-0174-0091

risks to surrounding communities due to accident history, overlapping worst case zones, and recent severe accidents and near misses.

Comment: 6.3.1-04 A few commenters discussed the reversal of this proposal from the RMP rule in 1996, in which EPA did not adopt an STAA requirement due to determining it would not provide meaningful safety benefits in the water sector, and the 2019 final rule where EPA removed the STAA requirement based on an analysis that accident rates were not lower in jurisdictions that adopted STAA-like programs (0188, 0239). A few commenters said EPA failed to justify a reversal of the 1996 decision that requiring analyses of alternative technologies is not beneficial and is inappropriate for existing processes (0229, 0232, 0238). One commenter pointed out that in 2019, EPA removed an STAA requirement based on its analysis that STAA regulations would likely not be effective at reducing accidents if applied on a national scale and this is the approach that EPA should continue to follow (0188).

EPA Response: EPA provided an explanation of its change of its position regarding the need for a rule requirement for STAA in the SCCAP proposed rule at 87 FR 53578-79 (Aug. 31, 2022). EPA recognizes it has reversed positions but explained several faults with the decision in 2019 – small data sets in New Jersey and Massachusetts, inappropriate comparisons of rates for all types of sources to rates in NAICS 324 and 325, and intra-year variability when dealing with very few accidents. The 2019 decision relied on the data trends in New Jersey and Massachusetts, but we concluded that, due to the faults discussed in the notice, that that reliance was misplaced. In lieu of relying on statistical analysis of data sets with significant shortcomings, we focused on the substantial body of expert opinion, including CSB investigations and recommendations, CCPS studies, and other material in the record. 87 FR 53575-79. The proposal and these materials address issues the commentors raise, such as, benefits of STAA being to reduce the risk of serious accidental releases by requiring facilities in these sectors to conduct a careful examination of potentially safer technology and designs, and safeguards that they could and in some cases, will need to implement in lieu of, or in addition to, their current technologies; and how STAA is applicable to both new and existing processes. We also discussed more generally our decision to move from the 2019 reconsideration rule's "compliance-driven" reliance on oversight and enforcement to a rule-based approach. 87 FR 53565-66. Therefore, having considered the basis for our 2019 decision, finding fault with it, and presenting the basis for going forward with amendments, we have addressed the basis for our change.

Furthermore, the CAA authorizes STAA. Both paragraphs (A) and (B) of CAA section 112(r)(7) authorize STAA and IST in particular. EPA cited all of section 112(r)(7) as authority for "[e]ach of the portions of the Risk Management Program rule we propose to modify" (81 FR 13646; March 14, 2016). The authority section for 40 CFR part 68 references CAA section 112(r) and is not limited to particular paragraphs. The proposed rule also noted that paragraph 112(r)(7)(A) had been invoked in the rulemaking petition on IST. Therefore, EPA provided sufficient notice that the Agency contemplated action under any authority under CAA section 112(r)(7). Nevertheless, EPA also views its authority to require STAA assessments or an IST review, or implementation of safeguards to reduce risk as being consistent with paragraph 112(r)(7)(B). Under paragraph (B), EPA has authority to develop "reasonable regulations . . . for the prevention of accidental releases." The reduction in severity of conditions in a process

plainly impacts the accidental release conditions and thus the modeling called for in section 112(r)(7)(B)(ii)(I). Moreover, section 112(r)(7)(B)(ii)(II) specifically mentions that prevention programs in risk management plans shall provide for "safety precautions;" STAA measures are a type of safety precaution. Finally, as noted above, the Conference Report for the 1990 CAAA and the Senate Report both demonstrate that Congress intended the regulations to prioritize STAA as a prevention measure.

We note that the STAA requirements adopted in this rule do not apply to water sector. We may revisit that decision in the future based on addition study and data, as well as a reassessment of the data currently before EPA.

Comment 6.3.1-05: One commenter requested EPA to clarify the language in preamble at 87 FR 53575 regarding "Program 3 processes covered under this provision." The commenter expressed uncertainty about whether EPA is referring to the PHA generally or the proposed STAA (0211).

A couple of commenters questioned the specificity and intent of the proposed STAA applicability. The commenters suggested an edit in STAA applicability that a "process" at the adjacent source should specify a "covered process" to read as follows:

> For a source (e.g., "source A") with a covered process in NAICS code 324 or 325, the triggers are (1) another "stationary source [(e.g., "source B")] having a *covered* process in NAICS code 324 or 325," and (2) source A being located "within 1-mile" of source B (0229, 0232).

EPA Response: In the proposal, EPA proposed to define facility location based on distance to the facility fenceline but sought comment on other definitions of facility proximity. Recognizing that the distance from a process is a more accurate way to calculate a release scenario than the distance from a fenceline, EPA will nevertheless retain 1 mile from the fenceline as the applicability criterion, as opposed to 1 mile from process locations, both for simplicity in implementation and also in deference to restrictions on source-specific information on release scenarios. The Agency believes that regulated facilities, the public, and implementing agencies can more easily calculate and verify a fenceline-to-fenceline measurement than a process-to-process measurement because it does not require access to facility-specific process information.

Concerns about specific industries

Comment 6.3.1-06: A couple of commenters expressed that the considerations of STAA would have little relevance among the diverse processes, formulations, and applications relevant to the fertilizer industry, specifically. The commenters added that forcing companies to incorporate this ill-fitting approach in their PHAs would lead to higher RMP-compliance costs that would be passed on to farmers and consumers (0229, 0232). One of the commenters further added these increased costs provide no benefit to the communities in which regulated facilities are located (0232).

EPA Response: With regard to comments relating to STAA requirements for the fertilizer industry, EPA is not requiring agricultural fertilizer retail facilities to perform a STAA, and thus there should be no burden to this particular industry as a result of the STAA provision. The STAA requirement in the PHA will only apply to Program 3 facilities in chemical manufacturing (NAICS code 325) and petroleum and coal products manufacturing (NAICS code 324).

Comment 6.3.1-07: One commenter supported the conclusion that STAA is not needed for NAICS Code 322, paper manufacturing based on the past performance of the sector (0238).

> **EPA Response:** Although accident rates for the paper manufacturing sector (NAICS 322, 17 percent, 20 accidents at 11 out of 65 facilities between 2016 and 2020) were similar to NAICS 324, EPA did not propose and is not finalizing STAA requirements at facilities in NAICS 322 due to the low actual number of incidents and comparatively fewer accident consequences. While 30 workers were injured (non-fatally) as a result of these accidents, the accidents resulted in no other reported offsite consequences (*i.e.,* sheltering in place, evacuation, or offsite property damage).[102]

Comment 6.3.1-08: Another commenter recommended instead focusing resources in identifying on a case-by-case basis the facilities that would benefit from STAA. The commenter suggested excluding processes already incorporating STAA-like analyses in their processes, such as batch toll manufacturers and those governed by specifications established by a government agency or by a customer through a short-term contractual relationship of less than five years. The commenter also urged flexibility for those already demonstrating compliance with an STAA-like analysis (0188).

> **EPA Response:** EPA disagrees with applying STAA on a case-by-case basis. Safer technology alternatives include many options beyond chemical substitution. IST could involve minimization of stored raw material chemicals, making process changes that make it less likely to release the chemical (moderation), or reducing complexity in the process that could make accidents more likely (simplification). Therefore, even where a contractual relationship or regulation requires a regulated facility to use a particular regulated substance in specified quantities, owners and operators of facilities should still consider other potential IST measures besides chemical substitution. Use of RMP chemicals for purposes in addition to making a formulated product, such as for cleaning equipment, wastewater treatment or refrigeration, for which chemical substitution may not be prohibited by regulation or contractual relationship.
>
> Additionally, under the STAA requirements applicable facilities would still need to consider and implement, if practicable, other safeguards to reduce risks, including at least one passive measure, or an inherently safer technology or design, or a combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure. EPA believes that measures lower on the hierarchy of controls, passive, active and procedural measures, when implemented appropriately, can be used to help operate a hazardous chemical process safely and can also reduce hazard risks of that process. When compared with IST, these measures could also more likely be added, modified, and improved at variable chemical operations governed by external specifications.
>
> Finally, EPA believes that the final rule provides substantial flexibilities to sources such as toll manufacturers and processes subject to other regulatory regimes to identify those restrictions as part of the basis for not adopting alternative technologies, either because they are not practicable or not appropriate.

6.3.2 2017 rule provisions requiring STAA for all NAICS 324 and 325 processes

[102] Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022).

Comment 6.3.2-01: Several commenters supported requiring STAA for all NAICS 324 and 325 processes (0179, 0211, 0460, 0444).

One commenter suggested that all fenceline communities located near NAICS 324 and 325 facilities benefit from the proposed STAA language to ensure that all communities receive the same protection from accidental releases. The commenter claimed that, by requiring all facilities to implement safer techniques, innovation and new safer processes would emerge faster because every facility would participate. The commenter claimed that this would discourage facilities not located in a dense NAICS facility area from keeping outdated and dangerous processes (0179).

One commenter supported the inclusion of the 590 NAICS code 324 and 325 facilities as the facilities that are most highly hazardous, have the worst incident rates, and are most threatening to the health and safety of workers and surrounding communities. The commenter stated safer technologies are available and have been successfully implemented in these sectors. The commenter also stated that this action is supported by similar action in several states and localities. The commenter explained state and local jurisdictions have implemented even stricter IST requirements than EPA 2017 RMP Amendments' provisions. The commenter urged EPA to cite and rely on these, including Contra Costa County in 1998, Richmond, CA in 2013, New Jersey in 1988, California in its refinery rule Cal. ARP Program 4 in 2017, and Jefferson County KY Air Pollution Control District in 2021 (0460).

One commenter claimed that, given the statute's mandate that EPA provide for the prevention of accidental releases to the greatest extent practicable, EPA was required to show that it would be impracticable for facilities to comply with the 2017 Rule's STAA provisions to narrow the scope of that obligation. The commenter claimed that EPA had not done so (0444). One of the commenters said the narrowing of this rule to make STAA coverage even less expansive than the 2017 rule appears in part to be giving into industry's contentions in a way that is unjustified in the record (0460).

One commenter expressed support for proposed rule's decision to exclude the midstream industry from the STAA regulations (0207).

One commenter suggested applying the requirement to evaluate STAA and feasibility to all facilities with processes covered by NAICS codes 324 and 325 and to those same facilities within a given radius of other defined infrastructure (e.g., docks, harbors, major roadways, railroad depots, schools, hospitals) or to those facilities within 1-mile of any other RMP facility. The commenter stated that, because part of the rationale for this distance criterion was the potential knock-on effects of accidents, the commenter claimed that these could apply to non-NAICS 324 and 325 facilities or to non-regulated infrastructure as well. The commenter suggested that the rule could require any regulated facility with processes covered by NAICS 324 or 325 within one mile of another RMP-regulated facility evaluate STAA without requiring the other facility to do so unless it was also in a covered NAICS (0211).

> **EPA Response:** In the final rule, EPA is expanding the initial STAA evaluation to all Program 3 facilities with NAICS 324 and 325 processes. EPA believes that high RMP accident frequency among NAICS 324 and 325 processes as shown by recent data[103] presented in the proposed rule, is reasonable justification for requiring RMP

[103] Such data are also consistent with accident frequency data that formed part of the basis for the STAA applicability provisions in the 2017 Amendments rule. See 81 Fed. Reg. 13668-69 (March 14, 2016) (Amendments rule NPRM); 82 Fed. Reg. 4632-34 (January 13, 2017).

owners and operators to evaluate safer technologies and alternatives to help prevent accidental releases. As noted in the proposed rule, between 2016 and 2020, sector accident rates (unique facilities having accidents) for NAICS 324 and 325 were, respectively, seven times higher (23 percent, n = 41 out of 177) and two times higher (6 percent, n = 96 out of 1631) than the rate for all RMP-regulated facilities (87 FR 53578). By expanding applicability of the STAA evaluation to these additional NAICS 324 and 325 processes, EPA expects to also capture complex facilities in less facility-dense areas that nonetheless may cause significant harm to human health and the environment.

In the final rule, EPA is expanding the applicability of the IST/ISD practicability assessment to apply to more facilities compared to the requirements included in the proposed rule. The IST/ISD practicability assessment will also apply to the owner or operator of a facility with Program 3 processes in NAICS codes 324 and 325 that has had an accidental release that meets the accident history reporting requirements under 40 CFR 68.42 since the facility's most recent PHA. As EPA noted in the 2019 reconsideration rule, a past accident is one of the best predictors of future accidents that could potentially threaten a facility's nearby community. Additionally, as indicated in the proposal, of the 70 facilities experiencing 2 or more incidents between 2016 and 2020, 43 (60 percent) were in NAICS 324 and 325. The facilities required to conduct practicability assessments for IST/ISDs identified in the STAA accounted for 42% of all accidents and 83% of the cost of accidents among all RMP facilities during the period from 2016-2020. A more in-depth look at implementation of IST/ISD by: (1) these facilities with accidents; (2) those identified in the proposal at facilities with processes in NAICS 324 and 325 located within 1 mile of another NAICS 324 or 325 facility; (3) and facilities with hydrofluoric alkylation, should lead to avoiding or reducing hazards at these facilities. At this time, EPA believes it is best to further focus the practicability assessment of IST/ISD on this subset of facilities as they present an even more heightened risk to a facility's surrounding community than other facilities with NAICS 324 and 325 processes.

While EPA is not requiring all Program 3 sources, or all sources in industry sectors where feasible safer technology alternatives have been identified to perform a STAA, the Agency encourages such sources to consider performing a STAA, and to determine practicability of IST or ISD considered, even if they are not subject to the STAA provisions of the final rule. EPA expects guidance for this provision and the data resulting from the STAA Technology Transfer described in section V.B.e. of the final rule preamble will be useful for all facilities to adopt to identify potential IST/ISD and safeguards. As noted in the preamble of the 2016 proposed amendments rule, provisions in the existing rule provides several incentives to encourage the use of STAA and the adoption of safer technologies, including having applicability based on a chemical threshold, allowing a source to take credit for passive mitigation in calculating its worst-case scenario and both passive and active controls when calculating its alternative scenarios (81 FR 13663; Mar. 14, 2016). Consistent with EPA's general approach to the RMP regulations, the Agency allows flexibility for owners and operators to adopt various methods to meet performance standards, with more specific, demanding standards for sources that pose a greater likelihood of an

accidental release and have greater complexity, and for sources that pose a greater risk to nearby communities.

Comment 6.3.2-02: One commenter suggested that if STAA is to be required, it should only be required at the design stage of new processes, at NAICS code 324 and 325 facilities with a reportable accident in the past five years, and exclude processes governed by external specifications. The commenter provided proposed regulatory language (0275).

EPA Response: In response to the comments that the STAA requirement should be limited to the design and development phases of new Program 2 and Program 3 processes, EPA disagrees. While the greatest potential opportunities for using IST may exist early in process design and development, many IST options may still be practicable after the initial design phase. Furthermore, STAA involves more than just IST. Safer technology alternatives also include passive measures, active measures, and procedural measures, and these measures can be modified and improved after the initial design of a facility. EPA notes that while many RMP-regulated facilities were originally constructed decades ago, major enhancements have been reported in some plants that have been operating for many years. Moreover, to the extent that particular measures are cost-prohibitive, the rule allows for that to be a factor in assessing whether a measure is practicable.

6.3.3 Other industries for which STAA should be required

Comments addressing specific industries

Comment 6.3.3-01: The following list are the industry suggestions several commenters made for which STAA should be required. Some of the commenters not only addressed all RMP facilities (or directly stated no limitation on STAA requirements), but also mentioned specific sectors/industries in the remainder of their comments.

- Water utilities and/or wastewater treatment facilities: 0139, 0179, 0185, 0203, 0208, 0209, 0220, 0252, 0264, 0269 0413, 0444, 0460
- All RMP facilities: 0139, 0183, 0185, 0219, 0240, 0255, 0270, 0366
- Pulp/paper manufacturing: 0135, 0179, 0203, 0208, 0209, 0264, 0413, 0444, 0460
- Petroleum refineries: 0179, 0203, 0208, 0209, 0252, 0264, 0269, 0413, 0444, 0460
- Coal: 0179, 0209, 0264, 0444
- Chemical manufacturers or distributors: 0135, 0179, 0203, 0208, 0209, 0252, 0264, 0269, 0413, 0444, 0460
- Agriculture and/or fertilizer plants: 0179, 0209, 0208, 0252, 0264, 0269, 0413, 0444, 0460
- Bleach/chlorine producers and wholesalers: 0139, 0203, 0252, 0264, 0269
- Smelting: 0203
- Bulk storage terminals: 0203
- Power plants: 0185, 0203
- Hazardous waste treatment: 0203

EPA Response: In response to the comment stating that EPA has failed to justify excluding any hazardous facilities where safer technologies or alternatives are available, EPA notes that it has provided justification for applying the STAA requirement to

facilities with NAICS 324 and 325 processes and does not believe that the final provisions have been limited arbitrarily, or that the Agency's decision to limit applicability of the STAA provisions to the petroleum refining and chemical manufacturing sectors implies that other sectors do not have viable safer technology alternatives. EPA notes that sources involved in complex manufacturing operations have the greatest range of opportunities to identify and implement safer technologies, particularly in the area of inherent safety, because these sources generally produce, transform, and consume large quantities of regulated substances under sometimes extreme process conditions and using a wide range of complex technologies. Therefore, such sources can often consider the full range of inherent safety options, including minimization, substitution, moderation, and simplification, as well as passive, active, and procedural measures. Further, EPA notes that RMP facilities in the selected sectors have been responsible for a relatively large number of accidents, deaths, injuries, and property damage and have significantly higher accidents rates as compared to other sectors. Refineries and chemical manufacturer sources that have had accidents in the past 5 years, are responsible for 42% of the total accidents from RMP-covered sources over the period from 2016-2020, and 83% of the accident damage, which supports additional requirements beyond STAA (i.e., a practicability assessment and the implementation requirement). Concentrating the most demanding requirements on this subset of sources recognizes the track record of heightened risk presented by these sources to their nearby communities.

While EPA is not requiring all Program 3 sources, or all sources in industry sectors where feasible safer technology alternatives have been identified to perform a STAA, the Agency encourages such sources to consider performing a STAA, and to determine practicability of IST or ISD considered, even if they are not subject to the STAA provisions of the final rule. EPA expects guidance for this provision and the data resulting from the STAA Technology Transfer described in section V.B.e. of the final rule preamble will be useful for all facilities to adopt to identify potential IST/ISD and safeguards. As noted in the preamble of the 2016 proposed amendments rule, provisions in the existing rule provides several incentives to encourage the use of STAA and the adoption of safer technologies, including having applicability based on a chemical threshold, allowing a source to take credit for passive mitigation in calculating its worst-case scenario and both passive and active controls when calculating its alternative scenarios (81 FR 13663; Mar. 14, 2016). Consistent with EPA's general approach to the RMP regulations, the Agency allows flexibility for owners and operators to adopt various methods to meet performance standards, with more specific, demanding standards for sources that pose a greater likelihood of an accidental release and have greater complexity, and for sources that pose a greater risk to nearby communities.

Specific comments on the water sector

Comment 6.3.3-02: One commenter that advocated for including water and wastewater facilities stated that more than 550 of these facilities are known to have removed chemical hazards such that they are no longer covered by the RMP program. The commenter stated persistent environmental justice disparities remain in communities around RMP water and wastewater plants in terms of housing value, household income, race and ethnicity, education levels, and poverty. The commenter explained that the 86 chlorine bleach plants excluded from the proposed

rule together have over 60 million people living in their vulnerability zones, and over a dozen water treatment plants each have over one million people in their vulnerability zones. The commenter also said all these facilities have many options for safer alternative operations (0139).

One commenter stated that EPA should require STAAs at water utilities since the purpose of requiring an STAA is to make sure that covered facilities have actionable information on conversion costs, savings, and avoided costs, information that facilities often lack. The commenter added that many water and wastewater facilities have deregistered from the RMP after converting from chlorine gas to sodium hypochlorite (or ultraviolet light at wastewater plants) or from anhydrous sulfur dioxide to sodium bisulfite. The commenter explained such conversions lead to savings and avoided costs such as the cost of complying with the RMP program requirements, the avoided costs of a worst-case scenario release, and many others (0220). The commenter also stated that the consideration of ISD should not be restricted solely to new facilities as conversions at former RMP water facilities demonstrate that retrofitting existing facilities is widely feasible. The commenter cited a survey of drinking water and wastewater plants, that were previously covered by the RMP, that replaced extremely hazardous substances with safer and more secure chemicals or processes. The commenter stated that given the likelihood of realizing cost savings in converting additional facilities, EPA could further incentivize conversions by offering communities support from the Clean Water State Revolving Fund, especially for those facilities with significant populations living in vulnerability zones, which would also address the Agency's concern about an unfunded mandate for publicly owned treatment works (POTWs) (0220).

Conversely, one commenter expressed support that the proposal did not apply STAA to the water sector as one of the least accident-prone sectors covered under the RMP, and that STAA does not appropriately the variety of contingencies water utilities must consider when choosing a treatment chemical (0239). A couple of commenters supported EPA's proposal to not require water and wastewater facilities to carry out mandatory STAA activities (0197, 0261). One of the commenters specified these facilities are already governed by public health mandates that require great flexibility in the selection of treatment processes that minimize health risks (0197). Another commenter referred to EPA's comment stating the probability of incident at water treatment facilities is low and added their facility's feasibility study to remove chlorine and convert to sodium hypochlorite was far too expensive to undertake (0261).

> **EPA Response:** EPA disagrees with commenters who suggest subjecting water and wastewater treatment facilities to STAA requirements. EPA's approach to applying the STAA requirement was to identify industry sectors with the greatest accident frequency at RMP-regulated facilities within the sector, and with the greatest opportunity to apply STAA risk management measures. While EPA agrees that water supply and wastewater treatment facilities often have feasible alternatives available, according to RMP accident history data, the sector is among the least accident-prone sectors covered under the RMP. Therefore, the final rule will not apply the STAA requirement to the water and wastewater treatment sector.

6.3.4 1-mile radius

Opposition to the 1-mile radius

Comment 6.3.4-01: Several commenters expressed concerns about underlying data to support the proposed 1-mile radius provision.

One commenter opposed the claim that proximity to other facilities is a major factor that impacts risk to the extent that it warrants using proximity as a reason for requiring the burden and costs of an STAA. The commenter stated that EPA's RMP accident database for NAICS Code 325 demonstrates no link between colocation of facilities and reported incidents. The commenter stated that based on EPA's dataset, 72% of facilities within the 1-mile proximity have had no accident history over two decades, which is comparable with 76% of the total chemical facilities. Furthermore, the commenter added that in the RMP dataset there are no reported simultaneous or synchronous incidents at separate companies within a mile of each other between 2015 and 2022, and EPA provides no example of a "knock-on" release example in the STAA discussion in the preamble. The commenter concluded that proximity is an arbitrary and capricious criterion and should not be included in the proposal (0215).

One commenter claimed that their analysis of EPA's data demonstrated that if one large event was excluded from the analysis as an outlier, none of the other incidents between 2016 and 2020, which involved predominantly facilities in facility dense areas, caused any offsite property damage.

The commenter also claimed that EPA inappropriately applied a sector-wide assumption on NAICS 324 and 325 facilities without normalizing the data. The commenter said EPA's assertion that facilities with NAICS 324 and 325 codes experienced more frequent accidental releases and that the Agency did not normalize accident rate data using criteria other than a per facility basis because EPA claimed that the number of processes at large facilities were arbitrary. The commenter stated that, when normalized on a per process basis, the accident rates for NAICS 324 and 325 facilities were more aligned with the rate for all regulated facilities. The commenter claimed that EPA's failure to present this normalized data was arbitrary (0268).

One commenter stated that the proposed rule suggests that EPA failed to look holistically at RMP data and to demonstrate a clear nexus between facilities within a certain radius. The commenter stated that after excluding an outlier event from 2019, none of the incidents involving the targeted industries in the last five-year reporting period resulted in offsite property damage and EPA should abandon the proposed STAA provision (0272).

One commenter claimed that the 1-mile radius restriction was unworkable as well as unjustifiable and that it was unclear how to determine the distance restriction. The commenter stated that the record did not show how EPA created the list and that the longitude and latitude data did not show any radius information that the public could replicate. The commenter claimed that EPA's attempt at applying the test likely fell short and missed facilities. The commenter did not understand why some facilities were listed for coverage using the geographic restriction and some were not. The commenter claimed that EPA's provision of only the longitude and latitude for STAA-covered facilities, without other facilities that were nearby, made the list not replicable and not reliable for communities attempting to evaluate the list and comment on it. The commenter also claimed that EPA had not placed all the underlying data into the record, which undermined the ability to understand and comment on this (0460).

Several commenters stated that the justification that EPA used to apply a distance radius of one mile is flawed as the statistics referenced rely on small samples that can easily be manipulated by outliers. The commenters urged EPA to reexamine this data using the median measures when comparing the impacts of these two groups to better determine if there is a difference in their impact (0180, 0205, 0217, 0226, 0234, 0458).

One commenter stated that the proposed rule's requirement to conduct STAA for facilities within a 1-mile radius was based on flawed and incomplete data as EPA included duplicate facilities in its analysis of the raw number of accidents that have occurred at refineries and chemical plants because several chemical plant and refinery facilities reported in facility-dense areas had the same latitude and longitude. The commenter claimed that this exaggerated the number of facilities in "facility-dense" areas. The commenter stated that EPA's analysis included duplicate facilities that had slightly different latitudes and longitudes from each other. The commenter recommended that EPA reassess its analysis by ensuring only unique facilities are counted. The commenter stated that EPA did not consider whether proximate facilities were in rural or urban population centers or located near public or residential communities (0268).

One commenter recommended that EPA reconsider the definition of facility-dense areas. The commenter said that approximately 40% of the facilities EPA identified as being located within a facility-dense area had only one other NAICS 324 or 325 facility located within 1-mile, with a second facility located on average, approximately 40 miles away. The commenter stated that EPA did not reference data to justify EPA's claim that such proximity increased the likelihood of a secondary knock-on release by compromising nearby processes (0268).

The commenter said that, while EPA stated 1-mile as the median distance of facilities with NAICS 324 and 325 processes that had accidents from 2016 to 2020 and the nearest adjacent NAICS 324 or 325 facility, this was irrelevant without comparing reportable incident data of the adjacent NAICS 324 or 325 facilities. The commenter claimed that EPA did not provide sufficient data to support EPA's claim that communities in areas with NAICS 324 and 325 facilities face overlapping vulnerability zones and a heightened risk of being impacted by an accidental release as compared to other NAICS facilities (0268).

One commenter discussed the definition of "densely co-located" in which the required RMP facilities are within 1-mile of another RMP facilities should consider topographical barriers and other mitigations between facilities. The commenter stated the single metric is insufficient and multiple factors should be included. Furthermore, the commenter added there is not data provided to support the claim that "densely co-located" facilities have an increased potential for release at a second facility (0263).

> **EPA Response:** In the final rule, the definition of the 1-mile radius is relevant to the applicability of the IST/ISD assessment and safeguard implementation only. Acknowledging that refineries and chemical manufacturers have sector accident rates that are higher than the general rates for RMP-covered facilities, close co-location of sources in NAICS codes 324 and 325 further increases the risk to the public that may be potentially exposed to a release from multiple sources. In these sectors, the worst-case scenarios of 80 percent of sources extend at least 1 mile, therefore the communities surrounding these sources will typically face multiple threats (that is, be within the worst-case scenario of more than one facility). Also, in the SCCAP proposed rule (87 FR 53578) EPA pointed to data[104] that shows the consequences of accidents for these co-located sources have resulted in considerably larger offsite impacts, including over 47,000 people sheltering in place, 56,800 people evacuating, and over 153 million dollars

[104] Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022)

in offsite property damage. It is appropriate to increase the stringency and transparency of the requirement for so situated sources.

Further, EPA notes that knock-on effects are a well-recognized industry release scenario.[105] While not many catastrophic accidents may have occurred under this scenario, research indicates that chemical industries are evolving towards clusters handling increasing amounts of substances, the emphasis is even more so on major chemical risks and on domino events which can eventually lead to catastrophic knock-on accidents.[106]

Further, recognizing that the distance from a process is a more accurate way to calculate a release scenario than the distance from a fenceline, EPA will nevertheless retain 1 mile from the fenceline as the applicability criterion, as opposed to 1 mile from process locations, both for simplicity in implementation and also in deference to restrictions on source-specific information on release scenarios. At this time, EPA is also not requiring facilities to apply topographic barriers and mitigations factors also for simplicity in implementation. The Agency believes that regulated facilities, the public, and implementing agencies can more easily calculate and verify a fenceline-to-fenceline measurement than a process-to-process measurement because it does not require access to facility-specific process information.

With respect to the list of facilities within 1-mile of another NAICS 324 or 325 facility that we provided in the Technical Background Document Appendix A, that list was an initial estimate provided to commenters to facilitate consideration of the proposed applicability method. We did not claim at the time that it was a definitive list. Rather, we provided it as initial assistance. EPA stated in the proposal, "Using RMP data from 2016 to 2020, EPA estimates the proposed approach impacts approximately 563 unique, active facilities. EPA is making available in the Technical Background Document, a list of sources it believes would be required to conduct STAA based on the location information currently provided in facility risk management plans." Ultimately, the owner or operator of each potentially affected source is responsible for compliance with the criteria in the rule itself. We would expect sources to be able to determine close calls as to whether they are subject to the relevant provisions of the rule through more individualized investigation.

Comments suggestion revisions to the 1-mile radius

Comment 6.3.4-02: One commenter claimed that there was no valid justification not to require a refinery or chemical manufacturer to assess IST and consider ways to operate more safely simply because it was not within 1-mile of another refinery or chemical plant. The commenter recommended that if EPA uses any mileage justification, it should use at least a 10-mile radius to capture more facilities. The commenter stated the evacuation zone at a recent incident had a 10-mile radius and EPA's recognition that the worst-case scenario zones for at least 10% of facilities are greater than 6 miles and at least 5% are as high as 10 miles. The commenter claimed

[105] As described in CCPS, *Guidelines for Siting and Layout of Facilities, 2nd Edition* (Hoboken, NJ: Wiley, 2018), *https://www.aiche.org/ccps/resources/publications/books/guidelines-siting-and-layout-facilities-2ndedition.*).
[106] G.L.L. Reniers, W. Dullaert, Knock-on accident prevention in a chemical cluster, Expert Systems with Applications 34 (2008) 42–49

that EPA failed to ensure that any facility that could have a 10-mile or larger worst-case scenario impact was included in STAA coverage (0460).

The commenter stated that a 1-mile radius restricted the likely impact area for severe hazards and releases from refineries and chemical plants especially for communities where there are many facilities within a 1-to-10-mile radius that can impact health, the ability of communities to evacuate, and the ability of first responders to assist. The commenter additionally said that a hurricane, flooding, wildfire, or earthquake tended to have impacts greater than a 1-mile radius (0460).

> **EPA Response:** In response to there was no valid justification not to require a refinery or chemical manufacture to assess IST, EPA disagrees. Acknowledging that refineries and chemical manufacturers have sector accident rates that are higher than the general rates for RMP covered facilities, close co-location of sources in NAICS codes 324 and 325 further increases the risk to the public that may be potentially exposed to a release from multiple sources. In these sectors, the worst-case scenarios of 80 percent of sources extend at least 1 mile, therefore the communities surrounding these sources will typically face multiple threats. It is appropriate to increase the stringency and transparency of the requirement for so situated sources applicable to this criteria. In contrast, while the commenter identified that 5% of facilities have worst-case scenarios of 10 miles or more, the likelihood of a community being within the worst-case scenario of two such sources is substantially lower than when two NAICS 324 or 325 facilities are 1-mile apart.
>
> EPA notes that while the 1-mile radius for NAICS 324 and 325 facilities is applicable to STAA, all Program 2 and Program 3 facilities are required to evaluate natural hazards in their hazard evaluation, as emphasized in the SCCAP final rule. The evaluation of natural hazards on facility processes, potential release of regulated substances and consequences to the community are not limited to a specific radius. Therefore, EPA expect facilities to make appropriate decisions to ensure natural hazards that could potentially affect their processes and subsequently harm nearby communities and the environment are identified and addressed appropriately.

Comment 6.3.4-03: Many commenters requested clarifications or proposed revisions regarding how to determine the 1-mile distance.

Several commenters stated that the use of the 1-mile distance from fencelines instead of process location is unreasonable as there are facilities that have processes hundreds of yards from their fenceline. The commenters suggested that this additional distance should be accounted for in this provision and requested that EPA use distances between the covered processes at the adjacent stationary source as opposed to fencelines (0180, 0205, 0217, 0226, 0229, 0232, 0234, 0267, 0458).

A couple of commenters suggested clarification in proposed language that adjacent facilities need to be both RMP regulated to require STAA under the proposed proximity requirement. The commenters suggested to clarify processes from adjacent facilities as “covered processes” as follows:

> The applicable element regarding the adjacent source’s NAICS code should be whether the source has a “covered process” in NAICS code 324 or 325, not whether the source has a NAICS code 324 or 325 “process.” In the proposed provisions, EPA refers to

"another RMP-regulated 324 or 325 facility." However, a stationary source is only subject to the RMP if it has a "covered process." If the final rule contains the same STAA requirements as proposed, EPA should revise § 68.67(c)(9) to make explicit that the adjacent source must have a "covered process" in NAICS code 324 or 325 (0229, 0232).

A couple of commenters stated that while EPA attempts to provide specificity regarding the end point for the 1-mile radius determination, they fail to identify the starting point. The commenters requested EPA clarify if it is from (1) the fence-line of the source evaluating applicability of the STAA requirements, (2) that source's NAICS code 324 or 325 Program 3 covered process, or (3) the "center" of that source. The commenters stated that they urge EPA to make certain that the starting point is the source's NAICS code 324 or 325 covered process (0229, 0232). One commenter claimed it was unclear how facilities would determine whether they are within one mile of one another, specifically if this would be based on the facility address or the end of the property. The commenter recommended that EPA prioritize the facilities that pose the most significant hazards to workers and communities (0240).

A couple of commenters requested guidance for sources to determine if the STAA triggers set forth in proposed § 68.67(c)(9) are met to make it easy for facilities. The commenters pointed out that one area of confusion is whether the facility is within the one-mile radius of a covered facility and whether EPA or the facility will be responsible for determining applicability (0229, 0232).

One commenter stated that the actual source site longitude and latitude, which is already required for EPCRA Tier I and Tier II reporting under 40 CFR Part 370, is recommended instead of the facility address as the process coordinates increase the accuracy for responders to model an actual release. The commenter stated that facilities can be acres in size and the sources can be hundreds of feet from the facility gate negatively impacting the accuracy of evacuation estimates (0165).

A couple of commenters voiced appreciation for the spreadsheet detailing facilities thought to fall within the one-mile threshold, but urged EPA to develop a more user-friendly, current, and accessible method of determining applicability of this provision (0217, 0234).

A couple of commenters urged EPA to develop a more user-friendly, up to date, and accessible method of determining if an owner/operator's facility lies within one mile of another facility with a 324 or 325 NAICS code, which would allow owners/operators of these facilities to establish how this provision applies to their facility (0158, 0205). A few commenters opposed EPA's STAA requirements for facilities with a 324 or 325 NAICS code that are within one mile of another facility with the same NAICS code, or facilities that utilize hydrofluoric acid (HF). The commenters urged EPA to develop a more user-friendly and accessible method for determining applicability to undertake STAA (0180, 0226, 0458).

One commenter suggested EPA offer training or guidance to facilities whose hazard reviews or PHAs are unsatisfactory or shortening the interval to three years to better identify and assist facilities that are not satisfying requirements (0261).

EPA Response: In the proposal, EPA proposed to define facility location based on distance to the facility fenceline but sought comment on other definitions of facility proximity. Recognizing that the distance from a process is a more accurate way to calculate a release scenario than the distance from a fenceline, EPA will nevertheless

retain 1 mile from the fenceline as the applicability criterion, as opposed to 1 mile from process locations, both for simplicity in implementation and also in deference to restrictions on source-specific information on release scenarios. The Agency believes that regulated facilities, the public, and implementing agencies can more easily calculate and verify a fenceline-to-fenceline measurement than a process-to-process measurement because it does not require access to facility-specific process information.

As a point of further clarification, the NAICS 324 and 325 processes applicable to the 1-mile radius criteria for the STAA practicability and safeguard implementation provision are those that are defined as RMP covered processes (40 CFR Part 68.3). EPA's final rule regulatory text reflects this clarification, "for covered processes in NAICS codes 324 and 325, located within 1 mile of another stationary source having a covered process in NAICS codes 324 or 325."

EPA intends to provide assistance to stationary sources to help determine whether they are subject to the 1-mile criterion. Such assistance may be in the form of lists. However, such lists should not be considered definitive. Owners and operators are responsible for making a determination under the applicability provisions as written in the RMP rule.

6.4 Practicability assessment

6.4.1 General comments on the practicability assessment

Support for the practicability assessment

Comment 6.4.1-01: A few commenters expressed support for EPA's proposal to require owners and operators to identify, evaluate, and document the practicability of implementing inherent safety measures, including documenting the practicability of publicly available safer alternatives (0139, 0183). Another commenter stated that EPA should include the STAA practicability assessment as part of the PHA because such an assessment will provide additional context to the public, local officials, and emergency managers regarding a facility's consideration of risk management. The commenter added that the assessment should be used internally by the facility to plan future process and technology improvements to increase safety (0241).

EPA Response: EPA agrees that the practicability assessment will provide the public and local emergency managers with important context regarding a facility's consideration of safer technologies and alternatives. In response to the comment that the practicability assessment should be used by facilities to increase safety, EPA believes that the final rule will allow the owner or operator to consider the potential for risk reduction, risk transfers, and tradeoffs when determining whether it is practicable to implement ISTs or ISDs considered. IST is a relative concept dependent on the hazard, the technology, and the facility. Therefore, EPA is requiring facilities to only consider IST as a possibility for addressing hazards rather than requiring ISTs be implemented. The final rule will give the facility owner or operator the flexibility to assess and to determine the practicability of any measures considered based on various factors for IST (including those involving risk transference).

Suggested revisions to the practicability assessment

Comment 6.4.1-02: One commenter suggested that EPA not give the power to the facility to make the determination of whether a safer alternative is feasible, and instead have a third-party make the assessment with input from the facility and from vendors and experts (0248).

> **EPA Response:** EPA believes the practicability of potentially safer alternatives is situation-specific, and owners and operators are usually in the best position to make these determinations.

Comment 6.4.1-03: A couple of commenters questioned how EPA, focused on process safety, would be able to assess social and economic factors as part of the PHA STAA component. The commenters stated that the consideration of "social" factors extend far beyond the traditional, performance-oriented "process safety" scope of a PHA, presenting a conflict with the scope of the PHA required by OSHA's PSM Standard. The commenters also said that EPA's "practicability" definition and evaluation does not distinguish between technologies or practices that have been proffered in research papers or demonstrated in pilot plants versus at the large-scale facilities subject to the RMP and required to perform a STAA. The commenters emphasized that "real-world" technologies should be the focus of the STAA, not theoretical or possible technologies that have not been tested or tried at RMP-regulated sources (0229, 0232).

> **EPA Response:** In response to the comment that the consideration of "social" factors extends far beyond the traditional, performance-oriented "process safety" scope of a PHA, EPA disagrees. While the PHA identifies the hazards, the RMP PHA requires the facility to identify the risk management measures applicable to eliminating or reducing the risks from the process hazards. EPA believes that it is appropriate for a facility to consider the five practicability factors (i.e., economic, environmental, legal, social and technological) for evaluating the appropriateness of implementing for potential IST measures because some IST can involve significant costs or involve impacts that go beyond the facility. These factors are recognized and further discussed in in CCPS' 2019, "Guidelines for Inherently Safer Chemical Processes, A Life Cycle Approach," 3rd edition, and NJDEP's Guidance for Toxic Catastrophe Prevention Act (TCPA), "Inherently Safer Technology (IST) Review," Attachment 1 "Feasibility guidance."[107]
>
> In response to comments stating that "real-world" technologies should be the focus of the STAA, not theoretical or possible technologies that have not been tested or tried at RMP regulated sources, EPA expects that facilities will only evaluate chemical substitutes that have already been shown to be commercially viable and does not expect facility owners or operators to expend a major effort on hypothetical or untested chemical substitutes or uses. This approach is consistent with EPA's authority to require reasonable regulations that prevent accidental releases to the greatest extent practicable.

Comment 6.4.1-04: One commenter stated that while the proposed rule's definition of "practicability" already allows facilities to consider economic factors, the Agency should include additional regulatory text or separate guidance that fleshes out under what circumstances costs may make implementation of a STAA measure impracticable (0444).

> **EPA Response:** EPA intends to publish guidance for STAA including the practicability assessment. Once these materials are complete, owners and operators can have time to familiarize themselves with the new materials if needing assistance in applying the provisions to improve process safety. EPA expects to develop and release this

[107] *https://www.nj.gov/dep/enforcement/tcpa/downloads/istguidance_rev2.pdf*

information approximately one year after this final rule. However, the provisions for a source are a site-specific determination, so EPA expects all regulated RMP facilities to be successful in beginning to address the provisions immediately, exercising reasonable judgment.

Opposition to practicability assessment

Comment 6.4.1-05: One commenter opposed the proposed new 40 CFR 68.67(c)(9)(ii) and 68.175(e)(7) and stated that EPA should not adopt the proposed practicability assessment requirement. The commenter stated that they oppose any requirement to consider IST in existing processes at covered stationary sources. The commenter also stated that the proposal for the owner or operator to notify EPA of any IST adopted is unnecessary because the current RMP provisions already requires the owner or operator to notify EPA and other RMP recipients every five years of process controls in place, mitigation systems in use, monitoring and detection systems in use, and changes since the last PHA. The commenter stated that this is sufficient because this information will reflect any changes made because of STAA. The commenter added that EPA does not explain why this longstanding provision is no longer sufficient nor does the proposed requirement add any benefit and only adds additional burden for covered facilities (0215).

EPA Response: The Agency is not requiring formal practicability assessments (as is now required for IST) for passive, active, or procedural measures. Since evaluation of passive, active and procedural measures have been a part of the RMP rule, leading to implementation of some, it is expected that the determination of their practicability already occurs. The Agency believes the requirement to determine what actions are to be taken in 40 CFR 68.67(e) suffices as a practicability determination for the less extensive upgrades or changes to the process as compared to IST. However, to ensure the assessment determining a measure is not practicable complies with the final rule definition, sources will be required to document this conclusion to the implementing agency's satisfaction; this requirement will help ensure costs alone are not the sole factor in determining practicability. The final rule establishes specific ways to report on IST/ISD considered or adopted, which should simplify reporting for sources, in contrast to more open-ended narratives about changes at the source.

Comment 6.4.1-06: One commenter discussed the EPA notification requirement and the RMP IST requirement would tend to involve EPA and the public in the key decision-making of the owner or operator on how best to operate its stationary source. The commenter stated that this exceeds EPA's duty under § 112(r), which does not include allowing space for EPA or the public to influence decision-making or potential improvements to affected facilities that already meet RMP requirements (0215).

EPA Response: In response to the comments that the notification requirement and the RMP IST requirement would tend to involve EPA and the public in the key decision-making of the owner or operator on how best to operate its stationary source, EPA disagrees. EPA notes that the hazard evaluation requirements for Program 2 (40 CFR 68.50) and Program 3 (40 CFR 68.67) processes remain unchanged – for the owner or operator to identify, evaluate, and control hazards involved in the process, assuring the recommendations are resolved in a timely manner. When facilities fail to conduct these activities, they will not be in compliance with the hazard evaluation provisions. EPA

believes the flexibility permitted in hazards evaluations, that is, allowing facility owners and operators to choose which recommendations will be implemented, is the best approach for exercising reasonable judgement to determine what risk reduction measures work best for their particular chemical use, process, or facility. However, EPA views choosing to leave hazards unaddressed out of fear of public scrutiny as not exercising reasonable judgement, particularly when it may leave the process more vulnerable to accidental releases. EPA has oversight authority and responsibilities under CAA section 112(r)(7) and the RMP rule. With this authority, we may require explanations of safety decisions in order to assure that the flexibilities for sources allowed in the RMP rule are being exercised reasonably, in compliance with the RMP rule.

6.4.2 Implementation of technically practicable IST/ISD and STAAs

Support for requiring implementation of technically practicable IST/ISD and STAAs

Comment 6.4.2-01: Many commenters requested that EPA require implementation of IST/ISD and STAAs (0135, 0139, 0157, 0160, 0178, 0204, 0208, 0219, 0240, 0248, 0252, 0264, 0269, 0270, 0366, 0383, 0392, 0407, 0409, 0447, 0449, 0460). One of the commenters urged EPA to require implementation at all Program 2 and Program 3 facilities (0139).

EPA Response: Taking an important step to reinforce these crucial factors, today's final rule is requiring processes subject to the IST practicability assessment to also implement at least one practicable passive measure resulting from the STAA evaluation. For this provision, practicable active and procedural measures or their combination can be implemented as a substitute to practicable passive measures if no practicable passive measures are identified or if they achieve layers of protection equivalent to or greater than the risk reduction of passive measures. This provision is intended to reduce the risks of the accidental releases by requiring processes that EPA has identified to present a heightened risk to a community to implement reliable safeguards necessary to help prevent or mitigate chemical releases and their consequences; in particular, the provision requires RMP-regulated facilities with P3 processes: (1) in NAICS codes 324 and 325 located within 1 mile of another NAICS 324 or 325 facility; (2) in NAICS codes 324 and 325 that has had an accidental release that meets the accident history reporting requirements under 40 CFR 68.42 since the facility's most recent PHA; and (3) in NAICS 324 with hydrofluoric alkylation processes—to implement practicable safeguards that help prevent or mitigate chemical releases and their consequences.

The PHA requirements at 40 CFR 68.67 have always required sources to "identify, evaluate and control the hazards involved in the process." Currently the provision does not prescribe exactly which type or what measures must be implemented to control the hazards. In guidance, the Agency discusses how sources can resolve hazard evaluation recommendations after identifying and evaluating solutions to control hazards, stating that, "EPA does not require that you implement every recommendation. It is up to you to make reasonable decisions about which recommendations are necessary and feasible. You may decide that other steps are as effective as the recommended actions or that the risk is too low to merit the expense. You must, however, document your decision on each recommendation."[108] Guidance further indicates, "You may not always agree with your

[108] EPA, General RMP Guidance - Chapter. 6: Prevention Program (Program 2) (2004), pp. 6–11, *https://www.epa.gov/sites/default/files/2013-11/documents/chap-06-final.pdf*.

PHA team's recommendations and may wish to reject a recommendation. OSHA's compliance directive CPL 2-2.45A(revised) states that you may decline a team recommendation if you can document one of the following: (1) the analysis upon which the recommendation is based contains relevant factual errors; (2) the recommendation is not necessary to protect the health of employees or contractors; (3) an alternative measure would provide a sufficient level of protection; or (4) the recommendation is infeasible. For part 68, you may also decline a recommendation if you can show that it is not necessary to protect public health and the environment."[109] While EPA continues to believe that the source has the primary expertise and resources to weigh decisions on process design, process safety and accident prevention, EPA is concerned that controlling hazards and adopting reasonable safety measures and layers of protection necessary to keep the public and environment safe from chemical releases based on reasoned, documented decision-making do not always occur.

In two recent CSB accident reports, "FCC Unit Explosion and Asphalt Fire at Husky Superior Refinery,"[110] and, "Fire and Explosions at Philadelphia Energy Solutions Refinery Hydrofluoric Acid Alkylation Unit,"[111] the CSB addresses safeguards that should have been in place to prevent or mitigate major accidents at refineries. These cases highlight the consequences to workers and the surrounding community when sources do not take the necessary steps to implement safeguards to control known hazards.

On April 26, 2018, an explosion and subsequent fire occurred at Husky Energy's Superior Refining Company LLC refinery in Superior, Wisconsin (Husky). The incident occurred during a planned maintenance event when flammable hydrocarbons inadvertently mixed with air. As a result of the explosion and fire, 36 refinery and contract workers were injured and sought medical attention. The CSB found that Husky failed to properly implement safeguards that could have prevented the inadvertent mixing of air and hydrocarbons during the shutdown. The safeguards CSB identified, a steam barrier, gas purge, and slide valves, are typically vital to this type of process and are generally known and broadly applied within the refining industry. Not applying these safeguards allowed oxygen to enter and accumulate in process equipment containing flammable material, which ignited and exploded.

On Friday June 21, 2019, Philadelphia Energy Solutions refinery in Philadelphia, Pennsylvania (PES) had a release of propane and toxic hydrofluoric acid vapor from a ruptured pipe in the PES refinery alkylation unit. The vapor found an ignition source, causing a fire and multiple explosions. Five workers and a firefighter experienced minor injuries during the incident and response. The incident also resulted in estimated property damage of $750 million. The CSB determined the cause of rupture was from a piping component that corroded. CSB indicated that the absence of safeguards, remotely operated emergency isolation valves, and passive safeguards to prevent incident-induced damage to the water mitigation system, contributed to the severity of the incident.

[109] EPA, General RMP Guidance – Chapter 7: Prevention Program (Program 3) (2004), pp. 7-7, *https://www.epa.gov/sites/default/files/2013-11/documents/chap-07-final.pdf*.
[110] https://www.csb.gov/husky-energy-superior-refinery-explosion-and-fire/.
[111] https://www.csb.gov/philadelphia-energy-solutions-pes-refinery-fire-and-explosions-/.

Comment 6.4.1-02: One of the commenters stated that relying on voluntary measures alone does not satisfy the requirement of the Act to for EPA to assure prevention "to the greatest extent practicable". Moreover, the commenter requested EPA to not consider costs, including cost uncertainty, to facilities as a justification for not requiring STAA implementation. The commenter added that many of the most hazardous facilities, including petroleum refineries, chemical manufacturers, pulp/paper mills, fertilizer plants, and water treatment plants, have well-documented availability of inherently safer technologies. The commenter stated the proposal is inconsistent with the CSB recommendation requiring both assessment and implementation of IST. The commenter also stated that the record does not support any decision that would not implement prevention activities (0460).

The commenter claimed that relying on voluntary implementation alone is insufficient to protect fenceline communities who have seen facilities repeatedly refuse to implement safer ways to operate, no matter how inexpensive or easy they may be. The commenter stated that voluntary measures cannot be relied upon given that market failure has delayed and prevented common-sense solutions. The commenter stated that, while the STAA, practicability assessment and justification report are all valuable and should be expanded and finalized, the rule should require the implementation of practicable IST through careful consultation with workers and worker representatives and community members. The commenter said the importance of assuring a just transition for changes to any work conditions or employment (0460).

> **EPA Response:** As discussed in previous rulemakings, the hierarchy of control methods in an STAA analysis—IST/ISD, passive, active, procedural—systematically provides for the identification of practicable control methods. The Agency expects the STAA analyses to lead to new hazard control approaches at sources where management finds such approaches to be reasonable and practicable. The Agency acknowledges requiring facilities to implement IST can involve extensive changes to a facility's process, depending on the IST, especially if it involves substitution of alternative chemicals and/or major process redesign to existing processes. EPA believes that measures lower on the hierarchy of controls, passive, active and procedural measures, when implemented appropriately, can be used to help operate a hazardous chemical process safely and can also reduce hazard risks of that process. When compared with IST, these measures could also more likely be added, modified, and improved after the initial design or operation of a facility.
>
> Nothing in the Final Rule forces the adoption or abandonment of any technology or design. The mandate EPA adopts is limited to selecting additional mitigation periodically for specific processes so long as the risk of an impact release persists,[112] with a preference consistent with the well-understood hierarchy of controls.
>
> EPA is requiring implementation of passive measures as a priority rather than active and procedural because it is the next highest level below IST on the hierarchy of controls and the most reliable in comparison to active and procedural safeguards, as they reduce risks without human, mechanical, or other energy input. As discussed in CSB's PES report,

[112] If passive mitigation or other adopted mitigation measures would be sufficient to change all NAICS 324 or 325 processes to Program 1, then the source no longer would have an obligation to add additional mitigation measures in future PHAs, as the mandate for safeguard implementation only applies to Program 3 processes. If the adopted mitigation measure is insufficient to meet Program 1 at all NAICS 324 and 325 processes at the source, then the potential for offsite impacts presenting risk would remain.

active safeguards that require a person or technology to trigger their activation have the potential to fail in major incidents involving fire or explosions, which was the case in the PES accident and could be a likely release scenario for flammable substances, which are regulated substances often present at refineries and chemical manufacturers.

EPA recognizes that passive safeguards may not exist or may not be practicable for a variety of reasons and other safeguards are needed to cover gaps in process safety risk reduction. EPA also recognizes that a passive measure may be even more effective when applied appropriately with other measures. This concept of layers of protection acknowledges that individual safeguards are not completely reliable or effective, and thus multiple safeguards ("layers") may be needed to minimize the chances of an initial fault propagating to a full-blown incident with potential for harm. This is often illustrated using the "Swiss Cheese" model for incidents. In this model, each safeguard layer has the potential to fail, with highly reliable safeguards (e.g., "inherent" ones) having relatively few "holes", and less reliable safeguards (e.g., "procedural") having more. While no single layer can adequately control the hazard, having enough adequately reliable safeguards can greatly reduce the chance of all of the "holes" lining up so that an incident actually occurs. This final rule will give the facility owner or operator the flexibility to assess and potentially implement IST, implement passive measures, or implement a combination of active and procedural measures to reduce risk associated with a process. The approach adopted in the Final Rule does not require a facility to implement a hazard reduction approach beyond what is to the greatest extent practicable among the reasonable options.

For a discussion of CAA 112(r)(7)(A) and (B), including the how EPA may consider cost under the requirement to establish "reasonable regulations" that "provide, to the greatest extent practicable" for the prevention of accidents, please refer to [cross-ref to the RTC legal section].

Opposition to requiring implementation of technically practicable IST/ISD and STAAs

Comment 6.4.1-03: Several commenters urged EPA to allow facilities to decide what is best on a case-by-case basis due to instances where adopting an inherently safer process may not actually make a process safer when put into practice (0180, 0217, 0226, 0234, 0458).

One commenter added there are cases where there are no safer alternatives and conducting an STAA is not necessary, does little to improve safety, and creates extra complexity for employers to present a case to regulators for their processes. The commenter also said that regulations should be straight forward and easy to understand so a vague requirement to require facility owners to present a case that their processes are safe will create confusion and not improve safety (0227).

Several commenters stated IST and ISD are in the best interest of facilities to implement where they are practical and effective, therefore there is no reason to require it. The commenters also expressed concern over excessive costs to implement unnecessary technologies if required to implement inherently safer technologies (0180, 0217, 0226, 0234, 0458).

A few commenters expressed concern that requiring implementation of technologies may force facilities to adopt unnecessary and costly measures that do not actually make a process safer (0205, 0215, 0271).

EPA Response: In response to comments concerning costs for implementing STAA measures, EPA believes there is an overemphasis on initial costs leading to less consideration of safer, reliable methods to reduce process risks. CCPS' 2019, "Guidelines for Inherently Safer Chemical Processes, A Life Cycle Approach," discusses the tradeoff of initial and operating costs of implementing different STAA measures. CCPS indicates that while inherently safer and passive measures do tend to have higher initial capital costs, operating costs are usually lower than those for the other measures. For active measures as compared to inherently safer and passive measures, reliability is typically lower, and complexity is greater. Operating costs are also actually likely to be the greatest for active solutions. While procedural measures are most often tempting solutions due to their initial very low capital cost and typically lower complexity, they are often also the least reliable and should be considered only after other solutions have been explored. Similarly, EPA believes passive measures (or active/procedural equivalent) measures that reduce risk and are practicable should be implemented.

The Agency recognizes that requiring any implementation of STAA measures is a departure from both the 2017 amendments rule (82 FR 4648-49; Jan. 13, 2017) and the 2022 proposed rule and that the Agency identified reasons for not requiring implementation of any STAA in the 2022 proposed rule (87 FR 53580; Aug. 31, 2022).[113] However, the 2017 amendments rule and the 2022 proposed rule primarily focused discussion on the reasonableness of mandating adoption of IST/ISD rather than passive, active, or procedural measures. For example, in 2017, EPA explained that one reason the Agency did not require implementation of IST/ISD is that a source may reasonably decide to employ more than one method of hazard reduction to address a hazard or that a given type of safer technology may not exist for a particular hazard point (82 FR 4649; Jan. 13, 2017); consistent with these observations, this rule allows a source to adopt layering active and procedural measures to achieve the equivalent risk reduction a passive measure would achieve and does not adopt a requirement for an IST/ISD at each hazard point. The Agency retains substantial flexibility for owners and operators to select among passive measures they deem appropriate for their stationary sources. The final rule allows for consideration of factors highlighted in the 2017 amendments rule like chemical formula specifications for toll manufacturers, the potential for risk transfer, supply chain limitations, and the need to address security implications of any change when assessing whether to reject particular passive measures. See 82 FR 4635-36 (toll manufacturers), 4643 (risk transfer), 4648 (supply chain), and 4649 (security).

The 2022 proposed rule contended that a requirement for implementation of IST/ISD or any measure was unnecessary because sources were likely to implement practicable measures when economically and technically reasonable and risk reduction would be significant. EPA partially based this contention on the observation that most of the economic savings from reducing accidents would accrue to the source itself (87 FR 53580; Aug. 31, 2022). However, not all damages accrue to the source responsible for the accident. For example, offsite impacts such as injuries, sheltering in place events,

[113] The 2019 Reconsideration Rule did not specifically discuss requiring or not requiring implementation of measures identified in a STAA because it more generally rescinded all prevention measures promulgated in 2017. With no requirement to perform an STAA, there was no need to assess whether implementation of measures identified in such an analysis needed to be implemented. The proposed rule and this final rule discuss the reasons for adopting a different broad approach to prevention than that adopted in 2019.

evacuations, environmental damage, and so on are experienced by people other than the regulated facility. Because these costs are external to the facility, there is a market failure, and firms do not have an appropriate level of incentive to prevent them. This market failure has been noted by commenters with respect to catastrophic events, the prevention of which is a primary purpose of enacting CAA section 112(r). Catastrophic events impose extensive burdens on people external to the source responsible for the accident. Moreover, these incidents are low probability, high consequence events that are difficult for owners and operators to assess; therefore, it may be unreasonable to rely primarily on sources to make the ultimate decision on whether to adopt any measures at all. The standard adopted in this final rule for sources presenting elevated risks to communities, wherein EPA mandates adoption of at least one passive measure at the facility, or an inherently safer technology or design, or a combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure, reasonably addresses the potential market failure that would lead to less implementation than would be necessary for risk reduction.

6.5 STAA technology transfer

Comment 6.5-01: Several commenters supported EPA's proposed technology transfer provisions (0139, 0203, 0216, 0220, 0270, 0460). A few commenters stated that EPA should require every RMP facility to routinely report the safer technologies/designs evaluated, implemented, or planned because, as proposed, 95% of RMP facilities will not report any solutions data (0203, 0216, 0270). One of the commenters stated this will allow EPA to better assess the impacts of its own activities for promoting prevention of catastrophic releases (0203).

Another commenter suggested that this reporting occur as a regular part of semi-annual CAA compliance reports, and at a minimum, as a regular part of RMP reporting to EPA (0270). One commenter stated that EPA should require the STAA-exempt 95% of RMP facilities to report whether they have evaluated IST/ISD and, if so, identify the major options evaluated, implemented, or planned. The commenter stated that this approach would be low cost, fill a major information gap, and yield invaluable insights (0220). Another commenter supported expanding the technology transfer provision to cover more facilities and gather additional valuable information, including on wastewater and water treatment plants (0460). One of the commenters wanted to strengthen the provision by including narrative text all key data points and that no data be optional (0460). One commenter suggested that EPA make technology transfer a resource of solutions data from converted and deregistered facilities (0139).

One commenter stated that any submitted STAA findings would probably not consider the nuance of the real practicality of switching between technologies, and if facilities are not required to switch to alternate technologies, it is unclear how EPA intends to effectively use these data (0201). Another commenter stated that EPA should not require reporting of STAA measures implemented in facilities' risk management plans because this requirement would create significant potential for third parties to insert themselves into what is a highly technical and site-specific analysis. The commenter added that EPA does not provide a clear basis in the proposed rule for its assumption that reporting and public availability of information on IST/ISD measures implemented will improve facility safety or mitigate the potential for accidental releases in any measurable way; therefore, determining that reporting this information in the RMP is simply not justified. The commenter also stated that alternatives analysis should be required only during the design phase of a facility, if at all (0233).

Another commenter stated that the proposed requirement for facilities to report on IST/ISD measures implemented, including the technology category, coupled with the public disclosure requirements, was improper and unjustified. The commenter claimed that, because members of the public do not have the expertise on HF alkylation units and potential substitutes or full knowledge of a facility's business operations, provided information would be inappropriately used by the public to compare and pressure facilities to change course on complex engineering decisions (0268).

A couple of commenters said the proposed STAA data collection will provide valuable information (0220, 0460). One of the commenters stated that STAA data collection would increase the likelihood and speed of implementing inherently safer methods of operating (0460).

A few commenters expressed concern that safer technologies and alternatives vary widely as they are distinct to each facility and process. The commenters stated that collecting and presenting safer alternatives removes these alternatives from the contexts in which they were determined to be "safer." The commenters believed the STAA in the clearinghouse would be perceived as better and implement or replace existing controls simply because they are in the database (0173, 0201, 0215).

One commenter recommended this type of database be left to standard-setting organizations such as AIChE and API (0215). Another commenter said The Chlorine Institute's publications, newsletter, forums, conferences, and technology symposium already provides professionals a means to discuss and learn about various safter technologies and alternatives (0201). One commenter expressed that expending resources to create this database is not necessary, as interested parties can already find solutions in the U.S. Patent and Trademark Office database of patented technologies (0233).

A few commenters were concerned with privacy (0173, 0201, 0233). A couple of the commenters conveyed concern about the potential requirement to disclose sensitive information or trade secrets (0201, 0233). Another commenter believed that due to accessibility by regulators, businesses will not be forthcoming with information (0173).

One commenter suggested EPA should integrate STAA information into routine RMP reporting using RMP*eSubmit. The commenter stated that the STAA clearinghouse and other data users should then be able to pull solutions data from EPA's RMP database. The commenter also suggested adding to the RMP deregistration form the menu items needed to report IST or ISD, and the methods used, as a reason for deregistration (0220).

One commenter stated that the lack of detail provided about the STAA clearinghouse does not satisfy the Administrative Procedure Act (APA) to provide meaningful opportunity for interested persons to participate in the regulatory process. The commenter elaborated that the STAA clearinghouse also appears to be subject to the Paperwork Reduction Act (PRA) due to its information collection on regulated entities. The commenter stated EPA has not shown that it satisfies the PRA requirement of soliciting public comment to evaluate that the proposed collection is the least burdensome, not duplicative of information otherwise accessible, necessary to the functions of the Agency, and has practical utility (0233).

> **EPA Response:** EPA is requiring that basic information on IST, facility information, categories of safer design identified and implemented and causal factor for initiating safer design implementation be provided in the RMP submission in accordance with 40 CFR

68.175(e)(7). Facilities must provide in their RMP any IST/ISD measures implemented since the last PHA, if any, and the technology category (substitution, minimization, simplification and/or moderation). These technology transfer provisions apply to all facilities required to conduct any component of STAA (evaluation or practicability) under the final rule. This reporting is also voluntary for all other facilities, including deregistered facilities, by which EPA expects to capture useful information about how some facilities, on their own accord, choose to make their processes safer. EPA intends for this not to be a cumbersome exercise, but rather, one that is based on information facilities likely already have. The intended fields of check boxes, dates, and numbers that summarize STAA activities for this provision will help facilitate data analysis for EPA to compile and make available for other industries to identify safer alternatives.

EPA believes that primary utility of STAA information for the public is to identify whether facilities are implementing IST and the nature of that change. In addition to information exchanged through an information request under 40 CFR 68.210, EPA encourages facilities to provide information about any IST or other safer technology alternatives that the facility is using or could be using at the public meeting forum under 40 CFR 68.210 or any other community outreach opportunity. Facilities should expect that a community wants to discuss hazards and risks associated with their chemical processes. Effective communication with the public can be an opportunity to develop robust relationships with communities, and trust is gained when considering the needs and challenges facing those potentially affected by accidents. Additionally, as will be discussed further in the Information Availability section (VII) of the preamble, having information available to the public builds upon the planning approach of Emergency Planning and Community Right-to-Know Act (EPCRA) and Agency studies of the value of right-to-know in emergencies, and promotes accident prevention by facilitating public participation at the local level. The Agency expects a more informed and involved public to have less fear of the unknown.

Further, the information collection activities in this rule will be submitted for approval to OMB under the PRA. The Information Collection Request (ICR) document that EPA prepared has been assigned EPA ICR number 2725.02. You can find a copy of the ICR in the docket for this rule. The information collection requirements are not enforceable until OMB approves them.

7 Root Cause Analysis

7.1 Proposed approach

General comments related to root cause analysis

Comment 7.1-01: Several commenters supported the proposed approach to require facilities to conduct root cause analyses after an incident (0108, 0139, 0141, 0143, 0177, 0180, 0181,0203, 0204, 0205, 0211, 0215, 0217, 0219, 0228, 0234, 0240, 0241, 0245, 0255, 0257, 0266, 0268, 0270, 0273, 0409, 0444, 0456, 0458, 0460). One of the commenters suggested that the proposed requirements would likely prevent harm from repeated incidents (0460). Another commenter noted that root cause analyses provide an additional opportunity to better understand the processes, procedures, and culture that may contribute to accidents (0241). Another commenter

noted that root cause analyses provide an additional opportunity to better understand the processes, procedures, and culture that may contribute to accidents (0241).

One commenter noted that root cause analyses can address environmental justice and provided an example of a Tyson foods accident in Arkansas that occurred in part because safety labels were not accessible to workers with limited English proficiency (0444).

Another commenter suggested that the financial burden associated with the increased investigation requirements would be limited since many facilities already conduct investigations consistent with the proposal (0273).

> **EPA Response:** EPA is finalizing the requirements as proposed. EPA agrees with those comments supporting the proposed provision and believes that requiring root cause analyses after RMP-reportable accidents, and including root cause information in incident investigation reports, is vital for understanding the nature of these events and how they may occur. EPA believes multiple accidents result, in part, from a failure to thoroughly investigate and learn from prior accidents. EPA agrees with the commenter that the burden of the finalized root cause analysis requirements is relatively small due to many sources already performing root cause analyses in a manner consistent with industry or company protocols.
>
> Further, EPA recognizes that accidental releases of regulated chemicals from facilities regulated by the rule would likely pose disproportionate risks to historically marginalized communities. However, EPA has concluded that these regulatory requirements will advance just treatment of those populations by reducing the disproportionate damages from accidental releases that RMP regulated facilities might otherwise inflict on those populations.

Comment 7.1-02: A commenter stated that the concept of "root cause" can be misleading, as there is not always a singular reason for why an incident occurred. The commenter said EPA should recognize that a root cause analysis is not always the most appropriate post-incident investigation method (0229).

> **EPA Response:** With regard to comments that the concept of "root cause" may be misleading, EPA agrees that an incident may have more than one root cause, which is why in the final rule EPA modified the definition of "root cause" to include that the root cause must identify a correctable failure, or failures, in management systems *and*, if applicable, in process design. *See* EPA response to Comment 7.1-03
>
> With regard to comments about the appropriateness of a root cause analysis as a post-incident investigation method, EPA has provided detailed background information on the usefulness of root cause analysis in both the 2016 amendments proposed rule (81 FR 13638) and the 2022 SCCAP proposed rule (87 FR 53556).
>
> EPA also notes that the final rule does not require facilities to use a specific root cause analysis method, select from a predetermined list of root causes, or force-fit investigation findings into an inappropriate category.

Comments addressing the definition for root cause

Comment 7.1-03: A couple of commenters expressed support for the proposed definition of "root cause" (0228, 0273).

One commenter requested that if EPA determines that all incident investigations require a root cause analysis, EPA update the definition for "root cause" to remove the "system-related" and "in management systems" language. The commenter suggested that by focusing on system-related releases, EPA ignores that humans or environmental causes could be the cause of an incident (0237).

Another commenter suggested EPA revise the provided definition to state (0203):

> "Root cause means a fundamental, underlying, system-related reason why an incident occurred that identifies a correctable failure(s) in process design and/or management systems."

> **EPA Response:** EPA is finalizing the proposed definition of "root cause" with modifications to include that the root cause must identify a correctable failure(s) in management systems, and if applicable, in process design. In finalizing this definition, EPA recognizes that an incident may have more than one root cause. EPA acknowledged in the proposal that the CCPS root cause definition identified that a root cause includes a correctable failure in management systems. EPA intended to use CCPS' definition in its entirety due to its wide use among the process safety industry. As such, EPA agrees that the definition of "root cause" should include management systems as a correctable failure that must be identified when determining root causes for incident investigations. EPA also agrees that adding process design to the definition of root cause is useful as process design points to a specific management system failure that may offer facilities an opportunity to design their process more safely.
>
> Further, EPA disagrees that by focusing on system-related releases EPA ignores human or environmental causes. CCPS' Guidelines for Investigating Process Safety Incidents, 3rd Edition (2019), Chapter 2, addresses that human error is not a root cause but an important aspect of the incident to further learn which opportunity allowed human error to occur. The guidance also identifies environmental circumstances as part of a complex sequence of occurrences and conditions of a major incident. EPA expects owners and operators to reference and use appropriate recognized industry guidance such as CCPS' when conducting root cause analyses.

Comment 7.1-04: One commenter recommended that EPA specify that a root cause is not "human error" but the factors that made the human error more likely (0108).

> **EPA Response:** EPA is finalizing the definition of "root cause" to mean a fundamental, underlying, system-related reason why an incident occurred that identifies a correctable failure(s) in management systems, and if applicable, in process design. EPA uses CCPS' definition in its entirety due to its wide use among the process safety industry. CCPS' *Guidelines for Investigating Process Safety Incidents, 3rd Edition (2019),* Chapter 2, addresses that human error is not a root cause but an important aspect of the incident to further learn which opportunity allowed human error to occur. EPA expects owners and operators to reference and use appropriate recognized industry guidance such as CCPS' when conducting root cause analyses.

Opposition for root cause analysis requirements for Program 2 and 3 processes

Comment 7.1-05: Several commenters did not support the revision of the incident investigation provisions for Program 2 and 3 processes to include root cause analysis requirements (0197,

0202, 0207, 0229, 0230, 0232, 0233, 0238, 0239, 0242, 0243, 0245, 0253, 0261, 0263). Several commenters suggested that EPA has not justified the additional regulation, shown that the current rules are ineffective, or proven that root cause analysis is effective at reducing accidents (0229, 0230, 0232, 0233, 0237, 0256, 0261). Another commenter suggested that the determination during the 2019 rulemaking to consider root cause analysis in individual enforcement actions is still appropriate (0233).

One commenter pointed to the effectiveness of current regulations and continuous improvement by facilities, as shown by the 70% reduction in annual reported accidents between 2004 and 2020, and that only 3% of RMP facilities reported an accident in the most recent reporting period. The commenter stated that RMP is not a zero-risk program, but a program to reduce risks of releases to a practicable level (0232).

A couple of commenters stated that EPA does not provide data to show that repeat accidents are partially or fully caused by a facility's failure to conduct a root cause analysis (0237, 0261). One commenter suggested that EPA focus resources on enforcing existing regulations instead of adding new regulations, if there are concerns about the quality of investigations being conducted (0233).

One commenter stated that the industry takes accidents seriously, and routinely investigates processes and prior incidents to ensure that facilities are run in a safe manner. The commenter explained that facilities would do this regardless of the presence of Federal or State requirements, therefore more stringent regulatory requirements are not needed (0256).

A couple commenters suggested that facility staff be allowed to determine when a root cause analysis is necessary during an investigation, as facility staff conducting the investigation will likely be able to identify the cause without completing a full root cause analysis (0242, 0253).

> **EPA Response:** In response to comments asserting that EPA has not justified the root cause analysis requirement or provided data to show that repeat accidents are partially or fully caused by a facility's failure to conduct a root cause analysis, EPA acknowledges that such data has not been provided to show causation, but notes that EPA has not previously required a root cause analysis for incident investigations, and therefore, does not have data available to compare the frequency of repeat accidents at facilities conducting (or failing to conduct) root cause analyses. However, EPA did perform an analysis of EPA's RMP accident reporting data and identified repeat accidents at facilities within the same process.[114] The result of this analysis demonstrates that, among facilities reporting accidents, facilities that reported one accident often have a history of multiple accidents, thus indicating a failure to properly address circumstances leading to subsequent accidents. Therefore, while it may be true that some facilities would undertake these investigations regardless of Federal or State requirements, some facilities may not be doing so. These accidents may have been preventable if root cause analyses had been required. EPA believes multiple accidents result, in part, from a failure to thoroughly investigate and learn from prior accidents. Therefore, when major concerning RMP accidents, including major accidents, continue to occur as they have, it is EPA's responsibility to further protect human health and the environment, if there are reasonable

[114] Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022).

opportunities to do so. EPA believes this root cause analysis provides that reasonable opportunity to reduce accidents.

Further, EPA does not believe the current incident investigation requirements are sufficient to ensure that incident investigations determine root causes. Since the 2019 rulemaking, serious accidents continue to occur, some of which have resulted because investigations of prior incidents at the same facility did not determine root causes. EPA thus continues to have the authority to promulgate reasonable regulations to provide to the greatest extent practicable for the prevention and detection of accidental releases. This continues to be true even when the number of reportable accidents continue to decline.

In some instances, "factors that contributed to the incident", as identified in the previously existing incident investigation provisions of 68.60(d)(4) and 68.81(d)(4), may or may not be root causes. For example, a poor emergency response may be a factor contributing to the severity of an incident but would not be a fundamental cause of the incident. EPA believes such contributing factors should be identified during an incident investigation, and ultimately resolved, but not without also identifying and resolving the fundamental reason or reasons why the incident occurred.

Comment 7.1-06: Several commenters stated that the inclusion of the root cause analysis requirements is duplicative of existing regulations or common industry practices, is unnecessary, and thus will not result in meaningful benefits (0184, 0202, 0223, 0237, 0261, 0263, 0262, 0267, 0275). A couple of the commenters stated that these requirements are covered in the IIAR industry guidelines (0184, 0237). Several commenters stated that OSHA PSM programs already include root cause analysis as a part of incident investigations (0202, 0223, 0262).

A couple of commenters suggested that EPA not expand incident investigation thresholds without coordination with OSHA's anticipated updates to the PSM standard (0229, 0232). One commenter stated that OSHA has primary jurisdiction on this issue, therefore EPA should ensure consistency with current and future changes to the PSM (0202).

Another commenter provided several examples of States that already require investigations to include root cause analyses as a part of air permitting, including Illinois's Environmental Protection Agency, Florida's Department of Environmental Protection, and Nebraska's Department of Environmental Quality (0262).

EPA Response: With regard to comments that noted potential overlap with existing federal or state regulations, or industry standards such as IIAR, EPA notes that a regulated source already subject to another requirement that duplicates the RMP root cause analysis requirement may use its compliance with the other requirement to demonstrate compliance with the equivalent RMP root cause analysis requirement.

For many years, EPA and OSHA have established a regular meeting to consult with the DOL and coordinate the PSM and RMP programs, including but not limited to interpretation of overlapping regulatory provisions and the development of potential amendments to the rules. During several of these regular meetings (including but not limited to meetings on various dates in Appendix A to this document), staff from the agencies discussed the development of the RMP SCCAP Rule and potential issues to be

addressed by EPA, including coordinating with OSHA to ensure that any incident investigation root cause analysis provisions do not contradict OSHA PSM requirements.

Comment 7.1-07: A couple of commenters opposed the requirements of a root cause analysis for more minor incidents due to what the commenters asserted would be a complex and resource-intensive assessment (0238, 0245). One commenter stated that root cause analyses are costly and labor intensive, and the costs of the analyses would be passed onto ratepayers (0230).

One commenter suggested that requiring a root cause analysis for all near misses will discourage employees and contractors from reporting near misses because of the resulting regulatory burden (0207).

> **EPA Response:** EPA is finalizing the applicability of the root cause analysis provision, as proposed – to conduct a root cause analysis when the incident meets the accident history reporting requirements under § 68.42. If an accident or incident at a facility meets that reporting criteria (under § 68.42), regardless of how the facility characterizes the incident, a root cause analysis is required.
>
> With regard to those commenters that recommended narrowing the applicability of the root cause analysis requirement because of the burden associated with the requirement, EPA notes that the burden of the proposed root cause analysis is relatively small. Few sources will have to conduct a root cause analysis because accidents occur at only a small number of sources, and many sources already perform root cause analyses in a manner consistent with industry or company protocols. Therefore, EPA does not believe that the anticipated burden of this requirement is a rationale for revising the applicability of the requirements.

Comment 7.1-08: A couple commenters suggested that EPA did not consider the level of expertise and training that would be required by staff to conduct a root cause analysis (0229, 0232).

EPA Response: EPA disagrees that it did not consider the level of expertise and training that would be required by staff to conduct a root cause analysis. The final rule will allow the owner or operator to determine root causes using a "recognized method" that is appropriate for their facility and circumstance. EPA recommends that owners and operators consult available literature on root cause investigation methodologies to select those appropriate for their facility and processes. For example, CCPS has published, "Guidelines for Investigating Process Safety Incidents," which provides extensive guidance on incident investigations, near miss identification, root cause analysis, and other related topics.[115] EPA believes this is already required under 40 CFR 68.60(c) and 68.81(c), where the incident investigation team is required to consist of "persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident." EPA intends this phrase to include a person knowledgeable in selection and use of root cause analysis techniques.

Comment 7.1-09: One commenter suggested that EPA could perform analysis on external data sets from jurisdictions that have imposed root cause analysis requirements, including the American Chemistry Council's Responsible Care Program, New Jersey's Toxic Catastrophe

[115] CCPS 2019. Center for Chemical Process Safety, Guidelines for Investigating Process Safety Incidents, 3rd Edition, NY: AIChE.

Prevention Act, CalPSM, CalARP, and the Contra Costa County Health Services and City of Richmond, California's Industrial Safety Ordinances (0233).

> **EPA Response:** EPA acknowledges the suggestion. However, EPA did perform an analysis of EPA's own RMP accident reporting data and identified repeat accidents at facilities within the same process. The result of this analysis of RMP facilities across the country demonstrates that, among facilities reporting accidents, those that reported one accident often have a history of multiple accidents, thus indicating a failure to properly address circumstances leading to subsequent accidents. These accidents may have been preventable if root cause analyses had been required. EPA believes multiple accidents result, in part, from a failure to thoroughly investigate and learn from prior accidents.

Applicability of root cause analysis requirements

Comment 7.1-10: One commenter expressed support for EPA's proposal to limit the root cause analysis requirements for Program 2 and Program 3 processes (0275).

A couple of commenters recommended that EPA expand coverage of this requirement to apply to all RMP facilities (0270, 0203).

A couple of commenters proposed that EPA further limit facilities subject to the root cause analysis requirements (0239, 0243). One commenter recommended that the root cause analysis requirement should only be mandated for Program 3 facilities, since they have the most complex processes, which is where root cause analyses are most useful. The commenter suggested that conducting root cause analyses is resource intensive and costly, and imposing the requirements on other non-Program 3 facilities will be overly burdensome without commensurate benefits (0239).

A commenter recommended that EPA only require root cause analyses for larger, more complex water systems, as the root cause analysis process is resource intensive and burdensome (0243).

> **EPA Response:** EPA believes this provision is most appropriate for Program 2 and 3 processes because facilities with these processes have RMP-reportable accidents more often (Program 2 = 15 percent, Program 3 = 83 percent of total accidents from 2004-2020) and pose a greater risk to the public because their worst-case scenario distance would affect public receptors. EPA did not expand the coverage of this requirement to apply to all RMP facilities because Program 1 processes only account for few of the total RMP-reportable accidents (3 percent of total accidents from 2004-2020), do not have recent accident history with specific offsite consequences, and have no public receptors within the worst-case release scenario distance.[116]
>
> EPA's response to this provision being overly burdensome on facilities can be found in its response to Comment 7.1-07.
>
> While it is true that most RMP-reportable accidents occur at Program 3 processes, EPA decided that there was little justification for limiting the root cause requirements to only Program 3 processes, because serious accidents also occur at Program 2 processes (87 FR 53593). Also, the Agency notes that some of the accidents at Program 2 processes occur at publicly-owned water and wastewater treatment facilities that are not in Program

[116] Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022).

3 only because they are not located in a State with an OSHA-approved State Plan.[117] While State and local government employees at facilities in States with OSHA-approved State Plans must comply with State Plan requirements that are at least as effective as the Federal OSHA PSM standard, State and local government employees at facilities in States under Federal OSHA authority are not covered by the OSHA PSM standard or any equivalent measures. This results in regulated processes at these sources being placed in Program 2, even though the processes generally pose the same risk as similar processes at publicly owned water or wastewater treatment processes that are located at sources in States with an OSHA State Plan.

Comment 7.1-11: Many commenters provided suggestions regarding the applicability of incident investigation requirements to specific incidents, as described below.

Several commenters suggested that the current requirements for when investigations are conducted are overly limited (0173, 0191, 0203, 0216, 0248, 0456, 0460). A couple of the commenters recommended that incident investigations be required after all near misses instead of after two incidents (0248, 0460). Another commenter suggested that root cause analyses should not be required for every incident or near miss, but they should be conducted for more incidents than just catastrophic releases. The commenter provided the example of Contra Costa County in California that investigate less severe incidents and use various investigative techniques that depend on the complexity or severity of the incident (0173).

Several commenters noted that root cause analysis should only be required for catastrophic or potentially catastrophic consequences (0233, 0238, 0239, 0243, 0245). One commenter stated that the quality of the safety reviews would be diluted if they were required for high-frequency, low consequence incidents, and will provide little relevancy to potential catastrophes (0202).

Several commenters supported requiring incident investigations for "near miss" events (0177, 0203, 0219, 0255, 0228, 0240, 0409, 0456, 0460). One of the commenters indicated that adding the requirement would increase engagement at facilities to ensure compliance was met (0177). One commenter suggested that EPA not require a root cause analysis if a near miss may have triggered only minor on-site injury with no threat to public health or the environment (0263).

EPA Response: EPA is finalizing the applicability of the root cause analysis provision, as proposed – to conduct a root cause analysis when the incident meets the accident history reporting requirements under § 68.42. If an accident or incident at a facility meets that reporting criteria (under § 68.42), regardless of how the facility characterizes the incident, a root cause analysis is required. EPA agrees with those comments supporting the proposed provision and believes that requiring root cause analyses after RMP-reportable accidents, and including root cause information in incident investigation reports, is vital for understanding the nature of these events and how they may occur.

EPA disagrees that root cause analysis should be required for every incident or for catastrophic, potentially catastrophic or near miss releases. EPA believes that providing a consistent trigger for accident investigations and reportable accidents under the accident history requirements of § 68.42 would simplify compliance for the regulated community. For example, some reportable incidents under the accident history provision may not pose an imminent and substantial threat to public health and the environment (see 40 CFR 68.3 (Catastrophic release)), but as EPA explained in the Response to Comment

[117] See 40 CFR 68.10 Program 2 eligibility requirements.

document for the original RMP rule and in the 2017 amendments rule, certain on-site accident impacts are relevant because they "may reflect safety practices at the source" and because "accidental releases from covered processes which resulted in deaths, injuries, or significant property damage on-site, involve failures of sufficient magnitude that they have the potential to affect offsite areas." Further, EPA did not propose a definition of near miss in the proposal, is not finalizing one for the final rule and therefore a universal definition within the program does not exist.

Comment 7.1-12: A couple of the commenters suggested that EPA require investigation of incidents that lead to decommissioning or destruction of a process, as this will likely provide important information for the industry and public to learn from (0203, 0460). Commenters asked EPA to clarify that root cause analysis is still required where a process is decommissioned or destroyed (0460, 0203).

EPA Response: With regards to clarity on applicability of decommissioned or destroyed processes to the root cause analysis provision, the Agency did not propose, and therefore will not require, decommissioned or destroyed processes, as long as they remain in that decommissioned or destroyed state, to comply with this provision. As discussed in the previous rulemakings, commenters have not identified a significant number of release incidents at RMP facilities that had resulted in a destroyed or decommissioned process without any RMP accident report. The absence of a substantial number of examples leads the Agency to conclude that the gap is not significant enough to address at this time.

Other recommendations related to root cause analysis

Comment 7.1-13: One commenter recommended that EPA implement the CSB's recommendation for facilities to work with unions, contractors, and communities to build an effective program related to incident investigations. The commenter also suggested that EPA require facilities to track recommendations to completion and share lessons learned with the workforce (0255).

Another commenter recommended that facilities include workers and their representatives in the investigation process, and that facilities share all information and documentation with them. The commenter also recommended that incident reports must include all written comments provided to the auditor and the facility operator's response to the analysis and recommendations (0203).

A commenter suggested that EPA require that incident investigations include staff with expertise in the process involved, the facility's root cause analysis method, and overseeing incident investigation analysis (0203).

One commenter suggested that third-party root cause analysis would prevent future accidents (0191).

EPA Response: EPA requires, even prior to this SCCAP rulemaking, that all investigations be conducted by a team (40 CFR 68.60(c), 68.81(c), investigation findings and recommendations be promptly addressed and resolved, and that resolutions and corrective actions documented (40 CFR 68.60(e), 68.81(e), and that findings be reviewed with all affected personnel whose job tasks are affected by the findings (40 CFR 68.60(f), 68.81(f)). EPA believes that all incident investigations, whether conducted on Program 2 or Program 3 processes, should involve a team of at least two people, particularly given the requirement under the final rule for investigations to include analysis of root causes.

However, beyond the requirements specified in the final rule (i.e., to establish an investigation team consisting of at least one person knowledgeable in the process involved and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident), the Agency does not believe it is necessary to specify additional qualification criteria for incident investigation team members. The requirement for the investigation team to include "other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident" should ensure that the team includes someone with expertise in root cause analysis. While EPA encourages sources to involve whoever they consider to be knowledgeable in incident investigations, especially workers, the Agency is not outlining specifications of who must make up an incident investigation team because some sources may need to obtain outside experts to investigate incidents. EPA expects that such outside experts will consult with workers and managers at the source as appropriate during the investigation.

Further, EPA is finalizing the employee participation requirement at 40 CFR 68.83, which is applicable to Program 3 processes, to require the owner or operator to consult with employees and their representatives on addressing, correcting, resolving, documenting, and implementing recommendations and findings of PHAs, compliance audits, and incident investigations. EPA realizes that practicable recommendations from hazard evaluations, incident investigations, and compliance audits that may reduce hazards at RMP facilities are not always implemented, for various reasons. The Agency believes that involving directly affected employees in these discussions and decisions will help ensure that the most effective recommendations for reducing hazards and mitigating risks to employees and the public are given the proper consideration.

Comment 7.1-14: Several commenters provided recommendations for guidance related to root cause analysis (0197, 0202, 0204, 0275). One of the commenters suggested that it is not clear how a facility would conduct a root cause analysis, especially small facilities that do not retain safety and regulatory consultants on staff (0202). Another commenter recommended that instead of additional regulatory requirements, EPA could provide guidance and tools to assist facilities with investigations (0197).

One commenter recommended that EPA update guidance documents to encourage the analysis of NBS in hazard evaluations. The commenter suggested that the new root cause analysis rules could create case study opportunities for NBS researchers (0204). Another commenter recommended that EPA develop guidance to address if facilities cannot determine a root cause because relevant evidence was destroyed. The commenter suggested that EPA issue guidance before the effective date of the proposed rule (0275).

EPA Response: EPA believes that requiring root cause analyses, rather than only issuing guidance, after RMP reportable accidents, and including root cause information in incident investigation reports, is vital for understanding the nature of these events and how they may occur. EPA performed an analysis of EPA's RMP accident reporting data and identified repeat accidents at facilities within the same process.[118] The result of this analysis demonstrates that, among facilities reporting accidents, facilities that reported one accident often have a history of multiple accidents, thus indicating a failure to properly address circumstances leading to subsequent accidents. These accidents may

[118] Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022).

have been preventable if root cause analyses had been required. EPA believes multiple accidents result, in part, from a failure to thoroughly investigate and learn from prior accidents.

For implementation, EPA recommends that owners and operators consult available literature on root cause investigation methodologies to select those appropriate for their facility and processes. For example, CCPS has published, "Guidelines for Investigating Process Safety Incidents," which provides extensive guidance on incident investigations, near miss identification, root cause analysis, and other related topics. Additionally, EPA intends to publish guidance for certain provisions, such as root cause analysis. EPA will consider the suggestions offered, such as nature-based solutions, to be included in the guidance. Once these materials are complete, owners and operators can have time to familiarize themselves with the new materials if needing assistance in applying the provisions to improve process safety. EPA expects to develop and release this information approximately one year after this final rule. However, most provisions for a source are a site-specific determination, so EPA expects all regulated RMP facilities to be successful in beginning to address the provisions immediately.

Use of a recognized investigation method

Comment 7.1-16: Several commenters asserted that EPA should not mandate the use of a recognized method for the analysis, as there are many ways to conduct the analysis (0109, 0184, 0237, 0256, 0268, 0275). One of the commenters indicated that prescribing a method may interfere with a facility's engineering judgement and use of investigative practices that are tailored to their unique facilities (0256). Another commenter said EPA should ensure that owners and operators have flexibility to modify recognized investigation methods to reflect the context, which may involve very complex or relatively simple processes or incidents (0215).

A couple of commenters requested that EPA define "recognized investigation method" to clarify what entity is approving a methodology (0184, 0237). One commenter recommended revising the language to read "investigation method recognized by applicable industry code writing or RAGAGEP establishing body" (0184).

One commenter recommended that EPA include a candidate list of methods for root cause analysis that parallels the specification of methodologies for conducting a PHA. The commenter also recommended that EPA include language to allow facilities to use "an appropriate equivalent method" that may not be included in the list (0193).

EPA Response: EPA agrees that there are many ways to conduct a root cause analysis. EPA is finalizing, as proposed, the requirements that root causes must be determined through the use of a recognized method. The final rule will therefore allow the owner or operator to determine root causes using a "recognized method" that is appropriate for their facility and circumstance. EPA disagrees that the Agency should define recognized investigation methods or point to specific entities for such methods. Investigation methods evolve over time, and new methods may be developed. Therefore, any list promulgated by EPA in this rule may soon be obsolete. The Agency took a similar approach in the PHA requirements for the existing rule, where it listed several potential methods, but also included the option to use an appropriate equivalent methodology. EPA recommends that owners and operators consult available literature on root cause investigation methodologies to select those appropriate for their facility and processes.

For example, CCPS has published, "Guidelines for Investigating Process Safety Incidents," which provides extensive guidance on incident investigations, near miss identification, root cause analysis, and other related topics.[119]

Comment 7.1-17: Several commenters provided feedback on the investigation methods and analysis elements described in the proposed rule (0108, 0173, 0184, 0193, 0204, 0215, 0230, 0237, 0256, 0268, 0275).

One commenter stated that requiring the use of a recognized method for root cause analysis will not assure adequate results, asserting that several methods that were included in the CCPS should not be considered recognized methods (e.g., the "5-Whys" method). The commenter noted that several industry committees determined that it was not a robust technique (0108).

One commenter noted that that the CCPS condoned the use of predefined logic trees and checklists to steer investigations (0204).

One commenter proposed the following revision to the regulatory language (0193):

Section 68.81 Incident Investigation
(h) The owner or operator shall …
(2) The report in paragraph (d) of this section shall include factors that contributed to the incident including the initiating event, direct and indirect contributing factors, and root causes. ~~Root causes shall be determined by conducting an analysis for each incident using a recognized method.~~
(3) Root causes shall be determined by conducting an analysis using
(i) Why-why
(ii) FMEA
(iii) Fishbone diagram
(iv) Scatter diagram, or
(v) An appropriate equivalent method

EPA Response: EPA disagrees that the Agency should specify recognized investigation methods or point to specific entities for such methods. Investigation methods evolve over time, and new methods may be developed in the future. Therefore, any list promulgated by EPA in this rule may later become obsolete. Further, the final rule will allow the owner or operator to determine root causes using a "recognized method" of the facility's choosing that is appropriate for their facility and circumstance. Therefore, EPA believes owner and operators will make appropriate decisions based on industry research to ensure their analysis is useful.

Comment 7.1-18: One commenter suggested that EPA has underestimated the cost and time needed for facilities to change current investigation processes to root cause investigations using a recognized method, which may include new software, training, and staffing (0230).

EPA Response: EPA recognizes that the time required for root cause analyses may vary considerably based on the complexity of the processes involved, and therefore, the agency considered a wide range of factors in developing burden estimates. In the baseline, facilities are required to conduct incident investigations; however, EPA expects additional time will be required for the more rigorous root cause analysis. Management

[119] CCPS 2019. Center for Chemical Process Safety, Guidelines for Investigating Process Safety Incidents, 3rd Edition, NY: AIChE.

time is expected to be devoted primarily to decisions concerning resolution of corrective actions arising from the investigation. For simple facilities, EPA assumed that root cause analyses will require management hours and additional hours evenly distributed between production staff and engineers. For complex facilities, EPA estimated that due to the facility's size and complexity, in addition to facility management hours, attorney hours will be required, along with corporate management time. EPA also estimated that engineering and production staff hours will be required to conduct the analysis. EPA retained the assumptions in the amendments rule RIA that simple facility costs include a trained facilitator to assist with the investigation and that complex facilities generally have staff familiar with the methodology and will conduct the root cause analysis in-house.

7.2 "Near miss" definition

Comments associated with this issue are discussed in the sub-issues below.

7.2.1 Potential definition

Comment 7.2.1-01: Several commenters supported the development of a definition of "near miss" (0139, 0202, 0243, 0248, 0263, 0460). Additionally, one commenter expressed a concern about selective enforcement in the absence of a clarifying definition (0268), while another commenter said that without specificity to define a near miss, the language might have established due process concerns as the proposal failed to provide adequate notice to the regulated community (0202).

One of the commenters suggested that EPA add a definition to comply with the CSB's recommendations (0460). Another commenter noted that any definition must be clear and narrow to prevent placing undue burdensome reporting requirements on local governments (0243).

A few commenters recommended that EPA consult with various industries to develop tailored definitions and to better understand the impacts of a particular definition of near miss. The commenters suggested that industry-specific definitions would reduce response costs and provide clarity to facilities (0232, 0237, 0272).

Several commenters requested that EPA adopt a definition of near miss that aligns with what is included in the OSHA PSM standard to create consistency between the regulations. The commenters noted that OSHA defines a near miss as a situation "in which a worker might have been hurt if the circumstances had been slightly different" (0180, 0205, 0217, 0226, 0234, 0458).

> **EPA Response:** EPA did not propose, and it therefore not finalizing, a regulatory definition of near miss. However, EPA will consider these comments when determining whether to develop a regulatory definition of "near miss" to identify incidents that require investigation in a future action.

Comment 7.2.1-02: Several commenters opposed the development of a definition for "near miss" (0173, 0207, 0215, 0230, 0232, 0237, 0245, 0253, 0275).

One of the commenters stated that they oppose a definition due to the broad nature of facilities subject to the rule (0230). Another commenter suggested that EPA provide guidance on near misses but allow facilities to determine their own definition. The commenter offered that this approach would foster a safety culture that encourages discussion and reporting of a near miss (0237).

One commenter noted that the California Accidental Release Prevention Program included a requirement for a root cause analysis to be completed for major incidents and incidents that could reasonably have results in a major incident, and therefore there was no need to define near miss (0173).

One commenter stated that the term is familiar to industry and developing a definition would be difficult due to the context required to determine what a near miss is (0215). One commenter noted that EPA has shown that developing a definition is virtually impossible, and most suggested definitions have been vague and broad that would result in root cause analyses to be conducted for every or most near miss incidents, which would create significant burdens for facilities with no benefit (0207).

One commenter suggested that the current language is sufficient to require facilities to investigate near misses, and a more prescriptive definition would cause confusion (0275). Another commenter echoed that the current definition of near miss captures most, if not all, of the near miss-type incidents, and since most RMP-covered processes are unique, a universal definition would not be workable (0210).

Another commenter asserted that the activation of engineering controls should not be considered a near miss, and EPA has not provided a justification for the collection and associated value of this type of data from facilities (0239).

> **EPA Response:** EPA did not propose, and is therefore not finalizing, a regulatory definition of near miss. However, EPA will consider these comments when determining whether to develop a regulatory definition of "near miss" to identify incidents that require investigation in a future action.

7.2.2 Universal definition

Comment 7.2.2-01: Several commenters opposed a universal definition of near miss, asserting that a one-size-fits-all approach will be overburdensome and challenging for facilities to implement (0210, 0230, 0237, 0239). Another commenter stated that the proposed definition of near miss would require small facilities to retain expensive expert consultants to perform complex analysis for every potential accidental release (0245).

> **EPA Response:** EPA did not propose, and is therefore not finalizing, a regulatory definition of near miss. However, EPA will consider these comments when determining whether to develop a regulatory definition of "near miss" to identify incidents that require investigation in a future action.

Comment 7.2.2-02: One commenter indicated that the draft text of the NJDEP definition of near miss would be more beneficial than the current wording (0173). Several commenters opposed the adoption of the NJDEP proposed definition of near miss due to its broad nature that would encompass a burdensome number of incidents (0193, 0196, 0207, 0224, 0229, 0215, 0230, 0232, 0237, 0238, 0253, 0272, 0275). One of the commenters stated that the NJDEP language is too broad and would include minor incidences that would directly or indirectly affect the release of a regulated substance, which would be overly burdensome to a facility to investigate (0196).

Several commenters also indicated that the NJDEP language would include scenarios where mitigation systems or engineering controls are successfully deployed to prevent or mitigate and accidental release, which is not a good example of a near miss (0207, 0215, 0224, 238, 0239, 0272). One of the commenters suggested that a definition of near miss excludes incident

investigation requirements related to normal operation of devices such as relief valves and vapor release alarms that operate as intended during the ordinary course of facility operations (0224). Another commenter noted that under the NJDEP definition, a temporary loss of power and use of a backup generator would also fall under the definition of a near miss (0207). One commenter noted that the NJDEP definition includes the undefined term "incident" in the definition. The commenter noted that the NJDEP definition would inappropriately include fugitive emissions as incidents (0193).

Another commenter recommended combining the NJDEP and CCPS definitions to include CCPS's references to weather conditions and incident qualifiers, such as "adherence to procedure" (0241). One commenter noted that the definition also requires speculation on whether an incident on a nearby non-RMP process creates the potential to cause an accidental release (0238). A few commenters stated that a process upset is not a good example of a near miss (0207, 0215, 0229). Several commenters opposed the adoption of the CCPS proposed definition of near miss due to its broad nature (0207, 0229, 0232, 0237, 0238, 0253, 0272). A couple of the commenters opposed the CCPS definition because it would require speculation on what may have resulted if an incident occurred under slightly different circumstances, which could lead to endless root cause analyses with no added benefit to the facility or community. The commenters suggested that the definition is too broad to achieve uniform implementation across all RMP processes and facilities (0207, 0238). A couple of commenters stated that the definition of near miss is subjective, which would dilute the quality of safety reviews by applying them to low consequence, higher frequency events (0229, 0232).

One commenter suggested that the CCPS definition is too narrow and could constrain investigation processes, as it suggests that all incidents be linked to a management system failure, which is not always possible (0233).

> **EPA Response:** EPA did not propose, and is therefore not finalizing, a regulatory definition of near miss. However, EPA will consider these comments when determining whether to develop a regulatory definition of "near miss" to identify incidents that require investigation in a future action.

Comment 7.2.2-03: Several commenters offered language recommendations for a definition of "near miss" (0108, 0193, 0196, 0203, 0216, 0241).

One commenter recommended the following definition for near miss, and noted that this definition would be broad enough to allow facilities to properly classify incidents as near misses without including minor incidents (0196):

> "An unplanned event or condition that has the potential to cause a slight change of events that could result in injury, environmental damage, or an interruption to normal operation"

One commenter suggested the following definition of near miss (0216):

> "A near miss is an unintended event which could have caused death, serious injury, or significant damage to property, but did not. The event may be an actual release of hazardous materials or energy where the main factor preventing injury or damage is luck."

Another commenter suggested adding the following language to EPA's recommended definition of near miss to ensure that considerations such as understaffing, lack of training, or lack of engineering controls to prevent human error are addressed at a facility (0216):

> "that identifies a correctable failure(s) in management systems or process design."

One commenter suggested the following definition of near miss, as it links process deviations outside the safe upper and lower limits set by the facility, the actuation of related safety systems, and captures external events that could have resulted in a catastrophic release (0193):

> "Includes any of the following: a deviation in the operation of a process outside of the established safe upper and lower limits as-required by 68.65(c)(1)(iv), actuation of an engineered safety system related to the covered process, or any external event that could have resulted in a catastrophic release of a regulated substance"

Another commenter suggested the following definition of a near miss (0203):

> "A near miss is an unintended event which could have caused death, serious injury, or significant damage to property or the environment, but did not."

A couple of commenters recommended that EPA adopt the term "precursor incident" instead of near miss. The commenters explained that spotting a precursor incident means identifying failed safeguards or an unidentified hazard before a major release occurs (0108, 160). One of the commenters noted that precursor incidents are not minor injuries or other events that could not result in a major accident. The commenter defined a precursor incident as follows (0108):

> "Minor incidents that could have been major accidents if one or more Safeguards had failed. […]"

Another commenter stated that two catastrophic explosions in Superior, Wisconisn and Torrance, California, were referenced by EPA as near misses, but that the term near miss is misleading as an explosion did occur at both locations. The commenter noted that the National Safety Council of Defense defines a near miss as "an unplanned event that did not result in injury, illness, or damage, but has the potential to do so" and OSHA defines a near miss as "a potential hazard or incident in which no property was damaged, and no personal injury was sustained." The commenter stated that, by these terms, the explosions mentioned would not be considered near misses, as damage did occur and a near miss would be more aptly described as circumstances that would have culminated in an explosion that was ultimately avoided. As such, the commenter recommended that the term near miss should be altered to precursor incident (0160).

> **EPA Response:** EPA did not propose, and is therefore not finalizing, a regulatory definition of near miss. However, EPA will consider these comments when determining whether to develop a regulatory definition of "near miss" to identify incidents that require investigation in a future action.

7.3 Investigation timeframe

Investigation timeframe

Comment 7.3-01: Several commenters opposed the regulatory deadlines for root cause analysis investigations (0229, 0232, 0233, 0237, 0263).

A couple of commenters stated that based on the complexity of the incident (0237) and level of input needed from external technical experts (0233), a 12-month timeline may not provide enough time. One commenter recommended that EPA address the reason investigation findings are not implemented, instead of imposing additional regulations (0237).

One commenter stated that the investigation of a catastrophic release often requires input from outside technical experts, which can take significant time. The commenter asserted that regulatory deadlines may be detrimental to the investigation by not allowing the investigation team to take the time and effort necessary to fully investigate the accident. The commenter stated in response to EPA's concerns that "owners or operators of regulated facilities indefinitely delayed completing incident investigations" should be cited as a violation of existing regulations and would not be remedied by a regulatory deadline (0233). Further, a couple of commenters suggested that EPA not specify a timeline to complete the investigations, as it is not guaranteed that EPA will grant an extension if one is requested. The commenters noted a concern that facilities will rush the investigation with this timeline enforced, leading to a compromise in the quality (0229, 0232).

Another commenter noted that depending on the complexity of an incident, some findings and recommendations may take more time to fully implement than 12 months, especially considering the supply chain issues facing the industry (0237).

A couple of commenters also supported EPA allowing extensions, when necessary (0237, 0245). One commenter also said EPA should not question extension requests from facilities, as some thorough investigations will require more than 12 months (0263). Another commenter stated that while a 12-month period is adequate to complete an investigation in most cases, come complex cases will require detailed forensic investigations and documentation, which may require longer than one year (0228).

> **EPA Response:** After considering these comments, EPA is finalizing the requirement to complete incident investigations within 12 months as proposed. EPA believes that this timeframe will provide a reasonable amount of time to conduct most investigations, while also ensuring that investigation findings are available relatively quickly in order to assist in preventing future incidents.
>
> For very complex incident investigations that cannot be completed within 12 months, EPA is allowing an extension of time if the implementing agency (i.e., EPA and delegated authorities) approves such an extension, in writing. EPA encourages owners and operators to complete incident investigations as soon as practicable and believes that 12 months is typically long enough to complete even complex incident investigations. However, EPA has provided flexibility for facilities to request more time to complete investigations when they consult with their implementing agency and receive written approval for an extension.
>
> EPA also re-emphasizes the importance of implementing recommendations as soon as possible after incident investigation completion to prevent future similar incidents.

Comment 7.3-02: Several commenters supported the 12-month requirement for completing an incident investigation (0237, 0241, 0245, 0444, 0460). One commenter requested that EPA clarify that the 12-month timeline is only for the completion of the investigation, not when the recommendations must be implemented (0237). One of the commenters stated that delays in the completion of an investigation should be avoided to ensure that events are scrutinized, and personnel are debriefed when memories are still clear (0241). Another commenter stated that delays in completion of an investigation could result in another incident occurring of a similar nature (0245).

EPA Response: EPA agrees with a 12-month timeframe for completing an investigation and is therefore finalizing this requirement as proposed. EPA agrees that the 12-month time limit applies only to completing the investigation report, not to implementing recommendations in the report. Nevertheless, EPA emphasizes the importance of implementing recommendations as soon as possible after incident investigation completion to prevent future similar incidents.

Comment 7.3-03: Several commenters recommended alternate approaches to the investigation timelines (0203, 0216, 0228, 0460). One of the commenters suggested that EPA require initiation of incident investigations and root cause analyses within 24 hours after the incident or near miss, that the owner or operator complete a preliminary report within 90 days and a final report within six months with the possibility of an extension for major catastrophic releases (0203).

One commenter suggested that EPA require completion of an initial incident investigation within 90 days to provide at the public meeting, with a final report due in 12 months. The commenter noted that since an air rule requires root cause and corrective action analyses for air releases at refineries within 45 days, requiring an initial investigation within 90 days is possible. The commenter recommended that 12 months is too long to complete the investigation, and EPA should consider a shorter timeline (0460).

Another commenter suggested that EPA require a preliminary report to completed within 90 days, and the final report completed within 6 months. The commenter noted that the shorter time frame would ensure that the conditions and circumstances surrounding the incident are accurate (0216).

EPA Response: EPA notes that for both Program 2 and Program 3 processes, incident investigations that may trigger supplemental root cause analysis must be initiated as soon as possible, but not later than 48 hours following the incident as required by 40 CFR 68.60(b) and 68.81(b). The SCCAP rule finalizes the requirement to complete root cause analysis incident investigations within 12 months as proposed. While EPA agrees that many incident investigations can be completed in a shorter timeframe, the Agency believes that this 12-month timeframe will provide a reasonable amount of time to conduct most investigations -particularly those related to serious accidents and can be complicated-, while also ensuring that investigation findings are available relatively quickly in order to assist in preventing future incidents.

As previously mentioned, for very complex incident investigations that cannot be completed within 12 months, EPA is allowing an extension of time if the implementing agency (i.e., EPA and delegated authorities) approves such an extension, in writing. EPA encourages owners and operators to complete incident investigations as soon as practicable and believes that 12 months is typically long enough to complete even complex incident investigations. However, EPA has provided flexibility for facilities to request more time to complete investigations when they consult with their implementing agency and receive written approval for an extension. EPA also re-emphasizes the importance of implementing recommendations as soon as possible after incident investigation completion to prevent future similar incidents.

8 Third-Party Compliance Audits

Comments associated with this issue are discussed in the sub-issues below.

8.1 Proposed approach

General support for third-party audit requirements

Comment 8.1-01: Two commenters expressed support for third-party compliance audits (0201, 0460).

> **EPA Response:** EPA appreciates the commenter's support of the third-party compliance audit requirement to be included in the final rule and believes it is appropriate to require a subset of RMP-regulated facilities to engage competent and independent third-party auditors following the conditions set forth in this final rule after: (1) one accidental release meeting the criteria in 40 CFR 68.42(a) from a covered process at a stationary source has occurred; or (2) an implementing agency requires a third-party audit due to conditions at the stationary source that could lead to an accidental release of a regulated substance, or when a previous third-party audit failed to meet the competency or independence criteria of 40 CFR 68.80(c).

General opposition to third-party audit requirements

Comment 8.1-02: Many commenters expressed general opposition to the third-party audit provisions (0188, 0202, 0205, 0227, 0228, 0233, 0239, 0263, 0268, 0275). *Comments expressing opposition to specific elements of the proposal are described in sections below.*

> **EPA Response:** The third-party audit provision is intended to reduce the risk of future accidental releases by requiring an objective auditing process to assist owners and operators in determining whether facility procedures and practices comply with subparts C and/or D of the RMP rule (i.e., the prevention program requirements), are adequate, and are being followed. Thus, EPA is finalizing requirements for third-party audits under 40 CFR 68.58 and 68.79 to require that owners and operators ensure that third-party auditors meet qualification criteria, that audits are conducted and documented, and that findings are addressed pursuant to the requirements of 40 CFR 68.59 and 68.80, as applicable.

Comment 8.1-03: A couple of commenters expressed opposition to third-party audits because they felt the language was too vague and as such the large amount of discretion EPA would be granted from the proposed language raises due process concerns and could risk audit overload and thereby make conditions potentially less safe, according to the commenter (0261, 0268).

> **EPA Response:** Based on review of comments, EPA is finalizing the proposed provisions for third-party audits with the following modifications and language clarifications listed below. The applicability and regulatory text changes are explicit and will be helpful for facilities to understand how to apply the provision successfully.
>
> - EPA is revising the requirements that triggered when a third-party audit would be required. For the final rule, two of the three proposed conditions (i.e., two accidental releases within five years meeting the criteria in 40 CFR 68.42(a), from a covered process have occurred; or one accidental release within five years meeting the criteria in 40 CFR 68.42(a), from a covered process at a stationary source in NAICS code 324 or 325, located within 1 mile of another stationary

source having a process in NAICS code 324 or 325, has occurred) are being replaced with one condition—one accidental release meeting the criteria in 40 CFR 68.42(a), from a covered process. The other condition allowing an implementing agency to require a third-party audit is being finalized as proposed.

- EPA is not finalizing compliance audit language which proposed auditing for every covered process at a facility. This corrects an error in the proposed rulemaking text. By not finalizing this language, compliance audits will remain consistent with the current practice, which allows for representative sampling. A discussion of representative sampling as an acceptable practice for compliance audits can be found in the Reconsideration final rule.
- EPA is not finalizing compliance audit language which proposed a 12-month timeline for a third-party audit after a triggering criterion. The revised final requirement relies on the language at 40 CFR 68.58(f) and 68.79(f) which refers to the timeline of a third-party audit to be the "next required compliance audit," which is at least every 3 years under 40 CFR 68.58(a) and 68.79(a).

Comment 8.1-04: Several commenters recommended limiting the scope of the proposed third-party audit requirements, as described below.

One commenter asserted that the auditor requirements are too restrictive, which they believe will result in a shortage of qualified auditors. The commenter recommended that EPA targets facilities with multiple accident histories and require them to be audited instead rather than waiting for an accident to happen and auditing them afterwards (0238).

One of the commenters asserted that facilities should be able to determine when they should conduct an audit themselves because it is based on performance (0227).

A couple of commenters asserted that inspectors should only call for third-party audits on a case-by-case basis (0188, 0229).

One commenter agreed that auditing can be a useful tool but asserted that it should not be required for RMP facilities that have not had multiple accidents (0215).

One commenter stated that the proposed rule is too broad and may require reporting a minor injury such as a sprained ankle, therefore EPA could be overwhelmed with submissions and unable to discern the most substantial concerns that deserve the attention of the Agency's limited enforcement resources (0268).

Another commenter stated that EPA has not showed evidence that third-party compliance audits are more effective than self-audits (0233). One commenter noted that EPA does not justify the third-party audit requirement justification based on the potential for self-auditing to be insufficient (0229).

One commenter stated that the proposal lacks a sufficient basis for the provision that would indicate first- or second-party audits are inadequate. The commenter continued that EPA's own Audit Policy finds first- and second-party audits effective (0253).

Several commenters challenged that there will be sufficient qualified third-party auditors available (0173, 0184, 0190, 0224, 0245).

> **EPA Response:** The frequency with which third party audits are required in the final rule is reasonable in order to prevent future accidents. As indicated in the proposal, EPA RMP

accident history data show that, while 97 percent of all RMP facilities had no RMP-reportable accidents from 2016–2020, 3 percent of all RMP facilities had at least 1 RMP-reportable accident and 0.5 percent (n = 70) of all RMP facilities had 2 or more RMP-reportable accidents (87 FR 53584).[120] EPA views one 40 CFR 68.42(a) accidental release as a serious matter deserving attention, considering the possible outcomes are deaths, injuries (i.e., any effect on a human that results either from direct exposure to toxic concentrations; radiant heat; or overpressures from accidental releases or from the direct consequences of a vapor cloud explosion (such as flying glass, debris, and other projectiles) from an accidental release and that requires medical treatment or hospitalization as defined by 40 CFR 68.3), or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage. Further, the average per accident damage estimate from 2016-2020 is $5.5 million. It is arguable that having even one accident should be a cause for concern considering most RMP facilities have never had any accidents. Additionally, of the 70 facilities that had at least 1 RMP-reportable accident, 61 percent (n = 43) had experienced another accident prior to 2016. EPA does not believe affected communities should have to experience the adverse consequences of a second reportable accident before an objective party comes in to evaluate the facility for compliance. The pattern of repeated accidents at RMP facilities provides a reasoned basis for EPA's focus on these facilities to apply a greater level of risk-reduction measures.

EPA notes that under 40 CFR part 68, sources with any Program 2 and/or Program 3 processes are already required to conduct compliance audits every three years. This rule does not change the requirement that RMP facilities regularly conduct RMP compliance audits, but adds that, in specific situations, those audits must be performed by a third-party or a team led by a third-party, pursuant to the requirements and schedule in 40 CFR 68.58 and/or 68.79 of the rule. However, EPA notes that having a third-party conduct a compliance audit does not preclude the facility from conducting an in-house compliance audit in tandem. If the goal is to ensure that preventative measures are in place to prevent future accidents, EPA hopes that a facility would want to implement all such measures to ensure it is compliant. EPA disagrees that the third-party audit requirement should be expanded to include all RMP facilities without waiting for an accident. While independent third-party audits help to ensure an independent systematic evaluation of the full prevention program at an RMP facility, EPA is not making this a regulatory requirement for all RMP sources before an accident, at this time, due to the increased burden associated with these audits.

[120] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

Lastly, it is important to note that the auditor independence requirements were simplified and streamlined from the 2017 rule, which included a limitation for auditors who conducted consulting type services for the owner or operator within the last two years, or for a period of at least two years following the audit report. EPA believes the provision, as adopted, ensures additional available independent auditors to act in an independent and impartial manner, allowing more flexibility in choosing auditors.

Justification for the proposed requirements

Comment 8.1-05: Several commenters stated that EPA does not justify the purpose of the third-party audit requirements (0207, 0229, 0232, 0233, 0253, 0268, 0272). One commenter noted that the third-party requirements lack a rational basis. The commenter added that facilities are already performing compliance audits every three years (0207).

One commenter added that there is also a lack of analysis of data to determine whether systemic problems exist in how RMP audits are currently performed or reported (0268).

One of the commenters added that EPA does not discuss whether such third-party audits led to a reduction of accidental releases from stationary sources (0232).

One commenter noted that the accident records at facilities do not provide adequate basis for the lower trigger threshold for NAICS 324 and 325 facilities (0272).

A couple of commenters stated that EPA must trial third-party auditing first to determine whether it actually prevents accidents and ensure compliance and safe operations (0229, 0232).

EPA Response: EPA disagrees with the commenters that the Agency did not provide a rational basis for the third-party audit provision. Because RMP facilities were not previously required to have third-party compliance audits, statistically valid outcome data specifically on RMP rule third-party auditing does not currently exist. That being said, sources that have had one RMP accident, which in this final rule is being required by all Program 2 and Program 3 facilities regardless of NAICS code, are more likely to have another accident than the general population of RMP-regulated sources. As mentioned previously, EPA RMP accident history data shows that from 2016-2020, 0.5 percent of all RMP facilities (n = 70) had 2 or more RMP-reportable accidents. This is true despite current RMP regulations, enforcement, and lessons learned from those previous accidents. Therefore, it is reasonable for EPA to be concerned that those facilities may not be able to identify measures on their own to properly evaluate and apply appropriate prevention program measures to stop accidents from occurring.

Further, there is a considerable and growing body of literature and empirical data on the effectiveness of third-party auditing, generally. These literature and data occur in many contexts that involve a diverse set of statutes and voluntary standards. In fact, some of these contexts are contextually similar to RMP auditing.

In the 2016 Amendments proposed rule and reiterated in the 2022 SCCAP proposed rule, EPA presented many examples of Federal and state agencies and trade association third-party verification programs. Like the RMP rule, some of those programs are expressly described by their managers as designed to improve regulatory compliance, prevent or reduce risks, or improve safety at the same or similar facility types and operations as are regulated by the RMP rule. These programs reflect industry recognition that third-party

auditing does, in fact, produce better outcomes relative to self-auditing in a variety of settings. Such programs include:

- National Association of Chemical Distributors (NACD)—Responsible Distribution[121]
- American Chemistry Council —Responsible Care program[122]
- American Petroleum Institute—Process Safety Site Assessments[123]
- Society of Chemical Manufacturers & Affiliates (SOCMA)—ChemStewards program[124]

Additionally, the supporting literature and data described by EPA in the proposed rule preambles remain relevant to RMP compliance auditing, notwithstanding the varied contexts they describe, because such literature addresses cross-cutting human biases and behaviors, common to all auditor and audit types, that can be addressed or corrected through independent third-party auditing.[125] EPA thus finds that the state of the science, evidence, and data on the effectiveness of independent third-party auditing programs supports requiring independent third-party audits for RMP facilities with accidental releases or conditions that could lead to an accidental release of a regulated substance.

Legal arguments

Comment 8.1-06: Several commenters suggested that EPA does not have the authority to compel third-party compliance audits or delegate this authority to third parties (0215, 0227, 0233, 0237, 0253, 0268, 0272). Many of the commenters suggested that no provisions in § 112(r) or § 114 of the CAA grants EPA authority to mandate third-party audits (0215, 0233, 0237, 0253, 0268, 0272). One commenter noted that the CAA allows EPA to delegate enforcement and oversight authority in two circumstances which are not met with a third-party auditor: (1) an EPA "authorized representative" and (2) a state after a formal delegation process has been completed. The commenter also stated that the third-party audit program violates the U.S. Constitution's private non-delegation doctrine. The commenter suggested that the third-party audit requirement be a private party enforcement program instead of a regulatory oversight program (0215).

A couple of commenters noted that third-party auditors are not authorized representatives (0215, 0268).

One commenter expressed concern that EPA is re-proposing requirements for Program 2 and Program 3 facilities to conduct third-party compliance audits. The commenter stated that the

[121] https://www.nacd.com/responsible-distribution/about-responsible-distribution/

[122] https://www.americanchemistry.com/chemistry-in-america/responsible-care-driving-safety-industry-performance?gclid=EAIaIQobChMIov_h7qbw9QIVj67ICh3g5guDEAAYASAAEgLHCfD_BwE

[123] https://www.api.org/products-and-services/site-safety

[124] https://www.socma.org/operations-manufacturing/chemstewards/

[125] *See, esp.*: (1) Short, Jodi L., and Michael W. Toffel, *The Integrity of Private Third-party Compliance Monitoring*, Harvard Kennedy School Regulatory Policy Program Working Paper, No. RPP-2015-20, November 2015. (Revised December 2015) http://www.hbs.edu/faculty/Pages/item.aspx?num=50186 ; (2) Lesley K. McAllister, *Regulation by Third-Party Verification*, 53 B.C. L. Rev. 1 (2012). http://lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?article=3182&context=bclr; (3) Esther Duflo et al., Truth-Telling by Third-Party Auditors and the Response of Polluting Firms: Experimental Evidence From India, 128 Q.J. Econ. 1499, 1499 (2013) http://qje.oxfordjournals.org/content/128/4/1499.abstract.

compliance audits are a governmental function and EPA may not subdelegate to outside entities without the authority granted by Congress through the CAA (0237).

One commenter suggested that the third-party program unlawfully circumvents congressional appropriation limits on EPA's enforcement budget, as federal law prohibits EPA from augmenting its enforcement budget by mandating third parties oversee the RMP program (0268). Another commenter stated that EPA acknowledges that the third-party compliance audit provisions are proposed to address Agency resource issues (0233).

> **EPA Response:** EPA disagrees with the commenters. Third-party audits do not constitute enforcement, nor do they substitute for inspections by implementing agencies. They are compliance audits, similar to the self-audits already required by the Rule but conducted by a third-party or a team led by a third-party auditor.[126] The findings of a third-party audit are intended to identify non-compliance that was not discovered by facility personnel during self-audits and are not intended to bring such findings to the attention of government regulators. In fact, the audits are designed primarily to benefit owners or operators by assisting them to identify both actual noncompliance as well as operational or equipment deficiencies, previously unidentified risk factors, and accident release and/or regulatory noncompliance precursor conditions which, if uncorrected, could lead to releases and/or enforcement actions. Proactively addressing deficiencies, risk factors, and precursor conditions to accidental releases and regulatory noncompliance will provide financial, regulatory, and environmental benefits for facility owners and operators and communities.
>
> Furthermore, third-party compliance audits in no way constitute regulatory inspections of, or enforcement at, RMP-regulated facilities. This rule is clear that third-party auditors' or third-party audit teams' findings will not, in and of themselves, determinations of regulatory violations. Nor will the audit reports or related documentation be required by this rule to be automatically submitted to implementing agencies. While the owners or operators will be required to address all third-party audit findings, the rule will provide that addressing the audit findings may include, where appropriate, determining that some specific findings were based on incorrect factual assumptions or were otherwise inappropriate to implement. Thus, the owner or operator of a stationary source may determine an appropriate response to the findings in the audit report and will not be required to accept findings when they can justifiably decline to adopt them.
>
> Finally, nothing in this rule will relieve the EPA of any of its responsibilities under the CAA or imply that EPA will not continue to use its enforcement authorities under the CAA or devote resources to monitoring and enforcing this rule. The third-party auditing regulatory requirements simply ensure that regulated entities will, in a carefully defined subset of circumstances, take reasonable measures to assess and ensure their own compliance.

[126] EPA notes that under 40 CFR part 68, sources with any Program 2 and/or Program 3 processes are already required to conduct compliance audits every three years. This rule does not change the requirement that RMP facilities regularly conduct RMP compliance audits, but adds that, in specific situations, those audits must be performed by a third-party or a team led by a third-party, pursuant to the requirements and schedule in 40 CFR 68.58 and/or 68.79 of the rule.

Comment 8.1-07: One commenter cited a 2001 paper by James Belke, a senior RMP official at EPA, which stated that EPA would face legal challenges if third-party audits were mandatory. The commenter stated that EPA does not supervise this audit process directly or have any mandatory duty to review the audit records. The commenter added that none of the audit records are required to be submitted to the Agency before a corporate officer must commit to correcting deficiencies identified by a third-party auditor. The commenter stated that if Congress had authorized EPA to delegate authority to private third-party auditors, delegation of authority would be unconstitutional (0268).

EPA Response: In the previous iterations of proposed and final rules, as well as in the 2022 SCCAP proposal, EPA explains at length why the new third-party auditing program in the SCCAP final rule is necessary and amply supported by information and evidence in the rulemaking record. The 2022 SCCAP proposal even discussed the 2019 reconsideration rule decision to rescind the third-party audit requirements was to "allow for coordination of process safety requirements with OSHA before proposing future regulatory changes, and to reduce unnecessary regulatory costs and burdens of a broad rule-based approach to third-party audits rather than a case-by-case approach (84 FR 69875)"; it was not based on a determination that third-party audits are not beneficial or justified in certain cases. The 2019 reconsideration rule further indicated that "while EPA cannot inspect every RMP facility every year, the Agency performs approximately 300 RMP facility inspections each year and prioritizes inspections at facilities that have had accidental releases. Therefore, EPA's enforcement resources and posture are capable of addressing accident-prone facilities without additional broad regulatory mandates. The Agency's choice to use a more surgical approach to accident prevention at these facilities is reasonable and practicable (84 FR 69853)."

The 2001 quote attributed to James Belke is not relevant to this rulemaking for three important reasons. First, the rulemaking record today differs significantly from what the state of the science, evidence, and experience with third-party RMP auditing was in 2001. The rulemaking record today is replete with articles, studies, and evidence on the effectiveness of independent third-party auditing, and how best to design such programs, that did not exist in 2001 when Mr. Belke wrote his article and hence was not considered at the time. Second, in contrast to Mr. Belke's 2001 discussion, the final rule requires third-party auditing only for the relatively small subset of RMP facilities with accidental releases meeting the criteria in § 68.42(a) from a covered process at a stationary source or where an implementing agency requires a third-party audit due to conditions at the stationary source that could lead to an accidental release of a regulated substance, or when a previous third party audit failed to meet the final rule's competency or independence criteria. Finally, it should be noted that Mr. Belke is a not a lawyer, was not speaking for EPA's Office of General Counsel, and his speculation as to EPA's legal authority in some future rulemaking cannot be read as binding the agency.

Comment 8.1-08: One commenter stated that the proposal provides no legal interpretation justifying third-party audits (0268).

EPA Response: The NPRM identified the legal authority for third-party audits and other prevention program modifications as section 112(r)(7). 87 FR 53564; *see also id.* at 53560 (authority for the rule). Additionally, starting at 87 FR 53584, the NPRM presents a policy justification for why a requirement for third-party audits is a reasonable

regulation. EPA expressed particular concern about trying to address facilities experiencing multiple accidents. Audits are intended to review prevention programs and identify weaknesses, and multiple accidents at facilities suggest the potential for prevention program weaknesses. In the final rule, we require third-party audits after one RMP reportable accidental release. A past accident establishes that a facility is at higher risk of a future accident. The final rule takes a proactive approach to addressing potential weaknesses in the prevention program than the proposal.

As described in the proposed rule, third-party audits were included in the 2017 amendments rule. In that rulemaking, EPA addressed many general comments regarding the inclusion of third-party audits in the RMP rule, including the justification for, and legality of, third party audits, and the benefits of third-party audits. For example, the 2017 amendments rule discussed that third-party audits are compliance audits, similar to the current self-audit requirements, only in this instance conducted by a team led by a third-party auditor. Additionally, the Senate Environment and Public Works Committee identified program audits ‘‘by company personnel . . . or outside consultants’’ as an element of prevention program rules within the range of authorities provided to EPA. *See* Senate Report at 243.[127]

The findings of a third-party audit are intended to identify noncompliance that was not discovered by facility personnel during self-audits and are not intended primarily to bring such findings to the attention of government regulators. Indeed, the audits are designed primarily to benefit owners or operators by assisting them to identify both actual noncompliance as well as operational or equipment deficiencies, previously unidentified risk factors, and accident release and/or regulatory noncompliance precursor conditions which, if uncorrected, could lead to releases and/or enforcement actions. Proactively addressing deficiencies, risk factors, and precursor conditions to accidental releases and regulatory noncompliance will provide financial, regulatory, and environmental benefits for facility owners and operators and communities. EPA has thus reasonably targeted third-party audit requirements to facilities that have had RMP reportable incidents that may demonstrate weaknesses in prior self-assessments and at facilities of heightened concern for implementing agencies.

Comment 8.1-09: Several commenters expressed concern about immediate mandatory reporting to the board of directors or other comparable committee without giving management the opportunity to act on audit findings (0227, 0233, 0253, 0263, 0268). One of the commenters noted that this requirement is not legally or factually justified, as other federal statutes such as the Sarbanes-Oxley Act regulate corporate governance. The commenter stated that taking corrective action is the responsibility of management, not the board, which provides oversight and advisory roles on management decisions (0268). Another commenter suggested that this requirement does not consider varying levels of leadership across facilities, and EPA should provide flexibility as to who or what committee needs to review the findings (0253).

EPA Response: Boards of Directors and their audit committees play an important role in establishing internal corporate accountability and overseeing corporate prioritization, budgeting, and operations. This requirement is not intended to suggest that the Board of

[127] Senate Committee on Environment and Public Works, Clean Air Act Amendments of 1989, Senate Report No. 228, 101st Congress, 1st Session 211 (1989)— ‘‘Senate Report.’’

Directors usurp management decisions, be the ones to oversee corrective action, or insert themselves into the auditing process in any way. Rather, EPA believes that immediately providing the facility's owner or operator's audit committee of the Board of Directors with third-party audit findings will ensure the committees and their Boards of Directors are simply aware of any deficiencies and then have the opportunity to properly budget for any required corrective actions in a timely manner. EPA expects that this approach will improve facility and public confidence that third-party audit report findings and recommendations are promptly and properly addressed.

Therefore, the final rule will require the owner or operator to immediately, upon its completion, provide to the audit committee of the Board of Directors, or other comparable committee or individual, if applicable a copy of the findings response report, which includes a copy of the final audit report, an appropriate response to each of the audit report findings; and a schedule for addressing deficiencies; and copy of any document required under Sections 68.59(f)(2) or 68.80(f)(2), documenting the actions taken to address each deficiency. The closing clause in Sections 68.59(f)(3) and 68.80(f)(3), "if applicable," is intended to clarify that owners or operators that do not have, or who are not otherwise required by law to have, an audit committee of the Board of Directors or that have not otherwise, established or designated a comparable committee or individual, will not be subject to the requirements in Sections 68.59(f)(3) and 68.80(f)(3). EPA recommends that the facility document how the owner or operator complied with this requirement and maintain that documentation with the findings response report. This may include identifying who received a copy of the report and the date it was provided. If there is no audit committee of the Board of Directors or a comparable committee or individual, then the owner or operator should consider documenting that no committee or individual exists.

Comment 8.1-10: One commenter suggested that the audit response requirement include a mechanism for the audited companies to dispute any findings, as some could arise from a misunderstanding of the facility's processes from a third-party auditor. The commenter stated that not allowing facilities this opportunity may raise due process concerns, and pointed to an EPA-Wharton pilot study, which confirmed the need for companies to have this opportunity (0268). A couple of commenters expressed security concerns about the release of sensitive or confidential information to the public (0227, 0263).

EPA Response: While owners or operators will be required to determine an appropriate response to each of the audit report findings, facility owners or operators will not be required to accept all third-party audit findings. This is similar to existing self-compliance audit requirements where the owner or operator is to promptly determine and document an appropriate response to each of the findings of the compliance audit. As such, there is no need for a process to dispute findings.

Regarding the release of this information to the public, EPA is finalizing a requirement for facilities conducting third-party audits to list in section 7 (Program 3) and section 8 (Program 2) of their risk management plans, findings resulting from the audit that the owner or operator chooses to decline. In doing so, the final rule will require facilities to choose from categories, similar to those in OSHA's 1994 Compliance Directive.[128] The

[128] https://www.osha.gov/sites/default/files/enforcement/directives/CPL02-02-045_CH-1_20150901.pdf

Agency believes the four pre-selected categories ensures a balanced approach to providing beneficial data to the public, allowing a straightforward method of reporting for facility owners/operators, as well as reducing security related concerns. This format will also help EPA administer and track how facilities choose to comply with this provision.

Burden of the proposed requirements

Comment 8.1-11: Numerous commenters argued that the third-party auditing requirements if passed, would be unnecessarily burdensome (0181, 0188, 0196, 0197, 0202, 0215, 0226, 0230, 0231, 0233, 0238, 0253, 0256, 0267, 0268, 0272, 0275). Specifically, several commenters argued that requiring third-party auditors could be potentially costly for facilities and disadvantage small businesses (0180, 0196, 0217, 0226, 0231, 0234, 0238, 0263, 0267, 0458). One commenter argued that third-party audits would require a reallocation of resources at facilities that are already implementing effective RMP programs and would therefore be counterproductive (0233).

Another commenter expressed concerns with the costs that facilities will incur by having to hire third-party auditors and recommended that EPA initiate these audits since they already have the authority to do so (0205).

A commenter noted that accidental releases already trigger incident investigations, including the proposed root cause analysis; therefore, an additional third-party audit will unnecessarily dilute the investigation effort and will be overly burdensome to facilities (0233).

EPA Response: EPA acknowledges the costs associated with third-party audit requirements and expects that these costs will be higher for larger firms and governments (see Exhibit 4-8 of the RIA). However, despite this final rule requiring a larger group of stationary sources to conduct third-party audits than the proposal, EPA finds these costs to be justified. The Agency believes the group of stationary sources affected by the finalized third-party audit requirements will benefit from themselves initiating an independent objective audit of their compliance with prevention program requirements, as they have had an RMP-reportable accidental release *after* their most recent compliance audit. As described in the proposed rule and throughout this document, EPA recognizes that a relatively small number of RMP-regulated facilities have had RMP-reportable accidents.

EPA disagrees that the costs implicated by the finalized third-party audit requirements will impose a significant economic burden to a substantial number of small entities.[129] To better understand the distribution of impacts on small entities, EPA conducted an analysis of small entity impacts. Exhibit 8-6 of the RIA displays the impact of the third-party audit provision (as well as other provisions) by sector, number, and average cost of impacted entities. As that exhibit shows, EPA estimates that the number of small businesses experiencing an accident and thus subject to the third-party audit requirement is less than

[129] As determined by Chapter 2 of Final Guidance for EPA Rulewriters: Regulatory Flexibility Act, http://www.epa.gov/rfa/documents/Guidance-RegFlexAct.pdf., http://www.usda.gov/wps/portal/usda/usdahome?contentid=2013/10/0199.xml., SBA definitions of small businesses apply to a firm's parent company and all affiliates as a single entity. Size standards effective March 17, 2023 https://www.sba.gov/document/support-table-size-standards - In some cases, NAICS codes are disaggregated to 5 digits and in others 6 digits. SBA does not include all 6-digit codes in its regulation.

25. Even considering the combined costs of all the final rule provisions, over 90 percent of small entities are expected to experience costs less than 1 percent of their revenues while 2.8 percent are estimated to experience costs greater than 3 percent of revenues (see Exhibit 8-7 of the RIA). Further details on this analysis and conclusion can be found in Chapter 8 of the RIA.

EPA continues to be concerned with RMP facilities that—despite current RMP regulations, enforcement, and lessons learned from previous accidents—continue to have accidents and, in some cases, multiple accidents, thereby continuing to put nearby communities at risk. Sources that have had one accident are substantially more likely to have another accident than the general population of RMP-regulated sources. EPA is concerned that those facilities may not have been able to identify measures on their own (through incident investigations, hazard evaluations, and compliance self-audits) to properly evaluate and apply appropriate prevention program measures to stop accident releases from occurring. Considering the goal of the RMP regulations is to prevent accidental releases, EPA believes that the increased cost of third-party compliance audits at such facilities is therefore justified.

Comment 8.1-12: Many commenters expressed concerns about the availability of third-party auditors and burdens associated with finding qualified auditors.

One commenter stated that third-party audit quality will suffer due to a decrease in the auditor talent pool, an increase in demand, and a net decrease in the total time dedicated to each audit (0233). Another commenter stated that this will place a burden on the industry's selection of an auditor for highly technical areas. The commenter added that, as structured, the proposed rule unnecessarily minimizes the audit pool and the use of experienced auditors associated with the facility (0253).

A few commenters noted that restricting audits to non-associated third parties will disproportionately affect facilities in remote areas, as qualified auditors will be difficult to find and will increase costs (0184, 0196, 0245).

A couple commenters noted the limited number of auditors in certain geographic regions and in certain areas of expertise as another unnecessary burden (0202, 0275).

One commenter recommended that industries such as retail anhydrous ammonia be exempt from this requirement, as it is overly costly and burdensome without added benefit (0245).

One commenter noted that the chlor-alkali industry has experienced consolidation in recent years, so there are few qualified third-party auditors (0201).

Another commenter noted that the explosives manufacturing is highly specialized, and production processes and material formulations tend to be unique and proprietary across the sector, therefore it would be extremely challenging for facilities to find a third-party auditor with the experience necessary to meet the regulatory knowledge requirement described in the rule. The commenter stated that this would require the facility staff to educate the auditor throughout the process, adding to cost and resource burdens (0228).

> **EPA Response:** EPA notes that the independence requirements in this final rule does not include a limitation for auditors who conducted consulting type services for the owner or operator within the last two years, or for a period of at least 2 years following the audit report. EPA believes the provision, as adopted, ensures additional available independent

auditors to act in an independent and impartial manner, allowing more flexibility in choosing auditors for all industries while also ensuring quality will not suffer. For example, EPA believes the third-party audit requirement allows for flexibility by allowing a facility to choose to have their third-party audit performed by a third-party or a team led by a third-party, including facility employees.

EPA disagrees with commenters that request EPA exclude facilities within specific sectors from third-party applicability. For this final rule, EPA bases applicability of third-party audits on whether a source had an RMP reportable accident, or when a previous third-party audit failed to meet the competence or independence criteria. EPA believes that these criteria are a potential indicator for noncompliance with program prevention requirements and therefore warrant an evaluation by a third-party. To the extent facilities in any specific industry sector or NAICS code are historically or prospectively relatively less likely than facilities in other sectors or NAICS codes to have such releases, however, they will be correspondingly less likely to need to conduct independent third-party compliance audits. If a specific industry sector does not typically have accidental releases, then this provision will not likely apply. The rule is carefully structured to produce these desirable outcomes. Therefore, it is not necessary to exclude or limit third-party audit applicability to specific industry sectors.

Third-party audit applicability criteria

Comment 8.1-13: Several commenters suggested areas of potential expansion with regards to the third-party audits (0208, 0255, 0402, 0460).

Several commenters recommended that the requirement triggering a third-party audit after two accidental releases within a 5-year period is not stringent enough, and facilities should be required to conduct a third-party audit after one accidental release or discovery of significant non-compliance (0179, 0240, 0270, 0444, 0460). One of the commenters suggested that a 5-year window for accident history is too narrow (0270).

One commenter recommended that EPA mandate third-party audits and thorough investigations occur after any chemical disasters (0208).

A few commenters suggested that third-party audits be required for all RMP facilities without waiting for an incident to occur (0177, 0203, 0460). One of the commenters recommended that EPA require third-party audits facilities that have delayed an incident report, delayed first-responder coordination, emergency response exercises, delayed or filed an incomplete RMP plan, or had any other compliance concerns documented in the RMP database (0460).

One commenter requested that the requirement be expanded to include all Program 2 and 3 facilities (0460). Another commenter suggested that that the requirement triggering a third-party audit should be required after one accidental release at a 324 or 325 NAICS facility regardless of location to another facility (0179).

One commenter asserted that audits should be based on safety priorities established in the rule, not just on previous accidents or near miss events (0402). One commenter stated that third-party auditors should examine all process safety management programs and risk management plans and ensure they are updated regularly in consultation with industry, labor, government, public interest, environmental organizations, and scientific experts (0255).

EPA Response: After a review of the comments received, EPA agrees that the proposed third-party audit applicability requirements were not stringent enough and therefore finalized the proposed third-party audit applicability with modifications. EPA believes it is appropriate to require a third-party auditor after: (1) one accidental release meeting the criteria in 40 CFR 68.42(a) from a covered process at a stationary source has occurred; *or* (2) an implementing agency requires a third-party audit due to conditions at the stationary source that could lead to an accidental release of a regulated substance, or when a previous third-party audit failed to meet the competency or independence criteria of 40 CFR 68.80(c). However, EPA disagrees that the third-party audit requirement should be expanded to include, as some commenters suggested, all RMP facilities without waiting for an accident. While independent third-party audits help to ensure an independent systematic evaluation of the full prevention program at an RMP facility, EPA is not making this a regulatory requirement for all RMP sources before an accident, at this time, due to the increased burden associated with these audits.

Comment 8.1-14: One commenter suggested that EPA narrow the third-party audit trigger from reportable accidents to catastrophic releases, as defined in the current regulation (0268). Another commenter echoed that EPA should include a trigger for incidents resulting in catastrophic releases (0253).

EPA Response: EPA disagrees with suggestions to limit the third-party audit trigger from reportable accidents to catastrophic releases. The purpose of the third-party audit is to help reduce the risk of future accidents by requiring an independent and objective audit to determine whether the owner or operator of the facility is effectively meeting the prevention program requirements the RMP rule. Stationary sources that have had accidents and/or substantial non-compliance with RMP requirements pose a greater risk to the surrounding communities. EPA believes that accidental releases that involve deaths, injuries, or significant property damage on-site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage are all potential indicators of noncompliance with RMP prevention program requirements.

Additionally, EPA does not expect these criteria to impact a large percentage of stationary sources with Program 2 and/or Program 3 processes. Currently, there are approximately 12,000 stationary sources with Program 2 and/or Program 3 processes. EPA Regulatory Impact Analysis assumes that the annual number and distribution of accidents among types of facilities reflects a 5-year baseline estimate and that in any one year, the number of facilities conducting a third-party audit will be equal to the average number of accidents.[130] The analysis projects over time that 94 facilities will conduct such an audit each year.[131]

Comment 8.1-15: Several commenters asserted that the 2-accident trigger for third-party compliance audits were vague in nature and could result in facilities conducting audits when they are not warranted (0233, 0268). One of the commenters stated that the proposed rule has not established standards that would govern when third-party audits would be necessary (0256).

[130] EPA recognizes that subsequent to the final rule being finalized, accident rates may change.

[131] The number of audits may be overstated because some facilities had multiple accidents in the same three-year period, resulting in only one third-party audit.

EPA Response: In response to comments on when third-party audits are required, EPA is clarifying and finalizing that whichever criteria triggers the requirement, a third-party need only be engaged for the next required compliance audit(s), which is no later than 3 years from the previous compliance audit. The revised final requirement relies on the language at 40 CFR 68.58(f) and 68.79(f) which refer to the timeline of a third-party compliance audit to be the "next required compliance audit," which is at least every 3 years under 40 CFR 68.58(a) and 68.79(a). For example, if a facility conducted an internal compliance audit in August 2024 and had an RMP-reportable accident in October 2024, the next compliance audit, required by August 2027, would be a third-party audit. EPA believes this approach is appropriate because it will allow the source to remain within their already required scheduled timing for audits. Further, when an accident occurs, the source will be required to conduct an RCA within 12 months; the 3-year finalized timeframe for the audit will give the source flexibility to accomplish both within their compliance due dates. If the third-party audit is completed after the RCA, it will give the source an additional opportunity to uncover deficiencies that led to the accident. In other words, the third-party audit will be a follow-up to review the RCA and ensure all practices to prevent an accident have been resolved.

Comment 8.1-16: Many commenters addressed the proposed requirement for all facilities with regulated NAICS code 324 and 325 Program 3 processes that have had one RMP-reportable accident and are located within a 1-mile radius of another facility with a regulated NAICS code 324 and 325 process to conduct a third-party audit after one accident.

Several commenters oppose the 1-mile trigger for a third-party audit (0173, 0232, 0253, 0263, 0268, 0272). One of the commenters stated that the one-mile trigger for a third-party audit is too vague and overly broad, and EPA's analysis of the 324 or 324 NAICS facilities is flawed (0268). Another commenter interpreted this requirement as emphasizing protecting select facilities over protecting the public (0173). One commenter suggested that this requirement could penalize facilities with an otherwise outstanding environmental and safety record because a neighboring facility within one mile does not (0263).

EPA Response: The 1-mile trigger for third-party audits is not applicable for the SCCAP final rule. EPA is finalizing the proposed third-party audit applicability with modifications. For the final rule, two of the three proposed conditions (i.e., two accidental releases within five years meeting the criteria in 40 CFR 68.42(a), from a covered process have occurred; or one accidental release within five years meeting the criteria in 40 CFR 68.42(a), from a covered process at a stationary source in NAICS code 324 or 325, located within 1 mile of another stationary source having a process in NAICS code 324 or 325, has occurred) are being replaced with one condition—one accidental release meeting the criteria in 40 CFR 68.42(a), from a covered process. The other condition allowing an implementing agency to require a third-party audit is being finalized as proposed.

Comment 8.1-17: Several commenters suggested that EPA develop a more user friendly, up-to-date, and accessible method of determining if a facility is within one mile of another facility with a 324 or 324 NAICS code to ensure compliance with this provision (0180, 0205, 0217, 0226, 0234).

One commenter expressed concerns with the language of the one-mile provision that references the adjacent stationary source "having a process in NAICS code 324 or 325," instead of referring to a "covered process." The commenter described an issue with EPA's determination of the starting point and ending point for the 1-mile measurement to an adjacent source with a 324 or 325 NAICS covered process. The commenter suggested that the starting point should be from the covered process from which the release occurred to the adjacent source's covered process. The commenter also noted that it is not clear how a source with a release is to determine whether any other sources within one mile have a 324 or 325 NAICS covered process (0232).

> **EPA Response:** The 1-mile trigger for third-party audits is not applicable for the SCCAP final rule. EPA is finalizing the proposed third-party audit applicability with modifications. For the final rule, two of the three proposed conditions (i.e., two accidental releases within five years meeting the criteria in 40 CFR 68.42(a), from a covered process have occurred; or one accidental release within five years meeting the criteria in 40 CFR 68.42(a), from a covered process at a stationary source in NAICS code 324 or 325, located within 1 mile of another stationary source having a process in NAICS code 324 or 325, has occurred) are being replaced with one condition—one accidental release meeting the criteria in 40 CFR 68.42(a), from a covered process. The other condition allowing an implementing agency to require a third-party audit is being finalized as proposed.

Comment 8.1-18: Another commenter stated that EPA's proposal to amend its regulations to require auditing of "each covered process" would create a conflict with OSHA's PSM standard and reflected EPA's failure to coordinate with that agency on this issue (0233). The commenter specified that "each covered process" auditing is inconsistent and more stringent than OSHA's requirements (0233).

> **EPA Response:** EPA is not finalizing compliance audit language at 40 CFR 68.58(a) and 68.79(a) which proposed auditing for every covered process at a facility. This corrects an error in the proposed rulemaking text. By not finalizing this language, compliance audits will remain consistent with the current practice, which allows for representative sampling. A discussion of representative sampling as an acceptable practice for compliance audits can be found in the Reconsideration final rule.

Schedule for conducting a third-party audit

Comment 8.1-19: A couple of commenters made recommendations regarding the timing of third-party audits (0233, 0268). Some commenters proposed that the language in the provision should be revised to state that audits should be performed every three years. The commenters stated there is an inconsistency in when audits would be required for the 1-Mile Trigger and 2-Accident Trigger, and they recommended removing the various triggers in the Final Rule and simplifying the triggers to only RMP-reportable accidents within the 5-year period (0261, 0268). One commenter recommended that EPA offer the opportunity to extend the deadline for third-party audits, as 90 days may not be sufficient for facilities to resolve deficiencies and implement recommendations identified in incident investigations (0268).

Another commenter suggested that EPA provide more time to complete audits than the 12-month requirement, or not dictate a timeline outside of the three-year audit cycle. The commenter requested that EPA specially allow two years to complete the audit and audit report (0233).

One commenter suggested that EPA revise the language to exempt facilities from this requirement if they conducted a third-party audit in the five years prior to meeting the listed criteria (0230).

One commenter noted that because of the COVID-19 pandemic, audit enforcement is requiring longer timeframes (0188).

> **EPA Response:** EPA is not finalizing the 1-mile trigger for third-party audits in the SCCAP final rule. Additionally, in response to comments on when third-party audits are required, EPA is clarifying and finalizing that, whichever criteria triggers the requirement, a third-party need only be engaged for the next required compliance audit(s), which is no later than 3 years from the previous compliance audit. The revised final requirement relies on the language at 40 CFR 68.58(f) and 68.79(f) which refer to the timeline of a third-party compliance audit to be the "next required compliance audit," which is at least every 3 years under 40 CFR 68.58(a) and 68.79(a). For example, if a facility conducted an internal compliance audit in August 2024 and had an RMP-reportable accident in October 2024, the next compliance audit, required by August 2027, would be a third-party audit. EPA believes this approach is appropriate because it will allow the source to remain within their already required scheduled timing for audits. Further, when an accident occurs, the source will be required to conduct an RCA within 12 months; the 3-year finalized timeframe for the audit will give the source flexibility to accomplish both within their compliance due dates. If the third-party audit is completed after the RCA, it will give the source an additional opportunity to uncover deficiencies that led to the accident. In other words, the third-party audit will be a follow-up to review the RCA and ensure all practices to prevent an accident have been resolved.
>
> Further, EPA disagrees that it is necessary to exempt facilities from third-party audits if they conducted one five years prior. Even with a previous third-party audit, the Agency believes the affected facility would still benefit from another independent objective audit of their compliance with prevention program requirements. The Agency notes that having a third-party conduct a compliance audit does not preclude the facility from conducting an in-house compliance audit in tandem. If the goal is to ensure that preventative measures are in place to prevent future accidents, EPA hopes that a facility would want to implement all such measures to ensure it is compliant.

Comment 8.1-20: One commenter suggested that the 30-day response requirement does not provide a safety benefit since addressing unsafe conditions immediate action (0232). Another commenter recommended that EPA adopt the 30-day timeframe for facilities to review the draft report and develop a written response (0203).

> **EPA Response:** EPA is finalizing the requirement that the owner or operator prepare a findings response report as soon as possible, but no later than 90 days after receiving the final audit report as proposed. EPA believes this timeframe will be appropriate for the owner or operator to consider the findings of the audit report and determine a response to each of the audit's findings. This approach will allow the owner or operator an opportunity to establish a schedule to implement corrective actions that can extend beyond the 90-day period for developing the findings response report and balance the need to promptly respond to the audit findings. EPA notes that, in many instances, an owner or operator may receive prior information about the audit's findings before

receiving a final audit report, particularly when the third-party audit team includes facility personnel. This will give the owner or operator additional time to consider its responses.

Audit report requirements

Comment 8.1-21: One commenter suggested that the rule's provision that would require the facility's audit response include a signed certification from a senior corporate officer or equivalent is unnecessary and burdensome. The commenter noted that Section 1001 of the Federal Criminal Code already makes it a felony to lie to Federal agencies knowingly and willfully, and Section 113(c)(2) of the CAA criminalizes knowing and willful false statements to EPA. The commenter noted that the certification requirement risks infringing on the senior official's Fifth Amendment privilege against self-incrimination, and the compelled speech of the certification requirement raises first amendment free speech concerns. The commenter also noted that EPA needs to clarify who qualifies as a "senior corporate officer, or official in an equivalent position" and recommended using the "responsible official" definition from the CAA's Title V operating permit program. The commenter recommended that any certification obligation incorporate the "reasonable inquiry" concept from the Title V compliance certifications, and that EPA adopt the same standard for certifications in audit responses as in the Title V compliance certifications (0268).

EPA Response: EPA believes these requirements and the associated certification are important to ensure that the certifying official is familiar with, and responsible for, the submitted reports. The certification requirements in this rule will be consistent with equivalent certification requirements in many EPA regulations, including in the CAA Title V regulations (40 CFR § 70.5(d).[132])

The certification will indicate that the compliance audit report was received, reviewed, and responded to under the senior corporate officer's direction or supervision by qualified personnel. Similar to the requirement to submit the findings response report to the audit committees of the Board of Directors, a senior corporate official ensures accountability and oversees corporate prioritization, budgeting, and operations. EPA agrees that senior corporate officials do not necessarily have high levels of technical expertise; however, these officials and entities include key managers responsible for establishing internal corporate accountability and overseeing corporate prioritization, budgeting, and operations. Indeed, the Security and Exchange Commission (SEC) requires other specified documents to be provided to such individuals, committees, and boards for similar reasons.[133] Finally, EPA believes that the certification will minimize corporate failures to properly address and implement compliance audit findings and recommendations. Adopting a less stringent standard would not be appropriate. EPA

[132] "(d) Any application form, report, or compliance certification submitted pursuant to these regulations shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[133] Under Section 3(a)(58) of the Exchange Act as added by Section 205 of the Sarbanes-Oxley Act, the term audit committee is defined as "[a] committee (or equivalent body) established by and amongst the board of directors of an issuer for the purpose of overseeing the accounting and financial reporting processes of the issuer and audits of the financial statements of the issuer" (if no such committee exists with respect to an issuer, the entire board of directors of the issuer). See Securities and Exchange Commission (SEC), 17 CFR 240.10A-3 - Listing standards relating to audit committees (68 FR 18818, Apr. 16, 2003, as amended at 70 FR 1620, Jan. 7, 2005; 73 FR 973, Jan. 4, 2008).

expects that the senior corporate official certification of the audit findings will improve facility and public confidence that third-party audit report findings and recommendations are promptly and properly addressed.

Moreover, the language of the certification will cite the actions that are taken by the owner or operator pursuant to these requirements, and include, among other things, a statement that based on personnel knowledge and experience, or inquiry of personnel involved in evaluating the report findings and or inquiry of personnel involved in evaluating the report findings and determining appropriate responses to the findings, the information submitted herein is true, accurate, and complete. The certification will not contain an acknowledgement of a violation, and the certification and report will not be required to be automatically submitted to the implementing agency. This language will be equivalent to the language in certifications that support submissions under Title V of the CAA. EPA continues to believe that it is important for a senior corporate official, or an official in an equivalent position, to sign such a certification, ensuring that the owner or operator is aware of the findings and responses, and will be correcting the deficiencies, pursuant to these requirements. For smaller entities without corporate officials, the official in an equivalent position for purposes of this requirement may include the owner or operator, or designated representatives of the owner or operator, including facility manager, operations manager, or another official at or above that level.

Third-party audits will be called for under the rule when there has been a reportable accident, or when required by an implementing agency due to conditions at the stationary source that could lead to an accidental release of a regulated substance. Such an incident or conditions can be an indicator of an ineffective accident prevention program. The fact that prior self-audits had either not detected a weakness in the prevention program or that recommendations from prior audits had not been addressed well enough to prevent the incident supports requiring fresh, independent eyes of a third-party auditor to conduct the next audit after the incident, and the involvement of senior officials of the stationary source regarding the findings. There is a substantial interest in ensuring that, when a third-party audit is required, a third-party audit is conducted, the audit report was received, reviewed, and responded to by the facility, and appropriate responses to the findings have been identified and deficiencies are being corrected, consistent with the requirements of subpart D of 40 CFR part 68.

The requirement for a senior corporate officer, or an official in an equivalent position, of the owner or operator of the stationary source to make such a certification directly and materially advances that interest, as it will ensure that the owner or operator is aware of the findings and responses, and will be correcting the deficiencies, pursuant to these requirements.

This certification requirement will be narrowly tailored to that interest, and the language will closely track the actions that such officials and facilities perform under the third-party audit provisions, including engaging a third party; receiving, reviewing, and responding to the audit report; and identifying appropriate responses to findings and correcting deficiencies.

Comment 8.1-22: One commenter suggested that the recordkeeping provision to retain the two most recent third-party audit reports and related documentation be revised, as third-party audits

may be conducted infrequently, it may require owners/operators to retain audits that are more than a decade old. The commenter suggested that the retention requirement be timebound or harmonized with 40 CFR 68.79(e). The commenter suggested the following language revision (0193):

> "§ 68.80(g) Recordkeeping. The owner or operator shall retain at the stationary source the ~~two most recent~~ final third-party audit reports, related findings response reports, documentation of actions taken to address deficiencies, and related records <u>for a period not less than five years from the date of the final issuance of the audit report."</u>
>
> **EPA Response:** The final rule will require that the owner or operator retain as records certain documents at the stationary source, including the two most recent final third-party audit reports, related findings response reports, documentation of actions taken to address deficiencies, and related records. EPA retention requirement is harmonized with 40 CFR 68.79(e), which is not timebound.

Comment 8.1-23: One commenter stated that the language: "any significant revisions between the draft and final versions of the report" is too vague and therefore serves no clear requirement (0233).

One commenter urged EPA to revise the language that "deficiencies were corrected or are being corrected" to leave space for facilities to disagree and explain their reasoning (0275).

> **EPA Response:** EPA disagrees that the audit report language is too vague. Because the RMP regulation is performance-based, EPA believes that all regulated RMP facilities can ultimately be successful in ensuring the third-party auditor includes in the final audit report what was considered to be significant revisions between the draft and final. This type of regulation does not create uncertainties or unnecessary burdens, but rather offers reasonable flexibilities in adopting the most effective measures to address this provision.
>
> As mentioned above, while owners or operators will be required to determine an appropriate response to each of the audit report findings, facility owners or operators will not be required to accept all third-party audit findings. This is similar to existing self-compliance audit requirements where the owner or operator is to promptly determine and document an appropriate response to each of the findings of the compliance audit. As such, there is no need for a process to dispute findings. However, EPA believes it is critical that facility owners and operators implement corrective actions to address findings from compliance audits. Therefore, the final rule will require the owner or operator to certify in the findings response report that deficiencies are being corrected. As an additional measure to ensure accountability, EPA is also requiring a copy of the findings response report and schedule to implement deficiencies to be submitted to the auditing committee of the Board of Directors or other comparable committee or individual, if applicable.

Auditor qualifications

Comment 8.1-24: One commenter asserted that EPA should put more emphasis on audit training resources and proper education and outreach related to auditing (0245). Another commenter recommended that EPA create a list of firms qualified for performing third-party audits of RMP facilities (0235).

Another commenter supported requiring selection of third part auditors to be mutually approved by the facility owners and workers (0178).

> **EPA Response:** EPA considered, but is not adopting, changes to the final rule that would establish additional processes or programs under which EPA or other regulatory agencies must first approve or credential third-party auditors before owners or operators can engage them. Nor is EPA modifying the rule to establish or reference additional independent auditor accreditation programs or auditor accreditation oversight committees or otherwise require potential third-party auditors to be accredited by an independent auditing or accreditation body before owners or operators may engage the auditors under this rule.
>
> For some programs, external accreditation of third-party auditors adds additional rigor to the process of ensuring the competence and independence of the auditors, but such external accreditation can be time-consuming and add financial costs. EPA has considered these comments and believes that establishing an accreditation program for third-party auditors would add time and costs to the process of third-party auditor selection and engagement without sufficient countervailing benefits given the overall context of the auditing and the rule's supporting processes and criteria. Therefore, in this final rule, EPA is electing, instead, to focus on streamlining the auditor competency and independence criteria. Owners and operators will be responsible for determining and documenting that the third-party auditors are qualified pursuant to the rule's competency and independence criteria. EPA believes this approach will be consistent with the majority of commenters' requests that the process for engaging the auditors should be straightforward and maximize owner or operator discretion in selecting third-party auditors. Owners and operators routinely obtain and review the internal policies, procedures, and qualifications of a wide range of consultants and contractors before engaging them in order to assess their qualifications to perform consulting or contractual services. EPA is confident that owners and operators will be able to assess third-party auditor qualifications in a similar manner.
>
> EPA believes that the level of effort and resources necessary to establish these programs would cause unnecessary delays in implementing third-party compliance audit requirements and are not warranted for the small universe of facilities that may be subject to these requirements.

Comment 8.1-25: Several commenters expressed concerns about the requirement for third-party auditors to "receive no financial benefit from the outcome of the audit, apart from payment for auditing services" as the language suggests that the specific auditor would not be able to work with the facility to address audit findings, or provide advice, who would be in the best position to do so (0173, 0229, 0230, 0232).

One commenter recommended the following edit to the language in 40 CFR 68.80(c)(2)(ii) that the third-party auditor "receives no financial benefit from the outcome of the audit, apart from payment for auditing services" (0230).

A couple commenters stated that this requirement would preclude a facility from employing the auditor to assist in addressing the audit findings, which facilities should be encouraged to do (0217, 0232).

EPA Response: EPA is not requiring the third-party auditor to review the owner/operator's findings response report to determine if the actions are addressing the auditor's findings and recommendation from the audit. In fact, to remain independent, the third-party auditor should not play a role in addressing the deficiencies its own auditing identified or in determining if the owner or operator's plan to address the deficiencies is adequate.

Comment 8.1-26: Several commenters indicated that non-associated third-party auditors may not have the expertise required to complete a substantial audit, and the regulations will limit the use of internal auditors, the most knowledgeable and qualified individuals, from performing audits (0173, 0184, 0190, 0196, 0201, 0215, 0227, 0228, 0237, 0239, 0245, 0256, 0262). One of the commenters suggested allowing a combined team of internal and external auditors, provided that the third-party auditor is approved by the facility owner and operator and employees (0227). A couple of commenters proposed self-audits rather than third-party audits to alleviate the cost and administrative burden of third-party audits (0267, 0268). One of the commenters noted that the third-party audits policy ignores EPA's own audit policy (0268).

A couple of commenters asserted that facilities should not oversee selecting third-party auditors as not all auditors are as experienced or qualified. The commenters stated that inconsistencies in the quality of the audits could arise because of inconsistent auditor expertise (0196, 0227).

One commenter requested that EPA clarify language that the auditor must be "knowledgeable and experienced" (0272). Another commenter stated concern that a third-party auditor may not be sufficiently knowledgeable to make compliance decisions. The commenter added that facilities may adopt ill-advised recommendations to potentially avoid legal liability or public criticism (0215).

One commenter suggested that requiring the use of independent third parties could create conditions that thwart protection of the environment and plant safety, as these third-party personnel would have limited or no familiarity with the facility being audited. The commenter suggested that personnel with experience and expertise with the processes at a facility will be able to more accurately and thoroughly conduct an audit (0256).

Several commenters noted that third-party auditors would have to spend significant time to learn the details of the processes and facility's approach to comply with regulations (0184, 0190, 0215, 0245, 0262).

One of the commenters noted that for batch processors, a third-party auditor may lack the expertise needed for this type of processing; and therefore, batch manufacturers should be exempt (0275).

One commenter noted that associations such as the IIAR and the Refrigerating Engineers and Technicians Association (RETA) develop training materials for the industry and maintains certification programs. (0190).

One commenter recommended that owners, operators, employees, and employee representatives should be allowed to express concerns about a selected auditor and their qualifications (0173). A few commenters stated that requiring employee input on third-party auditors will significantly increase the time needed to vet and approve auditors overall (0181, 0223).

One commenter suggested that the third-party requirement does not take advantage of in-house personnel who have experience, expertise, and familiarity with the plant. The commenter added

that this requirement could limit in-house participation in these processes (0256). Another commenter noted that second-party audits and self-audit programs can provide significant benefits, by allowing individuals with the most knowledge of the process and safety risks conduct audits. The commenter stated that second-party auditors (company personnel not located at the facility being audited) have advantages over third-party auditors, such as allowing for cross-learning across the company, are cost-effective, and are incentivized to identify problems and solutions to minimize corporate risk. The commenter also noted that two National Enforcement Programs (NEPs) carried out by OSHA support the fact that the majority of compliance audits being undertaken are sufficient and protective even where they are not conducted by a third-party (0215).

One commenter stated that internal audit teams at hazardous waste facilities are highly trained, experienced, and report directly to the chief executive officer. The commenter noted that these teams audit different facilities, prepare audit reports for management, conduct follow-up verifications, and support knowledge transfer between facilities (0262).

One commenter noted that facility owners and operators regularly conduct compliance audits of their programs and are best suited to manage risks and improve safety performance. The commenter stated that internal auditors are not biases or lenient, and there is no evidence that third-party auditors are more competent, independent, and impartial (0245).

EPA Response: EPA is finalizing an approach that allows owners or operators to meet their third-party audit obligations either by:

- Engaging third-party auditors meeting all applicable competency and independence criteria, as originally proposed, or
- By assembling an auditing team which is led by a third-party auditor but may include other audit team members. The audit team may be comprised of:
    - A team leader – this must be an employee of the third-party auditor firm who meets all of the competency and independence criteria of the rule;
    - Other employees of the third-party auditor firm – these personnel must meet the independence criteria of the rule; and
    - Other personnel not employed by the third-party auditor firm (e.g. facility personnel or employees of another consulting firm with specialized expertise) – these personnel are not required to meet the competency and/or independence criteria of the rule.

EPA believes that allowing facility personnel and other knowledgeable but independent contractors and consultants to participate in the audit would improve the audit teams' performance and outcomes. This approach will allow qualified personnel with critical sector or facility-specific experience to participate in the audit and enable facility personnel to provide input during the compliance audit. EPA believes this hybrid team could be especially useful for batch manufacturers where expertise of the specific batch process is needed. EPA also notes that having a third-party conduct a compliance audit does not preclude the facility from conducting an in-house compliance audit in tandem. If the goal is to ensure that preventative measures are in place to prevent future accidents, EPA hopes that a facility would want to implement all such measures to ensure it is compliant.

EPA further notes that the independence requirements in this SCCAP final rule were simplified and streamlined from the 2017 rule, which included a limitation for auditors who conducted consulting type services for the owner or operator within the last two years, or for a period of at least 2 years following the audit report. As noted in the SCCAP proposed rule, several trade associations have third-party auditing as part of their industry programs on process safety. EPA believes the provision, as adopted, ensures additional available independent auditors to act in an independent and impartial manner, allowing more flexibility in choosing auditors. Additionally, see section IV.B.3.i and IV.B.3.j in the 2017 amendments final rule for a robust discussion of auditor qualifications as an explanation for why EPA believes that independent auditors can provide a fresh perspective on compliance audits that will enable an owner or operator to improve the source's RMP.

Lastly, EPA disagrees that all compliance audits are sufficient and therefore the Agency believes it is appropriate to require a subset of RMP-regulated facilities to conduct third-party audits. As indicated in the proposal, EPA RMP accident history data show that, while 97 percent of all RMP facilities had no RMP-reportable accidents from 2016–2020, 3 percent of all RMP facilities had at least 1 RMP-reportable accident and 0.5 percent (n = 70) of all RMP facilities had 2 or more RMP-reportable accidents (87 FR 53584). EPA views one 40 CFR 68.42(a) accidental release as a serious matter, considering the possible outcomes are deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage. Further, the average per accident damage estimate from 2016-2020 is $5.5 million. It is arguable that having even one accident should be a cause for concern considering most RMP facilities have never had any accidents. Additionally, of the 70 facilities that had at least 1 RMP-reportable accident, 61 percent (n = 43) had experienced another accident prior to 2016. EPA does not believe affected communities should have to experience the adverse consequences of a second reportable accident before an objective party comes in to evaluate the facility for compliance. The pattern of repeated accidents at RMP facilities provides a reasoned basis for EPA's focus on these facilities to apply a greater level of risk reduction measures.

Comment 8.1-27: One commenter recommended that auditors be asked to sign a statement disavowing any conflicts of interest and outlining ethical obligations (0201).

EPA Response: EPA notes that the SCCAP final rule third-party auditor qualification provisions include requiring owner and operators to determine and document that all third-party personnel:

(i) Act impartially when performing all activities;

(ii) Receive no financial benefit from the outcome of the audit, apart from payment for auditing services;

(iii) Ensure that all third-party personnel involved in the audit sign and date a conflict of interest statement documenting that they meet the independence criteria;

(iv) Ensure that all third-party personnel involved in the audit do not accept future employment with the owner or operator of the stationary source for a period of at least two years following submission of the final audit report.

Additionally, the audit report must also include the following certification statement signed and dated by the third-party auditor or third-party audit team member leading the audit:

"I certify that this RMP compliance audit report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information upon which the audit is based. I further certify that the audit was conducted and this report was prepared pursuant to the requirements of subpart C of 40 CFR part 68 and all other applicable auditing, competency, independence, impartiality, and conflict of interest standards and protocols. Based on my personal knowledge and experience, and inquiry of personnel involved in the audit, the information submitted herein is true, accurate, and complete."

Comment 8.1-28: Another commenter stated disagreement with EPA's assessment that non-independent auditors will be biased and thus lenient in the conduct of an audit, resulting in less rigorous scrutiny and analysis of the facilities under review (0256).

EPA Response: As mentioned throughout this document, despite current EPA regulations, RMP reportable accidents continue to occur, in some instances, more than once at the same facility. Sources that have had one accident are substantially more likely to have another accident than the general population of RMP-regulated sources. EPA is concerned that those facilities may not have been able to identify measures on their own (through incident investigations, hazard evaluations, and compliance self-audits) to properly evaluate and apply appropriate prevention program measures to stop accident releases from occurring. The third-party audit provision is intended to reduce the risk of future accidental releases by requiring an objective auditing process to assist owners and operators in determining whether facility procedures and practices are accurate and are being followed.

That being said, facility personnel are also allowed to be on the audit team along with the third-party auditor. EPA believes that allowing facility personnel and other knowledgeable but independent contractors and consultants to participate in the audit would improve the audit teams' performance and outcomes. This approach will allow qualified personnel with critical sector or facility-specific experience to participate in the audit and enable facility personnel to provide input during the compliance audit. EPA also notes that having a third-party conduct a compliance audit does not preclude the facility from conducting an in-house compliance audit in tandem. If the goal is to ensure that preventative measures are in place to prevent future accidents, EPA hopes that a facility would want to implement all such measures to ensure it is compliant.

Auditing of each covered process

Comment 8.1-29: A couple commenters suggested that EPA has not justified why the current compliance audit requirements cannot be met by auditing a representative sample of all covered processes, which would lessen the burden on facilities while still ensuring safety (0268, 0272).

One commenter noted that EPA, OSHA, and the CCPS have long recognized representative sampling as a best practice. The commenter explained that any audit findings are still applied facility-wide, not just at those covered processes that were sampled (0268).

Another commenter stated that EPA previously acknowledged in the 2019 RMP Reconsideration Rule that a representative sampling approach to compliance auditing—rather than a process-by-process approach—is accepted industry practice, and the Agency provides no rationale in the Proposed Rule for departing from this understanding (0233).

One commenter asserted that some of the language in the provision is not discussed, namely the language that audits are to be conducted for "each covered process." The commenter noted that this is a "dramatic expansion" of previous auditing requirements, does not follow fundamental auditing principles, and is unnecessary (0233). Another commenter stated that the language was unclear (0232). A few commenters claim that it would be arbitrary and capricious and violate administrative law if EPA finalizes a requirement to audit "each covered process" without any explanation of the change (0233, 0237, 0253).

A couple of commenters noted that "each covered process" makes the Proposed Rule inconsistent with OSHA PSM Standards. The commenters also stated that requiring audits for each covered process lacks rational basis (0207, 0233).

> **EPA Response:** EPA is not finalizing compliance audit language at 40 CFR 68.58(a) and 68.79(a) which proposed auditing for every covered process at a facility. This corrects an error in the proposed rule text. By not finalizing this language, compliance audits will remain consistent with the current practice, which allows for representative sampling. A discussion of representative sampling as an acceptable practice for compliance audits can be found in the Reconsideration final rule.[134]

Other comments on third-party audit requirements

Comment 8.1-30: Numerous commenters expressed support for fully restoring the third-party auditing requirements of the 2017 rule (0139, 0191, 0216, 0235, 0240, 0245, 0248, 0257, 0383, 0402, 0444, 0449, 0456, 0460). One of the commenters noted that third-party auditing helps to ensure a systematic evaluation of the full prevention program for covered processes, while self-auditing may be insufficient to prevent accidents and ensure compliance (0444). Another commenter emphasized that third-party audits will also ensure they are unbiased, compared to self-audits (0383).

> **EPA Response:** EPA appreciates commenters' support. EPA believes it is appropriate to require a subset of RMP-regulated facilities to engage competent and independent third-party auditors following the conditions set forth in this final rule after: (1) one accidental release meeting the criteria in 40 CFR 68.42(a) from a covered process at a stationary source has occurred; or (2) an implementing agency requires a third-party audit due to conditions at the stationary source that could lead to an accidental release of a regulated substance, or when a previous third-party audit failed to meet the competency or independence criteria. EPA views one 40 CFR 68.42(a) accidental release as a serious matter, considering the possible outcomes are deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage. Further, the average per accident damage

[134] 84 FR 69834 (69882).

estimate from 2016-2020 is $5.5 million. It is arguable that having even one accident should be a cause for concern considering most RMP facilities have never had any accidents. Additionally, of the 70 facilities that had at least 1 RMP-reportable accident, 61 percent (n = 43) had experienced another accident prior to 2016. EPA does not believe affected communities should have to experience the adverse consequences of a second reportable accident before an objective party comes in to evaluate the facility for compliance. The pattern of repeated accidents at RMP facilities provides a reasoned basis for EPA's focus on these facilities to apply a greater level of risk reduction measures.

EPA notes that for this final rule, the independence requirements were simplified and streamlined from the 2017 rule, which included a limitation for auditors who conducted consulting type services for the owner or operator within the last two years, or for a period of at least 2 years following the audit report. EPA believes the provision, as adopted, ensures additional available independent auditors to act in an independent and impartial manner, allowing more flexibility in choosing auditors.

Comment 8.1-31: One commenter stated confusion regarding the third-party audit for stationary sources with a covered process in Program 2 or 3. The commenter added that it would be applied to very few sources under specific NAICS codes (0229).

EPA Response: As stated above, EPA is requiring a subset of RMP-regulated facilities to engage competent and independent third-party auditors following the conditions set forth in this final rule after: (1) one accidental release meeting the criteria in 40 CFR 68.42(a) from a covered process at a stationary source has occurred; or (2) an implementing agency requires a third-party audit due to conditions at the stationary source that could lead to an accidental release of a regulated substance, or when a previous third-party audit failed to meet the competency or independence criteria of 40 CFR 68.80(c). EPA views one 40 CFR 68.42(a) accidental release as a serious matter, considering the possible outcomes are deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage. Further, the average per accident damage estimate from 2016-2020 is $5.5 million. It is arguable that having even one accident should be a cause for concern considering most RMP facilities have never had any accidents. Additionally, of the 70 facilities that had at least 1 RMP-reportable accident, 61 percent (n = 43) had experienced another accident prior to 2016. EPA's Regulatory Impact Analysis (RIA) projects over time that 94 facilities will conduct a third-party audit each year.[135]

Comment 8.1-32: Several commenters opposed various aspects of the language used in the provision (0204, 0229, 0237, 0268).

A few commenters stated the proposed requirements are subjective, would be up to interpretation to inspectors, and would allow EPA to call for an audit for any reason (0184, 0232, 0237). Another commenter asserted that the threshold criteria for a third-party audit is low and vague and as such, a minor event could trigger an audit, when it is not needed (0193). One commenter suggested EPA specify the threshold level of severity above which non-compliance would trigger the requirement for a third-party audit, which they assert would avoid unnecessary appeals (0224).

[135] See Section 5.3.4 of the RIA for more detail on the analysis.

EPA Response: EPA disagrees that the threshold criteria for a third-party audit is vague or that the requirements would be up to interpretation to inspectors.

EPA is requiring the implementing agency to base a determination on conditions at the stationary source that could lead to an accidental release of a regulated substance, rather than on noncompliance. An implementing agency may determine that a third-party audit is necessary following inspections, audits, or facility visits, if conditions are observed at the stationary source that could lead to an accidental release of a regulated substance. The implementing agency may choose to take other action following an inspection, as appropriate.

Conditions at a stationary source that could lead to an accidental release may include, but are not limited to, significant deficiencies with process equipment containing regulated substances, such as unaddressed deterioration, rust, corrosion, inadequate support, and/or other lack of maintenance that could lead to an accidental release. The presence of small "pinhole" releases, that do not meet the criteria in § 68.42(a) for RMP-regulated accidental releases, could also constitute conditions that could lead to a larger accidental release of a regulated substance. The occurrence of several prior accidental releases that did not meet the reporting criteria in § 68.42(a) at or from a facility could also constitute conditions which could lead to accidental releases. These releases may be a potential indicator that an owner or operator is not complying with RMP prevention program requirements and would benefit from a third-party audit to prevent future accidental releases.

EPA believes that having the implementing agency evaluate whether conditions exist that could lead to an accidental release will better address the types of situations where a third-party audit would be most effective and will minimize the potential for inconsistent or arbitrary decisions made by implementing agencies. The criterion will focus on conditions with the potential to lead to accidental releases, rather than authorizing implementing agencies to require third-party audits under a potentially wide range of circumstances, including minor noncompliance.

This rule will also establish a formal and rigorous process for owners or operators to contest applicable EPA determinations that independent third-party auditing is required. Sections 68.58(g) and 68.79(g) describe the notification and appeals process for when an implementing agency requires a third-party audit. The implementing agency must provide written notice to the facility owner or operator that describes the basis for the implementing agency's determination. Within 30 days, the owner or operator may consult with, and provide information and data to, the implementing agency on the preliminary determination. The implementing agency will then consider this information and provide a final determination to the owner or operator. Then there is an appeals process, in which the owner or operator may appeal the final determination to the EPA Regional Administrator, or for determinations made by other implementing agencies, the administrator or director of such implementing agency. Such determinations will be subject to judicial review to the extent that they have the characteristics of final agency action, however, it is important to note that the final determination regarding the applicability of these provisions is not an enforcement determination. It is a notification regarding the applicability of an existing regulatory requirement, a requirement that does not apply to all stationary sources, all the time, but rather when an agency determines that

it would apply, the owner or operator is notified, given an opportunity to consult, and appeal further within the agency. Part 68 already includes final agency determinations regarding regulatory requirements in Section 68.220, and the process set out in this final rule for appeals of third-party audit determinations will be similar.

Comment 8.1-33: The commenter also requested that EPA revise 40 CFR 68.79(a) and 40 CFR 68.79(f)(3) (with 40 CFR 68.58(f)(3) similarly modified) as follows (0193):

"§ 68.79(a) (a) The owner or operator shall certify that they have evaluated compliance with the provisions of this subpart for each covered process, at least every three years to verify that the procedures and practices developed under this subpart are adequate and are being followed. When required as set forth in paragraph (f) of this section, the compliance audit shall be a third-party audit conducted in accordance with the scheduling requirements set forth in § 68.79(h)."

"§ 68.79(f)(3) An implementing agency requires a third-party audit due to conditions at the stationary source that could lead to an accidental release of a regulated substance meeting the criteria in § 68.42(a), or when a previous third-party audit failed to meet the competency or independence criteria of § 68.80(c)."

EPA Response: EPA notes that the regulatory language in § 68.79(h) refers to § 68.79(a). The language indicates that the audit and audit report shall be completed as in paragraph (a) of this section, unless a different timeframe is specified by the implementing agency. Regarding § 68.79(f)(3), the term used for applicability of the provision, accidental release, is defined at § 68.3. Therefore, the suggested edits by the commenter are unnecessary.

EPA believes that having the implementing agency evaluate whether conditions exist that could lead to an accidental release will address the types of situations where a third-party audit would be most effective and will minimize the potential for inconsistent or arbitrary decisions made by implementing agencies. Conditions at a stationary source that could lead to an accidental release may include, but are not limited to, significant deficiencies with process equipment containing regulated substances, such as unaddressed deterioration, rust, corrosion, inadequate support, and/or other lack of maintenance that could lead to an accidental release. The presence of small "pinhole" releases, that do not meet the criteria in § 68.42(a) for RMP-regulated accidental releases, could also constitute conditions that could lead to a larger accidental release of a regulated substance. The occurrence of several prior accidental releases that did not meet the reporting criteria in § 68.42(a) at or from a facility could also constitute conditions which could lead to accidental releases. These releases may be a potential indicator that an owner or operator is not complying with RMP prevention program requirements and would benefit from a third-party audit to prevent future accidental releases.

Comment 8.1-34: One commenter stated that the plural use of "auditors" in the section is confusing, and EPA should revise the section to differentiate between a "third-party auditor" from members of an "audit team."

The commenter also suggested that EPA clarify what constitutes an acceptable credential for an auditor's certification and proper auditing techniques, and provided the following language edits (0193):

Section 68.80(b)(2)(ii) Other personnel not employed by the third-party auditor firm, including facility personnel who are not listed as individuals responsible under Section 68.15(b) & (c).
Section 68.80(c) Third-party auditor qualifications. The owner or operator shall determine and document that the third-party auditor~~(s)~~ meets the following competency and independence requirements:
(1) Competency requirements. The third-party auditor~~(s)~~ shall be:
(iii) Trained ~~and/or certified~~ in ~~proper~~ auditing techniques.
(2) Independence requirements. The third-party auditor(s) and audit team members shall:
(iv) Ensure that ~~all~~ the third-party ~~personnel involved in the audit do~~ auditor or non-facility audit team members do not accept future employment with the owner or operator of the stationary source for a period of at least two years following submission of the final audit report. For purposes of this requirement, employment does not include performing or participating in third-party audits pursuant to Section 68.59 or Section 68.80.

EPA Response: Owners or operators can assemble a third-party audit team led by a third-party auditor that meets both the competency and independence criteria of the final rule. The third-party audit team can also include other non-independent personnel such as current or former employees of the facility or other persons with prior site-specific experience. This will enable a much broader and more diverse set of auditors to serve on the audit teams, including knowledgeable facility personnel, other personnel employed at different facilities owned by the regulated company, and a variety of second or third-party personnel such as consultants and contractors. Only employees of the third-party auditor firm leading the audit team will be subject to the independence criteria of the final rule, and only the individual leading the third-party audit team will be subject to both the competency and independence criteria of the final rule. Therefore, the Agency is finalizing the auditor regulatory language as proposed and do not believe the commenter's suggested edits are necessary.

Information sharing of audit findings

Comment 8.1-35: A couple of commenters stated that making audit findings available to first responders and LEPCs is preferred (0184, 0241).

EPA Response: EPA is not requiring in the third-party audit provisions for owners and operators to provide audit findings to emergency response officials or LEPCs. However, EPA maintains that it is very important to ensure that Local Emergency Planning Committees (LEPCs) or local emergency response officials have the information necessary for developing local emergency response plans; however, EPA believes it is not necessary to specify in the RMP rule the types or format of information that LEPCs or emergency response officials may request. Section 303(d)(3) of the Emergency Planning and Community Right to Know Act already provides the necessary authority to allow LEPCs to request information needed to develop the local emergency response plan. Furthermore, as part of the annual coordination between facilities and local emergency responders, responders may obtain information on the risks presented by covered processes as appropriate.

8.2 Proposed independence criteria and employee participation

Comments addressing the proposal to remove independence criteria from the 2017 rule

Comment 8.2-01: Several commenters supported the removal of the independence criteria from the 2017 rule, stating that they are burdensome and not necessary for ensuring safety (0173, 0190, 0193, 0233, 0224, 0225, 0229, 0232,0245, 0256, 0262, 0267).

Several commenters expressed concerns about the requirements prohibiting third-party auditors from accepting future employment with the owner or operator of the stationary source for at least two years following the submission of the final audit report (0180, 0205, 0217, 0226, 0229, 0232, 0233, 0234, 0237, 0253, 0256, 0262, 0268, 0458). Some of the commenters suggested that this requirement would further reduce the pool of available auditors (0181, 0184, 0253, 0268). One commenter suggested that this concern is compounded for small businesses or facilities in rural areas (0184). A few commenters noted that this would create a disincentive for otherwise qualified auditors to accept and perform third-party audits (0229, 0232, 0233).

Some commenters noted that this requirement does not improve the quality of the audits and there is no similar restriction to hire EPA personnel (0180, 0205, 0226, 0234).

Several commenters noted that EPA does not have the authority to implement this requirement, as regulations covering the hiring of employees are under the authority of the Department of Labor (0180, 0205, 0217, 0226, 0234, 0237, 0458).

Another commenter noted that this requirement would be difficult to enforce and require facilities and regulators to keep track of audit personnel (0256).

> **EPA Response:** EPA's goal for auditor qualifications is to ensure clarity and objectivity as to the minimum expected standards third-party auditors must meet for competency and independence. Such criteria are necessary to ensure that owners and operators are able to successfully identify and engage fully qualified, competent and independent third-party auditors.
>
> When all options for third-party auditors and teams are viewed as a whole, EPA believes there are ample opportunities to select personnel who may potentially serve as competent and independent third-party auditors to objectively audit a facility's compliance with prevention program requirements. EPA's proposed approach is being finalized which allows owners or operators to meet their third-party audit obligations either by:
>
> - Engaging third-party auditors meeting all applicable competency and independence criteria, as originally proposed, or
> - By assembling an audit team which is led by a third-party auditor but may include other audit team members. The audit team may be comprised of:
>   - A team leader – this must be an employee of the third-party auditor firm who meets all of the competency and independence criteria of the rule;
>   - Other employees of the third-party auditor firm – these personnel must meet the independence criteria of the rule; and
>   - Other personnel not employed by the third-party auditor firm (e.g. facility personnel or employees of another consulting firm with specialized expertise) – these personnel are not required to meet the competency and/or independence criteria of the rule.

EPA disagrees that this requirement will be difficult to enforcement as recordkeeping requirements are included for this requirement which will allow the Agency to verify auditor selections.

Comment 8.2-02: Two commenters supported EPA maintaining the proposed independence criteria from the 2017 rule (0216, 0173).

EPA Response: EPA is finalizing the proposed independence requirements and believes this is an important and necessary aspect of third-party audits. EPA notes that these independence requirements were simplified and streamlined from the 2017 rule, which included a limitation for auditors who conducted consulting type services for the owner or operator within the last two years, or for a period of at least 2 years following the audit report. EPA believes the provision, as adopted, ensures additional available independent auditors to act in an independent and impartial manner, allowing more flexibility in choosing auditors.

Other comments on independence criteria

Comment 8.2-03: Many other commenters addressed independence criteria without specifically addressing EPA's proposed requirements.

One commenter recommended that if the proposed criteria is accepted, EPA should provide a regulatory process if there are inadequate numbers of competent, independent, and impartial third-party auditors to complete an audit in the regulatory timelines (0224).

Another commenter recommended that if the requirements are included in the final rule, EPA should revise the restrictive eligibility criteria for auditors. The commenter noted that the record of past history of auditor use or dictating who can be party to a decision process, should be included especially since EPA retains the right to inspect any incident investigation regardless of who performs the review (0239).

One commenter recommended that EPA formally delineate in the regulation the degree of independence between third-party auditors and the audited facility (0224).

A couple of commenters suggested that the independence requirements may conflict with federal and state employment laws, as they limit employment opportunities. The commenters proposed that EPA evaluate this issue fully before moving forward with the proposed rule, including consulting with the U.S. Department of Labor, as well as other federal and state agencies (0229, 0232).

A couple of commenters suggested that if these requirements are adopted, EPA should clarify that the two-year ban on future employment would not preclude provision of independent consultation services unrelated to the audit (0233, 0268).

One commenter suggested that if EPA adopts this two-year employment ban in the Final Rule, the language in 40 CFR 68.59(c)(2)(iv) and 40 CFR 68.80(c)(2)(iv) should be modified to apply the ban to the stationary source where the audit was conducted, not to other sources owned or operated by the same company (0229).

One commenter expressed opposition that this [employment criteria] would apply to retired employees who would otherwise meet independence criteria (0228).

EPA Response: Many of the comments EPA received regarding independence requirements did not address the change, which removed the limitation for auditors who conducted consulting type services for the owner or operator within the last two years, or for a period of at least 2 years following the audit report. As with the 2017 amendments rule, EPA has received comments generally in support of the proposed independence requirements, and some generally opposed to the independence requirements. Such general comments were previously addressed by EPA during the 2017 rulemaking.[136]

Employee participation

Comment 8.2-04: Several commenters supported employee participation provisions (0173, 0183, 0203, 0241). One of the commenters suggested that employees be directly involved in the third-party audit outside of the presence of their immediate supervisor (0241). Another commenter recommended that employees participate to ask questions of the auditor (0173). One commenter supported including employee participation provisions in the proposed rule and stated that they should apply to all facilities (0183).

Several commenters provided suggestions regarding employee participation for third-party audits (0173, 0193, 0230, 0242, 0267, 0268). One of the commenters noted inconsistencies with the language, stating that 40 CFR 68.80(b)(2)(ii) permits members of an audit team to include facility personnel, but 40 CFR 68.80(c)(2)(iv) seems to prohibit employee participation when referring to "all third-party personnel" (0193).

EPA Response: While EPA encourages sources to include employee participation during third-party audits, EPA is not finalizing a provision that would require employee participation in third-party audits at this time. The Agency expects the enhancements to employee participation required by this rule will motivate owners and operators to recognize the benefit of involving their employees and their representatives in all aspects of the process safety management at their facility.

Comment 8.2-05: Several commenters expressed opposition to a requirement that the selected auditor be mutually approved by the owner/operator, employees, and employee representatives (0173, 0262). One commenter noted this requirement would increase the time needed to vet and approve auditors, causing unnecessary delays (0262). Another commenter noted that some public sector entities must follow stringent procurement rules and may not be able to deny hiring a qualified firm because employees or their representatives do not approve (0173). Another commenter suggested that the auditor be selected by facility management and that bringing unknowledgeable employees into the decision making process would be burdensome and will not improve compliance (0242).

One commenter suggested that it is unnecessary to include a requirement for employee involvement specifically in the resolution of audit recommendations (0267).

EPA Response: While EPA encourages sources to include employee participation during third-party audits, EPA is not finalizing a provision that would require employee participation in third-party audits at this time. The Agency expects the enhancements to employee participation required by this rule will motivate owners and operators to

[136] Response to Comments on the 2016 Proposed Rule Amending EPA's Risk Management Program Regulations; https://www.epa.gov/sites/default/files/2016-12/documents/rmp_rtc_compiled_12-21-16.pdf.

recognize the benefit of involving their employees and their representatives in all aspects of the process safety management at their facility.

8.3 Declined findings format

Comments about inclusion of declined findings in narrative form

Comment 8.3-01: Several commenters expressed opposition to requiring facilities to provide declined findings in narrative form in the RMP (0173, 0180, 0181, 0196, 0205, 0217, 0223, 0226, 0229, 0230, 0232, 0233, 0234, 0238, 0239, 0262, 0267, 0275, 0458). Several commenters noted that this requirement would be overly burdensome (0180, 0205, 0217, 0226, 0228, 0229, 0230, 0232, 0233, 0238, 0458).

One commenter supported requiring declined findings to be included in narrative form, stating that more detailed information on the recommendations and decisions are needed to ensure that a facility does not avoid implementing necessary or practical recommendations (0460). Another commenter noted that the suggested categories would fall short of capturing the reasons to decline an audit recommendation, such as a recommendation is impractical or ineffective (0215).

> **EPA Response:** In the final rule, when a facility declines findings from their third-party audit, EPA is requiring facilities to choose from categories, similar to those in OSHA's 1994 Compliance Directive, as opposed to in narrative form. The Agency believes this will ease the use and general consistency for facilities to report and communities to review declined third-party audit recommendations. This information will also help EPA administer and track how facilities choose to comply with this provision.

General comments about inclusion of declined findings

Comment 8.3-02: Many commenters addressed inclusion of declined findings generally without reference to format of findings.

Some commenters noted that public pressure may result in difficult technical debates about unfounded findings or cause facilities to address findings they disagree with (0228, 0229, 0232 0275). Another commenter recommended that the justification for declined findings should be consistent with the criteria outlined by OSHA's 1994 Compliance Directive, asserting that this would make a narrative text in the RMP repetitive (0173). One commenter noted concerns about releasing information to local responders, who may lack the expertise in chemical processes, could result in incorrect response activities during an accidental release (0196).

A couple of commenters suggested that this requirement would discourage facility leaders from encouraging audit teams to identify potential hazards to limit the information that must be reported to EPA. The commenters also suggested that audit findings are already readily available to EPA (0181, 0233). Several commenters requested that EPA not mandate that facilities make declined findings publicly available online due to security concerns of releasing highly sensitive information (0229, 0230, 0232 0233, 0267).

One commenter suggested that EPA amend the proposed provisions requiring that declined findings reports be provided to the regulated facility's board of directors. The commenter suggested that the reports should be delivered to the responsible official of the regulated facility (0224).

One commenter noted that is not clear how or why a facility would decline an audit finding. The commenter also suggested that there is no language in 40 CFR 68.175 to codify such a

requirement to report on declined audit findings. The commenter suggested that the proposed amendment to 40 CFR Section 68.170(i) (Program 2 plan requirements) could be read to require the reporting of findings declined from voluntary third-party compliance audits—not just those required to be conducted under 40 CFR 68.58 and 68.59 (0233).

One commenter noted that requiring the publishing of incomplete or un-vetted audit reports will only create unnecessary confusion and the potential for litigation.

A few commenters recommended that audit findings not be made available to the public (0184, 0203, 0268). One of the commenters noted that this would be overly burdensome and would result in security concerns (0184).

> **EPA Response:** Similar to the requirement to report declined recommendations from natural hazard, power loss and stationary source siting hazard evaluations, EPA believes public disclosure of recommendations declined from third-party audits are important to help the public understand how facilities address potential shortcomings in a source's accident prevention and preparedness program, one that may affect their community, and the other reasonable judgments and efforts to address the potential shortcomings. EPA believes that when local citizens have adequate information and knowledge about the chemical accident risks to them, facility owners and operators may be motivated to further improve their safety performance in response to community oversight.
>
> EPA believes the flexibility permitted in compliance audits, that is, allowing facility owners and operators to choose which recommendations will be implemented, is the best approach for exercising reasonable judgement to determine how best facilities can prevent and mitigate accidental releases. However, EPA views choosing to leave noncompliance unaddressed out of fear of public scrutiny as not exercising reasonable judgement, particularly when it may leave the process more vulnerable to accidental releases.
>
> When reporting declined recommendations, EPA is not requiring narrative explanations to be reported as there is concern that such explanations may be greatly inconsistent as they would require large amounts of technically challenging and varying information to be comparably condensed. EPA also believes this reduces security concerns. The Agency believes the four pre-selected categories, similar to those in OSHA's 1994 Compliance Directive, ensures a balanced approach to providing beneficial data to the public as well as a straightforward method of reporting for facility owners/operators.

8.4 Reporting requirements

Comment 8.4-01: A commenter suggested that EPA ensure that the reporting requirements for Program 3 facilities match those for Program 2 facilities; the commenter asserted that 40 CFR 68.175(k) is missing the key language in proposed Section 68.170(i): "and findings declined from third-party compliance audits and justifications" (0460).

> **EPA Response:** EPA notes that this was an error, and this has been corrected in the final rule.

9 Employee Participation

Comments associated with this issue are discussed in the sub-issues below

9.1 Proposed approach

Opposition to employee participation provisions

Comment 9.1-01: Two commenters opposed the recommendation decisions provision, stating that transferring decision making authority to employees presents additional legal issues in terms of employee responsibility and accountability, such as in the event an incident occurs, is investigated, and results in disciplinary action or legal liability (0232, 0253).

One commenter expressed concern that EPA lacks the statutory authority to impose employee participation plans, citing that the CAA does not authorize delegating regulatory authority to workers (0207). Another commenter expressed concern that EPA does not have authority to investigate and prosecute workplace disciplinary disputes between an employee and employer, and this is within OSHA's purview (0232). A couple of commenters said that OSHA has exclusive authority to address worker safety issues, which the CAA explicitly prohibited EPA from regulating (0232, 0253, 0239). One commenter stated that the proposed rule interferes with OSHA's existing regulations (0263).

Another commenter stated that EPA does not have authority to investigate and prosecute workplace disciplinary disputes between an employee and employer. The commenter further stated OSHA already governs a complaint resolution process through its statutory authorities. The commenter also stated that disciplinary disputes often implicate collective bargaining, governed by the National Labor Relations Act and such disputes fall outside its statutory authority. (0272).

> **EPA Response:** EPA disagrees that this provision presents additional legal issues. This provision does not transfer decision-making responsibility to employees and their representatives. The provision also does not attempt to shift ultimate accountability to the employee for decisions that the owner or operator is responsible for. For example, at 40 CFR 68.67(e), the PHA provision indicates the owner or operator shall establish a system to promptly address the team's findings and recommendations, to assure that the recommendations are resolved in a timely manner, and that the resolutions are documented. Under this provision, the regulated entity remains the owner or operator of the stationary source. The requirement to consult with employees and their representatives does not make employees the decision-making authority. This provision does, however, provide for consultation that gives employees the opportunity to provide their input and perspective, based on their firsthand knowledge of specific process safety concerns before final decisions are made regarding whether to implement recommended process safety solutions. This provision helps ensure that a well-informed approach is applied when finalizing resolutions for reducing hazards and mitigating process safety risks. As such, these RMP employee participation provisions do not establish regulations to investigate or prosecute workplace disciplinary disputes and therefore would not be governed by the National Labor Relations Act.
>
> Regarding the assertion that EPA employee participation provisions impermissibly regulates the workplace, worker safety issues, or is otherwise explicitly prohibited, we refer the commenters to the response to comment 1.3-03 in this document, which discusses the relationship between OSHA's and EPA's statutory authority in this area, how enhancing employee participation enhances protection of the public from the impacts of chemical accidents, and the origin, purpose and meaning of CAA 112(r)(7)

(G), regarding whether EPA's exercise of CAA 112(r) authority may be deemed to be exercising authority over occupational safety and health.

Further, for many years, including rulemakings finalized in 2017 and 2019, EPA and OSHA have established a regular meeting to consult with the DOL and coordinate the PSM and RMP programs, including but not limited to interpretation of overlapping regulatory provisions and the development of potential amendments to the rules. During several of these regular meetings (including but not limited to meetings on various dates in Appendix A to this document), staff from the agencies discussed the development of the RMP SCCAP Rule and potential issues to be addressed by EPA. These discussions included the employee participation requirements to ensure the RMP regulations do not create conflicting requirements with OSHA's PSM standard.

Comment 9.1-02: Several commenters said that the proposed rule is duplicative to PSM requirements under OSHA (0184, 0205, 0223, 0237). One of the commenters stated that the RMP and PSM should be complimentary of each other to avoid duplicative work (0205). A couple of commenters echoed that OSHA's PSM policy sufficiently covers the proposed rule text (0184, 0237). Several commenters stated that requirements to include employees in written plans of action in the proposal is duplicative of PSM as it is already required in PHAs (0180, 0217, 0226, 0234, 0275, 0458). Another commenter said that PSM and RMP regulations already include employee participation requirements and asserted that the proposed requirements exceed EPA authority (0268). One commenter stated that EPA should further consult with OSHA about adopting information and training provisions (0203). Another commenter stated that EPA should defer to OSHA when deciding the appropriate level of employee participation (0233).

Another commenter stated that at RCRA regulated facilities, provisions in the proposed rule are already taking place and therefore more efforts would be duplicative (0262).

One commenter said that employees are notified of PSM and RMP changes through SOPs, PHAs, and other pertinent information and participate in SOP creation, PHA review, and other sub-elements already. As such, the commenter stated that they believe this proposed regulation change is not necessary (0181).

EPA Response: With regard to comments that noted potential overlap with existing regulations, EPA notes that a regulated source already subject to another requirement that duplicates the RMP employee participation requirements may use its compliance with the other requirement to demonstrate compliance with the equivalent RMP employee participation provisions.

In regard to comments of OSHA PSM regulations being complimentary, EPA notes that each agency has distinct rulemaking procedures and the statute itself contemplates that the rulemakings may proceed on different schedules. OSHA's rulemaking under section 304 of the CAAA of 1990 was due within 1 year of enactment, while EPA's list rule was due 2 years after enactment and the RMP rule was due 3 years after enactment. Due to the statutory structure, it is not unreasonable for there to be some lack of synchronous process. Nevertheless, EPA has coordinated, and will continue to coordinate, with OSHA on revisions to the RMP rule and PSM standard to ensure RMP provisions do not contradict OSHA PSM requirements.

Lastly, the Agency continues to believe that involving directly affected employees and their representatives in recommendation discussions and decisions will help ensure that the most effective recommendations for reducing hazards and mitigating risks to employees and the public are given the proper consideration. EPA is finalizing the proposed provision with the modification, for clarity, that those employees who are to be consulted on addressing, correcting, resolving, documenting, and implementing the recommendations and findings of PHAs, compliance audits, and incident investigations must be those knowledgeable in the process.

Comment 9.1-03: Another commenter expressed opposition to requiring employee representatives to be included in facility hazard evaluations and other compliance activities (0233). Another commenter stated that third parties are not likely to have a deep enough understanding of the facility or processes in the facility to assess the appropriate level of employee participation (0275).

EPA Response: EPA disagrees with opposition to requiring employee representatives to be included in hazard evaluation recommendation decisions. EPA believes it is prudent to apply at least the same qualification criterion to employees who should be consulted on the conduct and development of process hazards analyses and on the development of the other elements of process safety management as required by 68.83(b) provision established in the initial 1996 RMP rulemaking.

General support for employee participation provisions

Comment 9.1-04: A few commenters expressed support for the efforts of collaboration of employees and management representatives (0219, 0252). Several commenters expressed support for the efforts to strengthen worker participation and protection through meaningful collaboration of employees and management (0157, 0250, 0269, 0270, 0409, 0248). A few commenters urged EPA to mandate inclusion of workers and their representatives in safety preparedness and response (0413, 0448, 0449, 0250). One of the commenters also stated that they support requiring common rights and authorities (0409).

One commenter cited media and opinion articles that documented support for stronger worker involvement to prepare for and respond to natural hazards (0258). A few commenters said that workers are often the most knowledgeable about process safety concerns (0191, 0194, 0208, 0441). One commenter added that input from workers can be significant for disaster prevention (0191). One commenter stated that in 2019 in Waukegan, Illinois, the AB Specialty Silicone plant had an explosion that resulted in the loss of four community members. The commenter believed this could have been preventable if employees were a part of the disaster prevention and planning process (0157).

One commenter stated that worker participation is vital to increasing public safety in this area. The commenter added that the damages estimated from chemical releases and or worker accidents can be in the millions of dollars (0235).

One commenter highlighted the importance of a just transition for facility workers. The commenter encouraged facilities to utilize the skills and knowledge of facility workers to implement safer alternatives. The commenter said that the transition should not have an adverse impact on their jobs (0158).

One commenter highlighted that workers are the first to be impacted by chemical exposures and related health impacts and concluded they should have access to the highest level of safety precautions and be empowered to actively participate in identifying potential hazards and mitigating potential accidents. The commenter worries that some workers may not push for stronger safety precautions for fear of losing their jobs (1057).

A few commenters said that CSB recommendations have shown that employee participation in safety planning and implementation is an essential component of incident prevention (0453, 0456, 0460). Another commenter cited a CSB report that lays out an effective worker participation program that includes participation, safety committees, and evaluation (0194).

> **EPA Response:** After review of the comments, the Agency continues to believe that involving directly affected employees and their representatives in recommendation discussions and decisions will help ensure that the most effective recommendations for reducing hazards and mitigating risks to employees and the public are given the proper consideration. EPA is finalizing the proposed provision with the modification, for clarity, that those employees who are to be consulted on addressing, correcting, resolving, documenting, and implementing the recommendations and findings of PHAs, compliance audits, and incident investigations must be those knowledgeable in the process.

Proposed changes to employee participation provisions

Comment 9.1-05: Several commenters proposed revisions to the employee participation provisions.

Two of the commenters suggested that the proposed rule require owners and operators to implement a written program to help ensure that there is no discrimination against any employee or employee representative for exercising authorities under this rule (0252, 0269). Another commenter echoed that workers need anti-retaliation protections, requiring immediate response by RMP facilities (0240).

One commenter suggested that for a submittal to be accepted, the safety plan should demonstrate employee input and explain any disagreements (0402).

One commenter suggested involving employees in developing risk management plans (0444).

Another commenter stated that EPA should defer to OSHA when deciding the appropriate level of employee participation and undergo employee consultation at the beginning of the PHA, incident investigation, and compliance audit processes (0233).

One commenter added that wherever possible, the proposal should require, not just recommend, critical prevention measures to support a safety culture, such as engagement management, active worker committees, contractors, and communities (0255).

Another commenter recommended employee consultation at the beginning of the PHA, incident investigation, and compliance audit processes (0233).

One commenter said that they reviewed National Response Center data and requested that EPA specifically include contractors as well as employees. The commenter stated that contractors are more likely to be tasked with running emergency power during storms, which is critical to pollution prevention, but that they can often be blamed in the NRC reports that the companies give to EPA. The commenter suggested that EPA directly communicate with contractors. Additionally, the commenter stated that Black residents are more likely to be contractors rather

than full time employees even though they have an outsized role in emergency management (0158).

> **EPA Response:** Regarding comments about discrimination, disagreements and anti-retaliation protections, the Agency notes that this final rule does not establish new whistleblower or similar protections. Rather, OSHA enforces whistleblower protections provided under the CAA, the Occupational Safety and Health Act, and other Federal laws. Further information about those rights can be found at https://www.whistleblowers.gov. These employee participation provisions for reporting non-compliance simply establish a minimum standard for owners and operators to involve employees in discussions of safety concerns internally to promote process safety, which will protect the employee while keeping communities safe as well.
>
> In response to other employee participation in the RMP provisions, EPA notes there are already provisions established by the initial 1996 RMP that requires employees to participate as a team member when developing recommendations from incident investigations under 40 CFR 68.81(c), compliance audits under 40 CFR 68.79(b), and PHAs under 40 CFR 68.67(d). At 40 CFR 68.67(d), the PHA provision indicates that the PHA shall be performed by a team with expertise in engineering and process operations, and the team shall include at least one employee who has experience and knowledge specific to the process being evaluated.
>
> Regarding comments suggesting implementation of specific prevention measures, EPA continues to believe the performance-based nature of both this provision and the overall rule allow facility owners and operators the discretion to determine what risk reduction measures work best for their particular chemical use, process, or facility.
>
> Regarding contractors, EPA believes owners and operators can use their best judgement as to when to involve contractors in the process, however EPA does not believe it necessary to be a requirement.

Comment 9.1-06: Another commenter stated that EPA's use of "employees and their representatives" can be viewed too broadly. The commenter provided a clarification to be refined to specifically target personnel who are directly involved in operating, maintaining, and managing the stationary source (0193).

> **EPA Response**: In response to the comment that the term "employees and their representatives" can be viewed too broadly, EPA has amended the language to specify that the provision only applies to employees knowledgeable in the process and their representatives. EPA expects employees involved in the consultation to be knowledgeable in the process, as these employees are expected to have a better firsthand understanding of the process than employees who do not work in the process, who are new to the process, or who do not understand the process. EPA expects that these employees are likely to also be the employees that have the qualifications to participate as a team member when developing recommendations from incident investigations under 40 CFR 68.81(c), compliance audits under 40 CFR 68.79(b), and PHAs under 40 CFR 68.67(d). At 40 CFR 68.67(d), the PHA provision indicates that the PHA shall be performed by a team with expertise in engineering and process operations, and the team shall include at least one employee who has experience and knowledge specific to the process being evaluated. EPA believes it is prudent to apply at least the same

qualification criterion to employees who can participate in developing recommendations as to those who can assist in deciding whether those recommendations will be implemented.

Applicability of employee participation provisions

Comment 9.1-07: Several commenters stated that EPA should expand the employee participation requirements to cover all program levels (0160, 0203, 0251, 0460, 0183). One commenter stated this proposed change would promote employee engagement and address process safety issues (0183). Another commenter said expansion of applicability to all program levels is warranted because EPA's current data indicates that between 2004-2015, there were three worker deaths and 38 worker injuries in program level 1 facilities (0160).

Another commenter suggested EPA adopt worker participation requirements, including PSM, and to extend these rights to workers in all RMP-covered facilities and support mandatory worker participation in all phases of the RMP (0216).

> **EPA Response:** At this time, EPA believes this provision is most appropriate for Program 2 and 3 processes because facilities with these processes have RMP-reportable accidents more often (Program 2 = 15 percent, Program 3 = 83 percent of total accidents from 2004-2020) and pose a greater risk to the public because their worst-case scenario distance would affect public receptors. Program 1 processes only account for few of the total RMP-reportable accidents (3 percent of total accidents from 2004-2020), do not have recent accident history with specific offsite consequences, and have no public receptors within the worst-case release scenario distance.[137]

Burden of employee participation provisions

Comment 9.1-08: A couple of commenters expressed opposition to quota systems that would require a specific percentage of employees to be involved in decision processes (0215, 0267). One of the commenters stated that the employee participation provision should not set a certain number or percentage requirement for employee participation as it can lead to a waste of resources (0267). One commenter said that RMP regulated sources need clarification on the proposed language to require a representative number of employee participation (0229).

One commenter provided a case study of a facility in California to note that a requirement to participate in all aspects of a prevention program could be an unnecessary burden (0173). Another commenter said that it is not prudent to regulate the number or percentage of employees involved in these decision-making teams (0230).

One commenter said that EPA should provide simple guidance to avoid unnecessary burdens (0197). Another commenter expressed concern that the documentation and response requirements proposed under § 68.83(d) are overly burdensome and only serve to increase administrative compliance functions on the part of regulated sources (0229).

One commenter stated that EPA should not impose a one-size-fits-all approach to employee involvement, noting that facilities of various sizes and types require varied actions for addressing a given situation. The commenter added that employee participation should be tailored to the

[137] Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022).

situation; and therefore, the proposed regulations can be burdensome, specifically on smaller facilities (0242).

One commenter stated that EPA is placing an unjust burden on communities by relying on workers to enforce rules (0254).

> **EPA Response:** Regarding the concern that reporting could create a burden or be performed by misinformed employees, EPA notes that the current Program 3 employee participation provisions under 40 CFR 68.83 already provide employees access to all RMP-related information. The new requirement for Program 2 processes under 40 CFR 68.62(c) will allow this as well.
>
> EPA does not expect to see a "one-size fits-all" plan developed by sources for reporting areas of non-compliance, the other employee participation provisions due to its performance-based nature. EPA recognizes some RMP facilities are less complex, operating with a handful of employees, while other RMP facilities have very complex processes that involve hundreds of employees. Like other provisions of the RMP regulation, the employee participation provisions allow facility owners and operators the flexibility to exercise reasonable judgement in determining how to best engage their employees and make them aware of their facility's efforts to apply the RMP rule to process operations. In the absence of a more specific performance standard like RAGAGEP or a specific direction, the RMP rule relies on the reasonable judgments and efforts of regulated entities in designing compliance programs that are aimed at preventing or mitigating accidental releases. EPA believes it is useful for individual RMP facility owners and operators to continually improve their efforts to enhance safety cultures, strengthen safety teams, and foster employee communication. EPA also agrees that the most effective programs probably already comply with most aspects of the provision. EPA believes that sources should create a welcoming atmosphere for employees to discuss safety concerns internally. However, commenters, particularly commenters from labor organizations who supported the provision, stated that this is not always the case. Therefore, EPA maintains that these employee participation provisions are necessary to establish a minimum standard for conduct.
>
> Lastly, in the SCCAP proposal EPA took comment on requiring a representative number or percentage of employees and their representatives involved in these recommendations decision teams as well as the development of other process safety elements as outlined in 40 CFR 68.83(b). For the final rule, EPA is not finalizing a requirement for this issue and expect owners and operators to make sound judgements in these scenarios.

9.2 Relevant sources in making risk decisions

No comments were coded to this issue.

9.3 Stop work authority provision

General support for stop work authority provision

Comment 9.3-01: Several commenters supported the proposed stop work authority provision of the employee participation plan under 40 CFR 68.83(d), and some recommended changes, as described further below (0139, 1716, 0203, 0216, 0219, 0250, 0252, 0255, 0264, 0269, 0270, 0409, 0456, 0255, 0177).

EPA Response: EPA appreciates the commenters' support.

Opposition to stop work authority provision

Comment 9.3-02: Many commenters did not support the stop work authority provision of the employee participation plan (0180, 0184, 0215, 0217, 0226, 0228, 0230, 0232, 0233, 0234, 0237, 0238, 0253, 0268, 0272, 0458).

Another commenter asserted that the underlying intent of the provision can be better addressed by establishing clear written guidelines on how employees can raise such concerns in "real time" (0230).

A couple of commenters stated that EPA does not have the authority nor did they justify the regulation of stop work authorities and interactions between an employer and an employee (0237, 0268).

Some commenters stated that these types of interactions, including whistleblower complaints, are already regulated by OSHA so adding them in this rule is duplicative rather than additive (0181, 0223, 0262, 0268). One commenter argued that a stop work authority would not provide an additional benefit to facilities because it would be duplicative of existing policies and existing practices (0207).

EPA Response: EPA is finalizing the proposed employee participation plan stop work provisions with the following modifications:

- Revising 40 CFR 68.83(c) to specifically apply only to those employees knowledgeable in the process.
- Removing from 40 CFR 68.83(d) the stop work criterion allowing an employee to refuse to perform a task when doing so could reasonably result in a catastrophic release.
- Revising 40 CFR 68.83(d) so that the two remaining stop work criteria specifically apply only to those employees knowledgeable in the process.
- Removing from 40 CFR 68.83(d) the requirement to document and respond in writing within 30 days of the stop work authority being exercised.

The stop work provision within the employee participation section of this final rule is intended only to include the stop work authorities established by the operating procedure provisions under 40 CFR 68.69(a), into the written employee participation plan. This provision is not intended to create new authorities or require additional components to those already developed. The final rule conforms the amendments to this intent. Therefore, while EPA believes that it is useful to evaluate any stop work authority exercised, EPA expects these internal evaluations to already be occurring in the owner or operator's annual review of operating procedures, through training activities, or when conducting compliance audits. To that extent, this final rule does not establish new whistleblower protections. Rather, OSHA enforces whistleblower protections provided under the CAA, the Occupational Safety and Health Act, and other Federal laws. Further information about those rights can be found at https://www.whistleblowers.gov.

Comment 9.3-03: Several commenters claimed that the stop work authority could result in other increased safety risks, indicating the potential for employees to lack adequate knowledge or training to make such a decision. The commenters expressed further concern that the frequency of transient operations could increase, and that more unplanned or abrupt shutdowns could occur,

which are often dangerous (0158, 0180, 0205, 0217, 0226, 0233, 0234, 0237, 0268, 0215). One of these commenters stated that having uniform requirements and procedures for an operation shutdown ignores the diverse array of regulated facilities in terms of industry and process. A few of the commenters said that giving this authority to all employees would leave facilities more susceptible to RMP incidents occurring and make the processes at RMP-covered facilities less safe (0180, 0205, 0226, 0234, 0458).

One commenter stated that while many process operators know how to operate the process and have been trained on the methods that shut the process down under emergency situations, the shutdown may lead to additional hazards if not done properly. The commenter requested that EPA consider modifying 40 CFR 68.83(d)(2) and (3) to include a notification to operations management to ensure a smooth and systematic shutdown with no negative consequences (0158).

Another commenter expressed concern that requiring procedures for employees to report hazards could result in investigation delays and potentially result in contradictory or incorrect information leading to misunderstandings between the Agency and the company (0267).

> **EPA Response:** The proposed rule provided an extensive discussion of the stop work authority that is already inherent in the current RMP rule.[138] As the proposed rule explained, the current RMP rule already addresses many aspects of a stop work authority that provides means for employees to identify and resolve imminent operational risks before they occur. Operating procedures, maintenance/mechanical integrity, and their associated training requirements, which are already mandatory under the rule, create a stop work authority as they address the circumstances and procedures to identify unsafe operations. EPA believes each facility's individual operating procedures and approach to correcting equipment deficiencies give owners and operators the flexibility to design a stop work authority for their process operations that remains adaptable to the procedures already in place. Therefore, EPA disagrees with the comments that a stop work authority documented in the employee participation plan would cause more shutdowns and possibly more accidents, as the authority that is being provided by the final rule's provisions leverages existing operating procedure and maintenance requirements. In reference to the comment citing the potential for an increase in safety risks when an employee lacks adequate knowledge to make a stop work decision, EPA has amended the provision to specify that this authority should be exercised only by employees knowledgeable in the process and their representatives.

Comment 9.3-04: A couple of commenters opposed the provision and stated that the language in the stop work authority provision would be too general, inevitably allowing every RMP covered process to be shut down by an employee. The commenters said that this does not align with EPA's stated purpose of the RMP rule, which is to improve safety at facilities (0228, 0238). A couple of commenters called for clarification and specificity on what level of event would trigger action under § 68.83(d) (0184, 0232).

> **EPA Response:** EPA disagrees that the new stop work authority provision does not align with the purpose of the RMP rule. Under the existing RMP rule, operating procedures are designed for, and assigned to, employees who will be trained on performing the tasks

[138] 87 FR 53591.

described, thereby producing employees knowledgeable in the process they are working in. However, because of the significant disruption to process operations that can occur when stop work authority is exercised, EPA agrees that it is useful to explicitly state that these authorities are applicable only to employees who are knowledgeable in the process. Further, EPA believes a work culture that promotes process safety allows for opportunities for employees to refuse to perform work. In a scenario where there is a potential for a catastrophic release, EPA believes it is important to take further steps to shutdown a process to prevent an accident. Rather than refusing to perform work only, steps necessary to shut down the process should be set in motion. Therefore, the Agency is deleting the change noted below from 40 CFR 68.83(d) to ensure that potentially imminent catastrophic releases are followed through with properly. The basis for including stop work authorities in the employee participation plan is to enhance authorities already provided to employees under the rule.

Comment 9.3-05: Several commenters opposed the stop work authority for the reason that employees should or do already receive training on existing procedures (0184, 0228, 0253, 0272). One of the commenters stated that many businesses already have a culture where employees know not to start working until conditions are safe to do so (0253). One commenter objected to EPA expanding stop work authority, stating that not all employees have the training to be able to make reasonable judgments about safety. The same commenter has a similar concern about EPA's version of anonymous reporting (0237).

One of the commenters asserted that employees would need training if the stop work authority provision were to be put in place, including what is included in their job duties (0184).

EPA Responses: After review of comments, EPA maintains that it is important to ensure facilities' employees have authorities to manage unsafe work as they are one of the last lines of defense to protect human health and the environment from a catastrophic release. EPA, however, does agree with some recommendations offered in the comments to enhance the provision. Therefore, EPA is finalizing the proposed provision with the following modifications as discussed above:

- Removing from 40 CFR 68.83(d) the requirement to document and respond in writing within 30 days of the stop work authority being exercised.
- Removing from 40 CFR 68.83(d) the stop work criterion allowing an employee to refuse to perform a task when doing so could reasonably result in a catastrophic release.
- Revising 40 CFR 68.83(d) so that the two remaining stop work criteria specifically apply to those employees knowledgeable in the process and their representatives.

Recommended revisions to stop work authority provision

Comment 9.3-06: One commenter recommended that the proposed rule also have a method for stop-work authority under dangerous circumstances (0177). One commenter cited the CSB report that recommends that employees have the authority to stop work that is perceived to be unsafe until the employer resolves the matter or the regulator intervenes (0003).

EPA Response: The stop work provision within the employee participation section of this final rule is intended only to include the stop work authorities, established by the operating procedure provisions under 40 CFR 68.69(a), into the written employee

participation plan. This provision is not intended to create new authorities or require additional components to those already developed. The final rule conforms the amendments to this intent. Therefore, while EPA believes that it is useful to evaluate any stop work authority exercised, EPA expects these internal evaluations to already be occurring in the owner or operator's annual review of operating procedures, through training activities, or when conducting compliance audits. The final rule does not add a provision to require evaluations be included in the written plan.

Comment 9.3-07: One commenter supported requiring all Program 2 and 3 facilities to implement stop work processes (0444). Another commenter stated that it should be extended to Program 1 and 2 level facilities (0250).

EPA Response: The stop work provision within the employee participation section of this final rule is intended only to include the stop work authorities, established by the Program 3 operating procedure provisions under 40 CFR 68.69(a), into the written employee participation plan. This provision is not intended to create new authorities or require additional components to those already developed. While EPA encourages owners and operators of Program 1 and 2 processes to identify these details when developing operating procedures for their processes, the RMP regulations do not require that level of detail to comply with their Program level requirements. Consistent with the general focuses of PSM on worker safety and RMP on public safety, processes in Program 1 do not have detailed prevention requirements because the processes do not have public impacts (no WCS reaching the public and no release within the prior 5 years resulting in offsite death, injury, or damage to environmental receptors). The purpose of the RMP and SCCAP employee participation requirements is to protect the public from accidental releases. Including Program 1 in the employee participation requirements would not further public protection due to the nature of how a process qualifies for Program 1. Therefore, while EPA believes that it is useful to evaluate any stop work authority exercised, EPA expects these internal evaluations to already be occurring in the owner or operator's Program 3 processes' annual review of operating procedures, through training activities, or when conducting compliance audits.

Comment 9.3-08: A few commenters asserted that EPA should also require prompt reports of all stop-work authority usage so that EPA and the public are made aware and can evaluate if additional quick action is needed to support the workers, assure compliance, and save lives (0208, 0413, 0456).

EPA Response: Regarding providing reports of stop work to EPA, the Agency disagrees that this is necessary because stop work should be exercised to prevent imminently dangerous situations from resulting in catastrophic releases and therefore should not be contingent on or require quick action by outside parties. Furthermore, the Agency does not have the capability or resources to immediately respond to all instances of stop work being exercised. If, for some reason, quick action by outside parties was needed, EPA believes that the emergency response plans required by the rule should already outline a plan for responding to dangerous situations by the facility and/or local responders as they will be the most familiar with the source's processes and hazards.

Comment 9.3-09: A couple of commenters recommended removing the 30-day response period given that it should not be necessary when the authority is primarily used in imminently

dangerous situations (0183, 0203). Another commenter was also concerned about the 30-day written response to the authority being exercised (0223).

One commenter stated that EPA should clarify why the 30-day response requirement accomplishes the goal of improving facility and community safety, expressing concerns that the requirement is overly broad and could be construed to include everything from significant acute hazards requiring immediate unit shutdown, to leading indicators such as near misses, safety observations, and other behavioral-based safety identifications (0215).

> **EPA Response:** EPA agrees that stop work authorities are expected to be carried out in imminently dangerous situations such that a 30-day response to an authority being exercised long after the threat has passed may not be practical. In the final rule, EPA is removing from 40 CFR 68.83(d) the requirement to document and respond in writing within 30 days of the stop work authority being exercised.

Comment 9.3-10: One commenter recommended EPA adopt the California refinery rule's stop work provision, so that employees can recommend to the operator to shut down operations, rather than making the executive decision themselves (0456).

> **EPA Response:** The SCCAP final rule requires the owner or operator to provide in the employee participation written plan of action, the following authorities to employees knowledgeable in the process and their representatives:
>
> > (1) Recommend to the operator in charge of a unit that an operation or process be partially or completely shut down, in accordance with procedures established in § 68.69(a), based on the potential for a catastrophic release; and
> >
> > (2) Allow a qualified operator in charge of a unit to partially or completely shut down an operation or process, in accordance with procedures established in § 68.69(a), based on the potential for a catastrophic release.
>
> California's Department of Industrial Relation's Process Safety Management for Petroleum Refineries stop work procedures[139] provide similar authorities:
>
> > 1. The authority of all employees, including employees of contractors, to refuse to perform a task where doing so could reasonably result in death or serious physical harm;
> >
> > 2. The authority of all employees, including employees of contractors, to recommend to the operator in charge of a unit that an operation or process be partially or completely shut-down, based on a process safety hazard; and,
> >
> > 3. The authority of the qualified operator in charge of a unit to partially or completely shut-down an operation or process, based on a process safety hazard.

10 Accident and Non-Compliance Reporting

Support for accident and noncompliance reporting provisions

Comment 10-01: A couple of commenters supported a requirement to provide means for anonymous reporting of accidents, non-compliance, safety hazards, or near-miss incidents (0177,

[139] https://www.dir.ca.gov/title8/5189_1.html , CCR Title 8: section 5189.1(q)(5)(A)

0240, 2041, 0456). Several commenters emphasized the need to strengthen worker participation through collaborations, anonymous reporting, and documenting reports by workers of safety issues (0157, 0264, 0269, 0450). One of these commenters stated that an anonymous reporting system would protect the identity of employees and contractors and encourage honest reports (0157). One commenter added that reporting of unpermitted emissions is a critical safety benefit of employee participation (0255). One commenter urged EPA to finalize a rule that provides workers whistleblower protection (0139).

Another commenter stated that it is also critically important to track and investigate precursors to RMP events, and near-miss reporting is a critical safety benefit of employee participation. The commenter stated that tracking these events will allow EPA to predict and prevent incidents. The commenter suggested that EPA provide a hotline to invite anonymous reporting. The commenter also requested that RMP inspections be conducted by government instead of contractors, and inspectors should be technically qualified and able to challenge industry claims as needed (0255).

EPA Response: After review of EPA's preferred approach, options, and comments, the Agency maintains that workers can play an important role in promoting process safety through reporting noncompliance. EPA, however, does agree with some recommendations offered in the comments to enhance the clarity of the provision. Therefore, EPA is finalizing the accident and non-compliance employee participation proposed provision with the following modifications as previously discussed:

- Revising 40 CFR 68.62(b) and 68.83(e) to specify the report methods to either or both the owner and operator and EPA.
- Revising 40 CFR 68.62(b) and 68.83(e) to let anonymity be decided by the reporter.
- Adding a provision to 40 CFR 68.62(b) and 68.83(e) to require the owner or operator to keep a written record of the report of noncompliance.

Reporting areas of non-compliance to the owner or operator allows employers to become aware of areas of concern and/or opportunities to improve process safety. EPA believes it is in the owner or operator's best interest for the necessary follow-up to address employees' process safety concerns and/or areas where the owner or operator may have fallen short on compliance with the rule. When an employer is engaged first and does not resolve an issue, it is expected that the next step for reporting noncompliance will be to report to EPA. Reporting areas of non-compliance to EPA will allow the Agency's Office of Enforcement and Compliance Assurance to determine the validity of the report received through appropriate levels of follow-up, investigation, and enforcement, if necessary.

EPA does not expect to see a "one-size fits-all" plan developed by sources for reporting areas of non-compliance. Some RMP facilities are less complex, operating with a handful of employees, while other RMP facilities have very complex processes that involve hundreds of employees. Like other provisions of the RMP regulation, the employee participation provisions allow facility owners and operators the flexibility to exercise reasonable judgement in determining how to best engage their employees and make them aware of their facility's efforts to apply the RMP rule to process operations.

The Agency notes that this final rule does not establish whistleblower protections. Rather, OSHA enforces whistleblower protections provided under the CAA, the Occupational

Safety and Health Act, and other Federal laws. Further information about those rights can be found at https://www.whistleblowers.gov. These employee participation provisions for reporting non-compliance simply establish a minimum standard for conduct for employees to discuss safety concerns internally to promote process safety to protect the employee's own welfare, which in turn help keep communities safe as well.

Opposition to accident and noncompliance reporting provisions

Comment 10-02: Several commenters expressed concern regarding anonymous reports and whistleblower protections (0183, 0184, 0207, 0237, 0262, 0456).

One commenter expressed concern that employees should be able to utilize internal policies and procedures to communicate and mitigate concerns of non-compliance prior to reporting to EPA (0257). Another commenter said that the proposed regulation for anonymous reporting is not necessary, given that employees have access to RMP information under current rules (0181).

One commenter stated that follow-up reporting and outreach should be given additional flexibility, and resource intensive actions like public meetings should be an option but wide discretion should be given regarding the necessity of resource intensive actions versus alternatives. The commenter stated that adequate time is needed for follow-up reporting and outreach. The commenter stated that these issues are better served by additional guidance tools than a regulatory approach (0197).

One of the commenters stated that a better approach to anonymous reports is to allow RMP-regulated entities to continue efforts to improve safety cultures, strengthen safety teams and foster employee communication in lieu of expending resources on anonymous reporting features (0237).

EPA Response: As mentioned previously, EPA does not expect to see a "one-size fits-all" plan developed by sources for reporting areas of non-compliance. For example, some RMP facilities are less complex, operating with a handful of employees, while other RMP facilities have very complex processes that involve hundreds of employees. Like other provisions of the RMP regulation, the employee participation provisions allow facility owners and operators the flexibility to exercise reasonable judgement in determining how to best engage their employees and make them aware of their facility's efforts to apply the RMP rule to process operations. In the absence of a more specific performance standard like RAGAGEP or a specific direction, the RMP rule relies on the reasonable judgments and efforts of regulated entities in designing compliance programs that are aimed at preventing or mitigating accidental releases. EPA agrees with commenters that it is useful for individual RMP facility owners and operators to continually improve their efforts to enhance safety cultures, strengthen safety teams, and foster employee communication. EPA also agrees that the most effective programs probably already comply with most aspects of the provision. EPA believes that sources should create a welcoming atmosphere for employees to discuss safety concerns internally.

Additionally, this final rule does not establish whistleblower protections. Rather, OSHA enforces whistleblower protections already provided for under the CAA, the Occupational Safety and Health Act, and other Federal laws. Further information about those rights can be found at https://www.whistleblowers.gov. These employee

participation provisions for reporting non-compliance simply establish a minimum standard for conduct for employees to discuss safety concerns internally to promote process safety to protect the employee's own welfare, which in turn help keep communities safe as well.

Comment 10-03: One of the commenters expressed concern that the language proposed for Levels 2 and 3 does not adequately specify what the reporting process should be. The commenter also stated that the provision is of limited value since an employee could report anonymously without a formal process. The commenter likewise stated that the provision is restrictive since, as written, the requirement excludes reporting in situations where the reporter does not wish to remain anonymous (0183).

EPA Response: To clarify EPA's intent in the proposal, EPA is specifically defining in this final rule that the process developed by the facilities to report noncompliance must detail how to report to the owner or operator and/or EPA. It is understandable that in some instances employees will feel more comfortable reporting to one or the other entity (or both), which will be up to the reporter, but the details provided in the plan should provide clear instructions for how to report to both entities. Reporting areas of non-compliance to the owner or operator allows employers to become aware of areas of concern and/or opportunities to improve process safety. It is expected that validating reports will not impose a heavy burden on the owner or operator as they should already be familiar with their level of compliance with the rule through regular compliance monitoring activities, such as triennial compliance audits. While EPA is not prescribing details of how a facility needs to follow-up with the report, the owner or operator will be required to at least maintain a record of the report. EPA believes it is in the owner or operator's best interest for the necessary follow-up to address employees' process safety concerns and/or areas where the owner or operator may have fallen short on compliance with the rule. When an employer is engaged first and does not resolve an issue, it is expected that the next step for reporting noncompliance will be to report to EPA. Reporting areas of non-compliance to EPA will allow the Agency's Office of Enforcement and Compliance Assurance to determine the validity of the report received through appropriate levels of follow-up, investigation, and enforcement, if necessary.

Regarding anonymous reporting, EPA recognizes both the concern for anonymity and the desire from employees wanting to identify themselves as the reporter. EPA believes the option in the final rule to remain anonymous or not will be particularly useful if there are additional follow-up steps that the reporter and or the owner/operator must take in order to resolve an issue.

Comment 10-04: Although a couple of commenters agreed that it is important that employees can voice concern without fear of repercussions, these commenters stated that anonymous reports require someone to judge the validity of the report. Some of the industry commenters also stated that anonymous reports could create a burden. The commenters expressed further concern that, for example, reports could be filed by misinformed persons, thus necessitating the development of methods and time frames to determine the credibility of reports as well as when appropriate action should be taken (0184, 0237).

EPA Response: Regarding the concern that reporting could create a burden or be performed by misinformed employees, EPA notes that the current Program 3 employee

participation provisions under 40 CFR 68.83 already provide employees access to all RMP-related information. The new requirement for Program 2 processes under 40 CFR 68.62(c) will allow this as well. However, EPA is concerned that some sources may provide RMP-related information to their employees without providing details or explanations of the information. EPA agrees with comments stating that workers without required information and training may be unaware of their opportunities and authorities to participate in hazard prevention, and that the lack of worker understanding will inevitably lead to less participation. Therefore, to ensure that employees are regularly reminded that RMP information is available to them, owners and operators of all Program 2 and Program 3 processes will be required to provide an annual written or electronic notice to employees indicating that RMP information is available.

The SCCAP final rule adds a provision for Program 2 and Program 3 process owners and operators to provide training on the written employee participation plan. The Agency believes that management, employees, and their representatives involved in the process could benefit from training on employee participation plans to ensure facility stakeholders are aware of the information included in the plans or otherwise available. A more thorough understanding through the training may help reduce unvalidated non-compliance reports, some of which commenters indicated could become a concern associated with this noncompliance reporting provision. Ultimately, EPA expects training on employee participation plans will help employees identify, and owners and operators correct, issues that may prevent and mitigate accidents.

Comment 10-05: A couple of commenters discussed how EPA lacks the legal authority to establish whistleblower protections and anonymous reporting, that OSHA has exclusive authority to address worker safety issues and the CAA prohibits EPA from regulating worker safety, and EPA does not have the legal authority to and should not finalize these provisions (0207, 0237). Although one commenter agreed that employees should know that they can voice a concern verbally or in writing without fear of repercussions, EPA's proposed provisions impede on OSHA's authority, even in collective bargaining and information required to provide to employee representatives and disputes, and EPA should not finalize them (0237). One commenter stated that it is unclear how facilities will have access to anonymous reports or unreported RMP accidents, and employee access to RMP information is already covered under 40 CFR 68.93(c) (0262).

EPA Response: The Agency notes that this final rule does not establish whistleblower protections. Rather, OSHA enforces whistleblower protections provided under the CAA, the Occupational Safety and Health Act, and other Federal laws. Further information about those rights can be found at https://www.whistleblowers.gov. The final rule also does not establish or amend collective bargaining or dispute regulation authorities or provisions. These employee participation provisions for reporting non-compliance simply establish a minimum standard for conduct for employees to discuss safety concerns internally to promote process safety to protect the employee's own welfare, which in turn help keep communities safe as well.

Further, nothing in the structure of the 1990 CAA Amendments nor its legislative history suggests that only one agency is the exclusive, proper, or prime authority for chemical process safety. The statute required both EPA and OSHA to proceed with provisions to

prevent chemical accidents. The Senate Report discusses the relationship and expertise of both agencies in the field of accident prevention, including the issue of whether OSHA should be the lead agency in the area, and noted that "EPA has developed considerable expertise in the area of accident prevention." (Senate Report at 244 -45). The approach of the bill was to require coordination among agencies rather than primacy or preemption. Sections 129(f)(1) and (2) of the Senate bill closely parallel section 112(r)(7)(A) and (B)(i), and section 129(f)(3) has the same consultation and coordination requirement for EPA with U.S. Department of Labor (DOL) and OSHA as CAA section 112(r)(7)(D).

Today's rule maintains EPA's focus on minimizing the public impacts of accidental releases even as it also reduces impacts on facilities and workers. As explained throughout the proposal and in this final action, the OSHA PSM standard and EPA RMP regulations are closely aligned in content, policy interpretations, and enforcement. This is not surprising, as accident prevention steps that make a process safe for workers often will be similar, or the same as, steps that would prevent deleterious impacts on the public. Thus, enhancing additional employee participation authority will enhance the chemical accident safety of the public. Congress recognized the RMP-PSM relationship by requiring EPA to coordinate its requirements with those of OSHA in developing accident prevention regulations and requiring OSHA to coordinate with EPA when developing its PSM standard (see CAA section 112(r)((7)(D) and CAAA section 304(a)). Therefore, since the inception of these regulations, EPA and OSHA have coordinated closely on their implementation in order to minimize regulatory burden and avoid conflicting requirements for regulated facilities. This coordination has continued throughout the development of this rule. Appendix A documents a series of meetings among staff from EPA and OSHA during SCCAP rule development.

Lastly, EPA does not expect to see a "one-size fits-all" plan developed by sources for reporting areas of non-compliance. Some RMP facilities are less complex, operating with a handful of employees, while other RMP facilities have very complex processes that involve hundreds of employees. Like other provisions of the RMP regulation, the employee participation provisions allow facility owners and operators the flexibility to exercise reasonable judgement in determining how to best engage their employees and make them aware of their facility's efforts to apply the RMP rule to process operations. In the absence of a more specific performance standard like RAGAGEP or a specific direction, the RMP rule relies on the reasonable judgments and efforts of regulated entities in designing compliance programs that are aimed at preventing or mitigating accidental releases.

Suggested revisions to accident and non-compliance reporting provisions

Comment 10-06: A couple of commenters requested that EPA provide an anonymous reporting hotline (0254, 0255, 0456). One commenter stated that the hotline should allow for anonymous near-miss and safety reporting directly to the Agency (0456). Another commenter asserted that anonymous worker reports should go directly to EPA (0255).

EPA Response: When an employer is engaged first and does not resolve an issue, it is expected that the next step for reporting noncompliance will be to report to EPA. There are already EPA resources in place to report RMP noncompliance. For example, there is

an existing EPA website where people can report environmental violations.[140] On that website, there are also resources to learn the difference between a possible violation and an emergency, and also provides the phone number to the National Response Center.[141] Another resource would be to contact the EPA region covering that particular area.[142] Reporting areas of non-compliance to EPA will allow the Agency's Office of Enforcement and Compliance Assurance to determine the validity of the report received through appropriate levels of follow-up, investigation, and enforcement, if necessary.

Comment 10-07: A couple of commenters stated that EPA should acknowledge that delays in reporting lead to significant under-counting, and the commenters stressed the importance of compliance-focused design. The commenters stated that the assumption that a delay in reporting would not lead to significant undercounting is incorrect, based on data on reported incidents. The commenters said that the reportable harm incidents EPA evaluated does not include some of the incidents that caused harm or measure some of the harm caused because impacts like toxic exposure and hospitalization are not tracked, even though this indicates harm to public health and well-being that EPA should recognize in its analysis. The commenters stressed the importance of strong compliance-focused design and urged EPA to build in sufficient reporting, monitoring, and automatic penalties so that it is easy for workers and the public to be able to tell at any time whether a facility is meeting the regulatory requirements or is in violation (0456, 0460).

EPA Response: EPA believes that accidental releases required to be reported in the five-year accident history required under § 68.42 of the existing rule, those that result in deaths, injuries, or significant property damage on-site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage are all potential indicators of noncompliance with RMP prevention program requirements. Nevertheless, in the proposal, EPA acknowledged the likelihood of late-reported accidents affecting the last few years of data as based on prior experience, EPA judged that there would be a slight increase in the number of accidents in the last few years of data. The proposal further discussed that the more current accident data since the 2019 analyses shows that reliance on a declining trend in accidents and impacts to conduct selective, often post-incident oversight may prove insufficiently effective over time and make it difficult to stay ahead of reversals in trends (87 FR 53565).

EPA does not expect to see a "one-size fits-all" plan developed by sources for reporting areas of non-compliance such as late accident reporting. Some RMP facilities are less complex, operating with a handful of employees, while other RMP facilities have very complex processes that involve hundreds of employees. Like other provisions of the RMP regulation, the employee participation provisions allow facility owners and operators the flexibility to exercise reasonable judgement in determining how to best engage their employees and make them aware of their facility's efforts to apply the RMP rule to process operations.

Nevertheless, EPA believes assistance, outreach, and enforcement will reduce undercounting of RMP reportable accidents and help ensure compliance with this provision, as all provisions of the rule. Because enforcement of the RMP regulation has

[140] https://echo.epa.gov/report-environmental-violations.
[141] https://www.epa.gov/pesticide-incidents/how-report-spills-and-environmental-violations#who
[142] https://www.epa.gov/rmp/epa-regional-rmp-contacts

and will continue to occur, EPA expects most facilities will proactively make the necessary prevention improvements in order to comply with the rule and thus avoid enforcement. Enforcement of RMP facilities remains an Agency priority, as indicated by its adoption as a National Enforcement and Compliance Initiative (NECI) since 2017. The goal of this NECI is to reduce the risk to human health and the environment by decreasing the likelihood of chemical accidents. Activities under the initiative include having regulated facilities and industry associations work to improve safety; increase compliance with RMP; and promote coordination and communication with State and local responders and communities. The capacity built by the NECI will continue to benefit oversight by EPA and its partner implementing agencies even after the NECI.

Comment 10-08: Regarding the anonymous reporting of hazards, another commenter recommended the following language (0183):

- The owner or operator shall collaborate with employees and their representatives to develop, implement, and evaluate a process for employees and their representatives to report, unaddressed RMP related hazards to the owner or operator and EPA including but not limited to those that could lead to a catastrophic release, unreported RMP reportable accidents, or any noncompliance with this rule. Those who report should have the option to remain anonymous or not to with no consequences to them for either choice. Anonymous and identified reports should be treated with equal seriousness.
- In addition:
    - The owner or operator shall:
    - 1) document and maintain reports of all RMP-related safety issues reported by workers and their representatives, including near-miss events;
    - 2) respond in writing within seven days indicating their response to the submitted information to the worker(s) and employee representatives submitting the information and their representatives; and
    - 3) disclose all information developed under this rule to implementing agencies and third-party auditors, including during RMP inspections, safety audits, or incident investigations (0183).
- The commenter recommended a response time of 7 days.

One commenter suggested that the reminder that OSHA enforces whistleblower protections is insufficient to prevent employer retaliation and urged EPA to adopt the following text in the Final Rule (0183):

> The owner or operator shall collaborate with employees and their representatives to develop, implement, and periodically update a written program to ensure that there is no discrimination against any employee or contractor or employee representative for exercising their rights under the Clean Air Act or this rule.

Another commenter stated that it is unclear to whom anonymous reporting is directed, and suggested revising § 68.83(e) as follows (0193):

> (e) The owner or operator process to allow employees and their representatives to anonymously report <u>to the senior manager of the facility or their representative</u> unaddressed hazards that could lead to a catastrophic release, unreported RMP reportable

accidents, or any other noncompliance with this part. A record of anonymous reports shall be kept for three years.

EPA Response: After review of EPA's preferred approach, options, and comments, the Agency maintains that workers can play an important role in promoting process safety through reporting noncompliance. EPA, however, does agree with some recommendations offered in the comments to enhance the clarity of the provision. Therefore, EPA is finalizing the proposed provision with the following modifications as previously discussed:

- Revising 40 CFR 68.62(b) and 68.83(e) to specify the report methods to either or both the owner and operator and EPA.
- Revising 40 CFR 68.62(b) and 68.83(e) to let anonymity be decided by the reporter.
- Adding a provision to 40 CFR 68.62(b) and 68.83(e) to require the owner or operator to keep a written record of the report of noncompliance.
- Adding a provision to 40 CFR 68.62(a)(1) and 68.83(a)(1) for the owner or operator to provide an annual written or electronic notice to employees indicating RMP information is available.
- Adding a provision to 40 CFR 68.62(a)(2) and 68.83(a)(2) for training on the written employee participation plan.

The Agency notes that this final rule does not establish whistleblower protections. The existing whistleblower protection provisions of the CAA and other applicable laws should be sufficient to protect employees from discharge or discrimination resulting from their involvement in an incident investigation. Further information about those rights can be found at https://www.whistleblowers.gov. These employee participation provisions for reporting non-compliance simply establish a minimum standard for conduct for employees to discuss safety concerns internally to promote process safety to protect the employee's own welfare, which in turn help keep communities safe as well.

Support for training and information access requirements

Comment 10-09: Several commenters asserted the importance of training employees on RMP rule provisions and suggested that the final rule should strengthen employee training provisions (0183, 0252, 0269, 0409, 0460, 0456). Another commenter stated that owners and operators should be required to provide annual training, at minimum, to facility employees (0241).

Several commenters supported providing employees with access and information about facility's RMP (0178, 0444, 0160, 0241). One commenter supported requiring owners or operators to distribute the RMP to workers (0178).

EPA Response: EPA is concerned that some sources may provide RMP-related information to their employees without providing details or explanations of the information. EPA therefore agrees with comments stating that workers without required information and training may be unaware of their opportunities and authorities to participate in hazard prevention, and that the lack of worker understanding will inevitably lead to less participation. Therefore, to ensure that employees are regularly reminded that RMP information is available to them, owners and operators of all Program 2 and

Program 3 processes will be required to provide an annual written or electronic notice to employees indicating that RMP information is available.

The Agency also believes that management, employees, and their representatives involved in the process could benefit from training on employee participation plans to ensure these facility stakeholders are aware of the information included in the plans or otherwise available. A more thorough understanding through the training may help reduce unvalidated non-compliance reports, some of which commenters indicated could become a concern associated with this noncompliance reporting provision. Ultimately, EPA expects training on employee participation plans will help employees identify, and owners and operators correct, issues that may prevent and mitigate accidents.

11 Proposed Modifications and Amplifications to Emergency Response Requirements

11.1 Proposed approach

Comments related to proposed community notification of RMP accident requirements are reflected in Section 11.2 below, and comments related to community emergency response plan amplifications are reflected in Section 11.4 below.

General comments on emergency response not related to EPA's proposal

Comment 11.1-01: Several commenters provided suggestions to EPA related to emergency response without referencing EPA's proposed rule.

One commenter urged EPA to communicate directly and provide information and training to local health departments, health care providers and facilities, and hospital systems, particularly around RMP facilities, to ensure front-line responders can protect themselves and prevent further exposure to the surrounding communities, and to strengthen disaster readiness and enhance national health security (0209).

One commenter stated facilities should be required to be involved in community response planning and reiterated the need for an element of accountability through enforcement for non-compliant facilities (0403). Another commenter stated the emergency response procedures should be developed with community input to assist facilities in learning what public engagement measures are most accessible and timely, as facilities have historically not accounted for accessibility and timing needs of nearby communities (0444). Another commenter emphasized the importance of public engagement to ensure the community's needs for notification are met (0444).

One commenter shared that one of the things they see over and over again when dealing with emergency responses is the lack of evacuation orders. The commenter highlighted that every time they have responded and tried to help local communities, they notice that the evacuation orders come late and are not comprehensive enough. The commenter believes that local governments are not providing enough protections during and after the disaster to protect public health (0157).

A couple commenters shared examples of the impact the delayed emergency responses had on them. One commenter shared how the Environmental Protection Division of the Georgia Department of Natural Resources has failed to respond to the release of toxic chemicals from the Georgia Pacific Cellulose pulp mill. One commenter stated that they have requested updated

emergency plans that include catastrophe event drills for new community members, but have not received a response from the local government authorities. One commenter highlighted the poor emergency response after the Chemtool disaster (0157).

One commenter stated RMP facilities should be required to evaluate and fix aging infrastructure to ensure an effective incident management and emergency response (0456).

One commenter suggested that an owner or operator should be required to conduct an exercise of the stationary source's emergency response notification mechanisms (0148).

One commenter stated the proposed rule fails address good emergency response practices to minimize onsite and offsite impacts to human health, safety, and the environment, and suggested including the Ammonia Safety and Training Institute One Plane emergency response best practices in EPA guidance to establish a bare minimum emergency response best practice (0137).

Another commenter said that while the proposed rule does list key measures to enhance emergency response coordination (e.g., within the structure of the LEPCs at the community level), it fails to take the next step to address good emergency response best practices. The commenter suggested EPA work with the Ammonia Safety and Training Institute (ASTI), who, over the last 34 years, has worked with industry, emergency responders, and government regulatory agencies to set up good emergency response best practices (0158).

Another commenter stated that the language for EPA's RMP program versus AWIA conflicts on the type of plans required for water facilities. The commenter explained that AWIA requires that no later than six months after certifying completion of its risk and resilience assessment, each system must prepare or revise an emergency response plan that incorporates the findings of the assessment. The commenter stated that the RMP rule indicates a stationary source stationary source's emergency response plan if one exists (40 CFR 68.93(b)). Since water facilities are often subject to RMP, the commenter recommended that the emergency planning requirements for AWIA and RMP align (0165).

> **EPA Response:** The Agency appreciates the comments on the RMP emergency response provisions. While these comments are not specific to scope of the proposal, EPA will consider these areas for future enhancements to the RMP regulations or guidance.

General comments on emergency response requirements

Comment 11.1-02: Multiple commenters expressed general support for the proposed modifications of emergency response requirements (0151, 0209, 0250, 0257, 0444, 0456, 0460).

One commenter supported the response planning provisions to cover at a minimum all Program 2 and Program 3 facilities (0460).

> **EPA Response:** EPA appreciates the commenters' support.

Release detection

Comment 11.1-03: Two commenters suggested deleting "perimeter monitor technologies" or rewording "their process area detectors and perimeter monitor technologies and models in use to detect" to "effective means to monitor levels of" (0184, 0237).

> EPA Response: The language described by the commenter was language EPA used in the SCCAP preamble to describe more detailed information EPA intends to collect in response to the regulatory requirement at 40 CFR 68.170(e)(5) and 68.175(e)(5) for

respective Program 2 and Program 3 processes to report in the RMP, "monitoring and detection systems in use." EPA did not propose and therefore is not finalizing changes to the regulatory text at 40 CFR 68.170(e)(5) and 68.175(e)(5).

To better understand electronic detection methodologies available and in use among RMP facilities, EPA will plan to revise its online RMP submission system, RMP*eSubmit, for owners and operators to simply input, in an open text field in the risk management plan, specific information on their process area detectors and perimeter monitor technologies and models in use to detect RMP-regulated substances.

Comment 11.1-04: Some of the commenters discussed the need for leak detection (0250, 0252, 0264, 0269). A couple of commenters stated that EPA should require process monitoring, real-time fenceline air monitoring, and leak detection at facilities with the most hazardous chemicals on-site, with real-time monitoring reports online and directly to EPA (0151, 0456).

Conversely, several commenters also expressed concern about release detection provisions related to emergency response (0184, 0233, 0262, 0275). One of the commenters stated that the current RMP program sufficiently addresses the need for detector and perimeter monitors and requiring outside "perimeter monitor technologies" would not result in actionable information especially for chemicals that are lighter than air such as ammonia, and the requirement should be removed from the Proposed Rule (0184). Another commenter stated that EPA provides no proposed regulatory text to indicate how the requirement for Program 2 and 3 facilities to input specific information on process area detectors and perimeter monitors and models will be incorporated into existing requirements. The commenter said that EPA articulates that facilities would identify the most effective method of release detection of their specific substances from their specific process operations "based upon RAGAGEP." The commenter urged EPA not to finalize a regulatory requirement to identify specific release detection technologies in the Risk Management Plan (0233). One commenter stated that the proposal to require facilities to input specific information on process area detectors and perimeter monitor technologies and models is unclear as to whether EPA is proposing a new requirement or simply requiring facilities to include in their RMP specific information on the facility's existing monitoring technologies. The commenter stated that they would support the latter option, but they would oppose a new requirement to have process area detectors and perimeter monitoring technologies installed. The commenter stated that such a requirement would be duplicative, leak detection and repair systems are already required under RCRA air standards, and OSHA regulations require monitoring technologies for OSHA regulated chemicals (0262). Another commenter said that they would oppose provisions that require a facility to install and operate process area or perimeter monitoring equipment since in many cases, reportable releases can be detected by other means. The commenter had no objection if facilities were required to report on such capabilities when they exist but stated that the proposal is unclear (0275).

EPA Response: Conforming to the performance-based nature of the RMP rule, the existing RMP regulations allow facility owners or operators to choose how they will detect releases at their facility.[143] Due to the numerous RMP-regulated substances—and different technologies and methods available of accurately detecting those substances—EPA expects facilities to identify the most effective method of detecting releases of their specific substances, from their specific process operations, based on RAGAGEP. For

[143] See 40 CFR 68.50(a)(4), (40 CFR 68.65(d)(1)(viii)), (40 CFR 68.67(c)(3)).

example, EPA would expect facilities with anhydrous ammonia in ammonia refrigeration systems to adopt IIAR 9–2020, ‘‘Minimum System Safety Requirements for Existing Closed-Circuit Ammonia Refrigeration Systems’’ (specifically, section 7.3.12)[144], to address the specific requirements for ammonia detection and alarms in machinery rooms. For water and wastewater treatment facilities using gaseous chlorine, EPA would expect adoption of the Chlorine Institute’s ‘‘Pamphlet 73, Atmospheric Monitoring Equipment for Chlorine.[145]

As explained in the SCCAP proposal, when reporting in their risk management plans, owners and operators can select up to four categories that apply to how releases are detected from their processes: ‘‘process area detectors’’, ‘‘perimeter monitors’’, ‘‘none’’, or ‘‘other monitoring/detection system in use’’. When process area detectors or perimeter monitors are selected, no further information is collected. To better understand electronic detection methodologies available and in use among RMP facilities, EPA will plan to revise its online RMP submission system, RMP*eSubmit,[146] for owners and operators to simply input, in an open text field in the risk management plan, specific information on their process area detectors and perimeter monitor technologies and models in use to detect RMP-regulated substances. This final rule will not change the regulatory text (40 CFR68.170(e)(5) and 68.175(e)(5)) which require respective Program 2 and Program 3 processes to report in the RMP, “monitoring and detection systems in use.”

Lastly, regarding providing real time air quality data to the public, EPA acknowledges the need to consider expanding fenceline monitoring requirements for RMP-regulated facilities to provide real time data to local responders and the public. EPA took comment on this in the proposal and is reviewing the comments received in consideration for a future rulemaking.

11.2 Community notification of RMP accidents and information for notifying the public

Support for proposed requirement to provide timely data to first responders

Comment 11.2-01: A couple of the commenters specified supporting the requirement of facilities to develop procedures to inform the public and appropriate authorities about accidental releases (0257, 0444, 0451).

One commenter stated that any stationary source subject to EPA RMP rule has the responsibility to ensure the capability of the emergency response actions exist to address an accidental release from their site and must ensure that either local emergency response agency can respond. The commenter added that the burden solely needs to be on the stationary source (0173).

EPA Response: EPA appreciates the commenter’s support. For the purposes of this rule, regulated facilities which have accidental releases are responsible for ensuring a prompt emergency response to any release at their facility’s covered processes in order to protect human health and the environment. As discussed in the proposal, if local public responders are not capable of providing such a response, the owner or operator is

[144] IIAR, *ANSI/IIAR Standard 9–2020* (2020).

[145] The Chlorine Institute, *Pamphlet 73, Atmospheric Monitoring Equipment for Chlorine* (2021), https://bookstore.chlorineinstitute.org/pamphlet-73-atmospheric-monitoring-equipment-for-chlorine.html?Session_ID=66da3abed669d2ecb4448e5c1c17ba5e

[146] https://www.epa.gov/rmp/rmpesubmit.

ultimately responsible for ensuring effective emergency response to any release at their facility occurs.

Opposition or suggested revisions to proposed requirement to provide timely data to first responders

Comment 11.2-02: A few commenters stated that the requirement to provide "necessary entities" with "accurate and timely data" is duplicative and vague, and urged EPA to remove this provision (0180, 0205, 0226, 0458). Some commenters added facilities are already required to notify and provide information of certain releases to the National Response Center (NRC), SERCs, and LEPCs in Title Ill of Superfund Amendments and Reauthorization Act under the Emergency Planning and Community Right-to-Know Act and Comprehensive Environmental Response, Compensation, and Liability Act (0205, 0217, 0234). A couple commenters stated that under existing regulations, facilities are already coordinating their emergency action plan with local emergency responders and under the Emergency Planning and Community Right-to-Know Act, they are submitting Tier 1 and/or Tier 2 reports to SERCs, LEPCs, and local fire departments (0202, 0227).

Another commenter stated that these provisions lack justification. The commenter added that EPA does not explain how RMP facilities can ensure a community notification system is available or how community emergency notification systems function (0272).

A couple of commenters stated that the provision to provide necessary entities with accurate and timely data related to accidental release information is vague and duplicative of the requirement to provide this release information to the National Response Center (NRC), State Emergency Response Commissions (SERC), and LEPCs in Title III of Superfund Amendments and Reauthorization Act (SARA) under the Emergency Planning and Community Right-to- Know Act (EPCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The commenters urged EPA to remove this provision (0217, 0234).

EPA Response: EPA disagrees that the provision is duplicative and vague. EPA believes that the provision offers the appropriate level of flexibility that may be needed during accidental release events. As stated in the proposal, the expectation for this provision is for owners and operators to provide initial information about their release to local responders as soon as possible, and to provide more accurate data or correct erroneous data that had been previously relayed when new information is available. EPA acknowledges that the time to gather and update release information can vary widely depending on the circumstances, extent and consequences of the release, and the status of individuals conducting the investigation during the accident. EPA also acknowledges that local responders may be different entities (e.g., fire department, Hazmat team, police, etc.) depending on the community. The initial and follow-up information required by this provision will help facilitate proper communication among responders and the facility to ensure the appropriate type and level of response is provided during a release.

In response to the comment that facilities are already required to notify and provide information about imminent releases to the NRC, SERCs, and LEPCs under CERCLA and EPCRA, EPA has amended the language in the final rule to allow existing release notification requirements to satisfy this provision, if applicable. EPA acknowledges that EPCRA section 304, CERCLA section 103, and the CSB have similar Federal reporting requirements, and that there may also be State-only requirements for release notification

and reporting that could meet this requirement. Therefore, EPA believes the amendment to this provision can help prevent any undue burden in complying with multiple requirements when a chemical release occurs. EPA believes this provision is particularly useful in closing regulatory gaps for chemical release notification where other statutory requirements do not apply. For example, reporting under EPCRA section 304 is required only to the SERC and LEPC, and reporting under CERCLA section 103 is required only to the NRC. Additionally, not all RMP regulated substances are EPCRA extremely hazardous substances and/or CERCLA hazardous substances (e.g., propane, butane, pentane, and hydrogen are regulated under RMP, but not under EPCRA section 304 or CERCLA section 103); thus, while there might be some overlap, some chemicals will require only Federal release reporting under RMP. Therefore, EPA does agree with the recommendation offered in the comments to prevent undue burden in complying with multiple requirements when a chemical release occurs. EPA is therefore finalizing the proposed provision with the following modification—revising the proposed provisions for 40 CFR 68.90(b)(3) and 68.95(c) to allow existing notification mechanisms or regulations to satisfy the RMP release notification requirements if applicable.

In response to the comment that these provisions lack justification, EPA maintains that the requirement to provide timely release data to responders in the case of an accidental release will help ensure that local responders have sufficient information to make the best decision on whether community notification is appropriate. Further, while EPA acknowledges that EPCRA section 304, CERCLA section 103, and the CSB have similar Federal reporting requirements, and that there may also be State-only requirements for release notification and reporting that could meet this requirement, EPA believes this provision is particularly useful in closing regulatory gaps for chemical release notification where other statutory requirements do not apply.

Comment 11.2-03: Several commenters expressed concern that requirements to coordinate with LEPCs in the regulation will conflict with current OSHA regulations. The commenters added that multiple standards create opportunities for uneven enforcement between agencies and confusion among facilities (0180, 0217, 0226, 0234, 0458).

EPA Response: Under 40 CFR 68.93, owners and operators are already required, among others, to annually coordinate response needs with local emergency planning and response organizations to determine how the facility is addressed in the community emergency response plan.

Further, for many years, including rulemakings finalized in 2017 and 2019, EPA and OSHA have established a regular meeting to consult with the DOL and coordinate the PSM and RMP programs, including but not limited to interpretation of overlapping regulatory provisions and the development of potential amendments to the rules. During several of these regular meetings (including but not limited to meetings on various dates in Appendix A to this document), staff from the agencies discussed the development of the RMP SCCAP Rule and potential issues to be addressed by EPA. These discussions included the emergency response requirements to ensure the RMP regulations do not create conflicting requirements with OSHA's PSM standard.

Comment 11.2-04: One commenter stated that the proposed rule should only require notification of releases potentially impacting an offsite community (0238).

EPA Response: After review of comments, EPA maintains that the requirement to provide timely release data to responders in the case of an accidental release will help ensure that local responders have sufficient information to make the best decision on whether community notification is appropriate. EPA realizes that when facility owners and operators first detect a release, they may not have all the details of the situation. However, EPA expects RMP facility owners and operators to be familiar enough with their regulated substances, processes, and potential release scenarios to promptly notify the public to support timely protective actions. EPA would also expect owners and operators to provide follow-up information about the release to local responders as soon as possible, to either provide more accurate data or to correct erroneous data that had been previously relayed. EPA expects that the annual emergency response coordination meetings (40 CFR 68.93) and notification exercises (40 CFR 68.96(a)) will help to ensure that these plans and procedures are discussed and practiced.

The Agency recognizes the possible tradeoff between early notification and accuracy. In some cases, a potential or actual release may be averted or mitigated within the facility well before any exposure to toxic fumes, intense heat, or blast overpressure occurs to the community. Early notification, or even ‘‘false positives’’ have the potential to disrupt communities and divert public response resources. Nevertheless, given the gravity of potential accidental releases of regulated substances from processes subject to the RMP rule—and in light of repeated expressions of concern heard at the 2021 listening sessions and 2022 public hearings—EPA believes its final amendments will provide a greater level of comfort and overall safety to communities surrounding RMP facilities.

Comment 11.2-05: One commenter listed specific information that should be included in a public notification: chemical(s) released; estimated time it began; estimated quantity released; potential quantity to be released; and potential consequences to human health and the environment (0223).

EPA Response: For emergency response provisions finalized in this rule related to timely data being provided to emergency responders at 68.90(b)(3) and 68.95(c), EPA agrees with commentors. Appropriate, timely data and information to local responders, detailing the current understanding and best estimates of the nature of the release should include the regulated substance released, estimated time the release began, estimated quantity already released and potential quantity to be released, and potential consequences of the release to human health and the environment. EPA realizes that when facility owners and operators first detect a release, they may not have all the details of the situation. However, EPA expects RMP facility owners and operators to be familiar enough with their regulated substances, processes, and potential release scenarios to promptly notify the public to support timely protective actions. EPA would also expect owners and operators to provide follow-up information about the release to local responders as soon as possible, to either provide more accurate data or to correct erroneous data that had been previously relayed.

Support for proposed requirements for ensuring a community notification system is in place

Comment 11.2-06: Several commenters supported a public emergency notification system provision of the proposed rule (0141, 0143, 0151, 0179, 0191, 0208, 0209, 0211, 0240, 0243, 0252, 0255, 0257, 0264, 0269, 0383, 0413, 0444, 0460). One commenter explained current

notification procedures are inadequate, with some community members not learning about a release until hours afterward (0444).

One commenter specified they do not oppose a requirement that nonresponding facilities work with local, state, and federal officials to ensure a community notification system is in place (0275). One commenter said these requirements to strengthen emergency notification are critical to saving the lives of workers and fenceline communities and are necessary to advance EPA's environmental justice goals and provide these communities with the tools and information they need to prepare for dangerous incidents (0456).

One commenter requested insurances that workers and community members are not only adequately informed of accident risks and measures to take when accidents occur, but also involved in the design of accident education and response programs. The commenter suggested education programs for workers and the public, public online access to facility emissions monitoring and accident reports, continuous accident monitoring and detection systems, and a rapid accident warning system within the facility and in the surrounding community (0151).

One commenter suggested that the final rule should require enhanced community notification and emergency response. The commenter stated that this will enhance post-incidence response and should be done without waiting for more disasters to occur (0139).

One commenter offered examples from New Castle, Delaware, and Houston, Texas, where environmental justice communities were not adequately notified of emergency events (0270).

> **EPA Response:** After review of comments, EPA maintains that the requirement to ensure that, during a release, all necessary resources are in place for a community notification system to function and operate as expected will help protect the public from accidental releases. EPA's intention for this provision has always been for facility owners and operators to work with the local responders to ensure that, during a release, a notification system is in place that will notify the public of the impending situation. EPA is therefore finalizing the proposed provision with the following modification—revising the proposed provisions for 40 CFR 68.90(b)(6) and 68.95(a)(1)(i) to specify that the owner or operator should partner with local response agencies to ensure a community notification system is in place and to document the collaboration. EPA is not requiring the use of this specific system to be the one solely used to notify the public. At this time, EPA is also not requiring further specifics for working with and keeping the community informed of potential releases at the facility. EPA does however encourage facility owners and operators to work with response agencies to determine how best to alert a potentially affected community about impending chemical releases.

Revisions to proposed requirements for ensuring a community notification system is in place

Comment 11.2-07: One commenter stated that while they support the presence of State and/or local alerting authorities, EPA should consider that this notification system may not be appropriate for all communities, especially those that are dealing with systemic barriers to safety and justice (0444). A few commenters suggested that, to remove the burden on facilities to ensure the notification systems of local responders, EPA should change "and ensure that" to "and *partner* to ensure that" (0184, 0237).

> **EPA Response:** In response to comments that the language in this provision should be changed from "and ensure that" to "and partner to ensure that" a community notification

system is in place, EPA has amended the language as suggested. It was not EPA's intention in the proposed provision to transfer inherent government responsibilities to RMP regulated facilities. Rather, EPA's intention for this provision has always been for facility owners and operators to work with the local responders to ensure that, during a release, a notification system is in place that will notify the public of the impending situation. The Agency expects that in most cases government emergency response officials will be the entities providing the notice. However, for the purposes of this rule, regulated facilities which have accidental releases are responsible for ensuring a prompt emergency response to any release at their facility's covered processes in order to protect human health and the environment. As discussed in the proposal, if local public responders are not capable of providing such a response, the owner or operator is ultimately responsible for ensuring effective emergency response to any release at their facility occurs.

Comment 11.2-08: Instead of the responsibility for notifying the public, several commenters stated that facilities should continue to only be required to notify emergency responders and alert the community notification system in the event of an emergency (0184, 0207, 0217, 0223, 0224, 0234, 0237, 0238, 0275).

EPA Response: The Agency expects that in most cases government emergency response officials will be the entities providing the notice. However, for the purposes of this rule, regulated facilities which have accidental releases are responsible for ensuring a prompt emergency response to any release at their facility's covered processes in order to protect human health and the environment. As discussed in the proposal, if local public responders are not capable of providing such a response, the owner or operator is ultimately responsible for ensuring effective emergency response to any release at their facility occurs, which includes notifying both emergency responders and the public.

EPA expects the partnership between facility owners and operators and emergency response officials to ensure a public notification system is in place should occur at least during annual coordination discussions under 40 CFR 68.93. Under 40 CFR 68.93, owners and operators are required, among others, to annually coordinate response needs with local emergency planning and response organizations to determine how the facility is addressed in the community emergency response plan. A component of the community emergency response plan is public notification of chemical releases, and it is expected that this component will be discussed and documented by the facility owner or operator as part of the annual coordination obligations.

Comment 11.2-09: A few commenters specified facilities designated non-responding should be exempt from the requirement to develop or implement a community notification system (0188, 0237, 0261). One commenter added, however, that this may be appropriate for locations without resources and staff to establish and maintain a plan (0261). A couple commenters specified small businesses tend to be non-responding facilities (0188, 0237). One commenter added these facilities do not have the control or authority to impose a notification system (0188).

EPA Response: EPA's intention for this provision, for responding and non-responding facilities, regardless of size, has always been for facility owners and operators to work with the local responders to ensure that, during a release, a notification system is in place that will notify the public of the impending situation. EPA is therefore finalizing the

proposed provision with the following modification – revising 40 CFR 68.90(b)(6) and 68.95(a)(1)(i) to specify that the owner or operator should *partner* with local response agencies to ensure a community notification system is in place and to document the collaboration. The Agency expects that in most cases government emergency response officials will be the entities providing the notice. However, for the purposes of this rule, regulated facilities which have accidental releases are responsible for ensuring a prompt emergency response to any release at their facility's covered processes in order to protect human health and the environment. As discussed in the proposal, if local public responders are not capable of providing such a response, the owner or operator is ultimately responsible for ensuring effective emergency response to any release at their facility occurs.

EPA expects the partnership between facility owners and operators and emergency response officials to ensure a public notification system is in place should occur at least during annual coordination discussions under 40 CFR 68.93. Under 40 CFR 68.93, owners and operators are required, among others, to annually coordinate response needs with local emergency planning and response organizations to determine how the facility is addressed in the community emergency response plan. A component of the community emergency response plan is public notification of chemical releases, and it is expected that this component will be discussed and documented by the facility owner or operator as part of the annual coordination obligations.

Comment 11.2-10: One commenter stated EPA should require facilities to broadcast timely, multilingual community notifications in emergency situations to fenceline communities, as current notifications are inadequate and too delayed. The commenter stated the proposal fails to require fenceline monitoring, a critical tool for detecting unplanned released and monitoring incident emissions. The commenter added that RMP facilities must be accountable to the fenceline communities that are most vulnerable to a chemical incident (0219).

EPA Response: In this rule, EPA is finalizing provisions to provide timely data and information detailing the current understanding and best estimates of the nature of the accidental release and to partner with these response agencies to ensure that a community notification system is in place to warn the public within the area potentially threatened by the accidental release. EPA expects notifications to be understood by community members potentially affected and therefore would expect multilingual notifications if necessary. EPA encourages facility owners and operators to work with response agencies to determine how best to alert a potentially affected community about impending chemical releases. The Agency notes that IPAWS is a well-known option as a notification system compliant with this provision. This system provides authenticated emergency and life-saving information to the public through mobile phones using wireless emergency alerts. It also provides alerts to radio and television via the Emergency Alert System and on the National Oceanic and Atmospheric Administration's Weather Radio.[147] Further, the Emergency Alert System devices found at radio, TV and cable stations can support multiple languages and wireless Emergency Alerts can support both English and Spanish.[148]

[147] FEMA, ''Integrated Public Alert & Warning System,'' accessed October 25, 2023, https://www.fema.gov/emergency-managers/practitioners/integrated-public-alert-warning-system.

Regarding providing real time air quality data to the public, EPA acknowledges the need to consider expanding fenceline monitoring requirements for RMP-regulated facilities to provide real time data to local responders and the public. EPA took comment on this in the proposal and is reviewing the comments received in consideration for a future rulemaking.

Comment 11.2-11: Further, a commenter suggested that EPA require a follow-up notice of the actual final release information in the short-term in addition to the public meeting requirement (0211).

EPA Response: While EPA encourages follow-up communication with local responders and the public after conclusion of response activities, EPA does not believe that an interim written follow-up- notice of the actual final release information should be required after the response ends. EPA believes that the public meeting requirement at 40 CFR 68.210 and the five-year accident history requirement at 40 CFR 68.42 provide adequate time for the facility to gather and finalize information to share with the public. That being said, the Agency notes that sources are required to update their accident histories in their RMPs within 6 months of an RMP-reportable accident (40 CFR 68.195(a)). Additionally, many States separately require follow-up release reporting within a short time after response activities are concluded (e.g., 30 days), and this information may be publicly available.

Comment 11.2-12 One commenter suggested an air siren could notify the immediate area in case of an accidental release, allowing first responders to prepare, schools to keep children inside, and residents to close their windows and take other precautions (0191).

EPA Response: EPA is not requiring the use of this specific system to be the one, solely used to notify the public. EPA encourages facility owners and operators to work with response agencies to determine how best to alert a potentially affected community about impending chemical releases.

Opposition to proposed requirements for ensuring a community notification system is in place

Comment 11.2-13: Numerous commenters opposed the language requiring RMP facilities to be responsible for community warning systems and notification of emergencies to the local community (0184, 0188, 0193, 0202, 0205, 0207, 0210, 0215, 0217, 0223, 0224, 0229, 0232, 0233, 0234, 0237, 0238, 0253, 0261, 0275). Numerous commenters stated the requirements of public notification are better suited to third parties, LEPCs, and government agencies already tasked with this coordination (0180, 0184, 0193, 0202, 0205, 0207, 0210, 0215, 0217, 0223, 0226, 0230, 0232, 0233, 0234, 0237, 0238, 0253, 0261, 0262, 0458). Several stated these agencies have the resources and infrastructure needed for disseminating emergency information to a community and coordinating local response (0180, 0205, 0226, 0230, 0458, 0233, 0234). One commenter said that the proposed rule would improperly place responsibility on facilities for response requirements that are outside of their control (0215).

Several commenters opposed the language requiring RMP facilities to be responsible for community warning systems and notification of emergencies to the local community (0180,

[148] FEMA, ‘‘Alerting People with Disabilities and Access and Functional Needs,’’ accessed October 25, 2023, https://www.fema.gov/es/emergency-managers/practitioners/integrated-public-alert-warning-system/public/alerting-people-disabilities.

0181, 0193, 0205, 0226, 0262, 0458). For instance, one commenter asserted that the language makes it seem like the RMP facilities would need to notify the public of any incidences of an RMP chemical release, even those contained on site (0262).

Some commenters stated that multiple alerts coming from RMP facilities in addition to local response and government agencies is duplicative and may cause unnecessary confusion, reduce effectiveness, and cause coordination issues in communities (0184, 0232, 0233, 0229, 0237, 0238).

One commenter expressed that the requirement of RMP facilities to notify the public and local emergency response of any release of RMP regulated substances would cause unnecessary public disruption and risk normalization, to the point that notifications may start to be ignored, since release events are currently reported based on facility permits, threshold quantities, and/or offsite consequences (0210).

Another commenter expressed concern that EPA lacks a meaningful justification for the community notification provisions. The commenter stated that it is impractical to make facilities responsible to ensure that community notification systems are working and how the proposed community notification provisions would be implemented (0268).

Another commenter cited that facility notification to the community is not well-defined and that should be the responsibility of the LEPC to initiate any community warning message (0181).

> **EPA Response:** It was not EPA's intention in the proposed community notification system provision to completely transfer inherent government responsibilities to RMP regulated facilities. Rather, EPA's intention for this provision has always been for facility owners and operators to work with the local responders to ensure that, during a release, a notification system is in place that will notify the public of the impending situation. However, EPA maintains that the requirement to ensure that, during a release, all necessary resources are in place for a community notification system to function and operate as expected will help protect the public from accidental releases. For that reason, the final rule is revised from the proposal in that 40 CFR 68.90(b)(6) and 68.95(a)(1)(i) specify that the owner or operator should *partner* with local response agencies to ensure a community notification system is in place, and to document the collaboration. The Agency expects that in most cases government emergency response officials will be the entities providing the notice. However, for the purposes of this rule, regulated facilities which have accidental releases are responsible for ensuring a prompt emergency response to any release at their facility's covered processes in order to protect human health and the environment. As discussed in the proposal, if local public responders are not capable of providing such a response, the owner or operator is ultimately responsible for ensuring effective emergency response to any release at their facility occurs.
>
> EPA expects the partnership between facility owners and operators and emergency response officials to ensure a public notification system is in place should occur at least during annual coordination discussions under 40 CFR 68.93. Under 40 CFR 68.93, owners and operators are required, among others, to annually coordinate response needs with local emergency planning and response organizations to determine how the facility is addressed in the community emergency response plan. A component of the community emergency response plan is public notification of chemical releases, and it is expected

that this component will be discussed and documented by the facility owner or operator as part of the annual coordination obligations.

Comment 11.2-14: One commenter suggested that EPA provide additional clarification on the extent of facilities' obligations. The commenter said that it is unclear whether requirements for assurance that a community notification system is in place applies to facilities' notification system or to external community systems (0267).

EPA Response: EPA's intention for this provision has always been for facility owners and operators to work together with the local responders to ensure that, during a release, a notification system is in place that will notify the public of the impending situation. For that reason, the final rule is revised from the proposal in that 40 CFR 68.90(b)(6) and 68.95(a)(1)(i) specify that the owner or operator should partner with local response agencies to ensure a community notification system is in place, and to document the collaboration.

The Agency expects that in most cases government emergency response officials will be the entities providing the notice. However, for the purposes of this rule, regulated facilities which have accidental releases are responsible for ensuring a prompt emergency response to any release at their facility's covered processes in order to protect human health and the environment. As discussed throughout this section and in the proposal, if local public responders are not capable of providing such a response, the owner or operator is ultimately responsible for ensuring effective emergency response to any release at their facility occurs.

EPA expects the partnership between facility owners and operators and emergency response officials to ensure a public notification system is in place should occur at least during annual coordination discussions under 40 CFR 68.93. Under 40 CFR 68.93, owners and operators are required, among others, to annually coordinate response needs with local emergency planning and response organizations to determine how the facility is addressed in the community emergency response plan. A component of the community emergency response plan is public notification of chemical releases, and it is expected that this component will be discussed and documented by the facility owner or operator as part of the annual coordination obligations.

Comment 11.2-15: A few commenters said that while IPAWS are in use in communities nationwide, many facilities are not in areas with these systems (0239, 0275). Furthermore, a few commenters expressed that neither the burden of ensuring IPAWS capabilities nor providing direct notification to the public should fall on RMP facilities (0238, 0239, 0275). Another commenter stated that IPAWS does not accept information from private entities, only government entities (0275). One commenter stated that while they support the need for a community notification system, they believe EPA should ensure that RMP facilities covered under this rule are in areas already covered by the IPAWS and if so, re-evaluate how this may impact local governments and their ability to allocate resources (0243). One commenter said that FEMA reports 1,600 Federal, State, local, tribal, and territorial authorities use IPAWS to issue alerts and warnings in their jurisdictions (0239).

EPA Response: With regard to specific comments about IPAWS, EPA acknowledges that while IPAWS is not currently operational in all communities, it could be. IPAWS is available in all States statewide, and, if not currently available in certain local

communities, it can be made available if the local designated government authorities apply to be an Alerting Authority.[149] While IPAWS is a well-known option as a notification system compliant with this provision, EPA is not requiring the use of this specific system to be the one solely used to notify the public. EPA encourages facility owners and operators to work with response agencies to determine how best to alert a potentially affected community about impending chemical releases.

Comments on information to share in public notifications

Comment 11.2-17: Several indicated that facilities are already required to notify and provide information of certain releases to the NRC, SERCs, and LEPCs under EPCRA and the CERCLA (0180, 0226, 0458). Several commenters said that the current notification procedures are inadequate in terms of language and timing. The commenters recommended that EPA explicitly require RMP facilities to provide emergency response notifications in all languages appropriate for the surrounding community and they take a multicultural approach in an emergency so that all, regardless of their first language, can be informed in a timely manner and have equitable access to information (0141, 0143, 0157, 0160, 0208, 0209, 0240, 0250, 0252, 0255, 0264, 0269, 0270, 0383, 0402, 0409, 0413, 0444, 0447, 0448, 0452, 0456, 0460). One commenter stated that industry needs to be required to notify residents in any manner that will reach them, whether online, by phone, by mail, or door to door. One commenter stated that if multilingual alerts are not required, the burden of translating will fall on community members, who may not be trained in best practices for these types of warning systems (0240).

Several commenters stressed the need for real-time, multilingual emergency notification and response plans for community members living near facilities (0156, 0270, 0273, 0331, 0402, 0409).

Another commenter said that local communities should be given as much warning as possible to evacuate, and multilingual messaging, including evacuation instructions, is important in multilingual communities and environmental justice concerns (0402).

One commenter also stated that a list of high-risk facilities must be maintained if they encounter a catastrophic event (0164).

EPA Response: In response to the comment that facilities are already required to notify and provide information about imminent releases to the NRC, SERCs, and LEPCs under CERCLA and EPCRA, EPA has amended the language in the final rule to allow existing release notification requirements to satisfy the emergency response provision for providing timely release data to responders, if applicable. EPA acknowledges that EPCRA section 304, CERCLA section 103, and the CSB have similar Federal reporting requirements, and that there may also be State-only requirements for release notification and reporting that could meet this requirement. Therefore, EPA believes the amendment to this provision can help prevent any undue burden in complying with multiple requirements when a chemical release occurs. EPA believes this provision is particularly useful in closing regulatory gaps for chemical release notification where other statutory requirements do not apply. For example, reporting under EPCRA section 304 is required

[149] A jurisdiction with the designated authority to alert and warn the public when there is an impending natural or human-made disaster, threat, or dangerous or missing person; https://www.fema.gov/emergency-managers/practitioners/integrated-public-alert-warning-system/public-safety-officials/sign-up.

only to the SERC and LEPC, and reporting under CERCLA section 103 is required only to the NRC. Additionally, not all RMP regulated substances are EPCRA extremely hazardous substances and/or CERCLA hazardous substances (e.g., propane, butane, pentane, and hydrogen are regulated under RMP, but not under EPCRA section 304 or CERCLA section 103); thus, while there might be some overlap, some chemicals will require only Federal release reporting under RMP.

EPA expects notifications to be understood by community members potentially affected and therefore would expect multilingual notifications if necessary. EPA is not requiring the use of this specific system to be the one solely used to notify the public nor maintenance of a high risk list but encourages facility owners and operators to work with response agencies to determine how best to alert a potentially affected community about impending chemical releases. The Agency notes that IPAWS is a well-known option as a notification system compliant with this provision. This system provides authenticated emergency and life-saving information to the public through mobile phones using wireless emergency alerts. It also provides alerts to radio and television via the Emergency Alert System and on the National Oceanic and Atmospheric Administration's Weather Radio.[150] Further, the Emergency Alert System devices found at radio, TV and cable stations can support multiple languages and wireless Emergency Alerts can support both English and Spanish.[151]

Comment 11.2-18: One commenter stated that while the real-time notifications are important, EPA should consider including more details on what actions need to be taken by communities. Some people may not know what it means to seek shelter, especially if they live in homes that are vulnerable to the impacts of hazards (0157).

Another commenter added that in addition to real-time notifications and clear directions, EPA also needs to communicate what is being done to lower the risk and prevent further incidents (0157). One commenter shared an example of how they were not notified about a hazardous release until two weeks after the release. The commenter stated that the facility did not notify the commenter about the accident or give any safety directions (0157).

Another commenter recommended that emergency response plans should be written to include a public information section that details instructions on how the public should respond to emergency events and recognize symptoms of hazardous substance exposure (0165).

One commenter recommended EPA improve their community notification systems, especially for non-RMP facilities (0157).

EPA Response: The Agency would like to note that community emergency response plans contain useful information for the public to learn how RMP facility processes are accounted and planned for if there is an RMP-regulated accidental release. According to 40 CFR 68.90(b)(1) and 40 CFR 68.95(c), respective nonresponding and responding facilities are currently required to be coordinated with the community emergency response plan developed under EPCRA Section 303, 42 U.S.C. 11003, ''Comprehensive

[150] FEMA, ''Integrated Public Alert & Warning System,'' accessed October 25, 2023, https://www.fema.gov/emergency-managers/practitioners/integrated-public-alert-warning-system.

[151] FEMA, ''Alerting People with Disabilities and Access and Functional Needs,'' accessed October 25, 2023, https://www.fema.gov/es/emergency-managers/practitioners/integrated-public-alert-warning-system/public/alerting-people-disabilities.

Emergency Response Plans.'' The plan is prepared by LEPCs/TEPCs to evaluate the need for resources necessary to develop, implement, and exercise the emergency plan. The plan must include the following:

- Identification of facilities within the emergency planning district, identification of routes likely to be used for the transportation of substances on the list of extremely hazardous substances, and identification of additional facilities contributing or subjected to additional risk due to their proximity to facilities subject to the requirements of EPCRA subchapter I under Title 42, Chapter 116, such as hospitals or natural gas facilities.
- Methods and procedures to be followed by facility owners and operators and local emergency and medical personnel to respond to any release of such substances.
- Designation of a community emergency coordinator and facility emergency coordinators, who shall make determinations necessary to implement the plan.
- Procedures providing reliable, effective, and timely notification by the facility emergency coordinators and the community emergency coordinator to persons designated in the emergency plan, and to the public, that a release has occurred.
- Methods for determining the occurrence of a release, and the area or population likely to be affected by such release.
- Description of emergency equipment and facilities in the community and at each facility in the community subject to the requirements of EPCRA subchapter I under Title 42, Chapter 116, and an identification of the persons responsible for such equipment and facilities.
- Evacuation plans, including provisions for a precautionary evacuation and alternative traffic routes.
- Training programs, including schedules for training of local emergency response and medical personnel.
- Methods and schedules for exercising the emergency plan.

EPA maintains that it is very important to ensure LEPCs or local emergency response officials have the information necessary for developing local emergency response plans. However, EPA believes it is not necessary to specify in the RMP rule the types or format of information that LEPCs or emergency response officials may request. Section 303(d)(3) of the Emergency Planning and Community Right to Know Act already provides the necessary authority to allow LEPCs to request information needed to develop the local emergency response plan. Furthermore, as part of the annual coordination between facilities and local emergency responders, responders may obtain information on the risks presented by covered processes as appropriate. EPA encourages owners and operators to be familiar with all the elements of the community emergency response plan to effectively consider the potential impacts of a chemical release from their facility on the community.

Comment 11.2-19: One commenter stated that real-time air quality data should be made available to the public, and not just select officials (0164).

A couple commenters asserted the importance of information accessibility to local state and Federal air quality experts as well as the public including health impacts from air quality incidents (0164, 0270).

> **EPA Response:** Regarding providing real time air quality data to the public, EPA acknowledges the benefits of expanding fenceline monitoring requirements for RMP-regulated facilities to provide real time data to local responders and the public. EPA took comment on this in the proposal and is reviewing the comments received in consideration for a future rulemaking.

11.3 Accessing emergency response plans

Comment 11.3-01: A couple of commenters said that in particularly rural and remote areas, community plans are difficult to access as LEPCs are under-resourced (0184, 0227). One commenter specified LEPCs are not all created equal or created at all (0205).

One commenter cited that community plans are difficult to access, and local communities are not responsive to dairy processor efforts to increase response plan effectiveness. The commenter added that in the case of a deficient local plan, this would place an unrealistic burden on facilities to address it (0237).

A couple of commenters stated that EPA should instead provide additional training and resources to LEPCs and volunteer first responders in smaller and rural communities with limited staff and resources as tools for communication in RMP facility communities and this can be used to achieve the Agency's goals discussed here (0205, 0227).

One commenter stated EPA should commit to setting up a searchable, online database with current and past substantial harm analyses and facility response plans. The commenter also said that facilities should be required to share information and consult with nearby public drinking water systems (0148).

> **EPA Response:** The Agency realizes community emergency response plans contain useful information for the public to learn how RMP facility processes are accounted and planned for if there is an RMP-regulated accidental release. EPA will consider the comments as it evaluates potential solutions to having the plans more accessible within the scope of the RMP regulations**.**

11.4 Community emergency response plan amplifications

Support for proposed modifications and amplifications to emergency response requirements

Comment 11.4-01: One commenter stated regulated facilities have an obligation to participate in community emergency planning efforts and should be required to report their prevention and mitigation measures to EPA, LEPCs, local first responders, and local emergency managers or face enforcement action. The commenter explained that all RMP facilities must be obligated to share, to some extent, emergency response plans detailing actions, equipment, and communications even if the response is to be minimal to LEPCs (0241).

> **EPA Response:** EPA maintains that it is very important to ensure that Local Emergency Planning Committees (LEPCs) or local emergency response officials have the information necessary for developing local emergency response plans; however, EPA believes it is not necessary to specify in the RMP rule the types or format of information that LEPCs or emergency response officials may request. Section 303(d)(3) of the

Emergency Planning and Community Right to Know Act already provides the necessary authority to allow LEPCs to request information needed to develop the local emergency response plan. Furthermore, as part of the annual coordination between facilities and local emergency responders, responders may obtain information on the risks presented by covered processes as appropriate.

EPA further notes that the modification to 40 CFR 68.90(b)(1) and 68.95(c) in the proposed rule was intended only to include details of EPCRA's community emergency response plan requirements into RMP regulatory text for reference, not to ultimately transfer plan development and implementation responsibility to RMP facilities. Rather, EPA's goal was to make it simpler for RMP-regulated facilities to be knowledgeable about the components of the community emergency response plan to ensure that they understand how their facility's processes could impact the larger community emergency response plan and understand the facility's role in coordination of the required plan provisions. While this proposed modification did not include a new regulatory requirement, EPA acknowledges the confusion expressed by including EPCRA requirements in the RMP regulatory text. Therefore, after reviewing the comments, the Agency has decided not to finalize this proposed regulatory text modification. EPA notes that 40 CFR 68.90(b)(1) and 68.95(c) will continue to reference the statutory citation for the EPCRA community response plan, 42 U.S.C. 11003. EPA encourages owners and operators to be familiar with all the elements of the community emergency response plan to effectively consider the potential impacts of a chemical release from their facility on the community.

Comment 11.4-02: Several commenters supported the change to allow facilities to identify as non-responding but requested the proposal to clarify whether facilities must have neither defensive nor offensive responses to identify as non-responding. The commenters stated that facilities that have defensive responding, but not offensive responding, should be able to identify as a nonresponding facility as they are still reliant on first responders to respond to an incident. The commenters stated that not allowing these facilities to identify as non-responding would disincentivize the adoption of defense response procedures for some facilities and put unrealistic emergency requirements on facilities with only defense response capabilities (0180, 0205, 0217, 0226, 0234, 0458).

A commenter suggested edits to Section 9 Emergency Response of the RMP*eSubmit, which currently lists emergency response planning information and does not include emergency action plan information. The commenter reported that facilities often select yes to the Facility Plan question (*"Does [the] facility have its own written emergency response plan?"*) when they are a non-responding facility with an action plan. The commenter asked EPA to clearly indicate if a facility is responding or non-responding and the program level in the emergency response section of the RMP report, as well as have separate entries for an emergency response plan review date versus an emergency action plan review date. The commenter added that this information will assist local responders to know the facility emergency coordination requirements (0165). One commenter suggested that the RMP*eSubmit tool should allow for multiple individuals to prepare information on behalf of covered facilities (0210).

EPA Response: For facilities with Program 2 or 3 processes, Subpart E designates them as either "responding" facilities or "non-responding" facilities. Responding facilities are those that will use properly trained facility employees (or contractors) to respond to

accidental releases of regulated substances, whereas non-responding facilities are those whose employees will not respond to accidental releases of regulated substances. Non-responding facilities instead rely on local public responders to respond to accidental releases at the source. Under Subpart E, while both responding and non-responding facilities must conduct and document annual coordination activities and annual notification drills, only responding facilities have additional obligations for implementation of an emergency response program.

EPA understands that there is a wide spectrum of planning, preparedness, and response arrangements available to facilities and local communities, and that the two categories of "responding" and "non-responding" facilities do not fully capture this continuum, such as solely being in the offensive or the defensive of a response. As explained above, there is some overlap between the obligations of non-responding and responding facilities. For example, both non-responding and responding facilities must have mechanisms or procedures in place to notify emergency responders about accidental releases, and both types of sources must conduct and document annual coordination activities with local responders. Because the outcome of these coordination activities may result in different types of response arrangements involving regulated facilities and communities, EPA understands that a facility's designation as "responding" or "non-responding" does not, by itself, explain all facets of emergency preparedness and response for the facility.

These designations are still useful, however, because "responding" facilities must meet certain requirements that "non-responding" facilities are not required to meet. Responding facilities must comply with all of the emergency response program provisions of § 68.95, which include developing an emergency response plan, developing procedures for the use, inspection, and testing of emergency response equipment, conducting training for employees in relevant procedures, and updating the emergency response plan to reflect changes at the source. Any facility that plans to use its employees to take offensive response actions as a result of an accidental release at the source – which could include, for example, donning emergency air breathing apparatus in order to enter an area where a toxic gas leak has occurred with the intention of stopping or controlling the release – would be expected to have obtained appropriate equipment and training, and to address these activities in its emergency response program, even if the facility is also relying on local responders to supplement its own response, or to manage off-site response actions such as evacuations and sheltering-in-place. Under § 68.96, responding facilities must also implement an emergency exercise program involving notification, field, and tabletop exercises, whereas non-responding facilities are only required to perform annual notification exercises and are not required to perform field or tabletop exercises.

The rule's emergency response requirements do not specify how responding facilities must respond to accidental releases. EPA recognizes that response strategies for responding sources may vary depending on the source, its location, the number and type of regulated substances and processes, available response resources, the surrounding community, and other factors. Regular coordination between facilities and local responders allows both parties to share information about response plans and resources. This is important because even in situations where regulated sources maintain full emergency response capabilities, local responders would still be responsible for

managing the aspects of the response external to the source, such as community evacuations and sheltering-in-place and responding facilities may also need or request local response resources to assist with on-site aspects of the response.

This SCCAP final rule retains the amendments and reconsideration rule requirement for compliance with the emergency response program requirements of § 68.95 within 3 years of when the owner or operator initially determines that the stationary source is subject to those requirements.

Opposition to proposed emergency response plan amplification provisions

Comment 11.4-03: One commenter said that certain proposed emergency requirements raise feasibility issues (0272).

One commenter stated that EPA should not expand the regulatory language in 40 CFR 68.90(b)(1) and 40 CFR 68.95(c) to be included in the community response plans (0230).

One commenter expressed concern that it is not reasonable to expect facilities to ensure that plans include the features in proposed 40 CFR 68.90(b) (0275). One commenter said that it is inappropriate for EPA to put the responsibility of the community plan on the RMP facility (0253). One commenter reiterated that the RMP facilities should not be solely responsible for the content of community response plans, and existing requirements already require RMP facilities to provide information to inform those plans. The commenter stated implementing this provision would be burdensome, challenging, and time consuming for the facilities (0237).

Some commenters added the new requirements beyond ensuring coordination of emergency response planning with existing local response organizations are unnecessary (0184, 0202, 0227, 0253, 0391, 0460).

Some commenters expressed confusion over the requirement that RMP facilities assume responsibility for an emergency plan only if the LEPC's current plan is inadequate. These commenters further explained that this places the burden of being held accountable on the RMP facility for the adequacy of a plan they have no control over (0184, 0193, 0207, 0229, 0232).

One commenter said that some communities do not have a local organization that can appropriately respond to an emergency, and this could force a facility to have an emergency response plan and require more response-trained employees, a costly burden for smaller facilities (0184).

One commenter stated that the entire language that refers to elements of the community emergency response program amended to § 68.95(c) should be removed (0193).

One commenter stated that it is also not appropriate to suggest that facilities are incorporated into LEPC plans. The commenter added that very few LEPCs prepare a free-standing Community Emergency Response Plan under § 303 of EPCRA. The commenter stated that a majority of LEPCs participate in the Community All Hazards Plan which, while incorporating hazardous materials, is rarely granular enough to include facility-specific preplan, with preplanning being a function of the time and staffing available to the responding agencies (0241).

Another commenter objected to EPA's incorporation into the RMP regulatory text of EPCRA requirements for a community emergency response program that is meant to be implemented by LEPCs. The commenter stated that this is inconsistent and overlaps with EPCRA. The

commenter also recommended that EPA avoid requiring compliance with another statute as part of its RMP program (0188).

> **EPA Response:** EPA notes that the modification to 40 CFR 68.90(b)(1) and 68.95(c) in the proposed rule was intended only to include details of EPCRA's community emergency response plan requirements into RMP regulatory text for reference, not to ultimately transfer plan development and implementation responsibility to RMP facilities. Rather, EPA's goal was to make it simpler for RMP-regulated facilities to be knowledgeable about the components of the community emergency response plan to ensure that they understand how their facility's processes could impact the larger community emergency response plan and understand the facility's role in coordination of the required plan provisions. While this proposed modification did not include a new regulatory requirement, EPA acknowledges the confusion expressed by including EPCRA requirements in the RMP regulatory text. Therefore, after reviewing the comments, the Agency has decided not to finalize this proposed regulatory text modification. EPA notes that 40 CFR 68.90(b)(1) and 68.95(c) will continue to reference the statutory citation for the EPCRA community response plan, 42 U.S.C. 11003. EPA encourages owners and operators to be familiar with all the elements of the community emergency response plan to effectively consider the potential impacts of a chemical release from their facility on the community.

Revisions to proposed emergency response plan amplification provisions

Comment 11.4-04: One commenter stated that there must be some framework to understand what "coordination and cooperation" entails (0241).

One commenter mentioned that the use of "should" in the community response plan renders the entire section as voluntary while the commenter suggested that the section should instead be required (0193). Another commenter also asked for greater clarity over the use of the word "should," rather than "must" (0246). Another commenter recommended reverting back to the previous language of the current language found in 40 CFR 68.90(b)(1), where the list of elements in a community response plan becomes non-mandatory because of the use "should."

> **EPA Response:** EPA notes that the modification to 40 CFR 68.90(b)(1) and 68.95(c) in the proposed rule was intended only to include details of EPCRA's community emergency response plan requirements into RMP regulatory text for reference, not to ultimately transfer plan development and implementation responsibility to RMP facilities. Rather, EPA's goal was to make it simpler for RMP-regulated facilities to be knowledgeable about the components of the community emergency response plan to ensure that they understand how their facility's processes could impact the larger community emergency response plan and understand the facility's role in coordination of the required plan provisions.
>
> While this proposed modification did not include a new regulatory requirement, EPA acknowledges the confusion expressed by including EPCRA requirements in the RMP regulatory text. Therefore, after reviewing the comments, the Agency has decided not to finalize this proposed regulatory text modification. EPA notes that 40 CFR 68.90(b)(1) and 68.95(c) will continue to reference the statutory citation for the EPCRA community response plan, 42 U.S.C. 11003. EPA encourages owners and operators to be familiar

with all the elements of the community emergency response plan to effectively consider the potential impacts of a chemical release from their facility on the community.

12 Emergency Response Exercises

Comments associated with this issue are discussed in the sub-issues below.

12.1 Proposed approach

Support for proposed emergency response exercises

Comment 12.1-01: One commenter stated their support for restoring the emergency response program requirements, including requiring certain facilities to conduct field exercises. The commenter noted that field exercises can help reduce accident impacts by ensuring that emergency response personnel understand their roles in the event of an incident, that local responders are familiar with the hazards at a facility, and that emergency response plans are up to date (0444).

A few commenters expressed support for EPA's efforts to encourage and require facilities to coordinate with LEPCs in circumstances where it is practical (0205, 0226, 0458).

> **EPA Response:** EPA appreciates the commenters' support. EPA wants to ensure that facilities are accountable to the communities in which they are located. One way to do this is to make sure that communities have mechanisms to evaluate the resources and capabilities needed to assist in a response to an accidental release and that they can perform field exercises involving actual emergency response functions to simulated release events.

Applicability of proposed emergency response requirements

Comment 12.1-02: One commenter suggested that EPA should expand the emergency response planning requirements at least to all Program 2 facilities. The commenter noted that this would ensure that additional facilities that could potentially harm the public must participate in exercises (0460).

> **EPA Response:** The RMP regulation requires all facilities with Program 2 or 3 processes to comply with the applicable provisions of 40 CFR Part 68 Subpart E: Emergency Response. While facilities with only Program 1 processes are not required to comply with the requirements of Subpart E, these sources must still ensure that emergency response actions have been coordinated with local emergency planning and response agencies.
>
> Under Subpart E, while both responding and non-responding facilities must conduct and document annual coordination activities and annual notification drills, only responding facilities have additional obligations for implementation of an emergency response program.
>
> EPA is cognizant of the resources (e.g., staffing, cost, expertise) that exercises demand both from stationary sources and from local responders. The final rule does not require Program 2 and 3 facilities to become responding facilities because the Agency believes that regulated sources and local response organizations should work together to implement emergency response plans that are best for the facility and its surrounding

community. In many cases, EPA believes that local responders are better positioned than regulated facilities to respond to accidental releases at the facility. EPA also believes this option would have been costly, particularly for small businesses. EPA further believes the new emergency response requirements added in the 2017 amendments rule and the 2019 reconsideration rule offer opportunities to address some of these concerns, such as coordination meetings with local responders and notification. In particular, EPA believes the annual coordination meeting and notification exercises will provide a wide range of useful outcomes, including information sharing and evaluation of the effectiveness of notification, evacuation, and sheltering systems and procedures. The annual coordination requirement is expected to help make continual improvements to emergency response systems and procedures, as appropriate.

General opposition to proposed emergency response exercise requirements

Comment 12.1-03: Several commenters asserted that EPA should recognize that not every location has a functioning LEPC that can coordinate field exercises with facilities and that clear carve outs should be established (0217, 0234). The commenters suggested that EPA allow facilities to demonstrate a good faith effort to coordinate with LEPCs or demonstrate the absence of an LEPC as exemptions from this requirement (0180, 0188, 0205, 0226, 0458). A couple commenters also stated the proposed rule is unclear on what to do if only some of the agencies agree to an exercise (0229, 0232).

One commenter expressed agreement that emergency response exercises can be valuable, but stated their effectiveness depends on the active engagement of responding agencies. The commenter noted that facilities cannot require responder participation and stated that it seems inappropriate to place a mandate on facilities to conduct an exercise with responders. The commenter also mentioned that many smaller response groups do not have the time or budget to be involved in field exercises and that many local responders have more than one shift (0184). Another commenter asserted that EPA is ignoring the capacity deficiency of many LPECs (0239).

Another commenter stated that the requirement of field exercises is entirely unrealistic for small retail agricultural anhydrous ammonia facilities because these facilities only operate a few weeks out of the year and facility employees and managers do not have adequate training to conduct field exercises nor the resources. The commenter noted that these facilities are generally non-responding and must rely on small and underfunded volunteer rural fire departments. The commenter suggested that if EPA maintains this provision, local emergency responders should be permitted to opt out if they are unable to or choose not to accommodate requesting facilities. The commenter also recommended that EPA withdraw the proposed rule (0245).

EPA Response: EPA understands and agrees with comments that describe the varying capabilities of LEPCs and responding agencies and believes the approach the Agency offers supports those comments. However, the Agency believes even the smallest sources will be able to hold field exercises at least once each decade, and in many cases, EPA expects sources will hold field exercises more frequently. Therefore, the Agency believes the frequency exemption provided in the final rule, which allows facilities and communities that do not have resources to complete field exercises every 10 years to work together to determine a lesser frequency, resolves this concern. The Agency continues to believe that field exercises are an important component of an emergency

response program and therefore believe the requirements outlined in the final rule are more useful than the Agency being more prescriptive about when the frequency would does not apply.

EPA believes various communities have different concerns as to why they would need to conduct field exercises less frequently and therefore does not expect a one-size fits all approach to be appropriate in accommodating those various circumstances. Additionally, EPA understands that there may be cases where local emergency response agencies are unable or unwilling to coordinate with a regulated facility on exercise frequencies. In such cases, the owner or operator may establish appropriate exercise frequencies and plans on their own, provided they meet the minimum requirements set forth in 40 CFR 68.96. The final rule will not specifically require the owner or operator to document unsuccessful coordination attempts, but EPA believes it will be in the owner or operator's best interest to do so and allow the owner or operator to demonstrate their good faith efforts for consultation in the event that an implementing agency requests this information.

Comment 12.1-04: One commenter noted that their members have response plans under the CWA that currently require field exercises. The commenter suggested the final rule should allow facilities to avoid duplication of already existing exercise requirements under other statutes (0223).

EPA Response: The Agency does not want to establish exercise requirements that conflict with other Federal, state, or local laws. In amendments made to the rule in 2017 and 2019, EPA added § 68.96(c) to describe alternative means of meeting exercise requirements. This section allows the owner or operator to meet requirements for notification, field, and/or tabletop exercises either through exercises conducted to meet other federal, state, or local exercise requirements (or under a facility's industry code of practice or another voluntary program) or by responding to an actual accidental release event, provided the exercise or response includes the actions required for exercises under § 68.96, as appropriate. This final rule does not deviate from the current allowance for alternative means of meeting exercise requirements.

Comment 12.1-05: One commenter stated that the requirements to coordinate with LEPCs will conflict with current OSHA regulations. The commenter noted that there should be one standard that facilities can look at to ensure compliance. The commenter mentioned that adding these regulations creates another opportunity for uneven enforcement between agencies and confusion among facilities and recommends that EPA work with OSHA in the adoption of any new regulations (0205).

EPA Response: EPA and OSHA have separate mandates under the Occupational Safety and Health Act (29 U.S.C. 651), the CAA, and the requirements enacted in the CAAA. In the 1990s, both Agencies fulfilled their mandatory duties to promulgate and issue the rules required by CAA sections 112(r)(3)-(5) and 112(r)(7)(B), as well as section 304 of the CAAA. The focus of OSHA's regulations in the PSM standard is on workplace safety, while EPA's focus in the RMP regulations has been primarily on minimizing the public impacts of accidental releases through prevention and response. Today's rule maintains EPA's focus on minimizing the public impacts of accidental releases even as it also reduces impacts on facilities and workers. As explained throughout the proposal and

in this final action, the OSHA PSM standard and EPA RMP regulations are closely aligned in content, policy interpretations, and enforcement. Therefore, since the inception of these regulations, EPA and OSHA have coordinated closely on their implementation in order to minimize regulatory burden and avoid conflicting requirements for regulated facilities. This coordination has continued throughout the development of this rule, including provisions associated with coordination with local responders and LEPCs.

Further, for many years, EPA and OSHA have established a regular meeting to consult with the DOL and coordinate the PSM and RMP programs, including but not limited to interpretation of overlapping regulatory provisions and the development of potential amendments to the rules. During several of these regular meetings (including but not limited to meetings on various dates in Appendix A to this document), staff from the agencies discussed the development of the RMP SCCAP Rule and potential issues to be addressed by EPA, and OSHA's intent to convene an informal stakeholder meeting in October 2022, as it explored potential regulatory amendments.

Comment 12.1-06: A couple commenters noted that EPA provided no identification who it is referring to as the "appropriate Federal [and] State . . . response agencies." The commenters stated that the source would be left to guess whether it contacted the appropriate agencies and obtained sufficient written notification; EPA does not recognize how cumbersome it would be comply with this provision (0229, 0232).

EPA Response: In the final rule, EPA has amended the language to reflect that the consultation required for this provision need only be with local emergency responding agencies. EPA acknowledges that the emergency response exercise program provisions under 40 CFR 68.96(b), only require coordination with local public emergency response officials, and wants to remain consistent with activities that most likely will occur on the local level.

Comment 12.1-07: One commenter stated that EPA is unclear on what is required for local responders to opt out and the standard for determining if the justification is adequate (0239).

EPA Response: The Agency continues to believe that field exercises are an important component of an emergency response program and therefore, this final rule does not include an option under which a facility may opt out of this field exercise requirement entirely. Under the final rule, owners and operators will be required to establish a frequency for field exercises at a minimum of at least once every ten years, unless the appropriate local emergency response agencies agree in writing that such frequency is impractical. However, if local emergency response agencies so agree, the owner or operator can consult with local emergency response officials in order to establish an alternate appropriate frequency to fulfill their field exercise requirements. In establishing an alternate exercise frequency, owners or operators and local responders may account for whatever factors they deem appropriate as long as it is documented. Owners or operators and local authorities may also adjust exercise frequencies as needed to account for changes in hazards, organizations, budgets, resource demands, regulations, or other factors.

12.2 Field exercise frequency

Support for the proposed field exercise frequency

Comment 12.2-01: Several commenters expressed support for the 10-year timeline for conducting field exercises (0173, 0181, 0197, 0215, 0237, 0262, 0268, 0275). One of the commenters noted that the timeline would allow local responders to maintain capabilities and familiarity with processes for responding to accidental releases, and it would also allow industry to obtain appropriate staff, experts, and funds (0215).

> **EPA Response:** EPA appreciates commenters' support. EPA wants to ensure that facilities are accountable to the communities in which they are located. One way to do this is to make sure that communities have mechanisms to evaluate the resources and capabilities needed to assist in a response to an accidental release and that they can perform field exercises involving actual emergency response functions to simulated release events.

Comment 12.2-02: One commenter expressed support for coordinated exercises and drills but suggested that prescriptive requirements regarding types and frequencies of drills should be avoided (0263).

> **EPA Response:** EPA agrees with this comment. The final rule will provide owners and operators extensive flexibility to develop emergency response plans and emergency exercise plans that are best suited to the owner or operator's situation.

Opposition for the proposed field exercise frequency

Comment 12.2-03: Some commenters expressed concerns regarding the 10-year timeframe (0151, 0252, 0269, 0456). A couple commenters suggested that EPA speed up compliance because 10 years is too long to wait for essential emergency planning, especially in communities with multiple RMP facilities (0252, 0269). One commenter noted that five- to 10-year deadlines allow more time than necessary to comply and would allow another generation of children to grow up without even the protection of a basic emergency response exercise at the facility near them (0456). Another commenter echoed that exercises should be conducted with LEPC every five years (0241).

Many commenters noted that 10-year cycle is inadequate, given typical turn-over rates these days in workforces as well as of residents in communities (0151, 0158, 0185, 0203, 0216). One of the commenters recommended that each owner or operator must perform at least one emergency response exercise involving the regulated substance per calendar year whether all local emergency response agencies can participate (0185). Another commenter suggested that EPA adopt a requirement like New Jersey's Toxic Catastrophe Prevention Act rules which require facilities to perform at least one annual full-scale emergency response exercise in which the emergency response team and emergency response containment, mitigation, and monitoring equipment are deployed at a strength appropriate to demonstrate the adequacy and implementation of the emergency response plan (0203). One commenter noted that there is potential for a 20-year employee to only have completed an emergency drill twice in their careers. The commenter urged that emergency response drills should be conducted annually at a minimum, noting that the community relies on the expertise of employees working in these hazardous facilities to keep them safe (0158).

One commenter stated that EPA is required to set a compliance deadline no later than three years under 42 U.S.C. 7412(r)(7)(B) for the field exercise requirement (0460).

A couple of commenters recommended that exercises should be conducted at all RMP-regulated facilities annually; the commenter asserted that there is nothing in the record to indicate that a facility would require more time (0270, 0460).

One commenter recommended the following revisions to 40 CFR 68.96(i) (0241): *Local emergency response agencies may require more frequent exercises if facility conditions indicate an increased risk of accidental release or if community conditions are such that an accidental release may result in significant impacts to life and/or property.*

> **EPA Response:** EPA disagrees that field exercises should be required on an annual, biennial, triennial or quinquennial basis. Requiring field exercises to be held at shorter minimum frequencies, such as these would significantly increase compliance costs to both regulated facilities and local responder agencies. Such an approach would discourage the participation of local emergency responders in field exercises, which is voluntary under the RMP rule. Additionally, table-top exercises of the emergency plan have value for protecting the nearby community, and these occur every three years. The community would not be without a type of "basic emergency response exercise." Therefore, EPA is finalizing the compliance date for owners or operators of sources to have planned, scheduled, and conducted their first field exercise by March 15, 2027.
>
> Further, EPA acknowledges the varying capabilities of LEPCs and responding agencies and believes the approach the Agency offers supports those differences. The Agency believes the frequency exemption provided, which allows facilities and communities that do not have resources to complete field exercises every 10 years to work together to determine a lesser frequency, is more useful than the Agency being more prescriptive about when the frequency does not apply. EPA believes various communities have different concerns as to why they would need to conduct field exercises less frequently and therefore does not expect a one-size fits all approach to be appropriate in accommodating those various circumstances. Additionally, EPA understands that there may be cases where local emergency response agencies are unable or unwilling to coordinate with a regulated facility on exercise frequencies. In such cases, the owner or operator may establish appropriate exercise frequencies and plans on their own, provided they meet the minimum requirements set forth in 40 CFR 68.96. The final rule will not specifically require the owner or operator to document unsuccessful coordination attempts, but EPA believes it will be in the owner or operator's best interest to do so and allow the owner or operator to demonstrate their good faith efforts for consultation in the event that an implementing agency requests this information.

Comment 12.2-04: A few commenters expressed concerns regarding the proposed requirement for State and Federal approval of a change in frequency. The commenters noted that it would be inappropriate for EPA to provide Federal and State officials veto power over scheduling an exercise for which they have no required role (0253, 0268, 0272). One of the commenters recommended that EPA remove the reference to Federal and State agencies, to clarify that RMP facilities do not need to obtain approval from Federal or State agencies if the local emergency responders have identified the frequency of an exercise is impractical (0268).

One commenter suggested that the proposed rule should allow the frequency to be established in coordination with local emergency response officials, as opposed to allowing that as an exception (0253).

A few commenters suggested revisions to the proposed regulatory text in 40 CFR 68.96(b)(1)(i) such as removing the consultation with Federal and State agencies and written confirmation requirements (0229, 0232).

> **EPA Response:** In response to comments that EPA should remove the reference to consultation with Federal and State agencies when developing field exercise frequencies, EPA agrees and has amended the language to reflect that the consultation required for this provision need only be with local emergency responding agencies. EPA acknowledges that the emergency response exercise program provisions under 40 CFR 68.96(b), only require coordination with local public emergency response officials, and wants to remain consistent with activities that most likely will occur on the local level.
>
> Therefore, EPA is finalizing the requirement for facility owners and operators to coordinate with local emergency response officials to establish an appropriate frequency for field exercises at a minimum at least once every ten years unless the appropriate local emergency response agencies agree in writing that such frequency is impractical to document the consensus. EPA is not finalizing the requirement for federal and state agencies to be consulted when coordinating the 10-year (or other determined) frequency.

Comment 12.2-05: One commenter stated that the proposed field exercise requirements do not comply with the reasonableness and practicability standards set forth in Section 112(r)(7), asserting that in the 2019 RMP Reconsideration Rule, the Agency found this requirement would be impracticable because of the burden it would impose on many local emergency response organizations (0233).

> **EPA Response:** EPA disagrees with comments that field exercise requirements do not comply with the reasonableness and practicability standards set forth in Section 112(r)(7). EPA acknowledges the varying capabilities of LEPCs and responding agencies and believes the approach the Agency offers in this final rule is reasonable and practicable. For example, EPA acknowledges that various communities have different concerns as to why they would need to conduct field exercises less frequently and therefore does not expect a one-size fits all approach to be appropriate in accommodating those various circumstances. Therefore, in the final rule, EPA included a frequency exemption, which allows facilities and communities that do not have resources to complete field exercises every 10 years to work together to determine a lesser frequency.
>
> Additionally, EPA understands that there may be cases where local emergency response agencies are unable or unwilling to coordinate with a regulated facility on exercise frequencies. In such cases, the owner or operator may establish appropriate exercise frequencies and plans on their own, provided they meet the minimum requirements set forth in 40 CFR 68.96. The final rule will not specifically require the owner or operator to document unsuccessful coordination attempts, but EPA believes it will be in the owner or operator's best interest to do so and allow the owner or operator to demonstrate their good faith efforts for consultation in the event that an implementing agency requests this information.

12.3 Exercise evaluation reports

Support for exercise evaluation reports

Comment 12.3-01: Several commenters expressed their support for the requirement that the current recommended field and tabletop exercise evaluation report components be mandatory (0181, 0252, 0262, 0269, 0275, 0444).

EPA Response: EPA appreciates the commenters' support.

Opposition to exercise evaluation reports

Comment 12.3-02: A couple of commenters expressed concerns about the burden of submitting exercise evaluation reports (0197, 0268). Another commenter recommended that EPA should make the reports simple and easy to generate because facilities that conduct exercises more frequently than every 10 years should not be penalized with more administrative paperwork and required to submit an overly burdensome and lengthy report each time (0197).

EPA Response: EPA disagrees that the requirement of this provision—to make the scope and documentation requirements of the exercise evaluation report mandatory—is overly burdensome. While the elements of the evaluation report were not previously mandatory, there was already a requirement to develop a report. In most cases, for those previously voluntary report elements, particularly lessons learned and recommendations for improvement, EPA had expected these to be included in the report, as they are advantageous in assuring that over time emergency response efforts improved. Other report elements such as names and organizations of each participant are expected to be collected using low-cost methods, such as sign-in sheets or registration websites. Local emergency response organizations participating in exercises will also likely be able to assist the owner or operator in collecting and providing this information. EPA has updated the RIA to consider the minimal paperwork hours and costs associated with this provision.

Comment 12.3-03: One commenter stated that EPA's rationale for modifying the list of information that "should" be included in an evaluation report to items that "shall" be included (namely, that the change would be consistent with the required information in an incident investigation report) is insufficient because incident investigations are distinguishable from emergency response exercises (0268).

EPA Response: EPA disagrees with the comment because while incident investigation reports are distinguishable from emergency response exercises, they are comparable. Current incident investigation regulations under 40 CFR 68.60 and 68.81 require incident investigation reports to include the date of incident, the date the investigation began, a description of the incident, the factors that contributed to the incident, any recommendations resulting from the investigation and their prompt resolution. The final rule exercise evaluation report provision finalized today requires the owner or operator to prepare an evaluation report that include a description of the exercise scenario, names and organizations of each participant, an evaluation of the exercise results including lessons learned, recommendations for improvement or revisions to the emergency response exercise program and emergency response program, and a schedule to promptly address and resolve recommendations.

EPA believes that, in most cases, these accidental release scenarios being exercised would be those that need to be investigated per 40 CFR 68.60 and 68.81, which would make many of the reporting requirements similar. For example, instead of documenting

the "exercise scenario," the owner or operator would document the nature of the accidental release prompting the response. Further, documented lessons learned and recommendations for improvement in both actual release events and in the exercised scenario reports allows participants to develop an evaluation that owners, operators, and responders can learn from.

Comment 12.3-04: A couple of commenters expressed concern that the requirement to submit emergency response exercise reports to EPA presents security concerns. The commenters noted that if members of the public can file a FOIA request for this information, the exercise evaluation reports, and the information contained therein could provide bad actors with a road map for attempting an industrial release (0229, 0232).

One commenter stated that the potential security issue for making emergency response exercises, including schedules for upcoming exercises, reports for completed exercises, and any other related information among the information that a covered facility must make available to the public and referenced EPA's past increase in security measures following the 9/11 terrorist attacks. The commenter stated that they support sharing information with first responders, LEPCs, and other local emergency response agencies, but suggested that care needs to be taken in the information and method(s) for sharing the information with the broader public (0197).

EPA Response: EPA agrees with commenters that members of the public do not necessarily need access to exercise evaluation reports. Therefore, EPA did not propose, and is not requiring in this final rule, that emergency response exercise reports be submitted to EPA. EPA will have access to these reports for compliance evaluation by means of inspection or through information requests, etc., but there is no requirement for owner/operator direct submission to EPA.

Comment 12.3-05: One commenter mentioned that in 2019, EPA recognized that making the reporting requirements non-mandatory would reduce the regulatory burden and allow emergency response personnel the flexibility to decide which exercise documentation would be most appropriate for the facility and community. The commenter urged EPA to retain this flexibility and not add this requirement to the existing RMP rule (0188). Another commenter noted that the proposed post-exercise reporting requirements provide little value to the program (0267).

EPA Response: While the Agency previously stated in the 2019 reconsideration rule that the scope and documentation provisions left as discretionary would allow owners and operators to coordinate with local responders to design exercises that are most suitable for their own situations, EPA now finds it beneficial to provide consistency between exercise evaluation and incident investigation documentation requirements, as incident investigation reports can be used to satisfy response exercise evaluation report requirements under the current rule. EPA acknowledges that different facilities use a variety of emergency response equipment types and may have many different actions specified in their emergency response plans. Since EPA cannot anticipate all variations of incidents that may occur, EPA also cannot anticipate all variations of appropriate exercises. Therefore, the current provision for incident investigation reports under 40 CFR 68.60 and 68.81 identifies general topics that must be included in the report but does not contain further prescriptive requirements about how those topics need to be addressed. Similarly, so will similar general elements guide the content of exercise

evaluation reports. The flexibility in both provisions allows participants to develop an evaluation that owners, operators, and responders can learn from.

Upon consideration of comments, EPA is finalizing the provision to require mandatory reporting for exercise evaluation reports as proposed.

13 Information Availability

Comments associated with this issue are discussed in the sub-issues below.

13.1 Proposed approach

Support for requirements to make information available to the public

Comment 13.1-01: Several commenters expressed general support for EPA's proposed information availability requirements (0248, 0276, 0270, 0451, 0480).

Another commenter suggested that the public needs overarching Federal regulation in this area to prevent an uneven patchwork of State regulations and practices that have been documented to refuse access to emergency planning chemical information in response to information requests (0216).

One commenter suggested that more information sharing is a public good that will decrease injuries and loss of life (0254).

Another commenter stated that implementing prevention measures like safer chemicals and processes at the RMP facilities will reduce their disproportionate impact and toxic burden across the chemical's lifecycle; however, unless and until EPA requires RMP facilities to eliminate the hazards fenceline communities face by requiring the transition to inherently safe chemicals and processes, people need to know what their risks are and how to respond when disaster strikes, yet access to this information to date has been piecemeal (0270).

> **EPA Response:** EPA continues to believe that providing chemical hazard information to the general public will allow people that live or work near a regulated facility to improve their awareness of risks to the community and to be prepared to protect themselves in the event of an accidental release. The public's ability to participate in emergency planning and readiness is enhanced by being better informed about accident history, types of chemicals present, and how to interact with the stationary source. EPA expects this to be particularly true when the public perceives there are threats of accidental releases not addressed by the facility. EPA acknowledges that access to emergency planning information under EPCRA and other state and local-implemented laws has been uneven across the country. Today's rule will provide a federally-enforceable minimum.

Opposition to requirements to make information available to the public

Comment 13.1-02: Several commenters generally opposed the proposed information availability requirements (0238, 0165, 0233, 0272, 0207, 0190).

A commenter stated that the general premise that making the RMP more accessible to the public will encourage facility operators to be more safety conscience via the imposition of "community pressure and oversight" is misguided. The commenter added that requiring members of the public to "pull" the information from the facility does little to promote proactive safety and accident/risk reduction at the fencelines as that public member must first have some idea that a

facility presents a risk (0241). One commenter disagreed with EPA's view of community pressure and oversight to minimize incidents (0207).

One commenter stated that EPA assumption that facilities will receive only one request per year creates confusion as to how this will significantly reduce risks (0239). One commenter asked how one request a year provides any benefit to improving safety at all (0205).

Another commenter expressed that public disclosure of information is not a viable proven method to promote regulatory compliance and to improve community understanding of chemical risks (0263).

> **EPA Response:** EPA continues to believe that providing chemical hazard information to the general public will allow people that live or work near a regulated facility to improve their awareness of risks to the community and to be prepared to protect themselves in the event of an accidental release. The public's ability to participate in emergency planning and readiness is enhanced by being better informed about accident history, types of chemicals present, and how to interact with the stationary source. In drafting both the proposed and final rule, EPA has been selective in identifying what information a source must make available; for example, the Agency has not required the facility to provide an entire RMP to the public.
>
> The Agency disagrees that community involvement in prevention and response planning, which in effect is a form of oversight and may be perceived as "pressure," does not have value in minimizing the likelihood of accidental releases and in improving the responses to such releases. The statute itself provides support for the Agency's position by generally making RMPs available to the public, subject to limited restrictions (42 U.S.C. 7414(c), 42 U.S.C. 7412(r)(7)(H)). In the 2022 SCCAP proposed rule, the Agency discussed its multiple means of access to information about a source to facilitate involvement about the risks a source presents (87 FR 53602). The Agency believes every RMP regulated source presents some level of risk, as each regulated source stores and manages toxic or flammable substances which may be accidentally released. Having the source provide the information set out in 40 CFR 68.210 directly to the public within the confines of the final rule promotes accident prevention and response by facilitating public participation at the local level.
>
> Under CAA section 112(r)(7)(H)(ii)(I)(bb), EPA conducted a benefits assessment in 2000, describing the benefits of providing community access to OCA information specifically but also addressing the benefits of public disclosure of risk management plan information. EPA found that public disclosure of risk management plan information would likely lead to a reduction in the number and severity of accidents. It also found that comparisons between facilities, processes and industries would likely lead industry to make changes and would stimulate dialogue among facilities, the public, and local officials to reduce chemical accident risks. The approach taken in this final rule builds upon the planning approach of EPCRA and EPA studies of the value of "right to know" in emergencies.

Comment 13.1-03: Several commenters indicated that the proposed information availability requirements would be burdensome for facilities (0184, 0193, 0196, 0201, 0202, 0213, 0215, 0234, 0239, 0268, 0271, 0272, 0165, 0233). A few commenters stated that EPA underestimates the costs to deliver community information requests (0180, 0226, 0268, 0458). One commenter

stated that facilities may not have the expertise for communicating the information as envisioned by EPA (0242). Another commenter stated that the requirement to disclose information would make facilities with covered processes potentially the target of high volumes of requests submitted by individuals or groups (0193). A few commenters stated that EPA underestimates the administrative costs to deliver community information requests (0180, 0226, 0458). One of the commenters said that the proposed rule would require facilities to expend time, labor, and resources to develop and maintain an information availability program that could have been used to support emergency planning and preparedness efforts (0215). One commenter added that EPA should not put the responsibility of vetting community members on facilities (0262). One commenter stated that unfettered disclosure requests could be used to harm the operations of a facility (0275). One commenter said that the list of data elements requires reviews by experts within companies who do not typically address CAA matters, which requires additional consultation internal to the companies to provide meaningful feedback to EPA (0244).

> **EPA Response:** Regarding comments on the burden of the information availability requirements, EPA notes that other statutes and regulatory programs, or other provisions of the RMP, require the stationary source to assemble the information that the rule makes available upon request (e.g., accident history, SDSs, and aspects of the emergency response program). The public's ability to participate in emergency planning and readiness is enhanced by being better informed about accident history, types of chemicals present, and how to interact with the stationary source. In drafting both the proposed and final rule, EPA has been selective in identifying what information a source must make available; for example, the Agency has not required the facility to provide an entire RMP to the public. Thus, the burden of making this information directly available from the source is minimal. Further, the final rule RIA estimates costs to develop and maintain an information availability program. See Section 4.7 of the RIA for a discussion on the costs estimated for this provision.

Comment 13.1-04: Commenters stated that the disclosure of raw information about a process the community does not understand may cause unfounded fears or anxiety in members of the community instead of benefiting them and stated that facilities may not have the expertise for communicating the information as envisioned by EPA (0190, 0242, 0238).

> **EPA Response:** While EPA acknowledges the potential for "community anxiety" as a result from the affected public having easier access to information about safety risks, public participation in the pre-rulemaking listening sessions and during the public hearings in this rulemaking demonstrate that anxiety among the public near facilities already plainly exists as a result of the more cumbersome disclosure authorizations of the current rule. The Agency expects a more informed and involved public, as a result of this final rule, to have less fear of the unknown.

Comment 13.1-05: A couple of commenters stated that EPA's proposed information availability requirements are unnecessary as regulations under Title III of SARA already gives the public access to chemical hazard information (0217, 0234).

A few commenters said that the proposed requirements would be duplicative of EPCRA (0164, 0196, 0233, 0262, 0267, 0268, 0272). Some commenters recommended EPA consider existing programs that already require facilities to report specific information (0196, 0215, 0233, 0267).

Another commenter stated that the proposed language does not provide any new information for the public and local responders. The commenter added that information must already be disclosed under EPCRA (0268).

One commenter recommended that facilities also report information in a facility's OCA (0196). Another commenter stated that providing the information to the public residing within 6-miles of the stationary source is redundant as it is already available to the public via the facility's annual Tier II filing (0158).

> **EPA Response:** The approach taken in this final rule builds upon the planning approach of EPCRA and EPA studies of the value of "right to know" in emergencies. EPA believes that this information should be more easily accessible to the public than the existing approaches to access information under EPCRA and other programs/regulations. The Agency believes that providing information solely to LEPCs or local responders would not be sufficient or improve safety as effectively as additionally requiring that information be provided directly to the affected public.
>
> EPA acknowledges that access to emergency planning information under EPCRA and other state and local-implemented laws has been uneven across the country. Today's rule will provide a federally-enforceable minimum.
>
> Further, EPA is committed to safeguarding OCA information in accordance with requirements specified in the CSISSFRRA, which allows for any member of the public to access paper copies of OCA information for a limited number of facilities. This OCA information remains accessible to the public only in Federal Reading Rooms or upon voluntary disclosure by the source itself. CAA section112(r)(7)(H)(v)(III).[152]

Recommended revisions to requirements to make information available to the public

Comment 13.1-06: Several commenters provided recommendations for increasing information sharing in addition to the provisions in the proposed rule (0164, 0198, 0220, 0248, 0254, 0257, 0266, 0270, 0276, 0402, 0444). These recommendations are discussed further throughout this section.

Several commenters stated that due to the complex technical information in technical documents such as SDSs, it will have limited value or use to the public, and instead EPA efforts should focus on improving LEPC's ability to interpret the information (0180, 0205, 0217, 0226, 0263, 0230, 0234, 0458). One commenter said that the LEPC should be provided with relevant chemical hazard information, which then could be shared with local citizens (0215). One commenter stated that information should be shared with the LEPC only (0215). A few commenters urged EPA to instead focus on improving LEPC presence through the country (0217, 0234).

A commenter suggested that current problems may be a result of a lack of coordination and communication challenges between Federal agencies and local communities and first responders. The commenter added that properly targeting limiting financial resources to LEPCs to help with joint education and training programs with local RMP facilities could also be a contributing factor to current problems (0227).

[152] https://www.epa.gov/rmp/federal-reading-rooms-risk-management-plans-rmp.

Two commenters asked that EPA require RMP facilities to provide access to information that emergency responders determine necessary (0276, 0270). Another commenter said that the proposed rule should be revised to require submitting the RMP to local authorities (0198).

> **EPA Response:** For the purposes of this rule, regulated facilities which have accidental releases are responsible for ensuring a prompt emergency response to any release at their facility's covered processes in order to protect human health and the environment.
>
> Nevertheless, EPA acknowledges there are current challenges and gaps in implementing EPCRA, a law that places full implementation responsibility on state, tribal, and local agencies. In its National Survey of State Emergency Response Commissions (April 2023)[153], EPA provides details on some of those issues identified and provides resources and recommendations for improvement moving forward, including some of those identified by commentors.

Comment 13.1-07: The commenter explained EPA should arrange for advance notification in an RMP impact area so community members do not have to ask facilities for information they will not be forthcoming with or navigate the Freedom of Information Act (FOIA) system. The commenter stated this would be a new approach where EPA maintains a phone number or website where community members can access the information on hazards and emergency response plans relevant to them (0456).

Another commenter suggested reporting in the RMP plan should include a link or other information on how to access a community response plan (0460).

A couple commenters stated that EPA should inform people located in fenceline communities or areas of the greatest risk, prior to an event that they are in a hazardous zone (0179, 0456).

> **EPA Response:** By policy, EPA has restricted access to the RMP database, even though only a portion of the database is restricted by CAA section 112(r)(7)(H) and its implementing regulations in 40 CFR part 1400. As described in the 2022 SCCAP proposed rule, EPA intends to, at a prospective date, begin publishing non-OCA risk management plan data annually, less any CAA section 112(r)(7)(H) protected sensitive information (87 FR 53602). The discussion in the proposed rule was intended to highlight some of the issues that are relevant to relaxing restrictions on data availability. The Agency will consider the data element input from the commenters when the Agency proceeds with a policy decision on whether to put some portions of the RMP database online.
>
> Further, EPA has long established the Vulnerable Zone Indicator System (VZIS)[154] which allows citizens to quickly find out if an address of interest could be affected by a chemical accident at facility that has submitted a risk management plan (RMP). Vulnerable zones are areas that could be affected by a release from a chemical accident at a facility subject to the risk management program requirements in 40 CFR Part 68. Citizens should also work with their local emergency planning committees (LEPCs) to learn more about chemicals in their community. LEPCs develop comprehensive

[153] https://www.epa.gov/system/files/documents/2023-04/National%20Survey%20of%20the%20State%20Emergency%20Response%20Commissions.pdf
[154] https://www.epa.gov/rmp/forms/vulnerable-zone-indicator-system

emergency response plans and also receive chemical inventory reports from facilities in the community.

Translation requirements

Comment 13.1-08: One commenter supported EPA's proposed translation requirements (0249).

EPA Response: EPA appreciates the commenters' support. The final rule requires that language translations be offered in at least two other major languages in the community. EPA expects owners and operators to use the most recent Census Language Use data,[155] or other recent authoritative information[156], to determine the two major languages spoken in a comparable size designation to the six-mile or worst-case release scenario distance radius of their facility. EPA believes this will provide the vast majority of the surrounding community with the information requested and account for language barriers while minimizing burden to facilities.

Comment 13.1-09: A couple of commenters noted that the proposed translation requirements go beyond EPA authority and would be burdensome and costly (0243, 0272). One commenter noted that the proposed language does not adequately consider the costs and challenges of implementation. The commenter added that EPA failed to consider full costs of timelines and resources (0268).

Further, another commenter stated the difficulty for facilities to translate technical information into multiple languages (0223).

One commenter stated that in some metropolitan areas, EPA's proposed requirements could require technical translation in as many of thirty languages. The commenter suggested the facility only be required to pay for translation of a material when it has been requested in that language to reduce the compliance costs for facilities (0239).

One commenter stressed that language accessibility can pose another barrier to workplace and frontline community safety, for example, a 2011 release of chlorine gas at a Tyson Foods poultry processing plant in Arkansas was the direct result of a Spanish-speaking worker not understanding an English drum label (0444).

EPA Response: The final rule requires that language translations be offered in at least two other major languages in the community. EPA expects owners and operators to use the most recent Census Language Use data,[157] or other recent authoritative information[158], to determine the two major languages spoken in a comparable size designation to the six-mile or worst-case release scenario distance radius of their facility. EPA believes this will provide the vast majority of the surrounding community with the information requested and account for language barriers while minimizing burden to facilities. Requiring translation in up to two of the major non-English languages of the community reflects a balance of the right-to-know purposes of CAA section 112(r)(7)(B)(iii) with the time and financial burden of providing such translations. The Agency believes community

[155] https://data.census.gov/table?t=Language+Spoken+at+Home
[156] *https://www.lep.gov/language-access-planning*
[157] https://data.census.gov/table?t=Language+Spoken+at+Home
[158] *https://www.lep.gov/language-access-planning*

involvement is integral to a well-functioning accident prevention program, and the translation requirement promotes accomplishing this objective.[159]

Further, the final rule RIA estimates costs to develop and maintain an information availability program and includes cost estimates to capture translation requirements. See Section 4.7 of the RIA for a discussion of those costs.

Notification requirements

Comment 13.1-10: One commenter supported EPA's proposal to require ongoing notification that RMP information is available to the public (0257).

EPA Response: EPA agrees with the commenter that the information availability requirements are most impactful if the public is aware of the availability of the information. Therefore, EPA is finalizing the proposed requirements that the owner or operator of the facility provide ongoing notification on either a company web site, social media platforms, or through other publicly accessible means, that facility information is directly available to the public within six miles upon request.

Comment 13.1-11: Several commenters recommended EPA consider environmental justice and fenceline communities (0249, 0270, 0444, 0460). One commenter suggested that EPA informs fenceline communities that they live near an RMP facility because oftentimes, people are unaware that they live near RMP facilities (0444). Some of the commenters suggested that facilities should provide notifications in a variety of languages such as Spanish and other languages appropriate for the surrounding community (0249, 0270, 0444).

EPA Response: EPA has considered impacts and risks to local communities, including communities with EJ concerns and fenceline communities throughout the rulemaking process. EPA believes that the final information availability provision makes significant improvements to provide more information to the public, including communities with EJ concerns and fenceline communities.

EPA also notes that the Agency has long established the Vulnerable Zone Indicator System (VZIS)[160] which allows citizens to quickly find out if an address of interest could be affected by a chemical accident at facility that has submitted a risk management plan (RMP). Vulnerable zones are areas that could be affected by a release from a chemical accident at a facility subject to the risk management program requirements in 40 CFR Part 68.

Comment 13.1-12: A commenter stated that EPA does not indicate what penalties or corrective action would occur to ensure facilities properly disseminate the required information. The commenter highlighted that 10% of active facilities did not provide information on who to contact for the LEPC after the 2019 reconsideration rule (0196).

EPA Response: Enforcement of RMP facilities remains an Agency priority, as indicated by its adoption as a National Enforcement and Compliance Initiative (NECI) since 2017. The goal of this NECI is to reduce the risk to human health and the environment by

[159] While not the basis of this provision, these language translation requirements advance the policies in Executive Orders 13166 and 14096: https://www.federalregister.gov/documents/2023/04/26/2023-08955/revitalizing-our-nations-commitment-to-environmental-justice-for-all; https://www.federalregister.gov/documents/2000/08/16/00-20938/improving-access-to-services-for-persons-with-limited-english-proficiency

[160] https://www.epa.gov/rmp/forms/vulnerable-zone-indicator-system

decreasing the likelihood of chemical accidents. Activities under the initiative include having regulated facilities and industry associations work to improve safety; increase compliance with RMP; and promote coordination and communication with State and local responders and communities. The capacity built by the NECI will continue to benefit oversight by EPA and its partner implementing agencies even after the NECI.

Further, EPA has and uses a policy to address civil enforcement actions for violations of Clean Air Act (CAA) section 112(r)(1), 42 U.S.C. § 7412(r)(1), known as the General Duty Clause (GDC) and for violations of section 112(r)(7) and its implementing regulations found at 40 CFR Part 68. The policy is available at https://www.epa.gov/sites/default/files/documents/112rcep062012.pdf.

EPA notes that some information reported on the RMP by facilities is optional. LEPC information at 40 CFR 68.160(b)(18) is one of those optional fields. It is possible that LEPCs may not exist for those facilities, that the LEPC may have existed but is inactive, or that the facility is not in communication with its LEPC.

Other comments on information availability

Comment 13.1-13: One commenter voiced concerns that the proposed rule does not have systematic information distribution to residents of the surrounding communities about the exceptional dangers of HF (0163).

EPA Response: EPA notes that available to the public is CAMEO Chemicals[161], a hazardous chemical database which is used widely to plan for and respond to chemical emergencies. CAMEO Chemicals also has a tool to predict possible hazards if chemicals are mixed together. With CAMEO Chemicals, you can search through the extensive chemical database to find chemical datasheets with critical response information, including physical properties, health hazards, information about air and water hazards, and recommendations for firefighting, first aid, and spill response.

Additionally, under the final information availability provisions of this rule, one of the data elements to be released upon request is the Safety Data Sheets (SDS) for all regulated substances located at the facility. The SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical.

13.2 6-mile radius

Support for 6-mile radius provision

Comment 13.2-01: A few commenters supported EPA's proposed approach of the 6-mile radius for requesting information (0241, 0257, 0265).

EPA Response: EPA appreciates the commenter's support. EPA believes the 6-mile radius restriction to be reasonable, as 90 percent of all toxic worst-case distances to endpoints are within six miles or less, and almost all flammable worst-case distances are less than 1 mile (87 FR 53601). The 6-mile radius for being able to request information from facilities allows people in most areas potentially impacted by a worst-case scenario

[161] https://www.epa.gov/cameo/cameo-chemicals-software#:~:text=CAMEO%20Chemicals%20is%20the%20hazardous,if%20chemicals%20are%20mixed%20together.

to have access to information while also providing a limit on widespread access to nationwide assembly of data. EPA agrees with commenters that allowing only those individuals that reside within the 6-mile radius to access information is too limited and has thus expanded the provision in the final rule to also allow members of the public working or otherwise spending significant time in the 6-mile radius to request information from a facility.

Opposition to 6-mile radius provision

Comment 13.2-02: Numerous commenters opposed EPA's proposed approach of the 6-mile radius for requesting information (0158, 0163, 0165, 0178, 0180, 0181, 0184, 0193, 0196, 0201, 0203, 0205, 0207, 0213, 0215, 0217, 0220, 0223, 0226, 0229, 0233, 0234, 0237, 0238, 0240, 0244, 0249, 0251, 0262, 0263, 0267, 0268, 0270, 0272, 0273, 0383, 0444, 0458, 0460).

Several commenters suggested that the 6-mile radius lacks justification or is arbitrary (0180, 0193, 0205, 0207, 0213, 0217, 0223, 0226, 0234, 0238, 0268, 0272, 0458, 0460). A couple commenters suggested EPA build upon existing programs and safeguards, such as LEPCs, to protect sensitive chemical information instead of choosing to impose a 6-mile threshold (0196, 0215).

One commenter asserted that the 6-mile threshold is unreasonable because, as they claim, most accident scenarios happen within a radius under three miles (0181).

One commenter stated the requirement of notification procedures to be available to all within six miles of an RMP facility is overly burdensome, while providing minimal safety benefits (0196).

One commenter added that EPA did not explain how the 6-mile radius requirement builds on existing regulatory programs designed by DHS and EPA to safeguard sensitive information (0215).

EPA Response: EPA believes the 6-mile radius restriction to be reasonable, as 90 percent of all toxic worst-case distances to endpoints are within six miles or less, and almost all flammable worst-case distances are less than 1 mile (87 FR 53601). The 6-mile radius for being able to request information from facilities allows people in most areas potentially impacted by a worst-case scenario to have access to information while also providing a limit on widespread access to nationwide assembly of data that was of concern to EPA in the 2019 reconsideration rule. This approach strikes a better balance between those security concerns and the interests of people spending significant time near facilities who could benefit from the information, including personal preparedness in the event of an accident, knowledge of potential risks and safety conditions where one lives, and more informed participation in community emergency and safety planning.

Further, for this final rule, EPA is requiring sources to provide instructions for how to request the information, which should include the necessary verification components for the public within a 6-mile radius of the facility. Nothing in the rule requires a facility to accept a mere P.O. Box address as evidence of residence, employment, or presence within the 6-mile radius. For this final rule, EPA is also requiring owners and operators to maintain a record of the requestors. The final rule leaves substantial flexibility for facilities to design a process for obtaining verification and keeping records of requestors that allows for facilities to have a suitable, minimally burdensome process for themselves and the community. The final rule allows for a straightforward process that does not

hinder the right of the public to access this information, allows facilities to be aware who has their information, and permits oversight by implementing agencies.

EPA acknowledges the security concerns raised by commenters and is committed to ensuring a balance between making information available to the public while also safeguarding that information. EPA worked closely with Federal partners, including the DHS and the Federal Bureau of Investigation (FBI)[162], to develop information availability requirements that strike a balance between security concerns and the need for sharing chemical hazard information with the public. EPA believes that the finalized approach is consistent with existing requirements to secure sensitive information. EPA also believes the current approach to notify the public that information is available upon request strikes an appropriate balance between various concerns, including information availability, community right-to-know, minimizing facility disclosure burden, and minimizing information security risks.

Most accident scenarios are not worst-case releases. Nevertheless, the statute identifies worst-case releases to be of concern and needing to be modeled (see 112(r)(7)(B)(ii)(I)). In selecting a 6-mile distance rather than 3 miles, EPA chose to focus on toxic regulated substance worst-case distances so that the vast majority of people within the farther distances discussed in the statute can have their right-to-know interests met while also balancing the factors discussed above in this response.

Recommended revisions to the 6-mile radius

Comment 13.2-03: Several commenters recommended other alternative distances and approaches in place of the 6-mile radius in the proposed rule (0165, 0178, 0180, 0181, 0184, 0193, 0205, 0207, 0217, 0220, 0226, 0234, 0237, 0240, 0251, 0252, 0269, 0273, 0383, 0444, 0458, 0460, 0480). Several commenters recommend EPA restrict the radius to 1-mile (0165, 0180, 0205, 0207, 0217, 0226, 0234, 0458). A few commenters recommended EPA use the actual worst-case scenario endpoint or worst-case release circle as the radius (0165, 0184, 0237). One commenter recommended EPA restrict the radius to 3-miles because EPA reports that 67% of worst-case scenarios are under 3-miles (0181). Another commenter recommended EPA restrict the radius to 10-miles because EPA said that 95% of all toxic-worst cases are within 10-miles (0273). One commenter suggested limiting the distribution of notification to the limits of the facility's offsite consequence analysis (OCA), which inherently considers the type of risk posed to the public and the unique physical circumstances specific to each facility and location (0196). Another commenter recommended an alternative approach where EPA would leave it up to LEPCs to determine the appropriate radius for public information requests as they are completing under EPCRA requirements (0165). One commenter recommend EPA eliminate the proposed 6-mile residency requirement and reinstate the information availability requirements of the 2017 rule (0444).

One commenter stated that the proposal's within 6-mile residency requirement creates an unnecessary obstacle to accessing information that could undermine EPA's goals to address environmental justice, especially as people in fenceline communities may not have a trusting relationship with government authorities, a home address, or documented status to demonstrate their residency. The commenter requested EPA eliminate the requirement that community members demonstrate they live within 6 miles of a facility to access information (0444).

[162] Including but not limited to meetings on various dates in Appendix B to this document.

EPA Response: EPA believes the 6-mile radius restriction to be reasonable, as 90 percent of all toxic worst-case distances to endpoints are within six miles or less, and almost all flammable worst-case distances are less than 1 mile (87 FR 53601). The 6-mile radius for being able to request information from facilities allows people in most areas potentially impacted by a worst-case scenario to have access to information while also providing a limit on widespread access to nationwide assembly of data. EPA agrees with commenters that allowing only those individuals that reside within the 6-mile radius to access information is too limited and has thus expanded the provision in the final rule to also allow members of the public working or otherwise spending significant time in the 6-mile radius to request information from a facility.

The 6-mile radius limitation also seeks to limit the potential security risk of allowing anonymous confidential access to this information to the entire public that was of concern to EPA in the 2019 reconsideration rule. This approach strikes a better balance between those security concerns and the interests of people spending significant time near facilities who could benefit from the information, including personal preparedness in the event of an accident, knowledge of potential risks and safety conditions where one lives, and more informed participation in community emergency and safety planning.

Regarding concerns about the verification of the identity of members of the public requesting information, EPA is requiring sources to provide instructions for how to request the information, which should include the necessary verification components for the public within a 6-mile radius of the facility. Nothing in the rule requires a facility to accept a mere P.O. Box address as evidence of residence, employment, or presence within the 6-mile radius. For this final rule, EPA is also requiring owners and operators to maintain a record of the requestors. The final rule leaves substantial flexibility for facilities to design a process for obtaining verification and keeping records of requestors that allows for facilities to have a suitable, minimally burdensome process for themselves and the community. The final rule allows for a straightforward process that does not hinder the right of the public to access this information, allows facilities to be aware who has their information, and permits oversight by implementing agencies. However, as this is a performance-based provision, just as most components of the rule, EPA recognizes that there is not a one-size fits all approach that works best for notifying the public that this information is available and verifying presence within a 6-mile radius. EPA expects facility owners and operators to notify the public that information is available in a variety of ways, such as using free or low-cost internet platforms, and social media tools that are designed for sharing information with the public. EPA also expects verification of the population within the 6-mile radius to be carried out through many methods, such as asking a member of the public to provide a utility bill for verification of residence, pay stub for verification of employment, or specific documentation to verify significant time spent within the 6-mile radius. EPA encourages the facility owner or operator to coordinate information distribution and verification requirements with the LEPC or local emergency response officials to determine the best way to reach public stakeholders.

The provisions of this rule that are based on worst-case scenario release distances (i.e., the 1-mile distance for applicability of certain STAA provisions and the 6-mile distance for information availability) both rely on aggregate worst-case distances rather than

individual stationary source worst-case distances to avoid requiring sources to disclose their individual worst-case distances.

Comment 13.2-04: Several commenters requested EPA to clarify what is meant by the requirement of a person to "reside" within 6-miles of a facility and how a facility will be able to verify the information (0180, 0181, 0196, 0205, 0215, 0217, 0220, 0223, 0226, 0232, 0234, 0267, 0458).

Some of the commenters expressed concerns that residents could use a PO Box within 6-miles of a facility to obtain access to and share information (0180, 0205, 0215, 0217, 0223, 0226, 0234, 0458).

EPA Response: EPA is clarifying in the final rule that the 6-mile radius is from the fenceline of the facility. EPA expects that in most cases, six miles from the fenceline is the appropriate definition, as opposed to six miles from process locations or any other location at the facility, because this consistent approach captures the wide variations of facility size, process locations and any process movement within the facility. It is also simpler to verify for the public and oversight agencies and does not require revealing of the precise location of the place in the process from which a release could occur, which may raise security concerns.

In response to comments requesting clarification on what it means for a person to "reside" within six miles of a facility, the final rule specifies that members of the public residing, working, or spending significant time in a 6-mile radius from the fenceline of the facility are able to submit information requests to a source. EPA interprets residing as occupying a dwelling (owning or renting), working as having paid employment, and spending significant time as frequently using services, volunteering, visiting with family or friends, etc.

EPA is requiring sources to provide instructions for how to request the information, which should include the necessary verification components for the public within a 6-mile radius of the facility. Nothing in the rule requires a facility to accept a mere P.O. Box address as evidence of residence, employment, or presence within the 6-mile radius. For this final rule, EPA is also requiring owners and operators to maintain a record of the requestors. The final rule leaves substantial flexibility for facilities to design a process for obtaining verification and keeping records of requestors that allows for facilities to have a suitable, minimally burdensome process for themselves and the community. The final rule allows for a straightforward process that does not hinder the right of the public to access this information, allows facilities to be aware who has their information, and permits oversight by implementing agencies.

Comment 13.2-05: Several commenters recommended EPA abandon any geographic limitation and instead make basic emergency preparedness information commonly available to the public (0157, 0178, 0193, 0220, 0251, 0383, 0460). One commenter emphasized that the proposed rule violates the FOIA as non-OCA RMP data is public information. The commenter stated that EPA cannot deny public access to this information. The commenter also said that this restriction would violate 42 U.S.C. 7412(r)(7)(B), which requires EPA to provide prevention, incident detection, and response "to the greatest extent practicable" (0460).

EPA Response: The 6-mile radius provision reasonably and practicably balances enhancing means of access for affected communities while also limiting security concerns about widespread, anonymous access that raised concerns in EPA's 2019 final rule. Further, the final provisions do not limit or violate FOIA rights of the public to obtain government-held records.

13.3 Data elements to be released to public

Support for future online posting of portions of the RMP database

Comment 13.3-01: Several commenters suggested that EPA create an online database to contain information from facilities (0139, 0157, 0208, 0219, 0220, 0240, 0252, 0254, 0264, 0269, 0273, 0444, 0460). Several commenters provided specific suggestions for the online database, as described below.

A few commenters stated that EPA should develop, maintain, and update a public, multilingual online database containing non-protected RMP information (0250, 0449, 0453). One commenter recommended this database be available to only those residents that are within a 10-mile radius and be available in a variety of languages (0273). Another commenter stated that EPA should provide to the public a dataset that includes more information on selected, non-sensitive facility characteristics and summarizes the RMP plans to improve external analysis of what common features put facilities at greatest risk of accidents (0266).

A couple of commenters stated that is essential for EPA to take prompt action to provide publicly accessible information on RMP facility hazards and safety plans on the Agency's website (0413, 0448). Another commenter recommended EPA provide access to all non-OCA information no later than December 2023 (0240).

A few commenters recommended EPA update this information monthly (0240, 0252, 0269).

One commenter suggested the information be made available in the comma-separated values (CSV) format (0211). A few of the commenters recommended EPA make RMP submission information available via the Agency website (0178, 0193, 0251).

One commenter requested that EPA put RMP facility information on a transparent, accessible, and multilingual website that is regularly updated. The commenter said that this includes public access to facility information without the need to provide personal information to facilities (as EPA is proposing) or show identification to enter a federal reading room (as is currently the practice); real-time fenceline monitoring; multilingual alerts about hazards and response/evacuation plans in advance of an incident and during one. The commenter stressed that access to real-time air quality information and multilingual alerts in advance of and during chemical incidents are paramount to allow environmental justice communities to take measures that protect their families. The commenter added that in addition to increasing information availability, EPA should proactively, engage environmental justice communities in the process of issuing RMPs as laid out in the Department of Justice's Comprehensive Environmental Justice Enforcement Strategy (0270).

EPA Response: By policy, EPA has restricted access to the RMP database, even though only a portion of the database is restricted by CAA section 112(r)(7)(H) and its implementing regulations in 40 CFR part 1400. As described in the 2022 SCCAP proposed rule, EPA intends to, at a prospective date, begin publishing non-OCA risk management plan data annually, less any CAA section 112(r)(7)(H) protected sensitive

information (87 FR 53602). The discussion in the proposed rule was intended to highlight some of the issues that are relevant to relaxing restrictions on data availability.

Support for requiring information availability of specific data elements

Comment 13.3-02: Several commenters expressed support for specific data elements or suggested additional data elements to be included in EPA's information availability requirements.

One commenter stated that EPA should require RMP owners and operators to proactively post SDS to the facility's public website (0220). One commenter stated that the communities deserve to be informed about which chemicals nearby facilities use or stockpile (0249).

A couple commenters recommended that final reports be posted to EPA's website to promote industry learning (0203, 0240).

One commenter suggested that EPA provide the public with differing information, including who to call and what to do in the case of an emergency (0201).

Another commenter said that the safety plan should demonstrate employee input, and then once accepted, the plans should be shared with local officials and the public (0402).

One commenter expressed appreciation for EPA's proposal to make the following publicly available: contact information for the RMP facility local emergency response organizations, procedures for informing the public and local emergency response agencies about accidental releases, providing instructions for how to request the information from the facility, and where to access information on community preparedness (0165).

Another commenter stated that disclosure requirements for safety data sheets should not be limited to RMP chemicals but should also apply to chemicals present onsite above their threshold quantities (0275).

EPA Response: EPA is requiring the owner or operator or RMP facilities to provide the following data elements, upon request by any member of the public residing, working, or spending significant time within 6 miles of the fenceline of a stationary source, the following chemical hazard information for all regulated processes:

- Regulated substances information. Names of regulated substances held in a process;
- Safety Data Sheets. SDSs for all regulated substances located at the facility;
- Accident history information. Five-year accident history information required to be reported under § 68.42;
- Emergency response program. Information concerning the stationary source's compliance with § 68.10(f)(3) and the emergency response provisions of subpart E as applicable:
    - Whether the stationary source is a responding stationary source or a non-responding stationary source;
    - Name and phone number of local emergency response organizations with which the owner or operator last coordinated emergency response efforts, pursuant to § 68.180; and

    - For stationary sources subject to § 68.95, procedures for informing the public and local emergency response agencies about accidental releases;
- Exercises. A list of scheduled exercises, excluding dates, required under § 68.96 occurring within one year from the date of request;
- LEPC contact information: LEPC name, phone number, and web address as available; and
- Declined recommendations and justifications: Declined recommendations and justifications required under §§ 68.170(e)(7) and 68.175(e)(7)-(9).

Having the source provide this information set out in 40 CFR 68.210 directly to the public promotes accident prevention by facilitating public participation at the local level. It should be noted that EPA has been selective in identifying what information a source must make available; for example, the Agency will not require the facility to provide an entire RMP to the public. EPA believes the public has a substantial interest in knowing what chemicals are present in the community and what it should do in the event of an accidental release involving facilities handling those chemicals. The public also has a substantial interest in having the opportunity to participate in an informed manner regarding emergency planning in its community. Facilitating access to information before an incident promotes more effective communication of information during responses to incidents, and thus promotes more effective response programs.

EPA disagrees that disclosure requirements for safety data sheets should not be limited to RMP chemicals. EPA notes that the RMP regulation only applies to regulated substances at or above threshold quantities. EPA notes however that under EPCRA 311-312, for any hazardous chemical used or stored in the workplace, facilities must maintain an SDS. Facilities must submit the SDS or a list of hazardous chemicals to their SERC or TERC, LEPC or TEPC, and local fire department. Facilities must also submit an annual inventory of these chemicals by March 1 of each year to their SERC or TERC, LEPC or TEPC, and local fire department. The information submitted by facilities must be made available to the public.

EPA release of RMP data

Comment 13.3-03: One commenter said that due to the incident reporting delay, EPA's own database undercounts the most recent incidents. The commenter added that EPA's RMP data are not fully accessible to the public, and the accessible information is not easy to analyze or understand without knowledge of the database relationships (0456).

EPA Response: In the SCCAP proposal, EPA acknowledged the likelihood of late-reported accidents affecting the last few years of data. Based on its prior experience, EPA judged that there would be a slight increase in the number of accidents in the last few years of data. The proposal further discussed that the more current accident data since the 2019 analyses shows that reliance on a declining trend in accidents and impacts to conduct selective, often post-incident oversight may prove insufficiently effective over time and make it difficult to stay ahead of reversals in trends (87 FR 53565). The fact that accidents continue to occur shows that we still have reason to exercise statutory authority to promulgate reasonable regulations to provide for the prevention and detection of those

accidents to the greatest extent practicable when the opportunity exists to improve the performance of our regulatory program.

RMP data can be accessed through EPA or through a person's SERC or LEPC contact. EPA outlines those options on its website: https://www.epa.gov/rmp/accessing-rmp-data. Additional details about the data elements within an RMP Plan are detailed in the Risk Management Plan RMP*eSubmit User's Manual[163].

Concerns about requiring information availability of specific data elements

Numerous commenters expressed security-related concerns about requiring information availability of specific data elements, which are discussed in Section 13.4 below.

Comment 13.3-04: A couple commenters said that some information, including CBI and trade secrets, should not be shared with the public (0223, 0231). Another commenter stated that proprietary information about processes and chemicals should be in the safety plan without disclosing details that would allow the methods or procedures or other intellectual property to be stolen (0402). One commenter said that EPA should reinstate previous language that enabled facilities to assert a claim of business confidentiality regarding any information they are required to make public under the RMP rule (0275).

While another commenter agreed that much of the information proposed is already publicly available, the commenter asked that EPA assure that confidential business information, information exempt from disclosure under state or federal laws, or critical infrastructure information would not be required to be released to the public (0261). A couple of commenters stated that some information, including confidential business information and trade secrets, should not be shared with the public (0223, 0231). One of the commenters expressed that information that can be requested contains sensitive business information (0205).

One commenter stated that proprietary information about processes and chemicals should be in the safety plan without disclosing details that would allow the methods or procedures or other intellectual property to be stolen (0402).

EPA Response: EPA has received comments in the past with concerns regarding CBI and directs these commenters to the requirements in 40 CFR 68.152 for substantive criteria set forth in 40 CFR 2.301. EPA acknowledges and shares industry's concerns pertaining to protection of CBI information, but EPA believes that the Agency has addressed these concerns by providing the same CBI protections for the public information availability provisions that exist for the RMP under 40 CFR 68.151 and 68.152 as for information contained in the RMP required under subpart G. As provided under 40 CFR 68.151(b)(3), an owner or operator of a stationary source may not claim five-year accident history information as CBI. As provided in 40 CFR 68.151(c)(2), an owner or operator of a stationary source asserting that a chemical name is CBI shall provide a generic category or class name as a substitute. CBI disclosure under EPCRA is controlled by that statute and rules implementing the information access provisions of EPCRA. Furthermore, EPA is not requiring STAA reports to be submitted to LEPCs or the public in the final rule, and, therefore, no CBI concerns exist for these reports. If an owner or operator has already claimed CBI for a portion of the RMP, then that claim still

[163]https://www.epa.gov/system/files/documents/2022-11/RMP%20eSubmit%20User%20Manual%20%28October%202022%29.pdf

applies for the disclosure elements in the information availability provisions of the rule. The owner or operator should provide a sanitized version as described in the RMP*eSubmit User's Manual. This policy is consistent with existing RMP guidance and practices.

13.4 Security concerns

General security concerns about the proposed information availability requirements

Comment 13.4-01: Several commenters emphasized security risks of the proposed rule (0180, 0181, 0201, 0207, 0215, 0217, 0226, 0229, 0233, 0234, 0237, 0238, 0239, 0244, 0262, 0263, 0267, 0268, 0271, 0458). Some commenters indicated that many RMP regulated facilities are important to the nation's critical infrastructure and the proposed provisions present a security risk (0184, 0244, 0253, 0268).

One commenter stated that the proposed language would provide security sensitive information to a wider audience with fewer security safeguards (0205). Another one of the commenters referenced similar security concerns expressed in comments from the 2016 RMP proposed rule (0229). One commenter stated that the proposed information disclosure requirements raise security risks and impose significant burdens with no added benefit (0272).

Several commenters stated there are no means to retain or prevent information from being shared outside of its intended use (0180, 0201, 0207, 0215, 0217, 0226, 0234, 0244, 0262, 0263, 0267, 0268, 0458). Some of the commenters added that terrorists and criminals would be able to readily obtain sensitive information and could easily falsify their identity or location (0201, 0215, 0244, 0262, 0267). Many of the commenters referenced social media and other web-based networks as means of quickly spreading sensitive information (0180, 0217, 0226, 0233, 0234, 0244, 0267, 0458).

One commenter stated that making information available in a consolidated manner increases security risks at facilities and draws attention to facilities as potential targets of criminal or terrorist activity (0244). A few commenters suggested that EPA balance the public right-to-know with the serious risks posed by broad disclosure of at least certain types of hazard-related information (0165, 0207, 0230, 0262).

> **EPA Response:** EPA acknowledges the security concerns raised by commenters and is committed to ensuring a balance between making information available to the public while also safeguarding that information. EPA worked closely with Federal partners, including the DHS and the Federal Bureau of Investigation (FBI), to develop information availability requirements that strike a balance between security concerns and the need for sharing chemical hazard information with the public.[164]
>
> This final rule does not create a central database of information required to be disclosed, nor does it permit anonymous access. EPA is requiring sources to provide instructions for how to request chemical information only specific to their facility, which should include the necessary verification components for the public within a 6-mile radius of the facility. Nothing in the rule requires a facility to accept a mere P.O. Box address as evidence of residence, employment, or presence within the 6-mile radius. For this final rule, EPA is also requiring owners and operators to maintain a record of the requestors. The final rule leaves substantial flexibility for facilities to design a process for obtaining verification

[164] Including but not limited to meetings on various dates in Appendix B to this document.

and keeping records of requestors that allows for facilities to have a suitable, minimally burdensome process for themselves and the community. EPA believes that the finalized approach is consistent with existing requirements to secure sensitive information.

EPA believes the information disclosures required by the final rule are fully consistent with the statutes and regulatory programs identified by the commenters as enacted after the 1990 CAA Amendments. For example, CSISSFRRA specified that portions of RMPs containing "offsite consequence analysis information" (OCA Information), any electronic data base created from those portions, and any statewide or national ranking derived from such information is subject to restrictions on disclosure under CAA sections 112(r)(7)(H)(i)(III) and 112(r)(7)(H)(v). Regulations jointly promulgated by EPA and the DOJ further define OCA Information in 40 CFR 1400.2(j). The final rule will not require disclosure of release scenarios or rankings based on such scenarios, nor will it make available any information based on such scenarios. The Critical Infrastructure Information Act restricts information "not customarily in the public domain." Further, CFATS creates a category of information, CVI, which protects certain information submitted to DHS and necessary to implement CFATS (see 6 CFR 27.400). In promulgating CFATS, DHS announced its intent to preserve Federal release disclosure, emergency planning, and accident prevention statutes, including EPCRA and CAA section 112(r) (see 72 FR. 17714; April 9, 2007). In this final rule, EPA creates no tension between after-enacted programs and enhancement of the RMP. The information that the final rule requires facilities to disclose largely draws on information otherwise in the public domain and simplifies the public's access to it. EPA has acknowledged that there would be some value to assembling a centralized, anonymously accessible government database of already-public information relevant to identifying and prioritizing facilities for potential impacts. However, this final rule does not create a central database of the information required to be disclosed, nor does it permit anonymous access. The limits on disclosure and access are important steps to minimize security risks. EPA has therefore coordinated with both the DHS Cybersecurity & Infrastructure Security Agency (CISA) which manages the CFATS program and the FBI in order to take steps that will balance accident prevention and security interests.[165]

Comment 13.4-02: Several commenters emphasized security risks of the proposed rule (0180, 0181, 0184, 0201, 0207, 0215, 0217, 0226, 0229, 0233, 0234, 0237, 0238, 0244, 0253, 0262, 0263, 0267, 0268, 0271, 0272, 0458), including risks of terrorist attacks or criminal activity (0139, 0217, 0222, 0226, 0234, 0242, 0244, 0267, 0458). Another commenter said that providing additional sensitive accident investigation and chemical information to the public could result in a national homeland security concern (0253). Another commenter stated that providing additional sensitive accident investigation and chemical information to the public could result in a national homeland security concern (0253).

Several commenters discussed the additional risks of cybersecurity attacks (0163, 0232, 0239, 0253, 0268, 0272).

EPA Response: There exists no publicly available database of intentional acts against the chemical process industries in the United States. In a 2021 study, researchers attempted to compile a database of such incidents, finding documentation of 84 incidents in the

[165] Including but not limited to meetings on various dates in Appendix B to this document.

chemical and petrochemical industries.[166] [167] Root cause data on these incidents, which are not available, would be needed to determine if availability of information on the facility contributed to terrorist incidents, which were second to cybersecurity incidents as the most frequent overall cause. According to the database, no terrorist event in the process industries (excluding transportation and pipelines) has occurred in North America after the 1970s.[168] However, a lack of incidents may result from the safeguards currently in place. DHS promulgated CFATS in accordance with the Homeland Security Appropriations Act of 2007, owing to insufficient security at industrial facilities. In promulgating CFATS, DHS did not intend for information created under CAA section 112(r) to constitute "Chemical-terrorism Vulnerability Information," which is sensitive information pursuant to CFATS requirements (72 FR 17714). EPA routinely coordinates with DHS as part of the Chemical Facility Security and Safety Working Group and commits to working with DHS to find regulatory solutions that balance community right-to-know with security concerns.

Accidental releases occur much more often than intentional events (about 100 per year using EPA RMP-reportable accidents). Pre-incident information, such as the locations of facilities and potential disasters, allows communities to be more prepared for disasters,[169] which DOJ also recognized in its 2000 risk assessment.[170] With over 20 years of data now, EPA has based many of the finalized provisions on prior accident information. EPA acknowledges that the Agency must consider whether some non-OCA data elements, or combinations of elements, may not be suitable for public release and should be restricted based on potential security risks. EPA has been[171] and will continue to work with DHS, DOJ, and other Federal partners on identifying these risks.

See also the response to comment 13.4-01.

Comment 13.4-03: One of the commenters stated that the six-mile boundary does not remove the serious risk from those individuals wishing to conduct criminal activities against facilities (0237). One commenter said that despite EPA's effort to impose a geographic restriction on citizens that can request information, the six-mile boundary does not remove the serious risk from those individuals wishing to conduct criminal activities against facilities (0237).

---

[166] Valeria Casson Moreno et al., "Analysis of Physical and Cyber Security–Related Events in the Chemical and Process Industry," *Process Safety and Environmental Protection* 116 (2018), 621–31, doi:10.1016/j.psep.2018.03.026.

[167] Matteo Iaiani et al., "Analysis of Events Involving the Intentional Release of Hazardous Substances from Industrial Facilities," *Reliability Engineering & System Safety* 212 (2021), 107593, doi:10.1016/j.ress.2021.107593.

[168] This is not a complete dataset, because it was developed based on publicly available information. Available in the supplemental material of Matteo Iaiani et al., "Analysis of Events Involving the Intentional Release of Hazardous Substances from Industrial Facilities," *Reliability Engineering & System Safety* 212 (2021), 107593, doi:10.1016/j.ress.2021.107593.

[169] Holly Carter, John Drury, and Richard Amlôt, "Recommendations for Improving Public Engagement with Pre-incident Information Materials for Initial Response to a Chemical, Biological, Radiological or Nuclear (CBRN) Incident: A Systematic Review," *International Journal of Disaster Risk Reduction* 51 (2020), 101796, doi:10.1016/j.ijdrr.2020.101796.

[170] DOJ, Assessment of the Increased Risk of Terrorist or Other Criminal Activity Associated with Posting Off-Site Consequence Analysis Information on the Internet (2000), https://www.regulations.gov/document/EPA-HQ-OEM-2015-0725-2003, EPA-HQ-OEM-2015-0725-2003.

[171] Including but not limited to meetings on various dates in Appendix B to this document.

EPA Response: The 6-mile radius limitation seeks to limit the potential security risk of allowing anonymous confidential access to this information to the entire public that was of concern to EPA in the 2019 reconsideration rule. This approach strikes a better balance between those security concerns and the interests of people spending significant time near facilities who could benefit from the information, including personal preparedness in the event of an accident, knowledge of potential risks and safety conditions where one lives, and more informed participation in community emergency and safety planning.

For this final rule, EPA is requiring sources to provide instructions for how to request the information, which should include the necessary verification components for the public within a 6-mile radius of the facility. Nothing in the rule requires a facility to accept a mere P.O. Box address as evidence of residence, employment, or presence within the 6-mile radius. For this final rule, EPA is also requiring owners and operators to maintain a record of the requestors. The final rule leaves substantial flexibility for facilities to design a process for obtaining verification and keeping records of requestors that allows for facilities to have a suitable, minimally burdensome process for themselves and the community. The final rule allows for a straightforward process that does not hinder the right of the public to access this information, allows facilities to be aware who has their information, and permits oversight by implementing agencies.

The risk of malicious use of RMP data is not removed by the 6-mile boundary nor is it created by it. The non-OCA portion of the RMP database is FOIAble and the OCA portion of RMPs is accessible in reading rooms. The 6-mile boundary for information access through requests directly to facilities provides a better balance of interests than both the 2017 amendments and the 2019 reconsideration rules.

Concerns about conflict with other information security requirements

Comment 13.4-04: Several commenters recommended that EPA withdraw its proposed information sharing provisions due to conflicts with information security protocols under DHS CFATS regulations (0139, 0180, 0202, 0205, 0207, 0215, 0217, 0226, 0227, 0234, 0237, 0239, 0242, 0263, 0268, 0458). One commenter said that the availability of information requirements included in the proposed rule are in conflict with the Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (CSISSFRRA), DOT Regulations, and DHS Regulations and expressed concern about the information being available on a company website (0253). A few commenters stated that the proposed public disclosure requirement is contrary to the Critical Infrastructure Information Act of 2002 (0268, 0215), and one commenter stated it is also in conflict with the Maritime Transportation Security Act (0268). One commenter said that EPA's proposed information disclosure requirements may conflict with existing DHS regulations restricting the disclosure of Chemical terrorism Vulnerability Information (CVI) (0267).

One of the commenters said that EPA's proposed information disclosure requirements may conflict with existing DHS regulations restricting the disclosure of Chemical Terrorism-Vulnerability Information (CTVI) (0267). Another one of the commenters encouraged EPA to work closely with DHS and Cybersecurity and Infrastructure Security Agency to limit the potential release of sensitive information (0158).

Some commenters requested that EPA and DHS better coordinate their efforts to safeguard sensitive chemical hazard information as the information availability components in EPA's proposal create several security vulnerabilities that are at odds with DHS initiatives, such as

Chemical Facility Anti-Terrorism Standards (CFATS) program (0180, 0205, 0217, 0226, 0233, 0234, 0237, 0458). One commenter stated that the categories of information that EPA proposes to require facilities to disclose publicly under the § 68.210 overlap substantially with the categories of information that are protected under CFATS and there is no evidence in the proposed rule or supporting materials that EPA has coordinated with DHS on this potential inconsistency (0233).

One commenter added that other federal agencies opposed these requirements, citing security concerns detailed on a 2000 report issued by the DOJ (0239). A couple of commenters stated that other federal agencies raised security concerns with the proposed disclosure requirements during interagency review (0268, 0272).

> **EPA Response:** EPA believes the information disclosures required by the final rule are fully consistent with the statutes and regulatory programs identified by the commenters as enacted after the 1990 CAA Amendments. For example, CSISSFRRA specified that portions of RMPs containing "offsite consequence analysis information" (OCA Information), any electronic data base created from those portions, and any statewide or national ranking derived from such information is subject to restrictions on disclosure under CAA sections 112(r)(7)(H)(i)(III) and 112(r)(7)(H)(v). Regulations jointly promulgated by EPA and the DOJ further define OCA Information in 40 CFR 1400.2(j). The final rule will not require disclosure of release scenarios or rankings based on such scenarios, nor will it make available any information based on such scenarios. The Critical Infrastructure Information Act restricts information "not customarily in the public domain." Further, CFATS creates a category of information, CVI, which protects certain information submitted to DHS and necessary to implement CFATS (see 6 CFR 27.400). In promulgating CFATS, DHS announced its intent to preserve Federal release disclosure, emergency planning, and accident prevention statutes, including EPCRA and CAA section 112(r) (see 72 FR. 17714; April 9, 2007). In this final rule, EPA creates no tension between after-enacted programs and enhancement of the RMP. The information that the final rule requires facilities to disclose largely draws on information otherwise in the public domain and simplifies the public's access to it. EPA has acknowledged that there would be some value to assembling a centralized, anonymously accessible government database of already-public information relevant to identifying and prioritizing facilities for potential impacts. However, this final rule does not create a central database of the information required to be disclosed, nor does it permit anonymous access. The limits on disclosure and access are important steps to minimize security risks. During the development and finalization of the information disclosure provisions, EPA has coordinated with both the DHS Cybersecurity & Infrastructure Security Agency (CISA) which manages the CFATS program and the FBI[172] in order to take steps that will balance accident prevention and security interests.
>
> There exists no publicly available database of intentional acts upon the chemical process industries in the United States. In a 2021 study, researchers attempted to compile a database of such incidents, finding documentation of 84 incidents in the chemical and

[172] Including but not limited to meetings on various dates in Appendix B to this document.

petrochemical industries.[173] [174] Root cause data on these incidents, which are not available, would be needed to determine if availability of information on the facility contributed to terrorist incidents, which were second to cybersecurity incidents as the most frequent overall cause. According to the database, no terrorist event in the process industries (excluding transportation and pipelines) has occurred in North America after the 1970s.[175] However, a lack of incidents may result from the safeguards currently in place. DHS promulgated CFATS in accordance with the Homeland Security Appropriations Act of 2007, owing to insufficient security at industrial facilities. In promulgating CFATS, DHS did not intend for information created under CAA section 112(r) to constitute "Chemical-terrorism Vulnerability Information," which is sensitive information pursuant to CFATS requirements (72 FR 17714). EPA routinely coordinates with DHS as part of the Chemical Facility Security and Safety Working Group and commits to working with DHS to find regulatory solutions that balance community right-to-know with security concerns.

Accidental releases occur much more often than intentional events (about 100 per year using EPA RMP-reportable accidents). Pre-incident information, such as the locations of facilities and potential disasters, allows communities to be more prepared for disasters,[176] which DOJ also recognized in its 2000 risk assessment.[177] With over 20 years of data now, EPA has based many of the finalized provisions on prior accident information. EPA acknowledges that the Agency must consider whether some non-OCA data elements, or combinations of elements, may not be suitable for public release and should be restricted based on potential security risks. EPA has been and will continue to work with DHS, DOJ, and other Federal partners on identifying these risks.

Commenters have referred to certain comments from other agencies in connection with drafts of prior RMP rulemakings. The cited material appeared in the docket as required by CAA section 307(d)(4)(B)(ii). Such material is explicitly excluded from the record for judicial review under CAA section 307(d)(7)(A). The introduction of this material into the record by these commenters is an attempt to avoid the exclusion under CAA section 307(d)(7)(A). Moreover, the comments addressed early stages of the rules that prior Administrators signed, and not the versions of prior proposed and final rules that were published, and do not reflect the ultimate positions of sister agencies with respect to what was published.

---

[173] Valeria Casson Moreno et al., "Analysis of Physical and Cyber Security–Related Events in the Chemical and Process Industry," *Process Safety and Environmental Protection* 116 (2018), 621–31, doi:10.1016/j.psep.2018.03.026.

[174] Matteo Iaiani et al., "Analysis of Events Involving the Intentional Release of Hazardous Substances from Industrial Facilities," *Reliability Engineering & System Safety* 212 (2021), 107593, doi:10.1016/j.ress.2021.107593.

[175] This is not a complete dataset, because it was developed based on publicly available information. Available in the supplemental material of Matteo Iaiani et al., "Analysis of Events Involving the Intentional Release of Hazardous Substances from Industrial Facilities," *Reliability Engineering & System Safety* 212 (2021), 107593, doi:10.1016/j.ress.2021.107593.

[176] Holly Carter, John Drury, and Richard Amlôt, "Recommendations for Improving Public Engagement with Pre-incident Information Materials for Initial Response to a Chemical, Biological, Radiological or Nuclear (CBRN) Incident: A Systematic Review," *International Journal of Disaster Risk Reduction* 51 (2020), 101796, doi:10.1016/j.ijdrr.2020.101796.

[177] DOJ, Assessment of the Increased Risk of Terrorist or Other Criminal Activity Associated with Posting Off-Site Consequence Analysis Information on the Internet (2000), https://www.regulations.gov/document/EPA-HQ-OEM-2015-0725-2003, EPA-HQ-OEM-2015-0725-2003.

Regarding concerns that the 2000 DOJ report is in conflict with the information availability requirements, EPA believes the 6-mile radius provision ensures that, even if community members obtain information related to OCA data, it would require a difficult nationwide-coordinated effort among people within six miles of each facility to create the type of online database described in DOJ's report. The provisions simply require RMP facilities to provide their chemical hazard information to communities within a 6-mile radius of the facility, when previously they were not required to do so directly.

Comments expressing a lack of security concerns about the proposed information availability requirements

Comment 13.4-05: A few commenters stated that there is no evidence that increasing information availability leads to security issues (0241, 0444). Another commenter stated that there is no evidence that community members have caused a chemical disaster or that they pose any security risk. The commenter stated that a valuable way to address any security risks are to provide full public transparency and give facilities more incentive to prevent disasters by reducing or minimizing hazards up front (0460).

Another commenter stated that there is a right-to-know and that there is no evidence that the ability of LEPCs to obtain information has ever resulted in a "security" related incident at a facility (0241).

One commenter said that eliminating chemical hazards and reducing risks present at industrial chemical facilities will not only prevent disasters in the event of an accident but will also prevent and reduce harm in the event of an intentional act, such as a cyberattack (0456).

One commenter cited that EPA points to no evidence that improved disclosure of chemical hazard information will lead to security issues. The commenter added that EPA should improve information access to prevent accidental releases to the maximum extent practicable (0444).

> **EPA Response:** EPA also believes the current approach to notify the public that information is available upon request strikes an appropriate balance between various concerns, including information availability, community right-to-know, minimizing facility disclosure burden, and minimizing information security risks.
>
> There exists no publicly available database of intentional acts upon the chemical process industries in the United States. In a 2021 study, researchers attempted to compile a database of such incidents, finding documentation of 84 incidents in the chemical and petrochemical industries.[178] [179] Root cause data on these incidents, which are not available, would be needed to determine if availability of information on the facility contributed to terrorist incidents, which were second to cybersecurity incidents as the most frequent overall cause. According to the database, no terrorist event in the process industries (excluding transportation and pipelines) has occurred in North America after the 1970s.[180] However, a lack of incidents may result from the safeguards currently in

[178] Valeria Casson Moreno et al., "Analysis of Physical and Cyber Security–Related Events in the Chemical and Process Industry," *Process Safety and Environmental Protection* 116 (2018), 621–31, doi:10.1016/j.psep.2018.03.026.

[179] Matteo Iaiani et al., "Analysis of Events Involving the Intentional Release of Hazardous Substances from Industrial Facilities," *Reliability Engineering & System Safety* 212 (2021), 107593, doi:10.1016/j.ress.2021.107593.

[180] This is not a complete dataset, because it was developed based on publicly available information. Available in the supplemental material of Matteo Iaiani et al., "Analysis of Events Involving the Intentional Release of Hazardous

place. DHS promulgated CFATS in accordance with the Homeland Security Appropriations Act of 2007, owing to insufficient security at industrial facilities. In promulgating CFATS, DHS did not intend for information created under CAA section 112(r) to constitute "Chemical-terrorism Vulnerability Information," which is sensitive information pursuant to CFATS requirements (72 FR 17714). EPA routinely coordinates with DHS as part of the Chemical Facility Security and Safety Working Group and commits to working with DHS to find regulatory solutions that balance community right-to-know with security concerns.

Furthermore, accidental releases occur much more often than intentional events (about 100 per year using EPA RMP-reportable accidents). Pre-incident information, such as the locations of facilities and potential disasters, allows communities to be more prepared for disasters,[181] which DOJ also recognized in its 2000 risk assessment.[182] *Security concerns about specific data elements of the proposed information availability requirements*

Comment 13.4-06: Data elements discussed by commenters as posing security threats if released to the public, which the commenters argued should therefore not be disclosed, include:

- chemical hazard information (0165, 0180, 0205, 0217, 0224, 0226, 0233, 0234, 0237, 0458)
- specific substance names and hazard characteristics (0201, 0215)
- names of regulated substances held in a process, SDSs, and any site-specific information (0215)
- information regarding hazardous substances on site (0224)
- storage location and transportation information (0201)
- offsite consequence analysis (0227, 0480)
- emergency response plans and details (0201, 0227, 0224, 0244)
- audit reports and exercise schedules and summaries (0227)
- accident history (0215, 0224)
- sensitive facility information (0207)

A couple of commenters also said that specific substance names and hazard characteristics are of particular concern, including the following substances: chlorine, anhydrous ammonia, propane, and butane (0201, 0215). One of the commenters specifically discussed chlorine and that information related to its storage location, transportation information, or detailed information about how emergency responses are conducted should not be available (0201).

In addition to accident history, one commenter stated that information regarding hazardous substances on site and emergency response compliance poses security risks. The commenter requested that EPA remove this provision from the rule, or at minimum remove it as applied to

---

Substances from Industrial Facilities," *Reliability Engineering & System Safety* 212 (2021), 107593, doi:10.1016/j.ress.2021.107593.

[181] Holly Carter, John Drury, and Richard Amlôt, "Recommendations for Improving Public Engagement with Pre-incident Information Materials for Initial Response to a Chemical, Biological, Radiological or Nuclear (CBRN) Incident: A Systematic Review," *International Journal of Disaster Risk Reduction* 51 (2020), 101796, doi:10.1016/j.ijdrr.2020.101796.

[182] DOJ, Assessment of the Increased Risk of Terrorist or Other Criminal Activity Associated with Posting Off-Site Consequence Analysis Information on the Internet (2000), https://www.regulations.gov/document/EPA-HQ-OEM-2015-0725-2003, EPA-HQ-OEM-2015-0725-2003.

entities in NAICS 2211 and 221210 responsible for generating, transmitting, and distributing power and natural gas to the public (0224).

One commenter stated that security sensitive information, such as OCA data, should only be publicly accessible through Federal Reading Rooms (0227).

> **EPA Response:** EPA agrees with commenters that suggested only information that could improve community awareness of risks should be made available to the public. EPA believes that this information should be more easily accessible to the public than the existing approaches to access similar information under EPCRA, through FOIA requests, or by viewing in a Federal Reading Room.[183] Having the source provide the information set out in 40 CFR 68.210 directly to the public promotes accident prevention by facilitating public participation at the local level.
>
> It should be noted that EPA has been selective in identifying what information a source must make available; for example, the Agency will not require the facility to provide an entire RMP to the public. EPA believes the public has a substantial interest in knowing what chemicals are present in the community (including regulated substances such as chlorine, anhydrous ammonia, propane, and butane, which are substances most often present in RMP covered process) and what it should do in the event of an accidental release involving facilities handling those chemicals. The public also has a substantial interest in having the opportunity to participate in an informed manner regarding emergency planning in its community. Facilitating access to information before an incident promotes more effective communication of information during responses to incidents, and thus promotes more effective response programs. (See the requirement in CAA section 112(r)(7)(B)(ii)(III) for response programs to address informing the public.) The public's ability to participate in emergency planning and readiness is materially advanced by being better informed about accident history, types of chemicals present, and how to interact with the stationary source. Nevertheless, of the information options proposed, EPA acknowledges some security concerns with releasing information identifying actual upcoming dates of tabletop or field exercises. EPA is therefore requiring facilities to provide a list of exercises that will occur within the year, indicating that they will occur, rather than identifying the specific date they will occur.
>
> In response to the specific comment that information related to storage location, transportation information, or detailed information about how emergency responses are conducted should not be available, EPA is not requiring facilities release that information, for chlorine or any other RMP regulated substance, for the information availability provisions finalized today.
>
> Although commenters did not explicitly request that the list of information required to be available upon request should include declined recommendations from new provisions, EPA is including this within the final rule. EPA intended this information to be available as the Agency indicated in the proposal that including this information in the RMP would ultimately enable the public to ensure facilities have conducted appropriate evaluations to address potential hazards that can affect communities near facility fencelines. When local

[183] Of the information listed in the comment, audit reports and sensitive facility information are not available through the existing resources listed. Audit reports and sensitive facility information will also not be required to be released upon request by these final rule provisions.

citizens have adequate information and knowledge about facility hazards, EPA believes that facility owners and operators may be motivated to further improve their safety in response to community pressure and oversight.

EPA is committed to safeguarding OCA information in accordance with requirements specified in the CSISSFRRA, which allows for any member of the public to access paper copies of OCA information for a limited number of facilities. This OCA information remains accessible to the public only in Federal Reading Rooms or upon voluntary disclosure by the source itself. CAA section112(r)(7)(H)(v)(III).[184]

Recommendations for improving security of the proposed information availability requirements

Comment 13.4-08: A couple commenters stated that there is no adequate vetting system for facilities to confirm the identity of the requestor (0181, 0229). Another commenter requested that EPA specify in the regulatory text that owners and operators may share the details of information requests with local responders and law enforcement as well as requiring residents to provide an explanation for their request (0244). Another commenter expressed security concerns over verifying the information from the requestor (0229, 0232).

One commenter recommended that anyone requesting information should be required to complete a mandatory background check before any information is shared (0238).

One commenter posed the following questions (0220):

- Would companies be required to validate the identity and home address of those who request information?
- Would companies be required to keep records of the names and addresses of people who request the information? If so, would requestor names and addresses be public records?
- What if a person doesn't want to make a direct request for fear of retaliation (including against family who work at an RMP facility)?
- How would a person who lives more than six miles from but works near an RMP facility obtain specified information?
- How would a person who lives and works outside the six-mile limit but goes to school, visits a hospital, or uses transportation near an RMP facility obtain specified information?
- How would an organization that provides community assistance from outside the six-mile limit obtain specified information?
- How many separate information requests – each with a 45-day response period – would it take to simply get a useful overview of RMP facilities in an industrial area?
- EPA estimates that RMP facilities will receive one direct request per year, but the average RMP member facility of the American Chemistry Council has more than 200,000 people living within its vulnerability zone – can these communities realistically prepare for emergencies one person, one request, one facility at a time.

EPA Response: Regarding concerns about the verification of the identity of members of the public requesting information, EPA is requiring sources to provide instructions for

[184] https://www.epa.gov/rmp/federal-reading-rooms-risk-management-plans-rmp.

how to request the information, which should include the necessary verification components for the public within a 6-mile radius of the facility. Nothing in the rule requires a facility to accept a mere P.O. Box address as evidence of residence, employment, or presence within the 6-mile radius. For this final rule, EPA is also requiring owners and operators to maintain a record of the requestors. EPA is not however requiring an explanation for the request because this information is otherwise in the public domain under EPCRA and through other means by EPA. The purpose of this requirement is to simplify access to what the public already has a right to. The final rule leaves substantial flexibility for facilities to design a process for obtaining verification and keeping records of requestors that allows for facilities to have a suitable, minimally burdensome process for themselves and the community. The final rule allows for a straightforward process that does not hinder the right of the public to access this information, allows facilities to be aware who has their information, and permits oversight by implementing agencies. However, as this is a performance-based provision, just as most components of the rule, EPA recognizes that there is not a one-size fits all approach that works best for notifying the public that this information is available and verifying presence within a 6-mile radius. EPA expects facility owners and operators to notify the public that information is available in a variety of ways, such as using free or low-cost internet platforms, and social media tools that are designed for sharing information with the public. EPA also expects verification of the population within the 6-mile radius to be carried out through many methods, such as asking a member of the public to provide a utility bill for verification of residence, pay stub for verification of employment, or specific documentation to verify significant time spent within the 6-mile radius. EPA encourages the facility owner or operator to coordinate information distribution and verification requirements with the LEPC or local emergency response officials to determine the best way to reach public stakeholders. EPA notes that the owner or operator shall document the method and the location of the notification in the RMP pursuant to 40 CFR 68.160(b)(22). At this time, EPA believes that requiring an explanation for the request would be unnecessary because this information is otherwise in the public domain under EPCRA and other means by EPA. the purpose of this requirement is to simplify access to what the public already has a right to.

14 Other Areas of Technical Clarification

14.1 Proposed approach

Comment 14.1-01: One commenter stated that EPA's proposals under "Other Areas of Technical Clarification" will lead to confusion and conflict with other Federal programs (0229).

EPA Response: EPA is not finalizing the proposed supplementary storage incident to transportation language at 40 CFR 68.3.

EPA is finalizing the retention of hot work permits and retail facility exemption proposed changes with the following modifications:

- Revising 40 CFR 68.85(b) to require retention of hot work permits for three years rather than five.

- Revising 40 CFR 68.3 to clarify that "year," in the context of the definition of "retail facility," can be calendar or fiscal year.

EPA is finalizing the provisions for PSI, Program 2 and 3 requirements for compliance with RAGAGEP, and the RAGAGEP gap analysis as proposed.

During the development of the RMP SCCAP rule, EPA consulted and coordinated with other Federal agencies to ensure the intent of adding specificity and clarification to the RMP regulations do not create conflicts with other Federal programs. For many years, EPA and OSHA have established a regular meeting to consult with the DOL and coordinate the PSM and RMP programs, including but not limited to interpretation of overlapping regulatory provisions and the development of potential amendments to the rules. During several of these regular meetings (including but not limited to meetings on various dates in listed in Appendix A to this document), staff from the agencies discussed the development of the RMP SCCAP rule. EPA also coordinates with DOT and DHS on a more ad hoc basis as relevant issues arise but have included meetings to discuss the development of potential provisions for this SCCAP rulemaking (see Appendix B). In addition, multiple agencies have an opportunity to review a draft rule under EO 12866 Regulatory Planning and Review, although the content of interagency deliberations are not subject to judicial review.

14.2 Process safety information

Support

Comment 14.2-01: A couple of commenters expressed support for EPA's proposal to clarify that the requirement to keep process safety information up to date as it explicitly applies to Program 3 processes (0216, 0460). One of the commenters stated that process safety is of critical importance and works together with the RMP program (0216). One commenter asked EPA to restore and expand on the 2017 EPA rule to keep process safety information up to date (0456).

> **EPA Response:** EPA appreciates the support for the Agency's proposed clarifications to the PSI requirements and is finalizing the provision as proposed. EPA believes that refining the language of 40 CFR 68.65 to reflect existing requirements would clarify clarifies that such PSI is required to be up to date for Program 3 processes—just as it is for Program 2 processes—without the need for evaluating compliance with management of change, conducting a pre-startup safety review, or meeting PHA requirements.

Opposition

Comment 14.2-02: Several commenters stated that the proposal to update PSIs is unnecessary, duplicative, and burdensome (0180, 0181, 0226, 0232, 0458). Another commenter asserted that EPA should not amend 40 CFR 68.65(a) as proposed and adhere to the existing regulatory language for Program 3 sources to ensure the long-standing consistency between the RMP and PSM Standard remain (0232). Another commenter asserted that EPA should not amend 40 CFR 68.65(a) as proposed and adhere to the existing regulatory language for Program 3 sources to ensure the long-standing consistency between the RMP and PSM Standard remain (0232).

> **EPA Response:** EPA disagrees that clarifying the PSI requirements is unnecessary. For processes subject to Program 2 requirements, RMP regulatory text explicitly states in 40 CFR 68.48(a) that "[t]he owner or operator shall compile and maintain the following up-

to-date safety information related to the regulated substances, processes, and equipment." This is also addressed in 40 CFR 68.48(c), which states: "The owner or operator shall update the safety information if a major change occurs that makes the information inaccurate." For processes subject to Program 3 requirements, the PSI requirements under 40 CFR 68.65 do not explicitly address updating PSI. Instead, that subject is addressed in several other parts of the Program 3 requirements, including the management of change requirements in 40 CFR 68.75, the pre-startup review requirements in 40 CFR 68.77, and the requirement to document that equipment complies with RAGAGEP in 40 CFR 68.65(d)(2). EPA is simply clarifying the PSI requirements in order to make the regulation more internally consistent throughout.

Comment 14.2-03: Several commenters said EPA's proposal is already an OSHA PSM requirement, is redundant, and EPA's proposed regulation change is not necessary (0180, 0181, 0226, 0232, 0458). Some of the commenters also stated that implementation would result in unnecessary costs on facilities (0180, 0226, 0233, 0458).

> **EPA Response:** In response to comments that the updated PSI requirements would be inconsistent or redundant with OSHA's PSM requirements, EPA disagrees. EPA has coordinated with OSHA throughout the rulemaking process (including but not limited to meetings on various dates in Appendix A to this document) to ensure the intent of adding specificity and clarification to the RMP regulations does not create conflicts with the requirements of the OSHA PSM standard.
>
> EPA disagrees that this modification will result in unnecessary costs on facilities. The intent of the changes to the regulatory text is to simplify implementation for facilities, as well as oversight, thereby improving chemical safety. The amendments do not change the meaning of the RMP rule. Therefore, EPA does not expect the changes to result in any additional costs for facilities.

Comment 14.2-04: One commenter said, as currently written, the regulation does not impose a continuing obligation to maintain PSI. The commenter stated that the current regulation requires only that "the owner or operator complete a compilation of written process safety information before conducting any process hazard analysis required by the rule," and that PSI be updated for specified process changes and facility changes that affect the process. The commenter stated that as PHAs are conducted on five-year cycles, the applicable PSI need only be compiled on a corresponding five-year cycle (0233).

> **EPA Response**: EPA disagrees that the regulation, as currently written, does not impose a continuing obligation to maintain PSI. The requirement in 40 CFR§ 68.75(d) that PSI must be updated to reflect changes implies that PSI must be maintained. Further, the requirement to "document compliance with RAGAGEP" additionally supports that current PSI shall be maintained, since compliance cannot be documented without the maintaining of current PSI documents.

14.3 Program 2 and 3 requirements for compliance with RAGAGEP

Support

Comment 14.3-01: The commenter supported EPA's proposal to harmonize the Program 2 and 3 provisions (§§ 68.48(b) and 68.65(d)(2)) (0460).

Another commenter expressed support for EPA's proposed clarification of RAGAGEP and stated that this may help alleviate the various interpretations of RAGAGEP industry-wide (0216).

> **EPA Response:** EPA appreciates the commenters' support. EPA believes that finalizing these regulatory text changes will clarify the requirements and address the concern that Federal or State regulations may lag behind current RAGAGEP.

Opposition or recommended revisions

Comment 14.3-02: A couple of commenters stated the provisions that owners should ensure and document processes are designed in compliance with RAGAGEP is an existing PSM requirement and is not necessary (0181, 0262). One of the commenters stated that the sentence "*Compliance with Federal or state regulations that address industry-specific safe design or with industry-specific design codes and standards may be used to demonstrate compliance with this paragraph*" should not be removed from the existing RMP standard. The commenter stated that EPA should advocate for specific federal or state regulations to be updated if EPA feels those lag current RAGAGEP (0181). Another commenter added the proposal to clarify that the requirement to keep process safety information up to date explicitly applies to Program 3 processes is already a requirement under OSHA and PSM and is also not necessary (0262).

A few commenters urged EPA not to eliminate from the RMP rule the language that allows a facility to comply with RAGAGEP through compliance with Federal or state regulations that address industry-specific safe design or industry-specific design codes and standards (0242, 0244, 0267). One of the commenters asked EPA to either retain flexibility through the current language or allow for the use of another approved standard (0267). Another commenter suggested that because there may be alternatives that provide the same or equivalent standards as RAGAGEP, EPA should allow the same options as provided in 40 CFR 68.48 (0244).

One commenter said that the proposed rule identifies no legal authority permitting these new requirements, no data demonstrating a need for them, or what benefits could be achieved by them (0207).

One commenter stated that compliance with Federal or State regulations is required by law and corporate policies; therefore, if OSHA flammable liquid standards in 49 CFR 1910.106 are not up to date with current National Fire Protection Association (NFPA) or International Fire Code Standards, the OSHA Standards should be updated. The commenter stated that the CAA does not grant EPA the authority to substitute compliance with current RAGAGEP for compliance with promulgated OSHA regulations (0238).

> **EPA Response:** EPA disagrees that the changes to the regulatory language are unnecessary. EPA has found that the distinction between "ensure" for Program 2 processes and "document" for Program 3 processes creates confusion, and requiring facilities to "document" compliance, rather than merely "ensure" compliance, removes this ambiguity. With regards to Federal or State regulations that lag behind current RAGAGEP, EPA notes there is a difference when updated codes augment existing regulations versus when they conflict. To the extent they conflict, existing regulations reign over new RAGAGEP. However, if a facility can comply with existing regulations and new RAGAGEP, then there is an obligation to comply with both. EPA believes this

provision will help resolve confusion when more current RAGAGEP identify potential shortcomings in a facility's process.

The legal authority for this provision is the same as the legal authority for all prevention program provisions. The authority is extensively discussed in the preamble.

Further, EPA has coordinated with OSHA throughout the rulemaking process (including but not limited to meetings on various dates in Appendix A to this document) to ensure the intent of adding specificity and clarification to the RMP regulations does not create conflicts with the requirements of the OSHA PSM.

Comment 14.3-03: One commenter urged EPA to strengthen the proposed changes by expanding the scope of applicability of the RAGAGEP requirement to cover all facilities and require implementation. The commenter further added that facilities should be required to implement RAGAGEP to protect fenceline communities and workers. The commenter said the statute directs EPA to ensure RAGAGEP is fully included in the assessment and process safety requirements, and mandates implementation "to the maximum extent practicable" (0460).

EPA Response: EPA is finalizing the proposed changes to the regulatory language. EPA agrees that doing so will clarify the requirements and address the concern that Federal or State regulations may lag behind current RAGAGEP. At this time, EPA is not expanding the scope of RMP applicability of RAGAGEP beyond Program 2 and 3 processes or requiring implementation. EPA does, however, encourage all facilities to use RAGAGEP as it reflects well known industry practices and lessons learned shown to improve process safety and prevent accidents.

14.4 Retention of hot work permits

Support

Comment 14.4-01: A few commenters expressed support for the 5-year retention period for hot work permits (0181, 0216, 0460). One of the commenters asked EPA to finalize the provision because it advances the rule's directive to ensure prevention and compliance to the greatest extent practicable and assures compliance as expeditiously as practicable (0460). Another commenter stated that these simple recordkeeping requirements are not burdensome, contribute to further safety, and can help demonstrate compliance in the event of an audit (0216).

EPA Response: EPA agrees that adding a requirement to retain hot work permits after the completion of operations would help ensure prevention and compliance to the greatest extent practicable and contribute to further safety. However, based on comments on the proposed timeframe, EPA is finalizing a three-year retention period of hot work permits as opposed to the five years that was proposed.

Opposition

Comment 14.4-02: Several commenters stated that the retention of hundreds of expired hot work permits for five years is unnecessary and creates a substantial recordkeeping and administrative burden on facilities (0184, 0193, 0207, 0233, 0237, 0238, 0242, 0244, 0267, 0268). A few commenters stated that retaining the hot work permits for five years provides no added safety benefits to the facility nor surrounding community (0238, 0242, 0267).

One commenter stated that EPA identified no instances where it required access to a hot work permit that was unavailable, and which led to an RMP incident. The commenter added that

nothing in the administrative record suggests the existing recordkeeping obligation contributes to incidents, non-compliance, or other risk-based concerns that might justify an amendment. The commenter also stated keeping the retention period consistent with the retention period for other RMP records is arbitrary as the existing regulation functions well (0268).

A few commenters stated that retention of hot work permits for five years is unnecessary to achieve EPA's stated purpose of assisting implementing agencies in determining whether a facility has been conducting hot work in compliance with RMP requirements. The commenters stated that facilities are already required to conduct compliance audits on three-year intervals and to retain the two most recent compliance audit reports, meaning that compliance audit documentation will be retained for at least six years (0193, 0233, 0242).

One commenter recommended reducing the retention period from five years to three years, adding that the three-year period is consistent with the three-year audit period under 40 CFR 68.58 and 40 CFR 68.79 for Level 2 and 3 facilities, respectively (0207).

Another commenter said that some insurance companies have a one-year retention requirement with which their insureds must comply and suggested that this should be a maximum upper bound on retention of hot work permits (0193).

A couple commenters requested that EPA clarify that only hot work permits associated with the RMP regulated system, rather than all hot work permits, are required to be kept for a certain timeframe (0244, 0267). One of the commenters, who objected to the five-year retention period, asked EPA to clarify the reasons why hot work permits would be required to be kept for five years (0244). One commenter added that these audits will review hot work compliance and are available to implementing agency personnel, thus the proposed hot work permit retention requirement is excessive in proportion to the marginal benefit to implementing agencies (0233). Similarly, another commenter, who objected to the five-year retention period, stated that facilities routinely retain a manageable number of hot work permits for the purpose of auditing (0193).

One commenter said that there should be no requirement to retain hot work permits beyond the completion of the hot work authorized by each permit (0238). Some commenters suggested retaining hot work permits for periods of time other than five years (0184, 0193, 0238, 0268). A couple of commenters agreed that retaining hot work permits for some period of time is helpful, they suggested that a one-year retention requirement would be more appropriate (0184, 0237).

One commenter recommended that EPA revise § 68.85(c) as follows (0193):

§ 68.85 Hot work permit.

…

(c) The permit shall be retained for five years after <u>until</u> the completion of the hot work operations.

> **EPA Response:** EPA does not agree that retention of hot work permits after the completion of operations is unnecessary. Under the existing RMP regulations, it can be difficult for implementing agencies, and the owner or operator, through the compliance audit provision (40 CFR 68.58 and 68.79), to determine if the facility has been conducting hot work in compliance with the requirements of 40 CFR 68.85, unless the facility is conducting hot work at the time of the inspection or audit and has hot work permits on file. Adding a requirement to retain hot work permits after the completion of

operations will address this issue. EPA is finalizing a three-year retention period of hot work permits in order to make the requirement less burdensome for facilities conducting hot work often and to align the requirement with the three-year audit period under 40 CFR 68.58 and 68.79.

Comment 14.4-03: A couple of commenters said that the proposed language is overreach, given that OSHA does not even require that permits be retained beyond the completion of the hot work task (0207, 0242). Similarly, another commenter pointed out that EPA failed to acknowledge that a five-year record retention period for hot work permits would break from the existing PSM rule, where OSHA requires hot work permits to be maintained only during the hot work. The commenter stated that this is consistent with the existing RMP rule and recommended that EPA maintain consistency with the PSM rule, particularly on a worker safety issue, such as hot work permits, which falls within OSHA's primary jurisdiction over workplace safety (0268).

> **EPA Response:** In response to comments that the proposed retention period would be inconsistent with OSHA's PSM rule, EPA has coordinated with OSHA throughout the rulemaking process (including but not limited to meetings on various dates in Appendix A to this document) to ensure the intent of adding specificity and clarification to the RMP regulations does not create conflicting requirements with OSHA PSM standard.

14.5 "Storage incident to transportation" definition

General support and opposition to revising the definition of stationary source

Comment 14.5-01: Several commenters expressed concern about EPA's proposed modification to the definition of "stationary source" to define what does and does not constitute "storage incident to transportation" (0206, 0215, 0222, 0246, 0247, 0253, 0262, 0270, 0272).

One commenter highlighted support for EPA's proposal to continue to exclude from the 40 CFR 68.3 definition of "stationary source" facilities and equipment used in "transportation and storage incident to transportation" subject to the pipeline safety regulations or a state natural gas or hazardous liquid program. The commenter said that this avoids duplication of the existing DOT regulations and continues the regulatory division of labor between EPA and DOT's Pipeline and Hazardous Safety Administration (PHMSA) (0246).

One commenter expressed support for the proposed change to add language that a transportation container can be disconnected from the power unit for 48-hours and after that must be included in any RMP threshold calculation (0181). Another commenter supported EPA's proposal to continue excluding facilities and equipment used in transportation and storage incident to transportation subject to the pipeline safety regulations under 49 CFR parts 192, 193, or 195, or a state natural gas or hazardous liquid program for which the state has a DOT certification from the definition of stationary source (0224).

> **EPA Response:** EPA is not finalizing the proposed regulatory language that includes a specified number of hours that a transportation container may be disconnected from the motive power that delivered it to the site before being considered part of the stationary source. As explained in the proposed rule, the term "storage not incident to transportation" is currently not defined in the RMP regulations. The proposed modification sought only to apply a specific timeframe to universally establish a structure to interpret the term. EPA hoped a specified timeframe would assist regulated entities and implementing agencies to more clearly determine when a transportation container used

for onsite storage must be incorporated into a facility's risk management plan. Nevertheless, after review of comments, EPA acknowledges some of the concerns with establishing a timeframe and chooses to further consider the feedback received on the proposed modification before pursuing the effort. EPA encourages regulated entities and implementing agencies to continue to rely on guidance EPA has provided to determine if a transportation container is considered a part of a stationary source.

Opposition to revising the definition of stationary source

Comment 14.5-02: Many commenters expressed concern about potential overlap with DOT regulations or lack of coordination with other Federal agencies.

A couple of commenters stated that the proposed definition would conflict with DOT requirements and could create an inconsistent understanding of the statutory term "transportation" (0188, 0215). One of the commenters further stated that the definition of "stationary source" in the RMP regulations appropriately excludes from that definition "storage incident to transportation," as that which DOT defines under its statutes and regulations. The commenter expressed concern that an RMP definition inconsistent with DOT's understanding of the term "transportation" would disrupt that uniform national scheme (0215). One commenter recommended that EPA consult and coordinate with DOT on any proposed changes to this definition (0188).

Another commenter stated that the 48-hour rule proposed by EPA ignores DOT requirements and creates confusion for transporters. The commenter asked EPA to coordinate with DOT and note that transportation containers covered under active shipping papers are not subject to EPA regulation until the container is delivered to the final consignee, which is also consistent with the scope of EPCRA. Additionally, the commenter said that EPA provides no meaningful explanation for the proposed change (0272).

Several commenters pointed out that DOT rules provide greater flexibility than EPA's proposed 48-hour rule, in that it excludes weekends and holidays (0215, 0229, 0253, 0272). A couple of the commenters also stated that the DOT rule cited as the basis for the 48-hour timeframe does not apply to railcars once they are on private track (0253, 0272).

Another commenter stated that the proposed rule to trigger the RMP regulation if a railcar is stored more than 48-hours in a disconnected transportation container directly conflicts with PHMSA's Hazardous Materials Regulation (HMR) provision which has no time restriction provided that the original shipping documentation identifies the shipment as a through-shipment and its destination. The commenter added that transloading can take up to two months due to a variety of safety and logistics reasons and requiring transloaders to move more quickly might increase the risks of release that the proposed rule seeks to minimize (0222).

One commenter expressed concern that proposed changes to regulatory definitions impacting the rail industry overlap and potentially conflict with PHMSA regulations governing the transportation of hazardous materials. The commenter stated that the proposed rule would make the distinction between a stationary source and a mobile source transporting hazardous materials unclear, and this could create potentially conflicting requirements and obligations. The commenter recommended that EPA coordinate with the DOT to adopt PHMSA's existing definitions to be sure when a shipment is in transport and when a railcar is in storage incidental to transportation and with PHMSA's jurisdiction. The commenter stated that the proposed rule

would exceed EPA's authority, would create confusion and conflicts with the applicability of PHMSA's regulations versus EPA's when applied to the rail industry, and would subject the rail industry to conflicting regulatory definitions and impractical requirements. The commenter suggested that EPA adopt PHMSA's definitions of when materials are in transportation or when a railcar is in storage incident to transportation (0159).

One commenter stated that a time frame of 48-hours is too short with respect to rail transportation. The commenter pointed out that many railroads shifted operations to Precision Scheduled Railroading which sometimes causes unintended delays. The commenter asked EPA to consider eliminating the 48-hour requirement altogether, or as a minimum, extend it further for purposes of the RMP rule. The commenter stated that concerns over safety to the surrounding environment due to an extended timeframe should be mitigated by the fact that railcars designed to transport hazardous materials must meet rigorous design specifications as specified by PHMSA in 49 CFR Part 179 (0247).

Referring to the proposed 48-hour rule, a couple of commenters said that EPA's preamble and the public docket provide no indication that EPA conferred with DOT on the proposed RMP text. The commenters asked EPA to do so and update the docket with DOT's views and make appropriate revisions to definitions (0215, 0229).

One commenter stated that there are no provisions for coordination with DOT and DHS, although EPA states they collaborate with those departments (0163).

Another commenter disagreed with EPA's proposal to change the definition of storage incident to transportation to state that a transportation container is in storage incident to transportation if it is attached to the motive power that delivered it to the site. The commenter asked EPA to clarify that storage facilities and storage containers connected to all pipeline systems or other transportation facilities subject to regulation under 49 CFR parts 192, 193 or 195—not just vehicles—are transportation or storage incident to transportation rather than stationary sources within the meaning of 40 CFR 68.3 (0224).

> **EPA Response:** EPA is not finalizing the proposed regulatory language that includes a specified number of hours that a transportation container may be disconnected from the motive power that delivered it to the site before being considered part of the stationary source. Nevertheless, during the development of the RMP SCCAP rule, EPA consulted and coordinated with other Federal agencies to ensure the intent of adding specificity and clarification to the RMP regulations would not create conflicts with other Federal programs; this included meetings with DOT and DHS.
>
> Further, EPA has demonstrated its intent and application of when transportation containers are and are not part of the stationary source in guidance and through court decisions. In the January 1998 amendments to the RMP rule (63 FR 640)[185], the Agency explained that EPA considers a container to be in transportation as long as it is attached to the motive power that delivered it to the site (e.g., a truck or locomotive). If a container remains attached to the motive power that delivered it to the site, even after a facility accepts delivery, it would be considered as still in transportation, and the contents would not be subject to threshold determination. Additionally, EPA's guidance indicates that transportation containers used for storage which are not incident to transportation and transportation containers connected to equipment at a stationary source are considered

[185] https://www.govinfo.gov/content/pkg/FR-1998-01-06/pdf/98-267.pdf.

part of the stationary source. Transportation containers that have been unhooked from the motive power that delivered them to the site (e.g., truck or locomotive) and left on a stationary source's site for short-term or long-term storage are part of the stationary source.[186]

Since EPA's proposal, courts have also spoken to this issue. In February 2023, the U.S. Eastern District Court of Washington ruled in favor of the U.S. against Multistar Industries regarding RMP applicability to railcars used for stationary storage. The Court determined that railcars containing trimethylamine (TMA) in 2017 in Othello, WA, were used as storage outside the scope of transportation.[187] The TMA-containing railcars sat for days or weeks before the TMA was eventually transloaded into trucks for transfer to the customer. Additionally, in 2017, the NC Department of Air Quality succeeded against Aberdeen Carolina & Western Railway in demonstrating that EPA's longstanding interpretation of the term "stationary source" includes railcars disconnected from locomotive power and stored for extended periods of time. In that case, between 2012 and 2016, in Star, NC, railcars containing butane were stored on tracks awaiting placement at a nearby terminal for up to 360 days.[188]

Comment 14.5-03: Many commenters requested clarification on specific aspects of EPA's proposal.

One commenter stated that proposed revisions to the definition of stationary source with respect to storage activities incidental to transportation and to expand the scope of covered facilities are confusing and need clarification. Specifically, the commenter stated that EPA provides no explanation, data, or cost-benefit analysis to support the 48-hour exception whereby transportation containers would be excepted from the threshold determination for stationary sources. The commenter also stated that the proposed expansion of the stationary source definition ignores that the DOT rule cited as the source of the 48-hour timeframe does not apply to railcars once they are on private track and also includes exclusions and changing this would increase the paperwork burden on facilities. The commenter also stated that proposed language providing the 48-hour exception is unclear regarding what activities are encompassed within that exception (0268).

Regarding the proposed revision to 40 CFR 98.3 regarding "containers" and the exclusion of "storage incident to transportation," one commenter said that EPA appears to assume that the only type of transportation is by vehicle to a site rather than also by pipeline from a site. The commenter asked EPA to clarify that storage facilities and storage containers connected to pipeline systems or other transportation facilities subject to regulation under 49 CFR parts 192, 193 or 195 are transportation or storage incident to transportation excluded from the definition of "stationary source" within the meaning of 40 CFR 68.3. (0246).

Another commenter stated that the proposed language to describe "storage incident to transportation" is confusing, making it difficult to understand whether issues reported by people in fenceline communities are sufficiently addressed by EPA's update to the RMP rule (0270).

[186] https://www.epa.gov/sites/default/files/2013-10/documents/chap-01-final.pdf (page 1-5).
[187] *United States v. Multistar Indus. Inc.*, No. 2:21-cv-00262-TOR, 2023 WL 1802387 (E.D. Wash. Feb. 7, 2023).
[188] *Aberdeen Carolina & Western Railway v. NC Dept of Air Quality, Final Decision on Summary Judgment*, State of North Carolina, County of Montgomery, 16 EHR 07190, May 22, 2017.

One commenter urged EPA to make clear that storage (such as a rail container) of any regulated substance anywhere on-site for over 48-hours will trigger or contribute to RMP rule coverage even if connected motive power. The commenter stressed that the fact of connection to power does not show movement from storage to transportation (0460).

One commenter stated that as currently drafted, the status of the motive power (connected versus unconnected) appears irrelevant to loading or unloading as transportation containers would be part of the stationary source regardless of when they are connected for loading to equipment at a stationary source. The commenter stated that this is of concern because transportation containers may be the only source at a facility that would contain sufficient material to trigger RMP requirements (0206).

Regarding EPA's proposal to add transportation containers that store for 48-hours or more to the threshold determination for stationary sources, another commenter said that this would largely affect railyards and other transportation facilities that have long been exempted from the threshold stationary source determination. The commenter added that EPA provides no meaningful explanation for the change except providing clarity for which containers used for onsite storage must be incorporated into the facility RMP (0253).

Another commenter expressed support for EPA's proposal to allow onsite storage for a period of time without its motive power but requested clarification of its applicability to "transportation containers connected to equipment at a stationary source for loading or unloading." The commenter pointed out that this is consistent with the PHMSA definition of "transportation or transport" as "the movement of property and loading, unloading, or storage incidental to that movement." (0206).

In specifying a 48-hour timeframe, one commenter asked EPA to clarify which entity, i.e., railroad, shipper or some other, is responsible for developing an RMP for those circumstances where no prior RMP was previously done (0247).

Referring to transloading facilities at rail yards, another commenter asked EPA to apply the 48-hour rule cumulatively and, if adopted, to clarify that the cumulative requirement applies only to railcars that are delivered to the railyard for the purpose of transloading and that other railcars in a railyard that are passing through along the route to their ultimate destination are not subject to this cumulative treatment (0229).

Referring to the 48-hour rule, a couple of commenters stated that the proposed rule creates ambiguity between the regulatory text and the preamble, which requires clarification and an opportunity for additional public input before EPA finalizes the change (0253, 0272).

> **EPA Response:** EPA acknowledges some of the concerns with establishing a timeframe and chooses to further consider the feedback received on the proposed modification before pursuing the effort. EPA encourages regulated entities and implementing agencies to continue to rely on guidance EPA has provided to determine if a transportation container is considered a part of a stationary source.

Comment 14.5-04: One commenter expressed agreement with the historical definition of stationary source which would include transportation containers only when they are no longer in transportation in commerce (0227).

> **EPA Response:** EPA is not finalizing the proposed regulatory language that includes a specified number of hours that a transportation container may be disconnected from the

motive power that delivered it to the site before being considered part of the stationary source. As explained in the proposed rule, the term "storage not incident to transportation" is currently not defined in the RMP regulations. The proposed modification sought only to apply a specific timeframe to universally establish a structure to interpret the term. EPA hoped a specified timeframe would assist regulated entities and implementing agencies to more clearly determine when a transportation container used for onsite storage must be incorporated into a facility's risk management plan. Nevertheless, after review of comments, EPA acknowledges some of the concerns with establishing a timeframe and chooses to further consider the feedback received on the proposed modification before pursuing the effort. EPA encourages regulated entities and implementing agencies to continue to rely on guidance EPA has provided to determine if a transportation container is considered a part of a stationary source.

Recommended revisions

Comment 14.5-05: Many commenters proposed revisions to EPA's proposal.

A commenter urged EPA to strengthen the definition of stationary source to expand the coverage facility-wide so that a facility with any covered process under the RMP must be fully covered. The commenter stated that EPA should ensure any facility that stores or uses a chemical regulated under the RMP must follow RMP requirements for all processes and all equipment and must ensure that all hazardous chemicals at the site are accounted for. The commenter described the 2013 West, Texas fertilizer plant explosion, the 2017 Arkema fire, a fire at a storage building at a chemical facility, and a July 2021 chemical disaster in LaPorte, Texas as examples of facilities that were only partially covered by EPA's rules. The commenter also pointed to near misses of HF acid tanks in refineries as examples. The commenter stated that EPA should change the RMP to cover the oil drilling process (0460).

One commenter asked EPA to shorten the 48-hour window to the shortest time possible needed to advance the Act's core preventions goals and trigger RMP protections. The commenter also said that once the container is disconnected from power, the RMP requirements should be triggered because a container's short time frame at a location does not offset the bigger picture of cumulative impacts and risks of multiple containers arriving and leaving (0460).

One commenter stated that it is not clear whether the 48-hour clock resets at each location where the loaded rail car comes to rest along the route or is cumulative, whereas DOT's rule resets the clock at each railyard along the route of movement. The commenter asked EPA to clarify its proposal to be consistent with the DOT rule to the extent that it is relying upon the logic of that rule (0229).

One commenter stated that the preamble and the proposed regulatory text mention delivery to the site or onsite storage, indicating that EPA does not intend to expand the scope of the RMP rule to cover railcars stored off-site from an RMP facility. The commenter asked that EPA clarify this interpretation (0268).

One commenter said that the 48-hour timeframe is based on the PHMSA regulations related to shipments of hazardous materials in rail carriers; however, RCRA regulated hazardous waste facilities use trucks to transport waste operate differently. The commenter explained that when trucks deliver waste materials to RCRA facilities a longer timeframe is needed because the waste materials, under RCRA, are required to be tested and sampled before the facility can accept

them. The commenter requested that facilities be given a minimum of 72 hours before a disconnected transportation container is considered part of the stationary source (0262).

Another commenter asked EPA to specify the 48-hour timeline begins once the transportation container reaches the threshold quantity of a regulated substance determined under 40 CFR 68.115 and 68.130 (0206).

One commenter recommended specific revisions to the regulatory language for the definition of stationary source (0206).

One commenter suggested removing "actively engaged in transloading activities" from "railyards and other stationary sources actively engaged in transloading activities may store regulated substances up to 48 hours …." (0268).

> **EPA Response:** EPA acknowledges some of the concerns with establishing a timeframe and chooses to further consider the feedback received on the proposed modification before pursuing the effort. EPA encourages regulated entities and implementing agencies to continue to rely on guidance EPA has provided to determine if a transportation container is considered a part of a stationary source. Changing the applicability of the RMP rule to cover an entire facility if the facility has a covered process was not assessed before proposal and is beyond the scope of the SCCAP rulemaking. It would introduce an inconsistency in the scope of PSM and RMP coverage that would benefit from further notice and comment as well as interagency coordination.

Safety concerns

Comment 14.5-06: A couple of commenters expressed safety concerns for communities near railroad tracks where containers sit for days, sometimes with engines running or locomotives attached (0270, 0460). One of the commenters expressed concern that communities near railroad tracks are being used as chemical storage sites for RMP facilities. The commenter added that the presence of chemical railcars multiplies the risk for communities by blocking emergency evacuation routes and increasing air pollution (0270).

Noting EPA's request for comment on whether any safety concerns may arise from transportation containers exempt from the RMP regulation when disconnected for less than a total of 48-hours, one commenter stated the hazard posed by the presence of that chemical is increased for the facility and neighboring community regardless of the length of time, whether or not the container is attached to a power source, and whether or not that source is in motion. The commenter asked EPA to use its authority to address these hazards (0270).

Another commenter discussed cumulative impacts and risks regardless of length of time at a location and asked EPA to work with local community groups to best resolve the safety concern (0460).

One commenter stated that the proposed rule fails to protect the community and workers because it does not consider risk from transportation of chemicals capable of mass casualties (0163).

> **EPA Response:** EPA will consider this feedback received if deciding to later pursue this matter.

14.6 Retail facility exemption

Opposition to retail facility exemption

Comment 14.6-01: Several commenters opposed EPA changes to the definition of "retail facility" (0202, 0227, 0229, 0247, 0272). Some commenters also contended that the proposed changes to the definition of retail facility lack justification (0229, 0272). One of the commenters said that EPA's proposed definition fails to: (1) provide any support for its assertion that owners and operators of facilities storing propane or other flammable substances are unclear how to determine whether they qualify as retail facilities, (2) provide any information to suggest that the current definition creates safety concerns, and (3) cite to enforcement concerns at facilities claiming to be retail facilities (0229).

> **EPA Response:** EPA disagrees that the proposed changes to the definition of "retail facility" lack justification. With the current definition, the period of sales to end users is unclear; it lacks a definite time frame in which to calculate whether more than one-half of the facility's direct sales are to end users. Specifying a definite period of time would eliminate this uncertainty and allows owners and operators to determine more accurately whether regulated substances in a process are subject to the RMP provisions. It also may reduce the amount of sales documentation that the owner or operator of a regulated facility must provide in response to an EPA information request to establish the facility's status as a retail facility. EPA is finalizing the "one year of sales activity" amendment because the Agency believes it captures the seasonality of propane sales at propane distribution facilities.

Comment 14.6-02: A couple commenters urged EPA to maintain its existing definition of a retail facility, which is consistent with the definition set forth in the Fuels Regulatory Relief Act and OSHA PSM Standard enforcement guidance and interpretations (0229, 0272). One of the commenters added that the definition change would result in burdensome changes to longstanding EPA and industry practice (0272). One commenter urged EPA to use the retail facility definition used for the RMP and OSHA PSM, which has been in place for a long time and is well understood by the industry and enforceable by the Agencies (0202).

> **EPA Response:** EPA disagrees with comments arguing that EPA's proposed definition would be inconsistent with OSHA's PSM regulations. EPA has coordinated with OSHA throughout the rulemaking process (including but not limited to meetings on various dates in Appendix A to this document) to ensure the intent of adding specificity and clarification to the RMP regulations does not create conflicts with the requirements of the OSHA PSM standard. EPA believes that the provisions it proposed and is finalizing are compatible and do not conflict with the prevention provisions of OSHA's PSM regulations.

Comment 14.6-03: A couple of commenters recommended that if EPA moves forward to adjust the definition of retail facility, the Agency provide businesses and/or facilities with the option of selecting either fiscal year or calendar year when determining annual income from direct sales to end users (0227, 0272). Given the seasonal nature of propane sales, one commenter recommended changing "calendar year" to "fiscal year" to facilitate the income calculation for those companies whose fiscal year may not coincide with the calendar year (0247). Regarding the annual sales and calendar year criteria in the proposed retail facility definition, another commenter stated that EPA provided no justification of its calendar year requirement (0229).

> **EPA Response:** In response to comments recommending that EPA adjust the definition to provide facilities the option of selecting either fiscal year or calendar year, EPA agrees

with this suggestion and is adopting it in the final rule. The Agency believes this option provides flexibility in using records in the configuration that may already exist at facilities.

14.7 RAGAGEP gap analysis

Support for RAGAGEP gap analysis provisions

Comment 14.7-01: One commenter supported EPA's proposal to make clear that a PHA must include an analysis of the most recently promulgated RAGAGEP and any gaps between the facility's design, maintenance, or operation and the most current version of RAGAGEP (§ 68.67(c)(10)) and to require facilities to specify why any PHA recommendation associated with adopting most current codes, standards, or practices are not implemented (if not implemented) (§ 68.175(e)(9)) (0460).

The commenter pointed out that OSHA has acknowledged that published RAGAGEP is often appropriately restated in internal procedures of the owner or operator, meaning that details of the published RAGAGEP may not appear in the internal procedures. The commenter added that such restatements are necessary to adapt published RAGAGEP to the specific circumstances and technology of a particular stationary source and to eliminate inapplicable or overly technical provisions in published RAGAGEP to make the internal procedures useful to site personnel. The commenter contended that such departures from published RAGAGEP are essential to ensure safety (0215).

> **EPA Response:** EPA appreciates the commenters' support. EPA notes that this RAGAGEP gap analysis is already expected under 40 CFR 68.65(d)(2) and (3) for Program 3 processes. EPA notes this PHA modification merely clarifies when facilities must, at minimum, conduct or review previous analyses when determining their compliance with 40 CFR 68.65(d)(2) and (3). Nothing in the RMP rule or these amendments prohibits stationary source-specific restatements that eliminate inapplicable or overly technical phrasing of RAGAGEP in internal procedures so long as the hazard identified by more recently promulgated RAGAGEP is addressed consistently with more recently promulgated RAGAGEP.

Comment 14.7-02: One commenter said that ensuring practicable implementation is essential because industrial facilities have failed to make common-sense safety decisions on the scale needed to save lives. The commenter urged EPA to require implementation of all practicable safer technologies, processes, and practices, NaTech or natural/external hazard, power loss, and stationary source siting mitigation, compliance auditor and incident investigation recommendations, and RAGAGEP. The commenter added that failing to require this would fail to assure prevention, as the statute directs, to the greatest extent practicable (0460).

> **EPA Response:** Other than the STAA requirement in this final rule to implement at least one passive measure, or an inherently safer technology or design, or a combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure, EPA is not requiring implementation of all protective measures resulting from hazard evaluations. We are retaining the performance-based structure of the rule. As a general matter, we require assessments of factors related to hazards and risks of accidental releases, methods to remedy such hazards and risks, reasoned decision-making by the facility, and communication of decisions about these factors in a

way that allows for public use of the information as well as oversight by regulatory bodies and stakeholders. Regarding RAGAGEP implementation as it pertains to this provision, as indicated in a Frequently Asked Question,[189] EPA explains that where RAGAGEP are updated to be more protective, but are not explicitly retroactive, per 40 CFR 68.65(d)(3), the owner or operator should thoroughly evaluate how their process could still be considered safe amid new industry knowledge. Simply indicating that a process incident has yet to occur is an inappropriate evaluation for choosing not to adhere to updated RAGAGEP, especially considering changes to RAGAGEP may result from industry accidents, industry operating experience, and improved understanding of existing and newly recognized hazards. Oftentimes it will be difficult for the owner or operator to document equipment is designed, maintained, inspected, testing, and operating in a safe manner when there is extensive industry knowledge that indicates aspects of older process operations are no longer safe.

Opposition to RAGAGEP gap analysis provisions

Comment 14.7-03: Several commenters opposed the proposal to include analysis of the most recently promulgated RAGAGEP to identify possible gaps and/or the commenters opposed the proposal to identify RAGAGEP recommendations that are not implemented and include a justification as to why they were not adopted (0173, 0181, 0184, 0205, 0207, 0210, 0215, 0217, 0224, 0229, 0232, 0233, 0234, 0237, 0242, 0244, 0253, 0262, 0267, 0268, 0272).Some commenters urged EPA not to finalize the RAGAGEP requirements (0207, 0233, 0234, 0267).

One commenter disagreed with EPA's characterization of the gap analysis as "technical" and added that they consider it a substantive amendment (0237).

EPA Response: EPA notes that this RAGAGEP gap analysis is already expected under 40 CFR 68.65(d)(2) and (3) for Program 3 processes. EPA notes this PHA modification merely clarifies when facilities must, at minimum, conduct or review previous analyses when determining their compliance with 40 CFR 68.65(d)(2) and (3). Evaluations of updated RAGAGEP already is an RMP requirement, as shown in enforcement actions against facilities not complying with this provision. For example, in 2022, EPA took an enforcement action against a refinery in Hawaii that failed to comply with the latest versions of applicable refining industry standards, API Recommended Practice 941, "Steels for Hydrogen Service at Elevated Temperatures" (8th edition, February 2016), and 581, "Risk Based Inspection" (3rd edition, April 2016).[190] In February 2021, EPA also took an enforcement action against a seafood processing facility in Massachusetts that failed to comply with the latest version (at that time) of an applicable ammonia refrigeration industry standard, International Institute of Ammonia Refrigeration (IIAR) 2-2014, "Safe Design of Closed-Circuit Ammonia Refrigeration Systems."[191] In both cases, the processes at these facilities were built prior to the updated RAGAGEP cited.

[189] https://www.epa.gov/rmp/complying-process-safety-information-psi-resulting-new-and-updated-recognized-and-generally.
[190] https://yosemite.epa.gov/oa/rhc/epaadmin.nsf/Filings/F8CDEF8A6F344043852588A90070FA45/$File/Par%20Hawaii%20Refining%20(CAA112R-09-2022-0008)%20-%20Served.pdf.
[191] https://yosemite.epa.gov/oa/rhc/epaadmin.nsf/Filings/0D26DA8B081A54008525867F00634AB2/$File/EPCRA-01-2021-0037%20and%20CAA%20-01-2021-0038%20ORPEL%20CAFO%20Respondent%20Signed-RJO-Signed02-17-21%20(002).pdf.

Comment 14.7-04: Many commenters expressed concerns related to overlap with OSHA's regulations.

A couple commenters stated that the proposed gap analysis encroaches on OSHA's PSM regulation (0232, 0237). Some commenters pointed out that EPA adopted their regulation verbatim from OSHA's PSM regulation, and OSHA has made clear that its regulations require the verification of safe equipment, not a continual review of RAGAGEP (0207, 0229, 0253, 0268, 0272). Several commenters said that EPA did not explain how the proposed gap analysis would work in tandem with OSHA regulation, which the proposal fails to repeal or revise (0207, 0229, 0253, 0268, 0272). One of the commenters added that ignoring existing regulations is arbitrary government action (0268).

One commenter stated that EPA's proposed change to 40 CFR 68.65(a) conflicts with the PSM Standard's PSI requirements set forth in 29 CFR 1910.119(d). The commenter asserted that EPA should not amend 40 CFR 68.65(a) as proposed but adhere to the existing regulatory language for Program 3 sources to ensure the long-standing consistency between the RMP and PSM Standard remain (0229).

Another commenter said that there is no material difference between the RMP and the PSM requirement, and the proposed gap analysis requirement except that the proposal would require it to be conducted during the PHA and would require facilities to document results of the analysis in their Risk Management Plans, rather than in their PSI. The commenter also said that the gap analysis would create inconsistencies with the OSHA PSM standard provisions concerning adherence to RAGAGEP no longer in general use (0233). The commenter stated that an ongoing duty for facilities to ensure that their process equipment is designed, maintained, and operated in accordance with the most current version of RAGAGEP is inconsistent with owners' and operators' obligations under the PSM standard. The commenter added that EPA did not acknowledge this inconsistency in its proposal, nor does EPA provide any reasoned explanation why it has chosen to depart from OSHA's interpretation of the comparable requirements of the PSM standard (0233).

One commenter asked EPA to recognize that the RAGAGEP proposed language contains "should" provisions. The commenter added that OSHA has recognized that non-compliance with "should" provisions does not create a presumption of noncompliance, and that non-compliance with "shall" provisions is not necessarily a violation of a regulatory RAGAGEP requirement (0215).

> **EPA Response:** In response to comments that the provisions encroach on OSHA's PSM regulations, EPA disagrees. This new PHA requirement is meant to complement OSHA's equivalent requirement in 29 CFR 1910.119(d)(3)(iii) and provide a framework for undertaking the analysis. Citing the discussion in the 2019 Reconsideration rule and the proposed SCCAP, EPA explained that there is no legal requirement to defer to OSHA in rulemaking, to hold off from rulemaking until OSHA amends its rules, or to not differ from PSM given the agencies separate missions. 87 FR 53564. While EPA favors consistency with OSHA's PSM standard, EPA must also ensure compliance with the CAA. CAA section 112(r)(1), 42 U.S.C. 7412(r)(1), Purpose and general duty, states that, "It shall be the objective of the regulations and programs authorized under this subsection to prevent the accidental release and to minimize the consequences of any such release of any substance listed pursuant to paragraph (3) or any other extremely hazardous

substance." Congress further clarified in legislative history that it intended facility owners and operators to implement all feasible means to reduce the threat of death, serious injury, or substantial property damage to satisfy the requirements of the GDC.[192] Obligations under the regulatory program authorized by CAA section 112(r)(7) build upon those under the general duty rather than undercut it. Accordingly, using the RMP regulations to permanently lock into place obsolete or out-of-date RAGAGEP is inconsistent with the purpose and intent of the CAA. EPA does not view the gap analysis for RAGAGEP to be inconsistent with the OSHA PSM standard. The gap analysis complements PSM by bringing awareness of potential safety concerns to the attention of the employer.

Further, the proposed and the unchanged final regulatory text changes associated with this provision do not include "should", rather, 40 CFR 68.67(c)(10) indicates: (c) *The process hazard analysis shall address . . . (10) Any gaps in safety between the codes, standards, or practices to which the process was designed and constructed and the most current version of applicable codes, standards, or practices.* Where the relevant RAGAGEP is phrased as the owner or operator "should" undertake an action, EPA would expect the owner or operator to evaluate whether its chosen RAGAGEP reflects recognized and generally accepted good engineering practices, document that the owner or operator reviewed the most recent version of RAGAGEP and address any safety gaps as required by 40 C.F.R 68.67(c)(10).

Comment 14.7-05: Several commenters opposed the added RAGAGEP regulations as unnecessary and duplicative, citing that it does not have a demonstratable safety benefit and that it is already included in the PSM regulations (0205, 0217, 0232, 0237). One commenter stated that EPA breaks from the longstanding application of RAGAGEP by imposing unreasonable, prescriptive requirements in the PHA. The commenter added that nowhere in the preamble did EPA analyze the safety benefit of conducting a gap analysis of RAGAGEP (0268). Relatedly, another commenter said that the gap analysis provides no corresponding accident prevention benefit, and the required gap analysis is not appropriate as part of a PHA (0233). Another commenter said that EPA's proposed requirements have no clear safety benefit and would divert resources away from existing RMP programs and processes (0233).

One of the commenters stated that OSHA does not impose a duty to ensure continual RAGAGEP compliance, rather it imposes a duty to ensure safety (0237).

Another commenter pointed to the CAA 112(r)(7)(B)(i), which requires EPA to develop reasonable regulations to account for "voluntary actions of such sources to prevent such releases and respond to such releases." The commenter added that under the proposed rule, EPA failed to provide any examples of an RMP incident that would have been prevented had the RAGAGEP portion of the proposal been in place (0268).

One commenter also said that EPA failed to acknowledge the high likelihood that the personnel time and facility resources spent analyzing the most recently promulgated RAGAGEP could detract from other core components of the PHA and thus be counterproductive to safety (0233).

The commenter stated that the requirements to use the PHA to identify RAGAGEP practices should not be included in the final rule. The commenter contended that this is an unnecessary intrusion into internal practices at a facility and does not improve good decision-making or that

[192] S. Rep. 101-228 at 209, 1990 U.S.C.C.A.N. 3385, 3595 (1989).

facility's safety. Also, because EPA should not require disclosure of decisions not to implement PHA recommendations, including RAGAGEP decisions, the commenter said that there is no need to provide specific categories for reporting that information publicly (0215).

> **EPA Response:** As indicated in a Frequently Asked Question,[193] EPA expects owners and operators to regularly review new and updated RAGAGEP applicable to their industry to determine where safety gaps exist within their current process. If the updated document explicitly provides that new clauses or requirements are retroactive, those updates are relevant to determining whether the owner or operator's practice continues to conform to RAGAGEP per 40 CFR 68.65(d)(2). Where RAGAGEP are updated to be more protective, but are not explicitly retroactive, per 40 CFR 68.65(d)(3), the owner or operator should thoroughly evaluate how their process could still be considered safe amid new industry knowledge. Simply indicating that a process incident has yet to occur is an inappropriate evaluation for choosing not to adhere to updated RAGAGEP, especially considering changes to RAGAGEP may result from industry accidents, industry operating experience, and improved understanding of existing and newly recognized hazards. Oftentimes it will be difficult for the owner or operator to document equipment is designed, maintained, inspected, testing, and operating in a safe manner when there is extensive industry knowledge that indicates aspects of older process operations are no longer safe.
>
> Evaluation of updated RAGAGEP already is an RMP requirement, as shown in enforcement actions against facilities not complying with this provision. For example, in 2022, EPA took an enforcement action against a refinery in Hawaii that failed to comply with the latest versions of applicable refining industry standards, API Recommended Practice 941, "Steels for Hydrogen Service at Elevated Temperatures" (8th edition, February 2016), and 581, "Risk Based Inspection" (3rd edition, April 2016).[194] In February 2021, EPA also took an enforcement action against a seafood processing facility in Massachusetts that failed to comply with the latest version (at that time) of an applicable ammonia refrigeration industry standard, International Institute of Ammonia Refrigeration (IIAR) 2-2014, "Safe Design of Closed-Circuit Ammonia Refrigeration Systems."[195] In both cases, the processes at these facilities were built prior to the updated RAGAGEP cited.

Comment 14.7-06: Several commenters contended that the effort to find and explain any safety gaps between current codes, standards, or practices of a system built to codes is unnecessary. The commenters added that to require facilities to include this information in their risk management plans would result in unnecessary costs on facilities (0184, 0205, 0232, 0233, 0234, 0237, 0253, 0268, 0272).

One commenter said that it is generally both unnecessary and infeasible for owners and operators to keep their processes compliant with recent changes in updated RAGAGEP, noting that the

---

[193] https://www.epa.gov/rmp/complying-process-safety-information-psi-resulting-new-and-updated-recognized-and-generally.

[194] https://yosemite.epa.gov/oa/rhc/epaadmin.nsf/Filings/F8CDEF8A6F344043852588A90070FA45/$File/Par%20Hawaii%20Refining%20(CAA112R-09-2022-0008)%20-%20Served.pdf.

[195] https://yosemite.epa.gov/oa/rhc/epaadmin.nsf/Filings/0D26DA8B081A54008525867F00634AB2/$File/EPCRA-01-2021-0037%20and%20CAA%20-01-2021-0038%20ORPEL%20CAFO%20Respondent%20Signed-RJO-Signed02-17-21%20(002).pdf.

RAGAGEP itself recognizes this. The commenter pointed out that many consensus standards identify changes to updated standards with indications of whether the changes are "retroactive," but few changes are so marked because updates to RAGAGEP are in the nature of continuous incremental improvements, rather than newly recognized step changes essential to process safety (0215).

A few commenters said that EPA's failure to consider costs in the RIA deprives the public of an opportunity to assess the full costs and benefits of the proposal (0253, 0268, 0272).

> **EPA Response:** In response to comments that EPA provided no reasonable explanation for the requirement, there would be difficulty in implementing the provision, and costs for the requirement were not considered, EPA notes that this RAGAGEP gap analysis is already expected under 40 CFR 68.65(d)(2) and (3) for Program 3 processes. EPA notes this PHA modification merely clarifies when facilities must, at minimum, conduct or review previous analyses when determining their compliance with 40 CFR 68.65(d)(2) and (3). Therefore, EPA does not believe that the Agency must consider and assess the costs of this provision in the RIA as sources already should be in compliance.

Comment 14.7-07: Many commenters addressed the feasibility of implementing the proposed RAGAGEP gap analysis requirements.

A few commenters stated that the proposed rule is of no benefit if older equipment is still accepted under RAGAGEPs or if they are not adequately covered under newer RAGAGEPs. The commenters added that a PHA is not the correct tool to perform the RAGAGEP gap analysis (0181, 0237, 0262).

Another commenter said that equipment built to RAGAGEP code is expected to comply with it for the life of the equipment unless it is significantly modified to subject it to more recent codes. The commenter added that although design codes and standards change over time, it is unusual for any code enforcement agency to require the process to be continually modified to reflect current RAGAGEP. The commenter also said that OSHA tried to enforce something similar and was informed by court order they could not (0173).

One commenter pointed out that the existing RMP regulations already address gaps in RAGAGEP through the process safety information requirement, 40 CFR § 68.65(d)(3) (0272).

Although another commenter said they did not oppose a clarification to require consideration of the gap between as-built RAGAGEP and current RAGAGEP, they stated that the RMP rule already requires evaluation of whether current equipment built using outdated codes is still safe (0215).

One commenter pointed out that industry standards are locked into place once a facility is constructed and each facility is designed, engineered, and built according to the standards of that time. The commenter added that in some cases it would be impossible to document that equipment, which may be 20 or 30 years old, to comply with RAGAGEP when RAGAGEP continually changes (0207).

Another commenter expressed concern that the proposed RAGAGEP provision could create misinterpretation, leading to judging a process on current RAGAGEP, which could result in costly changes to a process that was properly designed and built to older RAGAGEP. The commenter added that as approved by a facility or required by the AHJ, the operating and maintenance practices and procedures should follow current RAGAGEP from the industry and

should also incorporate manufacturers recommendations; however, if there is some issue relating to safety a recommendation it should be remedied. The commenter also stated that documenting the rationale of why a recommendation is declined should already be done under "*Actions taken/Supporting Documentation*" as shown in the IIAR PSM/RMP guidelines for doing a PHA (0184).

A couple of commenters suggested that the proposal to report recommendations declined from the gap analysis would invite second-guessing and be misunderstood by the public (0233, 0262).

The commenter stated that the proposed gap analysis ignores several practical difficulties in implementation, such as how facilities are to identify the most current version of applicable RAGAGEP, how they are to account for non-mandatory RAGAGEP provisions in the analysis, and how this analysis can be completed in a timely manner. The commenter added that the proposed requirement ignores existing obligations to determine and document that equipment designed and constructed is in accordance with RAGAGEP (0233). The commenter asked EPA to allow PHA teams to focus on process hazards using appropriate team members and methodologies, and not detract from the PHA by burdening it with extraneous requirements, such as STAA, RAGAGEP gap analysis, and natural hazard evaluations. The commenter added that EPA failed to consider how the gap analysis requirement may be inappropriate for and reduce effectiveness of the PHA by cluttering the PHA process with an extra analytical requirement that the PHA team may be ill-suited to perform (0233).

The commenter pointed out that the proposed gap analysis requirement is inappropriate for the PHA because it would require the PHA team to perform a function that it is ill-suited to perform, namely a comparative evaluation of codes, standards, and practices. The commenter added that incorporation of the gap analysis requirement will over-extend the PHA team and divert time and resources from the principal purpose of the PHA process: to identify, evaluate, and control hazards in a process as it exists (0233).

> **EPA Response:** EPA notes that this RAGAGEP gap analysis is already expected under 40 CFR 68.65(d)(2) and (3) for Program 3 processes. EPA notes this PHA modification merely clarifies when facilities must, at minimum, conduct or review previous analyses when determining their compliance with 40 CFR 68.65(d)(2) and (3).
>
> As indicated in a Frequently Asked Question[196], EPA expects owners and operators to regularly review new and updated RAGAGEP applicable to their industry to determine where safety gaps exist within their current process. If the updated document explicitly provides that new clauses or requirements are retroactive, those updates are relevant to determining whether the owner or operator's practice continues to conform to RAGAGEP per 40 CFR 68.65(d)(2). Where RAGAGEP are updated to be more protective, but are not explicitly retroactive, per 40 CFR 68.65(d)(3), the owner or operator should thoroughly evaluate how their process could still be considered safe amid new industry knowledge. Simply indicating that a process incident has yet to occur is an inappropriate evaluation for choosing not to adhere to updated RAGAGEP, especially considering changes to RAGAGEP may result from industry accidents, industry operating experience, and improved understanding of existing and newly recognized hazards. Oftentimes it will be difficult for the owner or operator to document equipment

[196] https://www.epa.gov/rmp/complying-process-safety-information-psi-resulting-new-and-updated-recognized-and-generally

is designed, maintained, inspected, testing, and operating in a safe manner when there is extensive industry knowledge that indicates aspects of older process operations are no longer safe.

EPA disagrees that the RAGAGEP analysis is ill-suited for the PHA team to perform. PHA teams should include staff who are aware of industry design standards. The PHA team requirement under 40 CFR 68.67(d) specifies that the PHA shall be performed by a team with expertise in engineering and process operations, and EPA expects an expert to be one that has knowledge of current industry standards. Additionally, industry trade associations are likely to ease the burden on facilities by identifying which of their current RAGAGEP should be broadly applied to the industry, regardless of when the process was designed. For example, the ammonia refrigeration industry has already done so, specifically in the ANSI/IIAR Standard 9-2020, "American National Standard for Minimum System Safety Requirements for Existing Closed-Circuit Ammonia Refrigeration Systems."

For many years, EPA and OSHA have established a regular meeting to consult with the DOL and coordinate the PSM and RMP programs, including but not limited to interpretation of overlapping regulatory provisions and the development of potential amendments to the rules. During several of these regular meetings (including but not limited to meetings on various dates in listed in Appendix A to this document), staff from the agencies discussed the development of the RMP SCCAP rule. This PHA regulatory text change was included in those discussions. This PHA requirement is meant to complement OSHA's equivalent requirement in 29 CFR 1910.119(d)(3)(iii) and provide a framework for undertaking the analysis.

Comment 14.7-08: One commenter stated that power sector facilities (i.e., NAICS codes 2211 and 221210) should not be required, as a regulatory condition, to meet RAGAGEP with respect to PHAs. The commenter added that while this may be appropriate for other industrial sectors, the power sector is too diverse to be subject to across-the-board RAGAGEP. The commenter clarified that regulated utility facilities should adhere to RAGAGEP whenever applicable and practical, but that the lack of readily available, sector wide RAGAGEP makes this an unnecessary and impractical regulatory obligation to place on the power sector (0224).

One commenter contended that EPA's proposed requirement for facilities to conduct a gap analysis against RAGAGEP in PHAs does not make sense for all RMP facilities. The commenter stated that because smelter facilities are relatively rare, there are no formal uniform design, maintenance, and operation standards for copper smelters that are regularly reviewed and or updated. The commenter added that EPA's requirement creates substantial confusion for them and said it is unclear how compliance could be demonstrated at the smelter. As a result, the commenter requests that EPA not finalize this proposed requirement, or in the alternative, that EPA pause this rulemaking and take the time to engage with a variety of facilities subject to the RMP rules to further inform its rulemaking process (0210).

EPA Response: EPA disagrees that some sectors should be exempt from this already existing provision. As the commentor acknowledges, and EPA agrees, adhering to RAGAGEP whenever applicable and practical is necessary. Therefore, EPA expects all owners and operators to regularly review if there are any new and updated RAGAGEP

applicable to their industry to determine if and where safety gaps exist within their current process.

15 Compliance dates

Support for compliance dates

Comment 15-01: One commenter expressed support for the compliance dates proposed by EPA consistent with CAA § 112I(7)(B)(i), with compliance required three years after the final rule and four years after the final rule to update and resubmit RMPs (0238).

Regarding RAGAGEP technical clarifications, one commenter stated that the proposed effective date of the final rule being the compliance date for these technical changes is appropriate, and it is important to add the RAGAGEP requirements because codes, standards, and practices change over time (0460).

EPA Response: EPA appreciates the commenters' support.

Requests to shorten compliance dates

Comment 15-02: A couple of commenters urged EPA to shorten the 4-year timeline for facilities to submit updated RMPs (0208, 0450).

EPA Response: EPA disagrees with commenters and is finalizing the four-year compliance date for this provision, as proposed. This timeframe will allow owners and operators an opportunity to begin to comply with revised rule provisions prior to certifying compliance in the RMP. Additionally, the Agency will revise its online RMP submission system, RMP*eSubmit, to include the additional data elements, and sources will not be able to update RMPs with new or revised data elements until the submission system is ready. Also, once it is ready, allowing an additional year for sources to update RMPs will prevent potential problems with thousands of sources submitting updated RMPs on the same day.

Comment 15-03: One commenter stated that EPA should set a deadline and require reporting on emergency response field exercises – but should speed up compliance because 10 years is too long to wait for this essential emergency planning, especially in communities with multiple RMP facilities (0264).

One commenter recommended that the compliance period under the proposed rule be shortened to two years for the emergency response public notification and exercise evaluation report provisions (0444).

EPA Response: EPA disagrees that field exercises should be required on an annual, biennial, or triennial basis. Requiring field exercises to be held at shorter minimum frequencies, such as these would significantly increase compliance costs to both regulated facilities and local responder agencies. Such an approach would discourage the participation of local emergency responders in field exercises, which is voluntary under the RMP rule. Additionally, table-top exercises of the emergency plan have value for protecting the nearby community, and these occur every three years. The community would not be without a type of "basic emergency response exercise." Therefore, EPA is

finalizing the compliance date for owners or operators of sources to have planned, scheduled, and conducted their first field exercise by March 15, 2027.

EPA is finalizing the 3-year compliance date for ensuring a public notification as proposed rather than shorten it. This provision is for facility owners and operators to work with the local responders to ensure that, during a release, a notification system is in place that will notify the public of the impending situation. EPA expects the partnership to occur at least during annual coordination discussions under 40 CFR 68.93. Under 40 CFR 68.93, owners and operators are required to annually coordinate response needs with local emergency planning and response organizations to determine how the facility is addressed in the community emergency response plan, among other things. A component of the community emergency response plan is public notification of chemical releases; therefore, it is expected that this component will be discussed and documented by the facility owner or operator as part of the annual coordination obligations. EPA expects that once the coordination meeting occurs additional time in needed to further acquire potential technologies and prepare the community to utilize the system thorough outreach efforts to ensure citizens are aware the system is operation and functional if and when an accident occurs.

EPA did not receive any comments specific to the three-year compliance date for exercise evaluation reports other than as a general comment. Therefore, EPA is finalizing the date for this provision, as proposed.

Comment 15-04: A commenter recommended that the compliance period under the proposed rule be shortened to two years for the employee participation and information availability provisions. The commenter added that statutory language reflects Congress's intent that EPA ensure adequate safeguards are promptly put in place to protect workers and surrounding communities from releases of dangerous chemicals. The commenter further stated that EPA's proposal should contain shorter compliance deadlines as compared to the 1996 RMP Rule because the proposed rule is not as extensive as developing a full RMP program. (0444).

EPA Response: EPA disagrees that the compliance dates for some or all provisions should be shortened to one or two years or should be lengthened to five years or three years after guidance is issued. The Agency believes there is a good balance with three years as the compliance date for most new provisions while also assuring compliance as expeditiously as practicable. Moreover, the initial 1996 RMP rule required compliance per the statute within three years. EPA believes the provisions finalized in this rule are not as extensive as developing a full RMP program. Nevertheless, time is needed for facility owners and operators to understand the revised rule; train facility personnel on the revised provisions; learn new investigation techniques, as appropriate; research safer technologies; arrange for emergency response resources; incorporate changes into their RMPs; and establish a strategy to notify the public that certain information is available upon request. This time is necessary to achieve compliance with the new provisions because as a performance-based rule, EPA has not specified how facilities apply these provisions to manage and improve process safety at their facility, whether it involves conforming to minimum standards, such as codes, or trying to reduce risk to as low as reasonably practical, or whether it uses qualitative or quantitative assessments. Furthermore, EPA intends to publish guidance for certain provisions, such as STAA, root cause analysis, third-party audits, and employee participation, etc. Once these materials

are complete, owners and operators can have time to familiarize themselves with the new materials if needing assistance in applying the provisions to improve process safety. EPA expects to develop and release this information approximately one year after this final rule. However, most provisions for a source are a site-specific determination, so EPA expects all regulated RMP facilities to be successful in beginning to address the provisions immediately.

Comment 15-05: One commenter asked EPA to clarify the requirement date for compliance with the natural hazard assessment and the power loss evaluations. The commenter asserted that this should occur as expeditiously as practicable, within one year after the effective date of the final rule, and facilities should be directed to report that they have completed these assessments soon after completion (0460).

Referring to compliance date for natural hazards and power loss evaluations, another commenter requested EPA clarify how 40 CFR 68.190(b) interacts with 40 CFR 68.10(i) and "assur[e] compliance as expeditiously as practicable." For example, the commenter stated that if the proposed rule is finalized in 2023 and compliance is required by 2027, but 40 CFR 68.190(b) requires revision of a facility's RMP by 2025, the current proposal should clarify that the 2025 revised RMP must comply (0460).

EPA Response: EPA notes that components of the hazards evaluation amplifications and the other areas of technical clarification in sections V.A. and VIII of the preamble impose no new requirements on facilities because they codify existing industry practice and re-emphasize current RMP requirements and do not change the meaning of the RMP rule. Compliance for these provisions is therefore already required and should be updated on their normal schedule. For example, an evaluation of natural hazards on a process should already be occurring as part of the hazard review (40 CFR 68.50) or PHA (40 CFR 68.67) and should be updated at least once every 5 years. Additionally, any update to the RMP required by 40 CFR 68.190 should continue to occur as normal and should include updating the RMP with current information required by Subpart G. The intent of the amplifications and clarifications discussed in this final rule are to simplify implementation for facilities, thereby improving chemical safety.

Regarding the compliance date for requiring standby or backup power for continuous operation of air monitoring equipment associated with prevention and detection of accidental releases from covered processes, EPA has adopted the three-year compliance date and has amended the regulatory language. EPA believes three years will allow time to evaluate and secure standby or backup power needs for air monitoring equipment and assure their safe operation.

Comment 15-06: A couple of commenters expressed concern that the 45-day period to receive information once requested is too long for people to wait that urgently need information (0251, 0460). A couple of commenters suggested that the required response time be shortened (0203, 0251).

EPA Response: EPA disagrees with these commenters and is finalizing a three-year compliance date for the information availability provision. This means that three years after the effective date of the rule, the facility owner or operator must have notifications in place to inform the public that information specified in 40 CFR 68.210(b) is available upon request. EPA believes that this timeframe is needed to allow facility staff an

opportunity to determine the best method for providing notifications to the public, to assemble and format information, including securing appropriate language translation services, and to prepare to respond to information requests. EPA is therefore finalizing the three-year compliance date for the information availability provision.

Recommendations to extend compliance dates

Comment 15-07: Several commenters stated that there are too many proposed changes to accomplish in three years and asked EPA to extend the compliance deadlines to five years after the effective date of the proposed rule (0181, 0240, 0253, 0262).

One commenter, who objected to the effective dates in the proposed rule as too restrictive, said EPA failed to meet its CAA obligation to set RMP effective dates in a manner that assures compliance as "expeditiously as practicable" (0233).

One of the commenters opposed allowing companies three years after the effective date of the proposed rule to comply. The commenter stated that this period is too long, given that most companies are already complying with an existing version of the RMP rule. The commenter suggested a one-year timeline is most appropriate (0254).

> **EPA Response:** EPA disagrees that the compliance dates for some or all provisions should be shortened to one or two years or should be lengthened to five years or three years after guidance is issued. The Agency believes there is a good balance with three years as the compliance date for most new provisions while also assuring compliance as expeditiously as practicable. Moreover, the initial 1996 RMP rule required compliance per the statute within three years. EPA believes the provisions finalized in this rule are not as extensive as developing a full RMP program. Nevertheless, time is needed for facility owners and operators to understand the revised rule; train facility personnel on the revised provisions; learn new investigation techniques, as appropriate; research safer technologies; arrange for emergency response resources; incorporate changes into their RMPs; and establish a strategy to notify the public that certain information is available upon request. This time is necessary to achieve compliance with the new provisions because as a performance-based rule, EPA has not specified how facilities apply these provisions to manage and improve process safety at their facility, whether it involves conforming to minimum standards, such as codes, or trying to reduce risk to as low as reasonably practical, or whether it uses qualitative or quantitative assessments. Furthermore, EPA intends to publish guidance for certain provisions, such as STAA, root cause analysis, third-party audits, and employee participation, etc. Once these materials are complete, owners and operators can have time to familiarize themselves with the new materials if needing assistance in applying the provisions to improve process safety. EPA expects to develop and release this information approximately one year after this final rule. However, most provisions for a source are a site-specific determination, so EPA expects all regulated RMP facilities to be successful in beginning to address the provisions immediately.

Comment 15-08: One commenter pointed out that EPA's proposal would require facilities to comply with the proposed revisions in the PHAs upon the effective date of the rule. The commenter said that the deadline is infeasible because it would take years to address the host of expansive new PHA requirements that require analysis of a wide range of issues. Accordingly, the commenter asked EPA to clarify that the deadline for any new requirements is when the PHA

becomes due as part of its five-year cycle, or three years after the effective date of the final rule, whichever comes later (0268). Referring to the natural hazards assessment, another commenter requested an implementation date of no sooner than five years after the effective date of the final rule (0233).

> **EPA Response:** EPA notes that components of the hazards evaluation amplifications and the other areas of technical clarification in sections V.A. and VIII of this preamble impose no new requirements on facilities because they codify existing industry practice and re-emphasize current RMP requirements and do not change the meaning of the RMP rule. Compliance for these provisions is therefore already required and should be updated on their normal schedule. For example, an evaluation of natural hazards on a process should already be occurring as part of the hazard review (40 CFR 68.50) or PHA (40 CFR 68.67) and should be updated at least once every 5 years. Additionally, any update to the RMP required by 40 CFR 68.190 should continue to occur as normal and should include updating the RMP with current information required by Subpart G. The intent of the amplifications and clarifications discussed in this final rule are to simplify implementation for facilities, thereby improving chemical safety.
>
> EPA is finalizing a three-year compliance date for the STAA evaluation and IST/ISD practicability assessment. Sources subject to this provision are among the largest and most complex sources regulated under 40 CFR part 68, and therefore PHAs and PHA updates and revalidations at these sources typically require a significant level planning. While PHA updates are normally done at five-year intervals, the Agency recognizes that some sources may be far enough along with their PHAs that they will not be able to schedule their STAAs as part of their PHAs. Such sources have the option of not performing STAA as part of their PHA so long as they perform a STAA within 3 years of the effective date of the final rule. Considering updates or revalidations to the initial STAA activities will likely require less effort, the Agency expects many of these sources will later incorporate further STAA updates on their normal PHA update schedule. Regarding the STAA safeguard implementation provision, since implementation (of at least one passive measure, or an inherently safer technology or design, or a combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure) is required each PHA cycle, EPA expects implementation to be commenced within that cycle and scheduled for completion as soon as practicable.

Comment 15-09: The commenter pointed out that the STAA requirement effective date would disrupt PHA cycles. They stated that the proposed STAA deadline is impracticable for facilities scheduled to complete their PHA update and re-validation any time after August 1, 2021. The commenter requested that EPA modify the effective date to perform a STAA as part of the next-scheduled PHA update and re-validation that occurs any time after three years from EPA's issuance of the intended STAA guidance or the final rule's effective date, whichever is later (0233).

One commenter stated that the compliance schedule for STAA is unreasonable, and even though the commenter expressed support for STAA taking place during the design phase, the commenter stated that it is inappropriate to extend the requirement to existing processes (0268).

> **EPA Response:** EPA disagrees with commenters and is finalizing a three-year compliance date for the STAA evaluation and IST/ISD practicability assessment. Sources

subject to this provision are among the largest and most complex sources regulated under 40 CFR part 68, and therefore PHAs and PHA updates and revalidations at these sources typically require a significant level planning. While PHA updates are normally done at five-year intervals, the Agency recognizes that some sources may be far enough along with their PHAs that they will not be able to schedule their STAAs as part of their PHAs. Such sources have the option of not performing STAA as part of their PHA so long as they perform a STAA within 3 years of the effective date of the final rule. Considering updates or revalidations to the initial STAA activities will likely require less effort, the Agency expects many of these sources will later incorporate further STAA updates on their normal PHA update schedule. Regarding the STAA safeguard implementation provision, since implementation (of at least one passive measure, or an inherently safer technology or design, or a combination of active and procedural measures equivalent to or greater than the risk reduction of a passive measure) is required each PHA cycle, EPA expects implementation to be commenced within that cycle and scheduled for completion as soon as practicable.

Comment 15-10: Regarding the community notification system requirements, the commenter said it will take more than three years to implement because it will be a significant undertaking requiring involvement of and coordination with several different parties (0233).

The commenter stated that to the extent that EPA intends to rely on forthcoming guidance in interpreting and enforcing the new RMP provisions, it is imperative that these new requirements not take effect until at least three years after the relevant guidance is issued, instead of three years after the effective date of the final rule as EPA has proposed (0233).

EPA Response: EPA disagrees with commenters that this provision will take longer than three years to implement. This provision is for facility owners and operators to work with the local responders to ensure that, during a release, a notification system is in place that will notify the public of the impending situation. EPA expects the partnership to occur at least during annual coordination discussions under 40 CFR 68.93. Under 40 CFR 68.93, owners and operators are required to annually coordinate response needs with local emergency planning and response organizations to determine how the facility is addressed in the community emergency response plan, among other things. A component of the community emergency response plan is public notification of chemical releases; therefore, it is expected that this component will be discussed and documented by the facility owner or operator as part of the annual coordination obligations. Therefore, EPA is finalizing the 3-year compliance date as proposed.

As indicated in the proposal and in this final rule, EPA intends to publish guidance for certain provisions, such as STAA, root cause analysis, third-party audits, and employee participation, etc. Once these materials are complete, owners and operators can have time to familiarize themselves with the new materials if needing assistance in applying the provisions to improve process safety. EPA expects to develop and release this information approximately one year after this final rule. However, most provisions for a source are a site-specific determination, so EPA expects all regulated RMP facilities to be successful in beginning to address the provisions immediately.

16 Regulatory Impact Analysis

Concerns regarding underlying data and assumptions

Comment 16-01: One commenter stated that EPA cites no new, relevant information identifying any deficiencies in the 2019 Reconsideration Rule since it became effective. The commenter noted that the RIA presents a single year of data after the effective date (2020), asserting that the data EPA cites still fails to provide a rational basis for deviating from the 2019 Reconsideration Rule (0207).

> **EPA Response:** The final rule RIA uses 2020 RMP data which is reported by the facilities themselves and reflects the most recent, fully available, and vetted source of facility data.[197] These data, along with public comments received, informed the development of this final rule.

Comment 16-02: One commenter stated that EPA's prior assessments of the data on incidents that caused ecological harm were based on what EPA called reportable harm incidents (i.e., incidents that facilities must report pursuant to 40 CFR 68.42 every five years, and within six months of an incident pursuant to 40 CFR 68.195, due to harm caused). The commenter stated that the new analysis of the current RMP data on incidents shows that EPA appeared to focus only on incidents that caused direct human impact (e.g., death, injury, shelter-in-place, evacuations) or property damage (0456).

> **EPA Response:** EPA expects that the final rule will reduce the frequency and severity of environmentally harmful incidents as well as incidents with direct human impacts or property damage. While environmental harm, direct human impacts, and property damage are all important concerns, more data is available to monetize direct human impacts and property impacts compared to environmental impacts. RMP accident history reports indicate only general categories of environmental damage without specific information to quantify the magnitude of these damages. However, some environmental harm from an incident may be reflected in property damage estimates.

Comment 16-03: One commenter stated that either EPA has erroneously left out data in the proposed revisions or the Agency potentially failed to properly enforce existing RMP regulations. The commenter stated that neither option provides public confidence in the underlying data and assumptions being made by EPA in the development of these major RMP regulatory changes that will incur significant costs on all impacted industries (0227).

> **EPA Response:** EPA has assessed the costs of final rule provisions based on the best available data which is facility reported data in RMPs. The RIA, in Chapter 3, presents the different characteristics of data used to assess the number of facilities impacted by

[197] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

each provision. Chapter 4 provides the assumptions and data used to quantify the costs for impacted facilities.

Comment 16-04: One commenter asserted that EPA is either using incorrect numbers or has changed its approach since the prior rulemaking and as a result, EPA should either revise and correct its figures or explain the change in its approach (0239).

EPA Response: EPA continually updates cost calculations to reflect the best available data and information. The prior rulemaking relied on data from the universe of facilities in 2015, whereas this final rule relies on data from the universe of facilities as of December 31, 2020.

Comment 16-05: One commenter stated that the RIA relies on stale data and simply adopts cost and burden estimates used in support of the 2017 RMP Amendments Rule, which are now over five years old (0233).

EPA Response: EPA considered the information provided by commenters on specific rule provisions and updated the assumptions and data that EPA believed made sense to update, which resulted in some adjustments to the cost estimates. For example, EPA added costs estimates for facilities to provide justification for not implementing recommendations to address natural hazards, facility siting, and RAGAGEP and aligned the rule familiarization hours assumptions for delegated implementing agencies, LEPCs, and P1, P2, and simple P3 facilities. In addition to adjusting the cost estimate for the final rule to incorporate these justification cost burdens and to align the rule familiarization hours assumption, EPA also adjusted the estimate to add costs associated with final rule provisions that were not included in the proposed rule (e.g., implementation of STAA measures), and to account for structural changes between proposed and final rule provisions for certain rule elements (e.g., the final rule requires translation of RMP information and training employees on the employee participation plan). EPA also updated its estimated labor rates to the most recent (2022) values available from the BLS and updated other costs to be in 2022 dollars as well. Moreover, EPA used 2020 RMP data instead of the 2015 RMP data used in the 2017 amendments rule, so total cost estimates in this final rule reflect the number of facilities active as of December 31, 2020. EPA also acknowledges that estimates – both in terms of unit costs and numbers of facilities – may not perfectly match specific industry sectors. To the extent possible, EPA made adjustments to facility-provided data in the RMP database to address some of the more obvious discrepancies.

Suggestions regarding risk assessment

Comment 16-06: One commenter stated that, given the industry's low accident rate, it is not clear how additional regulatory requirements could meaningfully reduce the risk of reportable incidents. The commenter recommended that EPA assess the risk reduction that would be achieved by the proposed rule and differentiate the stringency of program requirements based on the risk profile of regulated processes (0239).

EPA Response: EPA does not have the data to estimate the risk reduction that could result from each requirement. Instead, EPA performed a breakeven analysis illustrating the degree of risk reduction overall that the final rule must achieve for quantified benefits

to exceed quantified costs. In addition, the RIA includes a discussion of additional, unquantified benefits, including avoided damages, that cannot be accounted for in the breakeven analysis. However, EPA considered the accident history of different program levels and sectors, and some final rule provisions target specific program levels and sectors. For example, STAA provisions only apply to NAICS 324 and 325 Program 3 facilities.

Inconsistency with RIA guidance or requirements

Comment 16-07: One commenter stated that the RIA was inconsistent with EPA's Economic Analysis Guidelines, Executive Order 12866 and other relevant executive orders, and government-wide requirements for regulatory analysis issued by the Office of Management and Budget (OMB). The commenter stated that the Agency's use of proprietary data sources, which are not provided for public inspection, directly violates the "reproducibility standard" for influential information used to inform federal decisions as detailed in OMB Circular M-19-15 and associated guidelines. The commenter identified instances where the Agency failed to take into account or use its own databases and resources, inferring that EPA did not engage in the appropriate level of internal coordination to ensure that the proposed rule is adequately informed by its own data and expertise. The commenter also stated that EPA does not appear to have satisfied the Information Quality Act (IQA) requirements for data reproducibility and transparency (0239).

EPA Response: To increase transparency, EPA added additional explanation on data and assumptions throughout the Final Rule RIA. Additionally, EPA developed a second small entity analysis with data from Dun & Bradstreet (D&B) Hoovers in final rule RIA Appendix C. This analysis replicates and confirms the results of the original analysis that uses Data Axle data. EPA is making the second small entity analysis publicly available in the docket for this rulemaking. To the extent practicable, EPA coordinated within the agency to adequately inform the rulemaking.

Comment 16-08: One commenter asserted that the proposed rule's use of a five-year average, while ignoring potential outliers, contradicts EPA's own statistical guidance (0207).

EPA Response: Owners or operators of facilities subject to the RMP rule must submit an RMP every five years. EPA used five-year annual averages to smooth over year-to-year fluctuations. This five-year period was chosen to reflect the most recent trends regarding RMP accidents. It is the same period on which the analysis of accident data was based to develop cost estimates. Therefore, the annual average costs based on five-year accident data is matched with the average annual baseline damages. EPA generally includes all values in the five-year average, even potential outliers.

Comment 16-09: One commenter suggested that EPA revisit the RIA, correct "infirmities," and offer the public additional time to comment on the revised RIA and the technical documents supporting its analysis before finalizing any rule, consistent with the IQA (0239).

EPA Response: The EPA comment period for both the NPRM and the RIA and technical documents allow for public comment. The final rule RIA takes into account comments made on the proposed rule RIA, such as data sources in Chapter 3, data assumptions in Chapter 4, and a secondary small entity analysis in Appendix C.

Comment 16-10: One commenter noted that EPA was not in compliance with the CAA and APA rulemaking procedures which require an agency "to identify and make available technical studies and data that it has employed in reaching the decisions to propose particular rules," such that "[a]n agency commits serious procedural error when it fails to reveal portions of the technical basis for a proposed rule in time to allow for meaningful commentary." The commenter stated that EPA must explain the evidence available and must offer a rational connection between the facts found and the choice made. The commenter ultimately stated that they were unable to replicate EPA's analysis because the data tables for small entity analysis are based on proprietary information and thus have not been made available for public (0239).

> **EPA Response:** To increase transparency for the small entity analysis, EPA developed a second small entity analysis with data from Dun & Bradstreet (D&B) Hoovers. This small entity analysis is compared with the analysis using Data Axle data in the final rule RIA Appendix C. EPA is making the second small entity analysis publicly available in the docket for this rulemaking.

Comment 16-11: Several commenters stated that EPA's breakeven analysis is not a substitute for a benefit-cost analysis (0232, 0268). The commenter stated that, while EPA's 'Guidelines for Preparing Economic Analyses' indicates a breakeven analysis can be appropriate to 'support benefits valuation when robust value estimates and/or risk estimates are lacking, the Guidelines caution that because breakeven analyses "do not estimate the net benefits of a policy or regulation, they fall short of [benefit-cost analysis] in their ability to identify an economically efficient policy." The commenter argued that breakeven analyses are typically a "sensitivity analysis" to and not a replacement of a benefit-cost analysis (0268).

One commenter stated that instead of conducting a formal cost-benefit analysis, EPA presents a "breakeven analysis," which is not a substitute for a cost-benefit analysis according to EPA's own Economic Guidelines. The commenter stated that EPA excludes many proposed provisions from its breakeven analysis which makes the analysis invalid (0253).

> **EPA Response:** EPA estimated costs for all final rule provisions expected to impose costs. EPA conducted a breakeven analysis instead of a standard cost benefit analysis because while EPA was able to estimate the costs of the final rule, it cannot estimate the benefits. The incremental impact on the risk of an RMP facility release resulting from each of the revised RMP rule provisions is uncertain, as is the value of a wide variety of benefit categories as described in the final rule RIA Chapter 6 (lost productivity, responder costs, property value impacts, and so on). The final rule RIA Chapter 6 section 6.3 Avoided Accident Impacts: Breakeven Analysis discusses the breakeven analysis results. When considering the rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits.

Comment 16-12: One commenter recommended that EPA ensure that the RIA appropriately identifies the costs and benefits associated with each of the proposed rule's provisions to ensure compliance with the APA (0243).

> **EPA Response:** EPA identifies and discusses in the RIA the expected costs and benefits of each provision that would be expected to result in costs or benefits. In response to comments, and from new requirements in the final rule, EPA quantified additional costs beyond those quantified in the NPRM, including public costs to request and receive RMP

information and facility costs to translate RMP information into other languages, implement STAA measures, train employees on the employee participation plan, and provide justifications for not implementing recommendations to address natural hazards, facility siting, and RAGAGEP.

Comment 16-13: One commenter stated that EPA should analyze the distributional implications of its preferred approach and of each alternative – consistent with Circular A-4's guidance that "'an examination of alternative approaches' [is] one of the three basic elements of a good regulatory analysis." The commenter stated that EPA should consider the distributional consequences of the alternatives it proposes. The commenter stated that this analytical step is a natural extension of EPA's existing analysis, which already assesses the costs and benefits of a more stringent alternative and less stringent alternative. The commenter stated that if EPA also considered the distributional impacts of alternatives, EPA would be able to assess whether another option is better from a distributional perspective (0266).

> **EPA Response:** EPA considered several distributional components in both its cost analysis (RIA Chapter 5) and its regulatory alternatives (RIA Chapter 7), including costs by facility type, sector, and size and by provision. Furthermore, the small entity analysis in RIA Chapter 8 provides distributional effects by detailed NAICS industry and size of entities. The distributional cost to different communities located near RMP facilities is also assessed in Chapter 9 of the RIA, the environmental justice analysis.

Comment 16-14: One commenter stated that the Proposal should be withdrawn until EPA conducts an appropriate consideration of costs weighed against benefits, consistent with the requirements of § 112(r) and with *Michigan* (0272). Similarly, another commenter noted that the Proposed Rule failed to show that the RMP regulations are "reasonable" in light of costs before moving forward, required by the CAA. The commenter stated that the limited analysis in the RIA fails to fulfill EPA's statutory duty to make a finding that the regulation is reasonable and appropriate in light of costs. The commenter went on to state that EPA must also assess the costs and benefits of the proposed revisions, including a detailed analysis of how such measures would actually mitigate the risks of offsite consequences of an accidental release. The commenter claimed that EPA did not fulfill this requirement in the Proposed Rule and the failure to conduct a proper cost-benefit analysis invalidates the Proposed Rule (0268).

One commenter stated that EPA has not complied with these principles of EO 12866 because EPA's estimates of both the costs and benefits of the proposed rule are inaccurate and/or incomplete. The commenter requested that EPA conduct a proper cost-benefit analysis before adopting a final rule, applying the same level of analytical rigor that it applied in preparing its economic analysis for the 1996 RMP final rule (0233).

In contrast, one commenter noted that although the RIA well supports the proposed rule, by statute, EPA is not required to find that the costs of the rule are "reasonable" in comparison to its benefits (0460). Another commenter stated that EPA is not required under the statute to demonstrate that the benefits of a rule are expected to exceed its costs (much less show that the quantified benefits of a rule will exceed its costs), elaborating that, in light of the proposed rule's relatively low annual cost and substantial benefits to workers and fenceline communities, it easily meets these criteria (0444).

> **EPA Response:** EPA provided quantitative estimates wherever it could and discusses qualitatively the costs and benefits it could not quantify. The EPA does not believe that

the Agency must demonstrate that the quantified costs of the rule outweigh the quantified benefits in order to move forward with the rulemaking. The claim is not supported by the CAA nor has EPA adopted such an approach in the 1996 RMP rule, the 2017 amendments rule, and the 2019 reconsideration rule. Furthermore, EPA was unable to quantify the benefits of the SCCAP final rule, so it would not be possible to monetize the benefits associated with the final rule provisions.

While EPA is authorized to promulgate regulations that provide for the prevention and detection of accidental releases to the greatest extent practicable, so too must these regulations be reasonable. The relevant statutory phrase describing EPA's authority to regulate under CAA section 112(r)(7)(B)(i), authorizes "reasonable regulations . . . to provide, to the greatest extent practicable," for the prevention and detection of and response to accidental releases of substances listed in 40 CFR 68.130. EPA interprets the term "practicable" in this context to include concepts such as cost-effectiveness of the regulatory and implementation approach, as well as the availability of relevant technical expertise and resources to the implementing and enforcement agencies and the owners and operators who must comply with the rule. Further, an interpretation of the statute that does not give meaning to the qualifier "reasonable" to the authority to regulate "to the greatest extent practicable," as the commenters suggest, would be inconsistent with the structure of the statute.

As recognized by the Supreme Court in Michigan v. EPA, 135 S. Ct. 2699, 2707 (2015), "reasonable regulation" generally involves some sort of examination of the benefits and the burdens of a rule. Nevertheless, the Court in Michigan v. EPA did not mandate a strict analysis of quantified cost and benefits and limit the Agency to adopting only those measures that have quantified costs exceeding benefits. In assessing the types of benefits EPA should consider in a rulemaking under CAA 112(r)(7), EPA recognizes that a major purpose of the accidental release provisions of the CAA is to prevent large scale catastrophic incidents that are rare and therefore difficult to quantify. Both the Senate and the House committee reports on the CAAA specifically identify the Union Carbide-Bhopal incident as one that demonstrated the need for the accidental release prevention provision (House Report at 155-57; Senate Report at 134-35, 143-44). The Congressional reports and floor debates also cite an EPA study identifying 17 events that, based only on the volume and toxicity of the chemicals involved (and not accounting for factors such as location, climate, and operating conditions) had the potential for more damage than the Union Carbide-Bhopal incident.[198] Therefore, when assessing the reasonableness of the benefits and burdens of various regulatory options, EPA places weight on both preventing more common accidental releases captured in the accident history portion of the RMP database while also placing weight on less quantifiable potential catastrophic events. Our judgment as to what regulations are "reasonable" is informed by both quantifiable and unquantifiable burdens and benefits.

The fact that accidents continue to occur shows that we still have reason to exercise statutory authority to promulgate reasonable regulations to provide for the prevention and detection of those accidents to the greatest extent practicable when the opportunity exists

[198] Senate Report at 135; House Report at 155; Representative Richardson, 136 Congressional Record 35082 (1990) (statement of Representative Richardson); 136 Congressional Record 36057 (1990) (Statement of Senator Durenberger).

to improve the performance of our regulatory program. In determining what is "reasonable" when developing regulations under CAA section 112(r)(7)(B)(i), EPA acknowledges that some facilities are less likely to have an accidental release than others and that the statute gives the Agency the authority to distinguish among classes of facilities. When developing this rulemaking, EPA therefore had the authority to include multiple factors when determining what is reasonable, such as frequency of RMP accidents or proximity to both nearby communities and other RMP facilities that could, as a result, make the communities and other facilities be more susceptible to being exposed to a worst-case scenario. For example, as mentioned in the proposed rulemaking, the per facility accident rate between 2016 and 2020[199] for all regulated facilities was 3 percent (n = 382 facilities reporting at least one accident out of 12,855 unique facilities reporting between 2016 and 2020), the sector accident rates (number of unique facilities with accidents per sector divided by the number of unique facilities in each sector) for petroleum and coal manufacturing were seven times higher (23 percent, n = 41 out of 177) and two times higher for chemical manufacturing (6 percent, n = 96 out of 1631). Also, based on accidents occurring between 2016 and 2020, communities located near facilities in NAICS 324/325 that are located within 1 mile of another 324/325 facility are 1.5 times more likely to have been exposed to accidents at these facilities as compared to communities near facilities in NAICS 324/325 that are not located within 1 mile of another 324/325 facility (87 FR 53578)[200]. Also mentioned in the proposed rulemaking, these surrounding communities would benefit from rule-based prevention prior to incidents, rather than the case-by-case oversight approach of the 2019 reconsideration rule (87 FR 53565). Therefore, EPA now believes the benefits of rule-based prevention for certain high-risk classes of facilities could help prevent high consequence accidents that affect communities and are therefore reasonable and necessary to meet the statutory objective "to the greatest extent practicable."

In general, the cost elements analyzed represent provisions of the rule that will incur net new costs as a result of implementation. To the extent that the rule will require other actions, the Agency believes that these either will be similar to what was required in previous iterations of the RMP rule or will be de minimis. Although EPA did not specifically separate out a "no change" baseline alternative, the discussion of final rule provisions indicated how each provision differs from the baseline "null" scenario and indicated that costs calculated represent incremental costs above the current baseline.

[199] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

[200] In the SCCAP proposal, EPA acknowledged the likelihood of late-reported accidents affecting the last few years of data. Based on its prior experience, EPA judged that there would be a slight increase in the number of accidents in the last few years of data.

Baseline accidents for the purposes of discussing benefits are discussed in chapter 3 of the RIA.

Comment 16-15: One commenter stated that the EPA's cost benefit discussion in the RIA selectively uses empirical data, most often focused on potential costs, while making no attempts to quantify the benefits, which the commenter asserted is denying the principals of traditional benefit cost and guidance from OMB. The commenter stated that OMB guidance strongly encourages agencies to perform sensitivity analyses and provide the public the results, but EPA has not done so here. The commenter said that by not providing a sensitivity analysis that excludes this small number of incidents, EPA has skewed the cost benefit analysis (0239).

> **EPA Response**: OMB guidance for estimating the benefits and costs of proposed regulatory or deregulatory actions states that agencies should conduct a benefit-cost analysis to estimate the benefits and costs associated with a proposed action and each alternative approach. OMB states that "the benefits and costs should be quantified and monetized to the extent possible, and presented in both physical units (e.g., number of illnesses avoided) and monetary terms. When quantification of a particular benefit or cost is not possible, it should be described qualitatively." (OMB Circular A-4). OMB has also stated that "If the agency cannot quantify a benefit or cost, the agency should explain why and present any available quantitative information." (OMB Circular A-4). EPA believes it cannot quantify the impacts of the final rule provisions due to a lack of available data and has sufficiently evaluated the qualitative benefits of final rule provisions in accordance with OMB guidance.

Inconsistency with previous RIAs

Comment 16-16: One commenter stated that, in its reconsideration of the 2017 RMP rule in late November 2019, EPA cited as much as $884 million in undiscounted avoided costs to the private sector in its decision to rescind that rule, along with unquantifiable benefits to information security for affected facilities. The commenter asked how, precisely, that figure would be estimated today (0214).

> **EPA Response:** The RIA estimates costs for this final rule's provisions, which differ from prior rule provisions. Updated costs for rule familiarization and for third party audits, root cause analysis, public disclosure, and STAA initial evaluation and practicability study provisions are in the RIA. However, the content and scope of some of these provisions has changed.

Comment 16-17: One commenter stated that EPA's failure to appropriately consider costs and benefits is all the more unreasonable because the Agency has conducted a cost-benefit analysis in past RMP rulemakings, and nothing in the proposed rule record explains EPA's failure to use the same or similar methodology here (0272).

> **EPA Response:** Both the 2017 amendments rule and 2019 reconsideration rule RIAs included only qualitatively discussed benefits. The 2019 reconsideration rule included both cost and cost savings because it rescinded some requirements from the 2017 amendments rule but did not quantify any expected resulting change in the value of damages from accidents. As discussed in Chapter 4 of this final rule's RIA, EPA uses the same methodology as in the 2017 and 2019 rulemakings to estimate costs of third-party audits and root cause analysis provisions. The third-party audits and root cause analysis

provision estimates were updated to use the number of active facilities in 2020, average annual number of accidents from 2016 to 2020, and 2022 wage and dollar values. One additional change is that the root cause in the final rule only requires a root cause analysis on RMP-reportable accidents rather than RMP-reportable accidents and near-misses.

Reevaluate, revise, and/or reopen for public comment

Comment 16-18: Another commenter requested that EPA more closely reevaluate all the proposed RMP Rule requirements by sector and with an eye toward a more thorough evaluation of the minimal potential to reduce already low incident rates and to avoid unintended consequences (0197).

> **EPA Response:** EPA cost estimates differ by sector, where appropriate. For example, in final rule RIA sections 4.4.1 and 4.4.2, EPA disaggregated STAA costs by sector. RMP accidents are costly, with RMP Reportable accidents averaging $454.58 million per year from 2016-2020. EPA believes the final rule provisions will reduce these costly accidents as described in Chapter 6, *Benefits.*

Comment 16-19: One commenter stated that the analysis should be revised, and the public should be allowed additional time to comment on the revised proposal and RIA (0239).

> **EPA Response:** EPA has reviewed comments on the NPRM and updated the RIA accordingly. Updates include adding cost estimates for the requirements to provide written justification for declining natural hazards, facility siting, and RAGAGEP recommendations; assuming all entities except for P3 complex facilities require five hours for rule familiarization; and updating numbers to use 2022 wage and dollar values.

Comment 16-20: One commenter urged EPA to re-evaluate the RIA to accurately quantify the Proposed Rule's costs and benefits (0243). Another commenter stated that EPA should conduct this analysis and provide an explanation for public comment before proceeding to finalize this requirement (0272).

> **EPA Response:** EPA provided quantitative estimates wherever it could and discusses qualitatively the costs and benefits it could not quantify. EPA has reviewed comments on the NPRM and updated the RIA accordingly. Updates include adding cost estimates for the requirements to provide written justification for declining natural hazards, facility siting, and RAGAGEP recommendations; assuming all entities except for P3 complex facilities require five hours for rule familiarization; and updated 2022 wage and dollar values.

16.1 Small business impacts

Comment 16.1-01: Several commenters expressed concern about EPA's draft RIA small business impacts assessment (0180, 0188, 0202, 0217, 0226, 0227, 0234, 0239, 0259, 0459).

> **EPA Response:** EPA made several updates in the final rule RIA, including an expanded analysis by NAICS code and a secondary small entity analysis using D&B Hoovers data. The secondary analysis found small entity impacts to be similar to the small entity analysis using Data Axle data, which can be found in final rule RIA Appendix C.

Number of small entities

Comment 16.1-02: One commenter stated that, compared to the 2016 Small Business Regulatory Enforcement Fairness Act (SBREFA) analysis, the proposed rule suggests that there has been a 36% reduction in the number of small government entities (communities of 50,000 or less) and a 26% reduction in the number of small private entities covered by the rule and/or potential changes – a significant change for which the proposed rule and accompanying docket does not include an explanation (0239).

> **EPA Response:** EPA's final rule RIA improved on the 2016 analysis by utilizing entity specific data. For each private facility, EPA retrieved data from Data Axle on the revenue, NAICS code, and employee count for each entity, parent company, or corporate entity as appropriate. Additionally, EPA developed a second small entity analysis with data from Dun & Bradstreet (D&B) Hoovers in final rule RIA Appendix C. Final rule RIA Exhibit C-1 summarizes the number of facilities, the number of unique entities, the breakdown of private sector and government entities, and their size classifications. To determine the number of small government entities, EPA utilized the population sizes consistent with the 2019 reconsideration rule and data from U.S. Census Bureau (USCB) County Population Totals.

Comment 16.1-03: One commenter stated that the 2022 assessment does not provide a breakdown of the number of small entities by NAICS (0239).

> **EPA Response:** EPA has added the number of small private entities by NAICS affected to the small entity analysis in Exhibit 8-6 at the three-digit NAICS industry-level. The number of small entities affected at the six-digit NAICS level is also presented in RIA Exhibit 8-8.

Comment 16.1-04: One commenter disagreed with EPA's estimated number of small water facilities, noting that given water systems are essential to daily life and the basic functioning of a community, they rarely go out of business. The commenter asserted that the 2019 RIA determined that 49% of water sector facilities were classified as small (992). The commenter estimated that assuming water systems remain in business and applying the proportion to the total number of registered systems in 2022, there should be approximately 964 small water systems. The commenter continued that EPA's 2022 RIA estimated 630 of the 1,111 government entities are small based on Census data, which the commenter described as presenting issues. Specifically, the commenter called attention to the difference in the total number of government systems referenced in the RIA (1,111) and the value reported in Table 1 of the Proposed Rule and Exhibit 3-4 of the RIA of1,449 government entities – a difference of 338 entities when compared to the Census data referenced by EPA (0239).

> **EPA Response:** EPA's analysis of small water entities analyzed both private and government-owned water entities. For entities private water facilities, for each unique business, EPA retrieved data from Data Axle on the revenue, NAICS code, and employee count, parent company, or corporate entity as appropriate. To identify the number of small government entities, EPA utilized the population sizes consistent with the 2019 reconsideration rule and data from U.S. Census Bureau (USCB) County Population Totals. For the final rule RIA, EPA explored alternative data sources to classify NAICS 2213 facilities as private or government owned. EPA used its Facility Registry System (FRS) to crosswalk the data universal numbering system (DUNS) numbers (unique nine-digit business identifiers) reported by facilities in their RMP with their Water System ID

for identification in EPA's Safe Drinking Water Information System (SDWIS) dataset. SDWIS has information on registered water facilities and their ownership. Completing this exercise identified only 731 facilities in SDWIS, a count that is lower than the number of facilities that identify as NAICS 2231 in their RMPs regardless of ownership, which is described in final rule RIA section 3.1.2, *Manual Adjustments*. Therefore, EPA relied on the manual adjustments performed during the proposed rule stage to more accurately identify the facilities that are NAICS 2213.

The 1,111 value in both the proposed rule and final rule RIA refers to the number of entities, while the 1,449 value in proposed rule exhibit 3-4 refers to the number of facilities. As described in final rule RIA section 3.1.3, of the 1,111 government entities directly affected multiple own more than one RMP facility.

Comment 16.1-05: One commenter recommended that, to support a factual basis for certification, EPA should provide a more granular analysis of small entity impacts, such as the six-digit NAICS level. The commenter also stated that it is not appropriate to look at impacts averaged across industries, as this may mask significant effects in individual industries. Instead, the commenter recommended that EPA demonstrate the number of affected entities in each industry relative to the number of significantly affected small entities in each industry (0188).

EPA Response: EPA added Exhibit 8-6 which provides the top ten six-digit NAICS sectors with the largest share of small entities relative to other industries. Exhibit 8-6 shows that no single industry makes up a significant share of the small entities impacted by this rule. Exhibit 8-8 also provides the distribution of revenue impacts within each of the top ten six-digit NAICS industries and addresses the commenter's suggestion to explore revenue impacts within each industry and does not present revenue impacts across industries.

Costs to small entities

Comment 16.1-06: Several commenters stated that it is not realistic to conclude that only 0.2% of small entities will experience a financial impact of more than 3% and urged EPA to reevaluate its estimated cost as it applies to small businesses (0180, 0217, 0226, 0234, 0459).

EPA Response: EPA developed a second small entity analysis with data from Dun & Bradstreet (D&B) Hoovers and compared it to the analysis using Data Axle data in the final rule RIA Appendix C. EPA found the analyses using Data Axle and D&B Hoovers show the same cost-to-revenue impacts under the proposed rule, with estimates that 0.2 percent of small entities will incur cost impacts greater than 3 percent. For the final rule, the results show that the analyses using Data Axle and D&B Hoovers are similar in impact. Based on Data Axle and D&B Hoovers data, an estimated 2.8 and 1.9 percent of small entities will incur cost impacts that are greater than 3 percent, respectively.

Comment 16.1-07: One commenter stated that EPA must account for missing and underestimated costs, discussed below, in its small entity impact analysis. The commenter expressed concerned that proposed provisions characterized as amplifications of existing requirements will have costs that are not included, including the requirement to provide written justifications for declining relevant recommendations for the natural hazard, power loss, and chemical siting provisions. The commenter also stated that EPA proposes to include justifications for declined recommendations and findings for other proposed provisions but does

not provide a cost associated with this documentation requirement. The commenter recommended that EPA include costs of employee training in the RFA analysis as there is no estimate for the cost to small entities of training employees on employee participation or on implementation of any other provisions of the rule. The commenter strongly urged the Agency to include these costs as part of its calculation of the economic impact on small entities as part of its factual basis to support its RFA certification.

The commenter recommended including several costs that the commenter stated are not accounted for in the cost analysis, including: requirement to provide written justifications for declining relevant recommendations for the natural hazard, power loss, and chemical siting provisions; gap analysis and documentation associated with EPA's proposal to include an analysis of the most recent recognized and generally accepted good engineering practices related to the facility's design, maintenance, and operation; employee training; and, the cost information availability.

The commenter stated that it is not clear what EPA's basis is for assuming that 50% of facilities would receive a request in a given year. The commenter recommended that EPA should address the possibility of a high volume of requests in the analysis given that there is not a limit on the frequency. The commenter recommended that there should also be an estimate of the cost of translating and providing information in the requested languages and the cost to verify whether the requestor is within the six-mile boundary (0188).

> **EPA Response:** Both the proposed and final rule RIA include cost estimates for justifications for declining to implement backup power to address power loss. EPA added cost estimates in the final rule RIA for information availability (translation and verification costs), for the requirement to train employees on employee participation, and for the requirements to provide justifications for declining recommendations to address natural hazards, facility siting, and RAGAGEP. For information availability, the final rule RIA assumed an average of one request per facility per year and that 50 percent of request verifications would occur in person. EPA has incorporated these assumptions into the final rule RIA.

Comment 16.1-08: One commenter self-identified as a small business entity and commented that they believe the proposed rule would significantly impact operations and burden the business with additional operating costs, potentially diverting resources from value-added activities to address administrative aspects. The commenter noted that small refineries spend just as much as larger, complex refineries on PHAs, third party audits, and other regulatory-required reports. The commenter stated that EPA's analysis of the impact on small entities is flawed and incomplete. The commenter questioned how the proposed rule justifies small businesses spending considerable resources for largely administrative activities that do not improve risk prevention (0259).

> **EPA Response**: EPA updated its cost estimates from the proposed rule in response to comments by adding costs for information availability, for the requirements to train employees on employee participation, providing justifications for declining recommendations to address power loss, natural hazard, facility siting, and RAGAGEP. EPA used the per facility costs from the RIA to estimate the impact on small entities as described in Chapter 8 of the final rule RIA. EPA found that 90.8% of small entities

would have revenue impacts less than 1 percent, and only 2.7% of small entities would have revenue impacts larger than 3 percent.

Benefits for small entities

Comment 16.1-09: The commenter stated that they were concerned with EPA's proposal to add costly requirements to its existing regulations without providing any quantitative benefits. The commenter stated that EPA does not provide any quantitative benefits associated with the changes proposed in this rule. The commenter stated that before requiring small entities to pay the costs of implementing this proposed rule, EPA should be able to show how the provisions of the rule will result in benefits. The commenter stated that the breakeven analysis provided is insufficient to support the selection of optimal provisions or sectors to target with those provisions and that it seems possible based on the information EPA has provided that the implementation costs paid by small entities would yield little or no benefits (0188).

> **EPA Response:** EPA conducted a breakeven analysis instead of a standard cost benefit analysis because while EPA was able to estimate the costs of the final rule, it cannot estimate the benefits. The incremental impact on the risk of an RMP facility release resulting from each of the revised RMP rule provisions is uncertain, as is the value of a wide variety of benefit categories as described in the final rule RIA Chapter 6 (lost productivity, responder costs, property value impacts, and so on). The final rule RIA Chapter 6 section 6.3 Avoided Accident Impacts: Breakeven Analysis discusses the breakeven analysis results. When considering the rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits.

16.2 Small government impacts

Number of small entities

Comment 16.2-01: The commenter stated that there does not seem to be an estimate for the total costs for the 630 small government entities affected by the rule (0188).

> **EPA Response:** EPA evaluated the cost of the rule to small government entities in section 8.3.2 of the final rule RIA. Final rule RIA Exhibits 8-9 and 8-10 summarize the impacts of the final rule on small governments. The analysis found that the majority of small governments, except those with between 15,000 and 50,000 residents, will experience total impacts from the final rule estimated between $2,000 and $3,000.

Comment 16.2-02: One commenter asserted that EPA did not clearly state its assumptions regarding differences in burden between small and large government entities (0239).

> **EPA Response:** EPA discusses its assumptions regarding differences in burden between large and small government (and non-government) entities in the RIA Chapter 4. Provisions with cost differences assumed between small and large entities include: third-party audits, employee participation plan, and information availability. See Section 4.4.4 Third-party audits, Section 4.4.5 Employee Participation Plan, and Section 4.7 Information Availability.

Comment 16.2-03: One commenter stated that they cannot meaningfully review or provide comments on EPA's burden assessment for the proposed rule because of the arbitrary and

confusing way that EPA has organized water utilities into facility types in the analysis. The commenter elaborated that, for the purposes of examining the burden on the water sector, the only difference would be instances in which the system is considered small or large. The commenter also stated that the absence of a clear explanation of how many entities within the water sector fall within the various types made the review of sector-level burden impossible to replicate. Additionally, the commenter stated that the Agency does not explain the purpose of using multiple facility types to assess cost and why they were not uniformly applied (0239).

> **EPA Response:** In its final rule RIA, EPA explained how it classified Water and Sewage Utilities Sector (NAICS 2213) facilities as private or government owned in RIA Section 3.1.2. Facilities self-report in their RMPs their sector, and some water facilities report as NAICS 2213 and some as NAICS 92. EPA used manual adjustments to more accurately identify the facilities that are NAICS 2213 privately-owned versus government-owned by searching for facility names. Furthermore, EPA estimated private small entity per facility costs of the rule in its small entity analysis in Chapter 8.

Comment 16.2-04: One commenter stated that the RIA's approach to determining if a registered government-owned water system satisfied the small entity threshold, assuming that the 2019 Census population of a registered facility's city is representative of the water system's customer base, is flawed because the Census population of a community often is not representative of the customer service area of a drinking water or wastewater system. The commenter went on to recommend that the RIA use EPA data in related compliance datasets like SDWIS that provide the actual population served by a drinking water system.

The commenter also asserted that EPA used a flawed approach to determine the difference in ownership status between government-owned versus non-government-owned water entities. The commenter stated that it was unclear why EPA did not use the universal EPA ID number to crosscheck the RMP facility list with Safe Drinking Water Information System (SDWIS) or EPA's Permit Compliance System to determine the actual number of water entities (0239).

> **EPA Response**: EPA explored alternative data sources in the final rule to classify water system facilities (NAICS 2213) as private or government owned, including its Facility Registry System (FRS), to identify facilities' Water System ID in EPA's Safe Drinking Water Information System (SDWIS) dataset. However, only a small number of facilities were able to be matched in SDWIS. Therefore, EPA relied on the manual adjustments to properly identify water system facilities as described in the proposed rule RIA. More detail on EPA's approach may be found in RIA Section 3.1.2.

Comment 16.2-05: One commenter took issue with the RIA's estimate of revenue for drinking water or wastewater utility operations, stating that water utility budgets are directly linked to payments from actual customers and not the total number of individuals or entities that may be taxed by a city. As a result, the comment stated that the methodology applied by EPA is flawed and appears to underestimate the number of small government systems that may be impacted by the proposed rule, and does not accurately capture the ways these costs will impact environmental justice communities (0239).

> **EPA Response:** EPA's analysis of small water entities analyzed both private and government-owned water entities. For entities classified as private water facilities, EPA utilized entity-specific revenue data from Data Axle. For government entities, government budget data was not available. However, EPA estimated that the majority of

small governments, except those with between 15,000 and 50,000 residents, will experience total impacts from the final rule between $2,000 and $3,000, shown in final rule RIA Exhibit 8-10. Additionally, EPA was able to locate budget data for a small sample of governments or special districts. One small city operates a combined water system, power system, and cable system; although the water system produces revenues of $2.5 million, the combined system reported revenues of $190 million. This discussion of size determination and small entity economic impact can be found in final rule RIA section 8.2, *Estimating the Number of Small Entities,* and section 8.3, *Economic Impact on Small Entities*.

Costs to small entities

Comment 16.2-06: Several commenters expressed concern about EPA's draft RIA regarding small government impacts (0188, 0197, 0239, 0243).

> **EPA Response:** EPA's small entity analysis describes small government entities in final rule RIA section 8.2.2 and discusses cost impacts on small government impacts in section 8.3.2. A combined total of 798 facilities are owned and operated by small governments. EPA does not have data to estimate the percent revenue impacts on specific government entities. However, based on costs to small governments and their respective populations, EPA concludes that it is unlikely that a significant number of small governments will experience a cost impact larger than 1 percent of revenue.

Comment 16.2-07: In addition, the commenter requested that EPA consider indirect implications of resource impacts on air agencies as some of the recommendations in this rule could increase the need for facilities to obtain air permits including major Prevention of Significant Deterioration (PSD) or nonattainment area New Source Review permits. The commenter stated that these regulations are another example of the increased complexity and workload on Part 70 permit and compliance programs resulting from a wide variety of updated and new EPA regulations and grant programs. The commenter recommended that EPA provide resources to agencies to allow for full support of the implementation of new and revised air regulations in a timely manner (0199).

> **EPA Response:** EPA is not requiring adoption of IST/ISD as under the STAA provision. The STAA implementation requirement related to passive measures, or their equivalent is unlikely to lead to a significant emission increase that would trigger PSD or nonattainment NSR. To the extent that provisions of the CAA, such as limitations on the hours of emergency backup generators, would prohibit the adoption of backup power requirements for monitors directed at accidental releases, such provisions may be cited in setting out the basis for not adopting various measures. Therefore, EPA does not anticipate the RMP regulations of this final rule will increase the need for Prevention of Significant Deterioration or nonattainment area New Source Review permits.

Comment 16.2-08: One commenter stated that they were concerned about EPA's estimated impacts for small government entities. The commenter stated that EPA estimates 77% of small government entities will have costs less than $1,000, yet it seems that if small government entities had any cost beyond rule familiarization, they would likely exceed $1,000 in costs. The commenter recommended that EPA explicitly state which provisions apply to small government entities and that they provide the basis for the cost estimates for each category: 77 percent that

incur costs of less than $1,000, 17 percent costs ranging from $1,000 to $2,000, 3 percent costs ranging from $2,000 to $3,000, and one incurring costs of more than $10,000 (0188).

> **EPA Response:** Provision costs are applied to entities based on the regulated facilities' sector, program level, accident history, perimeter monitors, and use of HF alkylation, which are described in more detail in the final rule RIA Chapter 3 and Chapter 4. For example, information availability and rule familiarization provision costs apply to all facilities, while backup power for perimeter monitors applies only to RMP-regulated processes where power loss has been identified as a major hazard. EPA has facility data from RMP filings for the number of processes that require backup power and applied a per process cost to the relevant facilities. Costs are then added across provisions and analyzed. The small government cost impact is summarized in final rule RIA exhibits 8-9 and 8-10.

Comment 16.2-09: One commenter stated that many water utilities are small entities or are owned and operated by municipal government entities operating on fixed budgets that are not easily adapted to costly Federal mandates. The commenter went on to state that the proposed rule does not take into account the operational imperatives that these systems face when making decisions about resource tradeoffs (0239).

> **EPA Response:** In the final rule RIA, EPA estimated the costs of the rule to small entities, including government entities. EPA estimated that 97 percent of small government entities will face costs less than $10,000 and the majority, or 58 percent, will face costs less than $3,000. For more details, see Chapter 8 of the final rule RIA.

Comment 16.2-10: One commenter urged EPA to include a full accounting of possible cost burdens posed by this Proposed Rule to local governments, rather than take a surface level view of direct financial concerns (0243).

> **EPA Response:** In RIA Chapter 8, EPA analyzed the impacts of the final rule on small governments, defined as those who serve fewer than 50,000 residents. Costs from the final rule to each of the 798 facilities owned and operated by small governments were estimated.

Comment 16.2-11: One commenter stated that the cost-benefit analysis and RIA are incomplete and insufficient, and elaborated that EPA has over-inflated the benefits and underestimated the costs related to local governments' ability to implement these new requirements (0243).

> **EPA Response:** In the final rule, EPA identified and analyzed the impacts of the final rule on small governments in RIA Chapter 8. The analysis found that the vast majority of small government entities will not incur large costs. Only 3 percent of small governments were estimated to incur costs larger than $10,000.

Comment 16.2-12: One commenter stated that their district implemented the previous RMP provisions, have not had any accidents since implementing them in their district, and have not received any comments regarding the cost of the provisions in their district (0211).

> **EPA Response:** EPA's goal for the RMP regulations is to prevent accidents from occurring at any facilities processing regulated substances as well as establish better detection and response procedures. The final rule and RIA discuss the history and background of the regulations in more detail.

Impacts on water utilities

Comment 16.2-13: One commenter recommended that EPA reconsider the applicability of the proposed rule to water utilities (or justify the costs of the proposed rule to the water sector) for several reasons:

- Safety: The commenter cited the water sector's safety record of 0.02 incidents per facility from 2016 to 2020 and recommended that EPA consider instead issuing more targeted regulations aimed at particular facilities that pose a larger threat to public safety or have specific concerns that are not addressed by the existing regulations.
- Costs: One commenter asserted that the burdens of the proposed rule on water utilities cannot be justified because many water utilities are small entities or are owned and operated by municipal government entities operating on fixed budgets that are not easily adapted to costly Federal mandates. The commenter asserted that the proposed rule does not take into account the operational imperatives that these systems face when making decisions about resource tradeoffs (0239).

Another commenter urged the Agency to ensure that the costs and burdens on local governments are justified and that any new regulatory requirements placed on local governments will achieve the identified public benefits and protect public safety within the low-risk water sector, which has a demonstrated record of safety. The commenter emphasized that drinking water and wastewater systems do not represent the same risk profile as many of the other entities regulated by the RMP program and that the sector has demonstrated a strong record of safety throughout the life of the program. The commenter stated that EPA recognized this point in the 2017 amendments rule, stating that the water sector is among the least accident-prone sectors covered under the risk management program. The commenter went on to state that therefore, the additional costs, resources, and staff needed to fully implement and comply with the requirements of the proposed rule could pose an undue burden on a sector – and ultimately a community and its residents – that has consistently proven to be low-risk (0243).

> **EPA Response:** None of the STAA requirements of this final rule will apply to water facilities. A water facility must comply with third-party audits and root cause analysis provisions but only if the facility has an accident. The only costs the final rule is expected to impose on water facilities without an accident are rule familiarization and compliance with information availability, community notification, RMP justifications, emergency backup power for perimeter monitors, and employee participation plan provisions.
>
> In the final rule RIA, EPA estimated the costs of the rule to small entities, including government entities. EPA estimated that the 97 percent of small government entities will face costs less than $10,000 and the majority, or 58 percent, will face costs less than $3,000. For more detail, see Chapter 8 of the final rule RIA.

Comment 16.2-14: One commenter requested that EPA provide information on the costs, resources, and time that participation would place on local governments and the first responder community. The commenter recommended that EPA tailor regulatory requirements to local governments and water systems and provide additional flexibility for local governments and water systems, particularly for small systems. The commenter also recommended that EPA tailor the regulatory requirements to areas and entities that pose the largest threat to public safety. The commenter also suggested that the proposed requirements, such as for field exercise frequency and third-party compliance audits, should be considered in light of a more thorough

consideration of how the changes will reduce an already low incident rate within the water sector (0243).

> **EPA Response:** In the final rule RIA, Chapter 4, EPA discusses the assumptions used to estimate costs to regulated facilities, including those for local governments. Additionally, EPA has tailored some requirements of the RMP regulation such as STAA to affect only certain sectors, as described in the final rule RIA. EPA estimated costs to small government entities in RIA Chapter 8, including those small governments that own or operate water system facilities, and concluded that the vast majority of small government entities would face small costs. Specifically, 97 percent of small governments will face costs less than $10,000.

Comment 16.2-15: One commenter stated that EPA expects that government-owned facilities will incur different burden hours than similar private facilities but provides no explanation to support its claim that the ownership status would change the implementation burden imposed by the proposed rule (0239).

> **EPA Response:** EPA expects some implementation costs facilities will face from the final rule will differ by the size and type of facility, and EPA accounts for those differences in the final rule RIA cost estimates, as described in RIA Chapter 4. However, EPA does not expect per-unit costs to differ for water facilities based on ownership type, including private- or government-owned. Therefore, no difference in cost was assessed for ownership status.

Comment 16.2-16: One commenter expressed frustration that the analysis combined government-owned water facilities with other facilities in the 92 NAICS code to review and comment on the proposed rule (0239).

> **EPA Response:** EPA has separated government-owned water facilities with NAICS 2213 from other government facilities with NAICS 92 in the RIA for the final rule. See Exhibit 3-4 in the final rule RIA Chapter 3, section 3.1.2 Breakdowns Used in the Analysis.

16.3 Estimated costs and benefits

Estimated benefits

Comment 16.3-01: One commenter encouraged EPA to expand the benefits analysis in the RIA and better account for the significance of unquantified benefits to recognize even more benefits would come from the proposal. The commenter elaborated that such benefits could include saving lives, preventing injuries and toxic exposure, and preventing ecological harm and short- and long-term harm to people from related health and welfare impacts of incidents (0460).

> **EPA Response:** In the final rule RIA, EPA discusses qualitative benefits in Chapter 6, including avoided major catastrophes, avoided health risks from toxic chemical exposure, avoided lost productivity, avoided responder costs, avoided transaction costs, protected property values, avoided environmental impacts, avoided unquantified evacuation and shelter-in-place costs, and potential benefits to communities with environmental justice concerns.

Comment 16.3-02: One commenter stated that, while they did not express outright support for the proposed rule, overall, the increased protections from chemical accidents and other

safeguards for vulnerable communities and areas in need of environmental justice are positive improvements in EPA's proposed revisions to the RMP. The commenter stated that these regulatory changes should help reduce the frequency of chemical releases and their adverse effects in many communities in Wisconsin and that efforts to identify safer technologies and chemical alternatives will be helpful immediately and, in the future, as will more thorough incident investigations, and third-party incident response audits. The commenter stated that the prevention-focused approach that EPA is proposing better protects the public and reduces emissions of dangerous chemicals to the environment (0199).

> **EPA Response:** EPA agrees with the commenter that the final rule will increase protections from chemical accidents and protect vulnerable communities with environmental justice concerns.

Comment 16.3-03: One commenter stated that given the extremely low baseline for additional improvement, it is not unrealistic to believe that the marginal benefits for many sectors subject to the regulatory revisions are not measurable (0197).

> **EPA Response:** EPA conducted a breakeven analysis instead of a standard cost benefit analysis because while EPA was able to estimate the costs of the final rule, it cannot precisely monetize the benefits. The incremental impact on the risk of an RMP facility release resulting from each of the revised RMP rule provisions is uncertain, as is the value of a wide variety of benefit categories as described in the final rule RIA Chapter 6 (lost productivity, responder costs, property value impacts, and so on). While EPA does not have the data to estimate risk reduction from the final rule's requirements, the breakeven analysis illustrates the degree of risk reduction overall that the final rule must achieve for quantified benefits to exceed quantified costs. The final rule RIA Chapter 6 section 6.3 Avoided Accident Impacts: Breakeven Analysis discusses the breakeven analysis results. When considering the rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits.

Comment 16.3-04: One commenter recommended that EPA may wish to consider other alternative contextualization such as avoided injuries or fatalities for other provisions that are intended to lessen the severity of damages or reduce off-site injuries and fatalities rather than prevent accidents. The commenter also recommended that EPA review the State programs that have already demonstrated the effectiveness of considering inherently safer technology in leading to adoption (0266).

> **EPA Response:** EPA expects the STAA, root cause analysis, third-party audits, employee participation plan, RMP justifications, emergency response, and information availability provisions all will contribute to reducing accident severity, including reducing both on-stie and off-site property damage and the number of injuries and fatalities. Provisions for emergency response and hazard evaluation amplifications are particularly focused on lessening accident severity. EPA discussed their role in mitigating the consequences of accidents in Chapter 6, section 6.1.2 Mitigation. EPA reports the results of the breakeven analysis both in terms of the reduction in annual damages (including property damage and injuries and fatalities) and in terms of the reduction in number of accidents required for the final rule to break even.

EPA reviewed state programs to inform its development of the STAA provisions in the final rule. However, EPA has not identified a set of comparison facilities to serve as a counterfactual to quantify the effect of a state or local government's STAA-like requirements on accident damages or the number of accidents. Furthermore, state and local STAA-like programs differ from the final rule's STAA provisions in meaningful ways. While New Jersey and California statewide requirements resemble the final rule's STAA initial evaluation and practicability study requirements, Massachusetts' requirements are less stringent and no state mandates facilities implement practicable risk reduction measures. Contra Costa County's requirements, mandating implementation of inherently safer technology, are more stringent than the final rule's STAA initial evaluation, practicability study, and implementation provision requirements combined. The final rule's STAA provisions only mandate that facilities implement a set of practicable measures achieving at least as much risk reduction as a passive measure. Furthermore, the final rule is implementing its STAA provisions concurrently with other provisions not implemented by these state and local jurisdictions, which may interact with the safety impacts of the STAA provisions. Moreover, facilities in these jurisdictions may not be representative of the potential safety benefits at facilities nationwide due not only to differing policy environments but also different technical, environmental, and economic conditions.

Comment 16.3-05: One commenter requested more rigorous analyses of marginal and overall net benefits and expressed skepticism of the additional benefits that will be achieved by the proposed RMP regulatory changes. The commenter stated that, although EPA described the potential benefits in its RIA, much deeper analyses based on historical data are needed to evaluate expected marginal and net benefits, with an emphasis on working from the extremely low baseline of incidents to improve upon (0197).

EPA Response: EPA relies on non-monetizable benefits in the SCCAP final rule RIA. Because EPA has no data or empirical estimates of the impact of each provision on the probability and magnitude of an accident, EPA cannot precisely monetize benefits of the provisions in the SCCAP final rule RIA. EPA used historical RMP accident data from 2016 to 2020 to quantify some accident damages and compared these estimates to quantifiable accident damages from 2004 to 2016. However, EPA could not quantify other damages, nor could it quantify how much of these damages the final rule's provisions will mitigate. EPA selected the provisions included in the final based on comments, experts in industry, academia, and federal entities, like the Chemical Safety and Hazard Investigation Board. Although EPA cannot estimate the risk reduction with precision, that does not countermand the agency's reasoned conclusion that these provisions—both each individually, and together as a whole—would incrementally mitigate the likelihood of an accident.

EPA conducted a breakeven analysis instead of a standard cost benefit analysis because while EPA was able to estimate the costs of the final rule, it cannot precisely monetize the benefits. The incremental impact on the risk of an RMP facility release resulting from each of the revised RMP rule provisions is uncertain, as is the value of a wide variety of benefit categories as described in the final rule RIA Chapter 6 (lost productivity, responder costs, property value impacts, and so on). While EPA does not have the data to estimate risk reduction from the final rule's requirements, the breakeven analysis

illustrates the degree of risk reduction overall that the final rule must achieve for quantified benefits to exceed quantified costs. The final rule RIA Chapter 6 section 6.3 Avoided Accident Impacts: Breakeven Analysis discussed the breakeven analysis results. When considering the rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits.

Comment 16.3-06: One commenter stated that EPA has decided to implement changes to the rule that can have devastating impacts that will create more regulatory burden and confusion while increasing costs for the chemical industry and other covered businesses, likely without providing sufficient evidence of benefit (0214). Another commenter asked, given a lack of quantification of benefits, how can the Agency maximize net benefits (0215).

> **EPA Response:** EPA disagrees with the commenter that the evidence of a benefit from the SCCAP final rule is likely insufficient. EPA conducted a breakeven analysis instead of a standard cost benefit analysis because while EPA was able to estimate the costs of the final rule, it cannot precisely monetize the benefits. The incremental impact on the risk of an RMP facility release resulting from each of the revised RMP rule provisions is uncertain, as is the value of a wide variety of benefit categories as described in the final rule RIA Chapter 6 (lost productivity, responder costs, property value impacts, and so on). While EPA does not have the data to estimate risk reduction from the final rule's requirements, EPA selected the provisions included in the final based on comments, experts in industry, academia, and federal entities, like the Chemical Safety and Hazard Investigation Board. Although EPA cannot estimate the risk reduction with precision, that does not countermand the agency's reasoned conclusion that these provisions—both each individually, and together as a whole—would incrementally mitigate the likelihood of an accident.. The breakeven analysis illustrates the degree of risk reduction overall that the final rule must achieve for quantified benefits to exceed quantified costs. The final rule RIA Chapter 6 section 6.3 Avoided Accident Impacts: Breakeven Analysis discusses the breakeven analysis results. While the final rule increases costs, when considering the rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits.

Comment 16.3-07: One commenter suggested that California's PSM regulation serve as a model for process safety measures in the RMP rule that are protective and preventative. The commenter stated that a RAND economic analysis of the PSM found that (1) the cost of compliance with the regulations, which were passed on to consumers, resulted in a price increase of about $0.004 per gallon of gasoline in California, (2) each major refinery incident avoided saved facility owners approximately $220 million not including the potential costs associated with worker fatalities and injuries or damage to surrounding communities, and (3) it improved reliability of the state's fuel supply (0250).

> **EPA Response:** EPA reviewed the RAND study and did not use it because many of the estimated impacts appeared specific to the case of California and may not apply to the United States more broadly. For example, nationwide gasoline prices and fuel supply reliability may be less sensitive to PSM regulation than is California because California requires cleaner burning fuel formulations than the rest of the United States.

Comment 16.3-08: One commenter asserted that it was unclear how one information request will provide benefits (0239).

> **EPA Response**: The rule's information request provision will provide more public information and information availability, which will improve efficiency of nearby property markets. In addition, better information provided to emergency responders will improve the efficiency of their decisions regarding preventive measures to take and equipment and materials to purchase. These benefits are discussed in final rule RIA section 6.1.3, *Improved Information,* and section 6.1.4, *Evidence from the Literature*.

Comment 16.3-09: Specifically referencing costs/benefits for hydrocarbon transloading facilities, one commenter asserted that the RIA does not properly calculate and balance the burdens and benefits of the proposal. The commenter also stated that, given the protections afforded by PHMSA's HMR, the benefits of the proposed rule are murky at best (0222).

> **EPA Response:** EPA considered costs and benefits of the rule as a whole and provided quantitative estimates wherever it could and discusses qualitatively the costs and benefits it could not quantify. EPA conducted a breakeven analysis instead of a standard cost benefit analysis because while EPA was able to estimate the costs of the final rule, it cannot precisely monetize the benefits. The incremental impact on the risk of an RMP facility release resulting from each of the revised RMP rule provisions is uncertain, as is the value of a wide variety of benefit categories as described in the final rule RIA Chapter 6 (lost productivity, responder costs, property value impacts, and so on). EPA selected the provisions included in the final based on comments, experts in industry, academia, and federal entities, like the Chemical Safety and Hazard Investigation Board. Although EPA cannot estimate the risk reduction with precision, that does not countermand the agency's reasoned conclusion that these provisions—both each individually, and together as a whole—would incrementally mitigate the likelihood of an accident. While EPA does not have the data to estimate risk reduction from the final rule's requirements, the breakeven analysis illustrates the degree of risk reduction overall that the final rule must achieve for quantified benefits to exceed quantified costs. The final rule RIA Chapter 6 section 6.3 Avoided Accident Impacts: Breakeven Analysis discusses the breakeven analysis results. When considering the rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits.

Comment 16.3-10: One commenter stated that quantifying the full benefits from safety measures in financial terms is impossible because the lives of workers, first-responders, and community members are priceless, but EPA can and should recognize more of the benefits from preventing chemical disasters, based on newly available information (0456).

> **EPA Response:** EPA followed established guidelines for monetizing safety benefits, including value of a statistical life (VSL). The final rule RIA recognizes more benefits of the final rule beyond lives saved, including reductions in the number of people injured and evacuated or otherwise inconvenienced by sheltering in place; reductions in the damage caused to property on-site and offsite including product, equipment, and buildings; reductions in damages to the environment and ecosystems; and reductions in resources diverted to extinguish fires and clean up affected areas. The final rule also provides other benefits, such as increased public information, which in addition to

helping to minimize the impacts of accidents on the offsite public, may also lead to more efficient property markets in areas near RMP facilities.

For details on how quantified benefits were estimated or discussion on unquantified benefits, including the difficulty in their quantification, see Chapter 6 of the RIA.

RMP accident data shows past accidents have generated highly variable impacts, so the impacts of future accidents are difficult to predict. Nevertheless, it is clear from the RMP accident data[201] and other relevant data from RMP regulated industry sectors[202], that chemical accidents can impose substantial costs on firms, employees, emergency responders, the community, and the broader economy. Notwithstanding EPA's current rules, RMP accidents have continued to occur. EPA anticipates that promulgation and implementation of this final rule will improve the health and safety protection provided by the RMP rule and result in a reduced frequency and magnitude of damages from releases, including damages that are quantified for the baseline period such as fatalities, injuries, property damage, hospitalizations, medical treatment, sheltering in place, and evacuations. EPA also expects the final rule provisions to reduce baseline damages that are not quantified. These damages include potential health risks from toxic chemical exposure, lost productivity at affected facilities, emergency response costs, transaction costs from potential subsequent legal battles, property value losses in nearby neighborhoods, environmental damage and costs of evacuation and sheltering-in-place events, and others.

Estimated benefits—analysis of magnitude and frequency of accidents

Comment 16.3-11: One commenter stated that EPA should strengthen its analysis by improving its baseline estimation of the magnitude and frequency of chemical accidents and incorporating additional quantitative and qualitative information on the potential health and other consequences of chemical incidents. The commenter stated that EPA properly finds the proposed rule justified on the benefits already analyzed, but a fuller accounting of the scope of the proposed rule's benefits would supplement that evidence (0266).

EPA Response: In the final rule RIA, EPA used the most recent 5 years of accident data from the RMP Database for the years 2016 to 2020 to improve its baseline estimation of the magnitude and frequency of chemical accidents as well as to update the monetized per accident costs, found in RIA Chapter 6. EPA also compared the frequency, severity, and monetized cost of accidents to prior periods from 2014 to 2016 and 2004 to 2013 further understand accident trends. Monetized benefits of avoided accidents based on this data are presented in RIA Chapter 6.

Comment 16.3-12: One commenter stated that EPA can strengthen its breakeven analysis by better considering how risk mitigation measures decrease the magnitude of accidents and avoid the most-costly accidents or catastrophes. The commenter stated that EPA may be underestimating the number of future accidents avoided by the proposed rule due to underreporting, delayed reporting, and failure to account for increasing risks from climate

[201] EPA estimated monetized damages from RMP facility accidents of $540.23 million per year.

[202] Marsh JLT Specialty, "100 Largest Losses in the Hydrocarbon Industry," 27th Edition, March 2022. Accessed from https://www.marsh.com/uk/industries/energy-and-power/insights/100-largest-losses.html. Marsh provides estimates of large property damage losses in the hydrocarbon industry from 1974 to 2021 in current and 2021 dollars and in a few cases, business loss costs.

change and EPA should more fully consider additional types of health benefits, cumulative effects, and the impacts of worst-case scenarios. The commenter stated that the underreporting which EPA acknowledges, these data are incomplete. The commenter gave the example that in some cases, after a facility has a chemical incident, it may shut down altogether and is then no longer a RMP facility without reporting obligations and may never report the incident. The commenter said that because RMP's first compliance deadline was in 1999, this has resulted in waves of heightened reporting at the end of each five-year period: 2004, 2009, 2014, and 2019, and an expected wave in 2024. The commenter stated that comparing incident estimates for the year 2016 between the 2019 Reconsideration Rule and the proposed rule RIA shows that this delayed reporting is significant. The commenter also said that EPA's baseline assumes that future accidents will continue to occur at roughly the rate of current accidents, but this assumption systemically underestimates future risk due to climate change (0266).

> **EPA Response**: EPA acknowledges that risk mitigation measures may decrease the risk of catastrophic accidents that are far more damaging than the average reported RMP accident and may not only decrease the risk of accidents, but also decrease the magnitude of accident damages. To this end, the SCCAP final rule RIA reports breakeven analysis results in terms of both the number of average-cost accidents the final rule must avoid and the dollar amount of damages the final rule must avoid.
>
> The final rule RIA mentions that the number of reported accidents may underestimate total accidents due to facilities shutting down and discusses both quantifiable and non-quantifiable damages from accidents. In the SCCAP final rule RIA, EPA provided a summary table of the number of accidents from 2016-2020 as well as comparison tables covering 2004-2016. The final rule RIA estimates the average annual number of accidents using the five-year period from 2016-2020, which helps account for year-to-year variation in the five-year RMP reporting cycle. However, some accidents occurring during the 2016-2020 period might not yet have been reported as of August 2021, when the data was pulled.
>
> Concerning data on incidents when the process where a release occurred was either destroyed or decommissioned, EPA acknowledges that there may be some accidents associated with destroyed or decommissioned processes that are not reported to the RMP database because facilities were not required to report such accidents, under the pre-Amendments regulations. However, EPA is not aware of a significant number of examples of this occurrence, and commenters have not provided such data. Therefore, EPA does not believe that the possible omission of a few accidents associated with destroyed or decommissioned processes would materially impact the analyses included in the SCCAP RIA and continues to believe that relying on the accident information in the RMP database is reasonable and the best source of available information. To the extent some accidents have been omitted, EPA's estimates of accidents are conservative and may undercount the baseline damages that the RMP rule can help mitigate.
>
> Future changes in accident risk due to climate change, new technologies, and other changes are difficult to predict. EPA believes it is reasonable to assume the number of accidents would be similar in future years in the absence of the final rule.

Comment 16.3-13: One commenter stated that more thoroughly considering the benefits from avoided accidents would provide additional support for the proposed rule. The commenter

suggested first that EPA more fully assess health benefits—which currently focus only on reducing injuries—beyond treatment costs. The commenter recommended that EPA strengthen its analysis by updating its literature on the health benefits of the proposed rule and, in particular, pain and suffering, that EPA might omit important non-acute injury and sickness and ignores long-term effects of the harm, and may be ignoring long-term quality of life decreases, also elides the importance of mental health costs (0266).

> **EPA Response:** EPA discussed several additional health benefits beyond treatment costs in the final rule RIA Chapter 6 and Chapter 9. The benefits from reducing potential health risks from toxic chemical exposure were discussed qualitatively. The health effects benefits to communities with environmental justice concerns were also discussed qualitatively.

Comment 16.3-14: One commenter stated that EPA describes the benefits of the proposed rule almost exclusively in terms of accident-related damages reduced or avoided, although the Agency is unable to quantify any such reductions. The commenter suggested that EPA could have gathered and analyzed data from the states currently implementing STAA requirements to understand – and potentially quantify – any accident reduction benefits in these jurisdictions since the requirements took effect; or it could have gathered accident data and statistics from facilities that are currently implementing a third-party audit program voluntarily, to attempt to quantify decreases in accident damages for that subset of facilities (0233).

> **EPA Response:** EPA provided quantitative estimates wherever it could and discusses qualitatively the costs and benefits it could not quantify due to data availability. EPA has not identified a set of comparison facilities to serve as a counterfactual to estimate the effect of a state or local government's STAA-like requirements on accident damages or the number of accidents. Furthermore, state and local STAA-like programs differ from the final rule's STAA provisions in meaningful ways. While New Jersey and California statewide requirements resemble the final rule's STAA initial evaluation and practicability study requirements, Massachusetts' requirements are less stringent and no state mandates that facilities implement practicable risk reduction measures. Contra Costa County's requirements, which mandate implementation of inherently safer technology, are more stringent than the final rule's STAA initial evaluation, practicability study, and implementation provision requirements combined. The final rule's STAA provisions only mandate that facilities implement a set of practicable measures achieving at least as much risk reduction as a passive measure. Furthermore, the final rule is implementing its STAA provisions concurrently with other provisions not implemented by these state and local jurisdictions, which may interact with the safety impacts of the STAA provisions. Moreover, facilities in these jurisdictions may not be representative of the potential safety benefits at facilities nationwide due not only to differing policy environments but also different technical, environmental, and economic conditions.
>
> Comparing accident damages between facilities voluntarily conducting third-party audits and those not would likely suffer from selection bias because the choice to conduct an audit with a third-party may be associated either with other voluntary commitments to improve safety or with more inherent safety challenges at a facility. However, the final rule RIA Chapter 6 section 6.14 Evidence from the Literature discusses a number of articles from the literature that suggest a third-party audit requirement should improve safety.

While EPA does not have the data to estimate risk reduction from the final rule's requirements, the breakeven analysis illustrates the degree of risk reduction overall that the final rule must achieve for quantified benefits to exceed quantified costs. The final rule RIA Chapter 6 section 6.3 Avoided Accident Impacts: Breakeven Analysis, discusses the breakeven analysis results. When considering the rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits.

Comment 16.3-15: One commenter suggested that EPA should more carefully consider how the proposed rule could reduce the likelihood or magnitude of a future worst-case scenario. The commenter suggested that EPA assess the number of fatalities that could be caused by such an event, but for context an event that caused even 100 deaths, using the same value of a statistical life (VSL) as EPA applied in the RIA ($9.3 million), would result in $903 million in harm before considering property damage, injuries, or unquantified costs—and preventing these 100 deaths alone would exceed the estimated 10-year costs of the program. The commenter also stated that EPA may want to consider also applying alternative characterizations, such as the number of fatalities or injuries that would need to be avoided per year. The commenter stated that EPA's current breakeven analysis focuses on the size of the mean incident, but the distributional properties mean it is critical to reduce the higher moments – e.g., variance and skew – of the distribution as well. The commenter stated that given § 112(r)'s legislative purpose to prevent catastrophic events and the design of the regulatory regime to address worst-case scenarios, it would also make sense for EPA to analyze the benefits of avoiding these low-probability, high impact events. The commenter stated that EPA should consider using the worst-case scenario plans in RMPs and its expertise to determine the right number for a mid- or upper-bound breakeven point based on either historical events or future worst-case scenarios. The commenter suggested that given the STAA's applicability to avoiding worst-case scenarios it may be most appropriate to use these larger incident breakeven points for its consideration and narratively contextualize this relevance (0266).

EPA Response: EPA provided quantitative estimates wherever it could and discusses qualitatively the costs and benefits it could not quantify. EPA conducted a breakeven analysis instead of a standard cost benefit analysis, because while EPA was able to estimate the costs of the final rule, it cannot precisely monetize the benefits. The incremental impact on the risk of an RMP facility release resulting from each of the revised RMP rule provisions is uncertain, as is the value of a wide variety of benefit categories as described in the final rule RIA Chapter 6 (major catastrophes, lost productivity, responder costs, property value impacts, and so on). While EPA does not have the data to estimate risk reduction from the final rule's requirements, EPA selected the provisions included in the final based on comments, experts in industry, academia, and federal entities, like the Chemical Safety and Hazard Investigation Board. Although EPA cannot estimate the risk reduction with precision, that does not countermand the agency's reasoned conclusion that these provisions—both each individually, and together as a whole—would incrementally mitigate the likelihood of an accident. The breakeven analysis illustrates the degree of risk reduction overall that the final rule must achieve for quantified benefits to exceed quantified costs. Given the high degree of uncertainty in estimating accident damages, EPA does not provide separate accident damage averages by sector or provision.

In absence of sufficient data for quantification, EPA discusses qualitatively that risk mitigation measures may decrease the risk of major catastrophes that are far more damaging than the five-year historic average reported RMP accident and may not only decrease the risk of accidents but also decrease the magnitude of accident damages. To this end, the SCCAP final rule RIA reports breakeven analysis results in terms of both the number of average-cost accidents the final rule must avoid and the dollar amount of damages the final rule must avoid.

The final rule RIA Chapter 6 section 6.3 Avoided Accident Impacts: Breakeven Analysis discusses the breakeven analysis results. When considering the rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits.

Comment 16.3-16: One commenter stated that EPA has not demonstrated how the proposed rule would result in 15 fewer incidents, annually (0268).

EPA Response: EPA disagrees that it has not demonstrated the SCCAP final rule will reasonably result in benefits that will exceed the final rule's estimated costs. In the absence of sufficient data for quantification, EPA discusses qualitatively that risk mitigation measures may decrease the risk of catastrophic accidents that are far more damaging than any reported RMP accident and may not only decrease the risk of accidents but also decrease the magnitude of accident damages. To this end, the SCCAP final rule RIA reports breakeven analysis results in terms of both the number of average-cost accidents the final rule must avoid and the dollar amount of damages the final rule must avoid. The reported number of avoided accidents the final rule must result in is conservative in that it does not account for any accident damages that are not monetizable. Chapter 6 section 6.1 Benefit Categories of the final rule RIA qualitatively discusses the benefits of the final rule, which it summarizes in Exhibit 6-1 Social Benefits of final rule Provisions.

Comment 16.3-17: One commenter expressed concern that EPA failed to construct appropriate regulatory alternatives and differentiate benefits across the new requirements, noting that failure to discern differences in the benefits of the new provisions will lead to mistakes in identifying and evaluating regulatory alternatives (0215).

EPA Response: EPA disagrees that it has failed to construct appropriate regulatory alternatives and differentiate benefits across the new provisions. In absence of available to data to quantify benefits, Chapter 6 section 6.1 Benefit Categories of the final rule RIA qualitatively discusses the benefits of the final rule, which it summarizes in Exhibit 6-1 Social Benefits of final rule Provisions. EPA expects the STAA, root cause analysis, third-party audits, employee participation plan, RMP justifications, emergency response, and information availability provisions all will result in benefits via mitigation of future RMP and non-RMP accidents at RMP facilities. Additionally, EPA expects STAA, root cause analysis, third-party audits, and employee participation plan provisions will prevent future RMP and non-RMP accidents at RMP facilities and reduce the risk of major catastrophes. The information availability provision may also lead to more efficient property markets in areas near RMP facilities. For a further discussion of how these

provisions are intended to lower the likelihood of future accidents of the same or similar type see RIA section 6.1.1.

EPA constructed one regulatory alternative with higher costs and benefits and one regulatory alternative with lower costs and benefits than the final rule. The high-cost alternative would require all P3 facilities to conduct a third-party audit. Unlike the final rule, this alternative would not result in reduced future accident damage from requiring P2 facilities with an accident to perform a third-party audit but would result in reduced future accident damage at P3 facilities that had not already had an accident. The low-cost alternative would only require P2 and P3 facilities with multiple accidents in the past five years to conduct a third-party audit. Unlike the final rule, this alternative would not result in reduced future accident damage from requiring P2 and P3 facilities with only one accident to conduct a third-party audit. Unlike the final rule, the high-cost alternative would require all complex P3 facilities, instead of only a subset, to perform a STAA practicability study and implement a practicable risk-reduction measure, which EPA expects would result in risk reduction at more facilities. By contrast, the low-cost alternative would not require a STAA practicability study or implementation, so it would not result in the expected benefits from these provisions. The low-cost alternative also only requires P3 facilities with an accident to perform a root cause analysis, instead of P2 and P3 facilities with an accident under the final rule and high-cost alternative, so it would not result in reduced future accident damage at P2 facilities from requiring a root cause analysis. Last, the low-cost alternative would not require P2 facilities to develop an employee participation plan and would not require training on the employee participation plan for any facility, which would result in less accident damage reduction than under the final rule and high-cost alternative that do require these. Hence, EPA expects the final rule will result in fewer benefits and costs than the high-cost alternative and more benefits and costs than the low-cost alternative. In selecting between the alternatives, EPA has tried to balance new prevention program requirements with costs incurred by the regulated community.

Comment 16.3-18: One commenter disagreed with how the RIA presented the benefits of the proposed provisions, noting that the bundling of distinct provisions does not allow evaluation of each provision on its merits (0215).

EPA Response: EPA disagrees that the final rule RIA's presentation of benefits is insufficient. EPA selected each of the provisions in the final rule based on a reasoned consideration that each would contribute to risk reduction, and that in light of the remaining baseline damages that could be mitigated/avoided (as well as other unquantified benefits) EPA concluded for each provision that the benefits reasonably justified the costs for each provision.

EPA conducted a breakeven analysis instead of a standard cost benefit analysis because while EPA was able to estimate the costs of the final rule, it cannot estimate the benefits. The incremental impact on the risk of an RMP facility release resulting from each of the revised RMP rule provisions is uncertain, as is the value of a wide variety of benefit categories as described in the final rule RIA Chapter 6 (lost productivity, responder costs, property value impacts, and so on). While EPA does not have the data to estimate risk reduction from the final rule's requirements, the breakeven analysis illustrates the

degree of risk reduction overall that the final rule must achieve for quantified benefits to exceed quantified costs.

RMP accident data shows past accidents have generated highly variable impacts, so the impacts of future accidents are difficult to predict. Nevertheless, it is clear from the RMP accident data[203] and other relevant data from RMP regulated industry sectors[204], that chemical accidents can impose substantial costs on firms, employees, emergency responders, the community, and the broader economy. Notwithstanding EPA's current rules, RMP accidents have continued to occur. EPA anticipates that promulgation and implementation of this final rule will improve the health and safety protection provided by the RMP rule and result in a reduced frequency and magnitude of damages from releases, including damages that are quantified for the baseline period such as fatalities, injuries, property damage, hospitalizations, medical treatment, sheltering in place, and evacuations. EPA also expects the final rule provisions to reduce baseline damages that are not quantified. These damages include potential health risks from toxic chemical exposure, lost productivity at affected facilities, emergency response costs, transaction costs from potential subsequent legal battles, property value losses in nearby neighborhoods, environmental damage and costs of evacuation and sheltering-in-place events, and others. The final rule will also generate other benefits, such as increased public information, which in addition to helping to minimize the impacts of accidents on the offsite public, may also lead to more efficient property markets in areas near RMP facilities.

For details on how quantified benefits were estimated or discussion on unquantified benefits, including the difficulty in their quantification, see Chapter 6 of the RIA.

Breakeven analysis

Comment 16.3-19: One commenter stated that EPA's breakeven analysis calculation is flawed because it uses the "average" accident cost over the five-year period of analysis – approximately $5 million per accident – which is well out of line with the "median" accident cost from the same five-year period – approximately $50,000. The commenter argued that using the more representative median figure of $50,000 as the basis for its per-accident damage figure, the proposed rule benefits do not "break even" with its costs (0233).

EPA Response: EPA disagrees with the commenter that it would be better to use median instead of mean damage estimates of RMP-reported accidents. The mean damage estimate is more appropriate because EPA is also trying to avoid high consequence accidents, which result in the majority of damages. Using the median would not reflect the beneficial impact of avoiding those high consequence accidents.

Comment 16.3-20: One commenter stated that the breakeven value is not credible for several reasons, including but not limited to, the fact the value: (1) includes mathematical errors; (2) ignores provisions in the proposed rule and the associated costs of these provisions; (3) relies upon unrealistic or out of date cost estimates for some provisions in the proposed rule; and (4)

[203] EPA estimated monetized damages from RMP facility accidents of $540.23 million per year.

[204] Marsh JLT Specialty, "100 Largest Losses in the Hydrocarbon Industry," 27th Edition, March 2022. Accessed from https://www.marsh.com/uk/industries/energy-and-power/insights/100-largest-losses.html. Marsh provides estimates of large property damage losses in the hydrocarbon industry from 1974 to 2021 in current and 2021 dollars and in a few cases, business loss costs.

fails to adequately account for the highly variable nature of incident damages. The commenter explained that the breakeven analysis was flawed due to the inclusion of outliers (0268).

> **EPA Response**: EPA has corrected errors in the cost and accident damage estimates from the SCCAP proposed rule RIA for the final rule RIA. EPA has reviewed comments on the NPRM and updated the RIA accordingly. Updates include adding cost estimates for the requirements to provide written justification for declining natural hazards, facility siting, and RAGAGEP recommendations; raising the cost assumed to implement and maintain backup power for perimeter monitors; assuming all entities except for P3 complex facilities require five hours for rule familiarization; and updating numbers to use 2022 wage and dollar values. EPA has attempted to use the best data available for its cost estimates. Generally, EPA uses recent data but for some estimates it must rely on older estimates because more recent data is not available. EPA recognizes that accident damages are highly variable. Hence, EPA reports the results of the breakeven analysis both in terms of the reduction in annual damages (including property damage and injuries and fatalities) and in terms of the reduction in number of accidents (assuming damages equal the five-year reported mean) required for the final rule to break even. A key purpose of this rulemaking is to reduce the risk of less frequent, larger accidents and catastrophes and to mitigate the damages of these potential future accidents. Hence, it is important to include higher cost accident damages when estimating mean damages. Moreover, the final rule RIA average accident damage estimates are conservative because they do not account for potential damages of a major catastrophe of a greater scale than the accidents reported in the RMP database in the 2016-2020 period, nor include accidents where the facility stopped operating.

Comment 16.3-21: One commenter stated that EPA employed questionable methods in the breakeven analysis such as the following (0268):

- The commenter stated EPA cited data that suggests Sheltering in Place lasts ‘a few hours and note Evacuations are typically completed in 5 hours, but EPA assumed that Sheltering in Place takes 4 hours and Evacuations take 8 hours;
- The commenter stated BLS’s Occupational Employment and Wage Estimates for Metropolitan and Nonmetropolitan Areas could have been used to calculate a wage rate more applicable to the affected areas than what is currently used;
- The commenter stated EPA should have collected and used monetized accident costs from 2016–2020;
- The commenter stated Exhibit 3-10 reports the annual average value of property damages is $191.5 million but it is incorrect as it includes the Annual Average ($32 million) in the calculation;
- The commenter stated that the RIA asserts the proposed rule will have benefits, however, there is no basis for EPA to make this assertion;
- The commenter stated EPA speculates that its estimate of STAA costs ‘may be a conservative estimate as recent advancements in technology target HF conversion and may be lowering conversion costs, but there is no basis to claim conversion costs at all as the proposed rule does not require conversion in the STAA provisions;
- The commenter stated EPA acts arbitrarily and capriciously when it knowingly uses inaccurate data to justify expensive regulatory requirements.

EPA Response: The 4-hour sheltering time and 8-hour evacuation time assumptions in the SCCAP final rule RIA are consistent with those used in the amendments rule RIA. CDC suggests sheltering-in-place in response to a chemical accident will be "a few hours" but recognizes that every emergency is different. The source is on the CDC website at https://emergency.cdc.gov/planning/Shelteringfacts.asp. EPA considers 4 hours to reasonably reflect "a few hours" of time. CDC data from the 1999-2008 Hazardous Substances Emergency Events Surveillance (HSEES) , accessed from https://www.cdc.gov/mmwr/pdf/ss/ss6402.pdf, suggested that evacuations can last from a few minutes to 84 days, with a median duration of 2 hours and an average duration of 11 days. Another study by Kim and Cho (2020), accessed from https://pubmed.ncbi.nlm.nih.gov/33339315/, models evacuations completing in 5 hours. EPA considers 8 hours, which is well below the average of 11 days EPA estimated from CDC data, to be a conservative assumption of evacuation time.

EPA does not have estimates of how risks vary by metropolitan and non-metropolitan areas and does not assume that the specific locations of potential future accidents will resemble the distribution of accidents in the 2016-2020 period. Hence, EPA uses national compensation data to estimate average accident damages at the national level. EPA did monetize accident costs from 2016-2020. The SCCAP final rule RIA presents monetized accident costs from 2016-2020 in Chapter 3 section 3.2 Number and Cost of Baseline Accidents. Sub-section 3.2.5.3 Summary of Monetized Accident Impacts and its Exhibits 3-14 and 3-15 summarize these monetized accident costs.

EPA has reviewed the error the commenter identified in the SCCAP proposed rule RIA's Exhibit 3-10 and has corrected the calculation in Exhibit 3-12 in the final rule RIA Chapter 3 section 3.2.3.

EPA disagrees with the commenter that the EPA has no basis for asserting the SCCAP proposed or final rule will have benefits. As EPA explains in Chapter 6 of the RIA for the final rule, the benefits of the final rule include reductions in the number of people killed, injured, and evacuated or otherwise inconvenienced by sheltering in place; reductions in the damage caused to property on-site and offsite including product, equipment, and buildings; reductions in damages to the environment and ecosystems; and reductions in resources diverted to extinguish fires and clean up affected areas. The final rule also provides other benefits, such as increased public information, which in addition to helping to minimize the impacts of accidents on the offsite public, may also lead to more efficient property markets in areas near RMP facilities. Additionally, Chapter 6 section 6.1.4 Evidence from the Literature provides evidence from the literature supporting the effectiveness of some final rule provisions at improving safety and market efficiency.

The SCCAP final rule RIA discusses the STAA practicability assessment cost estimate methodology in Chapter 4 section 4.4.1 STAA: Initial Evaluation and Practicability Assessment and in Appendix A. To estimate the cost of the STAA practicability assessment, EPA maintains the approach it developed for the amendments rule RIA. That approach is to identify "reference" STAA projects for the sectors affected by the provision, estimate costs of the reference projects, and apply a percentage to the project cost to calculate the practicability assessment cost. EPA was unable to locate new information on practicability assessment costs or those costs in relation to project costs. Thus, EPA adopts the same 1.2 percent of project costs that was estimated for the

amendments rule RIA. The approach to estimating the costs of practicability assessments identified relevant reference projects for each affected sector and cost estimates for each reference project and then applied the 1.2 percentage estimate to project costs. EPA assumes Program 3 facilities already assess the practicability of some potential alternatives. Hence, the reference projects reflect the addition of inherently safer and a few other alternatives in a facility's practicability assessment as a result of the final rule. An important potential STAA project for the final rule is the consideration by petroleum refiners of converting an HF alkylation to safer technologies that replace HF with substitutes such as sulfuric acid, ionic liquids, or solid acid. While the practicability assessment provision does not require conversion, it is likely that refineries with HF units will study HF conversion as part of their assessment. Because EPA's best estimate of the assessment cost is as a percentage of the project cost, the cost of HF conversion affects the STAA practicability assessment cost estimate.

EPA uses the best available data to estimate costs and benefits of the final rule with the primary data source being facility reported data in RMP filings.

Comment 16.3-22: One commenter stated that EPA can treat any desirable (or undesirable) distributional effects as an unquantified benefit (or cost) that it compares alongside other costs and benefits. The commenter stated that EPA should consider these distributional consequences in the context of a breakeven analysis; for example, if multiple scenarios meet the breakeven threshold, EPA could consider and discuss whether one alternative has more desirable distributional impacts. The commenter also recommended that EPA coordinate internally and externally with other agencies and with OMB to conduct its distributional analysis for this rule in a manner that contributes to achieving a standardized approach to distributional analysis across the federal government (0266).

EPA Response: EPA is not able to quantify different distributional benefits in the benefit cost analysis because it cannot quantify specific risk reductions as discussed in the breakeven analysis in the final rule RIA Chapter 6. However, EPA considered several distributional components in both its cost analysis (RIA Chapter 5) and its regulatory alternatives (RIA Chapter 7), including costs by facility type, sector, and size and by provision. Furthermore, the small entity analysis in RIA Chapter 8 provides distributional effects to government facilities and by detailed NAICS industry and size of entities. The distributional cost to different communities located near RMP facilities is also assessed in Chapter 9 of the RIA, the environmental justice analysis.

Estimated costs

Comment 16.3-23: Several commenters expressed support for EPA's draft RIA regarding the estimation of costs (0151, 0266, 0273, 0444).

EPA Response: EPA appreciates the commenters' support.

Comment 16.3-24: Several commenters expressed concern about EPA's draft RIA regarding the estimation of costs (0180, 0197, 0202, 0205, 0214, 0215, 0217, 0226, 0227, 0232, 0233, 0234, 0239, 0243, 0250, 0253, 0259, 0268, 0272, 0275, 0456, 0458). Several commenters stated that the new requirements under the proposed rule would impose unnecessary burdens to facilities including new training and analyses, higher costs, or lower effectiveness of the program (0180, 0188, 0196, 0202, 0205, 0207, 0214, 0215, 0217, 0226, 0233, 0234, 0237, 0238, 0239, 0245,

0253, 0256, 0263, 0267, 0268, 0458, 0477). Another commenter stated that the proposed rule's additional requirements will increase operating costs, paperwork burdens, and compliance costs rather than making it more likely to prevent an accidental release, and asserted that the current RMP regulations work well (0227).

EPA Response: EPA disagrees with the commenters and finds the goals of the rule to reduce the harmful impact of accidents outweigh the costs estimated in the rule. EPA identifies and discusses in the final rule RIA the expected costs and benefits of each provision that would be expected to result in costs or benefits. EPA considered the information provided by commenters on specific rule provisions and updated some assumptions and data as able, resulting in adjustments to the cost estimates. In response to comments and to new requirements in the final rule, EPA quantified additional costs beyond those quantified in the NPRM, including public costs to request and receive RMP information and facility costs to translate RMP information into other languages; implement STAA measures; train employees on the employee participation plan; provide justifications for not implementing recommendations to address natural hazards, facility siting, and RAGAGEP; and aligned the rule familiarization hours assumptions for delegated implementing agencies, LEPCs, and P1, P2, and simple P3 facilities. EPA also updated its estimated labor rates to the most recent (2022) values available from the BLS and updated other costs to be in 2022 dollars as well. Moreover, EPA used 2020 RMP data instead of the 2015 RMP data used in the 2017 amendments rule, so total cost estimates in this final rule reflect the number of facilities active as of December 31, 2020. EPA also acknowledges that estimates – both in terms of unit costs and numbers of facilities – may not perfectly match specific industry sectors. To the extent possible, EPA made adjustments to facility-provided data in the RMP database to address some of the more obvious discrepancies.

EPA conducted a breakeven analysis instead of a standard cost benefit analysis because while EPA was able to estimate the costs of the final rule, it cannot precisely monetize the benefits. The incremental impact on the risk of an RMP facility release resulting from each of the revised RMP rule provisions is uncertain, as is the value of a wide variety of benefit categories as described in the final rule RIA Chapter 6 (lost productivity, responder costs, property value impacts, and so on). The final rule RIA Chapter 6 section 6.3 Avoided Accident Impacts: Breakeven Analysis discusses the breakeven analysis results. When considering the rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits.

Comment 16.3-25: Several commenters stated that the 57% decrease in RMP incidents from 2007 to 2016 and that 97% of RMP regulated facilities did not have a RMP reportable incident from 2016 to 2020 proves that current RMP regulations are achieving their purpose and reducing chemical accidents. The commenter stated that it is unclear if there will be a significant reduction of chemical accidents under the proposed changes (0180, 0205, 0217, 0226, 0234, 0458).

EPA Response: Based on data from the EPA RMP Database, there were a total of 488 RMP-reportable accidents from 2016 to 2020,[205] averaging almost 98 accidents a year.

[205] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the

These accidents included 18 total onsite deaths and 575 total onsite injuries as well as $2.3 billion in onsite property damages, excluding off-site impacts, as presented in RIA Exhibit 3-11. Therefore, the final rule imposes new requirements that will further reduce the impact of these chemical accidents. Furthermore, an analysis of monetized costs of accidents from 2004 to 2013 and 2014 to 2016, shows that average per accident costs have remained relatively stable at $3.0 million per accident. Average per accident costs from 2016 to 2020 were $5.1 million. Therefore, the severity of such accidents has not decreased.

Comment 16.3-26: One commenter said that social and health consequences, such as the monetary and emotional costs of a child or adult with neurological disabilities, cancer, or other lifelong or serious diseases, are not adequately accounted for in EPA's analysis of the rule. The commenter said that it costs twice as much to educate a child with special needs along with the costs of healthcare, counseling, tutors, and medical appointments for the child with learning disabilities, autism or ADHD (0249).

EPA Response: EPA discusses the potential health benefits in RIA Chapter 6 qualitatively. Specifically, long-term health benefits from a reduction in exposure to toxic chemicals are discussed in RIA section 6.2.2. Similarly, EPA quantifies the impact of accidents on health consequences by analyzing the monetized costs of accidents in terms of fatalities, injuries, hospitalizations, and medical treatments in RIA section 6.3. To the extent these impacts are not quantified/monetized fully, baseline damages estimated by EPA are conservative estimates.

Comment 16.3-27: One commenter stated that the ratepaying customers of the utility fund utility operations, and therefore any new costs incurred by the proposed rule will be carried by those ratepayers regardless of ownership type. The commenter recommended that EPA should consider effects of the proposed rule on water affordability and reliability (0239).

EPA Response: EPA disagrees with this comment's assertion that costs of the final rule will be carried over to ratepaying customers and have any implications for water affordability, as the cost of the rule to water utilities was determined to be small. In the final rule RIA, EPA estimated the costs of the rule to small entities, including government entities who operate water utilities, and EPA concluded that the vast majority of small government entities would face small costs. Specifically, 97 percent of small governments will face costs less than $10,000. Therefore, any impacts to ratepaying customers would also be minimal.

Comment 16.3-28: One commenter stated that EPA's newer data show that the decline in reportable accidents has continued through 2020, thus making the economically significant costs of this rule even less justifiable than they were six years ago (0275).

RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

EPA Response: Data from the RMP Database shows that the number of reportable accidents has fluctuated from 2016 to 2020 with a slight downward trend.[206] While the number of accidents may be on a downward trend, the severity of onsite and offsite impacts remains high, including 0.04 deaths, 1.18 injuries, and $4.66 million value of damage per accident. In addition, RMP accidents remain costly in total, with RMP reportable accidents averaging $454.58 million from 2016-2020. Therefore, the final rule seeks to impose new requirements that will further reduce the impact of these chemical accidents.

Comment 16.3-29: One commenter stated that the costs of death or disability, or of lasting harm to our natural environments, are immeasurable (0151).

EPA Response: EPA agrees that some costs resulting from accidents, including those listed by the commenter, are difficult to quantify. For that reason, EPA has discussed many of the benefits of the final rule qualitatively in the RIA Chapter 6.

Comment 16.3-30: Several commenters stated that the 2022 RIA does not take into account the requirement to audit all process units, as well as the need for hourly employees and contractors to assist salaried personnel with these audits (0223, 0268).

EPA Response: EPA disagrees with the commenter that the RIA does not account for the requirement to audit all process units and the need for hourly employees and contractors to assist salaried employees with these audits. EPA notes that audits are only required after an accident, when required by an implementing agency, and when the prior audit failed to meet standards. Shortly after the proposed amendments rule was published, EPA received cost information relating to a series of third-party audits conducted by a facility as a result of an enforcement action taken by EPA under CAA Section 112(r). The average cost of these audits was approximately double EPA's estimate in the proposed amendments rule, and comparable to cost estimates submitted by commenters. Therefore, EPA adjusted its cost estimate for this provision of the final amendments rule and has carried that adjustment over to this rule resulting in the estimated costs of third-party audits under the final amendments rule nearly doubling. The SCCAP final rule third-party audits provision imposes similar requirements as the amendments rule's third-party audits provision, so EPA uses the same hours assumptions as in the amendments final rule RIA for the SCCAP final rule RIA presented in Chapter 4 section 4.4.4 Third-party Audits. These per facility cost estimates vary based on the number of employees, whether the facility is government-owned, and whether the facility is complex (has a NAICS 324 or 325 process).

[206] Due to a lack of alternative data describing RMP accident impacts more comprehensively, EPA chose this five-year dataset to reflect the most recent trends regarding RMP accidents. EPA used the August 1, 2021, version of the RMP database to complete its analysis because under 40 CFR 68.195(a), facilities are required to report RMP accidents and specific associated information within six months to the RMP database. Therefore, the RMP database as of August 1, 2021, is expected to include RMP accidents and their specific associated information as of December 31, 2020. However, because accident data are reported to the RMP database by facility owners and operators, EPA acknowledges the likelihood of late-reported accidents affecting these last few years of data because some facilities may have not reported their RMP accidents as they are required to do. While some commenters have suggested that late reporting may impact the count of total accidents in recent years, neither the commenters nor EPA have identified any impacts of late reporting on the distribution of accidents by sector. See sections 3.2 and 3.3 of the RIA for more on this and other limitations on the number and costs of baseline accidents.

Comment 16.3-31: One commenter said that the net effect of adoption of the proposed changes would certainly be to decrease farmers' access to nitrogen fertilizer, nudging farmers to transport fertilizer, such as anhydrous nurse tanks, over many more miles of public roads – a perverse effect of a regulation intended to increase chemical process safety and risk management (0202).

> **EPA Response:** EPA disagrees with this comment and does not expect or find evidence that the final rule will impact farmers' access to nitrogen fertilizer. However, EPA acknowledges that the final rule would impose some costs on fertilizer manufacturers. In RIA Chapter 8, EPA analyzed the cost of the final rule to small entities, including entities in the NAICS 325311 (Nitrogenous Fertilizer Manufacturing), and found that 94 percent of nitrogenous fertilizer manufacturers would face revenue impacts of under 3 percent.

Comment 16.3-32: One commenter stated that requiring a full field exercise every 10 years is extremely costly, overly burdensome, and does not have clear benefits beyond what would result from conducting annual tabletop exercises; the commenter further asserted that the costs and benefits are not included in the RIA (0239). Another commenter said that the current requirement of tabletop exercises every three years and potentially full scale exercises every 10 years for fixed facilities could be a financial burden on smaller facilities and emergency planning districts. The commenter requested that EPA provide information on grant opportunities available to fixed facilities for emergency exercises (0165).

Another commenter stated that EPA had inadequately considered the significant resources and time necessary to properly run field exercises. The commenter said that the existing RMP regulations provide the necessary flexibility to facilities and local responders to collaborate and support exercises. The commenter suggested that EPA provide a reasonable estimate of the burden such engagement would place on local responders. The commenter also suggested that EPA provide upper and lower bound estimates of the resources required for a local responder to participate in an exercise for simple and complex RMP facilities (0239).

> **EPA Response:** EPA assumes facilities are already conducting regular field exercises so the emergency exercise provisions in the final rule will not result in an increase in costs for facilities. EPA continues to rely on the conservative cost estimate from the amendments and reconsideration rules that the average RMP facility will still conduct a field exercise every ten years. Details of those cost estimates can be found in Section 4.4.3 of the amendments rule RIA. While EPA is conscious of the potentially high burdens associated with exercises, EPA reaffirms its view that both field and tabletop exercises are an important component of an emergency response program.
>
> EPA understands that there may be cases where local emergency response agencies are unable or unwilling to coordinate with a regulated stationary source on exercise frequencies and plans, or to participate in exercises. In such cases, the owner or operator may establish appropriate exercise frequencies and plans on their own, provided they meet the minimum requirements set forth in 40 CFR 68.96. Also, the owner or operator should revisit their exercise schedules and plans at the next annual coordination opportunity with local response officials, so that these officials are given an opportunity for input on exercise schedules and plans, even if they remain unable to participate in the exercises.

Estimated costs – emergency response

Comment 16.3-33: One commenter stated that while it is not mandated that local responders participate in the field exercise, EPA should provide information on the costs, resources and time that such participation would place on local governments and the first responder community (0243).

> **EPA Response:** EPA assumes facilities are already conducting regular field exercises that may include voluntary participation by emergency responders. EPA expects the final rule will not meaningfully change the level of participation by local responders. Emergency exercise provisions in the final rule are formalizing what was already required so will not result in an increase in costs for facilities or emergency responders.

Comment 16.3-34: One commenter asserted that EPA also did not estimate the burden on local responders (government entities) required to implement and sustain IPAWS capability in a community (0239).

> **EPA Response:** The presence of State and/or local Integrated Public Alert and Warning System (IPAWS) alerting authorities covering all 50 States plus D.C., Puerto Rico, and the U.S. Virgin Islands implies that the infrastructure is in place nationwide for facilities to ensure community notification. Therefore, the direct cost associated with the provision will be coordination between the facilities and local responders.
>
> The SCCAP final rule does not impose mandatory requirements on LEPCs. For the majority of provisions, EPA does not expect that any burden will be placed on LEPCs. For those that will involve LEPC involvement – rule familiarization and community notification – EPA expects that involvement will be minimal and can be addressed within current staffing levels. To the extent that LEPCs may choose to implement and sustain IPAWS capacity in their communities, the agency expects that this involvement is already occurring or would occur even in absence of the SCCAP final rule.

Estimated costs – information availability

Comment 16.3-35: One commenter stated that the costs associated with Root Cause changes are not considered for NAICS 324. Regarding community notifications, the commenter stated that the RIA assumes only 3–6 hours additional internal and external resources to coordinate with the LEPC over the new requirements, but the commenter submits that this does not capture the time required adequately and it would be more like 8–20 hours of additional time. The commenter said that the information availability costs is underestimated by at least $50,000 and that does not include management and legal review resources. Regarding rule familiarization, the commenter estimated that qualified technical resources bill up to $350/hour, twice EPA's estimate (0259).

> **EPA Response:** As a result of the provision requiring incident investigations to include a root cause analysis, facilities, including NAICS 324 facilities, are expected to implement different but not necessarily more costly measures in response to these investigations than they would have in absence of the rule. SCCAP final rule RIA Chapter 4 section 4.4.3 Root Cause Analysis discusses the cost estimates for this provision.
>
> Regarding community notifications, EPA notes that facilities are already required to coordinate with LEPCs. Given that coordination already occurs between facilities and LEPCs and that IPAWS already exists in all States statewide, the requirement to ensure a community notification system is in place is not expected to take a facility and its LEPC

more than a few additional hours combined on average. SCCAP final rule RIA Chapter 4 section 4.6 Emergency Response discusses the cost estimates for this provision.

Regarding the information availability requirements, EPA has added cost estimates for translation and requestor identity verification in the SCCAP final rule RIA. Because the information that could be requested is already included in the RMP, EPA expects the information is likely already subject to management and legal review. Therefore, EPA estimates that simple facilities will spend 2 hours reviewing the information to ensure that it is up-to-date. Complex facilities may have more information to review because they may manufacture, process, and use multiple regulated substances in multiple processes. EPA estimates that small complex facilities will spend 4 hours collecting and reviewing the information. Large complex facilities were estimated to spend 54 hours because management and possibly counsel will need to ensure that the information was not subject to any restrictions related to security or confidential business information concerns. SCCAP final rule RIA Chapter 4 section 4.7 Information Availability discusses these estimates.

EPA disagrees with the commenter that the wage rate assumption for rule familiarization in the SCCAP final rule RIA is too low. EPA believes that the average loaded wage rate for SOC 11-3000 Operations Specialties Managers, weighted among the sector-specific wage rates by the number of facilities in each NAICS sector, is appropriate to represent the average hourly resources required for simple facilities, LEPCs, and delegated implementing agencies.

Estimated costs – community requests

Comment 16.3-36: Several commenters expressed concern that EPA's estimate that there will be an average of only one request by community members for each facility is an underestimate (0205, 0233). One commenter stated that the underestimate could potentially result in substantial administrative cost and burden for the facilities to provide multiple sets of the information (0205). Another commenter stated that EPA provided no basis for the assumption that "each facility receives 1 request per year from a community member residing within 6 miles of the facility" (0233). One commenter asserted that EPA's analysis also fails justify the assumption of one request annually and to consider translation costs (0239).

EPA Response: In response to comments, EPA added translation cost estimates. The SCCAP final rule RIA Chapter 4 section 4.7 Information Availability discusses these cost estimates, as well as the cost estimates for facilities to collect and review the information and for requestors to verify their identities. Regarding the assumption that each facility receives one information request per year, EPA recognizes that some facilities may receive no requests and others multiple requests in a given year but believes the assumption is reasonable in absence of available data to better inform the assumption. The SCCAP proposed rule preamble notes that total FOIA requests for non-OCA data have averaged 35 per year, far fewer than the number of facilities, but EPA considers it reasonable that this provision will result in a higher number of requests.

Estimated costs - STAA

Comment 16.3-37: One commenter urged EPA to revise its STAA cost-benefit analysis to: (1) use updated cost information from facilities currently implementing STAA; (2) factor in a cost

assumption that at least some STAA recommendations will actually be implemented to justify the claimed benefits of STAA; and (3) assemble and present data in support of its assumption that the STAA requirements will translate to accident reduction and mitigation benefits, factoring in that facilities in New Jersey, Massachusetts, and California are already subject to STAA requirements, and thus benefits for facilities in these jurisdictions cannot be attributed to the proposed rule (0233). Another commenter stated that the STAA cost estimate only assumes costs to conduct the analysis and not the costs associated with applying the recommendations from the analysis (0259).

> **EPA Response:** EPA uses the cost information from the SCCAP proposed rule RIA, updated to 2022 dollars, for the final rule RIA's STAA initial evaluation and practicability assessment provisions that reflect possible additional options facilities would analyze, as discussed in Chapter 4 section 4.4.1 STAA: Initial Evaluation and Practicability Assessment and Appendix A: Cost Estimates of HF Alkylation Conversion. EPA used this and other cost information discussed in the final rule RIA Chapter 4 section 4.4.2 STAA: Implementation Equivalent to Passive Measures and Appendix D: STAA Implementation Measure Costs to estimate STAA implementation provision costs. EPA does not have readily available data on cost information for STAA beyond what the RIA presents. Regarding costs for implementing STAA measures, the proposed rule did not require STAA implementation, but the final rule requires facilities to implement some practicable STAA measures, so the final rule RIA includes these cost estimates. Regarding facilities in New Jersey, Massachusetts, and California, EPA assumes facilities in Contra Costa already comply with the STAA initial evaluation, practicability assessment, and implementation provisions because the county imposes stricter requirements. EPA assumes HF facilities in California and all facilities in New Jersey already meet the requirements of the STAA initial evaluation and practicability assessment (but not STAA implementation) because they already face equivalent or stricter state requirements for similar analyses. However, EPA believes the STAA provisions are stricter than Massachusetts requirements, so these facilities may still face costs and benefits from all STAA provisions. While limited empirical evidence is currently available, EPA expects the STAA provisions will prevent and mitigate future RMP and non-RMP accidents at RMP facilities, including major catastrophes.

Comment 16.3-38: One commenter suggested that EPA consider whether it is overestimating the costs of the third-party audit and STAA provisions in the proposed rule. The commenter suggested that EPA not assume a baseline of zero cost as the correct unit cost would be the difference in cost between a self-audit (the baseline) and a third-party audit. The commenter suggested that EPA provide any evidence of the extent of this difference in cost or further discuss how it might be considerable. The commenter suggested that EPA consider collecting more information on the number of hours necessary to perform safer technology analyses and use those to help estimate costs rather than approximating costs based on a percentage of average projected costs for implementing a safer technology or alternative. The commenter stated that some state programs have required facilities to consider safer technologies for years and those experiences should be able to provide more concrete information on cost considerations. The commenter suggested that EPA consider the costs to larger entities as a percentage of their revenue to better indicate what the impact of the proposed rule would be on these facilities (0266).

EPA Response: EPA does not have better data than that presented in the RIA for costs of these provisions. The SCCAP final rule RIA already estimates the cost of the third-party audit provision as the amount the cost of conducting a third-party audit exceeds the cost of a self-audit facilities with accidents are already assumed to conduct in the baseline. The RIA Chapter 4 section 4.4.4 Third-party Audits discusses these estimates.

The SCCAP final rule RIA used the same cost information as the amendments final rule RIA, updated to 2022 dollars, for STAA initial evaluation and practicability assessment provisions. The amendments final rule RIA assumed that cost estimates for the STAA initial evaluation submitted by trade associations representing a particular category of facilities (e.g., refineries, complex chemical manufacturers, etc.) were the best representation of estimated costs for those categories of facilities and adjusted its own estimate accordingly. In most cases, this caused the estimated costs for the STAA initial analysis to increase.

For the practicability assessment, the amendments final rule RIA identified a number of representative implementation projects that a facility could voluntarily implement, ranging from piping or valve replacements to chemical conversions. The amendments rule RIA then assumed a percentage of these total costs would be incurred as part of the practicability assessment – as suggested by commenters and other sources. The SCCAP final rule RIA discusses its adapted approach in Chapter 4 section 4.4.1 STAA: Initial Evaluation and Practicability Assessment, Chapter 5 section 5.7.1 STAA, and Appendix A: Cost Estimates of HF Alkylation Conversion.

Costs to small entities are not a significant portion of revenue (see final rule RIA Chapter 8) and therefore does not expect costs to large entities to be any more significant.

Estimated costs - process hazard analysis

Comment 16.3-39: One commenter stated that EPA fails to assign any costs to the proposed requirement that Program 3 facilities include in their PHA an analysis of the most recently promulgated RAGAGEP to identify any gaps between practices related to the design and construction of the process and the most current version of applicable RAGAGEP. The commenter stated that this new PHA element will invariably require more labor and personnel time in conducting and documenting the analysis, which should be factored into EPA's cost assessment. The commenter also stated that the RIA does not account for any costs of updating process equipment as a result of determinations made in the gap analysis (0233).

EPA Response: In response to comments, EPA added cost estimates for the requirement to provide written justifications for declining RAGAGEP recommendations. SCCAP final rule RIA Chapter 4 section 4.5 RMP Justifications discusses these cost estimates. Aside from these requirements, EPA notes that it is not finalizing additional RAGAGEP regulatory requirements beyond the current RMP regulations. EPA expects facilities are already performing a RAGAGEP gap analysis to meet existing requirements, so the final rule results in no additional burden related to RAGAGEP beyond the justification requirement. Because the SCCAP final rule does not require facilities to update process equipment or any other implementation as a result of its gap analysis, the final rule RIA correctly does not include any costs related to such updates or implementation.

Comment 16.3-40: Another commenter stated that new PHA requirements, which are onerous at best, are not considered as an additional burden. The commenter elaborated that current PHA protocols require assessing the consequences of natural hazards and not the natural hazard itself, a distinction that would require additional expertise in PHA teams. The commenter also said that completing all 13 PHAs in a single year imposes an incredible burden on a small entity with limited resources (0259).

> **EPA Response:** In response to comments, EPA added cost estimates for the requirements to provide written justifications for declining recommendations to address natural hazards, as well as power loss, facility siting, and RAGAGEP. SCCAP final rule RIA Chapter 4 section 4.5 RMP Justifications discusses these cost estimates. Aside from these requirements, EPA notes that it is not finalizing additional PHA regulatory requirements from what already exists in the RMP regulations. The current RMP rule's PHA requirements include "determining and evaluating the hazards of the process" as well as "engineering...controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies." (40 CFR 68.67(c)(1),(3)). Similar but less detailed requirements apply to Program 2 processes (40 CFR 68.50(a)). The hazard evaluation requirements reflect not only the OSHA and EPA rules but also existing industry recommended practices, and therefore, EPA assumes that these hazard evaluation amplifications impose no new requirements or costs on facilities.

Estimated costs - backup power

Comment 16.3-41: One commenter stated that EPA, without explanation, assumes that facilities will need to spend only $1,000 for backup power for monitoring equipment, nor did EPA consider costs associated with on-going maintenance, fueling, and the potential need for necessary environmental permits (0233).

One commenter stated that although the Regulatory Impact Analysis (RIA) includes some estimates of costs for perimeter monitors, this is an underestimate of the full costs of back-up power, particularly for emissions monitoring equipment. The commenter also opposed the proposed PHA changes as they require new reporting obligations that are unnecessary and have not been fully analyzed (0272).

> **EPA Response:** In response to comments that EPA did not adequately consider the costs of the power loss provisions, EPA increased its cost estimate for the backup power for perimeter monitors and added cost estimates for the requirements to provide written justifications for declining recommendations related to power loss, natural hazards, facility siting, and RAGAGEP. EPA increased its estimate of the capital cost to purchase and install a backup generator from $1,000 to $3,000 and assumed operation and maintenance costs equal 10% of capital costs. EPA notes it is not requiring any facilities to implement perimeter monitoring. SCCAP final rule RIA Chapter 4 sections 4.4.6 Emergency Backup Power for Perimeter Monitors and 4.5 RMP Justifications discuss these cost estimates. Aside from these requirements, EPA notes that it is not finalizing additional PHA regulatory requirements from what already exists in the RMP regulations. The current RMP rule's PHA requirements include "determining and evaluating the hazards of the process" as well as "engineering...controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies." (40 CFR 68.67(c)(1),(3)). Loss of power is one such hazard, and backup power is an

engineering control applicable to the hazard and detection methodologies. Similar but less detailed requirements apply to Program 2 processes (40 CFR 68.50(a)). The hazard evaluation requirements reflect not only the OSHA and EPA rules but also existing industry recommended practices, and therefore, EPA assumes that these hazard evaluation amplifications impose no new requirements or costs on facilities. As EPA has discussed in prior RMP rulemaking RIAs, it is not possible to estimate quantitative benefits for proposed rule provisions as EPA has no data to project the specific contribution of each to an accident's impacts. As shown by accident trends, accident frequency and severity are difficult to predict. However, the 2022 SCCAP proposed rule and the accompanying Technical Background Document show that past accidents have been caused by power failure, and the backup power provisions target these events. Based on RMP-reportable accident and other data from RMP regulated industry sectors[207], chemical accidents can impose substantial costs on firms, employees, emergency responders, the community, and the broader economy. Reducing the risk of such accidents, the severity of the impacts when accidents occur, and improving information availability, as the provisions of this final rule intend, will provide benefits to the potentially affected members of society.

Comment 16.3-42: One commenter said that the Power Loss analysis costs are not included for NAICS 324 entities but should be (0259). Another commenter stated that EPA also failed to conduct a proper cost-benefit analysis of the proposed power loss requirement. The commenter also stated that EPA should address ambiguity, providing clarification and a fulsome analysis of the costs and benefits of the provision, subject to public comment, before proceeding with a final rule (0253).

EPA Response: In response to comments that EPA did not adequately consider the costs and benefits of the power loss provisions, EPA notes that it is not finalizing additional regulatory requirements from current RMP regulations. The current RMP rule's PHA requirements include determining and evaluating the hazards of the process" as well as "engineering...controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies." (40 CFR 68.67(c)(1),(3)). Loss of power is one such hazard, and backup power is an engineering control applicable to the hazard and detection methodologies. Similar but less detailed requirements apply to Program 2 processes (40 CFR 68.50(a)). The hazard evaluation requirements reflect not only the OSHA and EPA rules but also existing industry recommended practices, and therefore, EPA assumes that these hazard evaluation amplifications impose no new requirements or costs on facilities. As EPA has discussed in prior RMP rulemaking RIAs, it is not possible to estimate quantitative benefits for proposed rule provisions as EPA has no data to project the specific contribution of each to an accident's impacts. As shown by accident trends, accident frequency and severity are difficult to predict. However, the 2022 SCCAP proposed rule and the accompanying Technical Background Document show that past accidents have been caused by power failure, and the backup power provisions target these events. Based on RMP-reportable accident and other data from

[207] Marsh JLT Specialty, "100 Largest Losses in the Hydrocarbon Industry," 27th Edition, March 2022. Accessed from https://www.marsh.com/uk/industries/energy-and-power/insights/100-largest-losses.html. Marsh provides estimates of large property damage losses in the hydrocarbon industry from 1974 to 2021 in current and 2021 dollars and in a few cases, business loss costs.

RMP regulated industry sectors[208], chemical accidents can impose substantial costs on firms, employees, emergency responders, the community, and the broader economy. Reducing the risk of such accidents, the severity of the impacts when accidents occur, and improving information availability, as the provisions of this final rule intend, will provide benefits to the potentially affected members of society.

Estimated costs - insufficient justification for assumptions and other concerns

Comment 16.3-43: Several commenters expressed concern that, while EPA estimates the proposed rule will only equate to an undiscounted cost of roughly $64,000 annually per facility, this number is a gross underestimate. The commenters stated that considering the cost of labor hours and administrative costs attached to the above provisions as well as the need for third party contractors to facilitate analysis and help with the proper and required implementation of the rule, they feared that the cost per facility can easily exceed $100,000 per year. The commenters cited a third-party analysis of the proposed rule conducted by National Association of Chemical Distributors contractor John Dunham and Associates which estimated that an annual cost of $100,000 per RMP facility would result in a reduction of economic input from the chemical distribution industry of over $51 million. The commenters estimated an inflationary impact as the costs per ton of chemicals handled by distributors would rise by 0.13% or $0.46 per ton (0180, 0205, 0217, 0226, 0234, 0458).

EPA Response: EPA relied on the best available data and assumptions to estimate costs in the final rule RIA Chapters 4 and 5. EPA disagrees that the final rule cost estimates are an underestimate. Furthermore, EPA assessed the impact of the final rule across different industries in its small entity analysis in RIA Chapter 8. EPA found that the rule will cost some entities, including chemical manufacturers, over $100,000 as the commenter suggests (see Exhibit 8-7 of the final rule RIA). These costs, however, represent less than 3% of revenue for the vast majority of small entities and would represent an even small proportion of revenue for larger entities.

Comment 16.3-44: One commenter expressed concern that there may be missing incident costs from the RIA data that are a cost to taxpayers, such as the CSB investigation and costs spent by companies to upgrade inherently dangerous processes after disasters (0157).

EPA Response: EPA acknowledges that costs of accidents include CSB investigation and process upgrade costs. Reducing the frequency of accidents would result in lower total investigation and upgrade costs because fewer facilities would have accidents requiring CSB to investigate and the facility to upgrade processes.

Comment 16.3-45: One commenter stated that if EPA looks at the full reported harm from incidents in recent years, including harm to the environment without direct human impact or property damage, EPA will recognize that a larger number of harmful incidents have occurred. The commenter found approximately another 111 incidents in the database since 2004 showing just this kind of harm (where harm to people or property was not reported) but may have missed some of these incidents) (0456).

[208] Marsh JLT Specialty, "100 Largest Losses in the Hydrocarbon Industry," 27th Edition, March 2022. Accessed from https://www.marsh.com/uk/industries/energy-and-power/insights/100-largest-losses.html. Marsh provides estimates of large property damage losses in the hydrocarbon industry from 1974 to 2021 in current and 2021 dollars and in a few cases, business loss costs.

EPA Response: EPA relies on reported accident in its RMP database and therefore may not account for some accidents and accident costs that were not reported. Accidents must be RMP-reportable in order to be entered into the database, meaning they occurred for entities maintaining or operating RMP regulated substances. EPA acknowledges that this approach may miss some relevant accidents if they are not reported.

Comment 16.3-46: One commenter asserted that the RIA did not provide sufficient explanation as to why LEPCs will require five hours to become familiar with the rule, but delegated State and local implementing agencies will only need four hours to do the same reading (0239).

EPA Response: In response to comments, EPA in the SCCAP final rule RIA raised the number of hours EPA assumes delegated State and local implementing agencies, as well as simple and program level 1 and 2 complex facilities, require for rule familiarization from four hours to five hours to be consistent with the rule familiarization hours assumption for LEPCs.

Comment 16.3-47: One commenter asserted that EPA never explained how it determined that 392 entities will need to implement backup power using a small generator (0239).

EPA Response: For the SCCAP final rule RIA, EPA calculated from the RMP database the number of active facilities as of December 31, 2020, that have program level 2 or 3 processes and report having perimeter monitors, cooling loss as a hazard, and not having backup power. EPA calculated 18 program level 2 facilities and 374 program level 3 facilities (summing to 392 program 2 and 3 facilities) report having perimeter monitors, no backup power, and cooling loss as a hazard. This is EPA's best estimate of the number of facilities required to newly implement backup power under this provision.

Comment 16.3-48: One commenter asserted that EPA assumed local responding authorities will notify the community as authorized through IPAWS, and that all RMP facilities have access to and are covered by IPAWS. This commenter asserted that EPA did not appear to have made any effort to verify this assumption with data and information available from FEMA (0239).

EPA Response: EPA acknowledges that while IPAWS is not currently operational in all communities, it could be. IPAWS is available in all States statewide, and, if not currently available in certain local communities, it can be made available if the local designated government authorities apply to be an Alerting Authority.[209] While IPAWS is a well-known option as a notification system compliant with this provision, EPA is not requiring the use of this specific system to be the one solely used to notify the public. EPA encourages facility owners and operators to work with response agencies to determine how best to alert a potentially affected community about impending chemical releases.

17 Environmental Justice

Support for the proposal regarding environmental justice

[209] A jurisdiction with the designated authority to alert and warn the public when there is an impending natural or human-made disaster, threat, or dangerous or missing person; https://www.fema.gov/emergency-managers/practitioners/integrated-public-alert-warning-system/public-safety-officials/sign-up.

Comment 17-01: One commenter stated that reducing these accidents will promote environmental justice across the US, as a 2004 study found that chemical facilities are more likely to be in counties with high African American populations (as compared to white populations) and in places with high levels of income disparity (0273). One commenter stated that a strong RMP rule focused on enforceable prevention measures can deliver on recent Executive Orders (EO 14025 and EO 14008) and improve the lives of nearly half the U.S. population living within the disaster zone of a chemical facility (0250).

One commenter said that persistent environmental justice disparities remain in communities around RMP water and wastewater plants in terms of housing value, household income, race and ethnicity, education levels, and poverty (0139). Another commenter stated that fenceline communities face disproportionate impacts (0135). A couple of commenters stated that the data shows that incidents are occurring disproportionally in specific environmental justice communities (0456, 0460).

One commenter stated that the 2019 RMP rule rollback was deeply flawed [by] ignoring abundant evidence and was arbitrary and capricious. The commenter said that a wide variety of evidence demonstrates the need for a stronger RMP. The commenter added RMP facilities put 39% of the U.S. population (124 million people) who live within three miles of these facilities at constant risk of chemical disaster. The commenter stated that though much research has focused on those closest to the facilities, the full vulnerability zones can extend up to twenty-five miles in radius (0270). Another commenter mentioned that the prior Administrations rollback of protection put frontline communities at risk (0453).

Another commenter emphasized that EPA should recognize in the RIA that there is serious, disproportionate harm and risk under the existing RMP rules for "historically marginalized communities." The commenter also recommended emphasizing the benefit of preventing harm from toxic exposure from chemical disasters by quantifying the ecological damages of historical incidents in the RMP database (0460).

> **EPA Response:** EPA believes that the human health or environmental conditions that currently exist (e.g., prior to this action) result in or have the potential to result in disproportionate and adverse human health or environmental effects on people of color, low-income populations and/or Indigenous peoples. EPA conducted an EJ analysis using the Agency's EJ screening tool, EJSCREEN and the U.S. Census Bureau's American Community Survey (ACS). The EJ analysis shows that historically underserved and overburdened populations live within proximity to RMP-regulated facilities in greater percentages than these groups are represented in the US population as a whole and thus are at greater risk than other populations. The analysis also found evidence that regulated facilities are disproportionately located within historically underserved and overburdened communities. Thus, EPA recognizes that accidental releases of regulated chemicals from facilities regulated by this action will likely pose disproportionate risks to historically marginalized communities.
>
> EPA believes that the final rule is likely to reduce existing disproportionate and adverse effects on people of color, low-income populations and/or Indigenous peoples. Because populations living closer to facilities are more likely to be exposed if an accidental release at an RMP facility occurs, these releases pose a greater risk to communities.

Therefore, the benefits of this regulation will include reduced risk for historically underserved and overburdened populations.

EPA provided quantitative estimates wherever it could and discusses qualitatively the benefits it could not quantify. In the final rule RIA, EPA discusses qualitative benefits in RIA Chapter 6, including avoided major catastrophes, avoided health risks from toxic chemical exposure, avoided lost productivity, avoided responder costs, avoided transaction costs, protected property values, avoided environmental impacts, avoided unquantified evacuation and shelter-in-place costs, and potential benefits to communities with environmental justice concerns. EPA expects that the final rule will reduce the frequency and severity of environmentally harmful incidents as well as incidents with direct human impacts or property damage. While both ecological harm, direct human impacts, and property damage are all important concerns, more data is available to monetize direct human impacts and property damage. RMP accident history reports indicate only general categories of environmental damage without specific information to quantify the magnitude of these damages. However, some environmental harm from an incident may be reflected in property damage estimates.

Recommendations to strengthen the proposal with regards to environmental justice

Comment 17-02: A number of commenters urged EPA to strengthen the proposal to fully satisfy the law and the Agency's core commitments on environmental justice and worker safety and deliver basic common-sense protections for fenceline communities whose safety must be the top priority (0136, 0143, 0156, 0157, 0158, 0160, 0164, 0179, 0183, 0203, 0208, 0219, 0221, 0240, 0249, 0250, 0251, 0254, 0255, 0258, 0266, 0269, 0270, 0273, 0331, 0409, 0444, 0447, 0449, 0450, 0451, 0452, 0453, 0456, 0460). Some of the commenters added that EPA is required to do this under various Executive Orders (0183, 0250, 0270, 0444).

One commenter provided EPA with a set of media and opinion articles from June 2021 through October 2022 to demonstrate the extensive public and expert support for a stronger RMP rule, especially from the most affected communities and workers (0258).

EPA Response: EPA performed an EJ analysis to address the following Executive Orders (EOs): Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations; Executive Order 14008: Tackling the Climate Crisis at Home and Abroad; and Executive Order 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All. EPA's full EJ analysis is documented in "Regulatory Impact Analysis: Safer Communities by Chemical Accident Prevention final rule," which is available in the docket.

EPA believes that the human health or environmental conditions that exist currently (e.g., prior to this action) result in or have the potential to result in disproportionate and adverse human health or environmental effects on people of color, low-income populations and/or Indigenous peoples. The EJ analysis shows that historically underserved and overburdened populations live within proximity to RMP-regulated facilities in greater percentages than these groups are represented in the US population as a whole and thus are at greater risk than other populations. The analysis also found evidence that regulated facilities are disproportionately located within historically underserved and overburdened communities. Thus, EPA recognizes that accidental releases of regulated chemicals from

facilities regulated by this action will likely pose disproportionate risks to historically marginalized communities.

EPA believes that the final rule is likely to reduce existing disproportionate and adverse effects on people of color, low-income populations and/or Indigenous peoples. Because populations living closer to facilities are more likely to be exposed if an accidental release at an RMP facility occurs, these releases pose a greater risk to communities. Therefore, the benefits of this regulation will include reduced risk for historically underserved and overburdened populations.

Comment 17-03: One commenter stated that EPA must also account for the systemic policies, procedures, practices, and conditions limiting the impacted population's access to safety, emergency planning, transparency, accountability, and other forms of environmental justice. The commenter stated that EPA does not, however, fully address the urgent needs of island and coastal frontline communities, including Puerto Rico and the U.S. Virgin Islands, in this rulemaking (0444).

EPA Response: EPA believes that the new information availability provisions finalized by this rulemaking, providing chemical hazard information to the general public, will allow people that live or work near a regulated facility to improve their awareness of risks to the community and to be prepared to protect themselves in the event of an accidental release. The public's ability to participate in emergency planning and readiness is enhanced by being better informed about accident history, types of chemicals present, and how to interact with the stationary source.

Further, EPA believes that accidental releases of regulated chemicals from RMP-regulated facilities likely pose disproportionate risks to historically marginalized communities. EPA expects that the benefits of this clarified provision that the hazard evaluation need to address natural hazards, particularly those at coastal frontline communities, may lower potential exposure for fenceline communities with historically underserved and overburdened populations by reducing disproportionate damages that RMP-reportable accidents might otherwise inflict on those populations.

Comment 17-04: One commenter urged EPA to advance community knowledge and participation as part of the proposed rule consistent with the fundamental environmental justice principle of fair treatment. The commenter also asserted that EPA should make all discretionary decisions in favor of protecting defenseless fenceline communities that are in harm's way, and to employ the precautionary principle with an adequate margin of safety to protect susceptible, vulnerable neighborhoods, families, and individuals (0179).

EPA Response: EPA believes that the new information availability provisions finalized by this rulemaking, providing chemical hazard information to the general public, will allow people who live or work near a regulated facility to improve their awareness of risks to the community and to be prepared to protect themselves in the event of an accidental release. The public's ability to participate in emergency planning and readiness is enhanced by being better informed about accident history, types of chemicals present, and how to interact with the stationary source.

Distribution of benefits

Comment 17-05: One commenter stated that EPA should also continue to evaluate whether the benefits of additional risk reduction measures for fenceline communities would justify further amendments to strengthen the regulatory program. The commenter stated that in its current assessment of benefits in the RIA, EPA briefly notes that it anticipates potential benefits to accrue to communities with environmental justice concerns; EPA could build upon this acknowledgement to further integrate consideration of the disaggregated costs and benefits. The commenter stated that EPA should consider strengthening its environmental justice analysis and better integrating this analysis into its selection of alternatives. The commenter stated that strengthening the environmental justice analysis, as consistent with best analytical practices, could demonstrate even more pronounced distributional benefits for environmental justice communities (0266).

> **EPA Response:** Due to data and modeling limitations, EPA was not able to quantitatively assess the distribution of benefits and costs of the regulatory alternatives. EPA was able to quantitatively characterize the baseline based on RMP facility locations, including assessing how the effects of the final rule may vary across communities given that facilities vary in the ultimate risk they pose to proximal populations. In particular, EPA evaluated how community characteristics differ based on process types, the number of RMP-related accidents reported between 2004 and 2020, program level, and chemical storage. Since EPA was unable to estimate the incremental changes in accident risks from the provisions finalized by this rule, the baseline distribution of population as well as the findings from subsequent analyses that look at the socioeconomic characteristics of communities near facilities with a large number of accidents or classified as Program 3 facilities were used to determine that the benefits of the provisions (*i.e.,* accident risk reduction) may reduce potential exposure for communities with higher percentages of Black (non-Hispanic), Hispanic and low income populations.

Distribution of costs

Comment 17-06: One commenter stated that EPA should strengthen its consideration of distributional impacts and integrate those findings into its decision-making process for the final and future rules. The commenter stated that chemical incidents and catastrophic disasters put heavy costs on the communities surrounding RMP facilities and facility workers. The commenter stated that emergency management and preparedness costs, site clean-up costs, and other cascading effects on jobs and services from chemical accidents also fall on communities and different levels of government. The commenter stated that when EPA is averaging data across thousands of facilities, it should consider how this may obscure heavier impacts for communities near specific facilities, providing demographic data at the facility level with additional facility characteristic information such as the facility type, accident history, and chemicals on premises. The commenter also recommended that EPA consider the distribution of costs and benefits alongside the net quantity of benefits. The commenter recommended that EPA improve its distributional analysis by considering more granular data, further disaggregated socioeconomic data, and the distributional outcomes of alternatives (0266).

> **EPA Response**: EPA considered several distributional components in both its cost analysis (RIA Chapter 5) and its regulatory alternatives (RIA Chapter 7), including costs by facility type, sector, and size and by provision. Furthermore, the small entity analysis in RIA Chapter 8 provides distributional effects by detailed NAICS industry and size of

entities. The distributional cost to different communities located near RMP facilities is also assessed in Chapter 9 of the RIA, the environmental justice analysis.

Comment 17-07: One commenter cited a 2014 study that evaluated the demographic composition of the vulnerability zones of 3,433 RMP facilities which examined the demographics of the "fenceline communities" living in the one-tenth area of the vulnerability zones closest to the facility. The commenter stated that the study found that the communities in the fenceline zones had even higher proportions of Black and Latino populations than the vulnerability zones as a whole and found higher rates of poverty in the fenceline zones than the vulnerability zones as a whole. The commenter recommended that EPA conduct additional studies of the demographics of fenceline communities, especially near facilities with accidents or facilities containing the most dangerous chemicals, to ensure it is fully capturing the extent of the distributional costs on already overburdened communities such as a half mile radius category in addition to its one- and three-mile radius analysis (0266).

EPA Response: When modeling the worst-case release scenario, chemicals released from the industrial processes at facilities can vary in exposure trajectory and distance. Rather than limit the analysis to "fenceline communities," EPA wanted to capture those communities potentially affected by accidental releases from facilities and thus beyond the "fenceline communities". As a result, EPA used the one-mile buffer for the evaluation of proximal environmental justice communities with environmental justice concerns in the 2019 reconsideration rule and as a representation of communities likely to experience localized stressors from the associated facility. While a smaller buffer distance (*e.g.,* half-mile radius) has the potential to show a different distribution of affected community characteristics, the one-mile buffer is inclusive of those communities.

In order to capture varying levels of risk to proximal populations, as suggested by the commenter, EPA did evaluate three specific measures of potential risk: (1) RMP facilities categorized by the number of RMP-related accidents reported from 2004 to 2020, (2) RMP facilities categorized by their program level, and (3) RMP facilities categorized by the ratio of the quantity of chemical used in a process relative to the chemical's regulatory threshold quantity. Because program levels are assigned based on the relative potential for public impacts and the level of effort needed to prevent accidents, it could be used as a proxy for exposure to risk to dangerous chemicals. As a result, EPA did evaluate how community characteristics differ based on potential risk (*e.g.,* based on facilities with previous accidents and processes with higher program levels) and found that communities in proximity to facilities with elevated risk had higher percentages of Black (non-Hispanic), Hispanic and low-income populations.

Comment 17-08: One commenter stated that though much research has focused on those closest to the facilities, the full vulnerability zones can extend up to 25miles in radius. The commenter added that this radius often encompasses one or more other RMP facilities as well as additional dangerous facilities not covered by the RMP program (0270).

EPA Response: EPA acknowledges that communities outside of the evaluated buffer distances could be affected by accidental releases from facilities, and thus, affected by the rulemaking. However, this analysis focused on communities most likely to be affected by the rulemaking. In addition, the three-mile buffer is fairly broad and encompasses more

than 130 million people, largely due to the fraction of dense urban areas that intersect with the buffers. Most large cities are almost completely covered by the three-mile buffers and there is overlap between the buffers from multiple RMP facilities.

Comment 17-09: One commenter stated that, unlike private companies, water and wastewater services are funded by local user fees and therefore, the additional compliance costs that will be incurred due to this rulemaking will be passed on to local residents and businesses in the form of higher water rates. The commenter said that, although all ratepayers regardless of economic status will be affected by increased water rates, there will be a greater disproportionate impact on low-, middle- and fixed-income populations, further exacerbating the affordability crisis for economically disadvantaged and environmental justice communities. The commenter urged EPA to consider how increased compliance costs will impact small communities and environmental justice communities (0243). Similarly, another commenter stated that water utilities are funded by customers through rates, and additional compliance costs will impact economically disadvantaged and environmental justice communities. The commenter stated that unjustified compliance costs have a disproportionate impact on economically disadvantaged customers as they are least able to afford such rate increases (0239).

EPA Response: Major and other serious and concerning RMP accidents have continued to occur. EPA anticipates that promulgation and implementation of this final rule will reduce the risk of such accidents and the severity of the impacts when they occur. RMP accident data show past accidents have generated highly variable impacts, so the impacts of future accidents are difficult to predict. Nevertheless, it is clear from RMP accident data[210] and other relevant data from RMP regulated industry sectors[211], that chemical accidents can impose substantial costs on firms, employees, emergency responders, the community, and the broader economy.

Notwithstanding EPA's current rules, RMP accidents have continued to occur. EPA anticipates that promulgation and implementation of this final rule will improve the health and safety protection provided by the RMP rule and result in a reduced frequency and magnitude of damages from releases, including damages that are quantified for the baseline period such as fatalities, injuries, property damage, hospitalizations, medical treatment, sheltering in place, and evacuations. EPA also expects the final rule provisions to reduce baseline damages that are not quantified. These damages include potential health risks from toxic chemical exposure, lost productivity at affected facilities, emergency response costs, transaction costs from potential subsequent legal battles, property value losses in nearby neighborhoods, environmental damage and costs of evacuation and sheltering-in-place events, and others.

EPA acknowledges that many of these provisions will require time and monetary commitments to implement. EPA also believes that many of these provisions are necessary updates to the existing RMP rule to ensure continued public safety concerning the operation of chemical facilities in and near communities. Further, the rule has been structured such that the costliest provisions are targeted towards the largest and highest-

[210] EPA estimated monetized damages from RMP facility accidents of $540.23 million per year.

[211] Marsh JLT Specialty, "100 Largest Losses in the Hydrocarbon Industry," 27th Edition, March 2022. Accessed from https://www.marsh.com/uk/industries/energy-and-power/insights/100-largest-losses.html. Marsh provides estimates of large property damage losses in the hydrocarbon industry from 1974 to 2021 in current and 2021 dollars and in a few cases, business loss costs.

risk facilities or take effect only after an accident. The only provision that is universally applicable is public disclosure. In addition, all RMP facilities will perform the rule familiarization. Many other provisions – such as root cause analysis incident investigation and third-party audits – are take effect only under limited circumstances, including when an RMP-reportable accident occurs. Of the remaining provisions, several – such as STAA– apply only to a narrow subset of NAICS codes or facilities with response capabilities. It is highly unlikely that any facility will incur costs related to all provisions.

Cumulative impacts

Comment 17-10: Several commenters urged EPA to address the cumulative health impacts from multiple polluting facilities since many RMP sites nationwide are clustered together, resulting in communities that are polluted with multiple hazards at once. The commenters pointed out that RMP facilities are disproportionately located near Black, Indigenous, Latinx, and low-income communities and that these vulnerable communities have a higher burden of disease (0143, 0156, 0158, 0160, 0203, 0208, 0209, 0219, 0240, 0255, 0270, 0444, 0451, 0456, 0460).

Several commenters added that residents in environmental justice communities are not only threatened and harmed by potential chemical releases or explosions, but also the cumulative impacts of daily exposure to toxic air pollution (from RMP facilities and other sources) and disproportionate exposure to unsafe drinking water (0191, 0249, 0270, 0460, 0456).

One commenter stressed that EPA is required to comprehensively assess and redress cumulative impacts to underserved and coastal frontline communities through Executive Orders issued in 2021, which directs EPA to proactively promote and work toward achieving environmental justice. The commenter added that EPA should address the impacts of not rectifying barriers to environmental justice faced by these communities and not having proactive emergency plans in place before a disaster (0444).

One commenter stated that, due to the multiple stressors contributing to cumulative impacts, EPA should target facilities in environmental justice communities with a history of incidents, with increased compliance scrutiny and, when appropriate, enforcement actions (0409).

EPA Response: As major and other serious and concerning RMP accidents continue to occur, the record shows and EPA believes that this final rule will help protect human health and the environment from RMP accidents. The final rule's emphasis is on protecting communities most at risk of having an accidental release from a facility in their midst, including overburdened communities with multiple nearby facilities. Under the final rule, facilities in these communities will be required to do more to prevent chemical accidents, including conducting an STAA, more thorough incident investigations, and third-party audits. The final rule also includes new prevention provisions that have not been addressed in prior RMP rules, including empowering workers to make safety decisions and report non-compliance. The Agency is also increasing access to RMP facility information for fenceline communities in commonly spoken languages. EPA believes the final rule promotes transparency and provides more opportunities for the public and workers to be involved in accident prevention and emergency planning.

EPA agrees enforcement will help ensure compliance with the rule. Enforcement of RMP regulations at RMP facilities remains an Agency priority, as indicated by its adoption as a National Enforcement and Compliance Initiative (NECI) since 2017.

Comment 17-11: One commenter suggested that EPA should consider how accident damages combine with other cumulative impacts faced by fenceline and environmental justice communities, to result in higher costs for the affected population (0266). Another commenter recommended that EPA analyze cumulative impacts, including climate-related cumulative impacts. Doing so will provide a more realistic picture of the environmental burdens faced by these underserved communities (0444).

EPA Response: EPA discussed climate-related cumulative impacts in Section 9.5, noting that to the extent that the final provisions mitigate the potential consequences of accidents at regulated facilities as the result of natural hazards, EPA expects these provisions to benefit nearby communities with environmental justice concerns, including communities with higher percentages of both low-income residents and residents belonging to historically underserved and overburdened racial and ethnic groups.

Data and analysis

Comment 17-12: Several commenters cited data or analyses in support of strengthening environmental justice in communities around RMP facilities. One commenter, referring to data that show that RMP facilities are not spread equally across the country, urged EPA to use the data to show the need for stronger rules. The commenter pointed out that the data show about 832 counties have five or more RMP facilities and about 1,349 have one to four facilities (0456).

A couple of commenters provided maps showing the disproportionate and severe hazards for example communities around the United States. The commenters stated that these maps illustrate that RMP facilities are often located in communities that also have other high environmental health burdens, like cancer risk from toxic air pollution and show a need to strengthen chemical disaster prevention rules (0456, 0460).

One commenter described a statistical analysis they performed at the zip code level to identify the current state of environmental justice regarding RMP facilities. The commenter's analysis found that whether examined by race or by income the current state of the distribution of RMP facilities represents an environmental injustice that needs to be addressed (0183).

EPA Response: EPA's analysis does take into consideration the spatial distribution of RMP facilities by evaluating the community characteristics within specified distances of RMP facility locations. EPA also included a map of the distribution of RMP facilities in the United States and highlighted the fact that certain areas appear to have a higher concentration of facilities than others, including in the Midwest, mid-Atlantic coast, the Central Valley in California, and along the Gulf of Mexico throughout Texas and Louisiana.

EPA's analysis does not contradict the zip code level statistical analysis as EPA similarly found that communities near RMP facilities and facilities with RMP-related accidents have higher percentages of low income individuals and Black (non-Hispanic) and Hispanic residents compared to the national comparison group.

Comment 17-13: One commenter urged EPA to use its EJScreen mapping tool, which now can identify disadvantaged communities at the census tract level, to prioritize protection for fenceline communities where action is most needed (0460).

Another commenter stated that EPA and state agencies can improve the protection of communities during and after a chemical disaster and stated that EPA can use the EJScreen tool to access at-risk communities during facility incidents (0164).

> **EPA Response**: Data from EPA's EJScreen at the Census Block Group (CBG) level were used for the analysis summarized in Chapter 9. This is a finer spatial scale than census tracts.

Enforcement

Comment 17-14: A couple of commenters expressed concern about the lack of enforcement, facility accountability and consequences, and industries self-reporting. The commenters requested that RMPs be approved by the surrounding communities before they are finalized (0270, 0331). One of the commenters added that the proposed rule should include penalties sufficient to ensure compliance and deter facilities from future actions that can put workers and communities in harm's way (0270).

One commenter, who supports a stronger RMP rule to prevent disasters, asserted that a wide variety of experts have demonstrated conclusively to EPA that voluntary measures are not working to prevent chemical incidents and that there is abundant evidence available to EPA of policies and methods proven to reduce and remove hazards. The commenter insisted that any new RMP rule remove loopholes and reject the assumption that voluntary actions will protect workers and communities from the persistent cumulative impacts of chemical disasters disproportionately occurring in communities of color and low-income communities. The commenter added that the proposed rule requires facilities to "evaluate" for natural hazards but does not require them to implement prevention measures because of that evaluation, which leaves facilities and neighboring communities vulnerable to predictable disasters caused or exacerbated by natural hazards. The commenter emphasized that this failure to require implementation means that EPA is not addressing the real-world risk environmental justice communities face. The commenter urged EPA to focus increased compliance and enforcement action on facilities located in environmental justice communities and ensure state and local governments are equitably and justly enforcing the RMP (0270).

Pointing out the barriers to potential reporting by a member of an environmental justice community, one commenter stated that relying on the public for facility oversight places an unreasonable burden on people already suffering under the weight of chemical exposure and the risk of accidents (0254).

> **EPA Response**: The final rule's emphasis is on protecting communities most at risk of having an accidental release from a facility in their midst. Under the final rule, facilities in these communities will be required to do more to prevent chemical accidents, including conducting an STAA, more thorough incident investigations, and third-party audits. The final rule also includes new prevention provisions that have not been addressed in prior RMP rules, including empowering workers to make safety decisions and report non-compliance. The Agency is also increasing access to RMP facility information for fenceline communities in commonly spoken languages. EPA believes this

final rule promotes transparency and gives more opportunities for the public and workers to be involved in accident prevention and emergency planning.

EPA agrees assistance, outreach, and enforcement will help ensure compliance with the rule. For example, enforcement of the RMP regulation has and will continue to occur. Because of that fact, EPA expects most facilities will proactively make the necessary prevention improvements in order to comply with the rule and thus avoid enforcement. Enforcement of RMP facilities remains an Agency priority, as indicated by its adoption as a National Enforcement and Compliance Initiative (NECI) since 2017. The goal of this NECI is to reduce the risk to human health and the environment by decreasing the likelihood of chemical accidents. Activities under the initiative include having regulated facilities and industry associations work to improve safety; increase compliance with RMP; and promote coordination and communication with State and local responders and communities. The capacity built by the NECI will continue to benefit oversight by EPA and its partner implementing agencies even after the NECI. Furthermore, EPA intends to publish guidance for certain provisions, such as STAA, root cause analysis, third-party audits, and employee participation. Once these materials are complete, owners and operators can familiarize themselves with resources and best practices that EPA has gathered and found to be useful in helping to develop and maintain strong prevention programs. EPA expects to develop and release this information approximately one year after this final rule. The Agency views these compliance activities as a complement to strong accidental release prevention and response, but they are not a substitute for the stronger prevention measures and response provisions set forth in the final rule.

Comment 17-15: Another commenter stated that RMP facilities receiving federal financial assistance are required to address impediments under Title VI of the Civil Rights Act of 196434 (Title VI)—as the Department of Justice recognized in issuing its Limited English Proficiency (LEP) guide and EPA OLEM recognized in its recent Environmental Justice Action Plan. The commenter urged EPA to adopt analyses, procedures, and protections and continue to work closely with its Office of Civil Rights and DOJ's Office of Environmental Justice and Civil Rights Division to ensure RMP operations receiving federal financial assistance comply with Title VI. The commenter also asked EPA to adopt procedures to ensure that risk management plans do not exclude individuals on the grounds of race, color, or national origin, and are accessible to individuals with Limited English Proficiency (0444).

EPA Response: As the Environmental Justice Action Plan[212] described, one EPA priority is to ensure that entities receiving any federal financial assistance from EPA comply with the federal civil rights laws that prohibit discrimination on the basis of race, color, national origin, (including limited English proficiency) disability, sex and age, including Title VI of the Civil Rights Act of 1964. Recipients of financial assistance from OLEM, if they are RMP regulated facilities or otherwise, have an affirmative obligation to ensure their actions do not involve discriminatory treatment and do not have discriminatory effects. OLEM programs will work to ensure that the relevant actions described in the Action Plan adhere to this priority.

Other comments:

[212] https://www.epa.gov/system/files/documents/2022-09/OLEM-EJ-Action-Plan_9.2022_FINAL-508.pdf

Comment 17-16: Another commenter asked what EPA is doing to acknowledge the estimated 40%+ of environmental justice communities which are neither principally minorities nor principally foreign-born. The commenter explained that many states have methodically redlined their historically White, working-class waterfront communities for continued — if not escalated — toxic industry. The commenter said the appalling disease clusters in their area and the lack of EPA Region 1 support despite multiple well-documented appeals (0136).

> **EPA Response**: EPA defines "environmental justice" as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. As such, the analyses in Chapter 9 focus on income and race and ethnicity data for relevant communities in line with EPA's definition of environmental justice.

Comment 17-17: One commenter requested that EPA, with input from Environmental Justice Health Alliance (EJHA) affiliates and other fenceline residents and environmental justice advocates, define Environmental Justice Community for use in determining which facilities are located with environmental justice communities. The commenter referred EPA to the Equitable & Justice National Climate Platform definition of environmental justice community (0270).

> **EPA Response**: Rather than provide a binary designation for "Environmental Justice Community" , EPA evaluates differential impacts on population groups of concern in relation to a comparison group. The goal is to select a comparison group that allows one to identify how the effects of the regulation vary by race, ethnicity, and income separate from other systematic differences across groups or geographic areas. To generate a consistent comparison group that was not inclusive of the communities likely to be affected by the rulemaking, EPA used the population outside of the one-mile buffers because it would be a relevant comparison population for both the one- and three-mile buffers. The EJHA has described environmental justice communities as those that are low-income areas and communities of color. EPA uses the same characteristics when evaluating communities with potential environmental justice concern.
>
> Further, the incorporation of environmental justice into this EPA rulemaking is guided by two EPA documents: (1) *Technical Guidance for Assessing Environmental Justice in Regulatory Analysis*[213] and (2) *Guidance on Considering Environmental Justice During the Development of Regulatory Action.*[214] The *Technical Guidance for Assessing Environmental Justice in Regulatory Analysis*[215] establishes the expectation that analysts conduct the highest quality environmental justice analysis feasible in support of rulemakings, recognizing that what is possible will be context-specific.

Comment 17-18: One commenter stressed that the communities on the Gulf Coast need tighter rules and notifications because they have been frequently under evacuation or in shelters since 2005. The commenter said that the Gulf Coast is overburdened with RMP chemical risk facilities because of their vulnerabilities to hurricanes and exposure to new ammonia and LNG plants—

[213] EPA (2016). Technical Guidance for Assessing Environmental Justice in Regulatory Analysis. https://www.epa.gov/sites/production/files/2016-06/documents/ejtg_5_6_16_v5.1.pdf.
[214] EPA (2018). Guidance on Considering Environmental Justice During the Development of Regulatory Actions. https://www.epa.gov/sites/default/files/2015-06/documents/considering-ej-in-rulemaking-guide-final.pdf.
[215] EPA (2016). Technical Guidance for Assessing Environmental Justice in Regulatory Analysis. https://www.epa.gov/sites/production/files/2016-06/documents/ejtg_5_6_16_v5.1.pdf.

typically concentrated in coastal environmental justice areas. The commenter added that, in 2021, the Alliance refinery was destroyed because of Hurricane Ida, spilling thousands of gallons of oil, much of which was drained through the historic towns and native communities. The commenter stated that as Black and indigenous continue to rebuild from this accident, there has been little to no help from State and local governments (0158).

> **EPA Response**: EPA did observe a concentration of RMP facilities along the Gulf of Mexico throughout Texas and Louisiana. EPA believes that several of the provisions in this final action will benefit underserved populations, such as requiring facilities in NAICS codes 324 and 325 to conduct a Safer Technology Alternatives Analysis, increase information availability for fenceline communities, include backup power for perimeter monitoring, conduct root cause analyses for facilities that have reported accidents, and improve community notification and related response planning. As such, communities in proximity to these facilities on the Gulf Coast may experience reduced exposure as a result of the final action.

Comment 17-19: One commenter asserted that any environmental justice analysis needs to highlight the difficulties of women farmworkers who are unable to raise concerns over the misuse of toxic chemicals and asked EPA to factor into the Agency's analysis that many undocumented people live in areas around facilities that use extremely hazardous chemicals (0406).

> **EPA Response**: This rulemaking focuses on reducing accidental releases from RMP facilities rather than the use of toxic chemicals. In addition, the baseline distribution of population as well as the findings from subsequent analyses that look at the socioeconomic characteristics of communities near facilities with a large number of accidents or classified as Program 3 facilities (facilities with processes classified as Program 3 were considered to be of higher potential risk than facilities with processes classified as Program 1 or 2) suggests that the benefits of the provisions may reduce potential exposure for communities with higher percentages of Black (non-Hispanic), Hispanic and low income populations. To the extent that these same communities include undocumented people, the provisions may also reduce exposure for them as well.

18 Fenceline monitoring

18.1 General comments on a fenceline monitoring program

Comment 18.1-01: Several commenters expressed support for EPA to require RMP facilities to use real-time fenceline monitoring (0141, 0143, 0157, 0158, 0160, 0173, 0177, 0208, 0209, 0240, 0248, 0270, 0331, 0383, 0409, 0413, 0448, 0449, 0452, 0456, 0453, 0460). A few commenters emphasized the importance of requiring and enforcing fenceline monitoring (0383, 0413, 0460).

A few commenters requested real-time air monitoring inside and outside RMP facilities (0270, 0331, 0402). One of the commenters added that requiring adoption of fenceline monitoring at all RMP facilities falls directly within the scope of the proposed rule particularly because of its function to serve as an early warning alert system for workers and communities before major incidents occur (0270). Several commenters urged EPA to require real-time air fenceline

monitoring programs at RMP facilities to provide early notification to first responders and the public to reduce potential harms (0158, 0191, 0460).

One commenter similarly requested that the final rule require all facilities to have real-time fenceline air monitors with enforcement mechanisms and robust penalties for intentionally removing air monitors from service (0255). Additional comments regarding removal of air monitoring equipment are addressed in Section 3.2 of this document.

One commenter expressed support for fenceline monitoring, noting that the release of lower levels than the thresholds indicate a potentially larger release is occurring or about to occur (0191).

The commenter cited EPA's legal authority, stating that the statute's requirement for "detection" to the greatest extent practicable directs EPA to require fenceline monitoring and leak detection to prevent and reduce harm at all RMP facilities (0460).

Another commenter stated that EPA has the authority to require fenceline air monitoring, and that it has used this authority to issue fenceline monitoring requirements for benzene at petroleum refineries (0270).

Some commenters expressed that current monitoring networks are inadequate, leaving community members uninformed about potential health threats (0141, 0143, 0151, 0209, 0240, 0270, 0444).

One commenter expressed a concern that even though there may be monitors in their location, they are placed in pristine areas so that it doesn't seem as though environmental justice communities are impacted by air toxics (0157). Another commenter pointed out that the safety of those living near polluting facilities is nonexistent during a catastrophic incident (0219).

A few commenters agreed with EPA's decision to not require fenceline monitoring at RMP facilities in the proposed rule (0231, 0267, 0275).

> **EPA Response:** EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. The Agency will consider these comments when determining whether to take further action on this issue.

18.2 Regulated facilities

Comments suggesting facilities to be regulated

Comment 18.2-01: Several commenters encouraged EPA to require real-time air fenceline monitoring at all RMP facilities (0179, 0191, 0250, 0252, 0255, 0270, 0264, 0269, 0460, 0447). A couple of the commenters added that fenceline monitoring requirements should include enforcement mechanisms (0250, 0255).

One commenter recommended that EPA include fenceline monitoring in the proposed rule for refineries, explaining that there is no evidence that air quality permits would protect people from any of the RMP-regulated substances (0460).

One commenter recommended fenceline air monitoring specifically for air toxics at the most dangerous RMP facilities. The commenter stated that EPA has the authority to require fenceline air monitoring under the CAA and it has been implemented in various jurisdictions in certain states, such as California (0444).

One commenter added that the Inflation Reduction Act (IRA) should be used to assure fenceline monitoring methods are available for chemicals like ethylene oxide, and that methods are included in rules with enforceable corrective action requirements (0460). Another commenter echoed ethylene oxide as a particularly toxic chemical that should be monitored under fenceline monitoring (0191).

One commenter stated that fenceline monitoring should not be applied to all sectors. The commenter explained that fenceline monitoring would be unnecessary for power generation facilities due to rare occurrence of accidents and an energy transition away from coal-based electricity generating units (0244).

One commenter said that due to the disproportionate cost impacts on batch manufacturers, most of which are small businesses, batch manufacturing processes should be exempted from any fenceline monitoring requirement (0275).

> **EPA Response:** EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. The Agency will consider these comments when determining whether to take further action on this issue.

18.3 Type of monitoring

No comments were recorded for this section.

18.4 Automatic release notifications

Comment 18.4-01: Several commenters specifically supported release notifications for fenceline monitoring (0151, 0158, 0460). Several commenter's expressed support for fenceline monitoring coupled with their request for fenceline monitoring data to be made available to the public (0143, 0160, 0173, 0209, 0240, 0248, 0270, 0331).

A few commenters expressed support for monitoring to protect vulnerable communities, notably for communities that are nearby industrial facilities with high accident rates (0143, 0402, 0456). A couple of commenters highlighted the value in providing real-time fenceline monitoring as multilingual notifications to inform community members living near RMP facilities (0157, 0331). A couple of commenters related public notifications to environmental justice concerns and the need for multilingual notifications (0270, 0331).

A few commenters expressed the value of fenceline monitoring to alert the public and/or emergency services, such as first responders (0157, 0179, 0269, 0447). A few commenters described real-time fenceline air monitoring in events to identify chemical releases to trigger alerts and potential evacuation warnings (0270, 0456, 0460).

One commenter said that full disclosure of gathered data on hazardous chemical emissions should be available to everyone on a website in multiple languages. The commenter added that phone calls, emails, or text messages be sent to people who requested notifications (0191).

One commenter stated that outdated information on monitoring technology from 2014 does not justify refusing to require fenceline monitoring. The commenter continued that in recent years, State and local governments have required use of real-time fenceline monitoring as methods have improve. The commenter discussed the value of fenceline monitoring to assure information reaches first-responders and communities (0460).

EPA Response: EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. The Agency will consider these comments when determining whether to take further action on this issue.

18.5 Quality assurance of fenceline monitoring

Comment 18.5-01: One commenter stated that, while fenceline monitors could detect an accidental release in some circumstances, high wind events such as hurricanes can render them useless such that a loss of power to monitors would have no adverse effect on the source or the surrounding community (0215).

One commenter stated that technology has not advanced far enough to automatically detect chemical releases anywhere from an industrial facility with the accuracy demanded by the surrounding communities and will require additional manual due diligence. The commenter explained that there is a risk of a "crying wolf" scenario (0173).

EPA Response: EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. The Agency will consider these comments when determining whether to take further action on this issue.

18.6 Monitoring technologies and standards

Comment 18.6-01: One commenter suggested active fenceline monitoring with real-time data sharing. The commenter explained that in Texas, ambient air monitors are typically shut down by the TCEQ to avoid damage during disasters such as hurricanes. The commenter proposed that EPA should consider the feasibility of bringing mobile monitoring technology on site after a disaster because of the potential human exposure to pollution releases immediately following (0254).

EPA Response: EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. The Agency will consider these comments when determining whether to take further action on this issue.

18.7 Design of a fenceline monitoring program

Comment 18.7-01: One commenter said that EPA offices have experience and the ability to apply the best available known real-time methods for RMP hazardous substances, and for substances with no currently available technology, EPA should commit to review monitoring requirements. The commenter suggested starting with a program that would focus on a subset of high-toxicity substances with existing real-time monitoring technology, complex facilities, or facilities with multiple RMP processes or sources, and Program 3 RMP facilities (0406).

One commenter expressed support for real-time monitoring technologies based on the EPA Office of Research and Development's (ORD) expertise on how to ensure reliable and accurate air monitoring. The commenter explained that ORD has been evaluating and reporting on the effectiveness of various techniques, including for the RMP-regulated substance ethylene oxide, in recent years, and therefore, EPA should consult with State and local governments that have implemented fenceline monitoring (0191).

One commenter provided a list of Federal, State, and local fenceline monitoring requirements for EPA to evaluate and draw on as the Agency implements monitoring under the RMP (0460).

One commenter stated that Maine requires continuous fenceline emissions monitoring of aboveground petroleum storage tanks (0456).

One commenter suggested a monitoring program to be modeled off the nationwide program AIRNow (0191).

> **EPA Response:** EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. The Agency will consider these comments when determining whether to take further action on this issue.

18.8 Benefits of a fenceline monitoring program

Comment 18.8-01: Some commenters provided comments on the benefits of a fenceline monitoring program, including harm reduction, public awareness, and public funding sources (0248, 0151, 0266, 0456, 0460). One of the commenters said that monitoring could improve compliance, early warning systems, and public awareness (0456). One commenter mentioned that an analysis of fenceline monitoring benefits can be incorporated into final decision making (0266). One commenter supported fenceline monitoring, warning systems, enforcement, and whistleblower protections to improve worker health and safety (0248).

> **EPA Response:** EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. The Agency will consider these comments when determining whether to take further action on this issue.

18.9 Costs of a fenceline monitoring program

Comment 18.9-01: One commenter mentioned that a cost analysis of fenceline monitoring can be incorporated into final decision making and stated that funds from the IRA could offset costs of fenceline monitoring. The commenter said that more information on the costs and benefits of fenceline monitoring and other strengthening provisions during the comment process can be incorporated into its analysis. The commenter also discussed the allocation of funds to air quality monitoring under the IRA (0266).

One commenter said that cost is not a lawful or valid justification for not requiring fenceline monitoring at RMP facilities with the greatest hazards and near communities. The commenter mentioned that in a case in California, the costs of fenceline monitoring systems have declined in recent years (0460).

One commenter stated that LDEQ estimated the cost of fenceline monitoring across Louisiana at five million dollars a year, which is trivial compared to the tens of millions of dollars in health costs for communities from just one petrochemical facility (0158).

One of the commenters stated that RMP facilities already have detection devices or sensors in strategic areas that provide notification of a release at sites where an RMP-reportable release could occur. The commenter added that adding fenceline monitoring requirements would force facilities to expend considerable costs to install and maintain (0267).

One commenter expressed disagreement for EPA to require a fenceline monitoring program. The commenter explained that at batch manufacturing facilities, personnel or on-site alarms would identify any potential chemical releases. The commenter said that because these facilities use a myriad of chemicals that continually change, a monitoring program would not be cost-effective compared to other processes, such as a process area detector (0275).

EPA Response: EPA acknowledges the need for considering expanding fenceline monitoring for RMP-regulated facilities. The Agency will consider this comment when determining whether to take further action on this issue.

19 Chemical list expansion

19.1 Ammonium nitrate

General support for and opposition to including Ammonium Nitrate in RMP

Comment 19.1-01: Many commenters requested that EPA expand the RMP to include ammonium nitrate (AN) (0160, 0208, 0209, 0240, 0252, 0251, 0255, 0269, 0297, 0444, 0460, 0456). Several commenters shared reasons for EPA to add AN to the RMP, as described below.

Many commenters stated that AN should be added because of the danger of explosion and fires which can result in property damage, injury, and death. The commenters specified the need to protect public health and safety since AN is used near homes, schools, and hospitals; they asserted that AN poses a serious threat of death and injury for workers and community members, in particular (0209, 0251, 0276, 0297, 0444, 0456, 0460). One commenter mentioned adding AN in support of chemical disaster prevention, detection, response, and harm minimization given the danger posed by unregulated substances (0460). Another commenter cited the use of water to extinguish AN-related fires, which could result in toxic runoff into nearby waterways, killing fish and wildlife (0255).

One commenter discussed environmental justice concerns for people living near industries where AN is used, which tend to include racial minorities. The commenter added that in past incidents first responders have been underprepared for AN events (0297).

Another commenter countered a suggestion that following the RMP may be difficult for smaller businesses without safety staff. The commenter asserted that smaller business without dedicated safety staff are unlikely to address safety without clear prescriptive requirements by EPA; the commenter stated that any business using, storing, or managing AN should follow RMP requirements (0460).

Additionally, many commenters pointed to past incidents involving AN as evidence for the need to list AN in the RMP. Many commenters pointed to an in incident in Texas (0185, 0209, 0240, 0255, 0270, 0276, 0297, 0460, 0456). Several commenters pointed to an incident in North Carolina (0240, 0255, 0270, 0297, 0460). Some of the commenters also discussed an incident in Beirut (0255, 0270, 0456, 0460). One commenter mentioned an incident in Iowa (0255). One commenter added that EPA has admitted incidents involving AN are among the most severe and highest-profile accidental releases in the U.S. and globally (0444).

A few commenters stated that many facilities use AN or other highly hazardous substances and are not regulated at all under the existing RMP or only regulated in part (0240, 0460, 0456). Several commenters addressed EPA's authority to regulate AN.

A few commenters stated that EPA is required to reevaluate the list of RMP-regulated substances every five years; that list was last amended in 1998 and overdue for EPA review. The commenters stated that EPA had acknowledged the need for reviewing the list and requested that AN be added in a future review (0251, 0270, 0444, 0460).

One commenter said that AN and other chemicals meet the listing criteria under the RMP, supported by EPA's Technical Background Document. The commenter cited specific provisions of the CAA (§ 112(r)(4)) which establish the factors EPA must consider when listing a substance: (2) the severity of any acute adverse health effects associated with accidental releases of the substance; (3) the likelihood of accidental releases of the substance; and (3) the potential magnitude of human exposure to accidental releases of the substance. The commenter shared that regulations provide criteria for the discretionary listing of a substance, stating that EPA may add a substance to the list "if, in the case of an accidental release, it is known to cause or may be reasonably anticipated to cause death, injury, or serious adverse effects to human health or the environment." The commenter suggested that EPA has failed to complete its non-discretionary duty to review and update the RMP-regulated hazardous substances list and urged EPA to fulfill its statutory obligation to prevent chemical disasters and assure detection and response. The commenter added that there is no evidence that any other existing rules are better for health and safety protection or fill the safety gap from leaving these substances out of the RMP program (0460).

One commenter asserted that while additional regulatory and enforcement mechanisms are unnecessary for AN, the General Duty Clause would be a more appropriate authority for chemicals that become hazardous due to site and process specific condition (0228).

One commenter said that EPA already has the authority to regulate AN under the general duty clause' in CAA § 112(r)(1) to ensure that a facility handling an RMP-regulated substance or any other "extremely hazardous substance" is operating in manner to prevent accidental releases. The commenter stated that EPA has issued guidance on the safe storage of AN and cited this authority on at least three occasions. The commenter questioned what deficiencies EPA perceives in existing authorities that necessitate the need for the addition of AN to the RMP list **(**0229).

A couple of commenters pointed to other actions or organizations that support listing AN in the RMP. Several commenters mentioned the CSB recommends EPA adding missing chemicals, including AN, to the list (0185, 0240, 0255, 0270, 0456, 0460). One of the commenters discussed Executive Order 13650 on Improving Chemical Facility Safety and Security (0185). Another commenter pointed to New Jersey's Toxic Catastrophe Prevention Act which regulates reactive hazards and provides a blueprint for EPA to follow (0460). One commenter discussed the NFPA, including a recommendation to cover AN under the RMP (0270). Another commenter discussed research and recommendations by the Fire Protection Research Foundation and Great Britain's Health and Safety Executive (0185).

A few commenters provided detailed comments opposing listing AN as an RMP-regulated substance (0228, 0229, 0236).

Another commenter stated that EPA's Technical Background Document failed to provide justification that AN meets the minimum criteria for regulation under the RMP (both now and in previous rulemakings). The commenter felt the explosive and flammable properties of AN should not alone dictate their listing as an RMP-regulated substance. According to the commenter, EPA must consider three factors to list additional substances such as AN and AN-based explosives, including: (1) the severity of any acute adverse health effects associated with accidental releases of the substance, (2) the likelihood of accidental releases of the substance, and (3) the potential magnitude of human exposure to accidental releases of the substance.

Additionally, the commenter stated that EPA did not discuss a single adverse health effect that the CAA § 112(r) was designed to address, such acute health impacts or biological risks to humans (0236).

One commenter echoed that the information EPA provided (now and in previous rulemakings) does not support listing AN. The commenter pointed to EPA's acknowledgement that mining sites' "use of ANFO [AN-fuel oil mixtures] may not be as likely to have explosions adversely affecting the public because they are often remote." The commenter shared that EPA previously acknowledged that AN explosions are rare, and that "[s]tored AN is generally stable" and the "ignition [of AN] requires a strong initiating source or heating the substance under confinement." Additionally, the commenter pointed out that EPA has previously considered regulation AN, but decided not to (0236).

One commenter asserted that, to their knowledge, every serious AN incident resulted from or was exacerbated by improper storage practices; the commenter stated that these events could have been prevented by following best industry practices but not by additional regulation (0228). Another commenter echoed that additional regulation under the RMP would not have prevented past incidents involving AN, pointing to one incident was the result of intentional criminal and another that was outside the U.S. context and subject to different regulatory requirements (0229).

One commenter asserted that some information in the Technical Background Document was inaccurate. The commenter stated that the AN stored at West and Weaver would not be subject to EPCRA's emergency planning provisions; EPCRA would need to be amended for first responders to receive information regarding the chemicals stored at facilities (0229).

One commenter opposed expanding any provisions to notify the public regarding AN over concern with AN being sought for nefarious purposes. The commenter pointed to protection under CFATS regarding theft/diversion security designation. The commenter also opposed categorizing AN as a reactive chemical (0228).

A couple of commenters provided comments on how changes in rule provisions would adversely affect the explosives, and mining and related industries that use AN (including technical grade AN, AN solution, and ammonium-nitrate/fuel-oil) for blasting operations and explosives (0228, 0236). One of the commenters stated that some mining related operations such as mining and mineral processing machinery and suppliers; transporters; and financial and engineering firms use or manufacture above threshold quantities of regulated substances and are already regulated by the RMP. At the same time, the commenter shared that other mining and mining-related industries do not use RMP-regulated substances or use them below thresholds and thus are not regulated under this program. The commenter stated that changes related to AN would result in additional burden on these facilities (0236).

A couple of commenters echoed that blasting, mining, and mining-related actors are already regulated under several other regulatory authorities to ensure safe AN and AN-based explosives storage and handling practices to prevent harm to employees and the surrounding community. The commenters felt that these safe-handling codes are sufficient, and additional regulation is unnecessary (0228, 0236). One of the commenters shared that these existing regulatory authorities mean mining facilities store and manage their AN and AN-based explosives differently than fertilizer storage and distribution facilities. The commenter stated that regulation under the RMP would be duplicative and cause regulatory and legal uncertainty (0236).

Another commenter added that AN is a stable substance and is predictable, stating that AN is safely and effectively managed using safe-handling codes that the commercial explosives industry has helped develop and has followed for decades (0228).

A couple of commenters pointed to several specific regulations or authorities that already apply (0228, 0236). For the mining sectors, one commenter discussed authorities under (1) the Surface Mining Control and Reclamation Act of 1977 (SMCRA), (2) the Office of Surface Mining Reclamation and Enforcement (OSM), (3) the Bureau of Alcohol, Tobacco, Firearms and Explosives (BATF), and (4) the Mine Safety and Health Administration (MSHA) (0236). For the explosives and blasting sector, another commenter discussed authorities under: (1) DOT, (2) DHS Chemical Facility CFATS, (3) EPA's EPCRA, (4) OSHA, and (5) the Secure Handling of Ammonium Nitrate Act, as well as voluntary practices and standards such as the SAFEX Code of Good Practice, Institute of Makers of Explosives' protocol for Safe Handling of Solid Ammonium Nitrate, NFPA 400, the use of software tools for siting to insulate stores of AN from potential sources of shock, application of Institute of Makers of Explosives Safety Analysis for Risk, and enhanced knowledge sharing though the United Nations/Organization for economic co-operation and development following the Beirut, Lebanon incident (0228).

A couple of commenters stated that, together, existing regulations and authorities cover an array of safety and security measures for AN, including AN-based explosives/blasting agents/detonators, and AN-fuel oil mixtures by the blasting and mining industries (including surface and underground mines for coal, metals, and non-metals). The commenters included a detailed list of measures included in these existing regulations (0228, 0236).

One commenter stated that EPA provided insufficient details regarding the sector's handling and use of AN for on-site blasting operations, overlooking relevant regulatory programs that address the mining industry's safe handling and management of AN and AN-based explosives (0236).

One commenter stated that information shows for AN use in mining operations: (1) the severity of acute adverse health effects is low; (2) the likelihood of accidental releases is low; and (3) the potential magnitude of human exposure is low when AN is managed and stored properly. Therefore, the commenter suggested EPA should not add duplicative regulations that would cause regulatory and legal uncertainty for mining facilities (0236).

A couple of commenters recommended that EPA should add fertilizer grade AN (0185, 0240). A couple of commenters suggested that EPA expand the RMP to cover production and storage facilities for other fertilizer and other highly hazardous chemicals not currently covered (0240, 0264).

One commenter said that while the current Proposed Rule does not propose to expand the RMP to include ammonium nitrate (AN), the TBD for the proposal indicates that EPA intends to consider AN in a future rulemaking expanding the list of RMP substances. The commenter stated that they do not support the expansion of the RMP list to include AN and do not believe that the RMP is the appropriate regulatory program to ensure the responsible management of AN. The commenter also stated that AN is safely and effectively managed using safe-handling codes from the commercial explosives industry and attempting to apply safety "engineering analyses" to the storage and handling of AN would be redundant. The commenter added that neither of the criteria described by New Jersey Department of Environmental Protection (NJDEP) to identify reactive substances in its administration of the N.J. Toxic Catastrophe Prevention Act (TCPA), as specifically mentioned in the TBD, are applicable to AN. Additionally, the commenter stated

that NJDEP's consideration of prior accident history and an associated separation/distance assessment using the TNT equivalency method is not wholly appropriate for use with AN, and consider any evaluation and/or listing decision based on this analytical method to be questionable. The commenter stated, in regards to the reactive substances discussion in the TBD and EPA's inquiry as to whether the General Duty Clause ("GDC") rather than the RMP is the more appropriate authority for chemicals that only become hazardous due to site-specific and process-specific conditions, that they do not believe that EPA should attempt to recruit chemicals into the RMP via a process of "category" adoption and agree that the GDC is preferable to the RMP as a regulatory and/or enforcement mechanism (0228).

One commenter suggested that storage be heavily regulated with detailed risk management plans that reflect the needs of the local community (0297). Another commenter requested that EPA develop RMP rule guidance document(s) for regulated fertilizer grade AN facilities. The commenter suggested that EPA adopt a calculation for the OCA which considers the unique explosive characteristics of fertilizer grade AN to determine the endpoint for explosive effects and overpressure levels, such as those adopted by the 2014 Fire Protection Research Foundation report *Separation Distances in NFPA Codes and Standards* (0185).

One commenter also stated that if EPA were to move to add AN to the RMP regulated substances list, EPA must ensure that other substances where AN is a component are not included by default; specifically, urea ammonium nitrate (UAN) is not flammable, explosive, or toxic and not easily converted back to the individual components. The commenter asserted it would be inappropriate to regulate UAN in the same way as AN and AN mixtures. The commenter also asserted that additional regulation under the RMP would not have prevented past incidents involving AN, pointing to one incident was the result of intentional criminal and another that was outside the U.S. context and subject to different regulatory requirements (0229).

> **EPA Response:** While outside the scope of this rulemaking, EPA acknowledges the need for reviewing the list of RMP-regulated substances. The Agency further acknowledges that there is both support and opposition to regulating AN and will consider these comments when determining whether to take further action on this issue at a later date.

Comment 19.1-02: One commenter shared that for manufactures and distributors of AN fertilizer, ensuring the safe, effective, and secure production and use of AN is a top priority. The commenter stated that EPA should not expand the list of regulated substances to include AN, asserting that another regulatory program would not provide additional safety benefits.

The commenter stated that AN for use as a fertilizer is already subject to regulation designed to protect employees and the public from any hazards associated with the storage and movement of AN. The commenter suggested that EPA coordinate with other federal agencies in charge of these efforts to determine whether there is a need for additional regulation. The commenter shared examples of these entities: (1) the Cybersecurity and Infrastructure Security Agency oversees CFATS and operates the Ammonium Nitrate Security Program; (2) the fertilizer industry supports including AN on the CFATS Chemicals of Interest list; and (3) AN is also subject to regulation by OSHA, DHS, DOT, and BATF (0229).

The commenter stated that changes to existing regulatory authorities might be a more effective path forward than listing through the RMP program while also enhancing public safety. The commenter provided specific suggestions of existing authorities: (1) amending 29 CFR § 1910.109(i) to apply to AN and AN mixtures in fertilizer manufacturing and distribution (the

commenter stated it currently only applies to explosives and blasting agents); (2) seeking an amendment to EPCRA to remove § 311(e)(5) that currently excludes fertilizers from the definition of hazardous chemicals - adding AN would mean that public authorities receive safety data sheets receive estimates of hazardous chemicals at the facility during the prior year, an estimate of the average daily amounts of the hazardous chemicals at the facility during the prior calendar year, and the general location of the hazardous chemicals at the facility; and (3) revisiting the CFATS list for fertilizer grade AN, and to apply to larger quantities of fertilizer grade AN stored in bulk, regardless of how it stored (0229).

The commenter provided a list of efforts that the fertilizer industry voluntarily participates in to increase the safety and security of AN; the commenter asserted that these efforts prevent and respond to releases at considerable expense and time and demonstrate there is no need to regulate AN under the RMP (0229).

> **EPA Response:** EPA acknowledges the need for reviewing the list of RMP-regulated substances. The Agency further acknowledges that there is both support and opposition to regulating AN and will consider these comments when determining whether to take further action on this issue. In the interim, EPA encourages fertilizer retailers to review and use existing guidance. OSHA compiles several resources on their Fertilizer Industry Guidance on Storage and Use of Ammonium Nitrate webpage at https://www.osha.gov/dep/fertilizer_industry/. Other agencies, including OSHA and DHS, are considering modifications to their regulations, and EPA will coordinate any potential changes to the list of substances in 40 CFR part 68 with the actions of these other agencies.

19.2 Other substances identified by commenters

Comment 19.2-01: Several commenters expressed support for expanding the list of chemicals covered under the RMP (0264, 0448, 0449, 0453, 0460, 0409, 0456).

Many commenters requested that EPA not delay and update the list as fast as possible, by the end of 2023 (0208, 0252, 0255, 0264, 0269, 0270, 0460). One commenter suggested that EPA should update the list of covered chemicals no later than the end of 2023 (0409).

A few commenters opposed listing additional substances in the RMP (0212, 0228, 0229).

Several commenters specifically encouraged EPA to expand RMP to include more hazardous chemicals (i.e., flammable, explosive, reactive). The commenters stated that the program does not regulate many highly hazardous chemicals that, if released, could cause death, injury, toxic exposure, severe health effects, and other harm (0160, 0185, 0208, 0209**,** 0240, 0248, 0270, 0276, 0413, 0444, 0456, 0460). Another commenter added that unregulated reactive chemicals meet the listing criteria and past accidents signal the need to list additional substances (0460).

Some commenters emphasized that reactive substances specifically are very hazardous and, therefore, should be listed (0185, 0240, 0270, 0276, 0456, 0460). Regarding reactive chemicals, one of the commenters provided two types that EPA should include in the RMP: (1) those chemicals subject to unintentional reactions because they are unstable or self-reacting, or may react if they are unintentionally exposed to air or water; and (2) those chemicals that cause risk from the intentional mixing of two or more chemicals in a process (0185).

A couple of commenters mentioned the New Jersey Toxic Catastrophe Prevention Program (TCPA) as a model for the RMP. The commenters stated that the New Jersey Code includes reactive chemicals in their Environmental Hazardous Substance list, and that the state has added reactive hazard substances, organometallics, and liquified petroleum over time based on accidents or other sufficient information to justify the inclusion of the class to reduce the risk of a catastrophic release (0185, 0460). One of the commenters discussed multiple resources from Federal agencies, non-profit associations, and academia/researchers used by New Jersey to evaluate and group substances considering their chemical composition and their potential impact on the health and safety of the public (including unstable substances; water reactive substances; or intentional mixtures that are products, byproducts, or reactants) (0185).

Some commenters referenced past CSB actions that support listing additional chemicals in the RMP. The commenters mentioned a CSB study on accidents caused by reactive chemicals; between 1980 and 2001 167 incidents involved uncontrolled chemical reactivity. The commenters added that CSB has recommended multiple times that EPA expand the current RMP to include reactive hazards (including self-reactive chemicals, combinations of chemicals, and process-specific conditions), which have the potential to seriously impact the public (0185, 0240, 0456, 0460).

Another commenter mentioned New Jersey's TCPA, which includes reactive chemicals, liquified petroleum gas, and organometallics (0456).

Another commenter mentioned the NFPA Fire Protection Guide to Hazardous Materials as a source of information for EPA to consider when listing chemicals in the RMP. The commenter stated that the resource categorizes substances by the type and the degree of hazard, including for: (1) unstable substances that are capable of detonation, explosive decomposition, explosive reaction at normal temperatures and pressures, and (2) water reactive substances which when combined with water cause an explosive reaction (0185).

One commenter suggested that EPA consider higher stringency for chemicals with reactive, spontaneous decomposition, and explosive properties and with an accident history (such as New Jersey applied to calcium dithionite, sodium dithionite, and potassium dithionite) (0185).

A couple of commenters opposed listing reactive chemicals in particular. One commenter stated that the Agency's statutory authority under CAA § 112(r)(3) precludes it from regulating broad classes of substances including reactive chemicals (0229). Another commenter stated that EPA lacks authority under 42 U.S.C. § 7412(r) to designate broad categories of chemicals. The commenter also questioned if EPA has conducted sufficient supporting analyses to warrant including a reactive category of chemicals. The commenter stated that it is inappropriate to list ammonium nitrate under the RMP – emphasizing that OSHA has also excluded blasting agents from the PSM, a 2002 EPA decision not to identify reactive substances in the RMP, and data and reports submitted to NFPA which also support this conclusion (0228).

The commenter said that the Technical Background Document references New Jersey's TCPA provisions regarding reactive chemicals and expressed that ammonium nitrate does not meet the criteria for a reactive chemical through inherent instability, self-reaction, through exposure to air or water, or through controlled production processes. The commenter suggested that chemicals that can be managed by safe handling and storage practices should not be considered reactive. The commenter also took issue with how New Jersey added substances – asserting application of

a TNT equivalency is questionable since ammonium nitrate explosions are not easily comparable to TNT (0228). See Section 19.1 for other comments on ammonium nitrate.

A few commenters voiced particular concern that certain chemicals fall outside of the RMP-covered flammability rating but should be included due to fire and explosion risks (0255, 0456, 0460). One of the commenters added that unregulated flammable chemicals meet the listing criteria and past accidents illustrate the potential for accidental releases (0460).

A few commenters mentioned specific chemicals for EPA to consider listing. A couple of commenters referenced a list of 395 chemicals regulated by California, New Jersey, or OSHA's PSM rule that are not covered by the RMP program (0270, 0456, 0460).

A few commenters each expressed a need to list hydroxyethyl acrylate, organic peroxides, nitrous oxide, and/or organometallics. The commenters each expressed a need to list methylcyclopentadienyl manganese tricarbonyl (MCMT), sulfuric acid, liquified petroleum gas, methyl bromide, methyl vinyl ketone, propargyl bromide, tellurium hexafluoride, calcium dithionite, sodium dithionite, and/or potassium dithionite (0185, 0456, 0460).

One commenter provided comments on why hydrochloric (HCl) and HF acids used in steelmaking should not be regulated under EPA's RMP regulations. The commenter stated that these substances are used below threshold concentrations; as such, their use does not present facility risks. The commenter added that the industry is dedicated to safety and is already implementing chemical-release prevention and response programs under other statutory requirements. The commenter stated that extending the RMP program to low-risk facilities would create regulatory inconsistency and confusion without improving industrial safety. The commenter noted that EPA has considered the RMP threshold concentrations for HF and HCl on past occasions and concluded that the current RMP threshold concentrations are sufficient. The commenter asserted that such conclusions remain valid as no steel mills have experienced any significant incidents involving these chemicals. The commenter urged EPA to maintain the current HCl and HF threshold concentrations in the current RMP regulations (0212).

Many commenters asked EPA to reduce threshold quantities of substances for coverage (0185, 0252, 0240, 0264, 0269, 0270, 0456, 0460). One commenter noted that the last update to the chemical list and thresholds occurred in 1994 and stated that high thresholds present a loophole that exempt some facilities which have been a source of accidents (0460).

One of the commenters provided detailed comments on how EPA may calculate such thresholds based on the model in New Jersey (0185).

One commenter suggested that EPA lower the threshold quantity for regulated hazardous chemicals, as is the case in other jurisdictions. The commenter provided an example of an explosive incident involving hydrogen sulfide and methyl mercaptan, but where the facility was not regulated because it used these chemicals below the 10,000 lb. threshold. The commenter added that EPA's threshold level for ammonia is also higher than in other jurisdictions, such as California and New Jersey (0456).

Another commenter stated that EPA should review the list of regulated substances' existing thresholds, along with other jurisdictions' regulated threshold quantities and reduce the federal RMP threshold quantities accordingly. The commenter cited the Packaging Corporate of America Explosion as an example where the high threshold concentrations can present danger. The commenter stated that in this example, the processes that used hydrogen sulfide and methyl

mercaptan were not regulated under the RMP because they were at a lower threshold than the regulated threshold, but there was still an explosion that led to three deaths and seven injuries. The commenter added EPA threshold quantity for anhydrous ammonia is 20,000, but California and New Jersey specific rules cap allowable ammonia at 500 and 5,200 pounds, respectively (0460).

Several commenters pointed to past incidents that exemplify the need for listing additional substances in the RMP. The commenters provided examples of past incidents, which included those at T2 Laboratories in Jacksonville, FL in 2007; at Synthron in Morganton, NC in 2007; at MFG Chemical in Dalton, GA in 2004; at Bayer Crop Science in Institute in WV in 2008; in Beirut, Lebanon in 2020; at the Majestic Industries warehouse in Passaic, NJ (year not specified); at the Dow Bayport chemical plant in La Porte, TX (year not specified); at the Arkema plant in Crosby, TX (year not specified); at Winston Weaver in NC (year not specified); at BioLab in Westlake, LA (year not specified); at Chemtool in Rockton, IL (year not specified); at West Fertilizer in West, TX (year not specified); at First Chemical Corp. in Pascagoula, MS (year not specified); at Morton International in 1998 (location not specified); at Napp Technologies in 1995 (location not specified); at the Qualco chemical plant in 2022 (location not specified); an Airgas incident involving nitrous oxide (location nor year specified); at AB Specialty Silicones (location nor year specified); and for an ammonium nitrate incident (location nor year specified) (0185, 0240, 0255, 0270, 0276, 0456, 0460).

A couple of commenters suggested EPA evaluate recent incidents and final investigation reports from the CSB to inform updates to the RMP (0456, 0460). One of the commenters suggested the NRC as another source of incident reports (0460).

Two commenters recommended that EPA include the list of air contaminants in the the OSHA PSM standard in the RMP. The commenters suggested that unifying the list of hazardous chemicals under the PSM and RMP would provide clarity and consistency in regulations as well as protect communities outside of the fenceline (0460, 0456).

Some commenters suggested several other resources for EPA to consider when updating the RMP list. One commenter suggested that EPA reference the DOT Hazardous Materials Table at 49 CFR Part 172 (0185). Two commenters referenced actions in California as model for the RMP, including CalARP and local ordinances (0456, 0460). A couple of commenters mentioned the EPCRA list from 40 CFR Part 355, which establishes emergency response planning requirements for facilities that store or use extremely hazardous substances (0240, 0456, 0460). Two commenters noted that California has adopted the EPCRA list by reference (0456, 0460). One commenter added that California rules also regulate MCMT and sulfuric acid, which are not covered under EPA RMP rule but have caused incidents (0456). Another commenter mentioned CERCLA and § 112(r) of the CAA (0240).

> **EPA Response:** EPA acknowledges the need for reviewing the list of RMP-regulated substances. EPA will consider these comments when determining whether to propose revisions to the list of substances.

19.3 How should EPA prioritize listing new substances?

Comment 19.3-01: One commenter stated that if EPA were to consider listing AN, in particular, EPA must develop a robust technical and definitional basis to do so, and requested that that EPA establish a Federal advisory committee under the Federal Advisory Committee Act to facilitate

industry stakeholder input regarding the scientific and technical issues associated with such a proposal (0229).

> **EPA Response:** EPA acknowledges the need for reviewing the list of RMP-regulated substances. EPA will consider these comments when determining whether to propose revisions to the list of substances.

20 Other topics related to the Technical Background Document Content

No comments were recorded for this section.

21 Statutory and Executive Orders Reviews

21.1 Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

Comment 21.1-01: One commenter expressed concern that the proposed rule does not meet the goal stated in EO 13563 Section 1. General Principles of Regulation (0227):

> (a) Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation. It must be based on the best available science. It must allow for public participation and an open exchange of ideas. It must promote predictability and reduce uncertainty. It must identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends. It must consider benefits and costs, both quantitative and qualitative. It must ensure that regulations are accessible, consistent, written in plain language, and easy to understand. It must measure, and seek to improve, the actual results of regulatory requirements.
>
> **EPA Response:** EPA believes that it does meet the goal stated in EO 13563. Because major and other serious and concerning RMP accidents continue to occur, EPA believes that the final SCCAP rule will help further protect human health and the environment from chemical hazards through advancement of process safety based on lessons learned. These amendments seek to improve chemical process safety; assist in planning, preparedness, and response to Risk Management Program-reportable accidents; and improve public awareness of chemical hazards at regulated sources.
>
> As discussed in the proposal, while EPA was not required to hold virtual public listening sessions, on June 16 and July 8, 2021, the Agency did so and had an open docket for public comment (86 FR 28828; May 28, 2021). In the request for public comment, the Agency asked for information on the adequacy of revisions to the RMP regulations completed since 2017, incorporating consideration of climate change risks and impacts into the regulations and expanding the application of EJ. EPA received a total of 27,828 public comments in response to the request for comments. This includes 27,720 submitted to *regulations.gov*, 35 provided during the listening session on June 16, 2021, and 73 provided during the listening session on July 8, 2021. Information collected through these comments has informed the review.

Further, the proposed rule RIA analyzed two regulatory alternatives to the proposed rule: one alternative with lower costs and one with higher costs. EPA also conducted breakeven analyses for the two regulatory alternatives to give a sense of the decline in damages from accidents that would be needed to equal, or offset, the estimated costs of the proposed rule under each alternative.

Comment 21.1-02: Another commenter stated that the proposed rule reflects a disregard of fundamental principles of rulemaking set forth in EO 12866 and articulated by court cases concerning agency authority. The commenter suggested that EPA fell short of its EO 12866 obligations to: (1) explain how the provisions of the proposed rule are necessary to meet a "compelling public need," (2) clearly and credibly identify the problem that the proposed rule is intended to address, and (3) explain how the existing RMP regulations are insufficient to address issues that the proposed rule is intended to correct. The commenter stated that EPA cherry-picked certain data, focusing on a few metrics, such as evacuations, medical treatment, and sheltering in place, that could in fact be interpreted to suggest that accident response and mitigation measures are effective and working as intended (0233).

EPA Response: EPA disagrees that it disregarded the fundamental principles in EO 12866. As EPA indicates for this final rule, because major and other serious and concerning RMP accidents continue to occur, EPA believes that the final SCCAP rule are needed to help further protect human health and the environment from chemical hazards through advancement of process safety based on lessons learned. These amendments seek to improve chemical process safety; assist in planning, preparedness, and response to Risk Management Program-reportable accidents; and improve public awareness of chemical hazards at regulated sources.

While large events are rare, CAA section 112(r) was intended as a prevention program for large catastrophic releases as well as more common accidental releases. Post-event compliance measures such as outreach and enforcement are "too little, too late" for such large, but rare, events. Therefore, this final rule provides additional prevention program provisions reasonably calculated for stationary handling dangerous chemicals to prevent potentially catastrophic incidents. Thus, these are necessary updates to the existing RMP rule to ensure continued public safety concerning the operation of chemical facilities in and nearby communities.

Further, in enacting section 112(r), Congress was focused on catastrophic accidents such as the 1984 Union Carbide industrial disaster in Bhopal, India[216], which are extremely rare, but very high consequence events. While large chemical facility accidents that have occurred in the United States and Europe have not approached this level of damage, it is possible that could happen. For example, one of the most consequential chemical accidents in the United States[217] was the 1989 explosion at the Phillips facility in Pasadena, TX, that killed 23 workers ($239 million in 2022 dollars), injured at least 150 more ($7.5 million), and caused $1.8 billion in property damage.[218] The five-year baseline period accident costs included in EPA's analysis is $540 million per year. This cost was

[216] Union Carbide release of approximately 40 tons of methyl isocyanate into the air killed over 3,700 people. Most of the deaths and injuries occurred in a residential area near the plant.; Lees, Frank P. Loss Prevention in the Process Industries, Volume 3, 2nd ed. Appendix 5, Bhopal (Oxford: Butterworth-Heinemann, 1996).

[217] As compared to consequences resulting from RMP accidents 2004-2020 listed in Appendix A of the Technical Background Document for Notice of Proposed Rulemaking: Risk Management Programs Under the Clean Air Act, Section 112(r)(7); Safer Communities by Chemical Accident Prevention (April 19, 2022).

estimated using impacts from accidents during 2016 through 2020 (the last year with complete data) reported to the RMP plan reporting database by facility owners and operators. EPA used this dataset due to a lack of alternative data describing accident impacts more comprehensively. This estimate does not include a major catastrophe on the scale of Union Carbide-Bhopal, or even Phillips-Pasadena. If the final rule provisions were to prevent or substantially mitigate even one accident of this magnitude, the benefits generated, quantified and unquantified, will be dramatic. Further, some accidents that occurred at RMP facilities during the five-year period were not reported to EPA because the facility either closed after the accident, decommissioned the process, or removed the regulated substance from the process involved in the accident before it was required to submit a report to the RMP Database.[219] Additionally, the many baseline accident impacts that are not reflected in the $540 million baseline accident cost estimate because EPA was unable to monetize them[220], yet are expected to be avoided as a benefit of the final provisions, include responder costs, transaction costs, property value reductions, unmonetized costs of evacuations and sheltering-in-place, the costs of potential health effects from exposure to toxic chemicals, and productivity losses, among others. The $540 million estimate also does not reflect the full set of baseline inefficiencies that may be mitigated due to the improved information offered by several of the final provisions such as the community notification requirements and the back-up power for monitors. As the range of monetized accident impacts suggests (from $100 to $700 million for 2016 to 2020[221]), the variation in monetized damages is substantial. Preventing a single high-cost accident annually would offset annual rule costs.

When considering this final rule's likely benefits of avoiding some portion of the monetized accident impacts, as well as the additional nonmonetized benefits, EPA believes the costs of the rule are reasonable in comparison to its expected benefits. When assessing the reasonableness of the benefits and burdens of various regulatory options, EPA places weight on both preventing more common accidental releases captured in the accident history portion of the RMP database while also placing weight on less quantifiable potential catastrophic events. The Agency's judgment as to what regulations are "reasonable" is informed by both quantifiable and unquantifiable costs and benefits.

[218] EPA estimated the values of injuries and deaths that occurred in Pasadena using the same values applied to injuries and deaths at RMP facility-reported accidents. See Exhibit 3-15 in the accompanying RIA for specific values and Section 3.2.5.1 "Fatalities and Injuries" in the RIA for detailed explanations of how those values were estimated. The $1.8 billion in property damage was estimated by Marsh JLT Specialty, "100 Largest Losses in the Hydrocarbon Industry," 27th ed., March 2022. *https://www.marsh.com/us/industries/energy-and-power/insights/100-largest-losses/100-largest-losses-report-download.html*.

[219] For example, the Philadelphia Energy Solutions Refining and Marketing LLC facility in Philadelphia, PA, had a fire and explosions in the PES Girard Point refinery HF alkylation unit on June 21, 2019, which resulted in the release of HF. This facility deregistered the affected process before the deadline for their subsequent RMP report. For a description of damages from this accident see Section 3.2.1 of the RIA and the CSB Report, Fire and Explosions at Philadelphia Energy Solutions Refinery Hydrofluoric Acid Alkylation Unit, Factual Update, October 16, 2019, *https://www.phila.gov/media/20191204161826/US-CSB-PES-Factual-Update.pdf* .

[220] For descriptions on why EPA was unable to monetize each of these impacts, see Regulatory Impact Analysis: Safer Communities by Chemical Accident Prevention: Final Rule. This document is available in the docket for this rulemaking (EPA-HQ-OLEM-2022-0174). Chapter 6, Section 6.2.

[221] Regulatory Impact Analysis: Safer Communities by Chemical Accident Prevention: Final Rule. This document is available in the docket for this rulemaking (EPA-HQ-OLEM-2022-0174).

21.2 Paperwork Reduction Act (PRA)

Comment 21.2-01: Several commenters expressed concern that EPA did not make a finding on the practical utility of information included in the proposed rule (0272, 0239, 0215). One commenter stated that because EPA fails to provide proof that the proposed requirements (separately or in aggregate) will "maximize practical utility and public benefit" and "minimize burden," the proposed rule fails to meet the core standards of the PRA, and EPA should revise it. The commenter added that EPA could meet PRA standards by limiting the requirements to just those that are likely to reduce accidents at RMP facilities and to just those facilities that are likely to benefit from these new requirements (0215).

One commenter specifically called out the need to address the practical utility of documents concerning third-party audits and PHAs and urged EPA to explain the actual usefulness of the proposed information to be collected and disclosed pursuant to the proposal, not just the theoretical or potential usefulness (0272). Another commenter questioned the practical utility of the information availability requirements, asserting that it is unclear how some of the information requirements proposed to be provided to LEPCs and emergency response officials will improve community response and preparedness (0239).

> **EPA Response:** As major and other serious and concerning RMP accidents continue to occur, the record shows and EPA believes that revisions to the RMP regulations will likely further protect human health and the environment from chemical hazards through advancement of process safety based on lessons learned. The revisions in this final rule are a result of reviewing the existing RMP regulations and information gathered from the public comments on the SCCAP proposed rule. State and local authorities will use the information in RMPs to modify and enhance their community response plans. The agencies implementing the RMP rule use RMPs and related records to evaluate compliance with 40 CFR part 68 and to identify facilities for inspection because they may pose significant risks to the community. Citizens may use the information to assess and address chemical hazards in their communities and to respond appropriately in the event of a release of a regulated substance. EPA believes the information disclosure provisions in particular are targeted towards potentially impacted communities and help minimize the potential magnitude of accident damage as well as the number of accidents. Overall, the recordkeeping and the focus on gathering information and relying on source assessing it rather than more detailed command-and-control measures minimizes burden on sources. These revisions are made under the statutory authority provided by section 112(r) of the CAA as amended (42 U.S.C. 7412(r)).

Comment 21.2-02: A few commenters raised concerns about the PRA regarding duplicative collection of information from regulated entities (0237, 0253, 0272). A couple of the commenters specifically mentioned duplicative efforts under both the RMP proposed rule and the OSHA PSM regulation (0237, 0272). One commenter stated that the proposed gap analysis would encroach on OSHA's PSM regulations regarding equipment certification. The commenter also stated that the proposed provision appears to impose duplicative and costly paperwork burdens without any demonstrated safety benefit (0232). One commenter recommended that if EPA finalizes these provisions, they comply with the PRA and collaborate with OSHA to reduce the burden on facilities (0237).

EPA Response: In the United States, the Emergency Planning and Community Right to Know Act (EPCRA) was enacted in 1986 to promote community emergency planning and preparedness and provide local responders and the public with information about the chemical hazards in their community (42 U.S.C. 11002 et seq.). In 1990, sections 112(r) and 304 of the CAA were enacted to help prevent severe chemical facility accidents. Section 304 required the Occupational Safety & Health Administration (OSHA) to publish a chemical process safety standard (Process Safety Management, or PSM standard) to prevent accidental releases of chemicals that could pose a threat to employees. Section 112(r) required the EPA to publish Accidental Release Prevention Program regulations to prevent chemical releases or minimize their consequences if they occur. CAA section 112(r) requires the owner or operator of an affected facility to develop and file a Risk Management Plan with EPA, the U.S. Chemical Safety Board (CSB) (also established under the section), the State, and local response agencies. OSHA adopted its PSM standard (codified at 29 CFR 1910.119) in 1992 (57 FR 6403, Feb. 24, 1992). However, not all the information in the RMP registration section, and almost none of the information in the prevention program and hazard assessment sections of the RMP, is submitted to EPA under other regulations. The EPCRA section 312 Tier II forms, which also include some information similar to that in the RMP registration form, are submitted only to States and local planning authorities, not to EPA The collection of this data under the SCCAP rule enhances its accessibility and utility for accident prevention and mitigation of accident impacts.

As discussed in more detail in the final rule, the OSHA PSM standard and EPA RMP regulations are closely aligned in content, policy interpretations, and enforcement. Congress recognized this relationship by requiring EPA to coordinate its requirements with those of OSHA in developing accident prevention regulations and requiring OSHA to coordinate with EPA when developing its PSM standard (see CAA section 112(r)((7)(D) and CAA section 304(a)). Therefore, since the inception of these regulations, EPA and OSHA have coordinated closely on their implementation in order to minimize regulatory burden and avoid conflicting requirements for regulated facilities. This coordination continued throughout the development of this final rule and is explained further as it relates to specific provisions of the final rule in the relevant sections of the final rule.

Comment 21.2-03: Several commenters expressed concerns with the paperwork burden of specific provisions of the proposed rule.

One commenter stated that the requirements would impose significant burdens on PHA teams and the associated reporting requirement for rejected recommendations would create unnecessary paperwork burdens EPA has not fully analyzed or determined to result in safety benefits (0253).

Several commenters expressed concern that there is no reasonable explanation for requiring the reporting of declined recommendations. The commenters stated that the proposed PHA changes require new reporting obligations that are unnecessary and have not been fully analyzed (0232, 0238, 0253, 0268, 0272).

One commenter stated that EPA failed to consider the paperwork burden hours and costs associated with requiring the reporting of exercise evaluation reports (0268).

EPA Response: In response to comments, EPA added burden estimates for the requirements to provide written justifications for declining recommendations to address natural hazards, as well as power loss, facility siting, and RAGAGEP. EPA disagrees that the requirements to report on declined recommendations are unnecessary and provide no benefits. EPA believes the requirements are important to help the public understand how facilities address the hazards that may affect their community to keep the risk at or below an "acceptable level," which include adherence to RAGAGEP, and the reasonable judgments and efforts of compliance programs aimed at preventing or mitigating accidental releases. Aside from these requirements, EPA notes that it is not finalizing additional PHA regulatory requirements from what already exists in the RMP regulations. The current RMP rule's PHA requirements include determining and evaluating the hazards of the process" as well as "engineering...controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies." (40 CFR 68.67(c)(1),(3)). Similar but less detailed requirements apply to Program 2 processes (40 CFR 68.50(a)). The hazard evaluation requirements reflect not only the OSHA and EPA rules but also existing industry recommended practices, and therefore, EPA assumes that these hazard evaluation amplifications impose no new requirements or costs on facilities.

Further, EPA assumes facilities are already conducting regular field exercises so that the emergency exercise provisions in the final rule may result in slightly different burdens but will not result in an increase in burdens for facilities. The emergency response exercise provisions in the final rule will provide consistency between exercise evaluation and incident investigation documentation requirements.

21.3 Regulatory Flexibility Act (RFA)

Comment 21.3-01: One commenter provided two specific suggestions for EPA to improve its small entity impact analysis to support the factual basis required for its RFA certification (0188).

First, the commenter suggested that EPA should provide a more granular analysis of small entity impacts, noting that EPA's analysis is at the three-digit NAICS level while RFA analyses generally examine impacts at the six-digit NAICS level. The commenter stated that in Exhibit 8-6 of EPA's RIA for this proposal, 89 out of 2,911 entities would have costs exceeding 1% of revenues. However, the commenter stated that the analysis was neither transparent nor sufficient factual basis for certification. The commenter stated that it was not appropriate to look at impacts averaged across industries, as it may mask significant effects in individual industries. The commenter suggested that EPA show there is no industry where the proposed rule would have significant impacts on a substantial number of small entities. The commenter also recommended that EPA demonstrate the number of affected entities in each industry relative to the number of significantly affected small entities in each industry (0188).

Second, the commenter suggested that EPA account for several costs that the commenter believes are missing and underestimated costs in the small entity impact analysis:

- **Written justifications for declining relevant recommendations for the natural hazard, power loss, and chemical siting provisions:** The commenter stated that EPA does not provide a cost associated with this documentation requirement, including the missing costs of a gap analysis and documentation associated with EPA's proposal to

include an analysis of the most recent recognized and RAGAGEP related to the facility's design, maintenance, and operation.

- **Employee training:** The commenter stated that there is no estimate for the cost to small entities of training employees on employee participation or on implementation of any other provisions of the proposed rule. The commenter stated that while the training may be incorporated in existing training programs, time that was devoted to other activities will need to be allocated to developing, administering, and receiving training.
- **Information availability:** The commenter stated that costs of information availability do not appear to be fully estimated or supported in the analysis, noting that it is not clear what EPA's basis is for assuming that 50% of facilities would receive a request each year. The commenter suggested that EPA address the possibility of a high volume of requests in the analysis given that there is not a limit on the frequency. The commenter also noted that there should also be an estimate of the cost of translating and providing information in the requested languages and the cost to verify whether the requestor is within the six-mile boundary (0188).

EPA Response: EPA notes that the final RIA has been updated to address the concerns raised by the commenter.

The final rule RIA presents the distribution of small entity revenue impacts across six-digit NAICS sectors (Exhibit 8-8), with the top ten highlighted from the remaining NAICS sectors. The proportion of revenue impacted was calculated for small entities with revenue data (1,776). This is fewer than the total number of small entities affected by the rule (2,636) and analyzed above because the extrapolation exercise described in Section 8.2.1 was done at the 3-digit NAICS level. Most 6-digit NAICS codes have too few entities from which to reasonably extrapolate. Thus, EPA focused the analysis of revenue impacts by 6-digit NAICS sectors on only those entities with matched revenue data. Exhibit 8-8 shows the number of matched entities for each of the top ten sectors designated as small, as well as the remaining sectors for which these small entities had corresponding six-digit NACIS information. The NAICS subsector 325998 has a larger percentage of entities with revenue impact greater than 3 percent. This can be explained by the SBA size standards and entity revenue. This subsector has a lower size standard than the other NAICS 325 sectors, with a limit of 500 employees versus 1,000+ employees for other subsectors, meaning more entities were qualified as small. As a result, the subsector's average revenue is lower than the other NAICS 325 sectors entities, which increases the proportion of revenue impacted for this particular subsector.

Further, EPA notes that the final rule RIA updates or adds costs for several provisions:

- Rule familiarization costs: updated assumptions on the number of hours required for Delegating Implementing Agencies and most facilities to be consistent with LEPCs in response to public comments.
- Third-party audits: Costs updated to reflect a change in the provision requiring third-party audits after any accident.
- Initial Evaluation and Practicability Assessment: Costs updated to reflect changes to the provision requiring a STAA initial evaluation for more facilities and the practicability assessment for certain facilities that experience an accident since

their most recent process hazard analysis. Costs were also updated to account for the reduced effort required the second time a STAA analysis is completed.

- STAA Implementation: New cost for the provision now requiring certain facilities to implement one or more measures that have up-to passive measure risk reduction.
- Public Disclosure: New cost added to capture translation and ID verification requirements.
- Justifications: New costs added to capture four justification requirements in RMP submissions for RAGAGEP, Facility Siting, Natural Hazards, and Emergency Backup Power, which were not previously costed in the proposed rule RIA.
- Emergency Backup Power for Perimeter Monitors: Updated generator cost assumptions and added recurring operation and maintenance costs in response to public comments.
- Employee Participation Plan: Added a cost for training requirements in response to public comments.

Comment 21.3-02: One commenter stated that EPA must improve its RFA analysis to provide an adequate factual basis to support the certification that the rule will not have a significant economic impact on a substantial number of small entities (0188). Another commenter echoed that they believed the Agency substantially understated the economic impact on small businesses (0227).

One commenter stated that in 2015, before EPA originally proposed some of the revisions in this rule, the Agency convened a Small Business Advocacy Review Panel (SBAR panel) because the Agency could not certify that the rule did not have significant economic burden on a substantial number of small entities. The commenter continued that, conversely, the Agency proposes to certify that the rule will not have a significant economic impact on a substantial number of small entities (0188). Another commenter echoed that the SBAR panel previously raised concerns that EPA had not adequately considered several aspects of the proposal, and that failing to do so would have placed significant unanticipated costs on regulated entities (0202).

> **EPA Response:** EPA disagrees that the Agency substantially understated the economic impact on small business for this rulemaking. The small entity analysis indicates that the final rule will not impose a significant economic burden to a substantial number of small entities exceeding the threshold amount of 1 percent of small entity revenues. For private sector entities, EPA estimated that 9.2 percent of small entities will experience costs exceeding 1 percent of revenue and only 2.8 percent of entities will have costs greater than 3 percent of revenue. For small governments, EPA does not have data to estimate the percent of entities with different percent of revenue impacts. However, based on costs to small governments and their respective populations, EPA concludes that it is unlikely that a small government will experience a cost impact larger than 1 percent of revenue. The second analysis that EPA conducted with data from D&B Hoovers in Appendix C of the RIA further confirms that the final rule will not impose a significant economic burden to small entities and suggests that the final rule has a smaller impact on small private sector entities. Using D&B Hoovers data, EPA estimated that 6.0 percent of small entities will experience costs exceeding 1 percent of revenue and only 1.9 percent of entities will

have costs greater than 3 percent of revenue. Accordingly, the EPA Administrator certified that that this final rule will not have a significant economic impact on a substantial number of small entities. Details of these analyses are presented in Chapter 8 of the RIA, which is available in the docket.

Comment 21.3-03: Two commenters expressed concern that the proposed rule had not been reviewed by an SBAR panel and urged EPA to do so (0227, 0214).

> **EPA Response:** As the small entity analysis indicates, the final rule will not impose a significant economic burden to a substantial number of small entities exceeding the threshold amount of 1 percent of small entity revenues. As such, an SBAR panel is not required based on the outcome of the analysis.

21.4 Unfunded Mandates Reform Act (UMRA)

No comments were coded to this issue.

21.5 Executive Order 13132: Federalism

No comments were coded to this issue.

21.6 Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

No comments were coded to this issue.

21.7 Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Comment 21.7-01: Several commenters emphasized the importance of protecting children from environmental health risks and safety risks (0249, 0158, 0160, 0451).

One commenter asserted that requiring facilities regulated by the RMP to implement inherently safer chemicals, technologies, and processes is essential, not only for the health of manufacturing communities, but for communities across the supply chain. The commenter suggested that communities deserve to be informed about which chemicals are being stockpiled and used in their communities and should not be required to track down the information at each individual chemical facility within a 6-mile radius from their home. The commenter also suggested that communities must be informed at the same time, in plain language, if the chemicals in these RMP facilities can harm children's brains, cause cancer or what health effects the chemicals are linked to (0249).

Several commenters stated that over one in every three schoolchildren in the US attends a school within the vulnerable zone of an RMP facility, with half of these children in schools located in more than one chemical vulnerable zone. The commenters expressed concern about the risk to children's health and safety, especially given that children's bodies are still developing, from possible chemical exposure and releases due to accidents, noting specific examples of incidents. The commenters also discussed proximity of facilities, including those yet to be constructed, to communities and schools (0158, 0160, 0451).

> **EPA Response:** EPA acknowledges the scientific understanding that children may be at greater risk to environmental contaminants, such as chemical exposure and releases due to accidents, than adults due to differences in behavior and biology and that the effects of early life exposures may also arise in adulthood or in later generations. Nevertheless,

EPA does not believe the environmental health risks or safety risks addressed by this action present a disproportionate risk to children as the Agency believes that the revisions to the RMP regulations made by this final rule will further protect human health, including the health of children, through advancement of process safety. Particularly regarding information availability, EPA continues to believe that providing chemical hazard information to the general public will allow people that live or work near a regulated facility to improve their awareness of risks to the health of children, adults and the community and to be prepared to protect themselves in the event of an accidental release. The public's ability to participate in emergency planning and readiness is enhanced by being better informed about accident history, types of chemicals present, and how to interact with the stationary source.

Comment 21.7-02: A few commenters suggested that EPA strengthen the proposed rule to protect children from environmental health risks and safety risks (0251, 0383).

One commenter stated that toxic releases from facilities that process extremely hazardous substances expose students, families, and educators to significant harm. The commenter reported on a recent study which found that 1,977 schools were located within an approximately two-mile radius of 305 facilities (with the highest releases of air toxins, including five chemicals that are known as developmental toxins) putting approximately 964,525 students at risk. The commenter added that all students should be able to go to school and live in a community that fosters health and prosperity. The commenter requested that EPA strengthen the RMP rule to address this issue (0251).

Another commenter stated that their community endures more than enough poor air quality at the expense of the health of all ages within the community. The commenter stated that too many elected officials and industry executives hold onto outdated practices. The commenter suggested that industry should pivot to require a STAA that can advise of the safer chemicals that can be used (0383).

EPA Response: This action is not subject to E.O. 13045 because EPA does not believe the environmental health risks or safety risks addressed by this action present a disproportionate risk to children. As major RMP accidents continue to occur, EPA believes that the revisions to the RMP regulations made by this final rule will further protect human health, including the health of children, through advancement of process safety.

EPA hosted virtual public hearings on September 26, 27, and 28, 2022 to provide interested parties the opportunity to present data, views or arguments concerning the proposed action, many of which included the consequences to community on accidental releases. Information collected through oral testimonies and written comments from the hearings informed and enhanced the final rule. Details of the changes from the proposed to final rule can be found in the details of each issue in the preamble.

21.8 Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

Comment 21.8-01: One commenter suggested that the proposed rule would raise energy costs and impede the US' ability to compete in global energy markets (0233).

A couple of commenters stated that the proposed rule would impact the U.S. economy, predominantly through increased gasoline production costs (0227, 0477). One of the commenters, noting EPA's estimated costs to make changes at refining and petrochemical sites of possibly $1 billion per site, claimed that the rule would have a significant impact on all industries, including small businesses, due to significant impacts on U.S. gasoline production and stress on U.S. fuel supplies. The commenter was concerned that, due to current historic highs in gas and diesel costs and record inflation, the economic impact on the U.S. economy would be catastrophic (0227). Another commenter similarly claimed that the proposed rule could significantly impede domestic gasoline production, impacting supply chains and increasing costs for consumers. The commenter believed that this rule will be directly responsible for increasing consumer prices at the pump and exacerbating America's high inflation rate (0477).

> **EPA Response:** This action is not anticipated to have notable impacts on emissions, costs, or energy supply decisions for the affected electric utility industry.
>
> With respect to the supply and cost of gasoline, EPA's analysis in the proposed rule indicated that the proposal would not result in significant increases in consumer prices. During the rulemaking process, EPA sought additional information on the estimated costs of the proposed rule and, in particular, requested cost data or studies related to the cost of practicability studies for conversion of hydrofluoric acid alkylation units to safer technologies. EPA considered information submitted on this point and for the final rule still concludes that the proposal would not result in significant increases in consumer prices. In particular, we note that the final rule will not require any refinery to stop using hydrofluoric acid alkylation. Furthermore, EPA notes that in addition to potentially threatening lives and causing harm to property and the environment, serious accidents at petroleum refineries can result in lost production capacity that results in increased gasoline prices. For example, the proposed rule's RIA discusses a February 18, 2015, accident at the ExxonMobil refinery in Torrance, California that cost consumers more than $2.4 billion in increased gasoline prices due to the shutdown of a production unit. EPA believes that the proposed safer technologies and alternatives analysis provision has the potential to help avoid serious accidental releases like these and the associated harms to consumers and communities.

21.9 National Technology Transfer and Advancement Act (NTTAA)

No comments were coded to this issue.

21.10 Executive Order 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Comment 21.10-01: One commenter requested that EPA fully carry out its responsibilities under EO 12898 by directly addressing environmental justice issues of the kind outlined in its final rule (0251).

> **EPA Response:** EPA believes that the human health or environmental conditions that exist prior to this action result in or have the potential to result in disproportionate and adverse human health or environmental effects on people of color, low-income populations and/or Indigenous peoples.

EPA conducted an EJ analysis using the Agency's EJ screening tool, EJSCREEN and the U.S. Census Bureau's American Community Survey (ACS). The EJ analysis shows that historically underserved and overburdened populations live within proximity to RMP-regulated facilities and thus are at greater risk than other populations. The analysis also found evidence that regulated facilities are disproportionately located within historically underserved and overburdened communities. Thus, EPA recognizes that accidental releases of regulated chemicals from facilities regulated by this action will likely pose disproportionate risks to historically marginalized communities. However, EPA has concluded that the regulatory requirements will advance just treatment of those populations by reducing the disproportionate damages from accidental releases that RMP-regulated facilities might otherwise inflict on those populations. EPA's full EJ analysis is documented in "Regulatory Impact Analysis: Safer Communities by Chemical Accident Prevention final rule," which is available in the docket.

EPA believes that this action is likely to reduce existing disproportionate and adverse effects on people of color, low-income populations and/or Indigenous peoples. Because populations living closer to facilities are more likely to be exposed if an accidental release at an RMP facility occurs, these releases pose a greater risk to communities. Therefore, the benefits of this regulation will include reduced risk for historically underserved and overburdened populations.

EPA additionally identified and addressed EJ concerns by holding virtual public listening sessions on June 16 and July 8, 2021, and had an open docket for public comment (86 FR 28828). In the request for public comment, the Agency asked for information on the adequacy of revisions to the RMP regulations completed since 2017, incorporating consideration of climate change risks and impacts into the regulations, and expanding the application of EJ in the RMP. Following publication of the proposed rule, EPA held three public hearings (September 26, 27, and 28, 2022) and had a 60-day open public comment period. Participants in the virtual public listening sessions and hearings included a wide range of stakeholders including environmental and community groups, individual regulated facilities, industry groups, local and State governments, Federal agencies, and private citizens. Information collected through oral testimonies and written comments from the listening sessions and hearings respectively informed the proposed and final rules.

22 Comments Outside Current Rulemaking Scope

Environmental Concerns

Comment 22-01: One of the commenters recommended EPA take the opportunity to enhance knowledge and implementation of nature-based solutions (NBS) across the U.S. (0204).

Another commenter discussed the transformation to clean energy in the United States. The commenter discussed using new advanced clean energy technologies to reduce emissions, ultimately reaching net-zero carbon emissions while providing reliable and affordable electricity for customers (0244).

EPA Response: These comments are outside of the scope of the proposed rule.

"Upset Emissions"

Comment 22-02: One commenter stated that the RMP rule should be tightened to close the loop in the CAA that exempts reporting and regulating "upset emissions" such as those that are frequently the result of routine process safety events, maintenance, etc., as they are often precursors to RMP incidents (0255).

EPA Response: This comment is outside of the scope of the proposed rule.

Engineering Contractors

Comment 22-03: One commenter suggested that provisions for using engineering contractors under close EPA supervision should be added to the new EPA rule (0402).

EPA Response: This comment is outside of the scope of the proposed rule.

General

Comment 22-04: Several commenters provided other comments outside the scope of the current rulemaking (0148, 0157, 0164, 0184, 0208, 0237, 0244, 0245, 0252, 0255, 0263, 0269, 0270, 0409, 0460).

EPA Response: These comments are outside of the scope of the proposed rule.

Applicability

Comment 22-05: A couple of commenters said that the proposed rule would have an impact on ammonia, which is subject to the RMP, but is also the most efficient and effective alternatives for facilities considering a change from hydrofluorocarbons (HFCs) in industrial refrigerant use. The commenters stated that they caution EPA not to overburden RMP requirements such that EPA disincentivizes investments in lower GHG-emitting technologies and urged EPA to consider the unintended consequences the proposed rule may have on moving facilities away from HFCs to ammonia (0184, 0237).

EPA Response: This comment is outside of the scope of the proposed rule.

Comment 22-06: Another commenter urged EPA to revise the proposed rule so that air permits for major sources regulated by the RMP include safety plans and incident reports (0448).

EPA Response: This comment is outside of the scope of the proposed rule.

5-Year Reporting Timeline

Comment 22-07: One of the commenters stated that current reporting every 5 years is inadequate and stated that EPA should require compliance reports to EPA with the normal reporting required in air permits. The commenter specifically asked EPA to require more frequent compliance reporting in the form of electronic, semi-annual compliance reports, near-miss reporting, and reporting of IST and NaTech assessments (0456). Another commenter claimed that some facilities miss or ignore the 6-month deadline to report incidents and only update their accident history at the 5-year RMP update deadline. The commenter suggested that EPA seek review by enforcement experts within EPA's OECA to ensure that compliance is built into the proposed rule and implement the recommendations of CSB for more detailed reporting on the PHA and incident reporting. The commenter said that writing compliance-design focused rules will increase compliance without any further action from EPA, serve the core goal of preventing incidents before they occur, and provide more information EPA can use to assist in

enforcement where this is needed. The commenter explained that former EPA enforcement expert Cynthia Giles supports this approach. The commenter suggested that EPA require more frequent reporting, increased monitoring, automatic liability admission, corrective action, and penalty requirements, and increased transparency and review during the permit process (0460).

EPA Response: This comment is outside of the scope of the proposed rule.

Permits

Comment 22-08: One commenter suggested EPA consider issuing RMP permits to hold facilities accountable for maintaining their covered process equipment and RMP program (0158).

EPA Response: This comment is outside of the scope of the proposed rule.

Comment 22-09: One commenter stated that permits are based on the location of the actual facility, not based on the actual air pollution that crosses boundaries. The commenter expressed concern that EPA does not regulate what does off-site from these industries and does not inform the community of exposure based on air pollution modeling (0160).

EPA Response: This comment is outside of the scope of the proposed rule.

Comment 22-10: One commenter strongly urged EPA to review and update the list of RMP listed chemicals to assure coverage of all hazardous facilities that threaten communities and to ensure the promise of full protection (0413).

EPA Response: This comment is outside of the scope of the proposed rule.

APPENDIX A - Meeting dates for EPA/OSHA on program coordination and the SCCAP rule

EPA/OSHA PSM/RMP program coordination meetings:

EPA and OSHA staff participated in regularly scheduled PSM/RMP coordination meetings that involved discussions of EPA's revisions to the RMP rule and OSHA's revisions to their PSM standard, as well as discussion on other issues involving implementation, enforcement, and guidance for PSM and RMP programs. The dates of these meetings (virtual Microsoft Teams meetings) were as follows: 2/16/2021, 3/16/2021, 4/20/2021, 5/18/2021, 6/15/2021, 7/20/2021, 9/21/2021, 11/16/2021, 1/18/2022, 02/15/2022, 3/15/2022, 5/17/2022, 7/19/2022, 8/16/2022, 10/18/2022, 1/17/2023, 2/21/2023, 3/21/2023. 4/18/2023, 06/20/2023, 7/18/2023, 9/19/2023.

EPA and OSHA Meetings on the SCCAP Rule:

OSHA and EPA staff attended these meetings on 03/04/2021, 10/6/2021, 1/10/2022, 2/14/2022, 03/07/2022 and 01/23/2023, 05/30/2023, 07/11/2023.

Sources of meeting dates: Primarily calendars of William Noggle and Deanne Grant (EPA/OLEM/OEM).

APPENDIX B – Other Federal partner coordination meetings

Meeting dates for National Working Group on Chemical Facility Safety and Security[222]:

EPA, OSHA, DHS, and DOT staff participated in these regularly scheduled meetings. The dates of these meetings (virtual Microsoft Teams meetings) were as follows: 01/27/2021, 2/24/2021, 3/24/2021, 4/28/2021, 5/26/2021, 06/23/2021, 7/28/2021, 8/25/2021, 9/22/2021, 10/27/2021, 12/1/2021, 1/26/2022, 2/23/2022, 3/23/2022, 4/27/2022, 5/25/2022, 06/22/2022, 7/27/2022, 8/24/2022, 9/28/2022, 10/26/2022, 12/7/2022, 1/25/2023, 2/22/2023, 3/22/2023, 4/26/2023, 5/24/2023, 06/28/2023, 7/26/2023, 8/17/2023, 9/27/2023, 10/25/2023, 12/6/2023.

Meeting dates with DHS regarding information availability provisions in the SCCAP rule:

EPA and, DHS staff participated in meetings on 4/25/2022, 1/25/2023, 8/14/2023, 9/6/2023.

Meeting dates with FBI regarding information availability provisions in the SCCAP rule:

EPA and FBI/DOJ staff participated in meetings on 3/23/2023, 4/25/2023, 6/6/2023, 9/6/2023[223].

Sources of meeting dates: Primarily calendar of Deanne Grant (EPA/OLEM/OEM).

Meeting dates with DOT regarding proposed regulatory text changes to the storage incident to transportation provisions in the SCCAP rule:

EPA and DOT staff corresponded by email in March 2022 and participated in a meeting on 2/1/23.

Sources of meeting dates: Email and primarily calendar of Deanne Grant (EPA/OLEM/OEM).

[222] https://www.osha.gov/chemical-executive-order#:~:text=The%20working%20group%2C%20which%20includes,chemicals%20to%20workers%20and%20communities .

[223] DHS also participated in the meeting on 9/6/2023.