



H.R. 2273 and S. 3512: Analysis of Proposals to Create a Coal Combustion Residuals Permit Program Under RCRA

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Summary

On October 14, 2011, the House passed the Coal Residuals Reuse and Management Act (H.R. 2273). The bill would amend Subtitle D of the Solid Waste Disposal Act, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), by adding Section 4011, Management and Disposal of Coal Combustion Residuals. On August 2, 2012, the Coal Ash Recycling and Oversight Act of 2012 was introduced in the Senate (S. 3512). Both amendments would create a state-implemented permit program for the management and disposal of coal combustion residuals (CCRs).

Permit programs are used as a tool to ensure that certain federal regulations are consistently enforced. When created under RCRA, those federal regulations are intended to achieve a consistent standard of protection from threats associated with waste disposal facilities. Pursuant to directive in RCRA, the Environmental Protection Agency (EPA) has identified protective measures necessary to address such risks, promulgated regulations incorporating those criteria, and approved state-implemented programs to enforce the criteria. The resulting regulatory program entails two different, but related elements—federal standards intended to provide a required level of *protection* and the permit program that will *implement* the standards.

Section 4011, in both bills, would create both the federal standards and the program to implement them, under the umbrella of creating a CCR permit program. Established entirely in statute, the program would be unique among environmental laws. The permit program would draw from the regulatory program applicable to municipal solid waste (MSW) landfills. In contrast to the statutory directives and resulting federal requirements associated with that program, the proposed amendments to RCRA include no provisions that would ensure state adoption and implementation of a CCR permit program that would result in the adoption and implementation of minimum federal standards necessary to protect human health and the environment from risks associated with CCR disposal.

Based on the structure of each bill, it would appear that the proposed amendments are intended to create a program similar to the one applicable to MSW landfills. However, it cannot be determined whether states would implement their programs as such. There are complex variables that make that determination difficult. The primary reasons stem from the limited authority that Congress has to require and, given the limits to its authority in the proposed amendments, EPA would have to compel states to implement the program. Also, provisions in each bill lack detail comparable to regulatory standards with regard to key issues such as how, when, or to which facilities the permit program would apply. As a result, program requirements would be subject to the interpretation of each state that chooses to implement it.

Due to the questions regarding how states may implement it, a CCR permit program would be similar to the program to regulate MSW landfill criteria, only in states that choose to implement it as such. That level of uncertainty defeats the purpose of a permit program and would not be consistent with other permit programs created under RCRA. This report is intended to provide Members of Congress and their staff with information to understand why that would be the case.

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Introduction

On October 14, 2011, the House passed the Coal Residuals Reuse and Management Act (H.R. 2273). On August 2, 2012, the Coal Ash Recycling and Oversight Act of 2012 was introduced in the Senate (S. 3512).¹ Each bill would amend the Solid Waste Disposal Act—more commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA, 42 U.S.C. §6901 et seq.). The bills would add Section 4011, Management and Disposal of Coal Combustion Residuals, to Subtitle D of RCRA. The amendments would create a permit program, that states may choose to implement, for the management and disposal of coal combustion residuals (CCRs).

Permit programs are a common tool to enforce regulatory requirements. Exactly how and why they are created may vary. However, when Congress has created permit programs under federal environmental law, it has done so for a common purpose—to ensure consistent, national enforcement of a federal regulatory standard.

Within the boundaries of its constitutional authority, Congress has no power to require states to adopt and implement a federal standard promulgated under pollution control laws implemented under the Environmental Protection Agency’s (EPA’s) jurisdiction. However, under laws like RCRA, Congress has authorized EPA to promulgate and enforce certain standards, but provided for conditions under which a state may be authorized or approved to adopt and enforce the standards, in its place. Given the options of allowing EPA to enforce a federal standard at facilities in the state or adopting and enforcing that standard itself, states generally choose the latter.

When Congress has required a federal standard to be enforced using a permit program, should the state adopt a program, that directive has been required, in part, to assure that state enforcement of the standard will achieve a certain level of protection established by Congress. States may have a certain degree of flexibility in implementing the standard, as long as their enforcement program assures that a level of protection is met. To assure that the federally required level of protection is met, EPA has been required to authorize or approve state enforcement of federal permit programs. Under certain conditions, EPA may have some backstop authority to enforce a federal standard if a state does not adequately enforce it, or rescind EPA approval of the state program entirely.

The proposed amendments to RCRA appear to be intended to create a permit program that would result in state implementation of a program to regulate CCR in a manner similar to state programs to regulate municipal solid waste (MSW) landfills. Similarly established under Subtitle D, the regulatory program applicable to MSW landfills required EPA to promulgate regulations that met a baseline level of protection. It also required states to adopt a permit program to assure facility compliance with the MSW landfill criteria. To compel states to do so, EPA was authorized to enforce the MSW landfill criteria at facilities in any state that did not have a permit program determined by EPA to be adequate (very narrow authority, compared to other environmental laws that provide backstop authority to enforce federal standards).

¹ A bill with provisions that are largely identical to H.R. 2273 was introduced in the Senate (S. 1751) on October 20, 2011. This report refers to S. 3512, not S. 1751.

The CCR permit program is drawn from the program to regulate MSW landfills. However, there are substantial differences between the programs. The most unique element of the proposed amendment to RCRA, in both bills, would be the creation of a permit program absent directive to EPA to promulgate standards applicable to the entity potentially regulated pursuant to the program.² That is, the legislation would create no standard directly applicable to owners and operators of disposal facilities that receive CCR. Instead, the program draws, primarily, from existing federal standards applicable to MSW landfills. Also, although its purpose is to create a permit program, there are few requirements applicable to the program itself.

Under this construct, provisions in the proposed amendments to RCRA would serve as de facto regulatory standards applicable to the entity required to obtain a permit, as well as any requirements that may apply to the permit program itself. Compared to other programs created under federal environmental law, this is a complex approach to creating a regulatory program that blurs the distinction between the purposes of a federal standard or a permit program. That is, federal standards are intended to achieve a certain level of *protection*, permit programs are intended to assure *implementation* of that standard.

Creation of a regulatory program (e.g., the establishment of federal standards and a permit program to implement them) according to statutory provisions alone, without detailed regulatory standards, is unprecedented in federal environmental law. Since no regulations would be promulgated, potential ambiguities in the statutory provisions would be subject to state (and ultimately court) interpretation. For example, the absence of certain details in the statutory provisions would seemingly indicate that states could determine details regarding the entities to which the federal standards would apply, when compliance with certain standards must be met, and when the state would issue permits to existing facilities it chooses to regulate under the program.

The proposed amendments to RCRA include no directive to EPA to determine whether state CCR permit programs are adequate to enforce the statutory standards or to assess whether the programs would result in necessary protections. Instead, EPA would be required to notify states of deficiencies in a narrow range of program requirements. Given other limits to EPA's role in state implementation of a CCR permit program, EPA would have no federal backstop authority to implement federal standards comparable to its authorities established under other environmental law, including RCRA. Regardless of whether a state chose to adopt a CCR permit program, EPA would have no authority to compel states to adopt and implement the program according to provisions in the proposed amendments to RCRA.

It would appear that the proposed amendments to RCRA are intended to create minimum national standards and result in state implementation and enforcement of standards that would address risks associated with CCR management. At the same time, as noted above, they would allow states broad discretion to determine certain key details regarding program implementation. Given the limits to EPA's involvement, it appears that states would be allowed broad flexibility in implementing a CCR permit program.

² Federal regulations could be used by states as a model for rules the state may adopt or to serve as criteria for evaluating minimal protections in state-developed rules. Instead, the program draws, primarily, from existing federal standards applicable to MSW landfills.

It is not clear whether the program that would be created pursuant to the proposed amendment to RCRA is intended to allow states such broad flexibility to interpret and implement the program. If so, such a program is inconsistent with the purpose of creating permit programs under RCRA. If it results in states regulating CCR as they deem necessary, as they currently do, it calls into question the purpose of the permit program. At least, it would be unclear whether creation of a CCR permit program would result in state implementation of protective measures that states do not currently require or would rather result in a program that would be used to document regulatory programs that states currently implement.

The purpose of this report is to provide information necessary to determine how a CCR permit program created pursuant to Section 4011 compares to the permit program to implement MSW landfill criteria (the program on which it is based), including factors that make it difficult to determine how states may implement such a program. It provides background on risks associated with managing CCR, EPA's proposed rulemaking to address those risks, and the congressional response to EPA's proposal. It also provides an overview of required elements of RCRA permit programs and compares certain elements of those programs to the CCR permit program.

Information and analysis in this report were included in an effort to provide a broad assessment of the *approach* to creating a permit program in statute. In keeping with that focus, the report does not provide detailed analyses of the bills or compare provisions in each bill. Unless otherwise noted, any reference to the proposed amendments to RCRA or Section 4011 refers to both bills.

Overview of Issues Regarding CCR Management

Despite its recent decline in demand, coal remains the dominant fuel for electricity generation in the United States and is expected to continue to be well into the future.³ CCRs are the inorganic materials generated when pulverized coal is burned at electric utilities and independent power producers.⁴ A tremendous amount of CCR is generated annually. In 2011, industry estimates that as much as 130 million tons of were generated, making it one of the largest waste streams in the United States.⁵

Disposal of CCRs on-site at individual power plants may involve decades-long accumulation of waste—with hundreds of thousands, if not millions, of tons of dry ash (in a landfill) or wet ash

³ According to the Department of Energy's U.S. Energy Information Administration (EIA), coal accounted for 42% of total U.S. energy generation in 2011 compared to 45% in 2010. Still, in 2020 and 2035 EIS projects its share will be 39% and 38%, respectively. For more information, see EIA's "Annual Energy Outlook 2012: with Projections to 2035," June 2012, p. 87, available at <http://www.eia.gov/forecasts/aeo/pdf/0383%282012%29.pdf>.

⁴ The substance is also commonly referred to as coal combustion *waste*, *product*, or *byproduct*; it may also be referred to as fossil fuel combustion waste (FFC). How it is referred to depends on the context in which it is being discussed. For example, coal combustion *wastes* or *residuals* are materials destined for disposal, while coal combustion *products* or *byproducts* are destined for some use such as a component in gypsum wallboard or cement. Regardless of what it is called, these terms refer to the same material—coal ash (when referred to broadly) or fly ash, bottom ash, boiler slag, and flue gas desulfurization materials (when referred to with specific regard to its origin in a coal-fired power plant). This report will generally refer to the substance as coal combustion *residuals* (CCRs) since that term is used in the administrative and legislative proposals discussed in this report. As used by EPA, CCRs are materials destined for disposal. Under the legislative proposals, the term refers broadly to the residuals, but not their destination (e.g., disposal or recycling).

⁵ See the American Coal Ash Association's "2011 Coal Combustion Product (CCP) Production & Use Survey Report" at http://acaaffiniscape.com/associations/8003/files/2010_CCP_Survey_FINAL_102011.pdf.

slurry (in a surface impoundment pond) deposited at the site. On December 22, 2008, national attention was turned to risks associated with managing such large volumes of CCRs when a breach in a surface impoundment pond at the Tennessee Valley Authority's (TVA's) Kingston, TN, plant released 1.1 billion gallons of coal fly ash slurry, covering more than 300 acres, damaging or destroying homes and property. TVA estimates that cleanup will continue into at least 2014 and will cost \$1.2 billion.⁶

The incident at Kingston drew attention to the potential for a sudden, catastrophic release related to the structural failure of a surface impoundment. However, EPA has determined that a more common threat associated with CCR management is the leaching of contaminants likely present in the waste, primarily heavy metals, resulting in surface or groundwater contamination. The Kingston release also brought attention to the fact that the management of CCRs is essentially unregulated at the federal level.

In June 2010, EPA proposed two options to regulate CCR pursuant to its current authorities under RCRA Subtitles C and D. In reaction to concern over the potential impacts of implementing either EPA regulatory option, the proposals to amend RCRA were introduced.

EPA Efforts to Regulate CCR

Over 70% of CCR generated annually is managed in a way that involves some form of land application—disposal in landfills, surface impoundment ponds, mines as minefill, or use as structural fill. EPA has identified numerous conditions under which those land-based uses of CCR may pose a threat to human health and the environment.

EPA also identified certain protective measures that may be implemented that would minimize or largely eliminate risks from CCR disposal. Many of the measures reduce risks that may be broadly applicable to the operation or design of other types of waste disposal facilities, such as municipal solid waste (MSW) landfills. However, EPA identified other protective measures that would address risks specific to the management of CCR. In particular, EPA found that surface impoundment ponds pose a significant risk of contaminant leaching when CCR is placed in an unlined unit, but that risk can be largely eliminated through the use of a composite liner system. Surface impoundments also pose certain risk of structural failure. Given the potentially large volume of liquid waste they may contain, structural failure could result in a catastrophic release of coal ash slurry. The potential for structural failure could be minimized by various means, including ensuring that the units meet certain design standards and are inspected regularly.

CCR disposal facilities are subject to limited federal regulation. Instead they are regulated by individual states. In a continuing effort to determine whether CCRs should be subject to federal requirements, EPA has gathered data on CCR use and disposal for over 30 years. In the past 10 years, EPA has found that states appear to be regulating CCR landfills to a greater extent than they had in the past. However, based on data available to EPA, it appeared that states with CCR surface impoundments did not require facility owner/operators to implement protective measures EPA deemed necessary.

⁶ Tennessee Valley Authority, "Form 10-Q: Quarterly Report," filed with the United States Securities and Exchange Commission on May 4, 2012, for the period ending March 31, 2012, p. 19.

As a result of potential risks tied to CCR management, actual evidence of damages attributed to improper disposal practices, and concern over potential gaps in state regulatory programs to regulate CCR, particularly surface impoundments, EPA determined that national standards were necessary. EPA's goal in promulgating those standards was to ensure that CCR is managed in a way that meets a consistent level of protection. However, its authorities to do so are limited under RCRA.

Currently, CCR is explicitly excluded from the Subtitle C requirements, unless or until EPA determines that such requirements are warranted. As a result, apart from its potential to determine that CCRs warrant regulation under Subtitle C, EPA authority to regulate CCR disposal is limited to promulgating sanitary landfill criteria (see text box) to apply to disposal facilities that may receive CCR.

On June 21, 2010, EPA proposed for public comment two options to regulate CCR pursuant to those respective Subtitle C and D authorities.⁷ Under the Subtitle C option, EPA would reverse a previous regulatory determination to exempt CCR from the hazardous waste requirements and, instead, list the material as a "special waste." Subtitle C requirements applicable to CCR management would include strict standards applicable to its land disposal. EPA assumed that power plants that dispose of CCR on-site would continue to do so, but would upgrade their facilities as necessary to ensure compliance with land disposal standards applicable to owners and operators of TSDFs—standards that EPA tailored to address issues specific to CCR.

Regulating Waste Under Subtitle C vs. D

Subtitle C—Hazardous Waste Management Requirements

- **Applicability:** wastes determined by the generator to be hazardous based on a toxic, reactive, corrosive, or combustible characteristic; or particular wastes from certain common industrial or manufacturing operations that EPA explicitly lists as hazardous.
- **Regulations:** EPA was directed to promulgate standards applicable to waste management activities from cradle to grave—requirements applicable to waste generators, transporters, and owners and operators of treatment, storage, and disposal facilities (TSDFs); and to create a permit program for TSDFs.
- **Standard of Protection:** regulatory criteria developed by EPA were mandated by Congress to, at a minimum, be those standards necessary to protect human health and the environment from a particular activity.
- **Enforcement:** EPA is authorized by Congress to directly enforce the regulations and implement the TSDF permit program; pursuant to EPA approval, states could administer and enforce a federal hazardous waste program.

Subtitle D—Prohibition on Open Dumping

- **Applicability:** waste disposal facilities that receive residential, commercial, or industrial solid waste, other non-hazardous solid wastes, or wastes explicitly excluded from the Subtitle C requirements.
- **Regulations:** EPA was directed to promulgate criteria to determine which solid waste disposal facilities were sanitary landfills and which were open dump (prohibited under RCRA).
- **Standard of Protection:** sanitary landfill facilities are those that pose no reasonable probability of adverse effects on health or the environment from disposal of solid waste.
- **Enforcement:** the open dumping prohibition/sanitary landfill criteria are enforced by states that choose to adopt them or pursuant to RCRA's citizen suit authority.

⁷ U.S. EPA, "Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals From Electric Utilities," 75 *Federal Register* 35127-35264, June 21, 2010.

Pursuant to its Subtitle D authorities, EPA's second regulatory option was to promulgate national standards applicable to landfills and surface impoundments that receive CCRs. The proposed standards are structured similarly to regulatory requirements applicable to MSW landfills, supplemented to reflect requirements specific to the management of CCRs. In particular, the standards include criteria intended to address issues that may arise from the management of liquid wastes in a surface impoundment pond. Standards intended to address such issues are not included in the MSW landfill standards, but are included in Subtitle C requirements applicable to hazardous waste TSDFs. As a result, EPA's Subtitle D proposal drew from both the MSW landfill standards and the proposed standards applicable to CCR TSDFs.

According to EPA, each regulatory option would result in a similar level of protection, if implemented as proposed. However, implementation of either option would result in regulatory programs with a substantially different scope and potential for enforcement. Adoption and enforcement of the Subtitle C cradle to grave regulations would involve stricter waste management standards implemented at a higher cost to both industry and state waste management agencies. Promulgating the Subtitle D standards would result in the creation of standards applicable only to owners and operators of CCR landfills and surface impoundments (i.e., it would create a regulatory program applicable only to the CCR "grave," not every stage of its management). Further, in contrast to its broad authority to enforce Subtitle C requirements, EPA could promulgate the Subtitle D standards, but would have limited authority to enforce them. Instead, if finalized, EPA would encourage states to adopt and enforce the standards, but could not require states to do so.

EPA's proposal drew comments from industry groups, environmental and citizen groups, state agency representatives, individual citizens, and some Members of Congress. Although public comments varied, opposition to the Subtitle C option was largely due to concerns that it would—be costly, to both states and industry, to implement; be too restrictive; stigmatize the material by labeling it "hazardous," adversely affecting its potential for re-use; and restrict uses of the material that involve land-based applications of CCR, currently considered as beneficial, due to the land disposal restrictions applicable to hazardous wastes.

Opposition to the Subtitle D option stemmed from various concerns, many of which were centered on EPA's lack of authority to require facilities to adopt or states to enforce them. Given the argument by many states that the material is being managed sufficiently under current state regulatory programs, environmental and citizen groups have expressed doubts over the degree to which states would adopt new standards, resulting in the promulgation, but not implementation of any new requirements necessary to ensure protection of human health and the environment.

This report provides information regarding EPA's proposals to regulate CCR only insofar as such detail is necessary to understand why Congress has proposed an alternative legislative proposal in response to EPA's proposal; and to identify risks associated with CCR management as necessary to recognize the degree to which those risks may be addressed in the current legislative proposal to regulate CCR. This report does not provide a comprehensive discussion of EPA's authority to regulate CCR, why EPA determined that national standards were necessary, details of EPA's proposals, or opposition to them. That information is provided separately in CRS Report R41341, *EPA's Proposal to Regulate Coal Combustion Waste Disposal: Issues for Congress*, by Linda Luther.

Overview of Legislative Proposals to Regulate CCR

In response to various stakeholder comments, the House passed the Coal Residuals Reuse and Management Act (H.R. 2273) on October 14, 2011. In contrast to EPA's proposals, the House bill would amend RCRA to create a state-implemented permit program for the management and disposal of CCRs. On August 2, 2012, the Coal Ash Recycling and Oversight Act of 2012 was introduced in the Senate (S. 3512). That bill would create a permit program in a largely similar manner, with the addition of certain detailed requirements applicable to the program.

The stated purpose of the proposed amendments to RCRA, in both bills, is to facilitate recovery and beneficial uses of CCR and provide for its proper management and disposal. In accordance with that purpose, it would appear that the proposed amendment to RCRA, in each bill, is intended to result in a program that would not restrict beneficial uses or have the potential to stigmatize CCR, but create minimum standards necessary to manage the waste similar to the program to regulate MSW landfills. That is, it appears to be intended to create a permit program that falls somewhere between EPA's Subtitle C and D proposals.

Established entirely in statute, Congress would create a program unique among environmental laws. It would be created absent the promulgation of standards directly applicable to owners and operators of disposal facilities that receive CCR. Instead, the permit program specifications would draw from existing regulations applicable to MSW landfills and selected elements of EPA's June 2010 Subtitle D proposal. Instead of specifying that the criteria would apply directly to owners and operators of CCR landfills and surface impoundments, the criteria would be applied via permit program implementation. As a result, how and when a state may require facilities to comply with certain standards would likely depend on how states interpret the proposed Section 4011 provisions and whether they will enforce them at facilities in their state.

Apparent from its potential to issue guidance or technical assistance, the permit program would be created with limited involvement from EPA—to create requirements applicable to the permit program or to approve of state programs. EPA would be directed to identify deficiencies in a state's program. However, the program elements on which EPA could comment would be narrow in focus and include no substantive assessment of the program. For example, EPA would not be authorized to comment on the program's adequacy to enforce federal statutory standards or to assess the level of protection the program may provide. Instead, EPA would be required to comment on whether the state submitted the proper program notification and certification to EPA and whether the state is implementing a CCR permit program that meets the program's specifications. Within the limits of its authorities under Section 4011, EPA would have no authority to compel a state to implement required elements of a CCR permit program.

Such an approach to creating a permit program would be both complex and unique to RCRA. As a result, it may be difficult to determine how states may implement it.

Contrast with a Regulatory Program

As it would be created and implemented pursuant to the proposed Section 4011, the CCR permit program would be substantially different from other permit programs created under RCRA. For regulatory programs required under RCRA, Congress has directed EPA to promulgate regulations that meet a minimum standard of protection—generally, criteria necessary to protect human health and the environment. In that directive, Congress may specify additional requirements EPA must include in its regulations. Congress would also specify the entity to which the regulations would apply.

Pursuant to that directive, EPA would gather data necessary to determine risks associated with managing the risks and requirements that could be practicably implemented to minimize those risks (as EPA has done for CCR). EPA would be required to submit the rule for public comment, and respond to those comments, before issuing a final standard. Once finalized, depending on the statutory directive, the standards may or may not be federally enforceable. That is, Congress may give EPA express authority to both promulgate certain standards and enforce them, or to just promulgate standards and require states to enforce them. Generally, most federal environmental standards are enforced by states, pursuant to some EPA authorization or approval (also, as explicitly required in statute).

Statutory directives regarding some environmental standards have been broad and subject to a certain degree of discretion or interpretation by EPA. For example, in its directive to EPA to develop MSW landfill criteria, in addition to the broad standard of protection, Congress required minimum requirements applicable to groundwater monitoring, location restrictions, and corrective action.⁸

The final regulations provide a level of detail that statutory directive does not. Regulations detail more precisely to whom the criteria will apply. Also, if any of the statutory directives to EPA are vague or ambiguous, it is during the rulemaking process that EPA must interpret Congress's intent. Over the past several years, some industry groups and state regulatory agencies, as well as some Members of Congress, have charged that EPA has overreached its authority in promulgating certain environmental regulations. Particular focus has been directed at EPA efforts to develop federal standards to address greenhouse gas emissions, as well as emissions of other conventional pollutants, pursuant to the Clean Air Act. (See CRS Report R41561, *EPA Regulations: Too Much, Too Little, or On Track?*, by James E. McCarthy and Claudia Copeland.)

Charges of overreaching its regulatory authority have also been cited by certain opponents to EPA's proposal to identify and regulate CCRs as a hazardous waste under Subtitle C. Creation of a CCR permit program in the proposed amendments to RCRA could be seen as an effort to create a mechanism to manage CCRs that would allow states wide discretion in adopting and implementing the program, while limiting the potential involvement of EPA. However, given the limits to EPA's role in program development and flexibility allowed to states in program implementation, it is unclear whether the program created under the proposed Section 4011 would result in states applying regulatory standards to CCR landfills or surface impoundments that would differ appreciably from those states currently apply.

⁸ 42 U.S.C. §6949a(c)(1).

Standards Relevant to a CCR Permit Program

The proposed amendments to RCRA would create a permit program that is apparently intended to result in state regulation of CCR disposal facilities in a manner similar to state programs to regulate MSW landfills. To determine the degree to which a CCR permit program may resemble the program on which it is based, it is helpful to understand how that program was created and the key elements of its implementation.

Broadly, one of RCRA's goals is to prevent contamination associated with waste disposal, if at all practicable, rather than simply remedy it after discovery. Consistent with that goal, Congress required EPA to promulgate regulations applicable to hazardous waste treatment, storage, and disposal facilities (TSDFs) and facilities that may receive hazardous household wastes (subsequently defined in regulations as MSW landfills). Of particular relevance to the currently proposed amendments to RCRA is the approach that Congress took in 1984 that required EPA to promulgate and states to enforce standards applicable to MSW landfills. The resulting regulations applicable to MSW landfill management form the framework for the CCR permit program.

Also, under RCRA, when Congress has required EPA to promulgate standards applicable to solid waste disposal facilities, at a minimum, those standards have been required to be those necessary to protect human health and the environment from threats specific to a particular type of waste disposal facility or units that may receive a particular type of waste.⁹ Risks and associated protective measures specific to CCR management would therefore be relevant to any legislative proposal to regulate CCR that is intended to result in state regulatory programs consistent with other implemented pursuant to RCRA. EPA's June 2010 proposal identifies such risks/protective measures specific to CCR disposal in a landfill or surface impoundment. EPA's proposed standards provide a basis on which to compare standards that would apply to a CCR permit program and how the statutory standards may address risks identified by EPA.

The Program to Regulate MSW Landfills

The Hazardous and Solid Waste Amendments (HSWA; P.L. 98-616) amended RCRA Subtitle D to address an issue almost identical to the one currently applicable to CCR—that is, the need to regulate a waste excluded from Subtitle C requirements. In developing the amendments, Congress recognized that an explicit exemption from the Subtitle C requirements did not mean that disposal of those wastes did not pose potential risks to human health and the environment. For example, household waste was exempt from Subtitle C requirements. However, in its amendments to RCRA, Congress recognized that disposal facilities that accept such waste may need to comply with standards that were more detailed than the broad criteria applicable to sanitary landfills.¹⁰ Rather than subject household waste to the full gamut of “cradle to grave” Subtitle C regulations, Congress took an approach that could be implemented under Subtitle D. That approach would result in more detailed regulations than those applicable to sanitary landfills and include a

⁹ See directive to EPA to promulgate standards applicable to TSDFs at 42 U.S.C. 6924(a); and directive to EPA to revise criteria applicable to sanitary landfills to apply to solid waste disposal facilities that may receive hazardous household waste at 42 U.S.C. §6949a(c).

¹⁰ Sanitary landfills standards refer to the broad “Criteria for Classification of Solid Waste Disposal Facilities and Practices,” at 40 C.F.R. 257, promulgated by EPA to determine whether a solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment (i.e., open dumps).

stronger enforcement mechanism to ensure consistent state enforcement with the national standards.

HSWA amended Subtitle D to add Section 4010,¹¹ in which Congress directed EPA to study the extent to which the Subtitle D guidelines and criteria applicable to solid waste management and disposal facilities, including landfills and surface impoundments, were adequate to protect human health and the environment from ground water contamination. Within three years, EPA was required to report the results of its study to Congress, as well as any recommendations the agency made based on the study findings. Further, EPA was authorized to revise the sanitary landfill criteria to apply to facilities that may receive hazardous household wastes. Congress explicitly required EPA to revise the existing sanitary landfill criteria to be

those necessary to protect human health and the environment and may take into account the practicable capability of such facilities. At a minimum such revisions for facilities potentially receiving such wastes should require ground water monitoring as necessary to detect contamination, establish criteria for the acceptable location of new or existing facilities, and provide for corrective action as appropriate.¹²

In response to that directive, EPA promulgated the “Criteria for Municipal Solid Waste Landfills,” in 40 C.F.R. 258.¹³

The MSW Landfill Criteria

The MSW landfill criteria are standards identified by EPA as those necessary to address risks associated specifically with the management of MSW in landfills in accordance with the standard of protection established by Congress. EPA identified those minimum protective measures during the rulemaking process. For example, EPA gathered data regarding the types of waste common to such facilities, the contaminants likely present in the waste, risks associated with managing it, and protective measures that would address those risks. As a result, EPA promulgated detailed standards applicable to MSW landfills:

- location restrictions,
- operating criteria,
- design criteria,
- groundwater monitoring and corrective action requirements,
- closure/post-closure care, and
- financial assurance criteria.

¹¹ See “Adequacy of Certain Guidelines and Criteria” at 42 U.S.C. §6949a(1)-(2).

¹² 42 U.S.C. §6949a(c)(1).

¹³ Final rules were promulgated October 9, 1991. For detail see 56 *Federal Register* 51016.

The standards apply directly to owners and operators of facilities that meet the regulatory definition of an MSW landfill. Those owner/operators of existing facilities that did not comply with the standards by deadlines specified by EPA would be in violation of RCRA's prohibition on open dumping. New MSW landfills were required to ensure compliance with the standards before operation.

Of particular relevance to the CCR permit program is the fact that MSW landfill criteria were intended to apply to facilities that dispose of largely "dry" waste. That is, they do not address issues specific to liquid waste accumulation in surface impoundment ponds.

State Programs to Implement the MSW Landfill Criteria

Congress intended states to be the primary entities to implement and enforce federal standards applicable to non-hazardous solid wastes. Under Subtitle D, states were required to adopt the federal landfill criteria and enforce them. However, in contrast to EPA's limited authority to enforce the open dumping prohibition (i.e., to enforce the sanitary landfill criteria), HSWA also amended RCRA to specify conditions under which EPA may be authorized to enforce its MSW landfill criteria.¹⁴ More specifically, HSWA amended Section 4005 to include provisions that

1. compelled each state, within 18 months of EPA promulgating the MSW landfill criteria, to adopt and implement a permit program or "other system or prior approval and conditions" to assure that each solid waste management facility within the state that may receive MSW will comply with the MSW landfill criteria;¹⁵
2. required EPA to determine whether state permit programs were adequate to enforce the MSW landfill standards; and¹⁶
3. authorized EPA to enforce the open dumping prohibition (consistent with the MSW landfill criteria) at regulated landfill facilities in a state that EPA determined did not adopt and implement a permit program adequate to assure facility compliance with the MSW landfill.¹⁷

To implement the regulatory program, generally, states would directly adopt or model their own regulatory standards after the federal standard and implement those standards under their own solid waste management programs. States were not, however, precluded from adopting standards more stringent than the federal standard.

¹⁴ HSWA amended Subtitle D §4005, "Upgrading of Open Dumps," by adding EPA and state requirements for the "Control of Hazardous Disposal" (42 U.S.C. §6945(c)).

¹⁵ 42 U.S.C. §6945(c)(1)(B).

¹⁶ 42 U.S.C. §6945(c)(1)(C).

¹⁷ 42 U.S.C. §6945(c)(2). Since EPA has no separate authority under Subtitle D to enforce facility compliance with federal standards or to conduct facility inspections, a provision in Subtitle D authorizes EPA to use its inspection and federal enforcement authorities under Subtitle C (at 42 U.S.C. §§6927 and 6928).

A permit program would serve as a mechanism to assure facility compliance with the federal standard. EPA would have no oversight of state program implementation absent congressional authority to approve state programs. Its potential to require states to implement an adequate enforcement program was limited, apart from the congressional authority to directly enforce the federal standard in states EPA deemed to have enforcement programs inadequate to enforce the standard—an authority that it does not appear that EPA exercised.

Congress intended states to implement the federal waste management standards established under RCRA. In particular, rather than allowing EPA to enforce the standards, Congress required states to implement and enforce the standards applicable to MSW landfills using a permit program or some equivalent system to demonstrate that facilities in the state operated in compliance with the federal standard. To meet the congressional directive to approve of state permit programs, EPA promulgated “Requirements for State Permit Program Determination of Adequacy,” in 40 C.F.R. 239. The requirements detail the laws, authorities, and procedures a state must have in place to adequately enforce the MSW landfill criteria at regulated facilities in the state and gain EPA approval. The requirements are also referred to as the State Implementation Rule. The purpose of the rule is twofold:

1. to specify requirements necessary for a state permit program to adequately demonstrate that it will ensure facility compliance with the MSW landfill criteria; and
2. to specify the procedures EPA will follow to make that determination.

(To get an idea of the required elements of a permit program that EPA deemed adequate to enforce the MSW landfill criteria, see **Table B-1**.)

Congress cannot require states to adopt and enforce federal waste management standards.¹⁸ However, Congress can direct EPA to promulgate federal standards and directly enforce them at the facilities to which the standards apply. Given the choice of adopting, implementing, and enforcing a federal waste management standard or allowing EPA to enforce the federal standard at facilities in their state, states have chosen the latter.

In approving state permit programs to implement the MSW landfill criteria, EPA allowed states a certain degree of flexibility in adopting their enforcement programs. However, that flexibility was allowed within the context of EPA’s approval process. That is, for certain MSW landfill criteria, states may have various options to manage landfills. For example, for certain regulatory standards, states could take into consideration site-specific conditions in that state. However, EPA would be required to approve those standards. As a result, all state programs to implement the MSW landfill criteria may not be identical, but all state programs would be required to be approved by EPA, to ensure that the standards they implement are adequate to assure protection of human health and the environment.

¹⁸ A discussion of Congress’s lack of authority to require states to implement and enforce federal pollution control laws and alternate ways of encouraging them to do so, is beyond the scope of this report. For additional information about this issue, contact Robert Meltz in the CRS American Law Division at 7-7891.

Under this construct, the MSW landfill criteria are federal standards, but are only “federally enforceable” (i.e., enforced directly by EPA) at MSW landfill facilities in states EPA has determined to have an inadequate permit program. Once a permit program is approved by EPA, a state is responsible for enforcing the federal MSW landfill standards and issuing permits to individual owners and operators of MSW landfills. In contrast to other federal regulatory programs, EPA’s role in state permit program implementation is not considered EPA backstop authority (i.e., authority to EPA to step in and enforce the federal regulations in a state that EPA determines is not enforcing the federal standard).

Proposed EPA Standards to Address Risks Specific to CCR Management

The amendments to RCRA in H.R. 2273 and S. 3512 would be an alternative response to EPA’s proposal to regulate CCR under existing RCRA authority. Neither H.R. 2273 nor S. 3512 attempts to create a regulatory program similar to either option proposed by EPA. However, the proposed amendments to RCRA do appear to be intended to create a CCR permit program that would address risks associated with CCR management. As a result, certain information in EPA’s proposed standards may be relevant to the proposed amendments—primarily, the potential threats to human health and the environment EPA tied to CCR management; and standards EPA identified as necessary to minimize those threats.

In determining whether federal standards were needed to manage CCR, EPA looked at several factors, including

- *potential* threat to human health and the environment from the disposal and reuse of CCR; and
- *actual* evidence of damages (e.g., groundwater contaminated at levels that exceed level identified as safe) connected to CCR management.

Potential risks and actual evidence of damages have been tied primarily to two elements of the material—the large volumes accumulated at a particular site and the toxic constituents likely present in the waste. As noted previously, industry estimates that approximately 130 million tons of CCRs were generated in 2011.¹⁹ Those estimates also indicate that the vast majority of that material (approximately 70%) was managed in a manner that involves the placement of unencapsulated CCR onto land.²⁰

CCR “management” generally involves either disposal or reuse. Disposal primarily involves its accumulation in landfills (as dry ash), surface impoundment ponds (as wet ash slurry), or mines as minefill. Reuse of the material in land applications may involve its use as structural or embankment fill (e.g., to contour the land at a construction site or raise a roadbed).

¹⁹ See the American Coal Ash Association’s “2011 Coal Combustion Product (CCP) Production & Use Survey Report” at <http://www.acaa-usa.org/associations/8003/files/Final2011CCPSurvey.pdf>.

²⁰ As opposed to an encapsulated form that involves the use of the material that results in a solid product, such as its use as an ingredient to make concrete, cement, or dry wall.

When CCR is disposed of, it is primarily done on-site at individual power plants. On-site disposal may involve decades-long accumulation of waste—with hundreds of thousands, if not millions, of tons of dry ash or wet ash slurry accumulated at the site. The incident at Kingston, TN, drew attention to the potential for a sudden, catastrophic release related to the structural failure of a surface impoundment. EPA also identified a similar, smaller incident in 2005 in Martins Creek, PA,²¹ as evidence that current management practices can pose a risk from catastrophic releases due to the structural failure of surface impoundments.

With regard to the contaminants in the waste, EPA has identified more than 40 toxic constituents that may be present in CCRs, including antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, and selenium.²² The fact that toxic constituents are present does not mean that those constituents pose a risk to humans or the environment. The degree to which they would pose a risk would depend on whether there are potential pathways of human exposure and whether the resulting level of exposure is likely to be high enough to cause harm. EPA found such risks and actual evidence of human exposure from

- contaminant leaching and migration off-site when the waste was deposited in an unlined unit (e.g., landfill, surface impoundment, sand pit, quarry, construction site);
- the direct discharge or release of liquid waste to surface water, either accidentally, as in Kingston, or as a result of run-on/run-off across the deposition site during rain/flood events; and
- fugitive dust emissions, when fine particulates in the dried ash become airborne as at landfills or large-scale fill operations.

In identifying various risks and damages from CCR, EPA also identified certain protective measures that could be implemented to control those risks or largely eliminate them. For example, EPA determined that a composite liner would largely eliminate the threat of contaminant spread from landfills and surface impoundments.

EPA also found that protective measures it identified as necessary may not be implemented at facilities that have received or continue to receive CCR. For example, while owners and operators are likely to install liners and groundwater monitoring systems in new CCR disposal units, the majority of units currently in use are not new. EPA determined that 75% of surface impoundments in use today are more than 25 years old, with 10% being more than 50 years old. Such units are unlikely to have a liner or groundwater monitoring, and are more likely to leach contaminants. Consistent with that estimate, in 2004, EPA determined that 31% of the CCR landfills and 62% of the CCR surface impoundments lacked liners, and 10% of the CCR landfills and 58% of the CCR surface impoundments lacked groundwater monitoring.²³ EPA estimated that with an average life expectancy of approximately 31 years, those older disposal facilities would likely continue to operate without necessary protections in place well into the future.

²¹ In this case, a dam failure resulted in the release of over 100 million gallons of coal ash and contaminated water into the Oughoughton Creek and the Delaware River.

²² See EPA's June 2010 proposal at 75 *Federal Register* 35138.

²³ See findings discussed in EPA's June 2010 proposal at 75 *Federal Register* 35151.

EPA found that, while the majority of states appeared to regulate CCR landfills adequately, there appeared to be significant gaps in state regulation of surface impoundments. Those facilities may be managed in accordance with a state's dam safety program, but would not necessarily be subject to standards that address issues specific to waste management. For example, a 2009 survey of states found that, among survey respondents, 67% did not require liners and 61% did not require groundwater monitoring for surface impoundments.²⁴ EPA noted that the survey results are "particularly significant as groundwater monitoring for these kinds of units is a minimum for any credible regulatory regime."²⁵ The majority of states also did not have siting controls, inspection, or structural integrity requirements for surface impoundments—requirements necessary to minimize the potential of a structural failure.

EPA's resulting regulatory proposals were intended to address the potential gaps in state regulation of CCRs. Its Subtitle D proposal, "Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments," would apply to the following:

- *CCR landfills*—a disposal facility or part of a facility where CCRs are placed in or on land and which is not a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit. For purposes of this part, landfills also include piles, sand and gravel pits, quarries, and/or large scale fill operations. Sites that are excavated so that more coal ash can be used as fill are also considered CCR landfills.
- *CCR surface impoundment*—facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of CCRs containing free liquids, and which is not an injection well. Examples of CCR surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons. CCR surface impoundments are used to receive CCRs that have been sluiced (flushed or mixed with water to facilitate movement), or wastes from wet air pollution control devices, often in addition to other solid wastes.

In developing minimum national standards for the safe disposal of CCR, the primary source of EPA's proposed standards was the existing criteria for MSW landfills under 40 C.F.R. 258 and selected standards applicable to CCR treatment, storage, and disposal facilities (included in its June 2010 proposed rulemaking). According to EPA, MSW landfills criteria provide a comprehensive framework for all aspects of the disposal of wastes such as CCR in land-based units. Further, based on its experience with the requirements, EPA stated its belief that the MSW landfill criteria represent a reasonable balance between "ensuring the necessary protection from risks of CCR disposal and the practical realities of facilities' ability to implement the criteria."²⁶

²⁴ Summary results of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) "Combustion by-products (CCB) Survey" are available through the "regulations.gov" website at <http://www.regulations.gov>, under Docket ID EPA-HQ-RCRA-2009-0640. For EPA's discussion of the survey findings, see EPA's June 2010 proposal at 75 *Federal Register* 35152.

²⁵ *Ibid.*

²⁶ See EPA's discussion of its regulatory approach at 75 *Federal Register* 35193.

However, in its June 2010 proposed Subtitle D standards, EPA did not simply apply the MSW landfill criteria to landfills and surface impoundments that receive CCR. Instead, the proposed standards included certain requirements the agency identified as those necessary to ensure adequate protection from risks unique to management of CCR. (Differences between the MSW landfill criteria and EPA's proposed standards for landfills and surface impoundments can be seen by comparing the criteria included in both sets of standards, listed in **Table A-1**.) For example, the proposed standards include requirements intended to ensure no reasonable threat of adverse effects on human health or the environment from—contaminant leaching and migration, particularly from the disposal of noncontainerized liquid waste (prohibited in MSW landfills); a catastrophic release due to the structural failure of a surface impoundment pond; or the release of coal ash dust to the air. The following standards are among those intended to address concerns unique to CCR disposal:

- New disposal units (landfills and surface impoundments) would be required to be placed above the natural water table and could not be located in wetlands, within 200 feet of a fault zone, or in a seismic impact zone.
- New or existing disposal units could not be located in an unstable area (e.g., a location susceptible to natural or human-induced events or forces capable of impairing the integrity of the unit). Existing facilities in an unstable area would be required to close within five years.
- New disposal facilities would be required to be constructed with a composite liner. Within five years, existing surface impoundments would be required to have solids removed and be retrofitted with a composite liner.
- All units would be required to comply with the groundwater monitoring requirements within one year of the effective date of a final rule; *new* CCR units must have groundwater monitoring system installed before CCRs could be disposed of in the units.
- All units would be required to control fugitive dust emissions.
- All units would be required to have an independent registered professional engineer certify that the design of the run-on/run-off control system meets requirements specified in the regulations; and the owner/ operator would be required to notify the state that the design has been placed in the operating record and on the owner's or operator's publicly accessible internet site.

With regard specifically to surface impoundments, such units would be subject to design and inspection requirements similar to those of the Mine Safety and Health Administration (MSHA), including requirements that an independent registered professional engineer certify that the impoundment's design is in accordance with engineering practices applicable to that unit; that there be weekly inspections to identify potentially hazardous conditions or structural weakness; and that there be annual inspections by an independent registered professional engineer to assure design, operation, and maintenance of the unit is in accordance with engineering practices applicable to such units in accordance with regulations similar to those promulgated under MSHA at 30 C.F.R. §77.216.

Proposed Amendments to RCRA

Both the Coal Residuals Reuse and Management Act (H.R. 2273) and the Coal Ash Recycling and Oversight Act of 2012 (S. 3512) would amend RCRA to add Section 4011, “Management and Disposal of Coal Combustion Residuals.” Provisions in each bill differ somewhat, but the overall approach is the same—create a permit program pursuant to statutory directives, absent directive to EPA promulgate regulatory standards applicable to owners and operators of facilities that may receive CCR. Each bill would similarly limit EPA’s role in state adoption and implementation of the permit program.

Absent the promulgation of regulations or requirements specific to CCR management, selected criteria from the MSW landfill criteria are cross-referenced as being the standards the CCR permit program would apply. In both bills, Section 4011 also includes selected provisions that draw from elements of the EPA requirements applicable to MSW permit programs as well as selected elements of EPA’s June 2010 Subtitle D proposal. (Relevant elements of proposed and existing requirements incorporated into the CCR permit program are discussed in “Standards Relevant to a CCR Permit Program.”)

Unless otherwise noted, reference to Section 4011 or provisions in Section 4011 means elements of or provisions common to both H.R. 2273 and S. 3512.

Overview of a CCR Permit Program

Pursuant Section 4011, states would be given the option to adopt a CCR permit program. Within six months of enactment, states would be required to notify EPA whether they intend to implement the program, or risk EPA implementation of the program. Within 36 months of enactment, states implementing the program would be required to submit to EPA a certification explaining how their permit program meets required permit program specifications.

Required elements of the permit program would be limited largely to provisions in Section 4011 that specify program definitions, required state actions, and permit program specifications. Provisions in the proposed amendments to RCRA, in both bills, that would serve as de facto regulatory standards are summarized in **Table 1**.

Table I. Section 401 I Provisions Drawn from Subtitle D Standards

Proposed Subsection 401 I	Summary of Provisions Drawn from Existing/Proposed Standards
(b) State Actions	<p>Details the timeframe to submit to EPA a notification of state intent to implement a CCR permit program; and a certification that its permit program meets required specification. Lists information required to be included in the certification—some of which is similar to information states were required to provide in their application for approval of their MSW permit program. Information states must provide to EPA would be less detailed compared to information required under 40 C.F.R. 239 (provisions in each bill comparable to requirements in Part 239 are listed in Appendix B; required elements of Part 239 are listed in Table B-1).</p>
(c) Permit Program Specifications	<p>Lists “Minimum Requirements” a state would be required to apply to its CCR permit program. The requirements include—certain “revised criteria,” listed separately, and several standards drawn from requirements in 40 C.F.R. 239 and elements of EPA’s proposed Subtitle D standards specific to the management of CCR in landfills and surface impoundments. Separately listed “Revised Criteria,” defined essentially as the criteria at 40 C.F.R. 258, identify specific subparts in the MSW landfill criteria as well as specific criteria within each subpart “for structures.”</p>
	<p>Under H.R. 2273—states could decline to apply certain revised criteria as they deem necessary; there is no explicit directive to states to apply the program specifications directly to owners and operators of CCR structures.</p>
	<p>Under S. 3512—states would be required to apply permit program specifications to owner/operators of CCR structures; and would include no provision to allow states to exclude revised criteria from their permit program. Also, the bill includes more detailed statutory standards that appear intended to address risks associated with CCR management—including directives to the states to notify owner/operators of CCR structures of their need to obtain a permit and to install groundwater monitoring systems; to apply fugitive air emission standards; and to require unlined surface impoundments to meet certain requirements.</p>
(d) Written Notice and Opportunity to Remedy	<p>Delineates EPA’s role in state implementation of the permit program. EPA would be required to identify and notify the state of deficiencies in its program, pursuant to the state’s obligation to submit the required notification and program certification to EPA and whether the state’s program meets the minimum permit program specifications.</p>
	<p>In contrast to the Subtitle D permit program implementing the MSW landfill criteria, EPA’s assessment of a CCR permit program would be limited to program conformance with requirements delineated under the proposed Section 401 I. EPA would not be directed to comment on the degree to which the permit program may be adequate to assure state enforcement with the statutory standards applicable to CCR structures or to assess the degree to which the program implemented by the state may implement standards necessary to protect human health and the environment</p>
(k) Definitions	<p>State application of a CCR permit program, and any standards it may apply pursuant to the Permit Program Specifications, are keyed to units that receive CCR described as a “structure.” Both bills define a structure similarly as a landfill, surface impoundment, or other land-based unit which may receive CCR. No additional detail is provided to more explicitly define the facilities or disposal units that a state would be required to define as a structure and, hence, require to be regulated pursuant to its CCR permit program.</p>

Source: Congressional Research Service, based on an analysis of provisions in Section 401 I in H.R. 2273 and S. 3512.

As specified under State Actions provisions, a permit program could be implemented only by a state that maintains an approved MSW landfill permit program or be authorized to implement the federal hazardous waste management program under RCRA Subtitle C. All states have implemented permit programs to implement the MSW landfill standards.

States do not necessarily, however, regulate CCR landfills pursuant to a solid waste management permit program. Based on the information EPA has been able to determine regarding state regulation of surface impoundments, few states appear to regulate those units pursuant to permit programs implemented by their solid waste management agency. A surface impoundment may be subject to state permitting requirements if the owner/operator discharges pollutants from that unit to surface water. Such a permit would likely be issued pursuant to the state's authority to enforce Clean Water Act requirements. However, those permits would be intended to control direct wastewater discharges to surface water, not to control contaminant spread more common to waste management programs.

EPA would be required to implement the program in states that notify EPA of their intent not to do so. However, EPA estimates that all states that dispose of CCR at facilities in the state would opt to implement the permit program. Given the limits available to EPA to compel state adoption and implementation of the program, it is difficult to determine whether or which requirements in Section 4011, in either bill, states may choose to implement.

A CCR Permit Program Compared to an MSW Permit Program

In directing EPA to promulgate various standards under RCRA,²⁷ Congress has made it clear that it believes states are best equipped to implement regulations applicable to the management of solid waste. When permit programs have been required under RCRA, including the program to implement the MSW landfill criteria, Congress intended states to have the primary role in implementing those programs. However, regulatory programs that involved the creation of a permit program have been those that required the promulgation of federal standards that would provide a consistent level of protection, and implementation of a permit program to provide a consistent level of enforcement with that standard.

Congress has not required the implementation of permit programs as an academic exercise. States have been required to adopt and implement them to assure facility compliance with a specific federal standard. Under RCRA, a state's permit program served as a gauge to allow EPA to determine whether the state has adopted and implemented laws, regulations, and procedures necessary to implement a federal standard. EPA was authorized to enforce the federal standards at facilities in states that EPA determined did not have a permit program adequate to enforce the federal standards.

States had a certain degree of flexibility in adopting and implementing the federal standards, as long as their regulatory programs would result in standards that were adequate to meet the minimum national standard of protection. States were required to provide EPA with information in sufficient detail to allow EPA to determine whether the program would be adequate to enforce the federal standards. While EPA would have no authority to require states to adopt the federal

²⁷ Requirements applicable to hazardous waste management, promulgated pursuant to Subtitle C, and criteria applicable to solid waste disposal facilities, promulgated under Subtitle D.

standards or to implement those standards using a permit program, states were motivated to do both instead of allowing EPA to enforce federal standards at facilities in the state.

The stated intent of the proposed amendment, as proposed in H.R. 2273, is to create a CCR permit program that uses the “framework and requirements of the existing municipal solid waste landfill permit program as an enforceable minimum Federal standard for the regulation of coal ash.”²⁸ Given that statement, as well as the construction of both bills, it would appear that the proposed amendments to RCRA are intended to result in state implementation of a CCR permit program comparable to the program to regulate MSW landfills. However, a CCR permit program would be substantially different from that regulatory program. More specifically, following are elements of the CCR permit program that are inconsistent with the permit program to implement the MSW landfill criteria:

- **The potential for flexibility in program implementation**—certain key directives specific to program implementation are either missing from or ambiguously defined in Section 4011. It would appear that those missing/ambiguous requirements would be subject to a state’s interpretation of those requirements (e.g., a distinct definition of entities subject to the permit program and deadlines for existing facilities to obtain a permit). As a result, it cannot be determined whether CCR permit program implementation would create minimum federal standards, comparable to the MSW landfill criteria, to regulate CCR management.
- **No clear standard of protection established**—Section 4011 includes no explicit statement to indicate that creation of the CCR permit program is intended to meet a standard of protection. The inclusion of certain MSW landfill criteria and selected standards drawn from EPA’s Subtitle D proposal would indicate an attempt to address certain risks specific to CCR management. However, the proposed statutory standards selected for inclusion in Section 4011 are not comparable, in scope or in detail, to those proposed by EPA.
- **EPA’s role in program creation and implementation**—EPA would have no role in program development and a limited role in program implementation. Within those limits, it is unlikely that EPA could compel states to implement the requirements specified in Section 4011. States would be directed to provide EPA with limited information about their programs. EPA would be required to identify certain elements of a program that may be “deficient.” Given the limited information provided to EPA and questions regarding what constitutes a program deficiency, it does not appear that EPA would be required to assess the adequacy of the program to enforce the Permit Program Specifications (i.e., requirements equivalent to regulatory criteria) or determine whether the program may provide adequate protections.

Each of these issues is discussed below. These factors taken together are consistent with RCRA’s broad objective to provide states with flexibility to create and enforce their own waste management program or for EPA to have a limited role in state program implementation. For example, the proposed Section 4011 would create a program that involves roles and responsibilities similar to those required of EPA to develop and states to enforce RCRA’s

²⁸ See statements included under the “Purpose and Summary” section of H.Rept. 112-226.

prohibition on open dumping.²⁹ Pursuant to that prohibition, EPA promulgated broad, minimum national performance criteria that a facility must meet to be considered a sanitary landfill, allowed under RCRA, instead of an open dump. EPA was not directly authorized to enforce the prohibition on open dumping. Instead, that prohibition was enforceable by states or by citizens, pursuant to RCRA citizen suit authority.³⁰

Similar to state roles in enforcing the open dumping prohibition, the permit program that would be created pursuant to Section 4011 would appear to give states broad flexibility to create and implement a program to regulate CCR disposal, while limiting EPA's role in program implementation. Such an approach is not consistent with regulatory programs created under RCRA that were required to be enforced using a permit program. Whether or the degree to which individual states may implement programs to regulate CCRs in a manner comparable to state programs to manage MSW landfills would depend on how a state chooses to implement the CCR permit program.

Flexibility to Create Standards and Implement a Permit Program

As noted previously, regulatory programs such as the one to regulate MSW landfills result in two distinctly different, but related elements—creation of federal standards intended to provide a minimum baseline standard of protection, as specified by Congress, and creation and implementation of a permit program that, at a minimum, would assure enforcement of that national standard. Under the umbrella of creating a CCR permit program, Section 4011 would create both the federal standards applicable to structures that receive CCR and the permit program to implement those standards.

The combination of existing standards and requirements listed in 40 C.F.R. Parts 239 and 258, as well as EPA's proposed June 2010 standards, taken together could potentially form a suitable program to regulate CCRs' disposal and implement a program to enforce applicable regulations. However, the provisions in Section 4011 that draw from those three sets of standards do not include certain requirements necessary to ensure the creation of a consistent set of standards or consistent state enforcement of those standards. Section 4011 includes a number of ambiguous directives, as well as certain program requirements that are not included among the provisions.

Of particular relevance is the lack of detail in the definition of "structures" that may receive CCR. The program Minimum Requirements and Revised Criteria include directives such as "the CCR permit program shall require" or "shall apply" the requirements/criteria to "structures." It would appear that the applicability of any statutory standard would be subject to the state's interpretation of what constitutes a structure. The term is defined only as a "landfill, surface impoundment, or other land-based unit" which may receive CCR. RCRA regulations generally explicitly define those terms and may include detail to assure that a particular type of waste disposal facility will

²⁹ EPA was required to promulgate regulations containing criteria necessary to determine whether facilities should be classified as "sanitary landfills" or "open dumps" (under the authorities in 42 U.S.C. §§6907(a)(3) and 6944). Subsequently, EPA promulgated "Criteria for Classification of Solid Waste Disposal Facilities and Practices" in 40 C.F.R. 257.

³⁰ Citizen suit provisions specified under Section 7002 of RCRA allow for civil action against any entity that is alleged to be in violation of any "permit, standard, regulation, condition, requirement, prohibition, or order" (42 U.S.C. §6972). Further, citizen suits are allowed where the disposal of any solid or hazardous waste may present "an imminent and substantial endangerment to health or the environment" (42 U.S.C. §6972(a)(1)(B)).

be subject to the regulations (see definitions of selected relevant terms applicable to waste disposal facilities under the “General Standards” listed in **Table A-1**).

Given the flexibility a state may have to define a “structure,” it may be difficult to determine whether a state implementing a CCR permit program would adopt certain requirements comparable to those common to its MSW permit program, such as the degree to which the state may

- uniformly apply permit program conditions to all CCR landfills and surface impoundments within the state’s jurisdiction;
- require owners and operators of all new CCR landfills and surface impoundments to obtain a permit before the facility begins operation and operate that structure in accordance with permit conditions; or
- require owners and operators of all existing CCR structures to obtain a permit and operate in accordance with permit conditions by a certain deadline.

In contrast to standards included in the regulatory program to implement the MSW landfill criteria, Section 4011 includes no provisions that specify:

- **Compliance deadlines applicable to CCR structures**—no provision in the House bill specifies a deadline for CCR structures to comply with the statutory standards; the Senate bill includes deadlines for several specific activities.
- **Deadlines to issue/compel compliance with permits**—states must certify that they have a permit program that meets the permit program specifications within three years of enactment. However, no deadline is specified for states to issue permits or to compel owner/operators of CCR structures to operate in compliance with permit conditions.

The Senate bill does include a requirement that, within a year of submitting its program certification to EPA, a state would be required to notify “owners or operators of structures within the State of ... the obligation to apply for and obtain a permit” and to “require the owner or operator of each structure” to comply with certain groundwater monitoring. How a state implements that directive would depend on its interpretation of “structure.” Also, given the construct of the program, there appears to be no mechanism to determine whether a state has complied with the directives or what recourse they may be subject to (from EPA or citizen suits) if they do not comply with that directive.

Specific to the House bill, under the “Program Limitations” provision under the Permit Program Specifications, a state may determine that one or more of the revised criteria are not needed for CCR management in that state, and decline to apply them as part of its CCR permit program. Pursuant to those provisions, the minimum program specifications would apply selected revised criteria/MSW landfill regulations to the CCR permit program, as the state deems necessary.

The absence of certain requirements in Section 4011 does not mean that states would not establish such requirements. However, if a state is allowed to make such determinations, it cannot be predicted whether the program will result in the creation of minimum national standards or state enforcement programs that would meet a baseline standard of protection.

Section 4011 includes few requirements applicable to the permit program itself. (Specific provisions in the House and Senate bills that appear to be drawn from requirements in 40 C.F.R.

239 are listed in **Appendix B**. To compare those statutory directives with information that states were required to provide to EPA and required elements of a permit program that EPA deemed adequate to enforce MSW landfill criteria, see the summary of selected requirements from 40 C.F.R. 239 listed in **Table B-1**.)

The absence of provisions comparable to permit program requirements may stem from a stated belief that states that maintain permit programs approved under Subtitles C or D of RCRA (essentially every state) have adequately demonstrated that they are capable of administering permit programs.³¹ It is unclear how this belief relates to implementation of a CCR permit program. EPA has not questioned whether states can implement regulatory programs applicable to CCR disposal; EPA has noted that some apparently do not. It is not necessarily a question of a state's ability. Instead, it may be a difference in interpretation between states and EPA regarding standards necessary to ensure protections of human health and the environment. Also, whether a state has an approved MSW permit program intended to ensure compliance with the MSW landfill regulations may have little bearing on whether a state would amend its current laws or adapt its procedures to apply those requirements to the management and disposal of CCRs in structures in that state.

No Clear Standard of Protection

Federal standards promulgated under RCRA include directive from Congress to EPA that the regulatory criteria meet a particular standard of protection. When those standards are required to be implemented using a permit program, that directive is that the standards be those necessary to protect human health and the environment. There is no explicit directive in Section 4011 that Permit Program Specifications, assumed to be the equivalent of federal standards, achieve a certain level of protection. The absence of any directive or indication that the program has some objective to achieve a standard of protection is unique among all federal environmental law. Within the framework of RCRA, it raises the question: Why is this program required?

Although there is no statement to this effect in the proposed amendments themselves, it appears that the achievement of a level of protection was considered when applying the “revised criteria” to the permit program. In particular, the House report includes the following statement:

The Committee believes that it is not necessary for EPA to promulgate new regulations. EPA acknowledged in [its June 2010 Subtitle D] Proposed Rule that the “part 258 criteria represent a reasonable balance between ensuring the protection of human health and the environment from the risks of these wastes and the practical realities of facilities’ ability to implement the criteria.” The Committee expects that permit programs using the minimum Federal baseline established by this legislation will meet the standard of protecting human health and the environment.³²

The House report further notes that the “revised criteria” that would serve as the baseline for the proposed CCR permit programs consist of criteria that the EPA promulgated pursuant to Section 4010(c) of RCRA which require EPA to promulgate criteria necessary to protect human health and the environment. That is, by using the MSW landfill criteria as the basis of the program, it is

³¹ See statements included in the “Section-by-Section” analysis of bill provisions, in H.Rept. 112-226, with regard to proposed Section 4011(b)(3).

³² See statements in H.Rept. 112-226 included under the “Section-by-Section Analysis of the Legislation,” with regard to the definition of “revised criteria” in proposed Section 4011(k).

expected that state implementation of a CCR permit program that uses those requirements would protect human health and the environment. There is no legislative history for the Senate-proposed bill. However, since it also uses the MSW landfill criteria as its framework, there may have been a similar expectation that use of those criteria would create a permit program that would meet similar standards of protection.

The revised criteria did create minimum national standards to ensure protection of human health and the environment from risks associated with the management of MSW landfills—but not risks associated with CCR structures, particularly surface impoundments. EPA did not intend that the MSW landfill criteria, alone, would not provide a similar level of protection for the disposal of CCR in landfills and surface impoundments. EPA used the MSW landfill criteria as the framework for its June 2010 Subtitle D proposal. However, to meet the necessary standard of protection required under RCRA, EPA’s proposal included detailed criteria necessary to address risks associated with the disposal of dry CCR in a landfill (defined to include large scale fill operations) and liquid slurry in surface impoundments (a category of disposal unit explicitly excluded from the definition of MSW landfills). Neither the House bill nor S. 3512 includes provisions comparable to those proposed by EPA, in detail or scope, to regulate landfills and surface impoundments that receive CCR (see the list of MSW landfill criteria compared to EPA’s proposed Subtitle D standards in **Table A-1**).

Still, since both H.R. 2273 and S. 3512 include selected provisions drawn from EPA’s June 2010 proposal, it appears that permit program is intended to provide a certain level of protection from risks associated with CCR disposal. In particular, compared to the House bill, S. 3512 includes more detailed requirements under the program Minimum Requirements such as “requirements for surface impoundments that do not meet certain criteria” (e.g., units that do not meet certain liner systems or that must undertake some corrective action). It also would require states, within a year of certifying that they have a program in place, to notify owners and operators of CCR structures of groundwater monitoring obligations (specified elsewhere in the proposal).

The inclusion of those requirements appears to reflect intent to address issues specific to CCR disposal. However, by deciding to draw from certain standards proposed by EPA, but not others, it would appear that the level of protection achieved by implementing the CCR permit program is reflected in the criteria selected for inclusion in Section 4011.

In contrast to other regulatory programs, decisions to include certain criteria in the federal standard are reflected in the rulemaking process. During that process, EPA provides its analysis of risk assessment data, studies, reports, and various other data in making its determination of regulatory criteria that it believes would achieve the necessary level of protection. Various stakeholders may disagree with EPA’s assessment of what criteria should be required, but the administrative process allows a certain degree of transparency regarding how EPA arrived at its determination. How and why Congress selected or excluded certain requirements in the CCR permit program is not clear. Also, while Congress may have been informed by EPA’s June 2010 proposed rulemaking, it would be unique among permit programs established under RCRA to create statutory criteria with no apparent directive from EPA.

Absent the creation of standards applicable to CCR landfills and surface impoundments that address risks specifically associated with CCR disposal, the purpose of creating a CCR permit program is not clear. Unlike other Subtitle C or D permit programs, a CCR permit program would not be required to assure facility compliance with a set of standards. Instead, a CCR permit program is defined as one adopted by a state “for the management and disposal of coal

combustion residuals to the extent such activities occur in structures in such State” (in H.R. 2273) or “to regulate the management and disposal of coal combustion residuals” (in S. 3512).³³ Such a broad definition of a permit program is not consistent with other permit programs created under RCRA.

EPA’s Role in Implementing the CCR Permit Program

The CCR permit program would be created with limited involvement from EPA—to create requirements applicable to the permit program or to compel states to implement permit program requirements in Section 4011. EPA would be directed to identify deficiencies in a state’s program. EPA’s role in state adoption of the proposed CCR permit program is specified largely in provisions regarding “Written Notice and Opportunity to Remedy.”³⁴ In that capacity, EPA would be required to provide a state with notice and an opportunity to remedy deficiencies, if at any time the state

- does not comply with requirements to submit the required notification or program certification;
- does not maintain an approved MSW landfill permit program or an authorized hazardous waste management program, under RCRA; or
- is not implementing a CCR permit program that meets the permit program specification minimum requirements (including a state’s decision to not apply certain revised criteria to its permit program, as allowed in the House bill).

EPA could comment on deficiencies with regard to a state meeting these requirements. In contrast to its role in approving state MSW permit programs, it would appear that the directive to EPA to focus on this narrow range of issues would require no substantive assessment of the program. For example, EPA would not be authorized to identify as a deficiency the program’s adequacy to enforce federal statutory standards or to assess the level of protection the program may provide.

If EPA did identify a program deficiency, the time frame for a state to address it would be uncertain. If a state is notified of a deficiency, it would be required to work with EPA to establish a “reasonable deadline,” but one not sooner than six months after receiving EPA’s notice identifying the deficiencies. EPA would be required to implement a CCR permit program if it determines the state program has deficiencies (within the limits specified above, which do not include any minimum technical standards), but only after the state fails to remedy the deficiencies by the agreed-upon deadline and any judicial review brought by the state under Section 7006 of RCRA is resolved.

That there is any circumstance under which EPA *could* implement a CCR permit program has resulted in the impression among some stakeholders that Section 4011 creates a potential EPA backstop—circumstances under which EPA may enforce a federal standard if a state does not. EPA’s potential authority to implement the MSW landfill criteria in states with an inadequate permit program is not generally considered backstop authority. EPA authority to implement a CCR permit program would be allowed under more narrow circumstances, pursuant to Section 4011. Further, given the process EPA would be required to undergo to implement the permit

³³ These definitions are found in proposed Section 4011(k), in each bill.

³⁴ Under proposed §4011(d) in both H.R. 2273 and S. 3512.

program, as a practical matter, it is difficult to envision a plausible scenario in which EPA would implement a CCR permit program in a state.

In keeping with the narrow focus of EPA's role, information states would be directed to provide EPA is not comparable to the information states were required to provide to receive approval of their programs to regulate MSW landfills (see **Table B-1**). It would be possible to determine whether a state has implemented certain requirements consistent with directive in Section 4011, but it may be difficult to determine whether states have laws, regulations, or procedures in place that are adequate to ensure facility compliance with certain requirements included in Section 4011. For example, since surface impoundments are not regulated under the MSW landfill criteria, states may not have procedures in place to regulate those units under their Subtitle D waste management program. Since states could not be compelled to do so or, if they chose to do so, provide detailed information about how were regulating those structures, it would be difficult to determine whether a state would regulate them as intended by provisions in Section 4011.

Conclusion

By using the program to regulate MSW landfills as its framework, the proposed amendments to RCRA appear to be intended to result in the creation of state programs to regulate CCR structures similar to the program to regulate MSW landfills. Provisions in Section 4011 provide no mechanism to compel states that choose to adopt the CCR permit program to implement it pursuant to the requirements included in Section 4011. Further, considering the provisions that are not included in Section 4011 or that involve ambiguous directive, CCR permit programs would be implemented according to each state's interpretation of the statutory directives. Such a permit program would be created in a manner inconsistent with other permit programs established under RCRA or other federal environmental law.

Congress may choose to implement a permit program in any way and for any reason it deems necessary. However, if creation of a CCR permit program is intended to result in state programs similar to those to regulate MSW landfills, provisions in Section 4011 would not create such a program or be consistent with RCRA. The creation of such a program would likely require additional elements, beyond the creation of a permit program that draws from other standards. Again, to be consistent with RCRA, such a program would likely require

- the promulgation of detailed standards directly applicable to owners and operators of the facilities subject to the permit program;
- an indication of the level of protection the standards are intended to achieve; and
- enforcement authority to EPA that would compel states to adopt and implement a permit program adequate to assure facility compliance with a federal standard.

Given the concerns expressed by some Members of Congress regarding their interpretation of EPA overreaching its statutory authority, any directive to EPA to promulgate standards or approve state permit programs could include detailed direction from Congress limiting requirements EPA could establish.

Appendix A. Comparison of Standards for MSW Landfills and CCR Disposal Units

This table lists existing regulatory criteria applicable to MSW landfills in 40 C.F.R. 258 and comparable Subtitle D standards, proposed by EPA to be added under 40 C.F.R. 257, applicable to CCR landfills and surface impoundments. Listed under each column are individual requirements specifying general compliance standards (statements of purpose and scope, facility compliance deadlines, and program definitions) and regulatory criteria detailing location restrictions, operating criteria, design criteria, groundwater monitoring and corrective action, closure and post-closure care, and financial assurance.

When individual requirements are largely similar, only the regulatory heading is included. When there is a significant difference between two requirements, additional information is provided to clarify that difference. Those descriptions are not intended to summarize the full range of detail in each requirement.

Broadly, the most significant differences pertain to the potential regulation of surface impoundments. For example, requirements that would provide protections specific to the disposal of liquids are not included in Part 258 because bulk disposal of liquids is prohibited in MSW landfills. In comparison, EPA's June 2010 Subtitle D proposal includes various requirements intended to address issues unique to the management of CCRs, particularly the accumulation of liquids in surface impoundments—with regard to both the higher potential risk of a catastrophic release associated with a structural failure and contaminant leaching from those units.

Table A-I. Standards for MSW Landfills and CCR Disposal Units

Municipal Solid Waste Landfill Criteria (in 40 C.F.R. 258)	Proposed Standards for Landfills and Surface Impoundments that Receive CCR (proposed for inclusion in 40 C.F.R. 257)
<p>Overview. The MSW landfill regulations were promulgated Oct. 9, 1991. As detailed in the regulations, the criteria would apply to owners and operators of all new landfills; existing MSW landfill units were required to comply with the specific criteria by deadlines specified in the regulations, generally within two years.</p> <p>Enforcement: Individual states were required to adopt and enforce the standards in accordance with a permit program. The permit program was required to be adopted and implemented within 18 months of EPA promulgating the landfill criteria. Permit programs were subject to EPA approval pursuant with requirements established by EPA at 40 C.F.R. 239 (see Table B-1). In states determined to have an inadequate permit program, EPA was authorized to enforce the MSW landfill criteria at regulated facilities in that state.</p>	<p>Overview. Proposed in June 2010, the standards would apply new units or lateral expansions to existing facilities. The standards would apply to existing facilities in accordance with various deadlines.</p> <p>Enforcement: If selected, this option would be finalized pursuant to EPA's authority to promulgate regulations applicable to sanitary landfills. Under that authority, EPA could not directly enforce the requirements or require states to implement them using a permit program. Instead, EPA would encourage states to adopt them under their independent state enforcement authority. The standards could potentially be enforced by citizens under RCRA Section 7003 citizen suit authority.</p>

Municipal Solid Waste Landfill Criteria
(in 40 C.F.R. 258)

Proposed Standards for Landfills and Surface Impoundments that Receive CCR
(proposed for inclusion in 40 C.F.R. 257)

Subpart A—General

Specifies the purpose, scope, and applicability of the requirements and defines terms relevant to them

§ 258.1(a) The purpose of part 258 is to establish minimum national criteria under RCRA for all municipal solid waste landfill units and, under the Clean Water Act, for municipal solid waste landfills that are used to dispose of sewage sludge. These minimum national criteria ensure the protection of human health and the environment.

§ 258.1(b). The criteria apply to owners and operators of new MSW landfill units, existing MSW landfills and lateral expansions, except as otherwise specifically provided in this part; all other solid waste disposal facilities and practices that are not regulated under Subtitle C of RCRA are subject to the criteria contained in part 257 of this chapter.

§ 258.1(c) The Criteria did not apply to landfill units that did not receive waste after October 1991.

§ 258.1(d) Certain MSW landfills that received waste after October 1991, but stopped receiving waste before April 1994, were exempt from part 258 requirements, except the final cover requirement specified in § 258.60(a). The final cover was required to be installed by October 1994, or the owner/operators would be subject to part 258.

(g)-(h) MSW landfill units failing to satisfy the criteria are considered open dumps, prohibited under section 4005 of RCRA.

Definitions of selected terms pertaining to the waste received

Industrial solid waste—solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from...electric power generation.

Definitions of selected terms pertaining to the disposal units

Facility—contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.

§ 257.1 Scope and purpose. Unless otherwise provided, the criteria §§ 257.51 through 257.101 are adopted for determining which CCR Landfills and CCR Surface impoundments pose a reasonable probability of adverse effects on health or the environment pursuant to RCRA requirements applicable to sanitary landfills.

Facilities failing to satisfy either the criteria in §§ 257.1 through 257.4 or §§ 257.5 through 257.30 or §§ 257.51 through 257.101 are considered open dumps, prohibited under section 4005 of RCRA.

§ 257.40 Disposal standards for owners/operators of CCR landfills and CCR surface impoundments. Except as otherwise specified in the Subpart, all of the requirements would apply 180 days after the effective date of the final rule.

Coal Combustion Residuals—fly ash, bottom ash, boiler slag, and flue gas desulfurization materials. CCRs are also known as coal combustion wastes (CCWs) and fossil fuel combustion (FFC) wastes.

Facility—all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of CCRs.

<p>Municipal Solid Waste Landfill Criteria (in 40 C.F.R. 258)</p>	<p>Proposed Standards for Landfills and Surface Impoundments that Receive CCR (proposed for inclusion in 40 C.F.R. 257)</p>
<p><i>MSW landfill (MSWLF)</i>—a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under § 257.2 of this chapter. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A construction and demolition landfill that receives residential lead-based paint waste and does not receive any other household waste is not a MSWLF unit.</p>	<p><i>CCR landfill</i>—a disposal facility or part of a facility where CCRs are placed in or on land and is not a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit. Landfills would also include piles, sand and gravel pits, quarries, and/or large-scale fill operations. Sites that are excavated so that more coal ash can be used as fill are also considered CCR landfills.</p>
<p><i>Existing MSWLF unit</i>—any unit that is receiving solid waste as of dates specified in §258.1(e). Waste placement in existing units must be consistent with past operating practices or modified practices to ensure good management.</p>	<p><i>CCR surface impoundments</i>—a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is designed to hold an accumulation of CCRs containing free liquids (e.g., a holding, storage, settling, or aeration pit, pond, and lagoon).</p>
<p><i>Lateral expansion</i>—a horizontal expansion of the waste boundaries of an existing MSWLF unit.</p>	<p><i>Existing CCR landfill or surface impoundment</i>—a unit that was in operation on, or for which construction commenced prior to [the effective date of the final rule]. A CCR facility has “commenced construction” if the owner or operator has obtained the federal, state and local approvals or permits necessary to begin physical construction; and either: a continuous on-site, physical construction program has begun; or the owner or operator has entered into contractual obligations—which cannot be cancelled or modified without substantial loss—for physical construction of the CCR landfill or surface impoundment to be completed within a reasonable time.</p>
<p><i>New MSWLF unit</i>—any unit that has not received waste prior to October 9, 1993, or October 9, 1997 if the MSWLF unit meets certain conditions in Part 258.</p>	<p><i>Lateral expansion</i>—a horizontal expansion of the waste boundaries of an existing CCR landfill or surface impoundment made after [the effective date of the final rule].</p>
<p><i>New MSWLF unit</i>—any unit that has not received waste prior to October 9, 1993, or October 9, 1997 if the MSWLF unit meets certain conditions in Part 258.</p>	<p><i>New CCR landfill</i>—a CCR landfill in which there is placement of CCRs without the presence of free liquids, which began operation, or for which the construction commenced after [the effective date of the final rule].</p>
	<p><i>New CCR surface impoundment</i>—a CCR surface impoundment from which there is placement of CCRs with the presence of free liquids, which began operation, or for which the construction commenced after [the effective date of the final rule].</p>
	<p><i>Area-capacity curves</i>—graphic curves which readily show the reservoir water surface area, in acres, at different elevations from the bottom of the reservoir to the maximum water surface, and the capacity or volume, in acre-feet, of the water contained in the reservoir at various elevations.</p>

Municipal Solid Waste Landfill Criteria (in 40 C.F.R. 258)	Proposed Standards for Landfills and Surface Impoundments that Receive CCR (proposed for inclusion in 40 C.F.R. 257)
	<p><i>Independent registered professional engineer or hydrologist</i>—a scientist or engineer who is not an employee of the owner or operator of a CCR landfill or surface impoundment who has received a baccalaureate or postgraduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding the technical information for which a certification under this subpart is necessary.</p> <p><i>Recognized and generally accepted good engineering practices</i>—engineering maintenance or operation activities based on established codes, standards, published technical reports, recommended practice, or similar document. Such practices detail generally approved ways to perform specific engineering, inspection, or mechanical integrity activities.</p>
Subpart B—Location Restrictions	
Restrictions applicable to new units and lateral expansions and those requiring closure of existing units	
§258.10 Airport safety.	* No similar requirement.
§258.11 Floodplains.	* No similar requirement.
* No similar requirement.	§257.60 Placement above the natural water table—requires new CCR landfills and surface impoundments receiving CCRs to be constructed with a base located a minimum of two feet above the upper limit of the natural water table.
§258.12 Wetlands.	§257.61 Wetlands.
§258.13 Fault areas.	§257.62 Fault areas.
§258.14 Seismic impact zones.	§257.63 Seismic impact zones.
§258.15 Unstable areas.	§257.64 Unstable areas.
§258.16 Closure of existing municipal solid waste landfill units—required closure of MSW landfills that could not demonstrate compliance with location requirements pertaining to airports, floodplains, or unstable areas.	§257.65 Closure of existing CCR landfills and surface impoundments—would require closure of existing CCR disposal units that cannot demonstrate compliance with location requirements pertaining to unstable areas. Closure would be required within five years, but may be extended under certain circumstances.

Municipal Solid Waste Landfill Criteria (in 40 C.F.R. 258)	Proposed Standards for Landfills and Surface Impoundments that Receive CCR (proposed for inclusion in 40 C.F.R. 257)
Subpart C—Operating Criteria Daily operating standards for running and maintaining regulated disposal units	
§258.20 Procedures for excluding the receipt of hazardous waste.	* No similar requirement.
§258.21 Cover material requirements.	* No similar requirement.
§258.22 Disease vector control.	* No similar requirement.
§258.23 Explosive gases control.	* No similar requirement.
§258.24 Air criteria—Requires MSW landfill units to comply with State Implementation Plans and prohibit open burning.	§257.80 Air criteria—differs from MSW criteria in that the criteria specify fugitive dust controls.
§258.25 Access requirements.	* No similar requirement.
§258.26 Run-on/run-off control systems.	§257.81 Run-on/run-off control systems—requires an independent registered professional engineer to certify that the design of the run-on/run-off control system meets the requirements of this section; and the owner/ operator to notify the state that the design has been placed in the operating record and on the owner’s or operator’s publicly accessible internet site. Also requires the owner/operator to prepare a report, certified by an independent registered professional engineer, that documents how relevant calculations were made, and how the control systems meet the requirements of this subpart and notify the state that the report has been placed in the operating record and made available to the public on the owner/ operator’s publicly accessible internet site.
§258.27 Surface water requirements.	§257.82 Surface water requirements.
§258.28 Liquids restrictions—prohibits disposal of bulk or noncontainerized liquid waste in MSW landfills. If similarly applied to CCR units, this restriction may essentially prohibit liquid disposal of CCRs (i.e., surface impoundment disposal).	* No similar requirement.
* No similar requirement.	§257.83 Surface impoundment inspection requirements—requires surface impoundments to be inspected weekly for appearances of structural weakness. The proposal specifies when such inspections must occur and who would be qualified to conduct them. It also would require certain responses in the event hazardous conditions are identified.
§258.29 Recordkeeping requirements.	§257.84 Recordkeeping requirements—differs from MSW criteria in that records required to be kept include those that document/demonstrate annual surface impoundment inspections (something that is not required under the MSW criteria). EPA’s proposal also specifies that the records must be publicly accessible via the internet.

Municipal Solid Waste Landfill Criteria
(in 40 C.F.R. 258)

**Proposed Standards for Landfills and Surface
Impoundments that Receive CCR**
(proposed for inclusion in 40 C.F.R. 257)

Subpart D—Design Criteria

Liner and leachate collection requirements sufficient for groundwater to meet maximum contaminant levels for selected chemicals

§258.40 Design criteria—requires new MSW landfills or expansions of existing units to either install a composite liner or to allow the facility design to be based on site-specific conditions. Design criteria did not apply to existing units (i.e., units were not required to be retrofitted to meet the new liner requirements).

* No similar requirement.

* No similar requirement.

§258.42 Approval of site-specific flexibility requests in Indian country.

§257.70 Design criteria for new CCR landfills and lateral expansions—would require new/expanding CCR landfills to have composite liners and leachate collection and removal systems similar to those required under §258.40. EPA stated that its decision was based on its experience that such a liner design would be expected to be effective in mitigating the risks of leaching contaminant to groundwater from a waste such as CCRs. EPA did not modify the design criteria to allow for the consideration of site-specific conditions in individual CCR landfill design.

§257.71 Design criteria for existing CCR surface impoundments—existing units would require a composite liner, similar to that required of CCR landfills. Units would require retrofitting with a liner within five years of the effective date of a final rule or be subject to closure. EPA also proposed a “D Prime” option. Under this modification, the regulations would not require surface impoundment closure or retrofitting with a liner; rather, these surface impoundments could continue to operate for the remainder of their useful life. The other co-proposed Subtitle D requirements would remain the same.

Specific to surface impoundment units that continue to operate, EPA’s proposal would require design and inspection requirements similar to those of the Mine Safety and Health Administration (MSHA), including requirements that an independent registered professional engineer certify that the impoundment’s design is in accordance with engineering practices applicable to that unit; weekly inspections to identify potentially hazardous conditions or structural weakness; and annual inspections by an independent registered professional engineer to assure design, operation, and maintenance of the unit is in accordance with engineering practices applicable to that unit.

§257.72 Design criteria for new CCR surface impoundments and lateral expansions—essentially identical to the provisions applicable to *existing* CCR surface impoundments with regard to composite liner requirements and the additional criteria applicable to surface impoundment design, inspection, and recordkeeping.

* No similar requirement.

Municipal Solid Waste Landfill Criteria
(in 40 C.F.R. 258)

Proposed Standards for Landfills and Surface Impoundments that Receive CCR
(proposed for inclusion in 40 C.F.R. 257)

Subpart E—Groundwater Monitoring and Corrective Action

Requirements necessary to detect and respond to potential groundwater contamination

§258.50 Applicability—all MSW landfill units unless the owner/operator can demonstrate that there is no potential for migration of hazardous constituents from the unit. The criteria specify a time-table of compliance based on the proximity of the unit to a drinking water intake source.

§257.90 Applicability—all *existing* CCR units would be required to comply with the groundwater monitoring requirements within one year of the effective date of a final rule; *new* CCR units must comply with groundwater monitoring requirements before CCRs could be disposed of in the units.

§258.51 Groundwater monitoring systems.

§257.91 Groundwater monitoring systems.

§258.53 Groundwater sampling and analysis requirements.

§257.93 Groundwater sampling and analysis requirements.

§258.54 Detection monitoring program—specific constituents required to be included in the detection monitoring and assessment monitoring programs are listed under Appendix I to Part 258—Constituents for Detection Monitoring and Appendix II to Part 258—List of Hazardous Inorganic and Organic Constituents.

§257.94 Detection monitoring program—constituents for detection monitoring are boron, chloride, conductivity, fluoride, pH, sulphate, sulfide, total dissolved solids.

§258.55 Assessment monitoring program—within 90 days of finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the groundwater protection standards, the owner or operator must initiate an assessment of corrective measures that must be completed within “a reasonable period of time.”

§257.95 Assessment monitoring program—would be required whenever a statistically significant increase over background was detected for aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chloride, chromium (total), copper, fluoride, iron, lead, manganese, mercury, molybdenum, pH, selenium, sulphate, sulfide, thallium, total dissolved solids. In such cases, additional sampling and analysis requirements would also apply. Owners/operators would be required to complete their assessment corrective measures within 90 days of detecting the increase.

§258.56 Assessment of corrective measures.

§257.96 Assessment of corrective measures.

§258.57 Selection of remedy.

§257.97 Selection of remedy.

§258.58 Implementation of the corrective action program.

§257.98 Implementation of the corrective action program.

Subpart F—Closure and Post-Closure Care

Requirements applicable to the closure of regulated disposal units

§258.60 Closure criteria.

§257.100 Closure criteria—requires the removal of liquid and stabilization of remaining waste from a surface impoundment before closure.

§258.61 Post-closure care requirements.

§257.101 Post-closure care requirements.

§258.62 Approval of site-specific flexibility requests in Indian country.

* No similar requirement.

Municipal Solid Waste Landfill Criteria
(in 40 C.F.R. 258)

**Proposed Standards for Landfills and Surface
Impoundments that Receive CCR**
(proposed for inclusion in 40 C.F.R. 257)

Subpart G—Financial Assurance

Guarantees required to be established to assure that the owner/operator can pay for potential cleanup of contamination

§258.70 Applicability and effective date.

* EPA did not include financial assurance requirements in its proposal. It noted that any such requirements would be proposed in a separate rulemaking.

§258.71 Financial assurance for closure.

§258.72 Financial assurance for post-closure care.

§258.73 Financial assurance for corrective action.

§258.74 Allowable mechanisms.

§258.75 Discounting.

Source: Created by CRS based on a review of 40 C.F.R. 258 and EPA's June 2010 proposed standards to regulate CCR landfills and surface impoundments.

Appendix B. Proposed CCR Permit Program Requirements Compared to RCRA Permit Program Requirements

As proposed in H.R. 2273 and S. 3512, Section 4011 would provide limited direction to states regarding required elements of a CCR permit program. Listed below are provisions included in S. 3512 and the House bill that appear to be drawn from EPA's requirements applicable to permit programs it would deem adequate to implement the MSW landfill standards. Apart from those requirements, no other provisions in the proposed amendments to RCRA specify required elements of a CCR permit program.

Potential differences in program implementation can be seen when statutory requirements that would apply to a CCR permit program are compared to the regulatory requirements applicable to the permit program to implement the MSW landfill criteria at 40 C.F.R. 239 (listed in **Table B-1**).

Program Information Required to Be Provided to EPA

In both bills, within 36 months of enactment, states implementing a permit program would be required to submit a certification to EPA that their permit program meets the specification included in Section 4011(c). More specifically, provisions applicable to state actions in proposed Section 4011(b) would require that certification to include

- a letter identifying the lead state agency responsible for implementing the CCR permit program, signed by the head of that agency;
- identification of any other state agencies involved with the implementation of the CCR permit program;
- a narrative description of the CCR permit program explaining how the state will ensure that the program meets the Section 4011 requirements;
- statutes, regulations, or policies pertaining to public access to information, such as groundwater monitoring data (directive included only in S. 3512); and
- a legal certification that the state has, at the time of certification, fully effective statutes or regulations necessary to implement a CCR permit program that meets the Permit Program Specifications [in the House bill: "as described in subsection 4011(c)(1)," in the Senate bill: "as described in subsection 4011(c)"] including copies of those statutes and regulations.

With regard to the narrative description of the program, each state would be required to include a description of the state's

- process to inspect or otherwise determine compliance with the permit program;
- process to enforce the requirements of the permit program; and
- public participation process for the promulgation, amendment, or repeal of regulations for, and the issuance of permits under, such permit program.

Permit Program Requirements Specific to S. 3512

Under the Permit Program Specifications, S. 3512 also includes certain provisions drawn from additional requirements in Part 239. Those include

- **4011(c)(1)(G) Agency Requirements.** Except for confidential business information, the agency implementing the CCR permit program shall ensure that—documents for permit determinations are made available for public review and comment under the public participation process described in the program’s narrative description; final determinations on permit applications are made known to the public; and groundwater monitoring data are publicly available.

This provision is comparable to the “Public involvement requirements” at §239.6(a)-(c).

- **4011(c)(1)(E) Permits.** The agency responsible for implementing the CCR permit program shall require that owners or operators of each structure that receives CCR after the date of enactment of Section 4011 to apply for and obtain a permit incorporating the requirements of the CCR permit program.

This provision is apparently drawn from “Permitting requirements: required state law, at §239.6(e),” absent further directive that states ensure that new CCR structures have a permit in place prior to operation or that existing structures obtain a permit within a certain deadline. In contrast to the requirements in 239.6(e), this section of 4011 would require the state agency to require the owner or operator to obtain a permit “incorporating the CCR permit program requirements.” It does not specify the state must have necessary authorities in place to ensure facility compliance with the “revised criteria” (i.e., location restrictions, operating criteria, groundwater monitoring and corrective action) applicable to owners and operators of CCR structures, as described in the permit program specifications.

- **4011(c)(1)(H) Agency Authority.** Specifies that the state agency responsible for implementing the permit program has authority to:
 - obtain information necessary to determine whether the owner or operator of a structure is in compliance with the CCR permit program requirements (not to determine whether the facility is operating in compliance with standards applicable to that facility);
 - conduct or require monitoring and testing to ensure that structures are in compliance with the permit program requirements; and
 - enter, at reasonable times, any site or premise subject to the permit program for the purpose of inspecting structures and reviewing records relevant to the operation and maintenance of structures.

This provision appears to reinforce existing state authority. Currently, states are authorized to inspect and monitor facilities for compliance with waste management requirements they choose to adopt and implement under Subtitle D; §239.7 specifies the compliance monitoring and inspection authorities that EPA requires a state to adopt and implement to demonstrate that its authorities are adequate to assure facility compliance with the MSW landfill criteria. Also, this provision does not direct states to demonstrate that they have enacted laws reflecting its authority to conduct compliance monitoring activities as necessary to ensure that CCR structures operate in accordance with necessary standards.

- **4011(c)(1)(I) State Authority.** Specifies that the state responsible for implementing the permit program has authority to inspect structures and implement and enforce the CCR permit program.

Similar to the discussion of proposed Agency Authorities, above, these provisions appear to reinforce a state's existing authority, but do not explicitly direct a state to demonstrate that they have such authorities in place with regard to CCR structures.

Permit Program Requirements Specific to H.R. 2273

Apart from the information required to be included in the certification a state must submit to EPA, the House bill includes one requirement, drawn from Part 239, applicable to the permit program itself:

- **4011(c)(1)(F).** In the case of a coal combustion residuals permit program implemented by a State, the State has the authority to inspect structures and implement and enforce such permit program. States would not need separate authority from Congress

This provision appears to reinforce existing state authority, but does not explicitly require states to demonstrate that they have such authority (see reference to the proposed 4011(c)(1)(I) in S. 3512).

Required Elements of Existing RCRA Permit Programs

Pursuant to RCRA Section 4005(c), each state was required to adopt and implement a permit program or other enforcement system of prior approval and conditions, to assure owner/operator compliance with the MSW landfill criteria. Also under that section, EPA was broadly required to determine whether each state developed an adequate program (42 U.S.C. §6945(c)(1)(C)). Pursuant to that directive, EPA promulgated "Requirements for State Permit Program Determination of Adequacy" at 40 C.F.R. 239.

The federal MSW landfill criteria detail compliance obligations applicable to the owner operator of a regulated landfill. A state MSW permit program is the body of authorities, activities, and procedures that make up the state's system to regulate the location, design, operation, ground-water monitoring, closure, post-closure care, corrective action, and financial assurance of Subtitle D regulated facilities. Broadly, the federal standards detail what must be done to achieve the necessary level of protection; the permit program details how compliance will be enforced.

Key differences between the permit program to implement the MSW landfill criteria and the proposed CCR permit programs can be seen by comparing the directives to states in each bill, discussed above, to the detailed elements of a permit program deemed adequate by EPA to enforce a federal standard. **Table B-1** lists selected elements of the Part 239.

Broadly, few requirements comparable to those included under Part 239 are included in the proposed amendments to RCRA. As a result, provisions comparable to those listed in **Table B-1** that are *not* included among the requirements applicable to the permit program proposed in statute would likely not apply to a state's program or may be applied at its discretion.

Table B-1. Required Elements of a Subtitle D Permit Programs

Requirements for State Subtitle D Permit Programs

40 C.F.R. 239 Subpart A—General

§239.1 Purpose

This part specifies the requirements that state permit programs must meet to be determined adequate by the EPA under section 4005(c)(1)(C) of RCRA and the procedures EPA will follow to determine the adequacy of state Subtitle D permit programs or other systems of prior approval and conditions required to be adopted and implemented by states under RCRA section 4005(c)(1)(B).

§239.2 Scope and Definitions

- (a) *Scope.* (1) Nothing in this part precludes a state from adopting or enforcing requirements that are more stringent or more extensive than those required under this part or from operating a permit program with more stringent requirements or a broader scope of coverage than that required under this part.
- (2) All states which develop and implement a Subtitle D permit program must submit an application for an adequacy determination for purposes of this part.
- (3) If EPA determines that a state Subtitle D permit program is inadequate, EPA will have the authority to enforce the Subtitle D MSW landfill criteria on regulated facilities under the state's jurisdiction.

(b) *Definitions.* (1) For purposes of this part:

Approved permit program or *approved program* means a state Subtitle D permit program or other system of prior approval and conditions required under section 4005(c)(1)(B) of RCRA that has been determined to be adequate by EPA under this part.

Approved state means a state whose Subtitle D permit program or other system of prior approval and conditions required under section 4005(c)(1)(B) of RCRA has been determined to be adequate by EPA under this part.

Permit or *prior approval and conditions* means any authorization, license, or equivalent control document issued under the authority of the state regulating the location, design, operation, ground-water monitoring, closure, post-closure care, corrective action, and financial assurance of Subtitle D regulated facilities.

Permit documents means permit applications, draft and final permits, or other documents that include applicable design and management conditions in accordance with the Subtitle D federal revised criteria, found at 40 C.F.R. Part 257, Subpart B, and 40 C.F.R. Part 258, and the technical and administrative information used to explain the basis of permit conditions.

Regional Administrator means any one of the ten Regional Administrators of the U.S. Environmental Protection Agency or any authorized representative.

State Director means the chief administrative officer of the lead state agency responsible for implementing the state permit program for Subtitle D regulated facilities.

State program or *permit program* means all the authorities, activities, and procedures that comprise the state's system of prior approval and conditions for regulating the location, design, operation, ground-water monitoring, closure, post-closure care, corrective action, and financial assurance of Subtitle D regulated facilities.

Subtitle D regulated facilities means all solid waste disposal facilities subject to the revised criteria promulgated by EPA under the authority of RCRA Section 4010(c).

40 C.F.R. 239 Subpart B—State Program Application

§239.3 Components of Program Application

Any state that seeks a determination of adequacy under this part must submit an application to the Regional Administrator in the appropriate EPA Region. The application must identify the scope of the program for which the state is seeking approval (i.e., which class of Subtitle D regulated facilities are covered by the application). The application also must demonstrate that the state's authorities and procedures are adequate to ensure compliance with the relevant Subtitle D federal revised criteria and that its permit program is uniformly applicable to all the relevant Subtitle D regulated facilities within the state's jurisdiction. The application must contain the following parts:

- (a) A transmittal letter, signed by the State Director, requesting program approval. If more than one state agency has implementation responsibilities, the transmittal letter must designate a lead agency and be jointly signed by all state agencies with implementation responsibilities or by the State Governor;
 - (b) A narrative description of the state permit program in accordance with § 239.4;
 - (c) A legal certification in accordance with § 239.5;
 - (d) Copies of all applicable state statutes, regulations, and guidance.
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§239.4 Narrative Description of State Permit Program

The description of a state's program must include:

- (a) An explanation of the jurisdiction and responsibilities of all state agencies and local agencies implementing the permit program and description of the coordination and communication responsibilities of the lead state agency to facilitate communications between EPA and the state if more than one state agency has implementation responsibilities;
 - (b) An explanation of how the state will ensure that existing and new facilities are permitted or otherwise approved and in compliance with the relevant Subtitle D federal revised criteria;
 - (c) A demonstration that the state meets the requirements in §§ 239.6, 239.7, 239.8, and 239.9;
 - (d) The number of municipal solid waste landfill units within the state's jurisdiction that received waste on or after, October 9, 1991.
 - (e) A discussion of staff resources available to carry out and enforce the relevant state permit program.
 - (f) A description of the state's public participation procedures as specified in § 239.6(a) through (c).
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§239.5 State Legal Certification

- (a) A state must submit a written certification from the state Attorney General that the laws, regulations, and any applicable guidance cited in the application are enacted at the time the certification is signed and are fully effective when the state permit program is approved. This certification may be signed by the independent legal counsel for the state rather than the Attorney General, provided that such counsel has full authority to independently represent the lead state agency in court on all matters pertaining to the state program.
 - (b) If guidance is to be used to supplement statutes and regulations, the state legal certification must discuss that the state has the authority to use guidance to develop enforceable permits which will ensure compliance with relevant standards issued pursuant to RCRA section 4010(c) and that the guidance was duly issued in accordance with state law.
 - (c) If any laws, regulations, or guidance are not enacted or fully effective when the legal certification is signed, the certification should specify what portion(s) of laws, regulations, or guidance are not yet enacted or fully effective and when they are expected to be enacted or fully effective.
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40 C.F.R. 239 Subpart C—Requirements for Adequate Permit Programs

§239.6 Permitting Requirements

- (a) State law must require that: (1) Documents for permit determinations are made available for public review and comment; and (2) Final determinations on permit applications are made known to the public.
- (b) The state shall have procedures that ensure that public comments on permit determinations are considered.
- (c) The state must fully describe its public participation procedures for permit issuance and post-permit actions in the narrative description required under § 239.4 and include a copy of these procedures in its permit program application.
- (d) The state shall have the authority to collect all information necessary to issue permits that are adequate to ensure compliance with the relevant 40 C.F.R. part 257, subpart B or 40 C.F.R. part 258 federal revised criteria.
- (e) For municipal solid waste landfill units, state law must require that: (1) Prior to construction and operation, all new municipal solid waste landfill units shall have a permit incorporating the conditions identified in paragraph (e)(3) of this section; (2) All existing municipal solid waste landfill units shall have a permit incorporating the conditions identified in paragraph (e)(3) of this section by the deadlines identified in 40 C.F.R. 258.1; (3) The state shall have the authority to impose requirements for municipal solid waste landfill units adequate to ensure compliance with 40 C.F.R. 258. These requirements shall include:
- (i) General standards which achieve compliance with 40 C.F.R. 258, subpart A;
 - (ii) Location restrictions for municipal solid waste landfill units which achieve compliance with 40 C.F.R. 258, subpart B;
 - (iii) Operating criteria for municipal solid waste landfill units which achieve compliance with 40 C.F.R. 258, subpart C;
 - (iv) Design criteria for municipal solid waste landfill units which achieve compliance with 40 C.F.R. 258, subpart D;
 - (v) Ground-water monitoring and corrective action standards for municipal solid waste landfill units which achieve compliance with 40 C.F.R. 258, subpart E;
 - (vi) Closure and post-closure care standards for municipal solid waste landfill units which achieve compliance with 40 C.F.R. part 258, subpart F; and
 - (vii) Financial assurance standards for municipal solid waste landfill units which achieve compliance with 40 C.F.R. 258, subpart G.

§239.7 Requirements for Compliance Monitoring Authority

- (a) The state must have the authority to:
- (1) Obtain any and all information necessary, including records and reports, from an owner or operator of a Subtitle D regulated facility, to determine whether the owner or operator is in compliance with the state requirements;
 - (2) Conduct monitoring or testing to ensure that owners and operators are in compliance with the state requirements; and
 - (3) Enter any site or premise subject to the permit program or in which records relevant to the operation of Subtitle D regulated facilities or activities are kept.
- (b) A state must demonstrate that its compliance monitoring program provides for inspections adequate to determine compliance with the approved state permit program.
- (c) A state must demonstrate that its compliance monitoring program provides mechanisms or processes to:
- (1) Verify the accuracy of information submitted by owners or operators of Subtitle D regulated facilities;
 - (2) Verify the adequacy of methods (including sampling) used by owners or operators in developing that information;
 - (3) Produce evidence admissible in an enforcement proceeding; and
 - (4) Receive and ensure proper consideration of information submitted by the public.
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§239.8 Requirements for Enforcement Authority

Any state seeking approval must have the authority to impose the following remedies for violation of state program requirements:

- (a) To restrain immediately and effectively any person by administrative or court order or by suit in a court of competent jurisdiction from engaging in any activity which may endanger or cause damage to human health or the environment.
 - (b) To sue in a court of competent jurisdiction to enjoin any threatened or continuing activity which violates any statute, regulation, order, or permit which is part of or issued pursuant to the state program.
 - (c) To sue in a court of competent jurisdiction to recover civil penalties for violations of a statute or regulation which is part of the state program or of an order or permit which is issued pursuant to the state program.
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§239.9 Intervention in Civil Enforcement Proceedings

Any state seeking approval must provide for intervention in the state civil enforcement process by providing either:

- (a) Authority that allows intervention, as a right, in any civil action to obtain remedies specified in § 239.8 by any citizen having an interest that is or may be adversely affected; or,
 - (b) Assurance by the appropriate state agency that:
 - (1) It will provide notice and opportunity for public involvement in all proposed settlements of civil enforcement actions (except where immediate action is necessary to adequately protect human health and the environment);
 - (2) It will investigate and provide responses to citizen complaints about violations; and,
 - (3) It will not oppose citizen intervention when permissive intervention is allowed by statute, rule, or regulation.
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Source: Table created by CRS, taken from selected requirements in 40 C.F.R. Parts 239.

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