



WEAPONS SAFETY ASSESSMENT

Volume Two: Template

Chapters 3 and 4

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Office of Nuclear Security and Incident Response

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Weapons Safety Assessment

Volume Two: Template

Chapters 3 and 4

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Prepared by:
P. Brochman
H. Stone

Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

P. Brochman, NRC Project Manager

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ABSTRACT

The regulations of the U.S. Nuclear Regulatory Commission (NRC) require an applicant for combined preemption authority and enhanced weapons authority to submit a Weapons Safety Assessment (WSA) as part of its application. This document sets forth a process that the NRC staff finds acceptable for use by an applicant in developing a WSA. The information in this document can be used by an applicant to evaluate the potential onsite and offsite safety hazards, safety impacts, or safety risks and any onsite security risks that could arise from the deployment and potential use of enhanced weapons (e.g., machine guns) as part of a licensee's protective strategy for defending against malevolent acts. Based on its assessment of these hazards, impacts, or risks, an applicant should identify preventive or mitigative measures that it intends to implement upon the deployment of enhanced weapons.

Volume 2 of the WSA document consists of Chapter 3, "Applicant Information," and Chapter 4, "Fillable Template."

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FOREWORD

This NUREG describes an approach that the U.S. Nuclear Regulatory Commission (NRC) considers acceptable for use by licensees (hereafter referred to as an “applicant”) in developing a weapons safety assessment (WSA) when applying for combined preemption authority and enhanced weapons authority. The NRC’s regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) 73.15, “Authorization for use of enhanced weapons and preemption of firearms laws,” require a completed WSA as a component of an application for such authority. The purpose of a WSA is to evaluate the onsite and offsite risks associated with the deployment and potential use of a specific enhanced weapon and identify needed preventive or mitigative measures to address those risks.

Applicants may wish to, but are not required to, use this NUREG to complete a WSA. If an applicant elects to develop its own weapons safety assessment process, the NRC staff recommends an applicant review this NUREG for guidance on the types of information that should be addressed in a completed WSA.

Under 10 CFR 73.15(c), the Commission has designated the classes of facilities, radioactive material being transported, and other property that are eligible to apply for combined preemption authority and enhanced weapons authority. Only an applicant within the designated classes of licensed facilities and activities is eligible to apply for combined preemption authority and enhanced weapons authority. Under 10 CFR 73.15(f)(1)(i) and (f)(2)(iv) an applicant must also include a new weapons safety assessment for each type of proposed enhanced weapon. The NRC staff will evaluate an applicant’s WSA to: 1) determine if the potential risks associated with the use of a specific enhanced weapon have been properly identified and any necessary mitigative measures implemented; 2) take into account the risks and proposed mitigative measures; and 3) determine whether an applicant’s requested enhanced weapon in specific deployments is appropriate.

In addition to this NUREG, applicants should also refer to the NRC’s regulatory requirements in 10 CFR 73.15 and supporting guidance in Regulatory Guide (RG) 5.86, “Preemption Authority, Enhanced Weapons Authority, and Firearms Background Checks.” This RG includes information on the application process and requirements for possessing, transferring, transporting, and using authorized enhanced weapons.

This WSA NUREG document consists of four publicly available volumes. The contents of each volume are as follows:

- *Volume 1: Template Instructions*—This volume provides detailed instructions for an applicant’s use in completing a WSA Volume 2 template.
- *Volume 2: Template*—This volume provides a template an applicant may use for evaluating the potential onsite and offsite safety hazards, safety impacts, or safety risks that could arise from the use of specific enhanced weapons.
- *Volume 3: Review Criteria*—This volume describes the criteria that the NRC staff will use in evaluating a WSA developed using the Volume 2 template process in an application for combined preemption authority and enhanced weapons authority.

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- *Volume 4: Sample Template*— This volume provides an example of a completed WSA using the Volume 2 template process at a hypothetical power reactor site. Consequently, this sample template is intended only as a tool and visual aid to an applicant.

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Acknowledgment

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ACRONYMS AND INITIALISMS

AAHs	armored attack helicopters
ACP	Automatic Colt Pistol
ADR	area danger ring
AP	armor piercing
ATF	Bureau of Alcohol, Tobacco, Firearms and Explosives
BMG	Browning Machine Gun
CFR	<i>Code of Federal Regulations</i>
CQBR	Close Quarters Battle Receiver
CQC	Close Quarters Combat
CRISAT	Collaborative Research into Small Arms Technology
DA	Department of the Army
DBT	design-basis threat
DEA	U.S. Drug Enforcement Agency
DG	design guide
DODIC	Department of Defense Identification Code
DOE	U.S. Department of Energy
DOS	Day Optic Sight
DWM	<i>Deutsche Waffen und Munitionsfabriken</i> , German weapons manufacturer
ETL	Engineering Technical Letter
FBI	Federal Bureau of Investigation
FAA	Federal Aviation Administration
FLETC	Federal Law Enforcement Training Center
FM	field manual
FMJ	Full Metal Jacket
FMJBT	Full Metal Jacket Boat Tail
FN	Fabrique Nationale or Five-seven
FPS	feet per second
FY	fiscal year
HB	heavy barrel (machine gun)
HB	Brinell hardness; pertains to armor plating (sometimes designated as HBW, BN, or BHN)
HK	Heckler & Koch
HPT	high-pressure test
IADR	initial area danger ring
IR	item at risk
MADR	mitigated area danger ring
MK	Mark
MP	machine pistol
MRBF	mean rounds between failures
NATO	North Atlantic Treaty Organization
NRC	U.S. Nuclear Regulatory Commission
NVDs	night vision devices
PDC	Protective Design Center of USACE
POC	point of contact
QD	quick detach
RG	regulatory guide
RHA	rolled homogeneous armor
ROWS	remotely operated weapon system

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RPM	rounds per minute
SAAMI	Sporting Arms and Ammunition Manufacturers' Institute
SAS	Special Air Service, the principal Special Forces organization of the British Army
SAW	Squad Automatic Weapon
SCAR	SOF Combat Assault Rifle
SCAR-H	SCAR Heavy
SCAR-L	SCAR Light
SDZ	surface danger zone
SLAP	Saboted Light Armor Penetrator
SLAP-T	Saboted Light Armor Penetrator-Tracer
SMG	submachine gun
SOF	Special Operations Forces
SPR	special purpose rifle
SRTA	Short Range Training Ammunition
STANAG	Standardization Agreement (NATO abbreviation)
SUA	special use airspace
SV	Sniper Version or Sniper Variant
TM	technical manual
UCP	Ultimate Combat Pistol
UMP	Universal Machinen-Pistole = Universal Submachine Gun
USACE	U.S. Army Corps of Engineers
U.S.C.	<i>United States Code</i>
USMC	U.S. Marine Corps
Win Mag	Winchester Magnum
WSA	Weapons Safety Assessment

GLOSSARY OF TERMS

Area Danger Ring (ADR) (not to be confused with surface danger zones)

Initial (IADR)

An encompassed area that represents the worst-case scenario of a fired round of ammunition's potential range (i.e., maximum range without considering any physical limitations on the flight of a round).

Mitigated (MADR)

An encompassed area that represents a fired round of ammunition's potential range (i.e., maximum range considering any physical limitations on the flight of a round) with mitigative measures in place to reduce the potential range or effect of the round.

Blowback

A system in which automatic or semiautomatic firearms operate through the energy created by combustion in the chamber and bore acting directly on the bolt face through the cartridge. Other operating systems are recoil operation, gas-actuated, Gatling, and chain.

Blowback System

A System in which there is no positive lock between the bolt and the barrel. The mass of the bolt and force of its recoil spring act to keep the breech closed. The expanding gases from the fired round overcome this inertia and "blow back" the breech. The breech must be kept closed until the round has left the barrel and gas pressures have subsided.

Breech Block

The block in breech-loading firearms that closes the rear of the barrel against the force of the charge and prevents gases from escaping.

Brinell Hardness (HB)

The hardness of a metal or alloy measured by hydraulically pressing a hard ball under a standard load into the specimen. Brinell hardness may also be designated as HBW, BN, or BHN.

Cannelure

(1) Ring-like groove in the jacket of a bullet, which provides a means of securely crimping the cartridge case to the bullet, analogous to the crimping groove in artillery ammunition. (2) Ring-like groove for locking the jacket of an armor-piercing bullet to the core. (3) Ring-like groove in the rotating band of a gun projectile to lessen the resistance offered to the gun rifling. (4) Ring-like groove around the base of a cartridge case where the extractor takes hold. (5) Ring-like groove cut into the outside surface of a water-cooled machine gun barrel into which packing is placed to prevent the escape of water from the breech end of the water jacket.

Collaborative Research into Small Arms Technology (CRISAT)

The NATO standard in the manufacture of military equipment. The CRISAT Target is defined as a 1.6-millimeter titanium plate (UK IMI Ti 318) supplementing 20 layers of Kevlar (UK/SC/4468), as defined in STANAG Agreement 4512. Weapons are measured against this standard in respect to their ability to penetrate, and protective equipment is manufactured to adhere to it.

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Designated Firing Position

A designated firing position predetermined by the security operating procedures. These positions can be redeployable based on the security strategy.

Enhanced Weapons

As defined in 10 CFR 73.2(b),¹ enhanced weapons are “short-barreled shotguns,” “short-barreled rifles,” and “machine guns.” These terms have the same meaning as defined in ATF regulations under 27 CFR 478.11.² Enhanced weapons do not include destructive devices as defined in 18 U.S.C. § 921(a)(4).³

Fixed Firing Position

A firing position where the weapon is fired only from a fixed mount; may include multiple fixed positions from which the weapon can be moved to another fixed mount.

Foot-Pound

A unit of work equal to the work done by a force of 1 pound acting through a distance of 1 foot in the direction of the force.

Frangible

Capable of being broken; breakable. Frangible, or “soft,” rounds are designed to break apart when they hit walls or other hard surfaces to prevent ricochets during close-quarters combat. Also known as the Advanced Energy Transfer (AET) round.

Handgun

Any firearm, including a pistol or revolver, designed to be fired by the use of a single hand. The term also includes any combination of parts from which a handgun can be assembled. See 18 U.S.C. § 921(a)(29).

Joule

A unit of work or energy equal to the work done by a force of 1 newton acting through a distance of 1 meter.

Pintle

A usually upright pivot pin on which another part turns. The pin on which a gun carriage revolves.

Rolled Homogeneous Armor (RHA)

Armor having uniform composition and heat treatment throughout. RHA is frequently characterized as “hard” or “soft.” Homogeneous hard armor typically has a Brinell hardness in excess of 400 and is unmachinable, except with special tools. Homogeneous soft armor typically has a Brinell hardness of 350 or less and is machinable. RHA is sometimes referred to as “homogeneous rolled armor.”

Sabot

(1) A lightweight carrier in which a projectile of a smaller caliber is centered so as to permit firing the projectile within a larger caliber weapon. The carrier fills the bore of the weapon from

¹ 10 CFR 73.2, “Definitions.”

² 27 CFR 478.11, “Meaning of terms.”

³ Title 18 of the U.S. Code, “Crimes and Criminal Procedure”; Chapter 44, “Firearms”; § 921, “Definitions.”

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which the projectile is fired; it is normally discarded a short distance from the muzzle. (2) A thrust-transmitting carrier that positions a missile in a gun barrel or launching tube and that prevents the escape of gas ahead of the missile. (3) Aluminum body of a high-velocity, armor-piercing tracer projectile having a tungsten carbide core; in this case, the core may be considered as the subcaliber projectile.

Stray Round

Misdirected or accidental firing and ricochets.

3. APPLICANT INFORMATION

COVER PAGE

Weapons Safety Assessment for

[Insert Licensee Name here]

[Insert Date of Document here]

WARNING: Violation of Section 147 of the Atomic Energy Act, "Safeguards Information," is subject to Civil and Criminal Penalties.

Safeguards Information Determination:
Basis DG-SGI-1, Topic #www.q: yyyymmdd
Source/Date
Designator: _____
Name/Title/Org

Or

Derived From: _____
Source/Date
Declassify On: _____
Date or Event
Classifier: _____
Name/Title/Number

3.1 Facility Background Information

For a facility-based application, the staff of the U.S. Nuclear Regulatory Commission (NRC) recommends that an applicant include the following information:

Name of the Licensee:

Docket No.:

License No.:

Applicant Document No.:

3.2 Transportation Activity Background Information

For an application involving a transportation activity (e.g., the use of enhanced weapons to escort interstate shipments of spent nuclear fuel from one NRC-licensed facility to another NRC-licensed facility), the NRC staff recommends that an applicant include the following information:

Name of the Licensee:

Docket No.:

License No.:

Applicant Document No.:


Note: An applicant should refer to the responsible licensed shipping facility or receiving facility that will be responsible for providing security for the shipments, as appropriate, in completing Chapter 4 inputs.


3.3 Information That Is Not Applicable

An applicant should identify any sections of the weapons safety assessment (WSA) that were considered not applicable for a transportation activity application:

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4. FILLABLE TEMPLATE

Holding the control key and clicking on an  symbol will open the instructions for the section.

 4-1: GENERAL INFORMATION	
1. Facility Name:	2. Submittal Date:
3. Physical Address:	4. Is this a resubmittal?
5. City, State, Zip: _____ , _____	
6. Facility Phone Number: ()	
7. Mailing Address:	
8. City, State, Zip: _____ , _____	
9. Mailing Address Phone Number: ()	
10. Applicant Point of Contact (POC):	
11. Position Title of Applicant POC:	
12. Work Phone No.:	()
13. Alternate Phone No.:	()
14. POC's E-Mail Address:	
15. Alternate POC:	
16. Position Title of Alternate POC:	
17. Work Phone No.:	()
18. Alternate Phone No.:	()
19. Alternate POC's E-Mail Address:	
20. Plant Manager:	
21. Work Phone No:	()
22. Alternate Phone No:	()
23. Plant Manager's E-Mail Address:	

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4-2: DESIRED WEAPON

(A WSA is required for each enhanced weapon type desired. If multiple enhanced weapons are desired, a WSA must be submitted for each specific weapon.)

24. Select an enhanced weapon category:

(For weapons classified as both short-barreled shotgun and machine gun, select short-barreled shotgun. For weapons classified as both short-barreled rifle and machine gun, select short-barreled rifle. Weapons capable of full automatic or burst in addition to semi-automatic are classified as machine guns.)

25. Identify a manufacturer, model, and caliber/gauge representative of the weapon desired.

26. Enter the maximum range (meters):



4-3: AMMUNITION USED

NOTE: An applicant should consult the weapon manufacturer's documentation for recommended/acceptable ammunition for the selected weapon system.

27. Check all of the ammunition types below that are to be used with this weapon.

Type of Ammunition					
<input type="checkbox"/>	Ball	<input type="checkbox"/>	Tracer	<input type="checkbox"/>	Plastic (less lethal)
<input type="checkbox"/>	Armor Piercing	<input type="checkbox"/>	Hollow Point	<input type="checkbox"/>	Frangible
<input type="checkbox"/>	Slug	<input type="checkbox"/>	Buckshot	<input type="checkbox"/>	Birdshot
<input type="checkbox"/>	Other (specify):				

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4-4: WEAPON DEPLOYMENT AND TRAINING

28. Check all types of deployment for the weapon. Check all that apply.

<input type="checkbox"/>	The weapon will be used in a remotely operated weapon system (ROWS) from fixed position/s. (If checked, applicant <i>must</i> describe system in Item 31.)
<input type="checkbox"/>	The weapon will be fired from fixed position(s) (i.e., attached to pre-positioned mount or mounts).
<input type="checkbox"/>	The weapon will be used from a designated firing point/s (e.g., guard towers, roof tops, etc.).
<input type="checkbox"/>	The weapon will be used while patrolling the property (e.g., foot patrols, vehicle patrols, etc.).
<input type="checkbox"/>	The weapon will be used inside facility buildings (e.g., interior fighting position, checkpoints, patrols, etc.).
<input type="checkbox"/>	The weapon will be used only within a small defined area of the property.
<input type="checkbox"/>	The weapon will be used in many situations and areas of the property.

29. **Additional description of weapon deployment:**

(Describe how and where this weapon will be used to implement the licensee’s protective strategy. Include fixed positions or how the weapon will be carried, either by individuals or roving patrol (i.e., “locked in a rack” or “loaded with unchambered round,” etc.). Also note if the weapon will be replacing a different caliber weapon.)

30. **Range Cards.** Create a Standard Range Card for any enhanced weapon that is being used from a fixed position or designated firing position and attach the card to the end of the WSA. A Standard Range Card is not required for mobile positions but may be considered as appropriate. (See *WSA Reference Information volume for guidance; note that all manuals change periodically, and a Web search should be conducted to ensure that the latest version of a given manual is being used.*)

31. **ROWS Discussion:** If a remotely operated weapons system will be combined with an enhanced weapon, then provide the following information:

- a. Describe how many ROWS will be in use at the facility.
- b. Describe where these ROWS will be placed.
- c. Describe where the ROWS will be controlled from (location).
- d. Describe how many ROWs each operator will control.
- e. Describe any restrictions on field of fire.
- f. Describe any steps taken or conditions of the site that avoid crossfire.

32. **Advanced Training.** Select level of advanced training: Attach supporting documentation describing the advanced training.

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4-5: MAP INFORMATION

Maps and other documents can be referred to or sent as electronic or paper attachments. An applicant is responsible for submitting all maps, facility diagrams, Standard Range Cards, and other materials used to determine encroachments, buffer zones, and mitigating measures, risk items, likelihoods, and consequences.

33. Provide any pertinent map comments or explanations:



4-6: INITIAL AREA DANGER RING

Create the initial area danger ring (IADR), following the instructions in Volume 1.

Depending on weapons desired, ammunition used, deployment, and site geometry, an IADR may be composed of multiple individual rings rather than a single continuous ring. Refer to Volume 4, Appendix A, for examples of constructing IADRs.



4-7: PROPERTY BOUNDARY ASSESSMENT AND ENCROACHMENT ISSUES

34. Enter the percentage of each type of boundary buffer or encroachment type that surrounds the facility. These percentages should total 100. Double-click on the table below to open the Excel object for inputting data. Click outside the table to close.

Buffers	%	Buffers	%
River		Lake	
Ocean		Federal Property	
State Property		Farmland or Undeveloped Property	
Other Buffer			
Encroachments		Encroachments	
Residential Area		Light Industry	
Heavy Industry		Retail Property	
Recreational Areas		Other Encroachment	
		Total	0

Risk Level	1	Very Low
Percent Encroachment	0	

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35. Describe any pertinent information pertaining to property buffer or encroachment areas (i.e., describe the usage of any property owned by Federal, State, or local governments such as parks, recreation, military purposes). Describe natural barriers such as mountains, sloping terrain, manmade earthen berms, etc. An applicant should add to, or update, Item 35 as necessary while working through Items 36-40, as map comments may arise throughout the process of completing this template.



4-8: RISK IDENTIFICATION, EVALUATION, AND MITIGATION

Risk Items

Identify all risk items within the IADR. Assign each risk item a level of likelihood and consequence. Empty spaces are left in the tables for the addition of other risk items that are not already identified. Note: Items can be mitigated as a group if they are in close proximity to each other and have similar “likelihood and consequence.”

The NRC staff recommends as a good practice that an applicant’s initial risk identification involve multiple knowledgeable staff members from various elements of an applicant’s organization.

If the WSA relies on certain measures to mitigate risk items, then the NRC’s approval of the application may be conditioned upon implementation of these measures. The licensee will commit to these mitigation measures in their physical security plan. and These commitments will be subject to inspection by the NRC.

36. Hazardous (Reactivity, Flammability, and Health) Risks in the ADR

For evaluating risk items associated with chemicals and the potential release of chemical gases, fire, or explosions, first consider chemicals and fuels stored at the facility, but also consider that storage tanks 500–1,500 meters away can easily be punctured by some of the ammunitions listed in Section 2 of the WSA Reference Information volume. Consult a facility chemist or chemical engineer on the assessment of these chemicals. An applicant is responsible for determining the content of the table input and analyzing the risks.

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36. Hazardous (Reactivity, Flammability, and Health) Risks in the ADR.
(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)

Item ID	Risk Item	Inside ADR ¹		Likelihood of Strike	Consequence of Strike ²	Risk Level	
		Initial	Mitigated				
36a				N/A	N/A	0	N/A
36b				N/A	N/A	0	N/A
36c				N/A	N/A	0	N/A
36d				N/A	N/A	0	N/A
36e				N/A	N/A	0	N/A
36f				N/A	N/A	0	N/A
36g				N/A	N/A	0	N/A
36h				N/A	N/A	0	N/A
36i				N/A	N/A	0	N/A
36j				N/A	N/A	0	N/A
36k				N/A	N/A	0	N/A
36l				N/A	N/A	0	N/A
36m				N/A	N/A	0	N/A
36n				N/A	N/A	0	N/A
36o				N/A	N/A	0	N/A
36p				N/A	N/A	0	N/A
36q				N/A	N/A	0	N/A
36r				N/A	N/A	0	N/A
36s				N/A	N/A	0	N/A
36t				N/A	N/A	0	N/A
36u				N/A	N/A	0	N/A

Input is complete.				Average Risk Level in MADR		0.00	
Enter factor for training mitigation (submit supporting documentation),						0.00	
Enhanced Training=0.25 / Specialized Training=0.50.							
				Mitigated Risk Level		0.00	

Enter mitigated risk level in section 2-10 summary table.

- 1 - For each item inside the Initial ADR but outside Mitigated ADR explain mitigating circumstances in the corresponding discussion field.
- 2 - If mitigating circumstances (e.g. risk item is buried, behind barrier that round being considered cannot penetrate, etc.) exist or are planned, explain in corresponding discussion area below.

SECURITY BANNER HERE

36. Justify the likelihood and consequence levels for each risk item in the areas provided below. Select the type of mitigation for each risk item. Describe in detail the single or multiple mitigation steps taken to alleviate or lower the risk factor. The "Other Discussion" field can be used for any additional information supporting risk mitigation.			
36a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36b. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36c. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36d. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36e. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36f. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36g. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36h. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36i. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

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36j. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36k. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36l. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36m. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36n. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36o. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36p. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36q. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36r. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36s. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

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36t. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
36u. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

37. Key Facilities/Areas Inside the PA
For evaluating risk items associated with key facilities and areas inside the protected area (PA), consider risk items that are not always obvious (for example, a diesel generator that, if destroyed, would not be hazardous, but is a vital backup power source).
Note: An applicant should include those systems, structures, components, and operator actions that, if unable to perform their required function, could lead to an accidental criticality, dispersal of special nuclear material, significant core damage, radiological sabotage, or dispersal of spent nuclear fuel (SNF). This section identifies key facilities or areas within the sectors of fire. All facilities should be identified, and risks associated with each should be categorized as pertaining to "Public Health and Safety" or "Business," with consideration of how a risk item affects future plant operations. Refer to the instructions in Volume 1 for additional information.

Please scroll to the next table. Do not "Tab."

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37. Key Facilities/Areas Inside the PA								
<i>(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)</i>								
Item ID	Risk Item ¹	Inside ADR ²		Likelihood of Strike	Consequence of Strike ³	Rated	Risk Level	
		Initial	Mitigated					
37a				N/A	N/A		0	N/A
37b				N/A	N/A		0	N/A
37c				N/A	N/A		0	N/A
37d				N/A	N/A		0	N/A
37e				N/A	N/A		0	N/A
37f				N/A	N/A		0	N/A
37g				N/A	N/A		0	N/A
37h				N/A	N/A		0	N/A
37i				N/A	N/A		0	N/A
37j				N/A	N/A		0	N/A
37k				N/A	N/A		0	N/A
37l				N/A	N/A		0	N/A
37m				N/A	N/A		0	N/A
37n				N/A	N/A		0	N/A
37o				N/A	N/A		0	N/A
37p				N/A	N/A		0	N/A
37q				N/A	N/A		0	N/A
37r				N/A	N/A		0	N/A
37s				N/A	N/A		0	N/A
37t				N/A	N/A		0	N/A
37u				N/A	N/A		0	N/A
Input is complete.				Average Risk Level in MADR			0.00	

Enter factor for training mitigation (submit supporting documentation),
Enhanced Training=0.25 / Specialized Training=0.50. 0.00

Mitigated Risk Level	0.00
-----------------------------	-------------

Enter mitigated risk level in section 2-10 summary table.

1 - Assume all buildings are un-occupied and include people that would normally be in these buildings in Question 41.

2 - For each item inside the Initial ADR but outside Mitigated ADR explain mitigating circumstances in the corresponding discussion field.

3 - If mitigating circumstances (e.g. risk item is buried, behind barrier that round being considered cannot penetrate, etc.) exist or are planned, explain in corresponding discussion area below.

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37. Justify the likelihood and consequence levels for each risk item in the areas provided below. Select the Type of Mitigation for each risk item. Describe in detail the single or multiple mitigation steps taken to alleviate or lower the risk factor. Use the "Other Discussion" field for any additional information supporting risk mitigation.			
37a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37b. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37c. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37d. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37e. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37f. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37g. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37h. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37i. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

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37j. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37k. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37l. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37m. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37n. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37o. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37p. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37q. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37r. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37s. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

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37t. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
37u. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

38. Key Facilities/Areas outside the PA but on the Facility's Property
Evaluate Risk Items associated with key facilities and areas outside the facility's PA but within the facility's site boundary. Consider Risk Items that are not always obvious; for example, a diesel generator that if destroyed would not be hazardous by itself, but that is a vital backup power source.
Note: An applicant should include those systems, structures, components, and operator actions that, if unable to perform their required function, could lead to an accidental criticality, dispersal of special nuclear material, significant core damage, radiological sabotage, or dispersal of spent nuclear fuel. This section identifies key facilities or areas within the sectors of fire outside the PA. All facilities should be identified and the risks associated with each should be categorized as pertaining to "Public Health and Safety" or "Business," with consideration of how the risk item affects future plant operations. Refer to the instructions in Volume 1 for additional information.

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38. Key Facilities/Areas Outside the PA but on the Facility's Property
(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)

Item ID	Risk Item ¹	Inside ADR ²		Likelihood of Strike	Consequence of Strike ³	Rated	Risk Level	
		Initial	Mitigated					
38a				N/A	N/A		0	N/A
38b				N/A	N/A		0	N/A
38c				N/A	N/A		0	N/A
38d				N/A	N/A		0	N/A
38e				N/A	N/A		0	N/A
38f				N/A	N/A		0	N/A
38g				N/A	N/A		0	N/A
38h				N/A	N/A		0	N/A
38i				N/A	N/A		0	N/A
38j				N/A	N/A		0	N/A
38k				N/A	N/A		0	N/A
38l				N/A	N/A		0	N/A
38m				N/A	N/A		0	N/A
38n				N/A	N/A		0	N/A
38o				N/A	N/A		0	N/A
38p				N/A	N/A		0	N/A
38q				N/A	N/A		0	N/A
38r				N/A	N/A		0	N/A
38s				N/A	N/A		0	N/A
38t				N/A	N/A		0	N/A
38u				N/A	N/A		0	N/A
Input is complete.				Average Risk Level in MADR			0.00	

Enter factor for training mitigation (submit supporting documentation),
 Enhanced Training=0.25 / Specialized Training=0.50. 0.00

Mitigated Risk Level	0.00
-----------------------------	------

Enter mitigated risk level in section 2-10 summary table.

1 - Assume all buildings are un-occupied and include people that would normally be in these buildings in Question 41.

2 - For each item inside the Initial ADR but outside Mitigated ADR explain mitigating circumstances in the corresponding discussion field.

3 - If mitigating circumstances (e.g. risk item is buried, behind barrier that round being considered cannot penetrate, etc.) exist or are planned, explain in corresponding discussion area below.

SECURITY BANNER HERE

38. Justify the likelihood and consequence levels for each risk item in the areas provided below. Select the type of mitigation for each risk item. Describe in detail the single or multiple mitigation steps taken to alleviate or lower the risk factor. Use the "Other Discussion" field for any additional information supporting risk mitigation.			
38a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38b. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38c. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38d. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38e. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38f. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38g. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38h. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38i. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

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38j. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38k. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38l. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38m. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38n. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38o. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38p. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38q. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38r. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38s. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

SECURITY BANNER HERE

38t. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
38u. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

39. Key Facilities/Areas Outside the Property Boundaries
<p>For evaluating risk items associated with key facilities outside an applicant’s property boundaries, refer often to the IADR created in Section 2.6 of Volume 1, “Template Instructions.” An applicant should create lists of structures, companies, shopping areas, and facilities within the IADR, and then discuss how a stray round may affect that item and if there are other barriers that would lessen the chance of a stray round reaching the item. This section identifies key facilities or areas within the sectors of fire. All facilities should be identified, and the risks associated with each should be categorized as pertaining to “Public Health and Safety” or “Business,” with consideration of how the risk item affects future plant operations. Refer to the instructions in Volume 1 for additional information.</p>

Please scroll to the next table. Do not “Tab.”

SECURITY BANNER HERE

39. Key Facilities/Areas Outside the Property Boundaries
(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)

Item ID	Risk Item ¹	Inside ADR ²		Likelihood of Strike	Consequence of Strike ³	Risk Level	
		Initial	Mitigated				
39a				N/A	N/A	0	N/A
39b				N/A	N/A	0	N/A
39c				N/A	N/A	0	N/A
39d				N/A	N/A	0	N/A
39e				N/A	N/A	0	N/A
39f				N/A	N/A	0	N/A
39g				N/A	N/A	0	N/A
39h				N/A	N/A	0	N/A
39i				N/A	N/A	0	N/A
39j				N/A	N/A	0	N/A
39k				N/A	N/A	0	N/A
39l				N/A	N/A	0	N/A
39m				N/A	N/A	0	N/A
39n				N/A	N/A	0	N/A
39o				N/A	N/A	0	N/A
39p				N/A	N/A	0	N/A
39q				N/A	N/A	0	N/A
39r				N/A	N/A	0	N/A
39s				N/A	N/A	0	N/A
39t				N/A	N/A	0	N/A
39u				N/A	N/A	0	N/A

Input is complete.				Average Risk Level in MADR		0.00	
Enter factor for training mitigation (submit supporting documentation), Enhanced Training=0.25 / Specialized Training=0.50.						0.00	
				Mitigated Risk Level		0.00	

Enter mitigated risk level in section 2-10 summary table.

1 - Assume all buildings are un-occupied and include people that would normally be in these buildings in Question 41.

2 - For each item inside the Initial ADR but outside Mitigated ADR explain mitigating circumstances in the corresponding discussion field.

3 - If mitigating circumstances (e.g. risk item is buried, behind barrier that round being considered cannot penetrate, etc.) exist or are planned, explain in corresponding discussion area below.

SECURITY BANNER HERE

39. Justify the likelihood and consequence levels for each risk item in the areas provided below. Select the type of mitigation for each risk item. Describe in detail the single or multiple mitigation steps taken to alleviate or lower the risk factor. Use the "Other Discussion" field for any additional information supporting risk mitigation.			
39a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39b. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39c. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39d. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39e. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39f. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39g. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39h. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39i. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

SECURITY BANNER HERE

39j. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39k. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39l. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39m. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39n. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39o. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39p. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39q. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39r. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39s. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

SECURITY BANNER HERE

39t. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
39u. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

40. Critical Asset Items Outside the Property Boundaries (Refer to ADR Assessment)
For evaluating risk items associated with critical asset items outside the property boundaries, refer often to the IADR created in Section 2.6 of Volume 1, "Template Instructions." An applicant should create lists of any other risk items that have not been covered in the analysis from previous sections. List these items within the ring, then discuss how a stray round may affect that item and if there are other barriers that would lessen the chance of a stray round reaching the item. This section identifies critical assets within the sectors of fire. All critical assets should be identified, and risks associated with each categorized as pertaining to "Public Health and Safety" or "Business," with consideration of how the risk item affects future plant operations. Refer to the instructions in Volume 1 for additional information.

Please scroll to the next table. Do not "Tab."

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40. Critical Asset Items Outside the Property Boundaries
(Double click on the table to open Excel for inputting data. Enable Macros if screen appears.)

Item ID	Risk Item	Inside ADR ¹		Likelihood of Strike	Consequence of Strike ²	Risk Level	
		Initial	Mitigated				
40a				N/A	N/A	0	N/A
40b				N/A	N/A	0	N/A
40c				N/A	N/A	0	N/A
40d				N/A	N/A	0	N/A
40e				N/A	N/A	0	N/A
40f				N/A	N/A	0	N/A
40g				N/A	N/A	0	N/A
40h				N/A	N/A	0	N/A
40i				N/A	N/A	0	N/A
40j				N/A	N/A	0	N/A
40k				N/A	N/A	0	N/A
40l				N/A	N/A	0	N/A
40m				N/A	N/A	0	N/A
40n				N/A	N/A	0	N/A
40o				N/A	N/A	0	N/A
40p				N/A	N/A	0	N/A
40q				N/A	N/A	0	N/A
40r				N/A	N/A	0	N/A
40s				N/A	N/A	0	N/A
40t				N/A	N/A	0	N/A
40u				N/A	N/A	0	N/A

Input is complete.				Average Risk Level in MADR		0.00	
Enter factor for training mitigation (submit supporting documentation), Enhanced Training=0.25 / Specialized Training=0.50.						0.00	
				Mitigated Risk Level		0.00	

Enter mitigated risk level in section 2-10 summary table.

1 - For each item inside the Initial ADR but outside Mitigated ADR explain mitigating circumstances in the corresponding discussion field.

2 - If mitigating circumstances (e.g. risk item is buried, behind barrier that round being considered cannot penetrate, etc.) exist or are planned, explain in corresponding discussion area below.

SECURITY BANNER HERE


40. Justify the likelihood and consequence levels for each risk item in the areas provided below. Select the type of mitigation for each risk item. Describe in detail the single or multiple mitigation steps taken to alleviate or lower the risk factor. Use the "Other Discussion" field for any additional information supporting risk mitigation.			
40a. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40b. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40c. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40d. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40e. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40f. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40g. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40h. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40i. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			


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40j. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40k. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40l. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40m. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40n. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40o. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40p. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40q. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40r. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40s. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			

SECURITY BANNER HERE

40t. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			
40u. Justification of Likelihood & Consequence Levels:			
Mitigation Taken:			
Type of Mitigation:	<input type="checkbox"/> Procedural	<input type="checkbox"/> Physical	<input type="checkbox"/> Combination
Other Discussion:			


4-9: MITIGATED AREA DANGER RING
<p>Refer to Volume 1 for instructions on creating a map of the mitigated area danger ring (MADR). After the MADR map has been created, review the risk items in Items 36–40, and change the value in the “MADR” column to “No” for each risk item no longer in the MADR footprint.</p> <p>Depending on the weapons desired, deployment, limitations on round travel, and site geometry, the MADR may be composed of multiple individual rings rather than a single continuous ring. Refer to Volume 4, Appendix A, for information and examples of constructing an MADR.</p> <p>NOTE: Items 41–43 should be answered for the MADR footprint or for the IADR footprint if there are no mitigating factors to reduce the IADR.</p>
41. What is the estimated population density within the MADR (people/square mile)?
42. Is the population evenly distributed within the MADR?
43. If “No,” describe the population distribution. (Example 1, since the facility has a lake on the eastern side, most of the population is on the northern, southern, and western sides of the facility. Example 2, a continuously staffed fire station is located west of the facility.)



4-10: TRAINING AND WEAPON MAINTENANCE

44. Does an applicant have a firing range on the facility property.

45. If yes, will training for this weapon be on the facility's range?

45a. Has the local Federal Aviation Administration office been contacted to determine if special use airspace needs to be established in the vicinity of the training range when enhanced weapons are in use?

45b. Summarize the results of discussions with the Federal Aviation Administration and include information for point of contact (i.e., name and telephone numbers).

46. Who uses the onsite firing range?

47. If the existing range will not support training for this weapon, where will training take place?

48. What reference materials were used for modifying the existing training and weapon maintenance plans (e.g., military standards, National Rifle Association documents).


49. RESERVED



4-11: RISK ACCEPTABILITY

50. An applicant has reviewed the risks associated with using this weapon and the selected ammunition(s). **An applicant finds the risks to be _____ for this facility or transportation activity.**

If an applicant finds the risks associated with using this weapon system at the facility unacceptable, the NRC may not authorize the requested enhanced weapon system. Volume 1 provides additional guidance.



4-12: SUMMARY OF RISK IDENTIFICATION, EVALUATION, AND MITIGATION

In this section, enter the mitigated risk levels calculated in Items 38 through 42.

Item	Mitigated Risk Level
51. Chemical and Petroleum/Fuel Risks in the ADR (from Item 36)	
52. Key Facilities/Areas inside the PA (from Item 37)	
53. Key Facilities/Areas outside the PA but on the Facility's Property (from Item 38)	

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54. Key Facilities/Areas outside the Property Boundaries (from Item 39)	
55. Critical Asset Items outside the Property Boundaries (from Item 40)	

BIBLIOGRAPHIC DATA SHEET

(See instructions on the reverse)

Weapons Safety Assessment

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P. Brochman, H. Stone

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Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

10. SUPPLEMENTARY NOTES

P. Brochman

11. ABSTRACT (200 words or less)

The regulations of the U.S. Nuclear Regulatory Commission (NRC) require an applicant for combined preemption authority and enhanced weapons authority to submit a Weapons Safety Assessment (WSA) as part of its application. This document sets forth a process that the NRC staff finds acceptable for use by an applicant in developing a WSA. The information in this document can be used by an applicant to evaluate the potential onsite and offsite safety hazards, safety impacts, or safety risks and any onsite security risks that could arise from the deployment and potential use of enhanced weapons (e.g., machine guns) as part of a licensee's protective strategy for defending against malevolent acts. Based on its assessment of these hazards, impacts, or risks, an applicant should identify preventive or mitigative measures that it intends to implement upon the deployment of enhanced weapons.

Volume 2 of the WSA document consists of Chapter 3, "Applicant Information," and Chapter 4, "Fillable Template."

12. KEY WORDS/DESCRIPTORS (List words or phrases that will assist researchers in locating the report.)

Weapons Safety Assessment,
enhanced weapons,
automatic weapons,
machine guns,
security
area danger rings

13. AVAILABILITY STATEMENT

unlimited

14. SECURITY CLASSIFICATION

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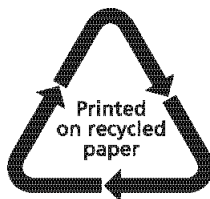
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