

Supporting Statement

for

**HAZARDOUS AND SOLID WASTE MANAGEMENT SYSTEM;
IDENTIFICATION AND LISTING OF SPECIAL WASTES; DISPOSAL OF
COAL COMBUSTION RESIDUALS FROM ELECTRIC UTILITIES**

**EPA ICR Number 1189.22
OMB Control Number 2050-0154**

Prepared by

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1. IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) TITLE AND NUMBER OF THE INFORMATION COLLECTION

This ICR is entitled "Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities," ICR 1189.22.

1(b) CHARACTERIZATION OF THE INFORMATION COLLECTION

Section 3001(b)(3)(A)(i) of the resource Conservation and Recovery Act (RCRA) (known as the Bevill exclusion or exemption) excludes certain large-volume wastes generated primarily from the combustion of coal or other fossil fuels from being regulated as hazardous waste under Subtitle C of RCRA, pending completion of a Report to Congress required by Section 8002(n) of RCRA and a determination by the EPA Administrator either to promulgate regulations under RCRA Subtitle C or to deem such regulations unwarranted.

In 1988, EPA published a Report to Congress on Wastes from the Combustion of Coal by Electric Utility Power Plants¹. The report, however, did not address co-managed utility CCRs, other fossil fuel wastes that are generated by utilities, and wastes from non-utility boilers burning any type of fossil fuel. Further, because of other priorities, EPA did not complete its Regulatory Determination on fossil fuel combustion (FFC) wastes at that time.

In 1991, a suit was filed against EPA for failure to complete a Regulatory Determination on FFC wastes (*Gearhart v. Reilly* Civil No. 91-2345 (D.D.C.)), and on June 30, 1992, EPA entered into a Consent Decree that established a schedule for EPA to complete the Regulatory Determinations for all FFC wastes. FFC wastes were divided into two categories: (1) fly ash, bottom ash, boiler slag, and flue gas emission control waste from the combustion of coal by electric utilities and independent commercial power producers, and (2) all remaining wastes subject to RCRA Sections 3001(b)(3)(A)(i) and 8002(n).

On August 9, 1993, EPA published its Regulatory Determination for the first category of wastes, concluding that regulation under Subtitle C for these wastes was not warranted. To make an appropriate determination for the second category, or "remaining wastes," EPA decided that additional study was necessary. Under the court-ordered deadlines, EPA was required to complete a Report to Congress by March 31, 1999, and issue a regulatory determination by October 1, 1999.

¹ Wastes from the Combustion of Coal by Electric Utility Power Plants, Report to Congress. EPA/530-SW-88-002, March 1988.

In keeping with its court-ordered schedule, and pursuant to the requirements of Section 3001(b)(3)(A)(i) and Section 8002(n) of RCRA, EPA prepared a Report to Congress on the remaining FFC wastes in March 1999.² The report addresses the eight study factors required by Section 8002(n) of RCRA for FFC wastes.

On May 22, 2000, EPA published its Regulatory Determination³ on wastes from the combustion of fossil fuels for the remaining wastes. EPA determined that the remaining (co-managed) wastes were largely identical to the high-volume monofilled wastes, which remained exempt based on the 1993 Regulatory Determination. The high volume wastes simply dominate the waste characteristics even when co-managed with other wastes, and thus the May 2000 Regulatory Determination addressed not only the remaining wastes, but effectively reopened the decision on the CCRs that went to monofills.

EPA concluded that these wastes could pose risks to human health if not properly-managed, although the risk information was limited (there were damage cases but no quantitative risk modeling). There were several bases for that conclusion. EPA identified and discussed a number of documented proven damage cases, as well as cases indicating at least a potential for damage to human health and the environment. EPA noted that although the absolute number of documented cases was not large, our inquiry on the existence of damage cases was focused on a subset of states that only accounted for approximately 20% of coal fired electric utility electricity generation capacity. In this regard, we noted that “given the volume of coal combustion wastes generated nationwide (115 million tons) and the numbers of facilities that currently lack some basic environmental controls, especially groundwater monitoring, other cases of proven and potential damage are likely to exist” (65 FR 32216).

As further support for its risk conclusion, EPA also discussed the results of its analyses of the potential for coal combustion residual constituents to leach at levels of concern into groundwater. Based on a comparison of drinking water and other appropriate standards to leach test data from coal combustion residual samples, EPA identified a potential for risk from arsenic that we were unable to dismiss. This conclusion was based on possible exceedances of a range of values that were being considered for a revised arsenic MCL. At the time, EPA concluded that its quantitative groundwater risk assessment was sufficiently problematic and would be inappropriate to rely on it and, therefore, a quantitative assessment of the risks to groundwater from arsenic or other contaminants due to improper waste management was lacking.

EPA also concluded that there was “sufficient evidence that adequate controls may not be in place.” Specifically, EPA was concerned with the lack of liners and groundwater monitoring in existing units. Based on the 1995 data source used in the risk assessment, EPA noted that only 26% of existing utility surface impoundments and 57% of landfills had liners. Similarly, although a high percentage of landfills had groundwater

² http://www.epa.gov/epaoswer/other/fossil/volume_2.pdf.

³ Federal Register, Vol.65, May 22, 2000, beginning on page 32214, available at: <http://www.epa.gov/fedrgstr/EPA-WASTE/2000/May/Day-22/f11138.htm>

monitoring (85%), only 38% of all utility surface impoundments had groundwater monitoring. Further, EPA noted that although there had been improvements in terms of state regulatory authorities and the imposition of controls at these facilities, a significant gap in state regulations remained, and CCR management practices were in need of further improvement.

Despite these concerns over the risk from arsenic and potentially inadequate controls, EPA concluded that the better approach to ensuring adequate management of CCR was to develop national regulations under subtitle D, rather than subjecting these wastes to hazardous waste regulation under subtitle C. In large measure, this conclusion rested on the finding that recent disposal practices in landfills and surface impoundments constructed between 1985 and 1995 were improving due to increasing state regulatory oversight, as well as voluntary industry improvements. EPA concluded that with the exception of relatively few states, the regulatory infrastructure was generally in place at the state level to ensure adequate management of CCRs. Consequently, EPA believed that subtitle D controls would effectively protect human health and the environment, because national rules would provide sufficient clarity and incentive for states to close the remaining gaps in coverage and for facilities to ensure that their wastes were properly managed and monitored.

EPA also was concerned that regulation under subtitle C would discourage purchase and beneficial use of CCRs. EPA was unwilling to place any unnecessary barriers to beneficial use of these wastes, because they conserve natural resources, reduce disposal costs, the amount of waste destined for disposal, and provide significant greenhouse gas benefits. EPA believes that such use, when properly performed, is by far the environmentally preferable destination for these wastes.

However, the Regulatory Determination explicitly stated that EPA would continue to review the issues, and would reconsider this decision based on a number of factors. Specifically, EPA noted that its ongoing review would include (1) “the extent to which [the wastes] have caused damage to human health or the environment;” (2) the adequacy of existing regulation of the wastes; and (3) the results of an National Academies of Science (NAS) report regarding the adverse human health effects of mercury, and that these efforts could result in a subsequent revision to the Regulatory Determination⁴. EPA has not taken any actions regarding the 2000 Regulatory Determination as a result of the NAS report.

Since publication of the 2000 Regulatory Determination, EPA has received a great deal of new information including two citizens’ petitions, an industry voluntary action plan, and a citizens’ proposal for rulemaking. In addition, EPA developed additional information, including damage cases, risk modeling, and updated management practices associated with the disposal of CCRs. EPA considered all of this information in making the decisions on the two co-proposed options of the May 2010 proposed rule. Based on this new information, and in the wake of several recent damage cases involving

⁴ National Academy of Sciences, “Toxicological Effects of Methylmercury,” July 2000, available at: http://www.nap.edu/catalog.php?record_id=9899

the failure of CCR surface impoundment slurry dikes that resulted in environmental damage, as well as a full consideration of the RCRA 8002(n) factors, EPA is proposing to regulate for the first time, coal combustion residuals (CCRs) under the Resource Conservation and Recovery Act (RCRA) to address the risks from the disposal of CCRs generated from the combustion of coal at electric utilities and independent power producers. However, EPA is considering two options in the May 2010 proposed rule and, thus, is co-proposing two alternative regulations. Under the first option, EPA would reverse its August 1993 and May 2000 Bevill Regulatory Determinations regarding coal combustion residuals (CCRs) and list these residuals as special wastes subject to regulation under subtitle C of RCRA, when they are destined for disposal in landfills or surface impoundments. Under the second option, EPA would leave the Bevill determination in place and regulate disposal of such materials under subtitle D of RCRA by issuing national minimum criteria. Under both options EPA is proposing to establish dam safety requirements to address the structural integrity of surface impoundments to prevent catastrophic releases.

EPA is not proposing to change the May 2000 Regulatory Determination for beneficially used CCRs, which are currently exempt from the hazardous waste regulations under Section 3001(b)(3)(A) of RCRA. However, EPA is clarifying this determination and seeking comment on potential refinements for certain beneficial uses. EPA is also not proposing to address the placement of CCRs in mines, or non-minefill uses of CCRs at coal mine sites in this action.

EPA solicits comment on all aspects of the proposed rule, including whether to regulate CCR as solid wastes under Subtitle C or Subtitle D.

This supporting statement provides justification for the eight categories of information collection requirements included in the proposed rulemaking for coal combustion residuals destined for disposal, under Subtitle C, and four categories – under Subtitle D, as follows:

1. Groundwater monitoring
2. Post-closure groundwater monitoring
3. Financial assurance⁵
4. RCRA manifesting⁶
5. Structural integrity inspections
6. RCRA hazardous waste Treatment, Storage, and Disposal Facility⁷
7. Recordkeeping requirements
8. Reporting⁸

A brief summary of the information collection requirements associated with these areas is provided in Section 3. A more detailed discussion of each cost element and the

⁵ Applies only to the Subtitle C regulatory option

⁶ Applies only to the Subtitle C regulatory option

⁷ Applies only to the Subtitle C regulatory option

⁸ Applies only to the Subtitle C regulatory option

respondent activities associated with each of the information collection requirements is presented in Section 6.

2. NEED FOR AND USE OF THE COLLECTION

2(a) NEED AND AUTHORITY FOR THE COLLECTION

These regulations are being proposed under the authority of sections 1008(a), 2002(a), 3001, 3004, 3005, and 4004 of the Solid Waste Disposal Act of 1970, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. 6907(a), 6912(a), 6921, 6924, 6925 and 6944. These statutes, combined, are commonly referred to as “RCRA.”

RCRA section 1008(a) authorizes EPA to publish “suggested guidelines for solid waste management.” 42 U.S.C. 6907(a). Such guidelines must provide a technical and economic description of the level of performance that can be achieved by available solid waste management practices that provide for protection of human health and the environment. RCRA section 2002 grants EPA broad authority to prescribe, in consultation with federal, state, and regional authorities, such regulations as are necessary to carry out the functions under federal solid waste disposal laws. (42 U.S.C. 6912(a)).

RCRA section 3001(b) requires EPA to list particular wastes that will be subject to the requirements established under subtitle C. (42 U.S.C. 6921(b)). The regulation listing such wastes must be based on the listing criteria established pursuant to section 3001(a), and codified at 40 CFR 261.11. Section 3001(b)(3)(A) of RCRA established a temporary exemption for fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, among others, and required EPA to conduct a study of those wastes and, after public hearings and an opportunity for comment, determine whether these wastes should be regulated pursuant to subtitle C requirements (42 U.S.C. 6921 (b)(3)(A)).

Section 3004 of RCRA generally requires EPA to establish standards applicable to the treatment, storage, and disposal of hazardous waste to ensure that human health and the environment are protected 42 U.S.C. 6924. Sections 3004(c) and (d) prohibit free liquids in hazardous waste landfills. Sections 3004(g) and (m) prohibit land disposal of hazardous wastes, unless, before disposal, those wastes meet treatment standards established by EPA that will “substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats are minimized.” (42 U.S.C. 6924(c),(d), (g), and (m)). RCRA section 3004(x) allows the Administrator to tailor certain specified requirements for particular categories of wastes, including those that are the subject of the

proposed rule, namely “fly ash waste, bottom ash waste, and flue gas emission control wastes generated primarily from the combustion of coal or other fossil fuels” (42 U.S.C. 6924(x)). EPA is authorized to modify the requirements of sections 3004 (c), (d), (e), (f), (g), (o), and (u), and section 3005(j), to take into account the special characteristics of the wastes, the practical difficulties associated with implementation of such requirements, and site-specific characteristics, including but not limited to the climate, geology, hydrology and soil chemistry at the site. EPA may only make such modifications, provided the modified requirements assure protection of human health and the environment. (42 U.S.C. 6924(x)).

RCRA section 3005 generally requires any facility that treats, stores, or disposes of wastes identified or listed under subtitle C, to have a permit. 42 U.S.C. 6925(a). This section also generally imposes requirements on facilities that become newly subject to the permitting requirements as a result of regulatory changes, and so can continue to operate for a period until they obtain a permit—*i.e.*, “interim status facilities.” 42 U.S.C. 6925(e), (i),(j). Congress imposed special requirements on interim status surface impoundments in section 3005(j). In order to continue receiving wastes, interim status surface impoundments are generally required to retrofit the impoundment within 4 years, to install a double liner, with a leachate collection system, and groundwater monitoring. 42 U.S.C. 6925(j)(6). In addition, wastes disposed into interim status surface impoundments must meet the land disposal restrictions in EPA’s regulations, or the unit must be annually dredged. 42 U.S.C. 6925(j)(11).

RCRA Section 4004 generally requires EPA to promulgate regulations containing criteria for determining which facilities shall be classified as sanitary landfills (and not open dumps) so that there is no reasonable probability of adverse effects on health or the environment from disposal of solid wastes at such facilities.

2(b) USE AND USERS OF THE DATA

The information collected will be used by EPA to regulate and ensure that owners and operators of CCR disposal units are in compliance with the regulations at 40 CFR Parts 257 (For the Subtitle D option) or 260 through 265, 268, 271, and 302 (for the Subtitle C option).

3. THE RESPONDENTS AND THE INFORMATION REQUESTED

3(a) RESPONDENTS/NAICS CODES

The groups affected by the proposed rule for the disposal of CCRs from electric utilities include both the generators of CCR and owners or operators of new, existing, or lateral expansions of existing non-municipal non-hazardous waste disposal units that receive CCR:

- NAICS code 221112: 495 coal-fired electric utility plants, of which⁹:
 - o 311 plants operate onsite CCR landfills
 - o 158 plants operate onsite CCR surface impoundments
 - o 149 plants use offsite disposal (84 solely), and
 - o 272 plants supply CCR for industrial beneficial uses (28 solely).
- NAICS code 562212 waste management services, of which 149 facilities receive CCR waste from coal-fired electric utility plants for offsite disposal¹⁰.

State administrative burden: Under section 3006 of RCRA, EPA may authorize qualified states to administer their own hazardous waste programs in lieu of the federal program within the state. Following authorization, EPA retains enforcement authority under sections 3008, 3013, and 7003 of RCRA, although authorized states have primary enforcement responsibility. The standards and requirements for state authorization are found at 40 CFR Part 271.

3(b) PUBLIC NOTICE

EPA plans to publish the proposed rule with this ICR in the Federal Register in May 2010. The public comment period would extend for 90 days.

3(c) INFORMATION REQUESTED

The following subsections describe the eight categories of information collection and notification requirements required in the proposed rule:

I. GROUNDWATER MONITORING

Groundwater monitoring requirements are essentially the same under the subtitle C and subtitle D regulatory options. Ground water monitoring systems under 40 CFR part 257 (Subtitle D) or 264/265 (Subtitle C) must consists of a sufficient number of wells, installed at appropriate locations and depths, to yield ground water samples from the uppermost aquifer that represents the quality of background ground water that has not been affected by leakage from the disposal unit. A detection monitoring program would be required to detect releases to ground water of CCR constituents listed in the facility subtitle C permit or the regulatory list of CCR constituents under subtitle D. Monitoring frequency is established by the EPA Regional Administrator (or State Director) in the

⁹ Source: Chapter 2 of EPA’s April 30, 2010 “Regulatory Impact Analysis” (RIA) for the CCR proposed rule.

¹⁰ Source: Chapter 2 of EPA’s April 30, 2010 “Regulatory Impact Analysis” (RIA) for the CCR proposed rule.

facility subtitle C permit or at least semiannual during the active life of the CCR landfill or surface impoundment (including closure) and the post-closure period under subtitle D. If any of the listed constituents are detected, the owner or operator must initiate a compliance monitoring program to determine whether the disposal units are in compliance with the ground water protection standard established by the EPA Regional Administrator and specified in the subtitle C permit or the regulatory list of CCR constituents under subtitle D.

II. POST-CLOSURE GROUNDWATER MONITORING

Post-closure care under 40 CFR part 257 (Subtitle D) or 264/265 (Subtitle C) requires monitoring and reporting of ground water monitoring systems during the post-closure care period in accordance with the ground water monitoring requirements during the active life of the disposal unit. Hence the post-closure care ground water monitoring requirements of the proposed rule are the same as those in the GROUNDWATER MONITORING section above.

III. FINANCIAL ASSURANCE

Financial assurance helps assure that the owners and operators of CCR landfills and impoundments have adequately planned for the future cost of closure, post-closure care, and corrective action for known releases, and to assure that adequate funds will be available when needed to cover these costs if the owner or operator is unwilling or unable to do so. Financial assurance helps protect future generations from paying for damages caused by or the prevention of damages potentially created from current waste management activities. Requiring provision of financial assurance during operation of landfills and impoundments places the cost burden on the current owner and consumer, and prevents costs from being passed from the current generation to future generations.

The cost estimate includes the costs for selecting a financial mechanism, establishing a financial test, and establishing a letter of credit. Financial assurance costs are provided for the RCRA Subtitle C option only. Financial assurance for the Subtitle D may be handled under a separate proposed rulemaking under section 108(b) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and thus are not included in this ICR for the Subtitle D option.

IV. RCRA MANIFESTING

RCRA manifesting only applies to the subtitle C regulatory option. CCRs transported off-site for disposal are subject to the manifest system requirements of 40 CFR part 264/265 (Subtitle C). The generator must comply with pre-transport requirements in 40 CFR part 262, including the preparation of the manifest. If a facility receives a CCR shipment accompanied by a manifest, the owner, operator or his agent must:

- (i) Sign and date, by hand, each copy of the manifest;
- (ii) Note any discrepancies (as defined in 40 CFR 264.72(a)) on each copy of the manifest;
- (iii) Immediately give the transporter at least one copy of the manifest;
- (iv) Within 30 days of delivery, send a copy of the manifest to the generator.

V. SURFACE IMPOUNDMENT STRUCTURAL INTEGRITY INSPECTIONS

Surface impoundment structural integrity inspection requirements are essentially the same under the subtitle C and subtitle D regulatory options. To detect and prevent potential catastrophic releases, the proposed rule requires periodic inspections of surface impoundments. Inspections must be conducted every seven days by a person qualified to recognize specific signs of structural instability and other hazardous conditions by visual observation and, if applicable, to monitor instrumentation. If a potentially hazardous condition develops, the owner or operator must immediately take action to eliminate the potentially hazardous condition; notify the Regional Administrator or the authorized State Director; and notify and prepare to evacuate, if necessary, all personnel from the property which may be affected by the potentially hazardous condition(s). Local first responders must also be notified. Annual inspections by an independent registered professional engineer are also required.

VI. PERMITTING

Permitting is required only under the subtitle C regulatory option. Under Subtitle C of RCRA, generators must obtain permits for treatment, storage, and disposal units. Under a permitting system, the regulatory authority has heightened oversight of all activities, and can assure that all activities are conducted to assure protection of human health and the environment. A further consideration is that a permit allows the regulatory authority to tailor the requirements specifically to the facility site conditions, which allows for some additional degree of flexibility, and facilitates implementation of the existing technical requirements. Under the subtitle D regulatory option, there is no permit requirement, but this option still involves certifications by professional engineers to tailor requirements to site specific conditions and to ensure that requirements are met in accordance with recognized and generally accepted good engineering practices. Furthermore, the subtitle D regulatory option addresses disposal units and not the treatment or storage of CCRs.

VII. RECORDKEEPING REQUIREMENTS

Recordkeeping requirements for disposal are essentially the same under the subtitle C and subtitle D options. For treatment, storage and transportation, those aspects are only part of the subtitle C regulatory option. In general, the proposed rule criteria require that the following 15 information items be recorded in the facility operating record as they become available, and that this information be retained by the owner and made available to the EPA upon request:

- o Subtitle C only - A description and the quantity of the waste, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by appendix I of 40 CFR Part 264;
- o Subtitle C only - The location(s) of the waste within the facility and the quantity at each location;
- o Subtitles C and D - Records and results of waste analyses and waste determinations performed as specified in 40 CFR §§257 or 264.13, 264.17, 264.314, 264.341, 264.1034, 264.1063, 264.1083, 268.4(a), and 268;
- o Subtitle C and D - Summary reports and details of all incidents that require implementing the contingency plan as specified in §257 or 264.56(j);
- o Subtitle C and D - Records and results of inspections as required by §257.83 or 264.15(d);
- o Subtitles C and D - Monitoring, testing or analytical data, and corrective action where required by 40 CFR §257 or subpart F of 40 CFR §264 and §§264.19, 264.191, 264.193, 264.195, 264.222, 264.223, 264.226, 264.252–264.254, 264.276, 264.278, 264.280, 264.302–264.304, 264.309, 264.602, and 264.1082 through 264.1090 of this part;
- o Subtitle C only - For off-site facilities, notices to generators of appropriate permits as specified in §264.12(b);
- o Subtitle C only - All closure cost estimates under §264.142, and for disposal facilities, all post-closure cost estimates under §264.144;
- o Subtitle C only - A certification by the permittee no less often than annually, that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the permittee to be economically practicable; and the proposed method of treatment, storage or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment;
- o Subtitle C only - For an on-site land disposal facility, the information contained in the notice required by the generator or owner or operator of a treatment facility under §268.7, except for the manifest number, and the certification and demonstration if applicable, required under §268.8, whichever is applicable;
- o Subtitle C only - For an off-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under §268.7 or §268.8;

- o Subtitle C only - For an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under §268.7 or §268.8;
- o Subtitles C and D - Any records required under §257.98(d)(4) and §257.98(f) under subtitle D, or §264.1(j)(13) under subtitle C for remediation waste management sites;
- o Subtitle C and D - A schedule and procedures for examining surface impoundment integrity and associated instrumentation, records of inspections, and abandonment plans must be maintained on site;
- o (15) Subtitle C - If a facility receives CCR accompanied by a manifest, the owner or operator must retain at the facility a copy of each manifest for at least three years from the date of delivery.

VIII. RCRA WASTE REPORTING

Under the subtitle C option the owner or operator must prepare and submit a single copy of a biennial report to the Regional Administrator by March 1 of each even numbered year. If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described by 40 CFR §263.20(e), and if the waste is not excluded from the manifest requirement by this chapter, then the owner or operator must prepare and submit a letter to the Regional Administrator within 15 days after receiving the waste. In addition to submitting the biennial reports and unmanifested waste, the owner or operator must also report to the Regional Administrator releases, fires, and explosions; and CCR disposal unit closures. Pursuant to RCRA section 3010, the Administrator may require all persons who handle hazardous wastes to notify EPA of their hazardous waste management activities within 90 days after the wastes are identified or listed as hazardous. For the subtitle D regulatory option, the owner or operator must report information on the company's publicly accessible website.

4. THE INFORMATION COLLECTED -- AGENCY ACTIVITIES, COLLECTION METHODOLOGY, AND INFORMATION MANAGEMENT

The following subsections discuss how the information will be collected. State agencies will not be responsible for collecting information. Rather, the owners or operators of disposal units that receive CCRs are required to collect the information, compile it in an operating record, and notify the Regional Administrator or approved State under a Subtitle C regulation, or the State, under a Subtitle D regulation when the documentation is placed in the operating record. The operating record is intended to be equivalent to a permit file that is routinely kept by the State government permitting agency.

4(a) AGENCY ACTIVITIES

Under the subtitle C regulatory option, this program is implemented by approved States and all information will be reported to the States or kept in an operating record; in unapproved States, the program is implemented by the EPA Regional Administrator and the owner/operator places all records in the operating record. EPA will not collect information from individual non-municipal non-hazardous waste disposal units. The owner or operator must make records available to the State or EPA upon request.

Under the subtitle D regulatory option, all information would be reported to the States, maintained in the owner's or operator's operating-record, and placed on the owner's or operator's publicly accessible internet site.

4(b) COLLECTION METHODOLOGY AND MANAGEMENT

Records are to be developed in accordance with the regulations and maintained in the operating record.

4(c) SMALL ENTITY FLEXIBILITY

Respondents may include small businesses; all data requested are essential for both large and small businesses.

4(d) COLLECTION SCHEDULE

Under the Subtitle C option, the final rule will become effective six months after promulgation by the appropriate regulatory authority -- that is, six months after promulgation of the federal rule in States and other jurisdictions where EPA implements the hazardous waste program (Iowa, Alaska, Indian Country, and territories, except for Guam) and in authorized States, six months after the State promulgates its regulations [unless State laws specify an alternative time]. Unless indicated otherwise below, all collection requirements described in section 3(c) in this ICR are for the period of time beginning on the effective date of the final rule until 30 years after closure of a CCR disposal unit.

The final rule will establish a schedule for the establishment of a groundwater monitoring program. Owners and operators of existing and new CCR disposal units, and lateral expansions of existing units, are to comply with the groundwater requirements according to the schedule established in the regulations unless, under a subtitle C regulation, an alternative schedule is specified by the EPA Regional Administrator or approved State.

Under either the Subtitle C or Subtitle D option:

- Existing disposal units that receive dry CCRs, and lateral expansions of existing units, are to be in compliance within one year after the effective date of the final rule.
- New disposal units that receive dry CCRs are to be in compliance before CCRs can be placed in the unit.

Once established at a unit, groundwater monitoring is to be conducted throughout the active life of the unit plus 30 years. The post-closure monitoring period may be decreased from the 30-year period if the owner/operator satisfactorily demonstrates to the regulatory authority that a shorter period of time is adequate to protect human health and the environment.

Under a Subtitle C option:

- The compliance date for the treatment standard for non-wastewaters (dry CCRs) is six months after the effective date of the final rule.
- The compliance date for the treatment standard for wastewaters with CCRs is five years after the effective date of the final rule.
- The owner or operator of a CCR disposal unit must prepare and submit a single copy of a biennial report to the Regional Administrator by March 1 of each even numbered year beginning on the effective date of the final rule.

The records and reports are to be maintained on an ongoing basis in the unit operating record.

5. NONDUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA

5(a) NONDUPLICATION

There will not be duplication of recordkeeping requirements since there are currently no similar federal recordkeeping requirements for the disposal units covered by the proposed rule and we are unaware of similar requirements imposed by states.

5(b) CONSULTATIONS

This ICR is based on the cost estimates contained in EPA's April 30, 2010 "Regulatory Impact Analysis" which accompanies the CCR proposed rule.

5(c) EFFECT OF LESS FREQUENT COLLECTION

EPA believes that less frequent recordkeeping and reporting could hamper citizen, State government, and federal enforcement and compliance efforts.

5(d) GENERAL GUIDELINES

This collection does not violate any of the Paperwork Reduction Act (50 CFR 1320.6) general guidelines.

5(e)-(f) CONFIDENTIALITY AND SENSITIVE QUESTIONS

No data requested are believed to be confidential. EPA is not requesting any trade secret information and believes that the information collection complies with the Privacy Act of 1974 and OMB Circular A-108. The recordkeeping and reporting requirements do not request information that is of a sensitive nature.

6. ESTIMATING THE BURDEN HOURS AND COST OF THE COLLECTION

6(a) ESTIMATING THE RESPONDENT BURDEN HOURS AND COST

The total universe of potential respondents identified in EPA's April 30, 2010 Regulatory Impact Analysis (RIA) for this rule consists of 495 industrial facilities, 149 commercial waste management (landfill) facilities, and 47 RCRA-authorized state government programs. However, the expected number of respondents reflects the different number of facilities impacted by each cost element as described in more detail below.

Except where noted, the burden hours per facility is estimated by dividing the cost per respondent by a \$60 per hour labor rate (approximate weighted average across current legal, technical, clerical, and managerial labor rates).

Exhibit 1 identifies the estimated information collection burden to industry under a Subtitle C rule. Note that figures may not sum consistently across rows due to rounding and differing assumptions used for hour burden estimates.

Exhibit 1: Estimated Information Collection Burden to Industry Respondents by Category for the Subtitle C Option							
Cost Element	One-time Cost per respondent	One-time hour burden per respondent	Expected Number of Respondents	Estimated Hour Burden per Respondent	Annual Cost per respondent	Total Annual Hour Burden	Total Annual Cost (millions)
I. Groundwater monitoring	-	-	467	360	\$64,000	168,120	\$29.90
II. Post-closure monitoring	-	-	467	64	\$3,860	30,000	\$1.80
III. Financial assurance	-	-	495	18	\$1,080	8,670	\$0.52
IV. RCRA Manifest Cost	-	-	149	7,383	\$443,000	1,100,000	\$66
V. Structural integrity inspections	\$91,000	1,360	90	45	\$1,400	4,050	\$0.127
VI. RCRA TSDF hazardous waste disposal permit	-	-	383	1,157	\$69,400	443,000	\$26.60
VIa. Added cost of RCRA Subtitle C permits for all offsite CCR landfills	-	-	149	1,157	\$69,400	172,400	\$10.30
VIIa. Notice of Regulated Waste Activity & EPA ID Number	\$140	2	495	-	-	-	-
VIIb. Paperwork Standards for Hazardous Waste TSDFs	-	-	411	365	\$22,000	150,000	\$9.01
VIIc. CERCLA Reportable Quantity (RQ) Spill/Leak Reporting	-	-	34	1.75	\$120	70	\$0.004
VIII. RCRA Waste Reporting	-	-	495	49	\$2,930	24,200	\$1.45
Totals:	-	-	-	10,600	\$677,190	2,100,510	\$145.71

Exhibit 2 identifies the estimated information collection burden to RCRA-authorized state governments under a Subtitle C rule. Note that figures may not sum

consistently across rows due to rounding and differing assumptions used for hour burden estimates.

Exhibit 2: Estimated Information Collection Burden to State Governments by Category for the Subtitle C Option							
Cost Element	One-time Cost per respondent	One-time hour burden per respondent	Expected Number of Respondents	Estimated Hour Burden per respondent	Annual Cost per respondent	Total Annual Hour Burden	Total Annual Cost (millions)
V. Structural integrity inspections	\$6,000	195	90	1	\$30	90	\$0.003
VI. RCRA TSDf hazardous waste disposal permit	-	-	383	970	\$58,200	371,500	\$22.30
VIa. Added cost of RCRA Subtitle C permits for all offsite CCR landfills	-	-	149	970	\$58,200	144,500	\$8.70
VIIa. Notice of Regulated Waste Activity & EPA ID Number	\$23	0.4	495	-	-	-	-
VIIb. Paperwork Standards for Hazardous Waste TSDFs	-	-	411	60	\$3,600	24,500	\$1.47
VIIc. CERCLA Reportable Quantity (RQ) Spill/Leak Reporting	-	-	6	2	\$120	12	0.0007
VIII. RCRA Waste Reporting	-	-	495	8	\$480	4,000	\$0.24
Totals:	-	-	-	2,011	\$120,630	544,602	\$32.71

Exhibit 3 identifies the estimated information collection burden to industry respondents under a Subtitle D rule. Because a Subtitle D rule would be self-implementing, industry in all states would become subject to the rule regardless of whether the state adopts the regulation. Burden estimates for state government agencies have been excluded because the rule would not require any enforceable action on the part

of the states. Note that figures may not sum consistently across rows due to rounding and differing assumptions used for hour burden estimates.

Exhibit 3: Estimated Information Collection Burden to Industry by Category for the Subtitle D Option							
Cost Element	One-time Cost per respondent	One-time hour burden per respondent	Expected Number of Respondents	Estimated Hour Burden per Respondent	Annual Cost per respondent	Total Annual Hour Burden	Total Annual Cost (millions)
I. Groundwater monitoring	-	-	467	360	\$64,000	168,120	\$29.90
II. Post-closure monitoring	-	-	467	64	\$3,860	30,000	\$1.80
V. Structural integrity inspections	\$91,000	1,360	90	45	\$1,400	4,050	\$0.13
VIII. RCRA Waste Reporting	\$3,000	50	495	50	\$3,000	24,750	\$1.49
Totals:	-	-	-	519	\$72,260	226,920	\$33.31

The cost categories are estimated below and are – for the most part – excerpted from EPA’s "Regulatory Impact Analysis (April 30, 2010)," for the CCR proposed rule. Modifications to these RIA cost estimates that were made for the ICR burden estimate are noted at the end of each category. Differences in the burden estimates for the subtitle C and D regulatory options are also noted.

I. Ground water monitoring

As estimated in EPA’s April 2010 RIA for this rule, groundwater monitoring costs are based on the Remedial Action Cost Engineering and Requirements (RACER) cost estimating software (2002) with costs based on the R.S. Means, Environmental Cost Handling Options and Solutions (ECHOS), Environmental Remediation Cost Data (2002).

- Assumes same groundwater monitoring requirements for both landfills and impoundments.
- Point of compliance: Placement at the unit boundary is assumed in the cost estimates. Unit boundary point-of-compliance monitoring complies with the “within 150 meter point-of-compliance” criterion. Plants monitoring at the unit boundary will incur no additional costs under the within 150 meter placement criteria.
- Number of wells: EPA’s March 1985 Ground Water Technical Enforcement Guidance Document (pages 2-8 to 2-16) recommends a maximum of 150 feet

spacing between down-gradient wells. EPA's December 1980 SW-611 Procedures Manual for Groundwater Monitoring at Solid Waste Disposal Facilities (pages 40 to 43) recommends a maximum of 250 feet spacing between down-gradient wells. Assuming the technical documents are the most stringent and the state regulation minimums are the least stringent, a middle ground within the range is anticipated and used in the cost estimates. This RIA does not evaluate the cost differences between the upper and lower bounds of well spacing. Groundwater monitoring well costs in this analysis assume a minimum of 2 down-gradient wells for the first 800 feet of length along two sides of the landfill or impoundment unit, which is assumed to be square, plus additional wells spaced every 400 feet. In addition, one up-gradient well is assumed.

- **Constituents:** The cost estimates include monitoring for the following chemical indicators and metals, which represents a reasonable "likely-case" scenario between indicators only and RCRA 40 CFR 261 Appendix VIII constituent monitoring which includes about 500 chemical substances:
 - **Chemical indicators:** Based on EPA's 1999 cement kiln dust proposed rule parameters (i.e., pH, conductivity, total dissolved solids, potassium, chloride, sodium, and sulfate) as a cost proxy.
 - **Metals:** Metals with primary and secondary Maximum Contaminant Levels (MCLs) (i.e., Al, Cu, Fe, Mn, Ag, Zn, Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Se, Tl).
- **Frequency:** The cost estimates only include semi-annual sampling (most-likely case) analogous to EPA's 1999 cement kiln dust proposed rule and to many current state regulations, even if some states require a quarterly or annual basis.
- **Unitized cost estimate:** Dividing the average annual cost estimate result for ground water monitoring, by the count of electric utility plants to conduct that activity under state government requirements, yields an average annual per-plant (i.e., unitized) cost estimate of \$64,000. In comparison, EPA's (2008) Information Collection Request (ICR) No. 0959.13 "Groundwater Monitoring Requirements" (renewal) for the RCRA Subtitle C 40 CFR 264.92 and 265.92 TSDF "groundwater protection standard" provides an estimate of \$28,130 per year.¹¹ The \$64,000 unitized cost for groundwater monitoring generated by the above assumptions applied in the engineering control cost model used for the April 30, 2010 RIA is 2.3 times larger and more appropriate to the RIA because it reflects a larger number of wells per-plant to monitor the groundwater under the larger sized CCR disposal units compared to the average sizes of other types of industrial waste disposal units.
- No state government (or "agency") costs are incurred under this cost element.

Modifications/clarifications to the RIA cost estimates above that were made for the ICR burden estimate:

¹¹ \$28,130 per year per-facility average cost derived by dividing the reported \$27.818 million annual cost by the reported 989 TSDFs from the EPA ICR 0959.13, Federal Register, Vol.73, No.103, page 30617; 28 May 2008; <http://edocket.access.gpo.gov/2008/pdf/E8-11888.pdf>

- The \$13 million per-year groundwater monitoring cost estimate represents the average cost to be paid each year over the assumed average 40-year operating lifespan of the existing and future new replacement CCR disposal units (i.e., landfills and impoundments), as estimated and averaged over the 50-year period-of-analysis (2012 to 2061) applied in the RIA.
- Only 467 of the total universe of 495 potential respondents will be impacted by this requirement because the other 28 facilities solely supply their CCR for beneficial uses.
- The \$64,000 unitized cost for groundwater monitoring described above was applied to these 467 facilities. Burden hours were estimated to be one-third of the annual costs given that the capital costs of installing the monitoring equipment will be higher over the first three years of service than labor costs. Thus, the capital costs needed to fulfill this information collection burden accounts for approximately \$42,400, while actual burden hours account for approximately \$21,600 of the total \$64,000 for each facility.

Differences between the subtitle C and D options:

- None.

II. Post-closure groundwater monitoring requirements

- Same requirements for both landfills and impoundments.
- Baseline post-closure monitoring is assumed to comprise 30 years of groundwater monitoring on a semi-annual basis. The physical parameters (i.e., point of compliance, number of wells, sets of chemical indicators and sets of chemical constituents monitored, and semi-annual frequency) and unit cost are assumed identical as defined in the groundwater monitoring cost item section of the RIA.
- No state government (or “agency”) costs are incurred under this cost element.

Modifications to the RIA cost estimates above that were made for the ICR burden estimate:

- Post-closure monitoring costs are estimated in the RIA assuming an annual sum is placed in a fund by affected entities (i.e., electric utility owners) during the assumed average 40-year operating life of the CCR disposal unit. At the time of closure, sufficient monies will be available in the fund to cover post-closure monitoring for the next 30 years beyond end-of-lifespan, assuming an annual interest rate of 7%.
- For post-closure monitoring, the RIA 50 year annualized cost estimate was applied because it more accurately reflects how this component will impact the respondents.
- As with groundwater monitoring, only 467 of the total universe of 495 potential respondents will be impacted by this requirement because the other 28 facilities solely supply their CCR for beneficial uses.

Differences between the subtitle C and D options:

- None.

III. Baseline financial assurance for CCR disposal unit closure and post-closure care

Financial assurance helps assure that the owners and operators of CCR landfills and impoundments have adequately planned for the future cost of closure, post-closure care, and corrective action for known releases, and to assure that adequate funds will be available when needed to cover these costs if the owner or operator is unwilling or unable to do so. Financial assurance helps protect future generations from paying for damages caused by or the prevention of damages potentially created from current waste management activities. Requiring provision of financial assurance during operation of landfills and impoundments places the cost burden on the current owner and consumer, and prevents costs from being passed from the current generation to future generations.

The cost estimate includes the costs for selecting a financial mechanism, establishing a financial test, and establishing a letter of credit. The differences between RCRA Subtitle C and Subtitle D financial assurance mechanisms are not assessed.

The RIA assumes the same requirements for both landfills and impoundments:

- Capital cost includes selection of financial assurance mechanism, establishment of financial test, and establishment of letter of credit. The letter of credit is assumed to be most available to utilities and will be utilized in most circumstances. This is amortized in the annual cost.
- Annual cost includes maintenance of financial test and maintenance of letter of credit. Establishment and annual maintenance of the letter of credit is estimated to be 1% to 3% of the nominal value of the letter of credit (i.e., total cost of closure and post closure). This RIA applied the 2% midpoint of this range. Implementation costs are estimated on the assumption that an outside consulting firm and legal assistance will assist in obtaining and maintaining the letter of credit (\$692 per year in 1995 dollars or \$1,051 per year inflated to 2009 dollars). Estimate obtained from Mohammad Iqbal and John Collier, ICF, Inc., "Local Government Financial Test Economic Analysis," memorandum to George Garland, EPA, 30 April 1995. Additional supporting information obtained from EPA "Estimating Costs for the Economic Benefits of RCRA Noncompliance," September 1997.
- States will incur some costs to review these financial assurance requirements; in the RIA, these costs were embedded in the permit review cost element. Thus, state costs are not broken out separately here.

Modifications to the RIA cost estimates above that were made for the ICR burden estimate:

- None.

Differences between the subtitle C and D options:

- These requirements are not applicable to the Subtitle D option.

IV. Regulatory offsite disposal costs (RCRA manifests, RCRA TSDF permits for offsite disposal)

Assume that Subtitle C adds extra cost to manifest waste sent to offsite disposal

Assumptions:

- Affects the 12% (15 million tons per year) annual CCR generation currently trucked offsite to non-hazardous landfills (2005)
- 6 miles average one-way trucking distance to offsite landfills ¹²
- \$0.19/ton/mile hazardous waste truck operating cost
- 12 tons CCR per full truckload (source: Gambrills, MD case study¹³); (15 million tons/year) / (12 tons/load) = 1.25 million truckloads per year

Cost Calculations:

- Manifest cost: (1.25 million truckloads) x (\$53 per manifest per load average cost from EPA 2007 ICR 801.15) = \$66 million per year
- No state government (or “agency”) costs are incurred under this cost element.

Modifications to the RIA cost estimates above that were made for the ICR burden estimate:

- Trucking costs not considered as part of paperwork burden estimates.

Differences between the subtitle C and D options:

- The Subtitle D option would not require RCRA manifesting.

V. CCR disposal unit structural integrity inspection cost

¹² Source: based on actual distance reported for a MD plant at <http://www.rachel.org/en/node/445>. Note: a broader range of 2.4 miles to 25 miles in one-way offsite landfill distance was reported by an OH plant at http://www.columbusdispatch.com/live/content/local_news/stories/2008/04/14/Powerfills.ART_ART_04-14-08_B1_FF9TI0U.html?sid=101, and a WI plant, respectively at <http://www.lacrossetribune.com/articles/2007/09/21/news/03landfill0921.txt>

¹³ January 2008 Constellation Energy Gambrills MD damage case

Assumptions:

- Assume that the residual 18% of the non-inspected plants require inspection over the 82% baseline inspection coverage.
- Cost Calculation:

One time industry cost: 1,360 hours/plant (to prepare and revise safety plan) x (\$70.07/hour) x (495 plants) x (18% not inspected) = \$8.5 million

Annual industry cost: [42.5 hours/plant (weekly inspections) x \$30.27/hour + 2 hours (certification by company engineer) x \$70.07/hour] x (495 plants) x (18% not inspected) = \$127,000

One time state government cost: 195 hours/plant (to review safety plans) x (\$30.57/hour) x (495 plants) x (18% not inspected) = \$0.53 million

Annual state government cost: 1 hour/plant (annual review of inspection status reports) x (\$30.57/hour) x (495 plants) x (18% not inspected) = \$2,700

Total (industry + state) Annual Costs = \$0.13 million

Modifications/clarifications to the RIA cost estimates above that were made for the ICR burden estimate:

- This cost element's labor hours and costs are based on the "Supporting Statement" for the March 2008 DOL/MSHA ICR 12-19-0015, "Refuse Piles and Impounding Structures, Recordkeeping, and Reporting Requirements" at: <http://www.msha.gov/regs/fedreg/paperwork/2004/04-24046.pdf>. This estimate assumes the impoundment safety plans are valid for 10-years (similar to the length of RCRA permits) and that one revision to the plan will be made during 10-years. These once-every-ten-year costs are annualized, but also broken out separately in the ICR cost table above.
- The one-time cost burden is not based on the application of the \$60 per hour labor rate to the one-time hour burden because these one-time burdens were based on more specific data supplied by the MSHA ICR cited above. The annual hourly burden and costs estimates were also based on the MSHA ICR and not the \$60 per hour rate.

Differences between the subtitle C and D options:

- Costs are the same for industry under both options, No state costs incurred under the subtitle D option.

VI. Regulatory RCRA waste disposal permit cost for onsite disposal

RCRA Subtitle C hazardous waste regulations require hazardous waste treatment, storage, disposal facilities (TSDFs) to obtain RCRA permits as described in 40 CFR 270 consisting of a two-part (i.e., Part A and Part B) application process. The paperwork burden cost of this requirement is estimated below.

- Assumptions:
 - Although 93% of CCR landfills have a state government non-hazardous waste disposal permit and 12% of CCR impoundments have such state permits, assume CCR disposal units will need new RCRA disposal permits under Subtitle C options.
 - 383 of the 495 total electric utility plants currently dispose onsite (i.e., 84 of the 495 plants solely dispose CCR offsite, plus 28 plants solely supply CCR for beneficial uses).
- Industry average cost per waste disposal permit:
 - $(\$440^{14} \text{ average RCRA Part A permit application cost per-plant per-year}) + (\$68,960^{15} \text{ average RCRA Part B application cost per-facility per-year}) = \$69,400 \text{ per Subtitle C permit per year}$
 $(383 \text{ plants}) \times (\$69,400 \text{ per permit}) = \26.6 million
- State government average cost per waste disposal permit:
 - Build estimate based on the following four RCRA Subtitle C permit-related state government activities associated with RCRA Subtitle C waste disposal permits:¹⁶
 $(1,215 \text{ pre-application activities}) + (\$27,063 \text{ application review}) + (\$26,846 \text{ permit issuance}) + (\$3,110 \text{ permit maintenance}) = \$58,200 \text{ average cost per Subtitle C waste disposal permit per year.}$
 - State Cost Calculation:
 $(383 \text{ electricity plants dispose CCR onsite}) \times (\$58,200 \text{ per Subtitle C permit per year}) = \$22.3 \text{ million per year}$

Total Subtitle C permit cost (industry + state government) = \$48.9 million per year

Modifications/clarifications to the RIA cost estimates above that were made for the ICR burden estimate:

¹⁴ \$440 unitized cost derived from EPA Information Collection Request (ICR) No. 0262.12 “RCRA Hazardous Waste Permit Application and Modification Part A”, Federal Register, Vol.74, No.17, 28 Jan 2009, page 4958; <http://edocket.access.gpo.gov/2009/pdf/E9-1804.pdf>

¹⁵ \$68,960 unitized cost derived from EPA Information Collection Request (ICR) No. 1573.12 “Part B Permit Application”, Federal Register, Vol.74, No.100, page 25237, 27 May 2009; <http://edocket.access.gpo.gov/2009/pdf/E9-12285.pdf>

¹⁶ Source: Based on cost data from page 84 of January 2007 ASTSWMO report “State RCRA Subtitle C Core Hazardous Waste Management Program Implementation Costs Final Report” at: <http://www.astswmo.org/files/publications/hazardouswaste/Final%20Report%20-%20RCRA%20Subtitle%20C%20Core%20Project.pdf>

- For the RCRA waste disposal permit costs for Subtitle C and D permits for onsite disposal, cost per permit per year to industry and state governments was not multiplied by three-years and annualized over 50-years, like the RIA does, because this is done for RIA annualization purposes and is not reflective of present value annual costs used for ICR burden estimates.

Differences between the subtitle C and D options:

- These requirements are not applicable to the Subtitle D option.

Via. Added cost for RCRA permits for all offsite CCR landfills

Assumptions:

- Industry average cost per waste disposal permit: (\$440¹⁷ average RCRA Part A permit application cost per-plant per-year) + (\$68,960¹⁸ average RCRA Part B application cost per-facility per-year) = \$69,400 per Subtitle C permit per year

(149 offsite CCR landfills) x (\$69,400 per permit per year) = \$10.3 million

- State government average cost per waste disposal permit:
Average cost for state government review of RCRA Subtitle C permits consists of four activities:¹⁹
(1,215 pre-application activities) + (\$27,063 application review) + (\$26,846 permit issuance) + (\$3,110 permit maintenance) = \$58,200 per permit

(149 offsite CCR landfills) x (\$58,200 per Subtitle C permit) = \$8.67 million

- Total Subtitle C permit cost (industry + state government) = \$18.97 million per year

Modifications to the RIA cost estimates were made for the ICR burden estimate:

- For the added cost of RCRA Subtitle C and D permits for all offsite CCR landfills, the cost per permit per year to industry and state governments was not

¹⁷ \$440 unitized cost derived from EPA Information Collection Request (ICR) No. 0262.12 “RCRA Hazardous Waste Permit Application and Modification Part A”, Federal Register, Vol.74, No.17, 28 Jan 2009, page 4958; <http://edocket.access.gpo.gov/2009/pdf/E9-1804.pdf>

¹⁸ \$68,960 unitized cost derived from EPA Information Collection Request (ICR) No. 1573.12 “Part B Permit Application”, Federal Register, Vol.74, No.100, page 25237, 27 May 2009; <http://edocket.access.gpo.gov/2009/pdf/E9-12285.pdf>

¹⁹ Source: Based on cost data from page 84 of January 2007 ASTSWMO report “State RCRA Subtitle C Core Hazardous Waste Management Program Implementation Costs Final Report” at: <http://www.astswmo.org/files/publications/hazardouswaste/Final%20Report%20-%20RCRA%20Subtitle%20C%20Core%20Project.pdf>

multiplied by three-years and annualized over 50-years, like the RIA does, because this is done for RIA annualization purposes and is not reflective of present value annual costs used for ICR burden estimates.

Differences between the subtitle C and D options:

- These burden estimates are not applicable to the Subtitle D option.

VII. EPA administrative reporting and recordkeeping costs

VIIa. Notice of Regulated Waste Activity & EPA ID Number

RCRA Subtitle C regulations for hazardous waste “generators” require generators to identify their facilities as such and obtain EPA identification numbers (40 CFR 262.12). According to EPA’s most recent (2009) estimate, the average per-facility response burden is \$162 per facility.²⁰ Applied to the 495 electric utility plants yields an estimated one-time notification cost of \$80,190 (i.e., (495 electric utility plants) x (\$162 per notification)).

Industry share of cost: $(86\%) \times (\$162 \text{ per notification}) \times (495 \text{ plants})$
= \$69,000/year

State government share of cost: $(14\%) \times (\$162 \text{ per notification}) \times (495 \text{ plants})$
=\$11,000/year

Modifications to the RIA cost estimates were made for the ICR burden estimate:

- This cost element was not amortized over 50 years at a 7% discount rate, like the RIA does, because this is done for RIA annualization purposes and is not reflective of present value annual costs used for ICR burden estimates. However, the 86%/14% share of the burden cost between industry and state governments, respectively, that the RIA uses (note above) was still employed.

Differences between subtitle C and D options:

- EPA identification number requirements are not required under Subtitle D, therefore, these burden estimates are not applicable to the Subtitle D option.

VIIb. General Paperwork Standards for Hazardous Waste TSDFs

²⁰ \$162 per year notification cost derived from EPA Information Collection Request (ICR) No. 0261.16 “Notification of Regulated Waste Activity (Renewal)”, Federal Register, Vol.74, No.123, pages 31028-31029, 29 June 2009; <http://edocket.access.gpo.gov/2009/pdf/E9-15310.pdf>

This cost item represents a set of paperwork burden activities grouped under 40 CFR 264/265 Subpart B (i.e., 264.10 to 264.19 and 265.10 to 265.19) and includes (1) maintaining records for the S001 special waste that is stored, treated, and/or disposed onsite, (2) descriptions of location, design, construction, operating methods, techniques, and practices for onsite S001 storage, treatment, and/or disposal, (3) contingency plans for unanticipated damages from S001 onsite storage, treatment and/or disposal, (4) maintaining qualifications of facility ownership, (5) maintaining continuity and financial responsibility of facility operation, and (6) personnel hazmat training. According to EPA's most recent (2009) estimate the average per-facility paperwork burden is \$27,350 per facility per year.²¹ Applied to the 383 electric utility plants which currently dispose onsite (i.e., 84 of the 495 plants solely dispose CCR offsite with other companies, plus 28 of the 495 plants solely supply CCR for beneficial uses) yields an estimated cost of \$10.48 million per year.

Industry share of cost: (86%) x (\$10.48 million/year) = \$9.01 million/year
State government share of cost: (14%) x (\$10.48 million/year) = \$1.47 million/year

Modifications to the RIA cost estimates were made for the ICR burden estimate:

- None.

Differences between subtitle C and D options:

- These burden estimates are not applicable to the Subtitle D option.

VIIc. CERCLA Reportable Quantity (RQ) Spill/Leak Reporting

Section 103(a) of CERCLA requires facilities and vessels to immediately notify the National Response Center (NRC) of a hazardous substance release (e.g., spill, leak) into the environment if the amount of the release equals or exceeds the substance's reportable quantity (RQ) limit. In general there are five RQ categories (1, 10, 100, 1,000 or 5,000 pounds). The CCR proposed rule proposes to add CCR listed as S001 special waste to the CERCLA list of hazardous substances and assign an RQ of one-pound, as well as allowing the use of concentrations to determine RQ thus resulting in a range of 1,294 pounds to 10,000,000 pounds for 12 chemicals. Using the total count of facilities (i.e., establishments) in the US manufacturing sector (NAICS 31, 32, 33) plus the US waste management sector (NAICS 562) as rough indicators, there are 315,000 industrial facilities in the US which may handle RQ-listed hazardous substances.²² According to

²¹ \$27,350 per facility per year average cost derived from EPA Information Collection Request (ICR) No. 1571.09 "General Hazardous Waste Facility Standards", Federal Register, Vol.74, No.23, pages 6152-6154, 05 Feb 2009; <http://edocket.access.gpo.gov/2009/pdf/E9-2467.pdf>

²² 315,000 industrial facilities based on "Number of Establishments" published for NAICS codes 31-33 Manufacturing (293,919 establishments) plus NAICS code 562 Waste management and remediation services (21,254 establishments) from the US Census Bureau in its "2007 Economic Census" at <http://www.census.gov/econ/census07/> Not all manufacturing or waste management facilities necessarily handle hazardous substances so this is an over-estimate, but there are also other economic sectors (e.g.,

EPA's most recent (2007) estimate, the average per-facility response burden is \$122 (i.e., 4.1 burden hours) per facility per response, based on an average annual 25,861 facilities at an annual paperwork burden cost of \$3.161 million.²³ Relative to this 300,000 industrial facility universe, this annual count of RQ-reporting facilities represents an 8% fraction. Extrapolated to the 495 electric utility plants yields a rough estimate of 40 possible RQ reports per year, at a cost of \$4,900 per year (i.e., (495 electric utility plants) x (8% RQ reports per year) x (\$122 per RQ report)).

Industry share of cost: (86%) x (\$4,900/year) = \$4,200/year
 State government share of cost: (14%) x (\$4,900/year) = \$700/year

Modifications/clarifications to the RIA cost estimates above that were made for the ICR burden estimate:

- For the "Notice of Regulated Waste Activity & EPA ID Number," the unamortized, one-time notification cost of \$80,190 (i.e. 495 electric utility plants) x (\$162 per notification) was used.

Differences between the subtitle C and D options:

- These burden estimates are not applicable to the subtitle D option.

VIII. RCRA Waste Reporting

RCRA Subtitle C requires hazardous waste LQG large quantity generators (40 CFR 262.41) and hazardous waste TSD treatment, storage, and disposal facilities (40 CFR 264.75 and 265.75) to submit "Hazardous Waste Report" information on a 2-year repeating cycle (aka "RCRA Biennial Report"). According to EPA's most recent (2009) estimate, the average annualized per-facility response burden is \$3,410 per year.²⁴ Extrapolating this estimate to 495 electric utility plants yields a cost estimate of \$1.69 million per year.

Industry share of cost: (86%) x (\$1.69 million/year) = \$1.45 million/year
 State government share of cost: (14%) x (\$1.69 million/year) = \$0.24 million/year

mining, construction, utilities, transporters, and wholesalers), which handle hazardous substances not included in this facility count which offsets this over-estimate.

²³ \$122 per facility average cost derived from EPA Information Collection Request (ICR) No. 1049.11 "Notification of Episodic Releases of Oil and Hazardous Substances (Renewal); Federal Register, Vol.72, No.205, 24 Oct 2007, pp.60357-60358; <http://edocket.access.gpo.gov/2007/pdf/E7-20934.pdf>

²⁴ \$3,410 per facility per year average cost derived from EPA Information Collection Request (ICR) No. 0976.14 "2009 Hazardous Waste Report", Federal Register, Vol.74, No.93, pages 22922-22924, 15 May 2009; <http://edocket.access.gpo.gov/2009/pdf/E9-11410.pdf>

Modifications/clarifications to the RIA cost estimates above that were made for the ICR burden estimate:

- None.

Differences between the subtitle C and D options:

- Subtitle D requires operators to make information pertaining to additional reporting requirements, as detailed in Section 3 (c) above, available on their websites. Assume a one time burden of 50 hours per plant for establishing a webpage; and additional 50 hours annually per plant for uploading and keeping the information current.²⁵ With 495 plants subject to this requirements, the total cost amounts to (495 plants x 50 hours/plant x \$60/hour) = \$1,485,000 one time cost, plus annual per-plant cost of: (495 plants x 50 hours/plant x \$60/hour) = \$1,485,000.

6(b) BOTTOM LINE BURDEN HOURS AND COSTS

Depending on the burden category, this information collection request impacts: 495²⁶ coal-fired electric utility plants; 149 commercial waste management facilities; and 47 state government RCRA-authorized programs; resulting in the following burden hours and costs:

Exhibit 4 presents the estimated one-time respondent burden hours and cost for reporting and recordkeeping requirements applicable to the Subtitle C and D options for both industry and state governments.

Exhibit 4: Estimated One-time Information Collection Burden to Industry and State Governments for the Subtitle C and D Options				
Type of Burden	Burden to industry under C option	Burden to industry under D option	Burden to state governments under C option	Burden to state governments under D option
One-time hourly burden	123,390	147,150	17,750	-
One-time cost (millions)	\$8.19	\$9.68	\$0.55	-

²⁵ Data based on approximate costs of similar duties and services contracted by EPA/OSWER.

²⁶ Based on EPA's April 30, 2010 "Regulatory Impact Analysis" (RIA) for the CCR proposed rule.

Exhibit 5 presents the estimated annual respondent burden hours and cost for reporting and recordkeeping requirements applicable to the Subtitle C and D options for both industry and state governments.

Exhibit 5: Estimated Annual Information Collection Burden to Industry and State Governments for the Subtitle C and D Options				
Type of Burden	Burden to industry under C option	Burden to industry under D option	Burden to state governments under C option	Burden to state governments under D option
Total annual hour burden	2,100,510	226,920	544,602	-
Total annual cost (millions)	\$145.71	\$33.31	\$32.71	-

Total annual burden cost and hours are calculated by adding one-third of the one-time burden to the annual burden estimates. Thus:

$$\text{Total Annual Burden} = \text{Annual Burden} + 1/3 \text{ of one-time burden}$$

Exhibit 6 presents the total annual burden estimates applicable to the Subtitle C and D options for both industry and state governments.

Exhibit 6: Total Annual Information Collection Burden to Industry and State Governments for the Subtitle C and D Options				
Type of Burden	Burden to industry under C option	Burden to industry under D option	Burden to state governments under C option	Burden to state governments under D option
Total hour burden	2,141,640	275,970	550,520	-
Total cost burden (millions)	\$148.44	\$36.54	\$32.90	-

The above total cost includes \$19,800,800 (\$42,000 per respondent x 467 respondents) in annual capital costs to industry for groundwater monitoring under both the C & D options.

6(c) BURDEN STATEMENT

The public reporting and recordkeeping burden for this collection of information (distributing total burden hours over all potential respondents for both industry respondents and state government agencies) is estimated to average about 5,400 and 560 hours per entity for the Subtitle C and D regulatory options, respectively. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the

time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. A Federal agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on EPA's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID No. EPA-HQ-RCRA-2008-0548, which is available for public viewing at the RCRA Docket in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The EPA/DC Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the RCRA Docket is (202) 566-0270. An electronic version of the public docket is available for online viewing at <http://www.regulations.gov>. Use <http://www.regulations.gov> to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the docket ID number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID No. (EPA-HQ-RCRA-2008-0548) and OMB control number (2050-0053) in any correspondence.