

Summary of Comments on the Public Notice for the Proposed Information Collection for Steam Electric Power Generating Effluent Guidelines and EPA's Response¹

Comment	Response
60 Day Response Time	
a. 60 days to complete and submit the ICR (which requests a high volume of data, high quality data, and historical data) is not sufficient and generally unworkable. EPA should allow a minimum of 180 days to complete the survey. b. Many of the individuals that will be required to provide information hold positions in which they perform activities essential to maintaining and operating out power plants. These individuals cannot be spared to do weeks or months of work on the ICR in a condensed time period. Instead, they will have to work their schedules after certain duties have been completed. c. It is unreasonable to expect the "most knowledgeable person" or the "best engineering estimate" to be available in the 60 day timeframe. d. Response time should be extended considering the government forms and other ICRs facilities are required to complete and submit. e. When EPA distributed the 316(b) survey in 2000, the response time was 90 days to complete a survey that was less than one half the length of this questionnaire. f. Response time should be extended to accommodate small utilities, co-owned utilities, and companies that own multiple utilities. g. The general criteria for an extension request should be laid out. EPA should reply to extension requests in a fair and timely manner.	a., b., and c. EPA has carefully evaluated the time required to complete the questionnaire, including reviewing comments on this topic, and continues to believe that 60 days is sufficient time for completing the questionnaire. Should individual plants have extenuating circumstances that result in the need for additional time, they can request an extension. EPA will consider each extension request on a case-by-case basis. EPA is aware that, literally, the "most knowledgeable person" may not be accessible for this questionnaire and has revised the instructions to use the term "personnel knowledgeable in." EPA disagrees with the comment about "best engineering estimate." The expectation is that respondents will make the engineering estimate as reflects the scope and context, including the time constraint of the ICR. This approach actually provides a reasonable degree of flexibility to respondents and avoids imposing the burden of collecting measurement data (other than leachate sampling) for the express purpose of responding to ICR questions. d. and e. EPA has structured the questionnaire in a manner that allows plants to efficiently compile the necessary information, including use of divisible parts that can be distributed among plant staff. The time provided for responding to other surveys is not relevant to the time plants will need to complete this ICR. EPA notes that the steam electric questionnaire will be distributed no earlier than May 2010. Therefore, EPA does not anticipate any overlap with collection activities such as EIA and FERC. f. EPA recognizes the concern raised but believes sufficient time is being provided to complete the survey. EPA has reduced burden for coal-fired plants operated by small entities by excluding them from Parts E, F, and G. The questionnaire is structured so that individual plants (i.e., plant staff) will be completing the survey, therefore the fact that plants may be co-owned or that

¹ Question numbers referred to throughout this table refer to the 1st FRN version of the questionnaire.

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	companies operate multiple facilities alone is not sufficient reason to provide additional time for completing the ICR. g. See the response to a-f. EPA will not automatically grant extensions for this ICR. Each extension request will be considered on a case-by-case basis and EPA will respond in a timely manner. Until they receive EPA's response to a request for additional time, plants should not delay responding to the questionnaire.
Defining the Scope of the ICR	
a. Facilities that do not possess a NPDES permit should not be required to respond to the questionnaire. b. Facilities that have no discharges associated to the effluent limitation guidelines should not have to respond to the questionnaire. Many of the questions request analytical data but have no indication of final discharge. When these discharges go to evaporative systems or are recycled back into the plant system there often are not adequate responses provided in the questionnaire. c. Zero liquid discharge facilities should not be included in the scope of this questionnaire. d. Participants of the 2007 <i>Data Request for the Steam Electric Power Generating Industry</i> should not be included in the scope of this questionnaire. e. Consider "screener" surveys and/or questionnaires to gather information from the coal-fired power plant population. f. Plants that are closing and/or repowering in 2009 should not be included in the scope of this questionnaire. g. Small businesses should not be included in the scope of this questionnaire.	a., b., and c. Information from plants that do not discharge wastewater is relevant to the rulemaking process because it provide valuable insight to approaches to reduce or eliminate pollutant discharges and it will be factored into the development and consideration of effluent guidelines options for other plants. Therefore, these plants remain within the scope of this ICR. d. This ICR collects more broad operational data and financial data that were not obtained by the 2007 data request and that is not obtainable through other sources; therefore, those facilities remain within the scope of this questionnaire. Also see Part A of the supporting statement. e. EPA did not elect to statistically sample a subset of the coal-fired power industry for Parts A through D and I due to the number and types of factors to be considered regarding FGD and ash operations, and the limited data available for identifying these factors at power plants to the extent necessary for establishing and defining strata for statistical sampling, as well as the individual plants that populate each sampling strata. Throughout the detailed study and during initial rulemaking activities, stakeholders have stressed the need to evaluate how variability in equipment and operating practices between plants affect wastewater discharges. In addition, stakeholders expressed concern over properly accounting for the financial conditions at each plant, considering ownership of individual generating units including, in a number of instances, multiple partial owners. EPA considered an approach that would issue a screener survey followed by a more

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	detailed questionnaire to selected plants, but determined that the wide range of variables to be evaluated would still result in a wide cross-section of the industry being selected for the detailed questionnaire. Despite the commenter's suggestion to issue a screener, it should be noted that the comment identified more than sixty factors that should serve as strata for statistically sampling plants; this is without accounting for financial strata criteria and other technical factors of interest. Given this situation, a screener questionnaire would be rather extensive itself, and in the end possibly would not substantially reduce the number of coal-fired plants that would receive the detailed questionnaire. The types of operations and the associated process wastewaters can change from facility to facility depending on factors, such as the type of coal burned, air pollution controls in place, type of wet FGD absorber design, FGD wastewater treatment, type of ash handling system, ash pond management, type of cooling water system, and the water source. Considering the large number of characteristics to be evaluated and the limited data currently available, EPA will distribute Parts A through D and I of this questionnaire to all coal-fired power plants. f. EPA has revised the questionnaire so that facilities that are permanently retired or will be permanently retired by December 31, 2011 will have to complete only a few questions at the beginning of the survey. However, plants that are repowering and will resume operating must complete the survey. g. EPA will include small businesses in the scope of this questionnaire to obtain information necessary to understand their operations and how changes imposed by revised effluent guidelines would affect them operationally or financially. However, to reduce burden imposed on these entities EPA is excluding coal-fired plants operated by small entities from responding to Parts E, F, and G.
Notification of the ICR	
a. EPA should provide the list of respondents prior to the mail out of the questionnaire.	a. EPA does not intend to publish the list of facility recipients prior to mail of the questionnaire because doing so could potentially jeopardize CBI responses, or force EPA to aggregate CBI (to prevent revealing CBI) in such a manner

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b. EPA should notify trade associations and industry of any changes made to the questionnaire (from the 1 st FRN Draft) prior to the 2 nd FRN publication.	that makes it more difficult for the public to view details of EPA's regulatory analysis.. b. EPA has continued outreach with industry and other stakeholders to discuss plans and potential ICR revisions, as appropriate. A revised questionnaire will be published as part of the 2nd FRN and the public will then have an additional opportunity to review and submit comments on the ICR.
<i>Distribution of the ICR</i>	
a. If the distribution of the questionnaire happens in the May-June 2010 period it would be very difficult to spend 200 to 500 hours answering the questionnaire for each facility. Facilities also have to file routine reports such as DMRs and TRI reports by July 1st. Suggest distributing the questionnaire after July 1st. b. Delay the ICR until January 2011 to reduce burden on respondents, as well as increase the utility of the ICR. c. There should be some consideration given, when distributing the ICR, to the other ICRs that facilities will be required to respond to. d. EPA should delay the distribution of the ICR until after the pending CCR Rule (specifically questions and requirements regarding ash handling and leachate sampling). It is likely that the CCR rule will have a significant impact on cement management practices for fly ash, bottom ash, FGD scrubber solids, etc. When the CCR rule is finalized, the information for Part B, C, D, and G could be largely obsolete.	a., b., and c. EPA is aware that the questionnaire may be distributed at a time when plants are engaged in other data collection and reporting efforts. However, EPA recognizes that some of these efforts are year-round and/or recurring activities for which plants are already staffed, and that it is impossible to avoid all other data collection efforts. In addition, this ICR will occur after plants have completed efforts for EIA and FERC, and much of the Utility MACT ICR. The proposed effluent guidelines are scheduled for publication in 2012. In order to meet this deadline, data collection must occur by mid-2010. d. EPA has made every effort to reduce or eliminate overlap of industry data collected, and to tailor this questionnaire to information necessary to revise ELGs. Although EPA recognizes that future changes may occur in the handling of CCR, the data requested on current and past operations will still be useful in evaluation technologies for control of wastewater discharges. Also see response to comments for Part C and G.
<i>Development of the Questionnaire</i>	
a. In developing this ICR, EPA has not been willing to discuss industry concerns and adopt suggestions as EPA has been in the context of other ICRs. b. This ICR attempts to better understand power plant operations with regard to water discharges for a number of different plant designs. However, based on trade association experience, the chemistry of trace elements and their partitioning to the water stream is not well understood, and the existing data will not be sufficient in terms of quality and breadth to allow Agency to project water impacts.	a. EPA encourages industry input and has consistently kept an open door to facilitate communications over the course of the detailed study and for this rulemaking, including the ICR development. See the docket for information about outreach and technical discussions with industry and other stakeholders. b. EPA feels that the questionnaire requests appropriate current and planned data to understand current and future discharges in the industry. EPA encourages discussions with industry on content of and ways to continually improve the questionnaire. In addition, EPA invites stakeholders to provide additional data they believe EPA needs to project water impacts.
<i>All Parts/Definitions/Terms</i>	

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a. EPA should prepare a list of definitions/glossary for terms found within the ICR. b. The Utility Water Act Group (“UWAG”) submitted a letter to EPA requesting that EPA provide definitions for several undefined terms used throughout the draft questionnaire. EPA should formally respond to the request. c. To ensure consistent understanding by both EPA and the industry, it is imperative that EPA make its glossary available for public comment before sending the proposed ICR to OMB for review. d. EPA has failed to provide adequate notice because of the lack of a glossary and incomplete nature of the draft questionnaire. e. Request for “planned” activities will likely yield inconsistent results. EPA needs to define “planned” and “future” in both scope and scale. f. In order to facilitate completion of the questionnaire as soon as possible, a detailed table of contents is needed.	a., b., and c. EPA prepared a glossary of terms for the questionnaire and considered UWAG’s recommendations in developing the glossary. EPA shared this draft glossary with stakeholders in advance of the second FR notice and received extensive feedback from industry. These suggestions were considered in revising the glossary, which is included in the current version of the ICR. d. EPA disagrees that the Agency failed to provide adequate notice. EPA also disagrees that because a separate list of definitions was not provided with the draft questionnaire, that it is not possible for the public to provide meaningful comment. Many of the terms were defined within the instructions and questions of the survey. e. EPA has revised the questionnaire to more specifically instruct facilities on the request for “planned” and “future” activities. f. EPA will include a Table of Contents in the questionnaire.
<i>Request for 2008/2009 Data</i>	
a. Requesting 2008 data as the most recent year would allow companies to start gathering information sooner. 2008 data is already available and given the economic downturn late in 2008, the argument could be made that 2008 was a more representative year for facilities than 2009.	a. EPA has minimized the specific request for 2009 data to the extent necessary. In many instances, EPA does not limit the request to a specific year and instead asks for data that represent “normal operations”. The comment page provides an opportunity to identify any atypical data. EPA will ask for 2009, where appropriate, to establish consistency among responses.
<i>Overlap with Existing Data</i>	
a. A number of questions request information which appears to be available via the Energy Information Administration (EIA)/Federal Energy Regulatory Commission (FERC) databases. Where possible, utilization of existing resources would reduce unnecessary efforts by the Agency and respondents. b. Under section 3506(c)(3)(B) of the Paperwork Reduction Act, EPA must certify to OMB that the information sought under an ICR is not unnecessarily duplicative of information otherwise reasonably accessible to the agency. Commenters believe that EPA’s proposed ICR does not meet this standard. Questions in the proposed ICR overlap with information that is proposed to be collected by EPA under the ICR for developing MACT standards for coal- and oil-fired electric utility steam generating units (the “Utility MACT ICR”). Thus, the Office of Water must use information that will be collected by the Office of	a. EPA has completed a thorough review of the entire questionnaire for potential overlap with other sources (e.g., EIA, FERC). Following this review, EPA deleted or revised certain requests or otherwise attempted to minimize re-providing the exact information in more than one report (except where needed for identification purposes). Specific overlap has been addressed in the specific comment responses for each part. b. EPA has completed a thorough review of the entire questionnaire for overlap with other completed or ongoing ICRs (including the Utility MACT ICR and the ORCR data). Where possible, EPA has deleted or revised questions to minimize or eliminate overlap. Specific overlap has been addressed in specific comment responses for each part.

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Air and Radiation as well as information that has already been collected by the Office of Solid Waste and Emergency Response, instead of collecting duplicate information.	
<i>Electronic Format for the Questionnaire</i>	
a. In a recent EPA-sponsored conference call, EPA personnel asked for recommendations for software to be used for the electronic version of the ICR. After review, EPA should use MS Excel. b. EPA should thoroughly test the electronic version of the questionnaire before release.	a. and b. EPA is using MS Excel as the format for the electronic questionnaire. This format is being distributed as part of the 2nd FRN to gather additional input on format and allow stakeholders the opportunity to test it before distribution. In addition, EPA has conducted initial testing and will continue testing the questionnaire prior to its distribution. This electronic method was created to minimize burden on the industry and ensure efficient processing of the collected data.
<i>CBI Justifications</i>	
a. EPA has made the process for claiming information as CBI extremely burdensome. The request to provide justifications departs significantly from previous ICRs. EPA should work the industry to designate portions or even complete section CBI.	a. EPA recognizes that supplying justifications for CBI marked information may impose burden unnecessarily on the industry. Therefore, answers can be marked as CBI according to practices familiar to the industry. A checkbox for the question will be marked and no justification at the time of submittal will be required.
<i>Certification Statement</i>	
a. EPA's proposed certification statement, requiring "best knowledge and belief that the information is accurate, is inappropriate for an ICR of this complexity. In contrast, the proposed MACT ICR does not include a general certification statement. (There are certifications associated with some of the individual questions.)	a. Respondents should certify that the requested information is accurate to the "best of their knowledge and belief" given the time and complexity constraints of the questionnaire. The certification language is typical for EAD programs and is appropriate for a data collection such as this.
<i>Request for Cost Data</i>	
a. Providing capital cost estimates of past projects, many by engineering judgment, will stretch the usefulness of the resulting data, but coming up with a breakdown of O&M costs associated with specific plant operations (for example the fly and bottom ash handling costs in Part C) or per pond/impoundment (per Question D54) will result in data of very limited value. b. Some capital costs are over 30 years old and may be estimates. Should 30-year dollars be used or should the dollar estimates be escalated forward?	a and b. EPA does not agree that the requested O&M data will be of limited value. These data are necessary to evaluate potential technology options and the impacts that new pollution control requirements may have on plants. EPA has limited the request of O&M costs for ponds/impoundments, landfills, and ash handling systems to those installed after January 1, 1985 to reduce burden. Respondents should answer these questions with the best available information and use the comments page to call attention to any estimates or assumptions that may have been made. Respondents should answer questions referring to capital costs with the best available information and specify the year basis of the provided costs. EPA has limited the request of capital costs for

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	ponds/impoundments, landfills, and ash handling systems to those installed after January 1, 1985 to reduce burden. No inflation costs need to be applied to the costs provided by respondents.
Burden	
a. EPA's burden estimate is too low, especially for utilities with multiple plant sites. The amount of information called for seems over burdensome in that it is not clear that the amount of requested detail is needed. b. Companies have noted that completing the questionnaire will take on the order of five to ten full-time staff several months per facility, a burden that is very difficult to sustain. EPA needs to provide a more realistic burden and look for ways to reduce the burden. c. EPA consistently states that the survey is divided into sections to reduce burden, saying that no facilities will have to complete all sections. All coal plants will have to complete at least four, one third will have to complete all except, obviously, the nuclear section. This does not reduce the burden. d. EPA's average burden estimate of 205 hours is extremely underestimated and does not account for different facilities being subject to different questionnaire requirements or any first level coordination. This estimate should at least be doubled for coal-fired power plants. e. Nowhere in the calculation of the responded time burden does EPA account for facilities having multiple units. f. EPA could reduce the burden by eliminating questions unrelated to discharges to "Waters of the United States". g. Eliminate questions requesting capital costs in Parts C and D for older installations to reduce burden. h. EPA's estimate of total burden is not clear and unable to be replicated. i. EPA's labor costs and time estimates are questionable.	a. and b. EPA has reviewed and considered all comments received regarding the 1st FRN burden estimate. EPA has revised the burden estimate, incorporating comments from the industry and revisions made to the questionnaire. EPA has carefully reviewed and revised the questionnaire to eliminate any burdensome requests that are unnecessary. See Part A of the supporting statement for information on why the data are being requested. c. and d. EPA reviewed the questionnaire and comments to revise the hourly burden estimate, taking into account some time for first level coordination. EPA recognizes that the calculated average burden differs according to different fuel segments of the industry. EPA will estimate a burden for each segment of the industry to come up with a more accurate average burden corresponding to a specific fuel type. e. EPA revised the burden to account for all plants, units, wastewater systems, ponds and landfills, and wet/dry FGDs. The revised Supporting Statement, published with the 2nd FRN, explains the number of respondents estimated for revising the burden. f. The questions included in the ICR are relevant to "water of the United States" in that they characterize operations that generate wastewater and how those wastewaters are managed, or identify practices that avoid generating and/or discharging wastewater. As part of the rulemaking, different regulatory options will be considered, this information is requested to address each option accordingly and make informed decisions about potential revisions to the ELGs. g. EPA has limited the request of capital and O&M costs for ponds/impoundments, landfills, and ash handling systems to those installed after January 1, 1985 to reduce burden. h. EPA revised the Supporting Statement so that the calculated burden is clear

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	and able to be replicated. i. EPA will adjust labor rates by 30% to account for employee overhead and benefits. The time estimates were reevaluated for the revised ICR, including consideration of comments on this topic.
Supporting Statement	
a. Page one states, "... determined that significant amount of the toxic pollutant loadings discharged to surface water by point sources." appears not necessarily fact based, and is not supported by references. Recommend changing wording or provide an example/proof for the statement that it was "determined that significant amount of the toxic pollutant loadings discharged to surface water by point sources." b. Support statement language regarding EPA seeking information on, "candidate pollution control technologies" to meet the effluent guidelines approach, appears to be open to candidate technologies regardless of their point of development. EPRI is concerned that technologies not yet proven on specific power plant wastewater at a full-scale should be noted as such. Reference needs to be made to "demonstrated controls" with respect to "candidate pollution control technologies" to meet the effluent guidelines approach.	a. EPA refers to the findings of the <i>Steam Electric Power Generating Point Source Category: Final Detailed Study Report</i> (EPA 821-R-09-008) to support this statement. See the report for information supporting these findings. b. EPA plans to use the information collected by the questionnaire and additional research to consider and review candidate pollution control technologies. EPA will evaluate all aspects of potential control technologies, including their technical feasibility, whether they are demonstrated, and their economic affordability, before using them as a basis for revised ELGs. It is not necessary for a technology to be proven at full-scale or on a specific power plant wastewater for it to be considered as a basis for revised ELGs.
Front Matter	
a. Page iii states "Extension requests will be evaluated on a case-by-case basis. Submittal of an extension questionnaire to EPA..." The word "questionnaire" should be changed to "request" in the second sentence of this paragraph. b. Page ii states "Each part should be completed by the person(s) most knowledgeable about the information requested." Throughout the Questionnaire, references to "persons most knowledgeable" should be changed to "qualified personnel" consistent with the certification statement. Given the very short response time for the Questionnaire, it is unreasonable to expect that the most knowledgeable person will always be available or could even be immediately identified and assigned to the appropriate topics. All companies will need multiple personnel to respond to the questions. By the time the Questionnaire is circulated to all personnel who will need to contribute to the answers, a significant portion of the 60-day period will have already passed. The Questionnaire does not provide adequate time for intra-company	a. EPA incorporated this change. b. See response above for "60 Day Response Time." c. EPA added a glossary that defines all key terms found in the questionnaire and added a list of acronyms at the end of the front matter. See response above for "All Parts/Definitions/Terms." d. See response above for "60 Day Response Time."

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communications and quality assurance steps. c. EPA should provide definitions of key terms. Definitions of key terms, according to the instructions, are supposed to be “at the back of the questionnaire” but are not attached. Neither is the promised list of acronyms and measurement units. Among many other undefined terms, EPA should define the following bold, italicized terms: plant-p. vi; wastewater treatment, p. vi; pollution prevention, p. vi; best management practices, p. vi; permanently, p. E-5; temporarily, p. E-5; pond/impoundment, p. E-5; disposal, p. E-5. d. Although the instructions provide for individual extensions to be decided on a case-by-case basis, and provides a 21-day period for filing an extension request, EPA does not specify how quickly it will act on those extension requests. Requests that EPA agree to respond to extension requests within one week after electronic receipt of the request. Also, EPA should provide some general criteria that will be considered in granting extension requests.	
Part A/Steam Electric Power Plant Operations	
a. Commenters believe a question should be added, so that if a facility does not discharge wastewater (i.e., do not possess a NPDES permit), then the facility would not be required to complete the questionnaire. b. Commenters believe that Q. A1-2 through A1-5 should be revised to require the submission of a single contact name due to the complexity of the questions in the Questionnaire. This person would be responsible for contacting additional individuals for responses to additional questions posed by EPA. c. Commenters think Q A1-6 should to be more specific. They ask if the unit has not generated electricity during the 2009 calendar year, would the answer be no. d. In Q. A1-9, commenters ask EPA to provide clarification regarding what constitutes "Distributed NOT for sale" to ensure consistency in responses. They are uncertain if it refers to power used for station service. e. In Q. A1-11, commenters ask what standard applies for judging whether the primary purpose of the plant is generation of electricity. Does it mean 50% or more of the profits are from electricity generation? f. Commenters believe the information requested should be limited to 2007 through 2009 in Q. A1-15. Requiring information from 2005 through 2009 is	a. EPA does not agree. See response for “Defining the Scope of the ICR.” b. EPA requests a primary and secondary contact for both the technical and economic data for cases when one of the contacts may leave the company. Additionally, the contacts for economic and technical information are often different. If the plant determines the same contact can provide both economic and technical information, they can answer accordingly. However, both primary and secondary contacts are still required. c. EPA changed the wording to ask if the plant has the potential (i.e., equipment available on site) to generate electricity from a steam electric generating unit. d. EPA removed the “Distributed NOT for sale” response option. If the plant is generating power for the distribution and use off site, the plant will select “Other” and provide a description. e. EPA defines primary purpose as “the predominant source of revenue and principal reason for operation.” f. EPA reduced this request to 2007-2009, and intends to obtain data on 2005 and 2006 from EIA, as available.

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overly burdensome and is unlikely to provide information that is more representative. g. Commenters ask EPA to confirm that Q. A1-18 requests information for permits associated with wastewater or stormwater discharges from industrial activities and does not include permits required for construction of wastewater and/or sanitary sewage facilities; erosion and sediment control permits associated with construction activities; temporary permits, general permits for hydrostatic testing water, water obstruction and encroachment permits and/or water allocation permits. Furthermore, commenters believe that EPA should delete the requirement to include pending permits. Pending permits have not been issued as yet, may be changed prior to issuance in final, and often do not have permit IDs, approval dates, or expiration dates. Additionally, commenters ask why EPA needs information on the plant's RCRA, air, and UIC permits for the purpose of setting effluent guidelines. h. Limited or zero discharge facilities may not have receiving waters for certain discharges to include in Table A-3. i. Commenters believe that EPA should clarify that the surface waters at issue are those that are waters of the United States or waters of a State and not waters outside the jurisdiction of EPA and a State. As Q. A1-19 is currently worded, respondents may believe they need to identify non-regulated on-site waters such as private ponds or water bodies that are part of the wastewater management system. In addition, it is assumed that plants discharging to cooling ponds that are not Waters of the U.S. do not need to answer this question. Additionally, "Reservoir" should be added as a possible response under type of receiving surface water in Table A-3. j. Throughout Part A, EPA uses the term "planned." Commenters ask EPA to define this term to ensure consistent responses. They suggest a short-time frame such as within the next 2 years. k. Many power stations utilize small sediment traps along access roads, haul roads, soil borrow areas, closed landfills, etc. to minimize the quantity of suspended solids to receiving streams. Pennsylvania, along with other states, broadly defines these same terms. Therefore, commenters request that EPA define the terms ponds, impoundments, storage, disposal, process wastes,	g. EPA clarified in the instructions for Table A-2 that Q. A1-18 should only cover permits associated with industrial activities and that permits required for construction of wastewater and/or sanitary sewage facilities; erosion and sediment control permits associated with construction activities; temporary permits, general permits for hydrostatic testing water, water obstruction and encroachment permits and/or water allocation permits are not required. EPA added an additional column in Table A-2 asking plants if they have a pending permit under development and revised the instructions so that plants will not need to provide the ID numbers and dates associated with the pending permits. Information in permits not related to water such as RCRA, air, and UIC permits will provide EPA with the information needed so it can obtain the permits, if necessary, to evaluate potential waste streams that may be generated from other process operations associated with the requirements for those permits. For example, these permits will include information on carbon capture and storage systems and other technologies, which generate wastewater of interest. h. EPA revised Table A-3 to request this information on an outfall basis and in a question format. EPA clarified that plants should skip the section collecting outfall information if the plant does not have a NPDES permit (i.e., no outfalls). i. EPA revised Q. A1-19 to request information on the receiving water for each outfall designated in the plant's NPDES permit. EPA added "Reservoir" as a response option for the type of surface water. j. EPA agrees that it would be useful to define a timeframe for reporting planned systems, but disagrees that "planned" should be limited to the next two years. EPA established appropriate timeframes for specific questions in the questionnaire. k. EPA defined the terms "pond/impoundment", "process wastewater", and "residue" in the glossary of the questionnaire. EPA does not believe definitions are required for "storage," "disposal," and "by-products." The questionnaire does not require plants to report information on sediment traps. l. The term "effluent point" has been changed to "pond outlet," which is defined as "the point at which the pond/impoundment releases water to another pond/impoundment, surface water, or other process." The question also

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residues, and by-products and clarify if sediment traps are included within these definitions. l. Commenters ask EPA to clarify in Q. A1-20 whether the effluent point is the point at which the effluent is discharged to a water of the United States or a water of the State or whether it includes internal discharges between ponds/impoundments. Many ponds have outlet structures that lead to additional water treatment and then an effluent discharge; it is unclear under the existing language whether a pond outlet would be considered an effluent point. "Effluent point" should be defined as that point where the treated effluent (pond or otherwise) discharges to the receiving water as defined in the applicable NPDES permit. m. Commenters believe "landfills" should be defined. n. In column 5 of Table A-4 in the heading, commenters ask what does EPA mean by "is leachate collected." Commenters state that leaks from ponds/impoundments are not leachate. Commenters ask why does EPA need information on retired and closed ponds/impoundments and believe EPA should define "closed" and "retired." o. Commenters think that Table A-5 needs a separate column for water/wastewater treatment chemicals and/or metals and should include columns for metal cleaning wastes, coal pile runoff, and low volume wastes. Additionally, the instructions for Table A-5 and Table A-7 should clarify that respondents do not need to report de minimis or incidental amounts of wastes stored or disposed of in ponds/impoundments or landfills. p. Commenters state that the heading in column 3 of Table A-6 is wrong. This is the table for landfills, not ponds/impoundments. q. Q. A1-22 requests latitude and longitude of the site. Commenters ask EPA to clarify the location at which the geographical coordinates of the plant should be identified (e.g., the center of the plant, the entrance gate, etc.). r. In Q. A1-23, commenters think that the word "available" is ambiguous and needs clarification. Land at some facilities could be made available for process equipment, treatment systems, etc. but only after extensive site work and grading is performed. Distance from the plant and limitations posed by existing structures also affect availability but could be overcome at great expense. Most electric generating stations have extensive arrays of buried electrical lines and pipes that	clarifies that emergency outlets should be used for ponds with no regular transference to another location. m. EPA defined the term "landfills" in the glossary of the questionnaire. n. EPA revised the definition of the term "leachate" to include leakage, leak, seepage, leachate collection, and leak detection sources. EPA believes that information on closed and retired units is necessary because retired and closed units have a potential to impact surface waters. For example, knowing whether the pond is lined is relevant whether the pond is operational or retired. EPA does not agree that "closed/retired" requires a definition. o. Plants are not required to report water/wastewater treatment chemicals and/or metals in this table. EPA revised Table A-5 to include not only solid wastes, but also process wastewaters that are stored, treated, and/or disposed in each pond/impoundment unit. EPA disagrees that certain wastes should not be required to be reported in Table A-5 and Table A-7. Therefore, no changes have been made. p. EPA corrected the heading in column 3. q. EPA revised this question to allow respondents to skip if they already reported their coordinates to EIA on U.S. DOE/EIA Form-860 (2007), schedule 2, line 6. EPA did not clarify the location for the coordinates so that respondents could use their EIA responses (EIA does not specify the location for the coordinates). r. EPA has removed Q. A1-23 from Part A. s. EPA revised the instructions of Q. A1-24 so that plants will only need to provide aerial photographs or maps, but do not need to identify various information on the map (e.g., wetland areas, surface waters bordering site). t. EPA revised the instructions of the water balance diagram to reduce the burden on plants. The instructions now specify that plants are allowed to use water balance diagrams from previous years as long as they are still representative of current operations. In addition, EPA revised the instructions to request that plants report the process operations at the unit level instead of requiring them to report and present all the equipment that is used in each unit. EPA has developed a destinations table located in the "Code Tables" tab at the end of the part, which provide more general destination options.

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seriously complicate development activities. Additionally, most power plants are located near waterways with associated wetland areas. Commenters believe available land should be defined as upland areas with no or minimal existing infrastructure and within a certain distance (i.e. 500') of existing units. s. Commenters believe that the maps requested in Q. A1-24 will be very time-consuming to prepare. This is overly burdensome. EPA should use existing public sources of information. Some companies would need to include within the property map a map of the facility's reservoir (ranging in the thousands of acres) because the reservoir part of the facility is property. Additionally, if there is no discharge to wetlands, there is no reason to include them in the questionnaire. t. Commenters believe preparing the water balance diagram requested in Q. A1-25 will be very time consuming and burdensome. Much of the information requested (e.g., flows) does not exist for many of the streams EPA has indicated must be included on the Block Flow Diagram. EPA should not expect the water balance diagram to actually balance. In addition, diagrams are typically prepared by our environmental consultants when preparing permit applications, so none will contain data from 2009. As a result, subcontractors will be required to complete this activity putting more burden on the plant. In addition, the average annual flow rates should be estimates; otherwise it may be very difficult to ensure the flow rates match information in Table A-8. The final destinations identified in the block diagram requested in Q. A1-25 should be general (e.g., off-site disposal, off-site reclamation, etc.) and not specific (e.g., the names of off-site locations that receive materials). u. Commenters think that the purpose of Table A-8 is unclear. Why does EPA need sludge data for a water balance table? Also, does the "solids or sludge" column refer to tons of sludge or tons of water in the sludge? Also, the volume of sludge or solids should be an average because the amount of sludge or solids produced on a daily basis can vary greatly over time. The terms "source water", "process wastewater", "treated wastewater", "solids", "sludge" used in Table A-8 should be defined. v. The "Date of Retirement or Expected Date of Retirement" column in Table A-9 implies that any retired unit should be described. Responders may interpret requirement of how far back to report differently. Because retired plants generally do not generate wastewaters for discharge, this information request appears to be excessive and would not yield useful information about the	u. EPA deleted Table A-8 from the Questionnaire; therefore, clarification is not needed. EPA deleted Table A-8; however, EPA has included definitions of the following terms in the glossary: "process wastewater", "treated", and "sludge" in the glossary of the questionnaire. v. EPA removed the "Date of Retirement or Expected Date of Retirement" column from Table A-9, because this information can be obtained from the MACT ICR. w. Although EPA removed the need to report type of boiler in Table A-9, EPA added "Pressurized water reactor," "Boiling water reactor," and "Pressurized heavy water reactor" as response options in the "Type of Boiler or Reactor" column for Table A-10. EPA also defined the terms "cycling unit" and "intermediate unit" in the glossary of the questionnaire. x. Cooling system data are not provided in Table A-9. EPA assumed the commenter was referring to Table A-11. Table A-11 is already designed to allow multiple cooling systems at the same plant to be reported, by designating a cooling system in each row and indicating what units are serviced by the system. Respondents should not use the 316(b) designations for the ICR. y. EPA revised Table A-11 so that plants can specify more than one biocide and more than one active ingredient can be added per biocide. z. EPA revised the "Average Amount of Wastewater Generation/Blowdown" and "Typical Duration AND Frequency of Generation/Blowdown" columns in Table A-11 by changing "average" to "typical" in both columns. aa. EPA revised Table A-11 by changing the fourth column header "Type of Biocide Used in Cooling System" to "Chemical Additives Added to the Cooling System and Make-up Water System." bb. EPA revised Table A-11 to include only condenser cooling systems. cc. EPA deleted the request for copies of the reports and calculation sheets. EPA refers to any type of monitoring used to demonstrate compliance. Plants may provide further explanation in the comments page, as necessary. EPA assumes that this question actually applies to A1-29 (Table A-11). Cooling tower blowdown is relevant to the revision. Blowdown is currently covered

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industry as a whole. Furthermore, personnel familiar with retired units are often retired as well or no longer have detailed knowledge about older retired units. Lastly, information about older retired units is often archived and/or is not readily available. Therefore, EPA should consider requesting information for units retired since a set date. w. In Table A-9, EPA should include “nuclear” as an option in the “type of boiler” column. EPA provides definitions for “peaking unit” and “baseload unit”, but also needs to define “cycling” and “intermediate.” x. Commenters ask how should multiple cooling systems at the same facility be distinguished in Table A-9 and also should the designations used for the 316(b) questionnaire be used for this questionnaire as well. y. For each cooling system there is only space for listing one biocide used in a system in Table A-11. Commenters state that table A-11 should be revised to allow for the identification of more than one biocide and more than one active ingredient per biocide. z. Table A-11 requests information in a manner that is certain to produce responses that may not be comparable to other responses or may not meet the agency's intentions with regards to the requested information. The fifth column from the left asks for "Average amount of wastewater generated/blown down." EPA needs to clarify the averaging period. aa. Information regarding the use of biocides should be expanded to include all chemical additives added to the cooling tower and make-up water systems. The beneficial effects of these additives may impact the performance of downstream wastewater treatment systems (WWTS) including, but not limited to the clarification and/or filtration of cooling tower blowdown and chemical treatment of FGD scrubber purge water where cooling tower blowdown is used as makeup water to the scrubber system. bb. Commenters believe that Table A-11 needs to be clarified to identify the type of cooling systems to be included. If this is asking only for condenser cooling systems, then that needs to be stated. cc. Commenters state that in most cases, chemical additives used within cooling tower systems can often be certified by our suppliers to be free of priority pollutants. This should be added as a fourth check-box. Q. A1-30 requests for	under the existing ELGs, regardless of whether treated prior to discharge. As such, EPA is characterizing these waste streams, including how much is generated/blown down. dd. EPA reworded the instructions to state that "Throughout this section, provide information for all steam electric generating units which were operated in 2009 including units that operated for only part of 2009." With this change "idle" and "extended period of time" do not need to be defined. ee. EPA agrees. EPA deleted Q. A2-1 from the questionnaire and revised the instructions for Q. A2-2 to include fuels used for start up. Therefore, no further clarification is needed. ff. EPA revised Q. A2-2 to remove the terminology “normal operation.” EPA has also revised the question to request use of “bituminous” coal. gg. EPA deleted. Q. A2-3 and Q. A2-4 from the questionnaire. hh. EPA added questions to Section 3 asking if the plant ever washes the catalyst on site. If so, the plant is prompted to answer similar questions that are asked for the SCR catalyst regeneration wastewater. Additionally, EPA defined the terms "SCR catalyst regeneration" and "SCR catalyst washing" in the glossary of the questionnaire. ii. EPA added a "NA" box to the "Where Last SCR Catalyst Regeneration Occurred" column. EPA believes that the comment regarding "every instance of SCR offsite regeneration" probably applies to QA3-2, in which case EPA agrees that it can reduce burden by limiting the response to the last two regenerations. EPA defined the term “NOx control system” in the glossary of the questionnaire. EPA does not believe the other terms need to be defined. jj. EPA converted Q. A3-2 to a table to allow two companies to be specified. kk. EPA has retained the request for planned systems and expects plants to respond regarding any planned systems at the time they are completing the questionnaire. ll. EPA revised Q. A3-9 to exclude particulate matter control systems along with FGD and SCR/SNCR systems that are not included in Table A-16. mm. EPA defined the term "flue gas mercury control system" in the glossary

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copies of the reports and calculation sheets, which is excessive and unnecessary for the development of revised ELGs and should be omitted from the ICR. Additionally, commenters ask does Q. A1-30 refer to monitoring in addition to priority pollutant sampling submitted with the permit renewal application or reviewed on an annual basis. Commenters ask is the fate of the cooling tower blowdown relevant to the steam electric guidelines revision. Cooling tower blowdown is used internally or the cooling tower blowdown is sent to a wastewater treatment system and not discharged directly to the receiving water body. Are these flows still to be reported as "wastewater generated/blown down?" dd. Commenters believe the instructions of Section 2 need to be revised. They are uncertain if a unit that did not operate at all in 2009 would be included. EPA needs to define "idle" and "extended period of time." ee. Commenters wonder what the relevance is, for purposes of effluent guidelines, of distinguishing fuels used for start-up from other fuels in Q. A2-1 and recommend deleting this question. Additionally, on a natural gas-fired unit, which uses gas to both start up and generate, is there a clear demarcation for when start-up ends and "steady state" operation begins. It is common practice in air permits to define "start up" and it may vary. EPA needs to clearly define when the start up period is over. ff. For Q. A2-2, EPA should provide a definition for "normal operation." EPA should also provide definitions for "Eastern Bituminous" and "Western Bituminous" as they are used in Table A-12. What is the relevance of this question for effluent guidelines purposes? gg. Commenters believe that Q. A2-3 requests for data on "any oil or coal" could yield very large amounts of data, if coal samples are collected daily. Also plants sample their coal differently, as some sample as received and other sample as fired, which could include blends of various coals. They suggest EPA to re-think this request as this data is not likely readily transferable to ELG water quality data or standard setting. Additionally, Question A2-4 seems to imply that analytical data required by A2-3 is required for each mine used to supply coal burned by the unit. Question A2-3 should be revised to include only representative data for each single type of fuel burned to minimize the ICR burden. Or EPA should consider requesting averages of available data. Additionally, EPA should consider limiting the coal analyses to volatile trace elements – mercury, selenium, chloride, and boron – and consider more detailed	of the questionnaire. nn. EPA assumes the commenter is referring to Q. A3-10 and removed the request for "type of materials of construction" from this question. oo. EPA reworded the language as suggested by the commenter. pp. EPA has revised the request to specify all technologies studied, but to only provide reports from technologies generate wastewaters. EPA disagrees that pilot test data requested in Q. A3-11 are not applicable to the ELG. They are useful for evaluating potential technology options that may be installed and generate future wastewater streams. qq. EPA replaced "Table A- 16" with "Table A-17." rr. EPA changed the date in Q. A3-13 to January 1, 2009 from January 1, 2005. ss. EPA defined the term "carbon capture system" in the glossary of the questionnaire. EPA has phrased Q. A3-14 to allow plants the flexibility necessary to adequately provide the information requested. EPA also revised Q. A3-14 so that plants would only need to provide information on technologies that generate wastewater. tt. EPA disagrees that reports should be limited to those with wastewater "impacts" due to the ambiguity in that term, and therefore has not removed Q. A3-15 from the questionnaire. uu. EPA clarified in Q. A4-1 that processing coal includes any methods used to prepare the coal for use at the plant including but not limited to crushing/pulverizing coal. vv. EPA clarified in Q. A4-2 that the plant can make an estimation of the coal pile runoff, but a description of the calculation needs to be included. EPA also clarified the request to report number of days of <u>discharge</u> rather than number of days of runoff. ww. EPA rephrased Q. A4-3 to ask "Was the coal pile runoff monitored for pH?" If yes, the plant is required to provide data. xx. EPA revised the question so that plants indicated whether the coal pile

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studies at select facilities Commenters believe that EPA's reason for requesting the coal quality data is based on a false premise and EPA has failed to state an adequate justification for this onerous data request. hh. Commenters state that EPA should clarify Q. A3-1 to ask if catalysts are washed with water onsite, and note that this does not include regeneration with various acids/bases offsite. Most, if not all, catalysts are regenerated offsite using various acids and bases. Some plants may wash the catalyst onsite to remove fly ash. Some clarification is needed to ensure consistent responses. The limited water data at most power plants will likely be of minimal benefit. Comprehensive multimedia studies (consisting of flue gas, water, and solids sampling and analyses) at numerous power plants are needed to characterize and be able to accurately quantify the effects of NOx control on water. ii. In Table A-14, EPA should define the terms "NOx control system", "SCR", "SNCR", "overfire air", and "low NOx burner". In addition, the "Where Last SCR Catalyst Regeneration Occurred" column needs an "N/A" box. Answers to the questions about future replacements/regenerations will be very speculative and will depend on unit operation and current catalyst condition. Must the plant report every instance of SCR offsite regeneration? This question needs a reasonable timeframe – e.g., sent offsite within the last two years. jj. Additional lines should be provided for plants that send SCR catalyst off-site to more than one facility for regeneration in Table A-14. kk. Q. A3-9 asks for planned Hg flue gas controls. It is unclear how power plants would respond since a mercury rule has not been finalized. This may also depend upon other EPA actions on climate/carbon, CCPs, cooling system retrofits etc. Commenters suggest limiting "planned" to a relatively short time period, such as 2 or 3 years – or a planned approach for responding to the proposed (and now vacated) CAMR rule. ll. Commenters believe the wording in Q. A3-9 needs further clarification. Particulate collection systems, including baghouses, need to be excluded from the questionnaire, along with the FGD and SCR/SNCR systems. mm. EPA should define the term "flue gas mercury control systems." nn. Q. A3-9 Asks for the materials of construction for all mercury controls. Commenters are unclear how this information could be used to characterize	runoff was transferred to a pond/impoundment and had the option to choose multiple options. EPA also defined the term "discharge" in the glossary of the questionnaire. yy. EPA revised Q. A4-5 by replacing the response option "All leachate discharged" with "All treated coal pile runoff discharged." In Q. A4-2, plants should provide their best estimate of generation. zz. "Coal washing" is defined in the glossary of the questionnaire. aaa. EPA defined blending to be the intentional mixing of different coal types prior to combustion, and does not include natural blending in the coal pile. bbb. EPA replaced the term "pyritic mill rejects" with "mill rejects." EPA also defined the term "mill rejects" in the glossary of the questionnaire. ccc. "Waste coal" is defined in the glossary of the questionnaire. EPA also removed anthracite culm and bituminous gob from examples of "Other coal."

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water quality or use, especially for activated carbon injection. oo. Commenters believe that Q. A3-10 is badly designed, will result in inconsistent answers, and should be deleted. This question requires, inter alia, that the respondent identify “any potential effect on other water streams” caused by flue gas mercury control system processes. This language is too broad. At a minimum, it should be reworded to require identification of “any known or anticipated probable effect.” pp. Commenters had several concerns about Q. A3-11. First, they believe pilot studies do not indicate whether the full-scale plant will actually install this technology and suggest limiting the request to reports that include impacts on wastewater, given uncertainty over the dates and compliance approaches of future rulemaking. In addition, data from a pilot test that will not be used at the plant would also not appear to be relevant to this ICR and only increases the burden on each respondent. Pilot studies are usually only of a slip-stream of flue gas and are of short duration. In addition, many companies have performed multiple pilot-scale flue gas mercury control studies. Many of these experimental tests have never been implemented full scale; therefore, the results are not pertinent to the effluent guidelines rulemaking. Additionally, most of these studies have not evaluated wastewater impacts. At a minimum, this question should be limited to reports that include wastewater impacts. This request is extremely burdensome and will require a significant amount of time to locate reports. qq. In the description of Table A- 17, there is a reference to Table A- 16 that is wrong – it should be A-17. rr. In Q. A3-13 the time period for data request is for 2005 instead of 2009. Commenters ask if this question should read as the previous section as January 1, 2009 or is it 2005. ss. EPA should define what it means by a "carbon capture system" and provide that definition to the public for review and comment prior to finalizing the questionnaire. In addition, the request for "any potential effect on other water streams" in Question Q. A-14 is too vague and speculative. EPA should identify the effects that it is concerned about and specifically identify them in the question so the respondents can determine if they are applicable. Commenters are also concerned that the open ended nature of this question will result in inconsistent answers.	

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tt. Some companies have performed multiple pilot-scale carbon capture studies. Many of these experimental tests have never been implemented full-scale; therefore, the results are not pertinent to the effluent guidelines rulemaking. Additionally, most of these studies have not evaluated wastewater impacts. At a minimum, Q. A3-15 should be limited to reports that include wastewater impacts. This request is extremely burdensome and will require a significant amount of time to locate reports. uu. EPA needs to define “process.” Does crushing/pulverizing coal constitute processing coal? vv. Q. Commenters believe that A4-2 is badly phrased and should be modified or deleted. EPA should allow the use of an estimate in Q. A4-2 because actual amounts will vary. Companies can report on rainfall received or the amount of discharge, but cannot report the total runoff or how many days it took to collect the runoff. This is because runoff is affected by many factors, including reuse/recycling, evaporation rate, ambient temperature, wind speed relative humidity, and cloud cover, as well as the frequency, amount, and duration of precipitation. ww. Coal pile runoff is not required to be monitored for pH. Q. A4-3 should include a response box for “Not Monitored.” xx. In Q. A4-4 the respondent must specify if coal pile runoff is segregated, commingled, or discharged without treatment. Commenters wonder how the respondent answers if the plant has the ability to do any of these options, depending on operating needs? Also, EPA should define “discharged.” yy. Q. A4-2 through Q. A4-5 refer to coal pile runoff. One commenter states that the volume of coal pile runoff at some of our sites is immediately captured and reused in ash sluicing systems. There is no direct measurement of runoff volumes collected during the process; it would strictly have to be a calculation of inches of precipitation multiplied by the surface area of coal yard. Calling coal pile runoff leachate, whether treated and discharged or otherwise reused, is incorrect. It is not leachate, it is surface runoff. Therefore, the word “effluent” or the phrase “treated coal pile runoff” should be substituted for “leachate” in the third choice for this question. zz. EPA should define “coal washing.”	

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aaa. Commenters believe that Q. A4-10 should be clarified so that it focuses only on blending various coal types, such as PRB with eastern bituminous (i.e., the intentional mixing of separate piles prior to combustion.. Coals from various suppliers are blended naturally when each coal shipment is placed on the pile. bbb. EPA should define the terms “pyritic mill rejects” and “mill rejects.” ccc. EPA should define the term “waste coal” and distinguish it from anthracite culm and bituminous gob. Typically, culm and gob are considered waste coal.	
Part B/Flue Gas Desulfurization (FGD) Systems	
a. Commenters noted that the use of “FGD System ID” in Table B-1 does not agree with the nomenclature of “Sulfur Dioxide Control Systems” used in Table A-17. Commenters also noted that some of the information requested in Table B-1 is already reported in Form EIA-860 and Form EIA-923. b. Commenters believe that EPA should identify a time period for “planned” FGD systems and that it should be limited to relatively short time period, such as 2 to 3 years. c. Commenters believe that the terms “purge stream” and “scrubber purge” should be defined. d. Commenters noted that Q. B1-4 does not include a response category for adipic acid. e. Commenters noted that Table B-4 requested the materials of construction for the FGD systems, including all of the pumps; but the shafts, impellers, housing, etc., on the pumps may have different materials of construction. f. Commenters noted that if a respondent answers “No” to Q. B2-1, the respondent is allowed to skip to Section 3; however, Section 3 is also associated with Wet FGD systems. Commenters recommended that if a respondent answers “No” to Q. B2-1, the respondent can skip to Section 4. g. Commenters noted that the phrase "which section of system," in Q. B2-3 could potentially lead to a wide range of responses; therefore, the commenters suggested re-phrasing sentence to "and indicate which <i>specific equipment units</i> of the FGD system determines...."	a. EPA deleted Table A-17 from the questionnaire; therefore, EPA did not make any revisions to Table B-1. Additionally, EPA acknowledges that some of the information in Table B-1 is reported in Form EIA-860 and Form EIA-923; however, EPA is using 2009 as its base year for the technology evaluation for this rulemaking and 2009 EIA will likely not be publicly available until the middle of 2011. Additionally, EPA is requesting information for FGD systems planned until 2020, which would not be available from either EIA form. b. EPA revised Q. B1-3 by directing plants to provide information for “planned” FGD systems that will be operating or begin construction/installation by Dec 31, 2020. c. EPA replaced the term "purge stream" and "scrubber purge" with "FGD scrubber purge (or slurry discharge)" throughout Part B of the questionnaire. EPA also defined the term “FGD scrubber purge” and “slurry discharge” in the glossary of the questionnaire. d. EPA added adipic acid as an option in Table B-3. e. EPA deleted Table B-4; however, EPA is now requesting the materials for the equipment unit(s) that determine the maximum design chlorides concentration of the FGD system. If multiple materials of construction are used in the equipment unit(s), the plants are ask to provide the material of construction that is most vulnerable to corrosion due to chlorides. f. EPA corrected the skip pattern for this question. g. EPA incorporated these changes.

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h. Commenters noted that Q. B2-4 asks for system parameters “used to control the FGD slurry blowdown from the FGD system.” The commenters asked whether this refers to the parameters used to control the quality of the FGD slurry as it leaves the absorber vessel, or at some other point in the process. i. Commenters noted that Q. B2-5 asks for the water sources that may be used as a source of FGD slurry water or FGD slurry water makeup. The commenters stated that the second reference to slurry water should be deleted. j. Commenters stated that many companies do not measure the mist eliminator wash, limestone preparation water, and FGD make-up water flow rates and that the flows vary widely based on operating conditions. Commenters believe that these questions are unlikely to generate usable, consistent responses. Commenters believe that an estimate would better fit an annual average instead of the stated instantaneous flows, durations, and frequency. A water balance based on annual flows and power production would be a more accurate reflection of operation. k. Commenters noted that Table X-X, which is referenced in several questions, was not provided. l. Commenters noted that Q. B2-13 seems to presume that blending fly ash with FGD solids always results in a pozzolanic material and that is not always the case. m. Commenters noted that Q. B2-14 uses the term “blowdown slurry,” and asked if that is the same as “slurry blowdown”? n. Commenters requested that EPA clarify the distinction between solids separation and solids settling. o. Commenters requested that EPA define the term “gypsum stack” from Q. B2-15. p. Commenters noted that Q. B2-16 uses the terms “permanently” and “temporarily” regarding the storage of FGD solids in landfills and/or pond/impoundments. The commenters requested that EPA define these terms. q. Commenters believe that the 5 year period of time requested for Tables B-5, B-6, B-8, and B-9 is not necessary to gain an understanding of FGD solids	h. EPA revised Q. B2-4 to read “Indicate the FGD system parameter(s) that are used to determine when the FGD slurry is blown down from the FGD system.” i. EPA reworded Q. B2-5 to ask for “water sources that may be used as a source of FGD reagent preparation water or absorber make-up water (e.g., fresh intake, recycled process water).” j. EPA changed the wording of those questions to ask for “typical flow rate, duration, and frequency” and, if the FGD was not operating in 2009, the flow rate data for 2010 should be provided. k. EPA included the process codes in the dropdown boxes in the 2nd FRN version of the questionnaire. EPA also added a “Code Tables” tab at the end of each part for reference. l. EPA revised the question to ask if the FGD solids are mixed with ash and then included an additional question to ask whether a pozzolanic material is formed. m. EPA incorporated these changes by replacing "blowdown slurry" with "FGD slurry blowdown" throughout this part. n. EPA amended Figure B-1 to clarify “FGD solids separation” systems for Part B. EPA also added the term “FGD solids separation” to the glossary. o. EPA replaced the term “gypsum stack” with “gypsum stacking.” Additionally, EPA defined the term “gypsum stacking” in the glossary of the questionnaire. p. EPA provided an example in the question to clarify both temporary and permanent storage. q. EPA revised the question to request three years of data to minimize burden. However, EPA believes obtaining data that spans 2005-2009 will better represent disposal and sale practices for FGD solids, so has instead requested data for 2005, 2007, and 2009. EPA acknowledges that some of the information regarding FGD solids disposition is included in Form EIA-923; however, the 2009 data will not be available until the middle of 2011. Additionally, the information is reported on a plant level to EIA, whereas, EPA is requesting the information on a unit level to determine how different

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disposal and resale. Commenters believe the request is overly burdensome and is unlikely to provide information that is more representative than the 2007 through 2009 time period. The commenters recommended using a 3 year period of time to minimize the questionnaire burden. Commenters also noted that the some of the information regarding FGD solids disposition is reported in Form EIA-923. r. Commenters noted that Q. B2-17 through B2-19 request information regarding revenue generated from marketing of FGD solids. Commenters believe that the potential changes to the classification of ash products under RCRA could severely restrict or eliminate any beneficial reuse of coal combustion residuals and therefore, would decrease or eliminate the projected revenue streams and needs to be considered when EPA begins analysis for the compliance cost model. s. Commenters suggested that Q. B2-18 and B2-19 should be redesigned to be more explicit about the costs that should be included, such as labor costs. Additionally, commenters noted that Q. B2- 18 requests total costs incurred to remove or dispose of FGD solids in calendar year 2009, while Table B-6 asks for five years of FGD solids sales and marketing information. The commenters believe this creates an incomplete economic picture of the costs and benefits of FGD solids management. t. Commenters asked what basis the concentration of chlorides in FGD solids is to be provided (e.g., dry solids, liquor, other). u. Commenters believe that the terminology used in Table B-7 is confusing. Commenters suggest that the terms be defined and used consistently throughout the ICR. Commenters also noted that an estimate would better fit an annual average instead of the stated instantaneous flows, durations, and frequency. Additionally, commenters asked what period of time the average should apply (e.g., calendar year 2009), as well as whether the average should be a median, mode, or mean value. v. Commenters noted that it is difficult to obtain representative analytical data on untreated FGD purge stream, as requested in Q. B3-3, due to its high TSS and heterogeneous nature. Commenters suggested that EPA should request information on sample collection and analysis techniques. Commenters also believe that the data request should be limited to data collected during 2009 because providing 2010 data will be too burdensome, in that the data needs to be validated and analyzed before it is provided. Commenters requested that EPA define “solids separation process” and provide examples, such as, how does a	unit/FGD system characteristics impact the disposition of the FGD solids. r. EPA acknowledges that future rules may affect the use of FGD solids; however, past actions will assist EPA in characterizing options. EPA limited the request to three years to minimize burden. s. EPA provided additional clarification in Q. B2-18 on what should be included in the costs (e.g., labor, materials, transportation, energy). In addition, EPA combined Q. B2-18 with Q. B2-19 requesting the costs for 2005, 2007, and 2009. In the table, EPA included separate rows for each of the items identified in QB2-19 and requested the estimated costs for each item and the sum at the bottom of the table. t. EPA clarified that the plants should provide the chlorides concentration on a wet basis (i.e., analyze the chlorides for the FGD solids with the moisture content included); however, if they do not have the concentration on a wet basis they should provide the dry-basis concentration and note it in the comments. u. EPA discussed potential changes to the terminology with UWAG and revised it in Figure B-1 and throughout Part B. In Table B-7, EPA removed the term “slurry water.” EPA replaced the “Slurry Blowdown Returned to Absorber as Makeup following Solids Separation” column heading with “Solid Separation Recycle Returned to Absorber” and replaced the term “average” with “typical” in the column headers. EPA also defined the term “FGD reagent preparation water” in the glossary of the questionnaire. v. EPA clarified in Q. B3-3 that respondents can provide additional information regarding the sample collection techniques or analytical methods in the “Part B Comments” tab at the end of the part. EPA defined the term “FGD solids separation” in the glossary and added clarification that the monitoring data should be collected after the last solid separation process, if multiple processes exist, and that the “last 12 months” applies to the date of the receipt of the ICR. In addition, EPA clarified the type of monitoring location by providing examples. EPA notes that they are requesting for dilution corrected quantitation limits because it is asking for the sample-specific quantitation limit. EPA disagrees that data request should only be limited to data collected under normal operating conditions, because the plants can provide additional details regarding any data provided in the “Part B Comments” tab at the end of the part.

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plant with primary and secondary hydroclones respond. Commenters also believe that EPA should provide clear instructions for describing the monitoring location. Commenters noted that EPA asks for the sample-specific nominal quantitation limit stipulated for the method used; however, they believe EPA should be requesting the sample-specific (dilution corrected) quantitation limit. Additionally, commenters believe these terms also need to be defined. Commenters believe that the data request should be limited to data collected under normal operating conditions and that any data collected during research and development activities should be excluded. w. Commenters believe that the requested information in Q. B3-3 is important, however, they believe that providing the monitoring data in the specific ICR electronic format adds additional burden to respondents. Commenters noted that monitoring data, in most cases, were not provided in electronic format and were not supplied in the ICR specified format. Therefore, hardcopies of the monitoring data could be scanned and provided, but commenter believe the manual transfer of this data into electronic format is not feasible in the time period provided. x. Commenters believe that the submittal of monitoring data requested in Q. B3-3 should be limited to that obtained using EPA-approved laboratories and methods. Commenters also believe it should be limited to NPDES permit-required monitoring. y. Commenters noted that FGD water streams can be sent to a pond with a NPDES permitted outfall, but not discharge the water since the FGD waste stream has been sent to the pond. Therefore, the FGD pond water is stored in preparation for possible discharge, and the answer to Q. B3-4 is neither yes nor no, the only two options available. A third option, such as a general "Other (Explain)" is needed for this question. z. Commenters requested that EPA distinguish "FGD water" from "FGD purge wastewater." aa. Commenters requested that EPA define "mill reject sluice." bb. Commenters noted that Q. B3-8 is not appropriately drafted for facilities that use deep well injection as the ultimate destination for their FGD water stream. Commenters suggested that EPA add an "other – please specify" category of response to this question.	w. EPA understands that the transfer of data to an electronic format can add burden if not already available electronically. However, EPA believes this is necessary to ensure collection of all data requested in a format that is not subject to misinterpretation by EPA. x. EPA disagrees with the suggestion to limit responses to data collected for NPDES monitoring because plants are not typically required to collect untreated FGD scrubber purge samples as part of NPDES permitting, but are known to collect these data internally for evaluation of their operation. Additionally, all monitoring data collected should be provided regardless of method or laboratory as it is still useful for characterizing the FGD scrubber purge stream. y. EPA has changed the wording of Q. B3-4 to ask if the plant transfers "the FGD scrubber purge (or slurry discharge) to a settling pond." z. EPA replaced the term "FGD water" to "FGD scrubber purge (or slurry discharge)." aa. EPA defined the term "mill reject sluice" in the glossary of the questionnaire bb. EPA added a specific option for "deep well injection" and another option for "Other." cc. EPA did not incorporate these changes because information regarding the specific chemicals used in the system is obtained in Part D of the ICR. dd. EPA replaced the term "gypsum stack runoff" with "gypsum pile runoff." EPA defined the terms "gypsum wash water" and "gypsum pile runoff" in the glossary for the questionnaire. ee. EPA is gathering data on all potential technology options that can reduce or eliminate potential pollutant discharges associated with this industry. Therefore, information on dry solids handling is pertinent to the revision of the ELG. ff. EPA acknowledges that future rules may affect the use of FGD solids; however, past actions will assist EPA in characterizing options. EPA limited

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cc. Commenters noted that Q. B3-7 chemical precipitation option does not break out lime, iron, and sulfide. Commenters suggest that EPA provide extra response categories for lime, iron, and sulfide. dd. Commenters suggested that EPA define “gypsum wash water” and “gypsum stack runoff.” ee. There are several instances where the questionnaire requests detailed information on processes that cannot reasonably be expected to contribute wastewater sources that would be covered by the ELG’s (for example Question B4-11 regarding five years of disposal records for dry FGD solids. ff. Commenters noted that information on revenue generated from marketing of dry FGD ash in Q. B4-12 could be significantly impacted by changes to ash disposal regulations. Commenters also noted that the technologies that may be required to meet upcoming mercury removal requirements could negatively impact the marketability of the ash products. For example, use of activated carbon for mercury removal can significantly change the characteristics of the ash produced and make it undesirable for other uses. Commenters believe this would significantly impact the accuracy of the compliance cost model. gg. Commenters suggested that EPA clarify what should be included and excluded when calculating total costs in Q. B4-13. hh. Commenters suggested that changes be made to Table B-10 regarding chemical additives, types of FGD system, and materials of construction. ii. Commenters noted that Q. B1-1 asks information that is requested in Form EIA-860.	the request to three years to minimize burden. gg. EPA provided additional clarification in this question to include costs for labor, materials, transportation, and energy. hh. EPA deleted Table B-10 from Part B; however, EPA made the following changes to the appropriate drop down boxes and/or the “Code Tables” tab at the end of Part B: - EPA added “Soda ash” to the list of sorbent types; - EPA changed “TMT-15” to “Organosulfide”; - EPA added an option for “spray/tray”; and - EPA added the list of FGD materials of construction to to options in Q. B4-3 (based on 2nd FRN version numbering). EPA disagrees that the standard types of FGD systems need to be specifically defined; therefore, EPA did not define mechanically aided. ii. EPA acknowledges that the information collected in Q. B1-1 is also collected in Form EIA-860; however, EPA is using the information to identify if the plant has to complete the remainder of Part B. Additionally, Q. B1-1 asks requests information for planned FGD systems that go beyond that captured by Form EIA-860.
Part C/Ash Handling	
a. The conversion to dry handling could greatly increase the costs for dust suppression activities on the site yet there is no mention of this in the survey. b. Commenters believe that the 5 year period of time for requested for Part C is not necessary to gain an understanding of fly ash and bottom ash solids disposal and resale and recommends using a 3 year period of time to minimize the ICR burden. c. Commenters believe that Part C is not well laid out for a facility that handles both bottom ash and fly ash dry, but combines all the ash in a silo for storage	a. EPA has revised the cost sections in Part C, which include obtaining costs for dust suppression activities (e.g., around silos in which fly ash conditioning occurs, and that associated with landfilling, etc.). b. EPA revised the instructions to request information from three years (2005, 2007, and 2009) instead of 2005-2009. c. To address the possibility of plants that combine fly ash and bottom ash in a silo, EPA has added a new section to Part C for combined fly ash and bottom

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prior to beneficial reuse and that EPA should consider, for each portion of Part C, how such a facility would respond to the question. d. Commenters suggested that Table C-1 be modified in several ways including adding the definition of “average” amount of dry fly ash, and specifying that information is for the year 2009. Commenters also believe that loss on ignition is not relevant to the effluent guidelines rulemaking and that determining the percent of fly ash handled as dry or wet will be difficult to determine for a plant that operates both systems. Also commenters requested the clarification of the ton basis in Tables C-1, C-6, C-13, and C-14 to indicate dry tons of ash. e. Commenters noted that Q. C1-4 and C1-5 do not take into account any changes or retrofits from one type of dry ash handling system to another type of dry ash handling system and ask how the reasons for fly ash and bottom ash handling system retrofits are relevant to the rulemaking. f. Commenters believe that Q. C1-5, C1-6, C1-24, C1-27 and 2-5 are very open-ended and will produce inconsistent answers. Commenters stated that there are many types of changes that could be discussed under this question, including physical changes to the facility, changes in personnel, changes in training, changes in ash disposal practices, changes in ash marketing practices. In addition, commenters noted that current personnel may not be aware of why certain actions/retrofits occurred, and there may not be any documentation available to answer this question. g. Commenters noted that Table C-2 in Q. C1-9 asks for percent moisture of fly ash, but does not segregate the question for ash wastes that are moisture-conditioned prior to final disposal. Commenters also believe that the tons of fly ash transported to a silo at a plant that also sluices fly ash will be difficult to determine, since this value is not calculated/measured/recorded. h. Commenters indicated that Q. C1-11, Q. C1-13, Q. C3-3, and Q.C4-3 refer to process wastewater/treatment codes in Table X-X, which is not present in the draft questionnaire. i. Commenters believe that potential changes in revenue streams from beneficial uses as a result of changes to ash handling and air emissions regulations must be accounted for in the compliance cost model and that more restrictive state regulations on beneficial use of ash products need to be considered in development of a national compliance cost model.	ash handling. d. EPA replaced the term “average” with “typical” amount of fly ash produced and specified where data should be provided for the year 2009. EPA kept the loss on ignition of fly ash in Table C-1 to determine potential markets for fly ash for EPA’s cost analysis. EPA recognizes that providing the wet and dry ash handling percentage information may be more difficult for plants that do not keep track of this information. Therefore, they should provide their best estimates, which is explained in the front matter of the questionnaire. Also, EPA revised the tables and other questions throughout the part to require tonnage on a dry basis where appropriate. e. EPA would use the information to assess/predict the number of plants that may convert to dry ash handling, apart from a potential EPA requirement. Additionally, EPA would use this question to assess the reasons behind converting to dry ash handling and how this might affect future operations. This information will be considered when evaluating the technical feasibility of such options. EPA modified these questions and added additional questions to account for dry fly ash handling systems that were modified/retrofitted. EPA made the same changes to the bottom ash section. f. EPA added response options to the questions to obtain consistent responses. Additionally, the questions were expanded to encompass the entire dry ash handling system, including components associated with transport/disposal. EPA recognizes that providing this information may be more difficult for plants that do not keep track of this information. Therefore, EPA expects plants to provide information to the best of their ability and note any uncertainties in the Comments page. g. EPA revised Table C-2 by changing the column heading to “Percent Moisture of the Fly Ash Entering Destination.”EPA recognizes that providing this information may be more difficult for plants that do not keep track of this information. Therefore, they should provide their best estimates, which is explained in the front matter of the questionnaire. h. EPA included the process codes in the dropdown boxes in the 2nd FRN version of the questionnaire. EPA also added a “Code Tables” tab at the end of each part to refer to. i. EPA is aware that such changes may affect beneficial uses, and EPA will be

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j. Q. C1-13 and Q. C1-14 relate to water usage in fly ash which is sold in order to evaluate water reuse opportunities. Commenters noted that water may also be used with fly ash that is not sold, and is a potential reuse option. Commenters also asked why data on chlorides or solids in the water used for moistening fly ash is being requested and recommend that EPA ask specifically about operational criteria – i.e., “Identify any other operational criteria that the source water must meet.” k. Commenters believe that Q. C1-16 and Q. C2-28 are likely to produce inconsistent answers because EPA does not specify what should be included in “total costs” and asked whether costs associated with constructing a landfill and dry handling systems, adjustments to the facility air permit or labor costs should be included. l. Commenters noted that there is no information available for fly ash quantities related to individual electrostatic precipitators..Also, commenters suggested that the instructions for Q. C1-18 refer to “dry to wet” instead of “wet to dry junctions” and clarify how the distance from the dry-to-wet junctions and the ash ponds or other final destination should be measured particularly if multiple ponds were used. Commenters noted that in Table C-5 Column 3’s heading should be “Number of Dry-to-Wet Mixing Junctions” and needs the phrase “ junctions” added in the second row. m. Commenters believe that Q. C1-21 is very open-ended and will produce inconsistent responses. n. Commenters believe that systems that are “planned” should be limited to systems that are planned to be installed by the end of 2012. o. Commenters believe that in Q. C1-26 and Table C-6 the term “Wet Fly Ash” is potentially misleading and recommend changing the wording from “Wet Fly Ash” to “Fly Ash Moved by Wet Handling” and that a similar change should be made in the bottom ash section. p. Commenters believe that the requirement to include bid proposals in Q. C1-27 is unnecessary because bid proposals may have little relation to actual cost estimates for an entire project and can reflect many pricing issues that are not objective, such as the business relationship between the site and the bidder. Commenters also believe that bids do not reflect true costs of the	assessing the impact. j. EPA revised the skip patterns to require all plants that complete the dry fly ash handling section to complete Q. C1-13 and Q. C1-14, not just those that market the ash. EPA is requesting information chlorides and solids in the water used for moistening fly ash in order to evaluate water reuse opportunities. If the plant does not measure chlorides/solids percentage, they can respond in the "Other" space provided. EPA did not modify the question to ask only about operational criteria. k. EPA deleted Q. C1-16 and C2-28 and revised the cost sections of Part C to include separate sections for fly ash conveyance, intermediate storage, and transport/disposal. l. EPA deleted the request for “Number of Hopper Trains in ESP/Baghouse” in question C1-18 and EPA replaced any references in Q. C1-18 of “wet to dry” with “dry to wet.” Additionally, EPA specified in the instructions of the question that the distance to the ash pond(s) is the distance to the end of the sluice pipe at the furthest ash pond (if multiple ponds). EPA added the phrase “junctions” to the second row of column 3 in Table C-5. m. EPA phrased Q. C1-21 in this manner to provide plants the flexibility necessary to provide the information requested. n. EPA revised questions throughout the questionnaire by directing plants to provide information on “planned” units/systems that will be operating or begin construction/installation by Dec 31, 2020. Power plants have made substantial changes to equipment in recent years and are expected to continue making significant changes in the near future. EPA is collecting this information to allow the Agency to reasonably predict the costs and other impacts associated with revisions to the ELGs. o. EPA revised Q. C1-26 and Table C-6 by replacing the term “Wet Fly Ash” with “Fly Ash Transported by Wet Sluicing” and made the same change in the bottom ash section. p. EPA recognizes the limitations of system/cost information in bid proposals/engineering reports; however they may provide useful information to fill data gaps, particularly for previously planned wastewater treatment systems, and as general verification of other ash handling system costs obtained. Additionally, EPA provided clarification to mark any bid

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installation/construction and that EPA should not request the submittal of bid information for any purpose. q. Commenters believe that the O&M and capital cost categories are too specific in Tables C-7 and C-8. Commenters recommended specifying the types of O&M and indirect and direct capital costs to be considered in the description for clarification and requesting only the total O&M cost and total capital costs in order to reduce the burden of the ICR. Also, commenters stated that O&M costs are not tracked by individual systems, such as the fly ash handling system but instead, generally compiled for all CCB systems (bottom ash, fly ash, scrubber solids, etc.) together and therefore, commenters believe that industry accounting systems make this table (and all the similar tables) very difficult and time consuming to prepare. r. Commenters noted that Q. C1-27 and Q. C2-27 request capital costs, but do not request information related to design ash generation rates (only actual 2009 rates) and recommended adding a question to request the design ash handling rate, so that capital costs can be adjusted if actual generation rates differ from design. s. Commenters believe that asking how fly ash handling system components are used between multiple generating units is open-ended and likely to produce inconsistent answers and that EPA should specify what it means by “O&M or capital cost overlap.” t. Commenters noted that there should be some information in the instructions in Section 2 telling respondents which question to skip to if there are no dry bottom ash collection systems and requested the addition of a question asking if the plant has a dry bottom ash handling system. u. Commenters stated that bottom ash produced is not a measured value but is instead calculated based on plant and coal characteristics and that EPA should remove the “check” in the box for “both” in column 3, row 2. v. Commenters believe that Q. C1-3 and Q. C2-2 are very open-ended and will likely produce inconsistent answers. w. Commenters asked how the distance should be calculated when multiple parties or locations received bottom ash in 2009. x. Commenters stated that EPA needs to define “solid wastes” for purposes of	proposals/engineering reports CBI, if applicable. q. The O&M and capital cost breakouts will allow EPA to most accurately compare costs for ash handling systems in the industry. EPA expects plants to provide information to the best of their ability, providing estimates if necessary. Estimated responses should be noted in the Comments page. Also, Obtaining separate O&M costs for fly ash and bottom ash handling systems (and separate from other CCB systems) will be critical for EPA’s cost analysis. EPA expects plants to provide these data to the best of their ability, using estimates as necessary. r. EPA added questions requesting the design ash handling rate in the bottom and fly ash handling system sections. s. EPA changed the questionnaire sections to request data on ash handling <u>systems</u> rather than on the electric generating unit level, which should minimize instances of reporting “overlap.” Overlap occurs when more than one system shares common components (e.g., intermediate storage silo). In addition, EPA requested systems to be defined for conveyance versus storage versus transport and disposal, and added more description of how to best define systems to avoid this reporting “overlap.” t. EPA modified the subsection instructions to indicate that the subsection should only be filled out for dry bottom ash handling systems. u. EPA expects plants to provide accurate data to the best of their ability, providing estimated data as necessary. EPA revised Table C-9 so the latter part of the comment is no longer relevant. v. EPA expanded these questions into multiple questions to find out more specifically why the fly/bottom ash is sluiced and whether the plant has the capability to handle all fly/bottom ash dry. w. EPA revised Table C-10 to provide long drop-down menus that provide multiple options for each of the types of destinations currently listed (for each row in the table). x. EPA replaced the term “solid waste” with “bottom ash disposal;” therefore, the term “solid waste” is not defined in the glossary of the questionnaire.

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this Table C-13. y. Commenters believe that Q. C2-20 through Q. C2-27 should clarify if the Agency is referring to wet handling, wet disposal, or both. Subsequent questions should be structured to address the desired scenarios. z. Commenters suggested that the cost of any modifications required to install dry bottom ash handling systems be requested as part of Q. C2-22. aa. Commenters stated that segregation of the ash types requested in sections 3 and 4 varies from plant to plant and on a unit by unit basis and believe that it may not be possible to provide all of the information, such as that requested in question C3-2. bb. Commenters stated that one option EPA is considering is to establish federal non-hazardous waste regulations for CCBs pursuant to RCRA Subtitle D and that such a regulation would impose requirements for the landfilling of coal ash and other CCBs, such as possible requirements for landfill liners, leachate collection systems, and possible phase-out and closure of CCB surface impoundments. Commenters believe that if EPA finalized the rule using this option, significant portions of the Questionnaire would be rendered largely obsolete or irrelevant including the much of Part C. Commenters also believe that if EPA proceeds with the Subtitle C option, even more of Part C would become irrelevant for purposes of the effluent guidelines rulemaking. cc. Commenters stated that the typical technologies for dry bottom ash conversions rely upon a long, water-filled rectangular trough at the base of a boiler, with a drag out chain and dry conveyor to remove the ash from the boiler building and while the space can usually be allocated for a new facility or unit, most existing boilers have no room for this equipment. Commenters indicated that the bases of many existing boilers are located in small sub-basements that are surrounded by massive amounts of steel and concrete that support the multi-story boilers and to re-engineer the base of these boilers to provide room for a trough, drag-out chain and conveyor would require removing and relocating massive amounts of steel and concrete supports which is a major impediment to dry bottom ash retrofits at most existing facilities. Commenters noted that the questionnaire does not ask any questions about the feasibility of retrofitting bottom ash handling at such facilities and recommended that at a minimum, EPA should develop a set of questions about the following: (1) whether there is	y. EPA defined the terms “wet bottom ash handling” and “dry bottom ash handling” in the Part C instructions, clarified that Q. C2-24 refers to bottom ash that is moved by wet sluicing. z. EPA requested the costs of modifications required to install bottom ash handling systems in the bottom ash handling system cost sections. aa. EPA did not revise the question, because EPA expects plants to provide data to the best of their ability, providing estimates if necessary. However, EPA did add a question asking whether economizer and air heater ash are handled together. If this is the case, the plant can answer the economizer ash section for economizer and air heater ash together. bb. EPA is not removing any questions in Part C, because EPA believes the information requested in this part is independently important regardless of the outcome of the CCB rule. cc. EPA added questions requesting the estimated length of the outage necessary to perform a bottom ash retrofit and asking what modifications are necessary for a dry bottom ash retrofit. However, instead of including a question requesting the space available below or around boiler, EPA has requested engineering diagrams to depict the configuration and location of the ash handling conveyance system.

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available space for a possible bottom ash retrofit; (2) whether the boiler's base is below grade; (3) the estimated length of the outage necessary to perform a bottom ash retrofit; and (4) a description of the equipment necessary to be installed for a dry bottom ash retrofit.	
<i>Part D/ Pond/Impoundment Systems and Other Wastewater Treatment Operations</i>	
a. Commenters expressed their concern regarding the instructions and terms used in Part D. For example, respondents were confused on whether or not ponds/impoundments that perform treatment should be included as ponds/impoundments or wastewater treatment units. Commenters also expressed concerns about missing definitions for key terms throughout part D. These terms include things such as non-pond unit, "planned activity", and pond/impoundment unit versus system. EPA should confirm that the responses to Part D are limited to CCB management units. b. Throughout Part D, questions regarding retired units should not be included if the pond/impoundment unit discharges wastewaters other than stormwater (e.g., leachate). c. Under the section on closed pond/impoundment units there is no mention of pond dewatering systems and the costs associated with installation and operation of those systems. These costs should be included in any compliance cost model. d. In Q. D1-1 and Table D-1, EPA does not define what it means by "retired" or "closed" pond/impoundment systems. These terms should be defined. e. Commenters suggested revising the last column heading of Table D-1 to read "Individual Ponds/Impoundments Included in the Pond/Impoundment System (identified in Table A-4)." f. It is unclear how to label ponds in Q. D1-1 and Q. D1-2. Clarify how ponds should be labeled. g and h. Q. D1-3 and Q. D1-5 are overly burdensome and will provide inconsistent answers. The reliability of study data varies, particularly as studies become dated and information about correct sampling and analysis techniques is developed. It is important to ensure that older, outdated studies are not relied on for purposes of this rulemaking. In addition, the ICR should inquire about concerns associated with the quality of the study data. EPA should request information only on full-scale studies conducted from January 2005 or 2007 to	a. EPA has carefully reviewed and revised the instructions in Part D to clarify the type information that is being requested. For example, it is clear that ponds/impoundments that perform treatment should be identified as a pond/impoundment system, unless part of a broader wastewater treatment system. Clear definitions and examples were added to the Part D instructions and to the glossary to aid respondents in answering the questionnaire. EPA also provided guidance for requests of "planned activity" as a result of public comment. b. EPA kept all questions regarding retired units, because they are used to gather information on trends in the life of pond systems, to gain knowledge on BMPs for closed or retired units, and to understand costs required to implement or close a pond/impoundment. c. EPA believes that Q. D3-21, which asks facilities to describe the closure process for ponds/impoundments (including required steps and associated costs), captures any dewatering process associated with the closing of ponds/impoundments. EPA clarified that the respondent must include the costs associated with the closure. d. EPA has set up Part D to allow all ponds to be reported as either "active/inactive/operating," "retired/closed," or "planned" and does not believe it is necessary to define these terms individually. Plants should classify ponds in the most appropriate category. e. EPA incorporated these changes. f. EPA revised the example in the instructions to provide additional clarification on how to label the pond designations. EPA has also provided to example diagrams (EPA_D-1 and D-2) to Part D for further clarification. g and h. EPA revised these questions to request studies since 2000 (versus 1995) to reduce burden. EPA also removed the detailed request for bench-scale

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December 2009.. i. Does Section 2 include all wastewater ponds including non-ash or industrial wastewater-only ponds? j. Commenters stated that because specific instructions are provided and must be met for the Block Diagram requested in Q. D2-1, existing block diagrams will not meet these requirements, and block diagrams from planned WWTS will need to be more fully developed. In addition, diagrams are typically prepared by our environmental consultants when preparing permit applications. Therefore, none will contain data from 2009. As a result, subcontractors will be required to complete this activity. Also, final destinations required in the diagram should be general and average flow rates should be estimates in order to match Table D-3. k. Many of the flows requested are not currently monitored. Normally, the discharge flow is taken from reading pump curves on the intake. It is unlikely that the resulting "water balance" will actually balance because of the number of estimations involved. l. EPA needs to provide Table X-X. m. Table D-3 requests information on influent/effluent solids/sludge streams, but the column headings do not clearly identify these streams. Add a column stating whether the stream is influent or effluent, and clarify units for solid/sludge streams (tons/day of solids or gallons per day flow rate). n. Residence time and life of impoundment varies depending on the state of the unit, when it was last dredged, etc. Q. D3-1 alone may cause detailed surveys to be performed. EPA should define "residence time." o. Many of these impoundments were designed and built over 30 years ago. Design information requested in D3-2 will be very difficult to find and may not exist at all. p. Q. D3-2, Q. D3-3, and Q. D3-4 should be revised because the maximum pond/impoundment depth for some facilities may include a requirement to maintain a certain minimum level of freeboard below the top of the embankment. q. Maximum current depth data requested in Q. D3-3 may not be available without taking field measurements from a boat! EPA should not require responders to generate new data specifically for this questionnaire	studies. i. EPA stated in the instructions that Section 2 should be completed for each pond/impoundment system or wastewater treatment system identified in Tables D-1 and D-2. These tables are limited to systems that treat wastewaters from ash or FGD operations. j. EPA did not remove the block diagram requirement, because it is standard and necessary. EPA recognizes that the survey requests more information than what is used for permit requirements; however, the overall burden of this question is lessened by only requiring block diagrams for treatment systems of interest, not all treatment systems. Additionally, due to the timing of the ICR mail-out, 2009 data will be available. EPA also clarified in the 5th item of the block diagram checklist to explain that the destinations should be "general" and that codes should be used from the "Code Tables" tab. k. EPA recognizes that some flow rates requested may not be monitored. Therefore, plants should provide their best estimates. l. EPA included the process codes in the dropdown boxes in the 2nd FRN version of the questionnaire. EPA also added a "Code Tables" tab at the end of each part for reference. m. EPA revised this table by making it specific to influent streams, and added a second table for effluent streams. In addition, EPA specified units for solid/sludge streams in tons per day or gallons per minute. n. EPA rephrased Q. D3-1 to ask for "residence time (as currently operated)." o. EPA is aware that it may be difficult to obtain design information for ponds that were built over 30 years ago, however, respondents should use the best available data to respond to the questions. Respondents should use the comments page to explain any estimates or assumptions made for the requested information. p. EPA added a specific request for freeboard height and removed the request from Part F of the questionnaire. EPA also provided a generic pond/impoundment diagram to show the depth and other dimensions of pond/impoundments. q. EPA clarified in Q. D3-3 that plants are not required to take new

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r. The information requested in Q. D3-6 should be limited to the last three years. Requiring information beyond the last three years is overly burdensome, will needlessly increase the time necessary to respond to this question, and is unlikely to provide information that is more representative than information for the last three years. s. Q. D3-9, Q. D3-19, and Q. D3-21 are very open-ended questions that will produce inconsistent answers. t. Clarify what should be included and excluded when calculating costs in Q. D3-9. For example, should labor costs be included? u. Commenters suggests that the check boxes should include a “none or N/A” choice for Q. D3-10. In addition, commenters suggest rewording the question to state "using techniques other than solely settling" for clarification. v. In Q. D3-12 and Q. D4-10, it may be necessary to provide chemical dosages as yearly estimates. In addition, the questions request concentration of treatment chemicals in the treatment unit in g/L, as well as the addition rate in gpm. For a lot of chemicals, such as liquid polymer or ferric chloride, the plant will know gpd fed and ppm by volume. g/L may apply to a dry feed system such as lime. Clarify to give the option for solid chemicals to use g/L, or for liquid reagents to report in gph. w. Commenters expressed concern with Q. D3-13 through Q. D3-15 stating that the request for all closed units is extremely broad. Information for closed units may not be readily available. The request should be limited to units closed within the last 3 years. The request should also exclude units for which the solids were removed (e.g., “clean” closed) prior to closure and for units that were replaced in-kind. Commenters also feel that EPA does need the original dimensions of a closed pond. It was also stated that Q. D3-15 should be revised to require the maximum depth based on the final elevation of the waste within the pond or impoundment, not the height of the berm because the final elevation constitutes the final maximum depth. EPA should also request the quantity of solids that went into the pond over the life of the pond/impoundment. x. In Q. D3-20, why does EPA need the closure plan, if any, for a closed pond? This is excessive, especially since EPA asks in the next question for a summary of the steps of closure and closure costs.	measurements to provide this data; however, best available information should be used to answer this question. r. EPA already had limited the bulk of this question (frequency, duration, and volume dredged) to the last five years. EPA does not believe it is necessary to limit the request for the year of last dredging, frequency of dredging that year, and amount of material removed that year to the last three years since some ponds/impoundments (perhaps many or even most ponds/impoundments) have not been dredged within the last three years. s. EPA phrased these questions in this manner to provide plants the flexibility needed to provide the information requested. t. EPA revised Q. D3-9 instructions to clarify the cost request.. u. EPA added a "NA" response option to accommodate any ponds that don't have "techniques other than settling." EPA also revised the question by adding “solely settling (e.g., adding chemicals to remove certain metals)”. v. EPA clarified in Q. D3-12 and Q. D4-10 that plants should provide the chemical dosage response in gpd and, if necessary, the plants can divide the total yearly chemical dosage by the number of days added throughout the year. EPA also revised the "Average Addition Rate" column to allow for both gpd and pounds per day options. w. EPA revised Q. D3-13 through D3-15 to limit the number of years for information regarding closed pond/impoundment units to the last 10 years to lessen the burden on the industry and still receive the information necessary for the rulemaking. EPA revised Q. D3-15 to request the pond/impoundment unit's volume, surface area, bottom and top elevation, freeboard height, maximum height of berms and dams above the surrounding grade, and the total quantity of solids placed in the pond/impoundment when it was originally built and at its end of life. EPA also added the request for the quantity of solids that went to the pond over the life of the pond. x. EPA requests the closing plan and associated cost information to evaluate the option of converting wet ash handling systems to dry. EPA rephrased Q. D3-21 to explain that if the plants have provided a closure plan that describes the closure process, the required steps, and the total capital and O&M costs associated with the closure, that they do not need to respond to D3-21.

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y. Q. D3-21 as currently worded is very broad and likely will result in the gathering and provision of information that does not aid in the potential rulemaking process. z. Are UICs considered wastewater treatment systems for purposes of Section 4? aa. Design, average 2009, and maximum 2009 flow rates are requested. Recommend adding average and maximum period for consistent responses (i.e., annual average, maximum daily flow). bb. Q. D4-3 should be deleted from the Questionnaire. Respondents should not be required to provide bid proposals for wastewater treatment systems. Bid proposals are not reliable information, as they are merely estimates of anticipated costs. Also, bid proposals may be influenced by the working relationships between the parties. Bid proposals also do not normally include the balance of ancillary equipment or installations, such as interconnecting pipes and controls. EPA should focus instead on actual installed systems. Best estimates for total capital and O&M costs would be more appropriate requests, yield better quality information, and less burdensome. cc. Commenters stated that since EPA requires submittal of the current NPDES permit and several system diagrams, EPA should refer to the permit and the diagrams for the effluent limitations applicable to the wastewater treatment unit and its discharge, instead of asking Q. D4-7. dd. Replace column heading “2006 Annual Cost” with “2009 Annual Cost” in Table D-10. ee. In Q. D5-1/Table D-10, EPA does not provide instructions for determining what rate per kilowatt hour to use for power for pumping and power for operations other than pumping. Also, the individual O&M categories identified in Table D-10 are too specific. EPA should generalize these costs and allow respondents to provide the total O&M costs for the questionnaire. ff. Q. D5-2 requests capital costs for wastewater treatment systems. In many cases these systems may have been installed 25 to 50 years ago. Collecting records of capital costs from that long ago could be extremely burdensome. Also, The individual capital costs identified in Table D-11 are too specific. We recommend specifying the types of direct and indirect capital costs to be considered in the description for clarification and requesting only the total capital	y. EPA phrased these questions in this manner to provide plants the flexibility needed to provide the information requested. z. For the purpose of the questionnaire, UICs are NOT considered treatment, they are considered disposal. aa. EPA revised this question to request maximum design flow rate and maximum daily flow (in gpd). bb. EPA recognizes the limitations of system/cost information in bid proposals/engineering reports; however EPA did not remove Q. D4-3, because the bid proposals/engineering reports provide useful information to fill data gaps, particularly for planned wastewater treatment systems. cc. EPA is aware that certain wastewater treatment systems may achieve specified effluent limits for different pollutants; however, this information is being requested to determine if there are certain pollutant(s) that drive the overall treatment system operation. This may not always correspond to the permitted limitations. dd. EPA incorporated these changes. ee. EPA added an explanation to Table D-10 to clarify that plants may use the total kWh used for pumping (for the treatment system) in 2009 to estimate \$/kWh for pumping costs. Similarly, for \$/pound steam costs, plants may use the total pounds of steam used (for the treatment system) in 2009. The O&M cost breakouts will allow EPA to most accurately compare costs for treatment systems in the industry. EPA expects plants to provide information to the best of their ability, providing estimates if necessary. Estimated responses should be noted in the Comments page. ff. EPA revised Q. D5-1 and Q. D5-2, only request information for systems installed in the past 25 years. The capital cost breakouts will allow EPA to most accurately compare costs for treatment systems in the industry. EPA expects plants to provide information to the best of their ability, providing estimates if necessary. Estimated responses should be noted in the Comments page.

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cost and year on which the cost is based. Simplifying the request will minimize the time necessary to gather more specific information.	
<i>Part E/Wastes from Cleaning Metal Processing Equipment</i>	
a. Revise Q. E1-1 and E1-2 to request information on generation of wastes since 2007 instead of 2000. b. Facilities that ship all metal cleaning wastes to off site treatment or disposal should be exempt from answering Part E. c. Clarify definitions of the terms “episode” and “residues.” d. Revise Q. E1-2 instructions: “an” should be “on.” e. One commenter suggested that Table E-1 should be split into two separate tables, one for cleanings using chemicals and one for cleanings without chemicals. Many commenters also requested that the seventh column in Table E-1 be modified to allow reporting of volume by cleaning event instead of annually and the eighth column be revised to request the frequency of cleaning events. f. Q. E1-3 is a very open-ended question and it will result in inconsistent answers. g. Q. E1-4 should include evaporation as a response option. h. Q. E1-8 asks for a waste determination status that may not be known until the wastes are generated and sampled. The results of the testing may determine whether the wastes are hazardous or non-hazardous.	a. EPA has revised this question to request information about the most recent cleaning event for each cleaning operation with chemical addition and without chemical addition on metal process equipment that has occurred since January 1, 2000. EPA is aware that some cleaning operations may occur years apart and does not want to risk mischaracterizing the industries wastewater generation by limiting the duration of the question. b. EPA does not agree to exempt facilities that ship these wastes off site from answering the questionnaire. EPA has already limited this part of the questionnaire to a statistical subset and therefore requires complete answers from all respondents in order to characterize national practices. c. EPA replaced the term “episode” with “cleaning event” and defined the term in the instructions of Q. E1-2. EPA also defined the term “residue” in the questionnaire glossary. d. EPA incorporated these changes. e. EPA incorporated these changes. f. EPA recognizes that close-ended questions are preferable. However, in order to provide plants the flexibility necessary to provide the information requested, EPA has retained the format for this question. g. EPA incorporated these changes. h. EPA has revised this question to provide a more typical answer that does not require sampling data.
<i>Part F/Management Practices for Ponds/Impoundments and Landfills</i>	
a. Revise Section 1 to also apply to oil. b. Are ponds/impoundments that perform treatment included in Section 1 and 3? c. In Q. F1-5, “storms in close succession” should be defined. The Agency could get many varied responses unless some definition of size, frequency, and/or duration is not requested. Also, EPA should define what it means by a “design	a. EPA did not revise Section 1 to also apply to oil in order to minimize burden and because the combustion of oil is not the focus of this part. b. EPA reworded the instructions of Section 1 and 3 to include “pond/impoundment units or landfills used for the storage, treatment, and/or disposal of residuals or by-products....”

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storm.” d. Commenters stated that ponds and impoundments typically do not have leachate collection systems. However, units with single and double liners may have a leak detection system from which water can be removed and treated. Commenters also requested that EPA define the terms “leak detection system” and “leachate collection system” in order for respondents to give an accurate reply. e. Q. F1-8 and Q. F2-9 assumes plants have monitoring controls to determine the number of days leachate is collected, however all plants may not have monitoring controls. Add a sub-question regarding estimate method (e.g., pumping logs, flow meters, and engineering judgment). f. Q. F1-12 through Q. F1-15 are redundant with the USEPA Ash Management Unit Survey questions and Q. F3-3 is redundant with the April 2009 question from the House Committee on Transportation and Infrastructure's Subcommittee on Water Resources and Environment. g. The fourth question in Q. F1-9, Q. F2-10, and Q. F2-15 requests the treatment system ID from Table A-4, but Table A-4 is intended to list pond/impoundment areas, not treatment systems. Correct the table reference. h. Q. F1-10, Q. F2-12, and Q. F2-16 do not specify how much leachate is recycled back in the plant. For leachate recycled back into the plant, request an estimate of the amount reused (as a percent of total). i. Many commenters expressed concern about the request for the cost of corrective actions, cost of inspection, and qualifications of the inspector in Table F-1. Commenters stated that the cost of corrective actions will already be included in the total O&M costs for each unit, that it will be difficult to estimate the cost without conducting engineering studies, and that the table requires further clarification of what should be included and excluded when calculating the cost. Commenters also stated that the request for the qualifications of the inspector goes beyond the scope of the questionnaire and that most inspectors do not have construction experience. Additionally, it was requested that a footnote be added to the “cost of inspection” column to require the respondent to indicate if the inspection was self-performed. j. Q. F2-1 should be rephrased. Not all landfills are “licensed,” in the sense that	c. EPA revised Q. F1-5 to ask if the pond/impoundment unit has ever experienced an overflow, excluding routine permitted discharges and added a new question to ask if such overflow was discharged to a receiving water d. EPA revised the definition of the term “leachate” to include leakage, leak, seepage, leachate collection, and leak detection sources. EPA also defined the terms "leak detection system" and "leachate collection system" in the glossary of the questionnaire. e. EPA clarified that the plants should provide a description of the estimation method in the “Part F Comments” tab at the end of Part F. f. EPA has generally retained Q. F1-12, Q. F1-13, and Q. F1-15/Table F-1. However, EPA deleted Q. F1-14 and removed the "Qualifications of the Inspector" and “Findings of Inspection” columns in Table F-1. Additionally, EPA did not remove Q. F3-3 because it does not request groundwater monitoring data; therefore, the question does not contribute significantly to the burden. g. EPA revised the question to refer to Table D-2 instead of Table A-4. h. EPA did not incorporate these changes because the percent recycled is not absolutely necessary to evaluate option for the ELG revisions and EPA felt this may be overly burdensome. i. In Table F-1, EPA did not remove the “cost of corrective actions” column because the questionnaire only requests the total O&M costs for 2009. However, EPA provided additional clarification of what should be included in the cost of corrective actions (e.g., labor costs)., EPA also recognizes that providing this information may be more difficult without conducting engineering studies for those corrective actions that have not yet been taken, and in these instances plants should provide their best estimates and any necessary comments in the Comments tab. Engineering studies would not be necessary for those corrective actions which have already been implemented. In addition, EPA removed the “qualifications of inspector” column from the table, as noted above. However, EPA did not add a footnote, but renamed the “Company/Consultant Name” column to “Affiliation of Inspector,” which has the respondent specify if the inspector was a plant/company employee or a consultant. Additionally, EPA revised the instructions to clarify that estimating the cost for on site or company personnel to conduct inspections is

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the state provides an official license. In some states, while the state reviews and approves design plans, it does not issue a license. k. In Q. F2-5 clarify what should be included and excluded when calculating costs. l. In Q. F2-5, include the date of the expansion, specify what dimensions are required, and request information on future plans to expand. m. In Q. F2-12 further define the term “discharged” to clarify if this means through a NPDES permitted outfall. n. In Q. F2-14 “Conveyance for stormwater run-off from the landfill” suggests all stormwater has contacted active surfaces of the landfill and does not distinguish between stormwater from capped areas of the landfill versus runoff from non-capped areas. Clarify that this is water that does not contact solids (assumes any water contacting an uncovered, working face would become leachate). o. EPA’s instructions for Section 2 refer to on site landfills previously defined in Table A-6. Table A-6 includes operating/active, retired/closed, and planned landfills. Section 2 questions seem to be directed toward operating/active landfills. Landfill characteristics/design for planned landfills may not be available or may change prior to construction. p. The checkbox for “No” in Q. F3-1 needs a (Skip to End of Section F) instruction. q. Q. F3-3 could be interpreted differently depending on the definition of pollutant (e.g., is calcium a pollutant), and background (e.g. a well upgradient of the landfill / pond or a regional background computed as in a RCRA study). Clarify the terms "pollutants" and "background". r. Commenters expressed concern about the relevancy of section 3 and requested the removal of these questions. Commenters also requested that the section be applicable to pond/impoundment systems, wastewater treatment systems, and landfills rather than specific pond/impoundment units and that EPA should specify if Q. F3-3 is focused on ash related constituents and/or on agricultural related compounds.	based on their labor costs and time involved. j. EPA replaced the term “licensed volume” with “approved/licensed volume” in Q. F2-1. k. EPA clarified that the costs requested in Q. F2-5 should include any labor, materials, and energy costs. In addition, EPA also stated that any unique capital costs should be listed separately from the general costs associated with expansion. l. EPA clarified that the dimensions refer to surface area, volume of stored materials, and height and added a request to provide the date(s) of expansion. However, EPA did not find it necessary to include a request about future expansions. m. EPA reworded the response options throughout this part to specify the type of discharge, either to a POTW or discharged directly (and to specify the outfall number). n. In revising the questionnaire, EPA has differentiated between capped and uncapped portions of the landfill. o. EPA revised the instructions throughout Part F to require the respondent to complete this part for all active/inactive/open and retired/closed pond/impoundment units and landfills. p. EPA added “Continue to Question F3-2” next to the “yes” response option and added “Skip to next Questionnaire Part” next to the “no” response option. q. In Q. F3-3 EPA clarified the term “pollutant” for the purpose of the question by referring to a list of analytes in Part G. EPA defined the term “background concentration” for the purpose of the ICR in the glossary. r. EPA did not remove Section 3, because the groundwater monitoring information is requested to evaluate the industry-wide prevalence of groundwater monitoring practices and to help evaluate the potential of leachate contaminating surface waters. However, EPA clarified that Q. F3-3 is limited to pollutant concentrations from ash and FGD related constituents and revised Section 3 to request the information on a pond system level (referring to Table D-1, D-2, or A-6).

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<i>Part G/Leachate Sampling Data for Ponds/Impoundments and Landfills</i>	
a. Include analyses of TSS, sulfates, dissolved metals, and dissolved mercury. b. Leachate streams from landfills are already regulated through state solid waste laws in most jurisdictions. Therefore, further regulation of leachate from coal combustion landfills may not be necessary, and EPA shouldn't prejudge the issue. c. Many commenters stated that it does not make sense to ask for leachate data from a pond or impoundment, because ponds/impoundments typically do not have leachate collection systems. However, units with single and double liners may have leak detection systems from which water can be removed and treated and therefore, it is unclear if the intent of this request includes water collected from leak detection systems. Additionally, commenters requested definitions for the terms "leachate," "runoff," "untreated," "treated," and "detection limit." d. If the respondent answers "no" to Q. G1-2, there should be an instruction to skip to Q. G1-5. e. Multiple commenters stated that many of the facilities will not be able to accomplish the leachate sample collection in the required amount of time, because some facilities do not regularly generate leachate weekly and there are a limited number of labs that are certified to collect and analyze the samples by low-level methods (e.g., Method 1631E). Therefore, every facility chosen for the sample collection will need to have their collection and analysis completed at the same time, which could prove to be impossible during a short window of time. f. Facilities that collect and dispose of leachate off site (i.e., not discharged) should be exempt from the sampling requirement, as the information collected likely would not be representative of typical leachate discharges. g. Clarify if pond/impoundments that perform treatment are included in this part. h. The costs for collecting and analyzing eight samples of leachate (treated and untreated) per treatment unit will be significant. One commenter estimated that the costs for collection and laboratory analysis per sample are in the range of \$1,000 to \$1,500. Therefore, the costs will be especially high for facilities that will be required to collect both untreated and treated samples. In addition, the burden will be very large for small facilities that are frequently on very tight budgets.	a. EPA added analyses of TSS and sulfates; however, EPA did not add dissolved metals and dissolved mercury, because of the additional burden (including cost) associated with the sample collection and analysis. b. EPA has not prejudged this issue, but requires additional data to determine if revisions to the ELGs are necessary for leachate discharges. c. EPA defined the term "leachate" in the questionnaire glossary to include leakage, leak, seepage, leachate collection, and leak detection sources. EPA also defined the terms "treated" and "detection limit" in the questionnaire glossary and clarified the difference between untreated and treated leachate in the leachate sample collection instructions. d. EPA has now included skip instructions for this question. e. EPA revised the instructions of the leachate sample collection to collect leachate samples every week for four weeks or as soon thereafter as sufficient leachate is available for collection, therefore collection during consecutive weeks may not happen in all cases. Laboratory availability is not expected to be a problem because of the small number of samples that will be collected and analyzed, relative to the number of samples laboratories routinely analyze nationwide from a variety of facilities, even when considering the specific analytical methods required by the ICR. The holding time for EPA Method 1631E is 90 days; therefore, samples will not need to be analyzed immediately upon collection. This will allow labs ample time to receive and preserve samples in order to handle the required analyses within the timeframe provided. f. Even those plants that send leachate off-site are required to provide sampling data for untreated leachate because the data will be used to characterize the raw wastewater and evaluate treatment technology for revised ELGs. However, EPA has revised the instructions to clarify that facilities that collect and dispose of leachate off site are not required to provide sampling data for treated leachate; only facilities that treat leachate on site are required to provide treated data. g. EPA clarified in the instructions that pond/impoundments that perform treatment are included in this part.

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i. EPA should develop a screener questionnaire that would allow EPA to investigate all potential analytical issues with the leachate matrices and determine whether any further existing data or sampling would be beneficial for characterizing leachate discharges. j. EPA should consider allowing the submittal of historic leachate data, if available, instead of requiring four new and additional weekly leachate sample results. k. Many commenters expressed concern that EPA's instructions for sampling are not clear. EPA does not specify where to sample for untreated or treated leachate, and therefore the resulting data will be inconsistent. l. Depending on the characteristics of the leachate samples, Method 200.8 may be an inappropriate choice for some metals. It has been demonstrated that Method 200.8 can produce erroneous results for some metals in certain matrices due to polyatomic interferences. These interferences can result in erroneous analytical results. m. EPA should require rainfall information (in inches per day) for 30 days prior to the first leachate sampling, and also during the entire sampling period. n. Depending on the configuration of the leachate collection system, sampling may be difficult due to confined space entry issues (i.e., in manholes). There may be significant safety concerns at some facilities due to this sampling requirement. o. Q. G1-6 is duplicative of Tables A-5 and A-7. The respondent already identifies types of wastes in each management unit on those tables. EPA should refer to those answers and not ask for the same information twice. In addition, EPA should clarify that the amount of waste requested in Q. G1-6 applies to the uncapped portion of landfill that contributes to leachate.	h.. EPA estimated in the supporting statement that the cost to analyze one leachate sample at one sample location (taking into account analytical testing, supply costs, and sample collection labor) would cost \$2,212.55, which is significantly higher than each of the commenters' estimates. Depending on whether a plant has a pond, a landfill, or both, EPA has estimated anywhere from 4 to 16 sample points at a plant. Therefore, EPA has accounted for the burden associated with this sampling effort. However, to reduce burden on small entities, EPA has excluded them from the subset of coal-fired plants selected to respond to Parts E, F, and G (and thus is excluding them from sampling). i. EPA does not agree that a screener questionnaire is necessary for the purpose of investigating analytical issues for leachate. j. EPA revised the leachate sample collection instructions to allow a plant to provide existing data in lieu of collecting new data if the historic data fulfills the specific requirements articulated in Part G. k. EPA revised the leachate sample collection instructions to clarify that the plant should collect samples from each leachate collection point for each pond/impoundment and landfill. If the plant determines that a sample from one or more collection points are representative of an individual pond/impoundment or landfill, then the plant may simply collect the representative sample(s) instead of sampling each collection point. l. Method 200.8 is an EPA-approved method and therefore is valid for setting effluent limitations. It remains the required analytical method for selected analytes; however, EPA has added flexibility for alternative methods for certain parameters. m. EPA added a question requiring rainfall information for two weeks prior to and throughout the sampling period, because the amount of rainfall can impact characterization and the amount of leachate generated. n. EPA recognizes there could be safety issues associated with leachate sampling; therefore, EPA revised the instructions of the leachate sample collection to allow the plant to request exemption from the data collection through the submittal of a written request within two weeks after receiving the questionnaire. The submittal must explain why the plant is unable to collect

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	the samples safely. o. EPA has revised the request, but still retains the request for types of wastes in each management unit because Part G requests the amounts of each type of waste, whereas Part A simply asks what type of wastes are managed. In addition, EPA revised Q. G1-6 to request the plant to complete two rows in Table G-3 if the landfill is partially capped, one for the amount of waste under the capped portion of the landfill and one for the amount of waste under the uncapped portion of the landfill.
Part H/Nuclear Power Generation	
a. Several of the questions within Part H refer to “water streams,” while others refer to “wastewater streams.” Commenters believe these terms should be defined. b. Commenters believe Q. H1-2 is not necessary. The type of nuclear unit is not later correlated to specific waste streams. c. Commenters believe that the term “associated with the nuclear generating units” should be defined. They question whether this only includes streams directly associated with the nuclear reactor, or if it includes all streams associated with the generation of electricity. Additionally, they ask whether streams not associated with electricity generation should be included (potable water, sewage, fire protection, car washes, etc.)? d. Commenters believe the electronic version of the Questionnaire needs to allow for more than four entries on Table H-1. Also guidance should be provided for describing the “type of water stream.” Commenters are not certain whether this is meant to be a simple description using existing Effluent Guideline descriptions (low volume wastes, chemical cleaning wastes, etc.) or if each facility should develop unique descriptors. e. Commenters believe it would be problematic to answer Q. H2-1 for non-routine, intermittent streams. Some of these waste streams may go years between discharge events. f. Commenters believe Q. H2-2 should include a response box for “discharged with treatment” and replace “All leachate discharged” to “All treated water discharged.” Additionally, the choices for destinations of treated water in Q. H2-3 include leachate and sluice water, both of which do not exist at nuclear	a. EPA replaced the term “wastewater streams” and “water streams” with “process wastewater.” EPA added and defined the term “process wastewater” in the glossary of the questionnaire. b. EPA deleted Q. H1-2 from the questionnaire since this information can be received from NRC. However, EPA does request the type of nuclear unit in the “Type of Boiler or Reactor” column in Table A-10 (planned systems). c. EPA has revised the wording to say “associated with the production of electricity from nuclear generating units” and expects respondents to report all process wastewater associated with running the nuclear plant. EPA also updated the definition of “process wastewater” to ensure that plants are not including non-contact cooling water, sanitary water, uncontaminated storm water, portable water, sewage, fire protection, or car washes. d. The electronic version of the questionnaire allows for 36 entries. EPA revised the table by including a drop down box with specific process wastewater streams identified, including an "other" category where the plant can define any additional streams not already identified. e. EPA revised Q. H2-1 to allow plants to provide data on both continuous and intermittent streams. f. EPA combined Q. H2-2 and H2-3 and revised the response options for the question so that they were applicable to nuclear plants. This included removing the use of the term “leachate.”

Comment	Response
facilities. EPA should modify this question to remove these response boxes.	
Part I/Economic and Financial Data	
a. Several commenters noted the challenge of coordinating responses from plant's having multiple owners, expressing concerns with both the limited time provided to complete the questionnaire and the utility of collecting detailed information from each owner. b. Commenters noted that certain terms used in the questionnaire refer to concepts that are not accurate legal descriptions of the plants' ownership structures c. One commenter questioned the utility of asking for total revenue and total employment rather than focusing strictly on revenue or employment associated directly with electricity generation. d. Several commenters questioned the utility of asking for data on activities not directly related to electricity generation. e. Commenters noted that this information is not currently compiled under customary business practice and completing the questionnaire would therefore impose a significant burden on respondents. f. Commenters questioned the utility of asking for information about the overall operations of the ultimate parent rather than focusing only on electricity generation. g. Commenters asked for clarification of the activities included in "revenue generating activities other than generation of electricity." h. Commenters also questioned the purpose of asking for other revenue in Question I1-30 and suggested deleting this row from the table. i. One commenter asked for clarifications on how variable O&M costs should be determined for the purpose of this questionnaire	a. In response to the comments, EPA has clarified the instructions to clarify that it seeks detailed information (balance sheet, income statement, etc.) only from the owner that has the largest ownership share or financial interest in the steam electric capacity at the plant. Only summary information (revenue, number of employees and identity of the ultimate parent) is requested for other owners. This summary information is expected to be easier to gather and will be used to assess the potential for substantial economic impacts on entities that own or have another form of financial interest in steam electric plants, including in identifying entities that meet the definition of a "small business." Regarding the logistics of coordinating responses among multiple owners, EPA has designed the questionnaire to be modular and to allow each section to be completed by different individuals, as needed, prior to being returned to EPA. b. EPA recognizes that plants can have types of ownership structures that differ from a partnership or joint venture. In response to the comment, EPA has revised the instructions and the definitions provided in the glossary to broaden the concept of ownership to also include other forms of "financial participation or interest". The simple term "plant owner" suggested in one comment is general and is captured by the concept of immediate parent described in the revised questionnaire and glossary. c. The intent of this question is to help determine entity size according to the Small Business Administration (SBA) standards for the analyses required by the Regulatory Flexibility Act (RFA) and the Unfunded Mandates Reform Act (UMRA) if the immediate parent is also the ultimate parent. This question was asked at the immediate parent- as well as the ultimate parent-level to simplify the skip pattern for questions. For the purpose of size determination, EPA needs <i>total</i> revenue, employment, and electricity sales, as opposed to only those related to steam electric operations. EPA is asking for revenue and employment associated with electricity generation for every immediate parent to allow the eventual assessment of the uncertainty associated with attributing compliance costs and other impacts only to immediate parent owner (largest equity share) and to support a cost-to-revenue analysis of impacts to all

Comment	Response
	affected entities. d. The intent of this question is to determine the scope of business activities of the immediate parent including those activities aside from electricity generation as well as the relative importance of these other business activities with respect to profitability of the firm. EPA will use the information to support the regulatory cost impact. Based on the comments, EPA has revised the question to distinguish between (1) production activities that are electricity generation-dependent, such as sale of steam or ash, waste combustion (which depend directly upon the generation of electricity) and (2) production activities that are not electricity generation-dependent, such as leasing of land. EPA has also revised the instructions to specify that, in this section, it is asking for information regarding all operations of the immediate parent and not just those of the plant, as these are covered in separate questions. e. In response to these comments, EPA has modified the two questions to reduce respondent burden to the extent possible while getting the data needed to conduct analyses. The questions have been revised to clarify the information requested, to specify that approximate shares are sufficient for the purpose of this data collection, and to explain that respondents need not review individual contracts to determine the exact fraction of sales subject to different pricing conditions. EPA expects that respondents will already have a sense of the approximate share of electricity sold under different terms, even if they do not have the exact statistics for each year. Additionally, the Agency has reduced the number of data items it is requesting by asking for information regarding contract duration and terms for only the most recent year of data (2009). While EPA does not expect that respondents will have to conduct an historical review of all contracts and their terms, the Agency has nonetheless revised its burden estimate to account for the potentially greater level of effort involved in answering this question. EPA has also clarified the basis for the shares requested to specify that they be based on physical quantities (MWh). f. EPA retained this question but explained the purpose for requesting the information in the instructions.

Comment	Response
	The intent of this question is to help determine entity size according to the Small Business Administration (SBA) standards for the analyses required by the Regulatory Flexibility ACT (RFA) and the Unfunded Mandates Reform Act (UMRA). For the purpose of size determination EPA needs total revenue, employment, and electricity sales, as opposed to only those related to steam operations. g. EPA has revised the question to specify that activities carried out by third parties and for which the plant incurs no cost and receives no revenue should not be included in the response. h. Regarding draft Question I1-30, because information on other plant revenue is already asked for, EPA deleted the row from this question. i. EPA provided a description of variable O&M costs in the glossary.