CKD Proposed Rule Comments

Adequacy of Record

Comment Id	Document Number	Comment
1064	ckdpL0003	We found the dockets disorganized and seriously incomplete. They did not, by themselves, permit meaningful review of central aspects of Agency decisions or decision processes related to CKD characteristics and related potential risks. Among other things, the dockets did not contain numerous relevant source documents and reports that EPA expressly relied on. Nor did they contain individual CKD measurements (dust samples with associated laboratory analysis results) and data quality information underlying numerous data summaries.[footnote 5] Where paper lists or printouts of sets of individual CKD measurements were available, the electronic databases that had been used by EPA staff to generate those lists had vanished, were unavailable for review and electronic manipulation by common statistical software, or in one critical case (Region VII "burner" measurements) were discovered by OSW staff to be missing entirely from the docket only after the close of the comment period. [footnote 6]□□ □□ Footnote 5: Individual measurements allow verification and correction of calculated averages or means, as well as of any judgments that may have been made with respect to outliers. Averages or medians alone may mask differences in the distribution of individual data points. Data quality information (for example, thenumber and times at which samples were taken, the protocols under which they were obtained, and whether a sample was cornposited or a set of sample measurements represents “splits” from a single sample or represents multiple samples) allow professional evaluation of whether a data set that seems to consist of apples actually contains mostly oranges, grapefruit and frangipani.□□ Footnote 6: This particular data set was later supplied on diskettes by OSW staff to PAI at its request. However, like other□□ missing docket items it apparently has never been publicly available and subject to review by other interested□□ parties.□□ Footnote 6:
1124	ckdpL0003	1. Fatal procedural defects. In rejecting a “two dust” approach because some data for burner and non-burner CKD “overlapped” for two constituents in a single year,’ EPA centrally relied on a comparison of Region VII burner data with the Coalition’s 15-plant nonbumer data. 64 FR at 45638-39. The Region VII numbers cited by the Preamble were summaries of a much larger data set that EPA expressly declared to be “available in the RCRA docket for this rule.” That data set in turn had been obtained by OSW staff in 1996 or 1997, but was never made public in any respect until certain unexplained summaries of its data appeared in an informal OSW staff communication to the Coalition in November 1997. The Coalition repeatedly but unsuccessfully asked for these new data so it could evaluate EPA’s summaries. We also noted that because EPA apparently meant to rely on these data, they should be made public through a NODA to satisfy procedural mandates.(Footnote 5: See, e.g., Letter, Levin (for the Coalition) to F. Smith (OSW) (Dec. 12, 1997). However, neither a paper printout of this data set nor any electronic version were ever placed in the docket or made available for public review before or during the comment period.(Footnote 6: OSW staff only discovered this fact and admitted it to the Coalition's consultants, who were attempting to obtain the individual R. VII CKD measurements for statistical analysis, on February 28, 2000. The absence of this data set precluded attempts by interested parties to evaluate EPA’s summary or place it in meaningful context.□□ □□ EPA has the burden of justifying any proposed rule. Docket information on which the Agency relies for that justification is a crucial part of the record, of meaningful opportunity for comment by interested parties, and of meaningful judicial review. Such missing information makes the proposal per se invalid, especially combined with other relevant docket gaps we identified (Footnote 7: These included, but were not limited to, Haynes & Kramer, “Characterization of US Cement Kiln Dust,” Bureau of Mines Information Circular 8885 (1982); PCA, “ An Analysis of Selected Trace Metals in [CKD]” (1992); PCA, “US and Canadian Portland Cement Industry: Plant Information Summary” (Dec. 3 1, 1998) (update of earlier PCA version published Dec. 31, 1992 and listed as Docket Item F-94-RC2A-SOOlO, but not in the docket); OSW, Technical Background Document, “Analysis of CKD Generation and Characteristics Data, Appendix E” (Aug. 1994) (containing CKD measurement data from Bureau of Mines, PCA Reports, EPA Sampling, RCRA $ 3007 requests for 1992, and public comments on the 1993 Report to Congress) (electronic database not in docket, required to be recreated for over 10,000 individual measurements from paper printouts designated Docket Item F-94-RC2A-SO0 17); Boemgen & Shacklette, “Chemical Analysis of Soils...of the Coterminous United States,” USGS Open File Report 8 1 - 197 (198 1) (elsewhere described as “currently the only national geochemical data set collected and analyzed [by] standardized protocols....[and] most appropriately used to provide information on background concentrations of [metals] elements in soil”); Dragun & Chiasson, “Elements in North American Soils” (199 1; HCMRI, Greenbelt, MD). These documents were either expressly cited and relied on by EPA, or necessary to evaluate summary Agency conclusions in the Preamble or in docket documents.).

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1531	ckdpL0002	Comment: One conclusion reached by the Texas Air Control Board's Task Force to study waste-burning cement plants in Midlothian, Texas was that all environmental and safety standards governing hazardous waste burning in cement kilns should be exactly the same as those governing commercial incinerators -- including the disposal of contaminated residues -- and that those standards should be the highest achievable. (TXU 686) Response: The Agency has received information from Texas on their approach. The Agency would like to point out that states may always adopt standards that are more stringent than the federal approach. APCA Response: The commenter appears to have misinterpreted or misquoted the findings of the TACB Task force, and requests that EPA correct the record.
1538	ckdpL0002	Comment: As required by statute, EPA must provide a meaningful opportunity for public comment on the CKD Report to Congress prior to making a regulatory determination regarding CKD (RCRA &3001(b)(3)(C)). Therefore, EPA should not make a regulatory determination until it modifies its Report or supporting documents to specifically include all data and assumptions used by the Agency in performing its exposure and risk assessments for CKD. EPA also should not make a regulatory determination until the Agency corrects the MMSOILS model and modifies its Report to reflect these model corrections. After the Report is modified, it should then be published again for public comment. As provided by statute, only after the Agency provides a meaningful opportunity for comment on the modified Report should it make a regulatory determination. (SI 853) Response: EPA disagrees. The RTC and subsequent NODA documents provide vast amounts of information on the Agency's data, methods, and findings. Because the existing administrative record is more than adequate to support EPA's regulatory determination, there will be no modified RTC and no additional comment period. APCA Response: The problems with the underlying data that existed in 1994 still exist today, so in this submittal we provide documented evidence of why the administrative record is less than adequate for the proposed rulemaking. We look forward to receiving updated and corrected information for review.
31	ckdp00010	For reference, Appendix I includes: pH Conductivity Total Dissolved Solids, Potassium, Chloride, Sodium, Sulfate. The Appendix I list includes parameters that are naturally occurring inorganics which are to be used as indicator parameters for evaluating potential impacts to groundwater. Statistical evaluation of concentrations of naturally occurring constituents can lead to SSI's based on variations in turbidity, rock geochemistry, and natural spatial variability. If only one upgradient monitoring well is present, natural spatial variability may be apparent but not easily demonstrated. Other parameters, which are not naturally occurring at significant concentrations, but are present in CKD (i.e. some metals), may improve the ability to detect potential impacts to groundwater. The additional cost for the metals analyses will be balanced by the reduced need to prepare demonstrations when false positive indications of groundwater impact are present.
250	ckdp00019	Need to Clarify "Listing" Appendix: EPA's Appendix I is the document justifying the hazardous waste "listing" of mismanaged CKD. 64 Fed. Reg. at 45675, col. 3. The title to this Appendix ("Justification for CKD Listing") should be changed to "Justification for Listing of Mismanaged CKD." Also, Table 1 should be entitled: "Mismanaged CKD Listing Determination Rationale." Certainly this is what EPA means, and in fact the Appendix itself explicitly keys on the phrase "improperly managed" CKD. 64 Fed. Reg. at 45677, col. 1. APCA encourages EPA to make these changes at the earliest practicable date. We of course are totally opposed to any hazardous waste listing of CKD under any conditions or circumstances, as should be abundantly clear throughout these comments.
549	ckdp00034	...none of the parameters currently listed in Appendix I are sensitive indicators of metals contamination at levels of concern for impact to the Point of Compliance as defined in Table 1 of Part 259. The parameters in Appendix I are gross indicator parameters, with analytical background and detection levels well above those of concern for metals. For example, a change to a TDS level of 10 ppm would probably pass as not statistically significant above background, yet there is health concern with changes in metals content of 0.02 to 0.05 ppm, considering the POC health-based thresholds defined in Table 1. It is therefore important to include metals in the Appendix I detection monitoring requirement, at least for kilns that are known to burn hazardous waste and which therefore have CKD that is influenced by metals.

Comment Id	Document Number	Comment
640	ckdp00040	Criticism of EPA's Rationale for Listing Cement Kiln Dust. Pursuant to RCRA, in order for EPA to "list" a hazardous waste, it must evaluate the waste basedon the listing criteria provided in 40 C.F.R. § 261.1 l(a)(3)(64Fed. Reg. 45,63 1,45,676 Table 1.). The rationale EPA provides for their decision to list CKD in Table 1 of the Preamble of the Proposed Rule is unconvincing and does not justify EPA's proposed management-based listing of CKD. In response to the third listing criteria, (40C.F.R. § 261.11(a)(3)(iii).) "Potential of the Constituent or Any Toxic Degradation Product of the Constituent to Migrate From the Waste Into the Environment under Specified Types of Improper Management," EPA cites thirty-six cases of documented air damage as evidence that CKD should be a listed waste. These "documented cases" are NOVs. One of the NOVs was issued to Holnam's Ada landfill in 1991. EPA's response fails to take into account the fact that the violation was remedied as a result of changes in management practices at the facility, and that there have been no further NOVs at the landfill. Due to improved management practices the fugitive dust pathway is no longer problematic for CKD at many cement plants, yet EPA still continues to inappropriately use fugitive dust as part of their rationale to list CKD. In response to the seventh and ninth listing criteria, "Plausible Types of Improper Management to Which the Waste Could Be Subjected," (40 C.F.R. § 26 l.l19(a)(3) (vii).) "Nature and Severity of the Human Health and Environmental Damage that has Occurred as a Result of the Improper Management of Wastes Containing the Constituent," (40 C.F.R. § 261.1l(a)(3)(ix).) EPA states: "[A] review of 1995 CKD management practices suggested that, overall, management practices had not substantially changed from those reported in the 1993 Report to Congress." (64 Fed. Reg. 45,631,45,676) This statement is inaccurate. The 1993 Report to Congress was based on Holnam's former management practices, pre 1991, and the former practices of the entire industry. However, improvement by all Holnam plants, and plants across the industry, significantly affects the assumptions used in the 1993 Report. EPA's reliance on out of date and inaccurate information invalidates their rationale for listing CKD. In response to the eighth listing criteria, "Quantities of the Waste Generated at Individual Generation Sites or on a Regional or National Basis," (40 CFR. § 261.11(a)(3)(viii).) EPA again uses data from 1995. In contrast to these out of date assumptions, Ada's disposal volume has dropped from 136,990 tons in 1995 to 68,985 tons in 1999, a 50% reduction. EPA's reliance on non-current information invalidates their rationale for listing CKD. As illustrated, several of EPA's reasons for listing CKD are based on no longer accurate information and do not reflect current management practices. As a result, the entire justification behind the Proposed Rule is flawed. Analysis of CKD pursuant to the listing criteria based on current information and current management techniques does not warrant a hazardous waste listing.
746	ckdp00048	On Page 45677, Table l., CKD Listing Determination Rationale, the rationale states that when mixed with water, CKD often exhibits the characteristic of corrosivity (40 CFR 261.22). The statement that CKD exhibits the characteristic of corrosivity is incorrect. The definition of the characteristic of corrosivity is a pH over 12.5 standards units. The measure of pH is defined as the negative logarithm of the hydrogen ion concentration of an aqueous solution. It is more correct to say that the mixture of CKD and water may exhibit the characteristic of corrosivity.□□ □ Further, if the CKD is removed (i.e., filtered out) from the water, the leachate/water would exhibit an elevated pH and may exhibit the corrosive characteristic. Therefore, TNRCC recommends that the rationale be revised to read: "When mixed with water, the mixture and/or the leachate/water often exhibits the characteristic of corrosivity."
805	ckdp00053	RCRA does not carve out an exception for CKD to the requirement that waste be classified as hazardous because of its intrinsic characteristics, as it does for military munitions. 42 USC § 6924(y). In the Proposed CKD Rule, EPA claims that its "approach is patterned on that adopted in the conditional exemption for military munitions," 64 FR at 45660 (referring to Military Munitions Rule, 62 FR 6622 (February 12, 1997)). EPA then cites Military Toxics Project v. EPA, 146 F.3d 948 (D.C. Cir. 1998), in which, according to EPA, the court "expressly upheld EPA's authority under RCRA to establish a conditional exemption from Subtitle C regulation for wastes that, absent the exemption, would be hazardous." 64 FR at 45642. However, we distinguish the authority found by the court in Military Toxics Project for EPA to define hazardous waste munitions based on the management practices for munitions from EPA's lack of authority for a management-based listing approach for CKD.

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806	ckdp00053	In Military Toxics Project, the court interpreted 42 USC § 6924(y), which requires EPA to identify "when military munitions become hazardous waste," id. (emphasis added), and found that EPA properly interpreted RCRA 3004(y): We see that in the preamble to the final Rule the "EPA interprets RCRA 3004(y) as only requiring the Agency to identify the circumstances under which military munitions become subject to the regulatory scheme for identified or listed hazardous waste promulgated under Subtitle C." 62 FR at 6632. We are inclined to agree with the EPA that, read in context, this is the more natural meaning of the word "when." . . . [Therefore] . . ,we defer to the EPA's reasonable interpretation. Military Toxics Project at 955 (emphasis added).
810	ckdp00053	Application of EPA's rules for making hazardous waste listing determinations to CKD require that EPA demonstrate that CKD "contains any of the toxic constituents listed on Appendix VIII and, after considering the following factors . . . [conclude] that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed." 40 CFR § 261 .1l(a)(3). When EPA promulgated the listing criteria, it stated: The criteria for listing toxic wastes are intended by EPA to identify all those wastes which are toxic, carcinogenic, mutagenic, teratogenic, phytotoxic, or toxic to aquatic species. These criteria provide that a waste will be listed where it contains any of a number of designated constituents - unless, after consideration of certain specified factors, EPA concludes that the waste does not meet part [B] of the statutory definition of hazardous waste. 45 FR at 33107 (1980) (emphasis added, referring to 42 USC § 6903(5)(B)). EPA then continued, "the first inquiry which must be made . . . is whether the waste contains any of the toxic constituents listed in Appendix VIII." Id. Thus, as EPA stated in 1980, "the presence of any of these constituents in the waste is presumed to be sufficient to list the waste unless after consideration of the designated multiple factors, EPA concludes the waste is not hazardous." I d . EPA then stated that it "has elected to focus . . . on the actual presence of the toxic constituent in the waste and to treat other factors such as migration potential as essentially mitigating considerations which might render the waste non-hazardous." Id. Thus, the regulation is clear that EPA must first determine whether CKD contains toxic constituents and then must determine whether CKD meets the requirements of 42 USC § 6903(5)(B) as clarified in 40 CFR § 261.11(a)(3).
814	ckdp00053	§ 261.11(a)(3)(i). The nature of the toxicity presented by the constituent: In response to this first criterion, EPA asserts in Table 1 that "CKD contains toxic metals and organics listed in Appendix VIII to part 261," etc. 64 FR at 45676. This statement does not address the applicable criterion of 40 CFR 261.ll(a)(3)(i), which is "the nature of the toxicity" of each of these constituents. Id. EPA's own statements acknowledge that the concentrations of toxic constituents are low and the resulting risks are low. e.g., 64 FR at 45636 (discussing predicted negligible impacts to groundwater); 64 FR at 45671 (noting that risks from direct pathways are low). EPA has declined to list as hazardous wastes other Bevill wastes with higher levels of many of the same toxic constituents. e.g., Final Regulatory Determination on Four Large-Volume Wastes from the Combustion of Coal by Electric Utility Power Plants, 58 FR 42466 (Aug. 9, 1993).□□ □□ § 261.1l(a)(3)(ii). The concentration of the constituent in the waste: EPA asserts that the "[a]mount of Appendix VIII constituents in CKD are high due to mass loadings into the cement manufacturing process." 64 FR at 45676. This statement does not address the applicable criterion of 40 CFR 261.1l(a)(3)(ii), which is "the concentration of the constituent in the waste." Id. EPA's analysis relates to the sheer volume of hazardous constituents in CKD, rather than the concentrations of those constituents in CKD, as required by § 261.1l(a)(3)(ii). Thus, EPA has failed to take into account the fact that the concentration of hazardous constituents in CKD is low. Although mass loadings may be high in certain locations, EPA fails to show this fact to be significant. In the RTC, EPA stated, "[T]he levels of several of the trace metals found in CKD are within the range commonly found in native soils." RTC at 3-33. These constituents are unlikely to be released into the environment in amounts that create any risk to human health or the environment for the following reasons: (a) Improved management practices that reduce the likelihood that hazardous constituents of CKD will be released to the environment have been implemented since the RTC and Regulatory Determination were published; (b) Federal and state regulatory programs currently in place mitigate the importance of such mass loadings and render the incremental improvements to the environment resulting from the proposed listing very small in comparison with the likely decrease in recycling and beneficial uses and likely concomitant increase in disposal rates of CKD; and (c) EPA's projections of migration of hazardous constituents of CKD are inadequate to show that a significant health risk exists from CKD or will be reduced significantly by the proposed listing.

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960	ckdp00060	B. EPA has neglected to consider facts that support the application of mitigating factors pursuant to 40 C.F.R. 5 261.11(a)(3).□□ □□ Not only has EPA relied on obsolete data in crafting the Proposed CKD Rule, but EPA has also failed to properly analyze whether CKD meets the criteria for being listed as a hazardous waste. EPA must evaluate whether CKD is a hazardous waste following the criteria provided in 40 C.F.R. § 261.11. EPA has not properly done so in the Proposed CKD Rule. Application of EPA's rules for making hazardous waste listing determinations to CKD require that EPA demonstrate that CKD "contains any of the toxic constituents listed on Appendix VIII and, after considering the following factors [conclude] that the waste is capable of posing a substantial present or potential hazard□□ to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed." 40 C.F.R. §261.11(a)(3).□□ □□ When EPA promulgated the listing criteria, it stated:□□ □□ The criteria for listing toxic wastes are intended by EPA to identify all those wastes, which are toxic, carcinogenic, mutagenic, teratogenic, phytotoxic, or toxic to aquatic species. These criteria provide that a waste will be listed where it contains any of a number of designated constituents - unless, after consideration of certain specified factors, EPA concludes that the zuaste does not meet part [B] of the statutory definition of hazardous waste.□□ □□ 45 Fed. Reg. at 33107 (1980) (emphasis added, referring to 42 U.S.C. § 6903(5)(B)). EPA then continued, "the first inquiry which must be made . . . is whether the waste contains any of the toxic constituents listed in Appendix VIII." Id. Thus, as EPA stated in 1980, "the presence of any of these constituents in the waste is presumed to be sufficient to list the waste unless after consideration of the designated multiple factors, EPA concludes the waste is not hazardous." Id. EPA then stated that it "has elected to focus . . . on the actual presence of the toxic constituent in the waste and to treat other factors such as migration potential as essentially mitigating considerations which might render the waste non-hazardous." Id. Thus, the regulation is clear that EPA must first determine whether CKD contains toxic constituents and then must determine whether CKD meets the requirements of 42 U.S.C. 5 6903(5)(b) as clarified in 40 C.F.R. §261.11(a)(3).□□ □□ Although EPA may look at both mitigating and exacerbating factors when making its listing determinations, the Proposed CKD Rule does not do so. Instead, the Proposed CKD Rule makes point by point assertions in support of the 1995 Regulatony Determination, 60 Fed. Reg. 7366 (1995), in Table 1 of the proposal. Thus, EPA uses the eleven factors listed in § 261.11(a)(3) as a template for justifying the listing without discussing mitigating factors at all. In its proposed rule, EPA asserts that CKD "meets the criteria at § 261.11(a)(3)," and then lists the ways in which these criteria are satisfied. 64 Fed. Reg. at 45676. EPA summarizes its findings with respect to these criteria in Table 1 in the proposed rule. Id.□□ □□ EPA's approach is not consistent with § 261.11(a)(3). The Proposed CKD Rule makes assumptions regarding potential exposure and health risks without using current data to show that listing CKD as a hazardous waste is justified. By failing to recognize any mitigating factors, EPA either implies that there is no mitigating factors applicable to CKD or ignores available information. EPA has not shown that it evaluated CKD in accordance with the criteria of § 261.11(a)(3), and, therefore, the proposed listing of CKD is not appropriate. Moreover, EPA limits its listing to improperly managed CKD, but apply its analysis of the mitigating factors in Table 1 to all CKD. Thus, EPA effectively assumes that all CKD will be mismanaged in various ways to arrive at its conclusion that listing CKD is warranted.
961	ckdp00060	§ 261.11(a)(3)(i). The nature of the toxicity presented by the constituent□□ □□ EPA asserts that "CKD contains toxic metals and organics listed in Appendix VIII to part 261," etc. 64 Fed. Reg. at 45676. This statement does not address the applicable criterion of 40 C.F.R. 261.11(a)(3)(i), which is "the nature of the toxicity" of each of these constituents. Id. EPA's own statements acknowledge that the concentrations [of] toxic constituents are low and the resulting risks are low. See, e.g., 64 Fed. Reg. at 45636 (discussing predicted negligible impacts to groundwater); 64 Fed. Reg. at 45671 (noting that risks from direct pathways are low). EPA has declined to list as hazardous wastes other Bevill wastes with higher levels of many of the same toxic constituents. See, e.g., 58 Fed. Reg. 42466 (Aug. 9, 1993) (Regulatory Determination on Coal Combustion Wastes).

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821	ckdp00053	(3) EPA's predictions that NAAQS for PM10 may be exceeded at CKDLFs are inaccurate: EPA projects that a certain number of people will be exposed to PM10 from CKD at levels exceeding the National Ambient Air Quality Standard (NAAQS). Health Risk TBD at 3-36. EPA offers no evidence that incidents of NAAQS exceedances predicted by EPA have occurred. If nonattainment of the NAAQS occurred with the frequency predicted by EPA in the Health Risk TBD, facilities causing such nonattainment would be required to take measures under other regulatory programs to control such emissions. EPA should explain why the stringency of regulation of CKD emissions in such situations would be greater under the Proposed CKD Rule than under the existing authority conferred by the Clean Air Act, 42 USC § 7502(c) and SIPS.□□ □□ In EPA's Health Risk TBD, EPA concludes that NAAQS for PM10 are exceeded by CKD within 500 meters of many U.S. cement plants. This determination was made by rationing other facilities' estimated emissions to estimated emissions from Holnam's Ada OK, plant. The Ada plant was assumed to be a "representative facility." Health Risk TBD at 3-21. EPA incorrectly assumed that NAAQS was exceeded by the Ada plant. In fact, there is no evidence that the Ada facility ever caused an exceedance of the NAAQS.□□ □□ The Agency assumed that other plants manage CKD in the same way Holnam's Ada, OK plant did in 1991. For these facilities, the distances from the facilities within which the NAAQS exceedances occurred were estimated as a proportion of the Ada plant's alleged NAAQS exceedance distance. When EPA made these approximations, EPA assumed that the majority of plants were significantly different from the Ada plant in terms of CKD hauling distance, road conditions, and exposed CKD landfill surface. For example, although Ada's CKD is hauled 6 miles on a paved highway, EPA assumed that the model Ada plant hauled CKD on a l-mile unpaved road. Thus, EPA sought to compare most cement plants to an existing cement plant, but then changed the existing cement plant to reflect what EPA considered more typical. This resulted in EPA's conclusions as to the number NAAQS exceedances and population exposures among the modeled plants. □□ □□ [New paragraph] However, in 1991, the Holnam Ada plant installed fugitive dust controls that rendered EPA's comparisons with the Ada plant even less consistent with reality in the field. EPA should explain why its estimates of NAAQS exceedances, based on now nonexistent CKD disposal practices at the Ada facility, accurately reflect the environmental impacts of so many different cement plants. EPA should also explain why, if fugitive dust controls were installed in 1991 at the Ada plant, all of the estimates of PM 10 exceedances need not be redone.
962	ckdp00060	§ 261.11(a)(3)(ii). The concentration of the constituent in the waste□□ □□ EPA asserts that the "[a]mount of Appendix VIII constituents in CKD are high due to mass loading into the cement manufacturing process." 64 Fed. Reg. at 45676. This statement does not address the applicable criterion of 40 C.F.R. 261.11(a)(3)(ii), which is "the concentration of the constituent in the waste." Id. EPA's analysis relates to the sheer volume of hazardous constituents in CKD, rather than the concentration of those constituents in CKD, as required by § 261.11(a)(3)(ii). Thus, EPA has failed to take into account the fact that the concentration of hazardous constituents in CKD is low, as it is required to do. Moreover, although mass loading may be high in certain locations, EPA does not show that this fact is significant. In fact, these constituents are unlikely to be released into the environment in amounts that create any risk to human health or the environment for the following reasons:□□ □□ 1) As described below and in detailed comments provided by SLC facilities, improved management practices have been implemented since the RTC and Regulatory Determination were published;□□ 2) As described below, federal and state regulatory programs currently in place mitigate the importance of such mass loading and render the incremental improvements to the environment resulting from the proposed listing very small in comparison with the likely decrease in recycling and beneficial uses and likely concomitant increase in disposal rates of CKD; and□□ 3) As discussed below, EPA's projections of migration of hazardous constituents of CKD are inadequate to show that a significant health risk exists from CKD or will be reduced significantly by the proposed listing.

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815	ckdp00053	§ 261.11(a)(3)(iii). The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in paragraph § 261.11(a)(3)(vii): CKD management practices have improved since EPA compiled its list of "damage" cases. EPA cites 13 cases of "damage" to groundwater and information contained in various technical and regulatory documents in support of the proposition that the potentials for various constituents to migrate from the waste into the environment justifies the listing of CKD as a hazardous waste. The various cited documents refer to other "damage" incidents, including, primarily, violations of state air quality rules under Clean Air Act State Implementation Plans ("SIPS") resulting in notices of violation (NOV). EPA cites these instances of environmental damage in support of the proposition that there is a significant potential for migration of hazardous constituents from CKD waste sites and there is a need for an enforceable federal CKD management standard. 64 FR at 45635. EPA does not consider data more recent than that developed for the 1995 Regulatory Determination. Id.□□ □□ More recently, EPA conducted health risk assessments and landfill design criteria evaluations based on the same data. These rely primarily on 1990 information from an industry survey on cement industry CKD management practices for CKD provided to EPA by the Portland Cement Association. By relying on l0-year-old data, EPA does not consider any changes in management practices by the cement industry in the intervening ten years or in the five years that have passed since the Regulatory Determination was promulgated. Thus, EPA assumes that the potential for migration of toxic constituents has remained essentially unchanged since 1990, and that it is unlikely for this situation to change in the future.□□ □□ EPA has not shown that the kinds of incidents cited in the RTC or the Regulatory Determination are recurring or are likely to recur. Instead, EPA concludes, "While the Agency acknowledges that CKD management practices may have changed at individual cement manufacturing sites, EPA believes certain practices which have led to damages to ground and surface waters have not stopped and occur today at other cement manufacturing facilities nation-wide." 64 FR at 45643. These incidents, in fact, are less likely to recur today and in the future because CKD management practices have improved significantly.□□ □□ Examples of improved practices at Holnam plants where EPA has noted documented or potential environmental damage associated with CKD: [the following text if from the table on pages 10 and 11 of the original comment]□□ - Mason City, IA, Environmental Damage: Contamination of groundwater and surface water (RTC at 5-9). Current Practice: Landfills are closed, plant has made process changes permitting it to stop wasting CKD.□□ - Artesia, MS. Environmental Damage: Elevated pH in quarry lake and lake discharges adjacent to CKD disposal area, 1993 EPA site visit (RTC at 5-40). Current Practice: Plant has applied for solid waste permit for new landfill and received draft permit; plant has demonstrated□□ that new site/design has no potential for migration.□□ - Ada, OK. Environmental Damage: Visible emissions from CKD storage pile blowing off plant property, 1991, (RTC at 5-48). Current Practice: Plant has obtained solid waste permit; plant conditions CKD with water prior to transporting, compacts CKD, and monitors groundwater.□□ - Holly Hill, SC. Environmental Damage: 5 NOVs for excess visible emissions from kiln and clinker cooler stacks, 1989 - 1991 (RTC at 5-46). Current Practice: These cases are unrelated to CKD management. However, plant conditions CKD prior to transporting, compacts CKD, and monitors groundwater; plant is required to permit its CKD landfill under recently promulgated state solid waste rules, and plans to close the active site and permit a new CKD landfill in 2001.

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816	ckdp00053	Holnam notes that EPA's 13 cited damage, as reported in the RTC and Groundwater TBD, include CKD management units that are not currently active or were in the process of closure at the time of the report. EPA should carefully consider information on changes in CKD management practices that have taken place throughout the U.S. cement industry since 1990.□□ □□ All of the NOVs involving CKD attributed by EPA to Holnam in the RTC resulted in corrective actions and no further violations of the sort described by EPA. Also, all of these facilities have since sought enforceable management standards in their respective states. Improvements have been made to CKD landfills as well as CKD handling systems. Citing the existence of NOVs without reference to the effectiveness of corrective actions taken and subsequent compliance history is an inappropriate use of damage cases by EPA to justify listing CKD. The fact that corrective actions have been taken and have been effective on a long-term basis should militate against a regulation that would list CKD as hazardous waste. In fact, because many of the cited NOVs have resulted in permanent improvements in CKD management practices, EPA should consider whether the existence of NOVs is more indicative of effective existing regulatory programs than of inadequate CKD management practices. EPA should treat the fact § 261.11(a)(3)(iii) and other subparagraphs. EPA should consider any improved practices that have resulted or are expected to result from other regulatory programs in making its estimate of the potential for migration.
820	ckdp00053	(2) EPA does not demonstrate projected reduction in health risk by listing mismanaged CKD as hazardous waste: EPA states that it "predicted a negligible impact to ground water and consequently low or negligible risk to human health via ingestion of contaminated drinking water." 64 FR at 45636. EPA then states that "cancer risks of concern were due primarily to exposure to arsenic in CKD" and that such risks occurred mainly "via movement of stormwater run-off and/or windblown dust from uncontrolled CKD storage or disposal areas to nearby water bodies and farm fields." Id. Thus, EPA appears to have found that the principal identifiable health risk, other than direct inhalation, is via the food chain pathway. This pathway is affected only by stormwater runoff, which EPA has found to be adequately regulated, 64 FR at 45674, and via air deposition, Health Risk TBD at 2-4. EPA has not shown what proportion of the estimated health risk comes from air deposition, or that the air pathway alone is significant compared with the surface water pathway. If, in fact, the air pathway is the principal source of unregulated risk due to CKD, EPA should explain why air emissions from CKD piles, hauling, and equipment are better regulated through the Proposed CKD Rule rather than other regulatory programs, such as under the Clean Air Act and SIPS.
822	ckdp00053	(4) The proposed CKD rule does not address the primary source of fugitive dust emissions from CKD management. In EPA's Health Risk TBD, EPA concludes that most of the direct and indirect health risks associated with CKD are a result of fugitive air emissions from CKD management units and hauling. In the Draft TBD on Control of Fugitive Dust at CKD Landfills, (1998), (Fugitive Dust TBD), EPA's study indicates that approximately 90% of the fugitive emissions associated with CKD come from unpaved roads on which CKD is hauled. Such emissions were found to be eliminated by watering haul roads. All of Holnam's plants have applied for operating permits under 40 CFR Part 70. These operating permits address fugitive emissions from haul roads. The Proposed CKD Rule does not address fugitive emissions from haul roads. Proposed CKD Rule would, therefore, not significantly affect the majority of fugitive CKD emissions. EPA has failed to explain why such a rule, which would control only a small portion of the fugitive dust associated with CKD, justifies listing CKD as a hazardous waste. □□ □□ (5) The Proposed CKD Rule ignores the regulation of CKD transfer points by the Portland cement NESHAP. The new Portland cement NESHAP rule adds additional air regulation not considered in the exposure assessments reported in the Health Risk TBD. 40 CFR Part 63, Subpart LLL. This NESHAP is applicable to "each conveying system transfer point at any Portland cement plant which is a major source." 40 CFR § 63.1340(b)(7). A point where a conveyed material is discharged by a conveyor may include a storage unit or pile. The NESHAP does not exclude any materials conveyed in cement plants, including CKD. EPA has not shown that the NESHAP is inadequate to regulate fugitive CKD emissions from transfer points and whether, in light of this rule, proposed section § 259.20 is necessary to control migration of fugitive CKD emissions.

Comment Id	Document Number	Comment
824	ckdp00053	7. § 261.11(a)(3)(x) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.□□ □□ EPA states: In making its regulatory determination, EPA evaluated State and Federal regulations pertaining to CKD waste and concluded that more stringent regulation of CKD is necessary based on current regulatory schemes. The Agency also determined that current practices are inadequate to limit contaminant releases and associated risks. CKD is now managed primarily on-site in nonengineered landfills, piles, and ponds. Many piles and landfills lack liners, leachate controls, or run-on/run-off collection systems. In addition, while dust suppression measures exist at many facilities, it appears that they are generally ineffective at controlling airborne releases of CKD. The Agency believes the following factors warrant additional environmental controls for CKD: (1) the general lack of current regulations applicable to contaminant discharges to ground water for protection of human health and the environment; (2) the general lack of ground-water□□ monitoring systems at CKD disposal units; and (3) the existence of damages to ground water and air that are persistent and continuous, and for which no requirements exist to address the risks posed via these pathways. 64 Fed. Reg. at 45637.□□ □□ The following regulator[y] activities have taken place with respect to Holnam plants:□□ □□ Ada, OK - Landfill has received solid waste permit for existing CKD landfill. Materials handling is regulated under the SIP and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation.□□ □□ Artesia, MS - Facility has applied for solid waste permit for new landfill and has received draft permit. Materials handling is regulated under the SIP and the Portland cement NESHAP. The plant has a Title V operating permit that addresses fugitive emissions from transportation.□□ □□ Clarksville, MO - State has authority to regulate CKD management but has waited for EPA action before implementing state rules. Materials handling is regulated under the SIP and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation.□□ □□ Devils Slide, UT - The CKD landfill is closed. The plant does not dispose of CKD. All CKD generated by the plant is sold for beneficial use. Materials handling is regulated under the SIP and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation.□□ □□ Dundee, MI - Plant has received solid waste permit for CKD landfill. Materials handling is regulated under the SIP and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation.□□ □□ Florence, CO - Plant has applied for and is negotiating amended mining permit with enforceable groundwater monitoring and fugitive emission controls. Materials handling is regulated under the SIP and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation.□□ □□ Holly Hill, SCPlant is required to obtain solid waste permit for CKD landfill under recently promulgated state rules and is preparing permit application for new CKD landfill. Materials handling is regulatedunder the SIP and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation.□□ □□ LaPorte, CO - Plant has applied for and is negotiating amended mining permit with enforceable groundwater protection and fugitive emission controls. Materials handling is regulated under the SIP and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation.□□ □□ Mason City, IA - The plant does not dispose of CKD. Materials handling is regulated under the SIP and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation.□□ □□ Midlothian, TX - Plant has met with state to request enforceable CKD management standards; state has authority to regulate CKD management. Materials□□ handling is regulated under the SIP and the-Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation.□□ □□ Theodore, AL - The plant does not generate or dispose of CKD. Materials handling is regulated under the SIP

Comment Id	Document Number	Comment
		and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation. .□□ □□ Trident, MTState has authority to regulate CKD management through the plant's mining permit; plant has proposed amended mining permit. Materials handling is regulated under the SIP and the Portland cement NESHAP. The plant has applied for a Title V operating permit that will address fugitive emissions from transportation. □□ □□ In addition, all cement plants have undergone the Title V permit process, which affects control of fugitive emissions throughout cement plants, and the NESHAP, which affects transfer points. Thus, Holnam has clearly embarked on a campaign to bring its CKD management activities under state regulation. Holnam is encouraged by the willingness of state regulators to accommodate these efforts, and now believes that, whether the Proposed CKD Rule is promulgated or not, all states in which Holnam has facilities either have or will regulate CKD management practices in the near future.□□ □□ Holnam reiterates its above comment that the history of NOVs cited in RTC and the resulting lack of recurrence of NOVs indicates CKD is being effectively regulated through regulations that are already in place.
986	ckdp00060	The Proposed CKD Rule relies on assumptions that the geology underlying CKD landfills is primarily karst terrain to conclude that there is the potential for off-site migration. SLC incorporates by reference comments by APCA to the effect that there is no basis to conclude that a majority of the U.S. cement plants is located in karst terrain. Thus, EPA overstates the potential for migration from CKD landfills in karst locations.
995	ckdp00060	The following regulatory activities have taken place with respect to SLC plants in addition to the Title V permit process, which affects control of fugitive emissions throughout cement plants, and the NESHAP, which affects transfer points.□□ □□ SLC Locaton: Catskill, NY. Plant Activities with Respect to State Regulation of CKD Management: Landfill has received solid waste permit for existing CKD and new landfill.□□ SLC Location: Hagerstown, MD: Plant Activities with Respect to State Regulation of CKD Management: State has authority to regulate CKD management but has waited for EPA action before implementing state rules.□□ □□ SLC has clearly embarked in an initiative to substantially reduce volume of CKD but also to bring the disposal units in conformance with state regulation or management guidelines. SLC is encouraged by the willingness of state regulators to accommodate these efforts, and now believes that, whether the Proposed CKD Rule is promulgated or not, all states in which SLC has facilities will regulate CKD management practices in the near future.
817	ckdp00053	Data relied upon by EPA to suggest that monitored sites generally show impacts to groundwater are outdated and not indicative of current conditions. The Agency implies that CKD disposal inevitably results in groundwater impacts. EPA states in its various CKD rulemaking documents that groundwater impacts at CKD disposal sites are inadequately monitored [original comment on page 12 quotes language from 64 FR 45644, 64 FR 45643, Groundwater TBD at page 2-29, and 60 FR 7370.] □□ □□ EPA implies from these statements that it considers these "damages" cases to be typical and representative of sites that do not manage CKD in accordance with EPA's preferred practices. However, the above assertions by EPA are not supported by current data, such as the following:□□ □□ (1) Many more active CKD disposal sites now monitor groundwater than were reported by EPA in 1995 and earlier. (2)The monitoring data collected at the active Holnam plants, some of which continue to use practices that do not match the proposed criteria, indicate that these practices do not, as a rule, cause damage to groundwater. (3) The empirical data relied upon by EPA, i.e., predicted population risks due to groundwater impacts, are fundamentally flawed because of EPA's unsupported underlying assumptions about the prevalence and effect of karst terrain at cement plants.

Comment Id	Document Number	Comment
818	ckdp00053	(4) Actual field data refutes the "empirical evidence" relied upon by EPA to characterize current management practices as unprotective at many cement plants. Ten Holnam cement plants that waste CKD actively managed 27% of the CKD disposed of in the U.S. in 1998. Of those ten plants, seven plants monitor groundwater quality at currently active CKD management units. Only one of those plants, Dundee, Michigan, currently uses management criteria similar to those in the proposed rule. The remaining plants are either engaged in permitting processes for new CKD landfills and have completed required hydrogeological investigations for the proposed sites, or plan to discontinue CKD disposal on-site. The Devils Slide plant has closed its active CKD management unit. Until 1999, Devils Slide had been mining CKD for sale as a beneficial use. The potential for the Devils Slide plant to be subject to new CKD landfill management criteria under a future federal rule as a result of EPA's active management policy, was a factor in the decision to discontinue such sales.□□ □□ [See table in original comment page 14: Descriptions of CKD management practices currently in use where groundwater monitoring now takes place and data are available.]□□ □□ None of the Holnam plants that monitor groundwater at active CKDLF units has detected groundwater impacts. Thus, all of Holnam's plants, representing 27% of the CKD disposed of in the U.S., have demonstrated (or will demonstrate at the newly permitted sites) protective CKD management practices. None of those plants had data to make such demonstrations at the time of the RTC. This information directly conflicts with E.PA's 1995 data and belief that "certain practices which have led to damages to ground and surface waters have not stopped." 64 FR at 45643.
819	ckdp00053	Based on these data, EPA's basis for proposing the Proposed CKD Rule should be reevaluated. Furthermore, Holnam disagrees with EPA's implication that, because of "empirical evidence of ground water contamination near the management unit at each cement manufacturing facility where ground water quality data exist," 60 Fed. Reg. at 7370, most of the CKD management units active today are likely to impact ground water quality. Empirical "evidence" used by EPA in the CKD rulemaking process has been largely derived from experience or computation of hypothetical cases alone and not on actual field data. Holnam's field data uniformly contradicts EPA's "evidence."
845	ckdp00053	6. § 261.11(a)(3)(ix). The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.□□ □□ Holnam reiterates its comment above regarding the potential of the constituent to migrate. For the reasons stated above, Holnam believes that the repetition of past environmental damages has diminished significantly, and will continue to diminish as Holnam's and other companies' CKD management practices become subject to increasingly stringent state and federal regulations affecting CKD management, including solid waste regulation as well as air quality regulation.
855	ckdp00054	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.
874	ckdp00055	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.
890	ckdp00056	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.
905	ckdp00057	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.

Comment Id	Document Number	Comment
926	ckdp00058	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.
950	ckdp00060	§ 261.11(a)(3)(ix). The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.□□ SLC reiterates its above comment under 261.11(a)(3)(iii) (the potential of the constituent to migrate). For the reasons stated above, SLC believes that the rate of repetition of past environmental damages has diminished significantly, and will continue to diminish as the cement industry shift to new CKD management practices.
963	ckdp00060	(1) CKD management practices have improved since EPA compiled its list of "damage" cases.□□ □□ EPA cites 13 cases of "damage" to groundwater and information contained in various technical and regulatory documents in support of the proposition that the potentials for various constituents to migrate from the waste into the environment justifies the listing of CKD as a hazardous waste. Technical Background Document on GroundWater Controls at CKD Landfills, RCRA Docket No. F-1999-CKDP-FFFFF-S0160 (1998) (" Groundwater TBD") at 2-2. In addition, the various cited documents refer to other "damage" incidents, including, primarily, violations of state air quality rules under Clean Air Act State Implementation Plans ("SIPS") resulting in notices of violation ("NOV"). RTC at 5-45. EPA cites these instances of environmental damage in support of the proposition that there is a significant potential for migration of hazardous constituents from CKD waste sites and there is need for an enforceable Federal CKD management standard. 64 Fed. Reg. at 45635. EPA does not, however, consider data more recent than that developed for the 1995 Regulntory Determination. Id.□□ □□ More recently, EPA conducted health risk assessments and landfill design criteria evaluations based on the same data. Technical Background Document on Population Risks from Indirect Exposure and Population Effects from Exposure to Airborne Particles from Cement Kiln Dust Waste, RCRA Docket No. F-1999-CKDP-FFFFF-S0158 (Draft, 1997) ("Health Risk TBD"); Groundwater TBD. By relying on pre-1995 data, EPA does not consider any changes in management practices by the cement industry in the five years that have passed since the Regulatory Determination. Thus, EPA assumes that the potential for migration of toxic constituents has not changed since before 1995, and that it is unlikely for this situation to change. EPA's risk assessments rely on data on U.S. CKD management practices in 1991. Health Risk TBD. EPA has not shown that the kinds of incidents cited are recurring or are likely to recur. "While the Agency acknowledges that CKD management practices may have changed at individual cement manufacturing sites, EPA believes certain practices which have led to damages to ground and surface waters have not stopped and occur today at other cement manufacturing facilities nation-wide ". 64 Fed. Reg. at 45643. These incidents, in fact, are less likely to recur today and in the future because CKD management practices have improved significantly, partly in reaction to the CKD rulemaking process.□□ □□ SLC notes that EPA's cited damage cases, as reported in the RTC and Groundwater TBD include CKD management units that are not currently active or were in the process of closure at the time of the report and are based on limited non representative sample of the cement industry. However, the management practices that resulted in those damage cases are not as prevalent as they were at the time that those cases arose. Thus, SLC urges EPA to carefully consider information on changes in CKD management practices that have taken place throughout the U.S. cement industry since 1991, as reported in comments by APCA and individual companies.

Comment Id	Document Number	Comment
988	ckdp00060	(2) Data relied upon by EPA to suggest that monitored sites generally show impacts to groundwater are outdated and not indicative of current conditions□□ □□ EPA states in its various CKD rulemaking documents that groundwater impacts at CKD disposal sites are inadequately monitored.□□ □□ In 1990, only 17% of all CKD management units nation-wide had ground-water monitoring systems. The American Portland Cement Alliance reports that in 1995, 33 out of 94 cement-manufacturing facilities had "ground-water monitoring systems." EPA, however, could not verify whether the monitoring systems were capable of characterizing ground water beneath the active CKD management unit(s). 64 Fed. Reg. at 45644.□□ □□ EPA has identified 13 cases of ground water damage resulting from the migration of potentially hazardous constituents, including metals, from waste CKD. . . These damages reflect CKD management practices from 1980 to 1995 at cement facilities across the United States. While the Agency acknowledges that CKD management practices may have changed at individual cement manufacturing sites, EPA believes certain practices which have led to damages to ground and surface waters have not stopped and occur today at other cement manufacturing facilities nation-wide. 64 Fed. Reg. at 45643 (emphasis added).□□ □□ It was noted in the Regulatory Determination, that of the 14 CKD disposal sites where groundwater monitoring data have been collected, all but one of the sites indicate some groundwater contamination has occurred. (60 FR 7366). Clearly there is a need to perform groundwater monitoring at CKD disposal sites in order to identify and remediate contaminated groundwater and to evaluate and remediate potential releases to groundwater from active CKD landfill (CKDLF) units. Groundwater TBD at 2-19.□□ □□ EPA has found empirical evidence of ground water contamination near the management unit at each cement manufacturing facility where ground water quality data exist. 60 Fed. Reg. at 7370.□□ □□ EPA implies that it considers these damages cases to be typical and representative of sites that do not manage CKD in accordance with EPA's preferred practices. The above assertions by EPA are not supported by current data.□□ □□ Many more active CKD disposal sites now monitor groundwater than were reported by EPA in 1995 and earlier.□□ □□ The empirical data relied upon by EPA, i.e., predicted population risks due to groundwater impacts, are fundamentally flawed because of EPA's unsupported underlying assumptions about the prevalence and effect of karst terrain at cement plants.□□ □□ Actual field data refutes the "empirical evidence" relied upon by EPA to characterize current management practices as unprotective at many cement plants.□□ □□ The data are limited and non-representative of the overall CKD management unit.
36	ckdpL0002	Comment: Regulating CKD as a hazardous waste could result in a significant reduction in cement kiln waste management capacity. CKD, though clearly a solid waste, does not satisfy the criteria outlined in the definition of "hazardous waste" found in Section 1004(5) of RCRA. Specifically, it has not been demonstrated that CKD will "…cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or, pose a substantial present or potential hazard to human health and the environment when improperly treated, stored, transported or disposed of, or otherwise managed . . ." (API 710) Response: The Agency disagrees. The findings of the RTC and subsequent analyses, as presented in the Regulatory Determination, clearly indicate that unless additional controls are implemented, CKD has posed and is likely to continue to pose risks to human health and the environment under plausible management scenarios [Emphasis Added].□ APCA Response: APCA objects to this characterization of risks. No documented evidence of actual damage to human health has ever been presented or found by EPA despite over a century of beneficial use of CKD as an agricultural soil amendment. The Agency should clearly distinguish between past documented cases of environmental effects, and future risks to hypothetical receptors estimated by predictive models incorporating a high degree of uncertainty.

Comment Id	Document Number	Comment
795	ckdp00053	The proposed rule will discourage recycling and beneficial use of CKD. EPA's proposed rule state: □□ □□ "Most current off-site uses, such as for waste stabilization or land application as fill material, are either currently regulated (under RCRA for hazardous waste stabilization, or under the Clean Water Act in the case of municipal sewage sludge) or appear to present low risk due to low exposure potential. As explained in the Regulatory Determination, in light of the low exposure potential, EPA believes that these uses constitute environmentally sound recycling and beneficial use. Therefore, the Agency is not proposing management standards for these beneficial uses of CKD or to list as a hazardous waste CKD used for such practices. We are proposing that beneficially used CKD is non-hazardous waste." - 64 Fed. Reg. at 45639.□□ □□ Despite EPA's words of encouragement for many beneficial uses, the proposed rule listing CKD as hazardous waste under certain circumstances creates substantial risks to beneficial users, that CKD that they use beneficially, automatically become a listed hazardous waste before these users ever receive the product. The preamble to the Proposed CKD Rule states:□□ □□ Under the proposed approach, CKD would only become hazardous waste subject to RCRA Subtitle C regulation when persons managing the waste commit egregious or repeated violations, such as failing to install controls designed to meet the performance standards, or failing to□□ manage CKD in units that conform to specific default technology-based standards. - 64 Fed. Reg. at 45642.□□ □□ The Proposed CKD Rule creates a class of "egregious" violations that would automatically apply to certain CKD, even if it were destined for sale. Under the Proposed CKD Rule, CKD -becomes listed whenever it has been managed in ways that fail to comply with the requirements listed in 40 CFR § 261.4(b)(8)(ii)(A). This automatic listing explicitly includes CKD destined for sale. Among the automatic triggers for hazardous waste listing is a violation of "the containment standards, as specified under § 259.20, for CKD destined for sale or beneficial use." 64 FR at 45696. Thus, CKD in a container, destined for sale or recycling may automatically become a hazardous waste while in temporary storage upon violation of the standards that apply to temporary storage. It is a feasible interpretation of the Proposed CKD Rule for such CKD to become listed as hazardous waste due to failure of tanks or silos or their associated air pollution control devices to adequately "prevent wind dispersal of dusts" or "prevent water from reaching the stored CKD." 64 FR at 45682. A cement facility would then potentially face several risks:□□ □□ 1. Listed hazardous waste CKD could be inadvertently shipped off-site without compliance with the generator standards provided in 40 CFR Part 262 (generator standards);□□ □□ 2. Listed hazardous waste CKD could be inadvertently delivered to customers, who might then be in violation of 40 CFR Parts 263 (transporter standards), 264 (treatment, storage, and disposal standards) and 268 (land disposal restrictions) and subject to facility-wide corrective action requirements. 40 CFR § 264.90; □□ □□ 3. The definition of "cement kiln dust waste" is so broadly defined as to include materials that are not wastes. In particular, cement raw materials and internally circulated particulate materials collected in air pollution control devices (APCDs) should not be considered wastes.□□ □□ In certain cement kiln systems, particularly preheater and precalciner kiln systems, cement raw materials are ground and dried using kiln exhaust gases. The ground kiln feed is recovered from the kiln exit gas stream by using an APCD, which also acts as a product recovery unit. Thus, in these processes, cement kiln raw materials are particulate solids collected by a cement kiln's APCD. Also, in many kiln systems, CKD is recirculated in an internal stream and not intended to be wasted. The Agency's definition of "cement kiln dust waste" should explicitly exclude these materials.□□ □□ The Proposed CKD Rule defines “cement kiln dust waste” as “the fine particulate solids, associated with the production of Portland cement, which are collected by air pollution control devices used to clean the kiln exhaust. ” 64 FR at 45679. Not only does this definition describe CKD waste, but it also fits cement kiln feed that is prepared using kiln exhaust gases and internally recirculating CKD. In the preamble to the Proposed CKD Rule, EPA states, “The Agency believes recirculation of CKD back into the cement manufacturing process is beneficial because recirculated CKD would never be disposed.” 64 FR at 45639. In fact, recirculating CKD “ would never be disposed.” Id. But, although EPA makes this statement in the preamble to the proposed CKD Rule, the Agency does not make an exception for these materials in the proposed regulatory language. Thus, even though recirculated CKD and ground kiln feed fit the literal definition of “cement kiln dust waste,” EPA should not consider these materials wastes. Instead, they should be considered what they are - products or components of internal process streams. □□ □□ EPA should explicitly exclude from the definition of CKD waste any cement kiln process materials that are not

Comment Id	Document Number	Comment
		otherwise wastes, such as kiln feed, recirculated CKD, and CKD reclaimed for re-use as cement raw material. Without this exclusion, these materials could become subject to the proposed Part 259 standards even though they are not wastes. Cement kiln feed does not have the characteristics associated with CKD: it is not calcined and not enriched in trace metals. Internally recirculated CKD is not a waste. Thus, other materials that fit the description of "cement kiln dust waste," if not excluded from regulation under the Proposed CKD Rule, could become listed hazardous wastes.□□ □□ Moreover, 40 C.F.R. § 63.1201, the hazardous waste combustor NESHAP, defines hazardous waste combustor as "a hazardous waste burning cement kiln." The same section defines hazardous waste burning cement kiln as " a rotary kiln . . . that produce[s] clinker . . . and burns hazardous waste at any time." Id. Thus, any cement kiln that recycles CKD that has been determined to be a hazardous waste is subject to this NESHAP. If any materials were to become listed hazardous waste as a result of a violation of the proposed Part 259 standards, they could be inadvertently fed or recycled to a cement kiln, subjecting that kiln to 40 CFR Parts 266 (hazardous waste burner standards), 265 (interim status standards), facility-wide corrective action requirements, and 40 CFR Part 63 Subpart EEE (NESHAP for hazardous waste combustion).□□ □□ Approximately one half of all CKD generated by Holnam in 1998 was recycled to the kiln systems. The consequence that a large number of cement kilns that recycle CKD could become subject to Part 266 standards for hazardous waste burners and the NESHAP for hazardous waste combustion is not appropriate, and will be a disincentive to recycling CKD. Therefore, in the event that EPA promulgates the Proposed CKD Rule, the definition of CKD should exclude materials destined for use as a product, feeding to cement kilns as raw material, or otherwise recycled to cement kiln systems.□□ □□ 4. In the Proposed CKD Rule, EPA states, "the Agency is not proposing management standards for . . . beneficial uses of CKD or to list as a hazardous waste CKD used for such practices. We are proposing that beneficially used CKD is non-hazardous waste." 64 FR at 45639. CKD beneficial users and cement facilities sometimes reclaim CKD from land disposal units, tanks, containers, or buildings that would become subject to the proposed Part 259 standards. A violation of these standards could cause beneficially reused CKD to become hazardous waste. This result would be a disincentive to continue such sales. Until 1999, Holnam's Devils Slide Utah plant reclaimed CKD from its CKD landfill for sale. This process was discontinued, in part, because of concern that the landfill would one day fit into the category of "actively managed" CKD subject to standards for new CKD landfills and that liability could arise from reclaiming material that□□ became a hazardous waste.□□ □□ As the trends in CKD management indicate, the proportion of CKD beneficially used and not placed in landfills has steadily increased between 1995 and 1998 from to 17% to 28% within Holnam, and from 16% to 22% in the entire U.S. cement the industry. EPA should consider whether the disincentive to beneficially use CKD could cause facilities to increase the disposal of CKD. Although § 261.1l(a)(3) does not include the "stigma" associated with hazardous waste listing as a basis for deciding whether to list a waste, the detrimental effect of listing on recycling and beneficial uses and the resulting concomitant increase in disposal mitigates against listing CKD as hazardous waste. Thus, the potential chilling effect on recycling is a factor that should be weighed heavily within the context of "such other factors as may be appropriate." 40 CFR § 261.1l(a)(3)(xi) and Hazardous Waste Treatment Council v. EPA, 861 F.2d 270 (D.C. Cir. 1988).
804	ckdp00053	In the Proposed CKD Rule, EPA is proposing to act without authority under the Solid Waste Disposal Act, 42 USC § 6901 to 6992 (RCRA) by listing "mismanaged" CKD as hazardous waste. Hazardous waste is defined in 42 USC § 6903(5) based on "its quantity, concentration, or physical, chemical, or infectious characteristics." Id. (emphasis added). Thus, a decision to classify a particular waste as hazardous waste may be based only on the characteristics of the waste itself. Nowhere in RCRA do the terms "quantity, concentration, or physical, chemical, or infectious characteristics" take on additional connotations beyond the characteristics of waste. The method of management of CKD is not a characteristic of CKD. Thus, the statutory definition of hazardous waste does not include hazardous waste that is defined as such based on the way in which it has been managed, unless an exception appears somewhere in the law.

Comment Id	Document Number	Comment
812	ckdp00053	The Proposed CKD Rule makes assumptions regarding potential exposure and health risks without using current data to justify listing CKD as a hazardous waste. By failing to recognize any mitigating factors, EPA either implies that there are no mitigating factors applicable to CKD or ignores available information. EPA has not shown that it evaluated CKD in accordance with the criteria of § 261.11(a)(3), and, therefore, the proposed listing of CKD is not in accordance with the law. (If, in response to this comment, EPA conducts a detailed analysis in accordance with § 261.11(a)(3), it must then provide public notice and an opportunity for comment before promulgating rules. 5 USC § 553.) Moreover, EPA is inconsistent by limiting its listing to improperly managed CKD, but applying its analysis of the factors in Table 1 to all CKD. Thus, EPA effectively assumes that all CKD will be mismanaged in various ways to arrive at its conclusion that listing mismanaged CKD is warranted.
813	ckdp00053	Because EPA states that CKD "meets the criteria at § 261.1l(a)(3)," Holnam's response is, therefore, not limited to mismanaged CKD. EPA has not, by evaluating all CKD in the rulemaking process, applied its analysis to any particular type of mismanaged CKD. Therefore, EPA has not actually determined whether each type of mismanaged CKD independently warrants listing that type of mismanaged CKD as hazardous waste. Thus, Holnam's comments also address all CKD and not only CKD managed in certain ways.
834	ckdp00053	F. EPA has not justified listing each type of mismanaged CKD.□□ □□ In justifying its proposal to list mismanaged CKD as a hazardous waste, EPA does not evaluate each type of mismanagement scenario listed in the proposed revision to 40 CFR 261.4 to determine whether it has actually created the environmental risks assumed in the listing proposal. Instead, EPA assumes that most CKD will be mismanaged in multiple ways at once. For example, EPA appears to have assumed that at the same time that a CKD landfill is impacting a nearby creek with runoff, it is also exceeding ambient air quality standards. Thus, although, certain types of violations of the proposed management standards render the affected CKD a hazardous waste, EPA has not demonstrated that each particular type of mismanagement, alone, poses an unacceptable risk or should cause the affected CKD to become a hazardous waste. Yet, each type of violation may create a different type of environmental risk. Because each method or combination of methods of CKD management may or may not create environmental risks in each circumstance, EPA should explain why each type of violation justifies listing CKD as a hazardous waste. Otherwise, CKD becomes listed under each circumstance without a rulemaking for that circumstance.
844	ckdp00053	4. § 261.11 (a)(3)(vii). The plausible types of improper management to which the waste could be subjected.□□ In comments submitted separately by Holnam's cement plants, Holnam describes its current and planned management practices. Of those cement plants that dispose of CKD:□□ □□ a. All plants either monitor groundwater in proximity to active CKD disposal areas, or are obtaining permits for new disposal areas that include monitoring or demonstrations of no potential for migration. □□ b. All plants use some form of fugitive dust control: Ada, Clarksville, Dundee, Holly Hill, and Trident mix CKD with water before transporting it disposal sites; Midlothian, Florence, and LaPorte spray CKD with agents to reduce fugitive emissions; and Artesia and Florence have budgeted for the installation of pug mill systems to mix CKD with water within the next year.□□ c. All plants have obtained or are in the process of obtaining permits that require specific demonstrations that the locations of planned CKD disposal will not impact groundwater or have demonstrated that disposal in their current locations has not impacted groundwater. EPA should consider that a substantial portion of the CKD managed in the U.S. is managed by Holnam, and that its improved practices indicate that improper management of CKD is far less "plausible" than at the time of the RTC and the Regulatory Determination. 40 C.F.R. § 261.11 (a)(3)(vii). Moreover, EPA should consider the improvements in management practices□□ across the industry as a whole as discussed in comments by APCA.

Comment Id	Document Number	Comment
970	ckdp00060	E. EPA has not justified listing each type of mismanaged CKD.□□ In justifying listing mismanaged CKD as a hazardous waste, EPA does not evaluate each type of mismanagement scenario listed in the proposed revision to 40 C.F.R 261.4 to determine whether it has actually created the environmental risks assumed in the listing proposal. Instead, EPA assumes that most CKD will be mismanaged in multiple ways at once. For example, EPA appears to have assumed that at the same time that a CKD landfill is impacting a nearby creek with runoff, it is also exceeding ambient air quality standards. See, e.g., Groundzuaieer TBD (assuming CKD will be disposed of on karst or below the water table); Health Risk TBD (assuming air emissions); statements in the preamble to the Proposed CKD Rule, supra, (regarding lack of groundwater monitoring). Thus, although certain types of violations of the proposed management standards render the affected CKD a hazardous waste, EPA has not demonstrated that each particular type mismanagement, alone, poses an unacceptable risk or should cause the affected CKD to become a hazardous waste. Yet, each type of violation may create a different type of environmental risk.□□ □□ Because each method of management may or not create environmental risks in each circumstance, EPA should explain why each type of violation justifies listing CKD as a hazardous waste. Otherwise, CKD becomes listed under each circumstance without a rulemaking for that circumstance. Listing materials, as hazardous waste requires formal rulemaking for each incidence of listing, 42 U.S.C. § 6921(b)(1), with the required notice and comment associated with rulemaking. 5 U.S.C. § 553. Nothing in the Solid Waste Disposal Act, 42 U.S.C. §§ 6901 to 6922, authorizes EPA to list CKD under specific mismanagement scenarios without rulemaking for each scenario. We distinguish the management-based listing approach proposed by EPA from the approach challenged in Military Toxics Project v. EPA, 146 F.3d 948 (D.C. Cir. 1998).□□ □□ In Military Toxics Project, the court interpreted 42 U.S.C. § 6924(y), which requires EPA to identify "when military munitions become hazardous waste," Id. (emphasis added), and found that EPA properly interpreted RCRA 3004(y) as only requiring the EPA to "identify the circumstances under which military munitions become subject to the regulatory scheme for identified or listed hazardous waste promulgated under Subtitle C." 62 Fed. Reg. at 6632. The statutory sections discussing CKD regulation to not authorize EPA to choose when CKD is a hazardous waste. Instead, EPA is required to "either determine to promulgate regulations under this subchapter . . . or determine that such regulations are unwarranted," 42 U.S.C. § 6921(b)(3)(C), and "If. . . [CKD] is subject to regulation under this subchapter," EPA is authorized to develop standards for CKD. 42 U.S.C. § 6924(x). Thus, EPA is authorized to decide whether to list CKD as hazardous waste and, if CKD is listed, how it should be regulated. EPA does not have the authority to make distinctions between CKD that is managed one way or another, or to cause CKD to become listed under certain circumstances without evaluating each decision to list CKD on its own merits.

Comment Id	Document Number	Comment
971	ckdp00060	Certain mismanagement scenarios that may cause CKD to become listed hazardous waste are not explained at all by EPA. For example, EPA does not explain why the following types of failure to manage CKD in accordance with the Part 259 standards justify listing the CKD as hazardous waste:□□ - Failure to comply with groundwater monitoring requirements constitute violation of the management standards sufficient to cause the exclusion under 40 C.F.R. § 261.4 to be lost under proposed § 261.4(b)(8)(ii)(A)(5), resulting in the affected CKD becoming a listed hazardous waste. 64 Fed. Reg. at 45696. EPA does not show that the risks of failing to monitor in accordance with the proposed rules justify listing CKD as a hazardous waste.□□ - EPA does not show that the risks of failing to comply with the time frames for corrective action (proposed 9 261.4(b)(8)(ii)(A)(5)) justify listing CKD.□□ - EPA has not explained why CKD that was once mismanaged in some way should be regulated as listed hazardous waste after the violation of the management standards has been remediated. Once the violation has been remediated, such CKD is no different than other CKD that is to be excluded from listing. Moreover, EPA does not explain why the de-listing process is not applicable to this situation or why listed hazardous waste CKD should not require de-listing pursuant to 42 U.S.C. § 6921(f).□□ - EPA does not explain the risks of repeated violations of other requirements (proposed § 261.4(b)(8)(ii)(A)(7)).□□ - The type of repeated violations that could cause CKD to lose its exclusion does not exclude failure to comply with record keeping or reporting requirements of proposed Part 259. EPA does not offer any justification for listing CKD under these situations.□□ - A facility may violate air quality rules pursuant to a SIP under the Clean Air Act, proposed § 259.22. EPA does not explain how violations of SIP requirements relating to fugitive dust, for example, justify listing CKD as a hazardous waste. In other words, EPA has not explained why a violation of a fugitive dust standard justifies listing the remaining CKD even after the fugitive dust problem has been remedied.□□ □□ Instead, this rulemaking makes broad conclusions as to the potential harms of mismanaging CKD without justifying the need to list CKD managed in violation of these specific requirements. Consequently, SLC considers this approach to listing to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." See 5 U.S.C. § 706(a)(2); 42 U.S.C. § 6976(a).
983	ckdp00060	§ 261.11(a)(3)(vii). The plausible types of improper management to which the waste could be subjected.□□ □□ In comments submitted separately by APCA, SLC and Holnam's cement plants, SLC describes its current and planned management practices. Of those cement plants that dispose of CKD:□□ - All plants either monitor groundwater in proximity to active CKD disposal areas, or are obtaining permits for new disposal areas that include monitoring or demonstrations of no potential for migration.□□ - All plants use some form of fugitive dust control.□□ - All plants have obtained or are in the process of obtaining permits that require specific demonstrations that the locations of planned CKD disposal will not impact groundwater, are located above the natural water tables, or have demonstrated that disposal in their current locations has not impacted groundwater.
1535	ckdpL0002	Comment: Regulating CKD as a hazardous waste could result in a significant reduction in cement kiln waste management capacity. CKD, though clearly a solid waste, does not satisfy the criteria outlined in the definition of "hazardous waste" found in Section 1004(5) of RCRA. Specifically, it has not been demonstrated that CKD will "…cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or, pose a substantial present or potential hazard to human health and the environment when improperly treated, stored, transported or disposed of, or otherwise managed . . ." (API 710)□ □ Response: The Agency disagrees. The findings of the RTC and subsequent analyses, as presented in the Regulatory Determination, clearly indicate that unless additional controls are implemented, CKD has posed and is likely to continue to pose risks to human health and the environment under plausible management scenarios [Emphasis Added].□ □ APCA Response: APCA objects to this characterization of risks. No documented evidence of actual damage to human health has ever been presented or found by EPA despite over a century of beneficial use of CKD as an agricultural soil amendment. The Agency should clearly distinguish between past documented cases of environmental effects, and future risks to hypothetical receptors estimated by predictive models incorporating a high degree of uncertainty.□

Comment Id	Document Number	Comment
823	ckdp00053	§ 261.11(a)(3)(viii). The quantities of the waste generated at individual generation sites or on a regional or national basis:□□ As stated above, the trend in CKD waste volumes disposed in landfills has clearly been downward. This is due to substantial efforts by Holnam to find ways to increase CKD recycling and sales for beneficial uses. See Appendix B. Listing CKD as hazardous waste will discourage recycling and beneficial uses. If EPA promulgates a rule that creates much greater enforcement risks for recycling and sales, Holnam would have less incentive to recycle and sell CKD. Perhaps more significantly, the demand for recycled CKD may be severely diminished if facilities that beneficially use CKD were to become subject to potential liability for handling CKD that becomes a listed hazardous waste.□□ □□ It should also be noted that, as is generally true throughout the cement industry, Holnam's dry process kilns generate far less CKD than its wet process kilns. See comments by Holnam plants and APCA.The trend toward modernization and the continual shift from wet process kilns to dry process kilns also creates a downward trend in CKD generation. Hazardous waste listing will not significantly affect this trend. The cost of permitting and constructing CKD landfills is not as significant a factor in cement economics as other manufacturing costs such as energy and labor. Therefore, in the absence of the Proposed CKD Rule, Holnam expects that current trends toward reduced CKD generation and increasing recycling and reuse of CKD will continue, whereas reuse and recycling will decline in response to the Proposed CKD Rule.
954	ckdp00060	§ 261.11(a)(3)(viii). The quantities of the waste generated at individual generation sites or on a regional or national basis.□□ □□ As stated above, the trend in CKD waste volumes has clearly been downward. This is due to substantial efforts by SLC and the cement industry to find ways to increase CKD recycling and sales for beneficial uses. SLC reiterates is concerns that listing CKD as hazardous waste will not encourage recycling and beneficial uses. On the contrary, because SLC (like most other cement companies) dispose of CKD on site, it does not have the same economic incentives as hazardous waste generators to reduce generation. Thus, if EPA crafts a rule that creates enforcement risks for recycling and sales, SLC has less incentive to recycle and sell CKD in certain circumstances. Perhaps more significantly, the demand for recycled CKD may be severely diminished if facilities that re-use CKD .may be subject to liability for handling a listed hazardous waste.□□ □ □ It should also be noted that SLC's dry process kilns dispose of far less CKD than its wet process kilns, as is generally true throughout the industry. See comment by APCA. The trend toward modernization and a shift to dry process kilns also creates a downward trend in CKD generation. Hazardous waste listing will not significantly affect this trend. The cost of permitting and constructing CKD landfills is not as significant a factor in cement economics as other manufacturing costs such as energy and labor. Therefore, in the absence of the Proposed CKD Rule, SLC expects that current trends toward reduced CKD generation and increased recycling and reuse of CKD will continue, whereas reuse and recycling will likely decline in response to the Proposed CKD Rule because of the economics to beneficial use will increase from a management stand point.
358	ckdp00021	The Agency has failed to demonstrate that all CKD that is not managed in full compliance with EPA's proposed management standards can be categorized as "listed" hazardous wastes. As the D.C. Circuit has recognized, before EPA can list a waste as hazardous, EPA must comply completely with its listing regulations at 40 CFR 4 26 1.11 (a)(3). Dithiocarbamate Task Force v. EPA, 98 F.2d 1394 (1996). EPA must carefully evaluate each of the eleven factors set forth at 40 C.F.R. 4 261.1 l(a)(3) in making the required determination that a waste "is capable of posing a substantial present or potential hazard to human health or the environment" when improperly managed. 40 C.F.R. 5 261.11 (a)(3). The record for this rulemaking as a whole demonstrates that EPA has failed to properly evaluate the factual record in the context of the above factors listed in 40 CFR 4 261.1 l(a)(3), and has improperly listed all CKD not managed in compliance with EPA's proposed CKD management standards as listed hazardous wastes. EPA's failure is particularly problematic in light of the fact that CKD is a Bevill waste, one of those wastes that Congress demanded that EPA not regulate under Subtitle C unless it went through the special regulatory approach mandated by Congress.
792	ckdp00053	The proposed management-based approach of the Proposed CKD Rule is not authorized under RCRA and is, therefore, contrary to law.

Comment Id	Document Number	Comment
807	ckdp00053	In its promulgation of the Munitions Rule, EPA relied only on the fact that "Section 3004(y) specifically requires EPA to identify when military munitions become hazardous waste for purposes of this Subtitle." 62 FR at 6632. Thus, EPA's analysis of its authority to list munitions as hazardous waste based on how the munitions are managed relied specifically on the explicit statutory authority derived from the legislative use of the word "when" in 42 USC § 6924(y). There is no similar provision in RCRA that applies to CKD.
808	ckdp00053	Unlike the statutory provisions for military munitions wastes, the statutory provisions discussing CKD regulation do not authorize EPA to choose when CKD is a hazardous waste. See, 42 USC § 6924(x); 42 USC § 6921(b)(3)(C). Instead, EPA is required to "either determine to promulgate regulations under this subchapter . . . or determine that such regulations are unwarranted," 42 USC § 6921(b)(3)(C), and "if. . . [CKD] is subject to regulation under this subchapter," EPA is authorized to develop standards for CKD. 42 USC § 6924(x). Nothing in RCRA authorizes EPA to list CKD based on the way in which it is managed. Thus, EPA is authorized to decide whether to list CKD as hazardous waste and, if CKD is listed, how it should be regulated. EPA does not have the authority to make distinctions between CKD that is managed one way or another when making the threshold determination of whether CKD is or is not a hazardous waste.
809	ckdp00053	Because EPA is not authorized to list wastes as hazardous waste for reasons other -than the intrinsic characteristics of those wastes, EPA lacks authority to list CKD as hazardous waste on the basis of how CKD is managed. Therefore, promulgation of a rule listing CKD as hazardous waste on the basis of how CKD is managed is "not in accordance with the law." 5 USC § 706(a)(2).
811	ckdp00053	Although EPA may look at both mitigating and exacerbating factors when making its listing determinations, the Proposed CKD Rule does not do so. Instead, the Proposed CKD Rule makes point by point assertions in support of the 1995 Regulatory Determination, in Table 1 of the proposal. Thus, EPA uses the eleven factors listed in § 261 .1l(a)(3) as a template for justifying the listing without discussing whether there are mitigating factors. EPA asserts that CKD "meets the criteria at § 261.11(a)(3)," and then lists the ways in which these criteria are satisfied. 64 FR at 45676. EPA summarizes its findings with respect to these criteria in Table 1 in the Proposed CKD Rule. Id. EPA's approach is not consistent with § 261.11(a)(3).
825	ckdp00053	H. Currently available data support a decision by EPA to reevaluate its decision to list CKD as hazardous waste.□□ □□ Holnam's contentions that there is minimal demonstrated health risk associated with CKD and minimal benefit of listing CKD, are supported by the progress of Holnam's efforts at its cement plants in recent years. As Holnam reported to EPA in 1998, Letter from Paul Yhouse, President of Holnam Inc. to Michael Shapiro, Acting Deputy Assistant Administrator, EPA (Nov. 20, 1998) and as discussed herein, improvements in Holnam's CKD management practices have reduced the environmental risks associated with more than one fourth of the CKD disposed of in the U.S. APCA's comments on the CKD Rule, incorporated by reference, make a similar demonstration of improvements across the entire cement industry.□□ □□ Holnam requests that EPA consider mitigating information in the docket materials, in current data supplied by Holnam and other cement companies, and in any subsequent investigation by EPA in the context of the eleven listing criteria provided by 40 C.F.R. 9 261.1 l(a)(3). CKD management has continued to improve since the Regulatory Determination and much more is known about the actual and potential environmental impacts of CKD than was known in 1995, Holnam requests that EPA conduct further analyses including further fact-finding before making a decision to list CKD as a hazardous waste under any circumstances. Holnam urges EPA to reconsider its decision to list, even conditionally, CKD as a hazardous waste in light of the discussions herein of the listing criteria.□□ □□ Holnam points to the mitigating factors under § 261.11(a)(3) discussed above as justification for withdrawing the proposal to list CKD. EPA need not find that all or even a preponderance of the mitigating factors militates against listing to conclude that CKD should not be listed. Instead, EPA has discretion to assign greater weight to a few or even any single listing factor than to other factors. As the U.S. Court of Appeals for the D.C. Circuit stated in 1994, "Neither RCRA nor EPA's regulations purports to assign any weight to the factors listed in subsection (a)(3). That being the case, the Administrator was free to emphasize or de-emphasize particular factors, constrained only by the requirements of reasoned agency decisionmaking." NRDC v. EPA, 25 F.3d 1063, 1071 (D.C. Cir. 1994).

Comment Id	Document Number	Comment
835	ckdp00053	Listing materials as hazardous waste requires formal rulemaking for each incidence of listing, 42 USC § 6921(b)(l). "[The Administrator shall promulgate regulations . . . listing particular hazardous wastes (within the meaning of section 6903(5) of this title)." Id. Promulgation of regulations requires all of the associated notice and comment associated with rulemaking. 5 USC § 553. Thus, for CKD to become listed as hazardous waste, even assuming that certain mismanagement practices could lawfully be used as a basis for listing CKD as hazardous waste; nothing in RCRA authorizes EPA to list CKD under specific mismanagement scenarios without rulemaking for each scenario. Thus, RCRA does not authorize EPA to either decide to list CKD as hazardous waste on a case-by-case basis or to promulgate regulations causing CKD to become listed under certain circumstances without evaluating each decision to list CKD on its own merits and formally promulgating rules "listing particular hazardous wastes." 42 U.S.C. § 6921(b)(1).□□ □□ Certain mismanagement scenarios that may cause CKD to become listed hazardous waste are not explained at all by EPA. For example, EPA does not show that the following types of failure to manage CKD in accordance with the Part 259 standards meet the criteria of § 261.11 for listing CKD as hazardous waste: □□ □□ 1. Failure to comply with groundwater monitoring requirements constitutes violation of the management standards sufficient to cause the exclusion under 40 CFR § 26 1.4 to be lost under proposed § 261.4(b)(8)(ii)(A)(5), resulting in the affected CKD becoming a listed hazardous waste. 64 FR at 45696. EPA does not show that the risks of failing to monitor in accordance with the proposed rules justify listing CKD as a hazardous waste;□□ □□ 2. EPA does not show that the risks of failing to comply with the time frames for corrective action (proposed § 261.4(b)(8)(ii)(A)(5)) justify listing CKD as a hazardous waste;□□ □□ 3. EPA has not explained why CKD that was once mismanaged in some way should continue to be regulated as listed hazardous waste after a violation of the management standards has been remediated. Once the violation has been remediated, such CKD is no different than other CKD that is excluded from listing. The process for petitioning EPA to remove the hazardous designation for specific CKD waste would be a lengthy and cumbersome process, not appropriate for an automatic listing process. 64 FR 45696, (proposed § 266.121. RCRA provides delisting procedures that preclude EPA from making rapid decisions to remove hazardous waste listing. 42 USC § 6921(f);□□ □□ 4. EPA does not explain why the statutory delisting process is not applicable to this situation or why listed hazardous waste CKD should not require delisting pursuant to 42 USC § 6921(f). Just as each instance of listing CKD as a hazardous waste as a result of a specific violation of a management standard should be subject to rulemaking requirements, delisting of CKD in response to corrective actions requires separate rulemaking actions. 42 USC § 6921(f). Thus, EPA's proposed delisting procedure is not authorized under RCRA; □□ □□ 5. EPA does not explain why the risks of repeated violations of various requirements with respect to discrete quantities of CKD, proposed § 261.4(b)(8)(ii)(A)(7), justifies listing the specific quantity of CKD as hazardous waste;□□ □□ 6. The type of repeated violations that could cause CKD to lose its hazardous waste listing exclusion does not exclude failure to comply with recordkeeping or reporting requirements of proposed Part 259. EPA does not offer any justification for listing CKD under these situations; □□ □□ 7. A facility could occasionally violate air quality rules pursuant to a SIP under the Clean Air Act, proposed § 259.22. EPA does not explain how violations of SIP requirements relating to fugitive dust, for example, justify listing CKD as a hazardous waste. EPA has not explained why a violation of a fugitive dust standard justifies listing the remaining CKD even after the fugitive dust problem has been remedied to the satisfaction of state air quality rules under a SIP.□□ □□ [New paragraph] Thus, the proposed CKD Rule makes broad conclusions as to the potential harms of mismanaging CKD without justifying the need to list CKD managed in violation of these specific requirements. The criteria for determining whether CKD would be hazardous waste under the Proposed CKD Rule are extremely vague, and appear to create unnecessary risks of enforcement for incidents that do not justify hazardous waste listing. This approach is completely unworkable, overly complicated, and impossible to implement and enforce consistently. Consequently, Holnam considers this approach to listing to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 USC § 706(a)(2); 42 USC § 6976(a).

Comment Id	Document Number	Comment
973	ckdp00060	SLC is opposed to any regulatory approach that would list CKD as a hazardous waste under any circumstances. SLC believes that listing CKD as a hazardous waste based upon specific management practices is not authorized under 42U.S.C. § 6921(b). Hazardous waste is defined in 42 U.S.C. § 6903(5) based on its "quantity, concentration, or physical, chemical, or infectious characteristics." This definition does not mean that a hazardous waste may be defined based on the way in which it is managed. As discussed above, 42 U.S.C. § 6924 does not carve out an exception to this definition for CKD, as it does for munitions. 42 U.S.C. § 6924(y).
1000	ckdp00060	Other regulatory programs are adequate to regulate CKD management. SLC opposes any regulatory alternative that would list CKD as hazardous waste under any circumstance. EPA has not shown that listing CKD as hazardous waste is warran ted based on evidence that there are demonstrated health risks that cannot be regulated by other federal and state programs. Thus, EPA should take only those actions necessary to ensure that CKD is managed properly.
842	ckdp00053	3. EPA does not significantly distinguish new and existing CKD landfills. EPA distinguishes, in the preamble to the CKD Rule, regulation of horizontal expansions (i.e., "new" CKD landfills) and vertical expansions ("existing" CKD landfills). 64 FR at 45679, (definitions proposed to be codified at 40 CFR § 259.2). EPA does not make this distinction in the proposed Part 259 standards. For example, the preamble states that "no new CKD landfill units may be sited within 60 meters of a fault." 64 FR 45646 (emphasis added). However, the proposed § 259.13(a) states "CKD shall not be managed in a CKDLF within 200 feet of a fault." 64 FR at 45680. This disagreement between the preamble and the rule language is repeated in numerous sections. Consequently, the Proposed CKD Rule is ambiguous as to the applicability of these sections to new or existing landfill units.
846	ckdp00053	8. § 261.11(a)(3)(xi). Such other factors as may be appropriate.□□ □□ The Proposed CKD Rule would create uncertainty as to the regulatory status of CKD destined for sale. See discussion below. EPA should consider the chilling effect on beneficial uses or recycling should would result from promulgation of the Proposed CKD Rule. See discussion□□ below. Both of these factors, should be considered by EPA as "other factors as may be appropriate," § 261.11(a)(3)(xi), and as such, should be considered mitigating factors. See discussion below.
851	ckdp00054	As noted in Table 2 [see Table 2 at end of original comment] the volume of beneficially reused CKD has substantially increased recently. The demand for CKD in reclamation projects is increasing, as documented by the MDEQ (see letter in Appenidx B). Potentially characterizing CKD as a hazardous waste would be detrimental to this trend, simply because of the fear of incurring additional liability, regardless of whether the liability exists. Thus the effect of a potential listing is contrary to the EPA's stated policy of reuse and recycling.□□ □□ (Appendix B to comment package) is a ltr from Montana DEQ, dated Jan 20, 2000. The letter encourages the use of all forms of kiln dust on mine reclamation projects of metal mines in Montana in both active mines as well as abandoned mines. The letter indicates that the recycling of one mine waste to clean up another makes good economic and environmental sense. Cement kiln dust has been subject to more scrutiny because of the added metals in the cement manufacturing process. Recent testing by Montana State University has proven that the CKD at Holnam, Trident, meets all the EPA standards in the TCLP test.
856	ckdp00054	Any benefit to health and the environment associated with listing mismanaged CKD as a hazardous waste is negligible compared with the regulatory burden on the cement industry. □□ □□ Listing of CKD as a hazardous waste will discourage its recycling and beneficial reuse, particularly with off-site vendors who may not want to incur the risk of handling a hazardous waste.
875	ckdp00055	Any benefit to health and the environment associated with listing mismanaged CKD as a hazardous waste is negligible compared with the regulatory burden on the cement industry. Listing of CKD as a hazardous waste will discourage its recycling and beneficial reuse, particularly with off-site vendors who may not want to incur the risk of handling a hazardous waste.

Comment Id	Document Number	Comment
876	ckdp00055	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.
889	ckdp00056	Impacts on Beneficial Reuse of CKD□□ □□ In the past three years the Artesia Plant has been able to market an average of 23,591 tons per year or approximately 38% of the CKD produced at our facility. The proposed rule will have serious negative impacts on our recycling and beneficial reuse efforts. The fact is that the stigma and liability associated with a potential hazardous waste listing would ultimately kill any marketing efforts that have been implemented and drive the quantities of CKD landfilled drastically upward! EPA should consider the ramifications for recycling and beneficial use that would result from listing CKD as a hazardous waste as proposed. EPA does not clearly explain when CKD becomes a hazardous waste and when there is doubt, people will not take the risk.
891	ckdp00056	Any benefit to health and the environment associated with listing mismanaged CKD as a hazardous waste is negligible compared with the regulatory burden on the cement industry. Listing of CKD as a hazardous waste will discourage its recycling and beneficial reuse, particularly with off-site vendors who may not want to incur the risk of handling a hazardous waste.
892	ckdp00056	Additional federal regulation (and listing) of CID is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP), developing state regulations (including Mississippi), and CERCLA and other analogous state programs.
903	ckdp00057	The volume of beneficially reused CKD has substantially increased recently. The demand for CKD in reclamation projects is increasing. Potentially characterizing CKD as a hazardous waste would be detrimental to this trend, simply because of the fear of incurring additional liability, regardless of whether the liability exists. [New paragraph] Thus the effect of a potential listing is contrary to the EPA's stated policy of reuse and recycling.
906	ckdp00057	Any benefit to health and the environment associated with listing mismanaged CKD as a hazardous waste is negligible compared with the regulatory burden on the cement industry. Listing of CKD as a hazardous waste will discourage its recycling and beneficial reuse, particularly with off-site vendors who may not want to incur the risk of handling a hazardous waste.
907	ckdp00057	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.
923	ckdp00058	4. Impacts on Beneficial Reuse of CKD□□ □□ The Holnam-Dundee plant believes that the proposed “management-based” listing of CKD as a hazardous waste will be detrimental to our efforts to beneficially reuse CKD. Efforts to identify markets for off-site uses of CKD have increased in the last two years, because of the termination of the CKD leach plant has limited the CKD recycling capabilities. Table 2 presents the results of those efforts. Off-site beneficial reuse has more than doubled over the past two years, and the trend is anticipated to continue. However, vendors will be hesitant to accept CKD due to the stigma attached to the potential for CKD to be listed. Thus the effect of a potential listing is contrary to the EPA’s stated policy of reuse and recycling.
927	ckdp00058	Any benefit to health and the environment associated with listing mismanaged CKD as a hazardous waste is negligible compared with the regulatory burden on the cement industry. Listing of CKD as a hazardous waste will discourage its recycling and beneficial reuse, particularly with off-site vendors who may not want to incur the risk of handling a hazardous waste.

Comment Id	Document Number	Comment
928	ckdp00058	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.
948	ckdp00060	By establishing firm and regulated standards on CKD and focusing on emission reduction rather than environmental improvement quality, certain opportunities to improve CKD management such as new beneficial use will no longer be available by losing some flexibility and also the hazardous waste stigma creating a chilling effect on CKD usage.
956	ckdp00060	G. Currently available data support a decision by EPA to reevaluate its decision to list CKD as hazardous waste and militate toward reevaluation of the EPA's Regulatory Determination that CKD should be regulated under Subtitle C of RCRA.□□ □□ SLC's contentions that there is minimal demonstrated health risk associated with CKD and minimal benefit of listing CKD are supported by the progress of SLC's efforts at its cement plants in recent years. APCA's comments on the CKD Rule, incorporated by reference, make a similar demonstration of improvements across the entire cement industry.□□ □□ SLC requests that EPA consider mitigating information in the docket materials, in current data, and in any subsequent investigation by EPA in the context of the eleven listing criteria provided by 40 C.F.R. § 261.11(a)(3). Further, because, as discussed below, CKD management has continued to improve since the Regulatory Determination and much more is known about the actual and potential environmental impacts of CKD than was known in 1995, SLC requests that EPA conduct further analyses including further fact-finding before making a decision to list CKD as a hazardous waste under any circumstances. SLC urges EPA to reconsider its decision to list, even conditionally, CKD as a hazardous waste in light of the discussions herein of the listing criteria.□□ □□ SLC points to the mitigating factors under § 261.11(a)(3) discussed above as justification for withdrawing the proposal to list CKD. EPA need not find that all or even a preponderance of the mitigating factors militates against listing to conclude that CKD should not be listed. Instead, EPA is free to accord greater weight to a few or even any single listing factor than to other factors. As the U.S. Court of Appeals for the D.C.□□ Circuit stated in 1994, "Neither RCRA nor EPA's regulations purports to assign any weight to the factors listed in subsection (a)(3). That being the case, the Administrator was free to emphasize or de-emphasize particular factors, constrained only by the requirements of reasoned agency decision making." NRDC v. EPA, 25 F.3d 1063, 1071 (D.C. Cir. 1994).
996	ckdp00060	§ 261.11(a)(3)(xi). Such otherfactors as may be appropriate.□□ SLC reiterates that the chilling effect on beneficial uses or recycling should be considered among "other factors as may be appropriate" and, as such, is considered a mitigating factor under Hazardous Waste Treatment Council v. U.S.E.P.A., 861 F.2d 270□□ (D.C. Cir. 1988).

Comment Id	Document Number	Comment
998	ckdp00060	F. Listing CKD as a hazardous waste will have a chilling effect on recycling and beneficial uses of CKD.□□ □□ The proposed rule will discourage recycling and beneficial use of CKD. EPA's proposal states: "Most current off-site uses, such as for waste stabilization or land application as fill material, are either currently regulated (under RCRA for hazardous waste stabilization, or under the Clean Water Act in the case of municipal sewage sludge) or appear to present low risk due to low exposure potential. As explained in the Regulatory Determination, in light of the low exposure potential, EPA believes that these uses constitute environmentally sound recycling and beneficial use. Therefore, the Agency is not proposing management standards for these beneficial uses of CKD or to list as a hazardous waste CKD used for such practices. We are proposing that beneficially used CKD is non-hazardous waste." 64 Fed. Reg. at 45639.□□ □□ Despite EPA's words of encouragement for many beneficial uses, the proposed rule listing CKD as hazardous waste under certain circumstances creates substantial risks to beneficial users that CKD that they use beneficially automatically became a listed hazardous waste before these users ever receive the product. The preamble to the Proposed CKD Rule states:□□ □□ "Under the proposed approach, CKD would only become hazardous waste subject to RCRA Subtitle C regulation when persons managing the waste commit egregiotls or repeated violations, such as failing to install controls designed to meet the performance standards, or failing to manage CKD in units that conform to specific default technology-based standards." 64 Fed. Reg. at 45642 (emphasis added).□□ □□ The Proposed CKD Rule creates a class of "egregious" violations that would automatically apply to certain CKD, even if it were destined for sale. For example, the proposed revision to 40 C.F.R. § 261.4(b)(B) p rovides that the exclusion to hazardous waste listing applies as long as CKD is properly managed. Under the Proposed CKD Rule, CKD becomes listed whenever it has been managed in ways that fail to comply with the requirements listed in 40 C.F.R. § 261.4(b)(B)(ii)(A)(I). This automatic listing explicitly includes CKD destined for sale. Among the automatic triggers for hazardous waste listing is a violation of "the containment standards, as specified under § 259.20, for CKD destined for sale or beneficial use." 64 Fed. Reg. at 45696 (proposed rule to be codified at 40 C.F.R. § 261.4(b)(B)(ii)(A)(2)).□□ □□ Thus, CKD in a container, destined for sale or recycling may automatically become a hazardous waste while in temporary storage upon violation of the standards that apply to temporary storage. SLC considers it feasible for such CKD to become listed as hazardous waste due to failure of tanks or silos or their associated air pollution control devices to adequately "prevent wind dispersal of dusts" or "prevent water from reaching the stored CKD. " 64 Fed. Reg. at 45682 proposed rule to be codified at 40 C.F.R. § 259.20(a)). A cement facility would then face several risks:□□ 1. Listed hazardous waste CKD could be inadvertently shipped off-site without compliance with the generator standards provided in 40 C.F.R. Part 262 (generator standards).□□ 2 . Listed hazardous waste CKD could be inadvertently delivered to customers, who might then be in violation of 40 C.F.R. Parts 263 (transporter standards), 264 (treatment, storage, and disposal standards) and 268 (land disposal restrictions) and subject to facility-wide corrective action requirements. 40 C.F.R. § 264.90.□□ 3. Listed hazardous waste could be inadvertently recycled to cement kilns, subjecting those kilns to 40 C.F.R. Parts 266 (hazardous waste burner standards), 265 (interim status standards), facility-wide corrective action requirements, and 40 C.F.R. Part 63 Subpart EEE (National Emission Standard for Hazardous Air Pollutant, hazardous waste combustors). SLC notes that 40 C.F.R. § 62.1201 defines hazardous waste combustor as "a hazardous waste burning cement kiln." The same section defines hazardous waste burning cement kiln as "a rotary□□ kiln . . . that produce[s] clinker . . . and burns hazardous waste at any time." Thus, any cement kiln that recycles CKD that has been determined to be a hazardous waste may be subject to this NESHAP. This consequence is not appropriate, and will be a disincentive to recycle CKD.□□ □□ Similarly, generators, beneficial users, and cement kilns may inadvertently use CKD reclaimed from land disposal units that have violated applicable provisions of proposed Part 259. For example, SLC's Hagerstown plant frequently reclaims CKD from its CKD storage units for sale. SLC would be likely to discontinue such sales rather than risk automatically triggering CKD listing for the entire units and also from an economics stand point. (Under the CKD Rule, a violation of the SIP may constitute a failure to comply with proposed 5 259.22, which would trigger hazardous waste listing of the affected CKD pursuant to proposed § 261.4(b)(8)(ii)(A)(2). 64 Fed. Reg. at 45696.) □□ □□ EPA may properly consider the chilling effect of the Proposed CKD Rule on beneficial uses among the mitigating factors listed in § 261.11(a)(3). Although § 261.11(a)(3) does not include the "stigma" associated with sales as a basis for deciding whether to list a waste, EPA can still consider the effect of listing on recycling as one of the eleven mitigating factors. See Hazardous Waste Treatment Council v. EPA, 861 F.2d 270 (D.C.

Comment Id	Document Number	Comment
		Cir.1988) (EPA could not consider the "stigma" associated with hazardous waste listing of used oil, which would discourage recycling, in deciding not to list used oil as a hazardous waste). The potential chilling effect on recycling (and consequent increase in disposal) is a factor, however, that should be weighed heavily within the context of "such other factors as may be appropriate." 40 C.F.R. § 261.11(a)(3)(xi).□□ □□ EPA should consider the ramifications for recycling and beneficial use that would result from listing CKD as a hazardous waste as proposed. This position is going against sustainable development principle where EPA should clearly encourage recycling and reuse by removing any burden if the activity is environmentally sound. SLC believe that the beneficial use activities are well protective of the environment. That is why SLC having is internal set of rule to manage CKD as agricultural liming agent. On another hand, if this concept of regulating CKD because of the volume and its low risk impact, thus EPA should include all hazardous material in day to day life such as asphalt, paint,□□ gasoline, stove ash that exhibit the hazardous characteristic, the high volume and also the low risk criteria.
83	ckdp00015	On page 45677 of the proposed rule, EPA includes an appendix discussing reportable quantities (RQ's) for CKD and how they will be regulated in the new regulation. The approach used by EPA in establishing RQ's presents a number of obstacles to facilities managing CKD as well as to beneficial use of the material. First, this exempt waste would not be considered a CERCLA hazardous substance under the proposed rule (i.e., CKD that is managed according to the proposed §259 requirements). As the basis for RQ's is explained in this appendix, it is very confusing what reporting requirements would apply if EPA or another delegated regulatory authority determines that CKD has been mismanaged. Also, it is confusing when this determination would apply and if the mismanaged waste would remain a CERCLA substance if reinstated as an exempt waste. Could companies then retract notifications made under CERCLA as if they never existed? EPA should clarify the requirements for CERCLA RQ reporting of CKD releases to specifically address the contingencies of when it becomes considered hazardous and when it is subsequently reinstated as exempt.
44	ckdp00013	-There was discussion of what constitutes an "egregious violation" that would kick-in the Subtitle C requirements. It was pointed out that examples of such violations are noted in the preamble. There was a suggestion that, to track with the preamble, the actual rule language might also be revised to include illustrations of egregious violations. - A question was raised with regard to the effective date for when "existing piles" must meet the rule's design requirements. It was noted that the proposal could be read as requiring that existing piles comply with the design requirements within 90 days, though the rule provides 2 years for ground water monitoring to be put into place. EPA clarified that existing facilities are those in existence prior to the proposal date, and that the proposal only requires liners to be installed at the footprint after the effective date of the rule.□ The applicability of the design requirements at an existing facility that is permitted/licensed by a State was brought up during this discussion. EPA responded that they had focused on the footprint of an existing facility, and had not considered whether the facility was permitted. EPA went on to note that nothing in the rule is intended to supersede existing agreements. The proposal establishes the Part 259 management standards, but the effective dates of those standards aren't activated until the State adopts the rule.□ -With regard to enforceability, a clarifying question was asked about what happens when CKD loses its exclusion and is considered a hazardous waste. EPA responded that the facility becomes subject to Subtitle C, adding that they do not envision that a facility would jump back and forth into Subtitle C quickly and easily, since they envision a quite a high hurdle into Subtitle C.□ - When asked about a public participation component, EPA clarified that they assumed public participation to be an element of Subtitle D program procedures, e.g., permitting.□□ □□ - It was recommended that EPA include more cross-references within the rule to provide a better understanding of how implementation would play out, e.g., include a cross-reference between Part 261.4 and Part 266.

Comment Id	Document Number	Comment
100	ckdp00015	The existence of adequate programs addressing CKD management. Some states either have existing rules specifically addressing CKD management, or programs in place that cover CKD in their requirements. These states have already invested resources in regulating CKD and should not be penalized for this effort, as would be the case with promulgation of federal regulations. The state regulation approaches outlined by EPA in the preamble would allow states which have already taken steps or developed programs of their own to use them, and build on them if necessary, to provide adequate and protective management of CKD. In addition, other states may not have programs in place which manage CKD directly, but have the regulatory framework in place that already ensures protective management of CKD. To illustrate the adequacy of programs that are in place which address the management of CKD, APCA conducted a survey to assess CKD generation, recycling and disposal practices across the United States for 1998. As discussed above, 22 cement plants in the U.S. accounted for 78% of the total volume of CKD disposed in landfills for 1998. APCA's survey further indicates that 18 of these plants have or expect to have a permit or other state regulation that addresses CKD management requirements. Further, the following facts were also determined from the survey:□□ - 1 of the facilities now recycles most of their CKD, another plans to reduce CKD waste by 50 % , and a third is further increasing its recycling.□□ - 16 of the remaining 21 (76%) sprayed, or slurried their CKD.□□ - 16/21 (76%) currently or will soon pug, pelletize, or slurry their CKD.□□ - 14/21 (67%) compact or slurry CKD.□□ - 13/21 (62%) have or plan groundwater monitoring.
653	ckdp00040	Holnam, Ada's disposal process is described in the permit application, Attachment 2. The site is located in a limestone formation that is not Karst. Fugitive dust emissions from CKD are actually less than those generated by agricultural activities or traffic upon unpaved roads in the area. Since implementation of current management practices in 1991, fugitive dust has not been an issue for Holnam, Ada, the plant has not had a notice of violation, a demonstrated exceedance, or a complaint from residents or employees regarding fugitive dust. Management practices designed to prevent fugitive dust are outlined in detail in the permit and the text of the permit application, both in Attachment 2. In addition, Attachment 3 provides Ada's Nonhazardous Industrial Landfill Permit from May 1999. The most recent ground water report is provided in Attachment 5, demonstrating no impact to the ground water (Third Quarter 1999, Ground water and Surface Water Monitoring Report, Webster Site, RSA).
667	ckdp00042	Ash Grove offers the following information derived from its successful experience with a slurried-CKD monofill at its plant in Chanute, Kansas. This monofill was designed to meet all of the criteria contained in the CKD management practices proposed by APCA in November 1993 and was fully permitted by the Kansas Department of Health and Environment in 1998. Features of the landfill include placement of CKD below grade in a depleted quarry for aesthetics but above the natural water table for environmental protection; avoidance of floodplains, wetlands, fault areas, seismic impact zones, karst terrain and unstable areas; wet placement of CKD for fugitive dust control and reduced CKD permeability; a synthetic liner; storm water runon diversion; leachate and storm water runoff collection and recycling to the CKD slurry; and groundwater monitoring. Ash Grove has demonstrated that an environmentally-secure, slurried-CKD landfill can be designed, constructed and operated in conformance with the proposed performance standards. There should be no blanket prohibition of slurried CKD landfills in the final regulation.□□□ □□□ [Note to EPA from SAIC - Where is there a "blanket prohibition" on slurried CKD landfills?]
791	ckdp00053	This comment document incorporates by reference comment documents submitted by Holnam's cement manufacturing facilities. Because each facility would be affected differently by the Proposed CKD Rule, each facility is commenting with site-specific information. To the extent that comments provided to EPA by the American Portland Cement Alliance ("APCA") and the Cement Kiln Recycling Coalition (CKRC) do not conflict with Holnam's comments, Holnam incorporates those comments by reference. [from second paragraph of cover letter]
1	ckdp00007	It is hereby requested that the deadline for comments on the proposed CKD management rule be extended for ninety days to February 18, 2000.
2	ckdp00008	Holnam's Devil's Slide plant therefore, requests that the Agency extend the comment period by a period of 90 days beyond the current deadline of November 18,1999 to February 18, 2000.

Comment Id	Document Number	Comment
1500	ckdpL0002	Comment: The term "generate," as used in the cement industry, refers to CKD removed from the system. In many cases, no CKD is removed from the system. (CKRC 717) Response: EPA realizes that its nomenclature may not be consistent with that used in the cement industry but the Agency has defined its terminology in the RTC. APCA Response: Use of inconsistent nomenclature causes significant confusion among reviewers of technical reports, particularly when these terms are inconsistent with standard industry practice. To facilitate mutual understanding, APCA would be pleased to work with EPA to develop a consistent list of terms.
170	ckdp00016	(Pg 45682, col 3, para (e), last line) Line should be changed to read: "(a), (b), (c) and (d) of this section." since paragraph (e) does not contain any recordkeeping or notification requirements.
194	ckdp00016	(Sec. 259.40(c)(2); Pg 45683, col 3) Recommend that the sentence be changed to read: "new CKDLF units must be in compliance.…." Including "expansions of existing CKDLF units" in this is not necessary because expansions of existing CKDLF units is included in the definition of new units.
202	ckdp00016	(Pg 45683, col 1, para (c)(1)) The reference to paragraph (d) should be changed to paragraph (f), which is the paragraph that relates to the relevant point of compliance.
203	ckdp00016	(Sec. 259.23; Pg 45682, col 2, para (a)(9)) Recommend that the phrase "of this part G" be deleted. The part should be 259, but it is not necessary to reference the part since it is not done with regard to Subparts B and E in the preceding subparagraphs (3) and (5), respectively.
754	ckdp00048	Sec. 259.23. On Pg 45682, col 2, para (a)(9), TNRCC recommends that, in the last line, "of this part G" be deleted. The part should be 259, but it is not necessary to reference the part since it is not done with regard to Subparts B and E in the preceding subparagraphs (3) and (5), respectively.
757	ckdp00048	Sec. 259.23. TNRCC recommends that in paragraph (e), in the last line, reference to paragraph (e) be deleted and the line be changed to : (a). (b). (c) and (d) of this section. since (e) does not contain any recordkeeping or notification requirements.
785	ckdp00048	Sec. 259.30 On Pg 45683, col 1, TNRCC recommends that in paragraph (c)(1) the reference to paragraph (d) be changed to paragraph (f) which is the paragraph that relates to the relevant point of compliance.
43	ckdp00013	Minutes of ASTSWMO Cement Kiln Dust Work Group Meeting with EPA, September 9, 1999, Washington, D.C.
366	ckdp00023	These comments are submitted in addition to comments written by Holnam's corporate office, which address the entire proposed rule in-depth. Holnam's corporate comments are herein incorporated by reference.
387	ckdp00024	We incorporate by reference all the Coalition's previous submittals to OSW, particularly including along with all attachments its: [Initial] Report on Cement Kiln Dust from Kilns That Do Not Burn Hazardous Waste (Oct. 1996); Supplemental Report On New Information Justifying State (Rather Than Federal) Regulation of non-burner CKD (April, 1997); comments on OSW's April "Trial Balloon" and Related Issues (July 15, 1997); CKD SBREFA Response (Sept. 15, 1997); letter to Frank Smith (OSW) addressing "Data and Related Issues supporting a 'two-dust' approach to CKD management" (Dec. 12, 1997), plus related correspondence from Coalition consultant PSM inter alia dated Sept. 16 and Dec. 19, 1997; and a file memo, "Draft Proposed CISD Rule---Roadmap" (Nov. 4, 1998, version 5A), containing detailed analyses of issues in the previous draft proposal, and distributed in substantially identical form to OSW senior managers at a meeting Dec. 20, 1998. The latter apparently is not in the Docket, but is Attachment A to these comments.

Comment Id	Document Number	Comment
388	ckdp00024	We also incorporate by reference parallel comments (dated July 10, 1998) for a related Coalition on the Agency's proposed Portland Cement MACT Rule, as they relate to cement industry SBREFA issues. Attachment B.
398	ckdp00025	These comments are submitted in addition to comments written by Holnam's corporate office, which address the entire proposed rule in-depth. Holnam's corporate comments are herein incorporated by reference.
425	ckdp00025	Holnam's Plant Clarksville is a leader in resource conservation, and as such, recovers as much CKD as possible by maximizing insufflation back into the kiln. CKD is, after all, partially calcined raw material, and a portion that is collected is never intended to be wasted, but remains in the kiln process via an insufflation system where it is converted to our finished product along with the other calcined materials.
426	ckdp00025	Holnam has been landfilling CKD into the present quarry site since 1985. This CKD is temporarily stored in a waste dust silo near the precipitators, and then pneumatically transferred to another temporary storage silo out in the quarry. The CKD is then conditioned in a pug mill, where it is mixed with water, and then transferred by conveyor belts out to the waste dust disposal pile. An end-loader transfers the CKD from the temporary pile at the end of the conveyor to the active sloped face of the horizontally expanding storage pile. Fugitive emissions from the active face are controlled by water spray as needed, using a high volume irrigation system.
427	ckdp00025	Global economy drives fierce competition, and the technological refinements and responsible environmental philosophy of the cement manufacturing industry have continued to focus on conservation of energy and natural resources. One resulting effect has been a reduction in rate of CKD generated. As expected by industry trends, the rate of CKD landfilled at Clarksville has been steadily decreasing over the past five years, as shown in Table 2.
428	ckdp00026	Cement Kiln Recycling Coalition (CKRC) is a Washington, D.C.-based trade association representing cement companies engaged in the use of materials burned for energy recovery, as well as companies involved in the collection, processing, management, and marketing of such fuels for use in cement kilns. CKRC accordingly has a vital interest in the outcome of the proposed CKD rule. For the most part, EPA's proposed rule would affect cement kilns that do not burn hazardous waste in precisely the same manner as it would affect cement kilns that burn hazardous waste. For this reason, APCA, has taken the lead in preparing and submitting comments on behalf of the entire cement industry. CKRC will rely primarily on the comments submitted by APCA to represent CKRC's views on the proposal, and CKRC hereby incorporates APCA's comments by reference.
456	ckdp00028	These comments are submitted in addition to comments written by Holnam's corporate office, which address the entire proposed rule in-depth. Holnam's corporate comments are herein incorporated by reference.

Comment Id	Document Number	Comment
471	ckdp00028	Summary of Holnam - Holly Hill Plant Current CKD Management Activities:□□ □□ CKD is presently disposed of on-site. The disposal site, which covem approximately 70 acres, has been in operation since 1966. CKD was initially disposed of in the quarry, but the elevation of the pile is now above original grade. Since the proposed management standards were published, CKD has been placed on top of older CKD above the elevation of the quarry wail.□□ □□ CKD that is wasted from the process and hauled to the landfill is moisture-conditioned to 15% moisture prior to loading into trucks. Haul roads are watered regularly to minimize fugitive dust. CKD is dumped at the working face in the landfill and graded to drain using a bulldozer. Considerable compaction is accomplished while grading the material, but there is no standard operating procedure for placing the CKD in thin lifts and compacting to a target density.□□ □□ CKD disposal rates have declined drastically since 1995. This trend was due largely to increased kiln stability and better process control measures. Approximately 65,013 tons of CKD were disposed of in the landfill in 1999, which is a reduction of approximately 80%.□□ □□ The Holly Hill Plant works with an individual broker to sell CKD for off-site beneficial use. While Holly Hill is committed to reducing CKD disposal rates through beneficial reuse, the quantity shipped off-site is due largely to the broker's success in marketing this material. Holly Hill is intentionally not proposing CKD for agricultural purposes.
472	ckdp00028	Summary of Holnam - Holly Hill Plant Future CKD Management Activities:□□ □□ The current CKD disposal site will be closed in 2002 or 2003 (within the timeframe allowed under the proposed management standards). The CKD spoils area has been designated as a solid waste management unit (SWMU) under the plant RCRA Part B permit. Although a closure plan has been submitted to the South Carolina Department of Health and Environmental Control (DHEC) as part of the mining permit, the final closure plan will be approved as a RCRA Corrective Measure. The final stage of the RCRA Facility investigation (RFI) is being completed this spring, and it is hoped that DHEC will agree to a final closure approach during 2060.□□ □□ The hydrogeologic investigation for a proposed new landfill site has been completed and will be submitted to DHEC during the second quarter of 2000. The Holly Hill plant has been pursuing the new permit under existing DHEC industrial solid waste regulations, using the proposed federal CKD management standards as guidance for issues specific to CKD disposal sites. For example, more work was performed that would have been necessary to demonstrate that the site is not underlain by karst terrain. Although DHEC has not decided how it would implement the proposed CKD management standards, Hoinam is confident that it can permit a new disposal site that meets the proposed standard under existing state regulations.□□ □□ The new landfill will include a composite (clay and geosynthetic membrane) liner, leachate collection system designed to maintain less than one foot of head on the liner, and groundwater monitoring system. Leachate collected from the landfill may be returned to the plant for reuse (possibly in the CKD conditioning system).□□ □□ The Holly Hill Plant intends to permit a disposal site with a 70-year life, to ensure disposal capacity for the 70 years of limestone reserves currently controlled by Holnam.
474	ckdp00028	Holnam is commited to protecting groundwater resources on its properties. With regard to CKD disposal, this will entail construction of a new landfill that includes a composite liner and leachate collection system.
488	ckdp00029	With the passage of the 1993 rules to Part 115, all waste piles including CKD, that were not in compliance with the rules were required to close, and all wastes were directed for disposal to a properly licensed and constructed landfill.
576	ckdp00035	These comments are submitted in addition to comments written by Holnam's corporate office, which address the entire proposed rule in-depth. Holnam's corporate comments are herein incorporated by reference.

Comment Id	Document Number	Comment
584	ckdp00036	These comments are submitted in addition to comments written by Holnam's corporate office, which address the entire proposed rule in-depth. Holnam's corporate comments are herein incorporated by reference.
593	ckdp00036	The Mason City plant has modified its raw feed mix so that we now can recycle 100% of our CKD back into the kiln. The plant maintains two inactive CKD landfill sites that are capped and monitored for ground-water quality.
594	ckdp00037	These comments are submitted in addition to comments written by Holnam's corporate office, which address the entire proposed rule in-depth. Holnam's corporate comments are herein incorporated by reference.
605	ckdp00038	Lone Star is a member of the (American Portland Cement Alliance) APCA and fully supports the comments submitted by the APCA on behalf of the cement industry. APCA's comments are included in Lone Star's comments by reference.
637	ckdp00040	These comments are submitted in addition to comments written by Holnam's corporate office, which address the entire proposed rule in-depth. Holnam's corporate comments are herein incorporated by reference.
657	ckdp00040	Holnam's cement plant in Ada has one of the largest CKD landfills in the country. The landfill has operated since approximately 1958, and its footprint is approximately 121 acres within a former limestone quarry. A Nonhazardous Industrial Solid Waste Landfill Permit (Permit Number - 3562007) from the Solid Waste Division of ODEQ was issued in May 1999 for the life of the facility, which is estimated at 45 years. In the next few years, Holnam will be performing additional maintenance work on the cover, including filling in low are-as to promote positive drainage, and gradually covering the CKD.□□ □□ Current CKD management practice at the facility utilizes a paddle mixer to combine water with the CKD after it is collected from the electrostatic precipitator. The wet mixture is loaded into covered trucks and hauled to the landfill via paved public roads. The trucks spread the moistened CKD at the site. If necessary, the wet CKD is spread again with a road grader. Then, only if necessary, the spread CKD is sprayed with additional water. Compaction of the wet CKD after placement is not necessary since the CKD hardens and "sets up" after application to the landfill.
661	ckdp00042	Ash Grove is a member of the American Portland Cement Alliance (APCA) and the Cement Kiln Recycling Coalition (CKRC). Each of these organizations will submit extensive comments on the proposed regulation. Ash Grove has participated in the preparation of these comments and incorporates herein the comments of the APCA and the CKRC.
686	ckdp00044	Capitol Cement Corporation (CCC) is a US owned and operated cement company and is a small business according to the guidelines of the Small Business Administration CCC does not burn any hazardous waste as a fuel. CCC is a member of and has worked with the Non Hazwaste Burner CKD Coalition (NHBCC). The NHBCC will submit comments separately and we agree with and incorporate those comments by reference.
847	ckdp00054	The enclosed comments are respectfully submitted in response to this Proposed Rule on behalf of the Three Forks, Montana Holnam, Inc. cement plant. These comments are specific to the issues of the Proposed Rule which affect the Three Forks, Montana plant and are submitted in addition to comments drafted separately by Holnam's corporate office, which address the entire proposed rule.
870	ckdp00055	The enclosed comments are respectfully submitted in response to this Proposed Rule on behalf of the Portland, CO Holnam, Inc. cement plant. These comments are specific to the issues of the Proposed Rule which affect the Portland, CO plant and are submitted in addition to comments drafted separately by Holnam's corporate office, which address the entire proposed rule.

Comment Id	Document Number	Comment
886	ckdp00056	The enclosed comments are respectfully submitted in response to this Proposed Rule on behalf of the Artesia, Mississippi Holnam, Inc. cement plant. These comments are specific to the issues of the Proposed Rule which affect the Artesia, MS plant and are submitted in addition to comments drafted separately by Holnam's corporate office, which address the entire proposed rule.
918	ckdp-00057	The enclosed comments are respectfully submitted in response to this Proposed Rule on behalf of the LaPorte, Colorado Holnam, Inc. cement plant. These comments are specific to the issues of the Proposed Rule which affect the LaPorte, Colorado plant and are submitted in addition to comments drafted separately by Holnam's corporate office which address the entire proposed rule.
920	ckdp-00057	2.1 Summary of Holnam - Fort Collins Plant Current CKD Management Activities□□ □□ CKD captured in the baghouse is conveyed to temporary storage bins, then is hauled dry in covered trucks to a mined section of quarry. The current landfill is unlined. Water sprays and weekly cover are used as fugitive dust controls. The base of the landfill is above the natural water table as defined in the CKD rule.□□ □□ Table 2 summarizes the CKD disposal and beneficial reuse rates at the Fort Collins plant. Beneficial reuse of CKD has increased substantially since 1994. [See Table 2 in original comment entitled "Table 2, Holnam Inc., Historic CKD Disposal and Beneficial Reuse Rates Fort Collins"]
921	ckdp00058	The enclosed comments are respectfully submitted in response to this Proposed Rule on behalf of the Dundee, Michigan Holnam, Inc. cement plant. These comments are specific to the issues of the Proposed Rule which affect the Dundee, Michigan plant and are submitted in addition to comments drafted separately by Holnam's corporate office, which address the entire proposed rule.
1011	ckdp00062	Essroc is a member of the American Portland Cement Alliance (APCA), which is a non-profit trade association representing virtually all U.S. cement companies. Essroc has worked closely with the APCA to develop its comments and fully supports and agrees with the comments submitted by the APCA on the proposed CKD management rule and hereby incorporate the APCA comments herein.
518	ckdp00034	The ETC supports management of cement kiln dust (CKD) under Subtitle C of RCRA, given the large number of documented damage cases resulting from releases of heavy metals to surface water and groundwater. We are concerned, however, that the proposed "contingent management" approach is not authorized by statute, will be very difficult to enforce and does not go far enough in regulating the more hazardous forms of CKD.
210	ckdp00019	As it has since the genesis of EPA's Bevill process for CKD, APCA opposes any form of RCRA Subtitle C hazardous waste regulation over CKD management. Quite simply, due to the inherent physical/chemical composition of CKD and the manner in which CKD is managed, the risks to human health and the environment from CKD management are so insignificant that Subtitle C hazardous waste jurisdiction cannot be rationally justified. APCA continues to encourage EPA to adopt approaches that do not include Subtitle C jurisdiction "in order to," as APCA said in 1994, "ensure that even the remote potential for risk to human health and the environment is addressed in a fully protective manner." APCA accordingly supports elements of EPA's proposed rule, which would not involve the invocation of Subtitle C jurisdiction.
211	ckdp00019	Because the risks are minimal and because CKD disposal is increasingly being limited to a small number of states and a smaller number of facilities, EPA should adopt the approach of allowing the relevant states to develop and implement their own CKD management programs. Once each of the key states have done so, there will be no need for EPA to issue a final rule.

Comment Id	Document Number	Comment
229	ckdp00019	We should also note for the record two other significant legal problems for EPA should CKD be subjected to any form of Subtitle C authority. The way the proposal is currently drafted, the only CKD disposal units that will be totally exempt from the requirements of the new part 259 rules are those that stopped receiving CKD as of August 20, 1999, when the proposal appeared in the Federal Register. 64 Fed. Reg. at 45656, col. 3. If a disposal unit receives CKD after that date, the proposal specifies that the unit must, within six months after receipt of its last waste, comply with the new final cover requirements of proposed §259.50. Otherwise, the CKD unit will be fully subject to the new part 259 rules (even though the unit may have been closed years before the new rules are finalized and become effective). See §259.1 (d).□□ While one could presume that this was an error, EPA makes it clear in the preamble that it was not. EPA says it intends to impose "some regulatory requirements" for units that stop receiving waste after the date of proposal because this "would help prevent releases of CKD waste." 64 Fed. Reg. at 45656, col. 3. EPA further explains this would help limit the production of leachate and fugitive dust. First, in the process of formulating the Regulatory Determination to impose Subtitle C authorities over CKD, EPA concluded that there were unacceptable risks from the so called "indirect" exposure pathway even before public comments had been filed on this issue. This is shown most vividly in the "Briefing Document" EPA staff prepared for the Administrator that EPA released to APCA subsequently pursuant to a Freedom of Information Act request. Although APCA and others filed significant comments arguing against this conclusion, these comments were not properly considered, representing a denial of due process under the Administrative Procedure Act. For an elaboration on these points, see the documents included as Attachment H hereto and hereby incorporated by reference. Second, in formulating their CKD Regulatory Determination, high-level EPA officials (including the Administrator) held several ex parte meetings with advocates of Subtitle C controls for CKD well after the public comment period had closed, even while these Agency officials refused repeated requests for a meeting from the cement industry. This procedural error, which caused great prejudice to APCA and its members, is explained in detail in the documents included as Attachment I hereto and hereby incorporated by reference. Finally, we should note that our comments of March 8, 1994, contain a lengthy discussion of the illegalities of imposing Subtitle C requirements on CKD. We continue to adhere to those comments and hereby incorporate them by reference.
370	ckdp00023	Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the "state-run"/"state-based" approach proposed by APCA, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, the state-based approach would be preferable to the Proposed CKD Rule.
295	ckdp00020	Lafarge supports the goal of developing adequate management standards for CKD waste. CKD waste, like other waste material, should be handled in an environmentally responsible manner. Furthermore, efforts should be made to identify, develop, and encourage beneficial uses of CKD in lieu of land disposal.
444	ckdp00027	Brown and Caldwell concurs with EPA that CKD needs to be managed in a "creative, affordable and common sense approach". Based on our experience, Brown and Caldwell believes that the proposed rules should be modified to more closely consider these objectives.

Comment Id	Document Number	Comment
293	ckdp00019	While our basic preference is for EPA to adhere to the State Program Approach already foreshadowed by its proposed rule preamble, we should note for the record our disagreement with the opinions of EPA's OGC that stopped progress on the proposed Enforceable Agreement.□□ We first sent a letter setting forth our views to OGC on May 25, 1995 (included as Attachment D and hereby incorporated by reference). We cited EPA's own recent Federal Register preamble language on a RCRA proposal (dyes and pigments) stating that EPA had authority to enter into enforceable agreements unless they were prohibited by law. No law cited by OGC or located by us prohibits EPA from entering□□ into our CKD agreement.□□ We also said that if EPA needed explicit authority, they need only turn to RCRA 5 8001. We showed how that section explicitly authorized EPA to "enter into contracts" for demonstrations, studies, and investigations regarding improvements in land disposal practices for solid wastes. We pointed out that our enforceable agreement-the first of its kind-could easily fit within this authority.□□ Nine months later, on March 7, 1996, OGC sent APCA a letter that essentially backed away from the Federal Register preamble statement after they had conducted "subsequent research." OGC said that EPA's 'inherent" contract authority was limited to "procurement of goods and services" and claimed nothing in RCRA conferred explicit contract authority.□□ In this letter, OGC overlooked APCA's point about RCRA § 8001. OGC said that APCA's suggestion that EPA issue a grant under § 8001 was inappropriate and left it at that-even though APCA had never even mentioned or suggested a grant.□□ On March 14,1996, APCA wrote a response to OGC's March 7 letter. APCA pointed out that we had never hinted at any reliance on grant authority, re-printed the paragraphs from our letter respecting explicit contract authority in RCRA § 8001, and asked that OGC consider our position in this light. We reiterated we believed this section clearly provided explicit statutory authority for our CKD enforceable agreement.□□ Three months later, OGC sent APCA a one-page response. OGC letter of June 10, 1996 (attached as Attachment E and hereby incorporated by reference). We note that OGC's conclusion is particularly inappropriate, as OGC says § 8001 was not intended to authorize "a substitute for Subtitle C regulation of an entire industry." Of course, in its CKD Regulatory Determination, EPA repeatedly emphasized it had no intent to impose anything close to full Subtitle C regulation.□□ We continue to adhere to our legal opinions expressed in our letter to OGC of May 25, 1995 and March 14, 1996, and we encourage EPA to reconsider the views expressed by OGC in their responses. If EPA proceeds to take the State Program Approach as indicated in its proposed rule preamble, however, this would become a moot point (at least for the fate of CKD).
61	ckdp00015	The rule does, however, allow for alternative demonstrations to be made by placing such a demonstration in the facility's operating record. In the cases of alternatives for closure and fugitive dust control, this must be implemented within 90 days of the effective date of the rule. Subsequently, the designated regulatory authority (EPA Regional Administrator or delegated state agency) must approve this alternative standard that has already been put in operation at the facility. Should the agency disagree with the facility's methods proposed in the alternative mechanism, the waste handled following the 90-day period up until the agency's ruling would be considered hazardous waste, and would then be liable to meet all of the applicable RCRA hazardous waste rule requirements (i.e., through 40 CFR 261.11). This seems absurd since the management method (i.e., fugitive dust control or closure activities) has had little to do with the characteristic of the waste material. The overall result is a rule that compels facilities to accept the default technical management standards and inhibits the opportunities to employ equally safe and effective alternative mechanisms to manage CKD. The specter of hazardous waste regulation that shadows facilities managing CKD essentially serves to stifle opportunities for common-sense management of CKD. EPA should reconsider its approach for employing hazardous waste requirements on CKD. Management-based listing is counterintuitive and inconsistent with practical considerations, given that mismanaged CKD can be neither listed (i.e., K-listing) nor characteristically hazardous.

Comment Id	Document Number	Comment
273	ckdp00019	A. Overview of lndustrv Concerns APCA has gone to great lengths in comments below and in accompanying analyses (Attachment L), to outline cement-industry concerns with the risk assessments prepared by EPA in support of the proposal. Particular attention has been focused on the Technical Background Document titled, Population Risks from Indirect Exposure Pathwavs and Population Effects from Exposure to Airborne Particles from Cement Kiln Dust Waste, Office of Solid Waste, U.S. EPA, August 1997, Draft, Do Not Cite or Quote [Emphasis Added]. This document is referred to as the " PBRA" herein and in Attachment L. The overarching conclusion in the comments below as well as those contained in Attachment L-prepared by Scientific Resources, Inc. on behalf of APCA-is that therisk assessments done in conjunction with the proposal do not provide an adequate basis for a federal rulemaking. They require much revision and reconsideration. The key deficiencies include: (1) sole reliance on insufficiently representative screening risk assessments, (2) substantial errors affecting both the results and conclusions, (3) utilization of a risk assessment that has never been finalized, and (4) a lack of transparency and true opportunity for comment on the Agency's efforts. The Agency should have tested the findings from the screening assessment with a representative set of site-specific conditions for a federal rule potentially affecting over 100 facilities.
274	ckdp00019	In sum, APCA believes that the errors, inaccuracies and deficiencies of these risk assessments call into question whether the Agency would ever have a sound basis for moving forward with this rulemaking. At a minimum, APCA would request that the Agency address all the shortcomings identified in these comments before determining whether the risks justify a federal rule. We are confident, however, that-confronted with such a task-the Agency would likely face the prospect of beginning the risk assessment anew. Finally, APCA will-within the next IO-14 days-supplement this submittal with comments on EPA's perspectives addressing the risk assessment used to support the Report to Congress on CKD. The Agency addressed this issue in the "Analysis of a Response to Comments on the Report to Congress on Cement Kiln Dust, January 31, 1995.□□ B. Specific Concerns With the Risk Assessments Suoportinq the Proposed Rule This report summarizes some of the key issues in the proposed rulemaking that require Agency review and comment. It is by no means a complete list, but is focused on the areas of greatest concern in the documents underlying the estimates of risk used to justify increased regulation of cement kiln dust (CKD). Key documents include the Federal Register notice (FR) containing the proposed rule,13 the Population-Based Risk Assessment (PBRA),14 the Agricultural Soil Amendment Risk Assessment,15 and the Agency's response to comments it received on the Report to Congress on CKD (RTCC)." The comments are grouped according to concerns about Use and interpretation of Data, Assumptions, and Conclusions.
275	ckdp00019	In addition, given the scope and potential consequences of these assessments, EPA should have submitted the risk analyses for independent peer review, as the Agency has done in other instances concerning industry-wide or national assessments. This would most likely have the result of reducing the uncertainties of the screening assessment conclusions. In the screening assessments, the Agency elected to rely on parameters for input into the risk assessment models that were from the high end of the range of potential values that could be employed. Site specific data for many of these parameters are readily available and should have been employed to represent a more plausible risk scenario. As a consequence of this shortcoming, the conclusions from the risk analyses are excessively conservative and cannot be considered representative of the potential□□ risks posed by CKD. EPA's reliance on modeled versus actual site-specific data results in yet another significant deficiency in the analyses. Most notably, the Agency emphasizes potential indirect exposures to subsistence fisher and farmer populations. With little effort, the Agency could have determine using available site-specific information that these sensitive populations do not reside in the vicinity of cement plants, certainly not within distances that would result in any risk to these individuals-should they exist at all. It is unacceptable for the Agency to rely on a draft, non-citable or quotable document as the basis for a potentially very costly and burdensome federal regulation. It is equally inappropriate for the Agency to solicit comment on the risk assessments, and then not provide access to the information necessary to conduct an adequate review of the Agency's work. As explained more fully in Attachment L, numerous attempts were made to obtain the electronic files (or even paper files) containing the data necessary to review the risk assessments. While the Agency was cooperative, the requisite data remains outstanding, hopelessly confounding a proper comment opportunity.
368	ckdp00023	Management controls and monitoring are in place or will be in place before the rule effective date, contrary to EPA's general belief about CKD landfills around the country, and therefore the proposed CKD rule provides an added layer of unneeded regulation.

Comment Id	Document Number	Comment
374	ckdp00023	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.
399	ckdp00025	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.
400	ckdp00025	Management controls and monitoring are in place or will be in place before the rule effective date, contrary to EPA's general belief about CKD landfills around the country, and therefore the proposed CKD rule provides an added layer of unneeded regulation.
405	ckdp00025	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.
419	ckdp00025	Holnam believes that the current environmentally sound management practices, the acknowledged beneficial uses for agricultural amendment and soil stabilization, and the commitment and fiscal directives to reduce CKD generation at the plant negate the need for EPA to promulgate unreasonably burdensome and costly regulations.
461	ckdp00028	Any benefit to health and the environment associated with listing mismanaged CKD as a hazardous waste is negligible compared with the regulatory burden on the cement industry. Listing of CKD as a hazardous waste will discourage its recycling and beneficial reuse, particularly with off-site vendors who may not want to incur the risk of handling a hazardous waste.
462	ckdp00028	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.
570	ckdp00034	The ETC supports EPA’s conclusions that greater control of CKD is needed. The large number of documented damage cases to air and water, as well as the risk modeling in the docket, support the need to control disposal practices of CKD. As EPA notes in the preamble, 7 cases of groundwater contamination, 12 cases of surface water contamination and 37 cases of air damage cases have been identified (64 FR 45635/2). EPA’s analysis also shows that 27% of cement manufacturing facilities are located within one mile of public drinking water wells. Given these facts, the Agency has strong reason to control CKD disposal practices.
577	ckdp00035	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.
580	ckdp00035	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.
585	ckdp00036	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.
589	ckdp00036	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.

Comment Id	Document Number	Comment
595	ckdp00037	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.
599	ckdp00037	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.
602	ckdp00037	The Devils Slide plant net CKD generation rate for 1999 was 16,4056 tons (see Table 2). Since 1994, the Devils Slide plant has reduced its net CKD generation over 50 %. These reductions support our position that there is no need for the additional regulation of CKD.
639	ckdp00040	The entire justification for EPA's Proposed Rule, and the proposed implementation of management-based listing, relies upon EPA's Draft Technical Background Documents ("TBDs") which primarily reference data from EPA's 1993 Report to Congress on CKD and the 1995 CKD Regulatory Determination. These documents use out of date and inaccurate information to conclude that CKD presents sufficient environmental and human danger to warrant removal from the Bevill exemption and treatment as a listed hazardous waste under RCRA. The following issues identify flaws in the TBDs which EPA used to determine that CKD requires hazardous waste listing. [New paragraph] Ground water impacts. The Technical Background Document on Ground Water Controls at CKD Landfills referencesthe 1995 Regulatory Determination, which indicates that ground water impacts are exhibited at a majority of sites where ground water data is available. From this information, EPA concludes that ground water effects are present at a majority of CKD sites. This conclusion, however, is based on a biased sample since at that point in time, pre 1995, the only CKD disposal sites which monitored ground water were those where there were known, or expected, ground water effects. Extrapolation that all CKD disposal sites are likewise contaminated is an unsupportable conclusion. Currently, a much broader sampling pool of ground water impacts, or lack thereof, exists. Seven out of the ten Holnam plants which dispose of CKD are monitoring existing landfill units, and two others are planning to monitor ground water at new units in the near future. None of the seven existing landfill sites are exhibiting ground water impacts. Monitoring shows no effect on ground water at the Ada landfill. In fact, only the up-gradient well has exhibited anything unusual, but no constituents exceed any Maximum Contaminant Levels. This variability appears to be due to the natural lithology, not from any infiltration from the CKD site. Holnam performed quarterly ground water monitoring during the process of obtaining their solid waste permit, but the requirement changed to semi-annual sampling in 2000 based on the ground water results. The most recent ground water report is attached demonstrating no impact to the ground water. [New paragraph] Fugitive Emissions. The 1993 Report to Congress identified Ada as an example of a facility with inadequate air controls based on a Notice of Violation (NOV) in 1991. EPA claims there is insufficient control over CKD, yet this exceedance was brought to EPA's attention through an NOV. The very existence of an NOV indicates that the current regulatory mechanism is effective and the Proposed Rule is unnecessary. In response to this NOV, Holnam improved their management practices at the facility. A water line was installed at the facility to wet the CKD, topsoil was placed on side slopes to reduce erosion, and a paddle mixer was installed at the cement plant to mix the CKD with water prior to transport to the landfill. These efforts resulted in a significant reduction of fugitive emissions. No complaints have been filed against the Ada landfill since 1991. Reliance upon historic NOVs prior to initiation of new and improved management standards industry-wide makes information in the Technical Background Document inaccurate. Since the Proposed Rule is based upon the Technical Background Documents, this negates any justification for the rule.
698	ckdp00046	The Department supports the Agency's goal to establish standards for the management of cement kiln dust (CKD) that will be protective to human health and the environment while encouraging the legitimate reuse of this material. We urge EPA to consider our comments to the proposed CKD rule. Following are specific comments ont he CKD rule proposal.
848	ckdp00054	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.

Comment Id	Document Number	Comment
850	ckdp00054	Our existing landfill is not exhibiting ground water impacts, demonstrating the low risk of CKD disposal and the unwarranted "management-based" hazardous waste listing included in the proposed rule.
871	ckdp00055	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.
872	ckdp00055	Management controls and monitoring are in place or will be in place before the rule effective date, contrary to EPA's general belief about CKD landfills around the country, and therefore the proposed CKD rule provides an added layer of unneeded regulation.
873	ckdp00055	Our existing landfill is not exhibiting ground water impacts, demonstrating the low risk of CKD disposal and the unwarranted "management-based" hazardous waste listing included in the proposed rule.
887	ckdp00056	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.
888	ckdp00056	Management controls and monitoring are in place or will be in place before the rule effective date, contrary to EPA's general belief about CKD landfills around the country, and therefore the proposed CKD rule provides an added layer of unneeded regulation.
902	ckdp00057	Management controls and monitoring are in place or will be in place before the rule effective date, contrary to EPA's general belief about CKD landfills around the country, and therefore the proposed CKD rule provides an added layer of unneeded regulation.
915	ckdp00057	A hydrogeologic investigation was performed to evaluate the suitability of the proposed future CKD landfill site at the Fort Collins plant. Three monitoring wells were installed within and adjacent to the future disposal area. The locations of these wells and the proposed CKD monofill and included in Appendix A. Water levels were recorded in the monitoring wells and the hydraulic conductivity of the underlying geologic formation was estimated based on slug tests performed on the monitoring wells.□□ □□ The site geology is depicted in the geologic cross-section presented in Appendix A. The cut in which the proposed landfill is located overlies the Cordillo Sandstone. Ground water is encountered at the top of the Code11 Sandstone. The estimated hydraulic conductivity of this unit ranged from approximately 9 x 10 -7 to 5 x 10 -10 cm/sec. Thus ground water flow rates would be expected to be low, making the site favorable for landfill development. The site does not exhibit karst features.□□ □□ In addition to the monitoring well installation and hydraulic conductivity testing, the investigation included batch leaching tests on representative samples of CKD from the Fort Collins plant to identify potential constituents of concern and their potential to migrate from the base of the landfill through the ground water. The results of these tests indicated that the native materials beneath the proposed landfill would effectively attenuate most metal species. Those that would not be as effectively attenuated leached at such low concentrations that the mass loading to underlying aquifers was insignificant. [New paragraph] These results are summarized in Appendix A.
919	ckdp-00057	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.
922	ckdp00058	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.

Comment Id	Document Number	Comment
949	ckdp00060	A. SLC's percentage of Net CKD production has decrease without any regulation framework.□□ □□ In response to discussions among EPA, the cement industry, and other interested parties prior to the Proposed CKD Rule, SLC and the entire U.S. cement industry have acted diligently to improve CKD management practices. The result is that many of the facts about CKD management practices relied upon by EPA in the RTC and related rulemaking documents are no longer accurate. This inaccuracy is sufficient to belie the essential contentions of EPA in the RTC, the Regulatory Determination, and the preamble to the Proposed CKD Rule that purportedly justify the Proposed CKD Rule. The data provided herein and incorporated by reference should be considered in support of this argument.□□ □□ SLC's net volume of CKD removed from its kiln systems (total CKD produced less CKD recycled directly to the kiln systems) ("Net CKD") in 1993 was 142,755 metric tons. In 1998 the net CKD production was 42,797 metric tons where the clinker production have increase. Thus, improvements in SLC's CKD management practices have a significant effect on the overall CKD production without any regulation. As discussed below and in the comments incorporated by reference, changes implemented by SLC since the data discussed in the RTC and the Regulatory Determination was gathered have resulted in significant decreases in CKD generated by SLC facilities and in CKD recycled. Consequently, the volume of CKD landfilled by SLC facilities has decreased by 88% since 93. At the same time, state regulation and oversight of SLC's CKD landfills has increased. SLC agree with Holnam and believes that the rest of the U.S. cement industry has experienced similar trends. As discussed below, these developments undermine EPA's justification in the RTC and Regulatory Determination for regulating CKD disposal activities to such a degree that EPA should withdraw its Proposed CKD Rule and should reconsider whether there is a need for federal regulation in this area at all. A summary of the trends in SLC CKD production statistics is provided in Appendix B [see Appendix B in orginal comment including table entitled " SLC CKD Generation Statistics, 1994 - 1998" and "Figure B.1. Trends in SLC US operation of CKD volume sale and Landfilled".]

Comment Id	Document Number	Comment
1099	ckdpL0003	EPA's Risk Estimates for Potentially Exposed Individuals and Populations-EPA outlines a risk-based justification for its proposed CKD management standards in Sections II.C.3, II.C.4, and 1V.B of the Preamble to the Proposed Rule.□□ □□ In II.C.3, the Agency summarizes the potential individual risks it thought to be posed by improper on-site management of CKD piles from direct exposure pathways (e.g., ingestion of surface or ground drinking water), indirect exposure pathways (i.e., foodchain uptake), and inhalation exposure to airborne particulate matter. EPA also summarized certain other indirect individual risks it thought were posed by off-site application of CKD as a liming agent or pH buffer for acidic soils used to grow crops.□□ □□ EPA reports "only low or negligible risk potential" for the drinking water direct exposure pathways. For the indirect foodchain pathway, EPA projects maximum potential individual lifetime cancer risks between 1 x 10-5 and 1 x l0-3, for "highly exposed subsistence fishers and farmers." EPA states that these projected indirect cancer risks are due primarily to arsenic in CKD. EPA speculates about a potential indirect cancer risk from dioxin in CKD, but concludes its database is too limited to support any conclusions on that topic. EPA also found "exceedances of non-cancer hazard thresholds via indirect exposure to the toxic metals cadmium, chromium, thallium, and lead."□□ □□ Elsewhere in Section II.C.3, EPA suggests individual potential health risks due to inhalation exposures to airborne fine particulate matter (PM- 10) blown from CKD piles in amounts that could exceed applicable National Ambient Air Quality Standards (NAAQS) at plant boundaries and nearby residences. Finally, EPA addresses indirect individual risks associated with foodchain uptakes from agricultural uses of CKD as a soil amendment or fertilizer at sites removed from cement plants. The Agency suggests that "CKD, at plausible [agricultural] application rates, contains sufficiently high concentrations of metals and dioxins to cause [such separate] foodchain risks." [footnote 29]□□ □□ In Section II.C.4, EPA reports on its analysis of population risks. Individual risk estimates should carry over directly into such population risk analyses, which are typically meant to put into meaningful perspective the qualitative risk statements and individual risk estimates such as those presented in Section II.C.3. [footnote 30] However, as we note briefly below and in the following section, central aspects of EPA's population risk analyses either contravene or do not match, and cannot easily be matched with, its individual risk projections. □□ □□ EPA's focus is "population risks from indirect, or foodchain, exposure pathways and population effects from exposure to airborne [CKD] particles, but not potential population risks from beneficial use of CKD." [footnote 31]□□ □□ EPA's justifying cancer risk estimate for indirect foodchain exposure is 0.04 excess cases over a 70-year lifetime in a population of 3.4 million people nation-wide who reside within five miles of all cement plants. [footnote 32] We interpret this projected population risk as negligible, as it is far below the levels historically believed by government or private risk assessors to warrant corrective action. However, it also is unintelligible, in the sense that its apparent individual risk components cannot be traced back consistently to their roots. Because indirect foodchain risks are one of the two bases for EPA's conclusion that sufficient projected risk exists to warrant national regulation, [footnote 33] this flawed estimate suggests the presence of other, similar flaws in EPA's analysis.□□ □□ Specifically, EPA states that its 0.04 estimate of excess "indirect" cancer cases is derived from findings that there are 0.009 such excess cases in the subsistence farmer population, and 0.03 such excess cases in the "homegrown" vegetable-garden-consuming population. EPA also states that the number of excess cancer cases it predicts for the potentially exposed recreational fisher population is negligible. However, EPA does not mention population risks for subsistence fishers, although the Agency apparently concluded in Preamble Section B.C.3 that the individual risks to this exposed population were between 1 x 10-5 and 1 x 10-3, among the highest individual risks projected anywhere in EPA ‘s discussions. We must assume either that this is a major disconnect, or that on the basis of further analysis EPA also found these cancer risks to be negligible (without saying so).□□ □□ Footnote 29: This is the only one of the many CKD “beneficial uses” that EPA remotely suggested might pose a projected risk.□□ Footnote 30: Individual risk projections ordinarily are merely a predicate for a meaningful risk assessment, because the number or frequency of excess cases over “background” or baseline levels that would otherwise be expected in exposed populations is the typical measure for whether there may be sufficient projected risk to pursue risk management steps (such as new regulations).□□ Footnote 31: 64 FR 45637□□

Comment Id	Document Number	Comment
		Footnote 32: Ibid.□□ Footnote 33: Population inhalation risks, addressed further below, are the other basis.
281	ckdp00019	b. Incorrect Determination of Environmental "Damage": There is some question as to whether what EPA described as "damages" due to CKD in 1994 did in fact meet any legal or scientific definition of the term. As EPA states on page 45635, "Most of these cases [of damages to air] involved visible emissions violations (opacity) related to equipment malfunctions associated with CKD handling equipment (kilns, bag houses, and screw conveyors)." Here, and in several places in EPA's Response to Comments on the Report to Congress on CKD, EPA concludes erroneously that a notice of an opacity violation equates to environmental damage. This is not a scientifically supportable statement. To be specific, a Notice of Violation is a piece of paper - a notice that someone in the State or EPA Region is alleging that there may be a violation of some kind. Unless and until the facility concedes there is a violation, or unless the matter is adjudicated (with appropriate note & comment and/or hearing opportunities) an NOV is not evidence of a violation, much less damage. More Fundamentally, even where there may be a "violation" of some environmental requirement, in many cases this cannot fairly be equated with any environmental "damage." The same is true of violations associated with monitoring and reporting and recordkeeping requirements: they are not representative of environmental damage.
282	ckdp00019	Even more broadly, many substantive environmental regulations (in the CAA, CWA, RCRA, etc.) are technology based, and therefore have no direct relationship to potential exposures to human health or environmental receptors. For instance, a power plant may have a BACT limit as part of its PSD permit. The power plant could violate its BACT limit by a 10% excursion, even though such excursion does not cause or contribute'to either a (i) violation of the applicable PSD increment, or (ii) a violation of any ambient air quality standard. Such a violation obviously cannot be said to cause environmental "damage," and the same may easily be said for intermittent opacity violations. Finally, all alleged "damages" listed by EPA were to air, ground water, and surface water, yet the proposed rule does not establish limits for CKD for these media. The proposed limits on metals in CKD used for agricultural purposes are not established based on these media, but on indirect exposure through the food chain. EPA provides no evidence of any damage resulting from the historically extensive application of CKD in agricultural settings despite the ready availability of exposed media to be sampled. Using presumed but unsubstantiated claims of damage in one medium as justification for requiring limits in another medium is specious reasoning at best.
369	ckdp00023	Our existing landfill is not exhibiting ground water impacts, demonstrating the low risk of CKD disposal and the unwarranted "management-based" hazardous waste listing included in the proposed rule.

Comment Id	Document Number	Comment
1130	ckdpL0003	7. Damage cases. No different result is warranted by EPA's final reliance on so-called damage cases and CKD inhalation risks to reject a two-dust approach. This is true for both water and air "damage" instances, several of which seem double-counted or improperly counted.□□ □□ Water. Despite vigorous efforts, EPA has not been able to identify a single additional case of "damage" to groundwater or surface water beyond the 13 cases it relied on for the 1995 Regulatory Determination. [footnote 18] These cases consist appear to consist mostly of CKD piles deposited before 1980, in one case directly accessible to waves from a lakeshore. Several of them involved commingled hazardous wastes, and/or became federal or state Superfund sites due to lack of any management whatever over extended periods. None seem remotely representative of industry practices in 1995, much less today. None involved small nonburner plants, and data submitted by the Coalition documented that no CKD site managed even by Coalition members who are not small entities had any cognizable impact on ground- or surface -waters. These data included at least one very large CKD pile that directly overlies a municipal drinking-water aquifer intensively monitored for potential contamination.□□ □□ It is unclear whether any of these cases meet the "test of proof" for cognizable Bevill damage that EPA was applying prior to this proposal to other such potential instances.[footnote 19] However, it seems clear that the non-practices which led to these instances cannot simply be presumed to continue. As the SBA bluntly noted in comments on the draft proposed rule:□□ □□ It is disturbing that EPA relies on [these] groundwater damage cases...We would like to see the[se] instances...broken out by date, firm and...how the damage occurred and remedial action taken...While the agency asserts that the management practices that led to these cases continue, there is no evidence of such. The agency admits that it did not complete a census. Therefore,... these damages may have been caused by . . . "rogue firms," or most of these cases [in reality may have] occurred around ten to fifteen years ago....Surely, if these practices were going on to the present day, all sorts of enforcement... would [have been] raised [but] the agency cites no OECA enforcement] data... Thus, the agency can not rely on this evidence to issue a proposed rule. [footnote 20]□□ □□ Finally, EPA's water-based damage statements (64 FR at 45639/2) seem misleading. We understand that in fact only about half these 13 cases ---not "largely" all these cases---may be related to CKD deposited by non-burner rather than burner plants. HW "fuels" were typically dumped in the backyard, burned onsite at industrial facilities, or shipped to traditional landfills until 1980. They have only been burned in cement kilns since that date. Non-burner CKD has been generated and deposited by coal-fired Portland cement plants for at least 150 years. Thus a reasonable observer might expect the overwhelming majority of many more identified damage cases to be associated with nonbumer CKD land disposal, if EPA's assumptions were correct. That half the identified "cases" appear associated with plants that have been buming'HW fuels and disposing their CKD for less than two decades undercuts those assumptions. □□ □□ Air. EPA's reliance on asserted air "damage" from windblown CKD seems still weaker, whether for observed instances or for projected inhalation risks. As we understand it, some 17 of the 36 cited "damage" cases involved observations of what appear at most to be relatively minor occurrences during the same day at a single plant. Most of the "damage" observations were associated not with regulated particulate emissions but with opacity, which does not relate directly to PM emissions, tends to reflect coarse particles rather than those inhaled deep into the lungs, and is easily (and vigorously) enforced against by state/local air pollution agencies where they believe non-trivial violations exist. [footnote 21] Many of the opacity instances were administrative NOVs, not confirmed regulatory breaches. Many of the instances related to CKD emissions that are irrelevant because they came from production processes rather than "waste CKD" piles or handling.□□ □□ Moreover, EPA's projected PM-10 inhalation risks rest on inflated assumptions that were input to models which overstate ambient impacts, and were never tested against ambient data that are readily available on Air Office websites. Even so, EPA apparently projected that UC most 4200 people---of the apparently exposed population of 3.4 million living near 108 cement plants---"may be exposed to airborne PM concentrations in excess of [both the coarse and fine particulate] NAAQS." [footnote 22] These are not risks that justify national regulation. Nor can they be "environmental damage" that justifies rejecting a two-dust approach.□□ □□ Perhaps more important, whatever its view of state air enforcement, EPA nowhere attempts to explain why state solid waste agencies that have been responsible since 1976 for controlling fugitive dust emissions from MSW landfills, cannot deal with fugitive CKD emissions that are far more limited in volume, distribution and potential environmental impact.23 Nor does EPA mention or explain the findings of a special Report commissioned by the California Legisature. This Report expressly concluded that any CKD management beyond existing state authority was a low environmental priority because (among other things) fugitive dust enforcement at cement plants was "active" and "vigorous." Moreover, it continued, if regulators appeared rarely to address CKD piles

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		rather than process CKD emissions, this result made sense because CKD piles "are not significant sources of particulate emissions to the air."24 These findings, by a state that□□ has long led the nation in environmental matters, contradict EPA's Preamble at every turn.□□ □□ Footnote 18: As we understand it, these 13 groundwater cases also included the 3 surface water cases, since there was "damage" via both media from the same CKD disposal sites. Cf 64 FR at 45676-77.□□ Footnote 19: Cf. EPA/OSWER, Report to Congress: Wastes From teh Combustion of [Commingled Utility, Industrial and Certain Other] Fossil Fuels, Vol. I (Executive Summary), pp. 3-4,4-2,6-1 passim (EPA Document 530-S-99-010) (March 1999) (the "FFCWs RTC"). EPA apparently dropped two damage cases by time of proposal, without explaining why. 64 FR at 45635 n. 6.□□ Footnote 20: Memoranda to EPA and OMB, SBA Office of Advocacy (Nov. 12, 1998; Dec. 1,199s) (emphasis added). See Attachment B. Neither these comments nor EPA's apparent (non) responses are in the docket.□□ Footnote 21: In its July 15, 1997 comments on an OSW "Trial Balloon" conceptually outlining CKD regulatory options (including what became the proposed rule), the Coalition submitted a partial compilation of numerous state fugitive-dust rules facially applicable to CKD piles, along with evidence that such regulatory limits are routinely incorporated in new-source and existing-source permits for cement plants. So far as we know EPA never responded to that submittal.□□ Footnote 22: 64 FR at 45637/3 (emphasis added).

Comment Id	Document Number	Comment
1508	ckdpL0002	Comment: EPA's definition of Tests of Proof (i.e., using certain Administrative Rulings and Court Decisions) is inappropriate to use as convincing criteria of damage to human health or the environment. For example, the Agency should not use the existence of an enforcement action that cited damages, or out-of-court settlements, to prove that damage to human health or the environment has actually occurred. The Agency can conclude, however, that damage has occurred in those cases where conditions cited in an enforcement action are upheld in an administrative ruling. (RCC 834, CKRC 717, LFC 700) Response: The Agency disagrees. These long standing Tests of Proof have been used by the Agency as part of many special waste studies. EPA's use of Tests of Proof began in 1987 with the study of wastes associated with the exploration, development, or production of crude oil, natural gas, and geothermal energy. The Report to Congress is not a record of an enforcement proceeding; therefore, there is no need to require an administrative ruling upholding an enforcement action or that all rights of appeal must be exhausted before a damage case can be included in the report. The Agency believes that these Tests of Proof are adequate, serve as indicators of damage to human health and the environment, and individual damage cases have been subject to public comment. APCA Response: See below. Comment: The analytical data presented in the Report to substantiate a damage case were not reviewed to assure that proper sample collection and analytical protocols were followed. Data can be very misleading if it is not fairly and accurately evaluated and presented. (CKRC 717) Response: The Agency disagrees. The information used in the damage case descriptions in the Report to Congress were obtained either as a matter of routine monitoring or as part of an enforcement action. The Report to Congress is not a record of an enforcement proceeding; so data quality requirements are different. It is not necessary that information presented in a damage case result in an enforcement action, only that the damage be adequately identified. The Agency notes that the commenter did not offer any proof that invalid data was used in any of the damage cases. APCA Response: See below. Comment: Based on this extensive investigation, EPA alleges 19 documented damage cases. None of these damage cases, however, meet the statutory standard of proof regarding threats to human health or the environment. All of the ground water damage cases involve exceedances of generic constituent limits or simply raise concerns about "potential" harm. Potential harm and mere allegations of harm do not meet the statutory requirement of "proven damages." (SI 853) Response: The Agency disagrees. There are no statutory standards of proof regarding damages to human health and the environment. No further Congressional guidance is given in RCRA, other than what is specified under &8002(o). The Agency has set up the Tests of Proof to identify resource and other damages. APCA Response: See below. Comment: The majority of damages cited in the Report were "air damages" associated with opacity violations. These violations do not necessarily constitute damage. (HI 827) Response: The Agency disagrees. One of the Agency's Tests of Proof is whether damages are found to exist through a formal administrative ruling, such as a report by a field inspector. Many of the air damage cases were the result of a State inspector issuing an administrative ruling in the form of a Notice of Violation. APCA Response: See below. Comment: Changes in CKD generation, composition, and management practices, as well as cement kiln operating procedures, process inputs, and equipment modifications influence CKD characteristics and disposal site conditions such that the conditions associated with an alleged damage case no longer reflect the current situation at the site. As an example, one commenter cited the circumstances of CKD storage in the salt marshes outside Salt Lake City, which would not be allowed today under recently enacted statutes and regulations. (CKRC 717, LFC 700, HES 702, SI 853) Response: The Agency disagrees. In RCRA Congress did not restrict the Agency's search for proven damages to current or past management practices. Even so, most current cases reflect CKD waste management practices within 5 years of the Report. While the Agency acknowledges that CKD management practices may have changed at individual cement manufacturing sites, certain practices have not stopped and occur today at other

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		facilities industry-wide. APCA Response: See below. Comment: The Agency has not demonstrated that the documented damage cases have anything to do with CKD, because CKD was frequently co-disposed with other cement manufacturing wastes (e.g., kiln brick, limestone mining wastes, and general debris), which may contain higher concentrations of hazardous constituents. Other potential causes of the purported damage cases may include the storage of manufacturing feedstocks at the sites, as reported in the Report. It would be difficult to distinguish the effects of these materials from those of CKD. (SI 853) Response: The Agency disagrees. In considering damages to human health and the environment, it is sufficient that CKD contributed to the observed damages. In compiling cases of damage for the Report to Congress, the Agency did not consider several cases of co-disposal that involved CKD waste because the contamination was traced to a substance that was not CKD. APCA Response: See below. Comment: In one documented Air Damage Case, visible emissions were "probably" the result of citizen complaints. Citizen complaints do not necessarily represent damage to human health or the environment, and should not be cited in the Report. While the noted incidents may have posed a nuisance to nearby residents and businesses, they in no way represent damage to human health and the environment. (CKRC 717) Response: The Agency disagrees. While the Agency found that administrative rulings, in the form of Notices of Violation, were sometimes issued by State inspectors as the result of citizen complaints, these rulings were issued by the governmental authority and meet the Agency's criteria for proven damage to the environment. APCA Response: See below. Comment: The Agency found no documented cases in which danger to human health or the environment has been proved. The scientific studies performed for the presented cases do not demonstrate that damages are significant in terms of impacts on human health or the environment. In fact, the Report states no such proof exists. (CKRC 717, LFC 700) Response: The damage cases described in the Report to Congress are not a census of damages at all cement manufacturing facilities. The Agency, however, can demonstrate damage to the environment caused by the mismanagement of CKD waste. Congress did not restrict the Agency to consider only damages causing impacts on human health in its regulatory determination for CKD. APCA Response: It is highly improper to equate exceedances of emission limitations (particularly exceedances of surrogate parameters, such as occasional opacity excursions) with danger and/or damage to human health and the environment. Indeed, thresholds are established (or should be) with some degree of buffer to ensure that adverse effects do not immediately result each time a limit is exceeded. To say that the data further do not need to undergo rigorous scientific validation to be considered proof of damage or adverse effect (much less exceedance of a regulatory criterion) is both legally and scientifically unsupportable.

Comment Id	Document Number	Comment
1509	ckdpL0002	Comment: EPA should have used an epidemiological study to determine CKD damage cases, which is the scientifically accepted method to determine the impact of such pollutants on human health. In an epidemiological study, populations which differ in their exposure to the pollutant in question but are matched in all other characteristics associated with a given disease are studied for the disease rate. Numerous epidemiological studies of populations have shown that airborne particulate matter, such as CKD, is detrimental to human health. Instead, EPA looked for documented evidence that an individual had suffered damage to their health from CKD, which is impossible to show, and found no direct human health impacts. (Marti Sinclair 142) Response: The Agency disagrees. In RCRA, Congress did not mandate by statute that the Agency perform epidemiological studies in conducting the special waste studies. Epidemiological studies take time and are costly. In addition, damage to human health is only one of eight study factors that the Agency is statutorily mandated to consider in its study of CKD waste. The Agency believes it has enough information to document damages. APCA Response: Performing an epidemiological study would have been consistent with the Agency's stated goal of performing "as realistic an assessment" of risk of CKD as possible, regardless of the lack of a Congressional mandate to do so. Deriving scientifically sound estimates based on modeling takes time and is costly. Given the extensive historical use of CKD as an agricultural soil amendment, and an EPA estimated average of 30,000 metric tons CKD being added to each site every year, it would seem that there is some environmental monitoring than can and should be done to more realistically evaluate the effects of CKD used as an agricultural soil amendment. Regarding EPA's assessment of human health via direct or indirect study means, APCA contends that EPA's belief that it has enough information to document damages is too subjective and requests documentation by an independent source of peer review that these damages do, in fact, exist.
1511	ckdpL0002	Comment: [Not included, as the APCA concern is with the Agency response] Response: As explained in Chapter 5 of the RTC, danger to the environment includes significant impairment of natural resources (e.g., contamination of any current or potential source of drinking water with contaminant concentrations exceeding drinking water standards). Surface water represents potential drinking water. Therefore, the Agency believes that comparison of drinking water standards and constituent levels in surface water is useful, although not routine. To meet the test of proof, it is necessary only that the results reported are from a credible scientific analysis. The data presented in this case are used only to characterize the site, and are not used in enforcement. It is, therefore, not necessary that the data presented in this case have undergone rigorous scientific validation. APCA Response: As stated above, to equate regulatory exceedances with danger and damage is scientifically nonsensical. Indeed, thresholds are established (or should be) with some degree of buffer to ensure that adverse effects do not immediately result each time a limit is exceeded. Data indicating regulatory exceedances should be subjected to rigorous scientific validation to determine whether there was any actual damage or adverse effect (much less exceedance of a regulatory criterion).

Comment Id	Document Number	Comment
1512	ckdpL0002	Comment: Several commenters, including environmental groups, farmers/ranchers, and citizens expressed concern about the impacts of the Ash Grove kiln to human health and natural resources surrounding the kiln. The Montana City elementary school and the Teddy Bear day care center are located less than a half mile from the plant. Prickly Pear Creek is a trout fishing area, and swimming in the creek is a popular summer pastime. Many local fishermen eat their catch, as do their families. Hunting is also a popular pastime, and many game animals are used as food supplements. Prickly Pear Creek drains into Lake Helena, a prime fishing and waterfowl habitat. Several organic farmers are located in the vicinity of the kiln, and they are concerned about the health effects of CKD, as well as the impact the hazardous waste burning facility has on their licenses to grow organic vegetables. (MPIRG 708, MHF 709, AL 711) Response: The Agency recognizes the concerns of local citizens about the possible health and environmental impacts of the Ash Grove kiln. The Agency has stated that the data used in conducting risk analyses are conservative and that plausible risks are likely to be higher [Emphasis Added]. The comments by the citizens corroborate the potential for higher risks. APCA Response: In light of the obvious alarm this statement must cause to concerned citizens, APCA requests justification of the Agency's comments that "plausible risks are likely to be higher" as well as the Agency's definition of "plausible." Rather than "corroborating" any potential for higher risks, the commenters point out areas where environmental media might have been sampled for food chain exposure in the intervening five years.
1513	ckdpL0002	Comment: Discussion of cases of "potential" environmental damage is speculative and hypothetical and is not based on scientific fact. Such discussion requires the application of hypothetical situations that could be applied to any facility. Therefore, each and every cement plant included in this study should be considered a case of " potential" environmental damage. Or, more appropriately, "potential" cases should not be discussed for any facility since they are hypothetical and not based on facts. (TXI 1001) Response: The Agency disagrees with this comment. The Agency has evidence, based on scientific fact, that on-site surface water and ground water was impacted at the TXI plant in Midlothian. Cases of potential damage are appropriate for the Agency to consider in making its regulatory determination because these cases reflect current industry management practices which could contribute to existing or future problems at TXI, or other sites. APCA Response: As noted above, documented impacts do not necessarily equate to damage, either legally or scientifically. Nor does the scientific "fact" of the presence of detected levels of compounds of concern constitute damage. This is another facility where environmental monitoring has been done, and reported to EPA, that would provide useful information regarding the lack of "damage" from this facility and avoid unnecessarily alarmist statements. The commenter's statement is correct.
1514	ckdpL0002	Comment: The last paragraph of page 5-39 of the Report incorrectly states that as a result of the March 1992 TWC inspection, EPA Region 6 filed a Letter of Complaint with TXI for violations of RCRA Subtitle C regulations. EPA's inspection and subsequent complaint were in no way related to the TWC inspection or its findings. The EPA complaint was filed in response to a March and August 1992 EPA inspection and did not reference "seepage" or "storm water run-off" from CKD management. The only allegations in the EPA complaint relative to CKD involved the TXI sampling procedures; there were no allegations relating to environmental damage resulting from management practices [Emphasis Added]. Furthermore, four of the initial seven counts in the complaint by EPA have been dropped and settlement of the matter has been reached in principle without any admissions of Subtitle C violations by TXI. (CCP 947, TXI 1001) Response: The Agency recognizes that the EPA letter was not issued as a result of the March 1992 TWC inspection. The EPA letter was issued for applications of the BIF rule and was unrelated to the observations made by the state and identified in the state NOV. The inclusion of the site as a potential damage case is based on the state-issued NOV, not the EPA Letter of Complaint [Emphasis Added]. APCA Response: As stated elsewhere in this report, an NOV is not a legal or scientific basis of establishing damage. Given that the Agency has had several years to evaluate these sites for potential damage, APCA requests that EPA either discontinue referring to these sites as damaged or investigate them more fully to verify the extent of any damage. It is inconsistent to describe sites as causing damage or potential damage without conducting a full investigation, and then rely on incompletely characterized risks as a basis for a rulemaking.

Comment Id	Document Number	Comment
1515	ckdpL0002	Comment: Using NOVs as the standard of proof of damage to air media from CKD is misleading. Many of the NOVs cited are related to manufacturing aspects or malfunctions in handling equipment for raw materials. This information should not be included in the Report as damage caused by CKD. The impact of raw materials is unrelated to CKD. This consideration reduces the number of facilities cited from 14 to four. (CKRC 717) Response: The Agency disagrees. Where damages are traced to malfunctions in the handling equipment, that equipment manages CKD waste. Environmental releases that either directly involve CKD waste, or involve CKD waste as a contributing factor, meet the Agency's criteria for proven damage. The Agency did not consider many NOVs because the releases could be traced to equipment that handled materials other than CKD waste. APCA Response: See combined response below.
1516	ckdpL0002	Comment: In at least one case, the reported opacity readings were challenged because the facility did not use a certified test method. An important issue about using opacity as a proof of damage is that opacity is an indirect measurement. As EPA points out in the Report, a violation of an opacity limit does not necessarily result in a human health impact. Violation can only be measured with ambient air quality monitoring data in combination with mass emission rates and atmospheric modeling for the plant in question. (CKRC 717) Response: In RCRA, Congress mandated that the Agency not only look at damages to human health, but also damages to the environment. Opacity is an indirect measure of particulate matter. Since high opacity correlates with high particulate matter, it may signify a health hazard. In addition, in all air damage cases, the State believed it had sufficient information to issue a Notice of Violation. Nov meet the Agency's criteria for proven damage. APCA Response: See combined response below.
1517	ckdpL0002	Comment: For Holnam's plant in Holly Hill, South Carolina, the issue listed in the Report was opacity violations from the manufacturing process. For Holnam's plant in Ada, Oklahoma, the issue cited was opacity violations due to fugitive emissions from the handling and disposal of CKD. We do not believe that opacity violations necessarily constitute "damage", nor do we believe that opacity violations caused by manufacturing processes are pertinent to this discussion. The violations at Holly Hill, however, have been resolved through a rebuild of the electrostatic precipitators. The violations at Ada were corrected by installing a mixing station to assure appropriate wetting of the CKD prior to disposal in the landfill. The important point to note is that these emissions are more adequately regulated by the Clean Air Act, and that APCA's CKD Management Practices initiative would have successfully addressed this issue under Option 2. (HI 827) Response: The Agency believes that it was correct in tracing the releases to CKD waste or at least CKD waste was a contributing factor. The Agency also believes that opacity violations do meet the test of proof for damage. In RCRA, Congress mandated that the Agency not only look at damages to human health, but also damages to the environment. Opacity is an indirect measure of particulate matter. Since high opacity correlates with high particulate matter, it may signify a health hazard. In addition, in all air damage cases, the State believed it had sufficient information to issue a Notice of Violation. NOVs meet the Agency's criteria for proven damage. The Agency commends the plant operators for correcting the malfunctions that lead to the NOVs, however that does not negate the fact that an NOV was issued nor is it reason alone to remove the damage case from consideration. The commenter is correct in stating that the Clean Air Act has a significant role in regulating emissions from cement plants. APCA Response: See combined response below.

Comment Id	Document Number	Comment
1518	ckdpL0002	Comment: For Lone Star Industries' plant at Cape Girardeau, Missouri, neither the NOV, dated February 4, 1991, nor the Settlement Agreement, dated September 24, 1990, meet the statutory criteria for inclusion in the " Summary of Air Damage Case Findings" chart. Specifically, there were no damages alleged, or damages actually documented by the Missouri Department of Natural Resources. Further, the Settlement Agreement called for the payment of stipulated penalties if the operating limits were exceeded or the construction and testing schedules were not met. The agreement does not allege exceedances and no stipulated penalties were paid for exceedances during the period of the Settlement Agreement. It was Lone Star's position that the exceedances, which historically had been reported, were a result of startup, shutdown, or malfunctions and were controlled to the maximum extent possible as required by the regulations. A report of excess emissions is not a regulatory violation by itself. The reasons for each excess emission are submitted in the excess emissions report. The NOV issued on February 4, 1991 that was the subject of the placement of Lone Star's Cape Girardeau plant as an Air Damage case, was issued in error and was never acted upon. Stipulated penalties were never assessed as called for by the agreement. Later, a letter from MDNR was issued stating that full compliance with the agreement had been achieved. In summary, the description for the Lone Star Cape Girardeau plant should be eliminated from the list of CKD Air Damage cases. (LSI 837) Response: The Agency believes that this case meets the test of proof for damage to the environment. Penalties do not have to be assessed for the test of proof to be met, nor does the regulatory agency have to initiate an enforcement action. The fact that an administrative finding was made by the state that excess emissions (as measured by opacity) were released is sufficient to meet the Agency's test of proof. Although the claim is made that the exceedances of emission standards were controlled to the maximum extent possible as required by the regulations, the Agency notes that they nonetheless occurred and meet the test of proof. The Agency also notes that the commenter submitted no documentation. APCA Response: See combined response below. Comment: There are inaccuracies in the documentation for including the National Cement plant among the Air Damage Cases. First, EPA incorrectly reported the date of the NOV that the plant received for excessive bag house emissions on October 7, 1992. We assume that the NOV being referenced is for one dated October 7, 1991. Further, this 1991 NOV was a result of a failure of a single bag in our cement kiln's 14 compartment, 120 bag per compartment, dust collector. At the time of the failure, representatives of the Kern County Air Pollution Control District were conducting an inspection of another area of the plant. Repairs to the bag were completed less than 10 minutes after the visible emission evaluation was conducted. After the emission evaluation, the District representatives were told that this was an equipment breakdown. Equipment breakdowns preclude enforcement action if corrective action is taken immediately and the air district is properly notified. In this case, in addition to the verbal notice to the District representatives, a report of equipment breakdown was submitted in writing a few days later to the air district. However, the District contended that since they witnessed the excessive emissions before the report was made, a violation occurred. National Cement agreed to settle this NOV by payment of a small fine without admission of guilt. Quick action prevented any excess emissions. Although this incident resulted in a very small amount of excess emissions, we question whether this should have been included in the section, which includes "documented air damage cases." (NCC 714, PCMI 7176) Response: The Agency admits the error in the date of the NOV. However, the Agency is not convinced that the case should be removed from consideration as a damage case. The Agency maintains that violations of state standards that are cited in a state NOV meet the test of proof for damages to the environment. In this case an equipment malfunction allowed excess emissions to escape from the bag house, thereby releasing CKD to the air. The fact that the malfunction that caused the release was quickly repaired is commendable, but nonetheless the release occurred and an NOV was issued. This meets the test of proof. APCA Response: See combined response below. Comment: The NOV was for exceeding an opacity standard. Use of opacity as documentation and proof of damage is subjective at best. There is certainly no documented evidence that this resulted in damage to human health or the environment. (NCC 714) Response: The Agency believes that opacity violations do meet the test of proof for damage. In RCRA, Congress mandated that the Agency not only look at damages to human health, but also damages to the environment. In all air damage cases, the State believed it had sufficient information to issue a Notice of Violation. NOVs meet the Agency's criteria for proven damage. APCA Response: See combined response below.

Comment Id	Document Number	Comment
		Comment: None of the purported air damage cases establish that CKD poses a "danger to human health." Each of the cases that EPA discusses involves either an alleged failure to control visible fugitive dust emissions or an alleged exceedance of state and federal opacity limits. Yet, even EPA concedes that visible emissions do not necessarily involve a threat to human health. Moreover, EPA has not established that all of the damage cases it considers in the Report were caused by CKD. EPA appears to have considered any case that was somehow linked -- however tenuously -- to CKD; that is, EPA considered cases in which damage was due only in part to CKD. Visible emissions, however, can originate from a variety of ongoing activities at cement kilns that have nothing to do with the management of CKD. For instance, raw material crushers and dryers produce limestone dust and other particulate matter that can contribute to opacity readings. So too can the passage of trucks and heavy equipment along unpaved haul roads. Given the right wind conditions, this type of dust could contribute significantly to opacity exceedances. By failing to account for other possible causes for the opacity exceedances, EPA has not established that the cases considered in the Report involve damage caused by CKD. (SI 853) Response: The Agency disagrees. Where damages are traced to malfunctions in the handling equipment, that equipment manages CKD waste. Environmental releases that either directly involve CKD waste, or involve CKD waste as a contributing factor, meet the Agency's criteria for proven damage. The Agency did not consider many NOVs because the releases could be traced to equipment that handled materials other than CKD waste. In RCRA, Congress mandated that the Agency not only look at damages to human health, but also damages to the environment. In all air damage cases, the State believed it had sufficient information to issue a Notice of Violation. NOVs meet the Agency's criteria for proven damage. APCA Response: APCA wishes to restate its objection to the characterization of NOVs as scientific or legally credible tests of proof. As stated on page one of Chapter 5 of the RTC under "Tests of Proof-" "The statutory requirement is that EPA examine proven cases of danger to human health or the environment. Accordingly, EPA developed "tests of proof" to determine if documentation available on a case provides evidence that the danger/damage has occurred." (Section 8002(o)(4) of RCRA is cited) This begs the question of whether EPA's "tests of proof" identify proven cases as defined by Section 8002(o)(4) of RCRA or merely "evidence that danger/damage has occurred." Its reasonable to assume that every instance in which EPA has a concern about a release or potential release, that the concern is based on some "evidence". It is less reasonable to assume that this 'evidence' equates to a proven case under Section 8002(o)(4) of RCRA. Furthermore, we are confident that EPA is aware that opacity measurements are inappropriate analytical measures for assessing human health effects from exposures related to particulate matter, even assuming the particulate matter creating the opacity being measured has any attendant health effects at that level of exposure. APCA recommends strongly that EPA provide documentation that opacity measurements are a surrogate or a direct measure of human health effects.

Comment Id	Document Number	Comment
1519	ckdpL0002	Comment: Inaccuracies in individual air damage case summaries include the following: [First Bullet] Hercules Cement Comoanv. Stockertown, Pennsvlvania. The narrative in Exhibit 5-17 is misleading in that the description of the violation notes emissions from the bag house dust disposal area when in fact, a more accurate interpretation would be emissions from the dust truck loading procedures. Fugitive dusts were observed by a State regulator emanating from the "scope" of our dust load-out system. This practice was not on a continuing basis, but rather on an as-needed basis; therefore, it can be stated this was not a continuous emission. [Second Bullet] Kevstone Portland Cement, Bath, Pennsvlvania. Notice of Violations (NOVs) and consent order cited in the Report relate to State actions associated with enhanced particulate control and monitoring at the stack and do not relate to the management of collected CKD. [Third Bullet] Giant Cement. Harlevville, South Carolina. There were no opacity violations on kilns 4 and 5. The Consent Order regarded fugitive emissions from the clinker handbag and storage shed, and not a CKD waste management unit. [Fourth Bullet] Lafarae Corporation. Alpena. Michigan. There have never been excessive emissions from the pug mill or pelletizer. The reference to this is false. Secondly, there were excessive emissions from the dropping of pellets onto the disposal pile, but the circumstances around this are important: (1) This was in the initial start-up and was never indicative of long term operations. (2) It is not proper to site 76.67% opacity since a certified test was never done by MDNR. (3) The conveying equipment in question has been removed and replaced to improve the handling operation; it is no longer in existence. (CKRC 717) [Fifth Bullet] Holnam, Inc., Ada, Oklahoma. The information reported is accurate and complete. Holnam corrected the situation by providing additional controls on fugitive dust during CKD unloading at the dust storage area. (CKRC 717) Response: The Agency disagrees that the instances cited do not relate to CKD. Where damages are traced to malfunctions in the handling equipment, that equipment manages CKD waste. Environmental releases that either directly involve CKD waste, or involve CKD waste as a contributing factor, meet the Agency's criteria for proven damage. The Agency did not consider many NOVs because the releases could be traced to equipment that handled materials other than CKD waste. In RCRA, Congress mandated that the Agency not simply assess damages to human health, but also damages to the environment. In all air damage cases, the State believed it had sufficient information to issue a Notice of Violation. NOVs meet the Agency's criteria for proven damage. APCA Response: APCA reasserts its objection to the use of NOVs as a representation of "proven damage."

Comment Id	Document Number	Comment
1534	ckdpL0002	Comment: In the Report, EPA followed the same decision rationale that it employed in the last two special waste reports under the Bevill Amendment. If present management practices do not pose threats to human health or the environment, the risk of future threats is even lower, given the increasing stigma of managing industrial wastes. Further, a conclusion of no or minimal threats based on actual data should not be overridden by overly conservative hypothetical models that predict the possibility of such threats. To the contrary, the near or complete absence of observed damage or injury from mismanagement of a waste tends to show that those models are unrealistic. A negative response to the first inquiry, based on empirical data, should conclude the inquiry. (CMA LO03) Response: The potential risks projected by the Agency's modeling studies are not generally contradicted or denied by real world data. In general, little or no real monitoring data exists in the vicinity of cement plants to determine quantitatively the degree of direct water-born or air-born or indirect food-chain exposures that may be experienced by nearby residents or ecosystems [Emphasis Added]. This is the main reason for using modeling as a principal tool for risk assessment, and EPA does not agree that the work performed in the RTC was overly conservative in the context and for the purposes that it was performed. The Agency is unaware of any conclusion of no or minimal threats based on actual data. The Agency did receive in comment on the RTC a substantial number of citizen complaints from many different parts of the country alleging damages or potential damages from CKD mismanagement at a number of different locations. APCA Response: APCA has noted elsewhere in this report a significant amount of actual monitoring data is available to EPA from state agencies, federal rulemaking dockets and through APCA member companies. These data could and should be used in support of more realistic characterization of risks from exposure to CKD.
1536	ckdpL0002	Comment: EPA's conclusion that risks from CKD are negligible is not supported by the existence of numerous damage sites. The empirical evidence indicates that current hazardous waste CKD practices pose a 14% or greater risk for environmental damage and a 2% or greater risk for resulting contamination that leads the site to be listed as a Super-fund site. (The commenter based these calculations on the number of sites with documented damages or that are Superfund sites compared to the total number of sites EPA examined for the Report.) (MS 142) Response: As evidenced by the preceding comments and responses, the Agency did not think that it had concluded that all risks from CKD at all plants are negligible. Rather, the Agency has concluded that potential risks from CKD and current management practices are variable and site specific across the industry [Emphasis Added]. EPA is cognizant of the Super-fund sites, since these were included in the RTC chapter on documented damages. Both the damage cases and EPA's expanded risk assessment (including risk screening and an analysis of karst terrain issues) presented in the September 1994, technical background documents indicated potentials for risks to human health and the environment via several pathways. APCA Response: APCA notes that facility risks that are "variable and site-specific" are perhaps better managed at the state level, given the variation in environmental conditions across the states.
55	ckdp00015	The site-specific nature of individual facilities. Each facility that manages CKD differs with respect to such factors as geology, climate, volume of CKD managed, rainfall, process and operational practices, proximity to communities, etc. It is difficult to envision a broadly scoped rule outlining requirements that either might not apply to a specific state or region, or would be impossible or infeasible to achieve due to a factor that is out of anyone's control.

Comment Id	Document Number	Comment
276	ckdp00019	Concerns Regardina Use of Data a. Inappropriate Reliance on Modeled Estimates in Lieu of Actual Data: The Agency repeatedly uses modeled estimates when actual data are available or obtainable-particularly for the food chain exposure it cites as being of greatest concern. Such use of models incorporates a significant degree of uncertainty. When available, actual data are preferable in order to meet EPA's own objectives of conducting a risk assessment that is "as realistic as possible" and avoiding the unnecessary introduction of significant additional uncertainty into the risk assessment process. For example, EPA indicates on page 45636 that the "Agency's database on dioxin levels in CKD was not extensive enough to conduct a large-scale study." Nonetheless, EPA concludes that "cancer risk levels due to dioxins are also possible," apparently based not on actual data but on extrapolation of limited data taken at five sites several years ago. The Agency appears to concede that its database is not large enough to support rulemaking, and that the suggestion of risk is only derived from limited modeling and a series of inadequately tested assumptions. In fact, the actual data would suggest that any possible risks from CKD are limited to past practices at a very few sites, but that even this possibility could not be proven with the current data. Limited modeling of a selected set of data is not an adequate basis for claiming real or potential harm nationwide, and it is certainly not an adequate basis for federal rulemaking. Dioxins should be excluded from consideration until actual measured samples from the food chain of concern show otherwise.
277	ckdp00019	EPA goes on to say its "risk modeling also estimated potential exceedances of non-cancer thresholds via indirect exposure to the toxic metals cadmium, chromium, thallium and lead, which are present in CKD." This statement contains several points that require clarification. These compounds are present in CKD and also in soil, coal, and many other common materials, because cement and cement kiln dust are derived from crustal materials. Because it is the dose that defines a poison, it is not appropriate to describe these metals as "toxic" without describing the exposure concentrations and circumstances that would cause these metals to exert a toxic effect. There is no information presented anywhere in the documents to suggest that CKD contains toxic concentrations of these compounds. There is also no discussion of the background concentrations associated with these compounds to help put the nature of these risks into appropriate context. Finally, EPA again relies on modeled estimates instead of actual measurements in its efforts to characterize risk "as realistically as possible."
278	ckdp00019	The same is true of modeling as opposed to measuring particulate matter. EPA states on page 45636 that its model-based "analysis" that PM10 from "uncontrolled CKD waste management units could exceed EPA's health-based fine particulate NAAQS at plant boundaries and potentially at nearby residences." As stated on FR 45637, EPA concludes that on the basis of modeling-rather than actual ambient air measurements- "about 18 people [out of 3.4 million the EPA estimates live within five miles of all U.S. cement plants] may be exposed to airborne PM10 concentrations in excess of the NAAQS." The Agency, however, does not provide any measurements of PM10 in ambient air near any cement facility, despite the ready existence of such data. Therefore the claim of "evidence of possible risk to human health due to the fine particulate nature of inhaled dust" (FR 45650) is without factual basis, and the subsequent discussion about the adverse effects associated with exposure to PM at levels unrelated to CKD exposure is irrelevant and misleading. Many thousands of tons of CKD that have accumulated at facilities throughout the United States, and the impact of this rule will be significant. Therefore, it would have been appropriate to take some samples at any of these facilities to determine the extent to which the model can predict offsite exposure to particulate matter and develop such evidence. These data could be compared to existing data in Texas and elsewhere, including at EPA's particulate matter monitoring stations throughout the United States. This comparison would demonstrate that despite what modeling results may predict, residents are not being exposed to levels of particulate matter above regulatory thresholds, and that no action should be taken on the basis of EPA's modeled prediction of possibly 18 people at risk in the country. The results of CKD resuspension are so inappropriately estimated as to render them useless. Further, as many of EPA's modeling assumptions are based on past, not current, CKD management practices, it is acknowledged that EPA is unlikely to be able to recreate the worst-case scenarios it relied on in these support documents to be able to validate these assumptions. In sum, the particulate matter modeling presented by EPA does not represent current or actual conditions, and does not provide an adequate technical basis for rulemaking.

Comment Id	Document Number	Comment
279	ckdp00019	The EPA repeats the same error with agricultural applications of CKD, stating on page 45636 that "screening-level [i.e., modeling] analyses of agricultural use described in the RTC and NODA suggest that some CKD, at plausible application rates, contains sufficiently high concentrations of metals and dioxins to cause food chain risks." Here again the Agency, to meet its own goal of estimating risks "as realistically as possible," would need to base its assessment of risk on actual samples taken within the food chain in areas where CKD has been applied liberally and frequently. Instead EPA relies on models intended only as surrogates for actual data when such does not exist. Significant volumes of CKD have been applied for beneficial use over many decades. Moreover, media to sample the exposed food chain is readily available. Therefore, it is not appropriate for the Agency to allow modeling of the food chain to supercede actual measurements when such data are or obtainable. Once again, EPA has chosen to rely on uncertain and scantily supported models when actual data exists. This is particularly true when historical experience would suggest that the predicted risks significantly exceed actual conditions, as is the case with predicted risks from CKD exposure versus actual experience. b. Lack of Data to Review in Support of Modeled Estimates EPA notes at FR 45666 that the Agency "requests public comments on all aspects of the risk assessment.. .and on all aspects of the methodology used to establish protective levels for hazardous constituents in CKD used agriculturally." Although this report addresses many aspects of the risk assessments and methodology, a complete review was not possible due to the lack of supporting data and files available in the docket for this rulemaking. As discussed in the attached SRI report (Attachment L), these missing data were requested and determined not to exist in EPA files. Given the importance of the rulemaking, APCA concurs with EPA's stated intent to "undertake revisions to the risk assessment based on recommendations received through the peer review process as well as comments received from the public" (FR 45666). This will allow EPA to recreate these files and make them available for public review and comment. c. Deficiencies of the Particulate Matter Risk Assessment EPA submitted a Technical Background Document on the Population Effects from Exposure to Airborne Particles from Cement Kiln Dust Waste. According to FR 45637, the Agency included consideration of both the existing NAAQS for coarse particulates and a "new NAAQS proposed for fine particulates," and included summary tables showing "PMz.~ standards" and " exceedence of the PM2.5 NAAQS." As EPA is aware, discussion of the NAAQS for PM2.5should be deleted in light of its having been remanded by the U.S. District Court, or at least presented for informational purposes only and not as "standards" that had been "exceeded" in these modeling exercises. d. Deficiencies of the Risk Assessment for CKD Used as Agricultural Soil Amendment The same documents used to prepare the PBRA were used as the foundation for the Agency's draft evaluation of CKD used as an agricultural soitamendment.20 It therefore suffers from the same difficulties in data use and interpretation outlined in this report and in particularly in the attached review of the PBRA. As a result of the deficiencies in the underlying documents, it will be necessary to revise the risk documents on which they are based, including the agricultural soil amendment risk assessment. On the basis of this report, EPA is proposing to include for regulation under RCRA CKD that is used as a liming agent on agricultural fields unless such CKD meets specified levels for concentrations of arsenic, cadmium,. lead, thallium, and dioxins and furans (FR 45661). According to EPA, " CKD contains toxic metals and chlorinated dioxins and furans which can, at high exposure levels, present adverse human health effects" and proceeds to discuss the assessment of "reasonably anticipated adverse effects" it conducted to "individuals" from the use of CKD as a liming agent. (FR 45661) Unfortunately, EPA presents no evidence that these levels are either "high" or would result from a plausibly realistic exposure scenario. All assessment of risk to "individuals" turns out to be modeled extrapolations of□□ the risk estimates developed in the underlying documents. The only circumstances under which these reportedly " high exposure levels" are achieved are to subsistence farmers and their children when they are exposed via the food chain to the highest recorded levels of metals in CKD. There were no exceedences of risk for the home gardener or the subsistence fisher in any of these modeled scenarios, and even the "exceedences" were not significantly above established risk thresholds. In some cases, they were not exceedences at all.*' The highest cancer risk was estimated to be 2 x IO' 5 for subsistence farmer indirect exposure to 80.7 mg/kg arsenic in CKD. The greatest non-cancer risk estimate of 4.0 was due to the subsistence farmers child's indirect exposure to 450 mg/kg thallium in CKD (assuming the summary tables are accurate□□ reflections of the underlying spreadsheets, which could not be confirmed).** In its calculation of dioxin risk, EPA appears to be relying on conclusions reached in its 1994 draft Health Assessment Document for 2,3,7,8-TCDD and Related Compounds ("Do Not Cite or Quote"). The Agency fails to address, however, the controversy surrounding these assumptions and the effects of these assumptions on the overall uncertainty of the results.23 For example, in the CKD support documents, the assumption is made (by assigning dioxins a carcinogen slope factor) that dioxins are in fact human carcinogens. By setting an allowable limit of exposure to dioxins in CKD equal to the background level of dioxins in soil, EPA makes the assumption that levels greater than background levels are unacceptable.24 Any change in either of these assumptions would have a significant effect on the allowable levels calculated for exposure to dioxin in CKD, and should be presented as part of any rulemaking. In light of the assessment of EPA's conclusions presented by the authors upon whose data EPA bases its assumptions, it would seem the Agency's estimates of dioxin risk should be reevaluated. Consistent with Agency policy, it should include a quantitative presentation of uncertainty that accurately reflects the effects of these assumptions.25 There are also significant errors in the dioxin exposure modeling that substantially□□

Comment Id	Document Number	Comment
		overestimate risk, as shown in the attached Scientific Resources review of the PBRA that should be corrected in this revision.
280	ckdp00019	e. Reliance on Outdated Information: On page 45635 of the Federal Register, under 3) The Need for CKD Management Standards - Documented Evidence of Damage, the Agency notes that "despite state regulations, damages continued to occur with current (i.e., as of 1994) CKD management practices." As noted in other responses to this rulemaking, much has been accomplished in the last six years by both the industry and the individual states to the point where this information appears to be outdated. Indeed, EPA presents no information or evidence that "damages" continue to occur as of 1999 or today. Thus the need for CKD management standards based on current practices is called into question. f. Incomplete Presentation of Data and Risk Information: The EPA does not go to sufficient lengths to put the data it does have in proper□□ context, which can lead the statements to be easily misinterpreted or incompletely understood by those without access to considerable additional background information. For example, the EPA states on page 45636 that " Volatile and semi-volatile compounds were generally not found in CKD." It is difficult to assign any importance to a statement about what was detected in CKD or not without knowing whether or not those detection limits were above or below thresholds of concern. EPA continues: "However, levels of 2,3,7,8-substituted dioxin and 2,3,7,8-substituted dibenzofuran were detected, although the concentrations were generally low." Even in an abbreviated preamble, this statement must be qualified with detection limits-whether they were higher or lower than those for volatiles and semi-volatiles-and a characterization of what is meant by "generally low." That opportunity was missed in 78 the following sentence, when EPA describes the levels as ranging from non-detect up to□□ 9 ppt - but does not mention this equates to background levels of dioxins measured throughout the United States. As this information is included in the section titled The Need for CKD Management Standards, some explanation is required for why levels of dioxins that are equal to background levels in soils in pristine areas of the United States require the imposition of management standards. Without it, the reader is left with the□□ impression that 9 ppt, the highest value measured by EPA, is somehow of known health or environmental significance and that management standards are therefore advisable. g. Inappropriate Use of Data: There appear to be several instances of incorrect use of data, most of which□□ could not be verified without the additional supporting electronic files. The SRI review (Attachment L) of the PBRA discusses the problems associated with the use of dioxin high-end data versus AP-42 mean data. Table 8-l of the Agricultural Soil Amendment risk assessment appears to use the highest measured values in its calculation of risk as a soil amendment instead of a distribution values, and does not provide the source of these measurements. The effect of incorrect use of data on the risk assessment results (and subsequent rulemaking) is unknown, and lack of ability to review the underlying data does not meet EPA's criterion of transparency in risk assessment. Sources and uses of data in the risk assessments submitted in support of this and any other rulemaking should be clearly defined and resubmitted. 2. Concerns Regarding lnteroretation of Data a. Incorrect interpretation of "Baseline Risks": EPA states on page 45635 that "one of the primary objectives of the [I9941 risk assessment [prepared in support of the Report to Congress] was to evaluate, as realistically as possible [emphasis added], the baseline risks of CKD management at actual sites. This was accomplished by focusing initially on a sample of case-study cement plants and offsite beneficial use scenarios that appeared to provide a reasonable representation of the universe of sites were CKD is disposed and used. For each sample site, EPA evaluated the potential for CKD contaminants to be released into the environment, migrate to possible human and ecological receptors through a number of media and pathways (e.g., groundwater contamination, surface water runoff to streams or lakes, windblown dust) and result in exposures and adverse effects. This evaluation included a combination of quantitative analyses designed to document and describe major factors contributing to (or limiting) risks, and quantitative modeling designed to estimate the magnitude of risks. "Although laudable in its intent to characterize the risk assessment as quantitative, realistic, and thorough, this description does not adequately or accurately characterize the nature of modeling EPA did to identify these baseline risks. First of all, actual and "realistic" site sampling data were not used, despite the fact that these facilities have been operating for years. Offsite soil, air and water should have been sampled if true "baseline" risks and impacts from CKD at these facilities are to be understood. Instead, the Agency relied on predictive models, which introduce orders of magnitude of uncertainty into the conclusions and tend to create upwardly biased results. ignoring actual measurement data is not consistent with the intent to evaluate these sites "as realistically as possible." Nevertheless, there appears to be sufficient evidence to suggest the Agency's screening level risk modeling contained enough serious errors and inappropriate inputs to invalidate portions of it. Although realistic characterization of baseline risks may have been the stated intent, that goal was clearly not achieved. Furthermore, as practices have changed significantly since 1993, the baseline risks are no longer adequate justification for current rulemaking. This challenges the entire premise of the rulemaking.

Comment Id	Document Number	Comment
287	ckdp00019	Region VII. The attempts cited above to find subsistence farmers and fishers around industrial generally looked at areas within 3-5 km from the facility, at plants that have hot, high-velocity, elevated emissions sources. The risks estimated in the RA for the CKD rule are driven in part by the results for assumed subsistence farming activities, even though the existence of such individuals has been studied over a wide geographic area and is considered unlikely. In contrast, the concern with CKD is generally limited to ground-level or near-ground-level fugitive emissions, which would impact a much smaller area. This means subsistence farming activities, in order to be within the area of maximum impact, would have to be within approximately 500 meters of the CKD being managed - not the five mile radius of socioeconomic census tract data within five miles of the facility as reviewed in the PBRA. If subsistence farming activities have not been found even within five miles of an industrial location, the probability is vanishingly small that a significant number will be found within 500 meters, and that the fact or likelihood of their existence should be evaluated by EPA in support of its rulemaking. In many cases, and as shown by the CKD support documents (particularly when corrected for errors noted in the separate review of that report), even 500 meters is not sufficient to allow fugitive emissions to leave the plant property. If such a person does not or is not likely to exist at the area of reasonable maximum exposure, then there is no pathway of exposure and no risk to be calculated. As the degree of certainty with which that receptor's risk is non-existent approaches 100%, and the exposure scenario no longer meets EPA's criterion of plausibility as a reasonable maximum. Thus the question becomes: does EPA know of any individuals that produce 100% of their primary foodstuffs on land within the primary impact zone for a significant emissions source? If so, such data should be made available in the docket as part of this rulemaking. In fact, an EPA report- " Race, Ethnicity and Poverty Status of Populations Living Near Cement Kilns in the United States--did not appear to locate any, and concluded that "the data do not suggest that specific minorities or poverty-level□□ populations [presumably including subsistence farmers and fishers] are overly represented at the national level [near cement kilns]." (FR 45673)□□ If there is no evidence that this is a common occurrence, then subsistence farmers and fishers should be looked at no differently than other special subpopulations under current EPA risk assessment guidance. For these groups, it is assumed that the inherent conservatism in accepted RA protocols is adequately protective, but there is always a door left open to evaluate unique characteristics of selected populations once□□ they are identified. Indeed, this is exactly the sort of site-specific information that should be evaluated-either for specific sites, or as a basis for national rulemaking.

Comment Id	Document Number	Comment
288	ckdp00019	ii) Recommendation: Unless site-specific evidence or high probability of subsistence farmers can be found-and these populations are deemed at risk of significant exposure to CKD-it is recommended that the RA for the CKD rule be amended to remove the exposure scenarios dealing with subsistence activities. At the very least, the RA should be reissued to show the estimates of risk to more plausibly exposed populations. The proposed rule should be modified to be consistent with the findings in the reissued RA. c. Influence of Risk Management Decisions on Risk Assessment Outcomes: The above concerns indicate that risk management decisions may be influencing risk assessment outcomes, such as by the required use of defined receptor scenarios regardless of whether such an individual actually exists. Policy decisions are also clearly influencing the characterization of scientific data, as shown by the earlier discussion of Chapter 9 of the dioxin Health Assessment Document. The practice of allowing undue influence of policy into the creation of the underlying scientific report is contrary to the longstanding NRC guidance, which endeavors to keep the two processes as distinct as possible.36 The increasing tendency of policy decisions to influence risk assessment outcomes is to be avoided if an accurate characterization of risk is to be achieved and informed decision making is to result. 4. Concerns Reqardino Epa Conclusions: It is perhaps obvious that if the data and assumptions underlying the risk assessment are in question, the resulting conclusions must therefore also require review. In addition to the above comments, which have the net effect of challenging the foundation of EPA's conclusions regarding the need for federal regulation of CKD, we would like to draw EPA's attention to concerns we have with the following major conclusions. a. Inaccurate Characterization of Risks from Particulate Matter: EPA indicates on page 45636 that "potential risks from exposure to particulate matter were also indicated" in its effort to characterize "baseline" risks through modeling. The Agency's screening risk assessment approach for particulate matter contains errors sufficient to render its conclusions moot, and reflect deviations from regardless of whether such an individual actually exists. Policy decisions are also clearly influencing the characterization of scientific data, as shown by the earlier discussion of Chapter 9 of the dioxin Health Assessment Document. The practice of allowing undue influence of policy into the creation of the underlying scientific report is contrary to the longstanding NRC guidance, which endeavors to keep the two processes as distinct as possible.36 The increasing tendency of policy decisions to influence risk assessment outcomes is to be avoided if an accurate characterization of□□ risk is to be achieved and informed decision making is to result. 4. Concerns Reqardino Epa Conclusions: It is perhaps obvious that if the data and assumptions underlying the risk assessment are in question, the resulting conclusions must therefore also require review. In addition to the above comments, which have the net effect of challenging the foundation of EPA's conclusions regarding the need for federal regulation of CKD, we□□ would like to draw EPA's attention to concerns we have with the following major conclusions. a. Inaccurate Characterization of Risks from Particulate Matter: EPA indicates on page 45636 that "potential risks from exposure to particulate matter were also indicated" in its effort to characterize "baseline" risks through modeling. The Agency's screening risk assessment approach for particulate matter contains errors sufficient to render its conclusions moot, and reflect deviations from to groundwater and air that are persistent and continuous, 40 and for which no□□ requirements exist to address the risks posed via these pathways. How does this position reconcile with the Agency's statement on page 45636 that it "predicted a negligible impact to groundwater and consequently low or negligible risk to human health via ingestion of contaminated drinking water"? The only reasonable interpretation is that EPA believes standards are required because in the case of 1) and 2) above that regulations and monitoring do not exist --not because of actual damage to the environment. Claim 3) of "damages" to the environment are partly or completely□□ based on past practices at sites that have since been remediateb. Finally, most of these cases of "damages" were not actual harm, but opacity violations, as described elsewhere in this report. We conclude that EPA has not adequately made its case for the need to regulate CKD. The summary statements that "management of CKD in unlined landfills, under water or in direct contact with the ground water table, without fugitive dust controls, or when used for agricultural purposes without proper controls is like/y to pose significant risks to human health and the environment" and that "the CKD management standards proposed today will protect the public from human health risks and prevent□□ environmental damage resulting from current CKD disposal practices" (FR 45642, emphasis added) have in no way been proven by the documents submitted in support of the proposed rulemaking.
289	ckdp00019	Inaccurate Characterization of Risks from Particulate Matter: EPA indicates on page 45636 that "potential risks from exposure to particulate matter were also indicated" in its effort to characterize "baseline" risks through modeling. The Agency's screening risk assessment approach for particulate matter contains errors sufficient to render its conclusions moot, and reflect deviations from policy and guidance that contravene EPA policy as well as Executive Order 12866 cited on FR 45669.

Comment Id	Document Number	Comment
290	ckdp00019	Inaccurate Characterization of Risks via Indirect Exposure: In its attempt to characterize CKD risks "as realistically as possible," EPA states on page 45636 that it "modeled health risks via indirect food-chain pathways (i.e., risks from ingestion of contaminated crops, livestock or fish)," estimating risks as high as 10-3 for "highly-exposed subsistence farmers and fishers." For the many reasons and errors cited above, we challenge the conclusion that this characterization is either "realistic" or "as realistic as possible," or that regulation of CKD is required as a result of these significant errors. We concur with EPA's intent to revise the risk assessments in accordance with comments it receives.
356	ckdp00021	EPA's design and operating standards for CKD management are overly restrictive, will lead to unnecessary costs without corresponding benefit to the protection of human health and the environment, and should be modified to reflect the actual risks posed by CKD to human health and the environment.
372	ckdp00023	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.
406	ckdp00025	Holnam believes that scientific evidence demonstrates the low risk of nearly all CKD being generated. Unwarranted arbitrary "management-based" hazardous waste listing suggested in the proposed rule is a contradiction to reasonable criteria used for other wastes, where the physical hazardous waste characteristics are evaluated. The "characteristic hazardous waste" criteria already in place are adequate for determining threat posed to human health and the environment by CKD. Promulgation of the proposed rules would incite unjustified fear and confusion within the regulated community and the public. Existing RCRA regulations adequately address responsible management and classification of characteristic hazardous wastes, and existing particulate standards provide for control of dust emissions under the Clean Air Act.
469	ckdp00028	Hydrogeologic Investigation Results An extensive hydrogeologic investigation of the existing CKD disposal site has been conducted under the RFI. It has been concluded that groundwater flows from the surrounding areas through the CKD pile toward the quarry. Groundwater beneath the quarry floor, and hence the CKD pile, is under confined (artesian) conditions. No evidence of groundwater or surface water contamination related to the CKD pile has been discovered. These data are consistent with EPA's conclusion that CKD disposal sites pose negligible risk via the drinking water pathway (Preamble, 64FR45636, column 1). A map of the site and groundwater monitoring results are included in Appendix A.
490	ckdp00030	The overall impact of the proposed rule to Idaho would appear to be minimal. Of the proposed options, the Idaho Division of Environmental Quality is in support of EPA's proposed Cement Kiln Dust (CKD) Rule. This proposed rule appears to provide adequate protection to human health and the environment while providing some flexibility to owners/operators of CKD landfill facilities. In addition to setting landfill disposal requirements, the proposed rule will require CKD used as liming agent on agricultural fields to meet specified levels for concentrations of certain hazardous constituents. This will help ensure that CKD used as liming agents will not negatively impact human health and the environment.
516	ckdp00033	The CKD proposal is based on insufficient scientific environmental impact evidence to set a regulation.□□ □□ The overall risk assessment is overestimated and based on insufficient representative data.
787	ckdp00048	…EPA requests comments on the need for part one of the two-part test, and solicits information on whether there is any CKD that passed part one, but failed to pass part two, the comparison with health-based limits.□□ □□ Unless the information is presented that CKD passed part one and failed part two, TNRCC concurs with the elimination of part one.

Comment Id	Document Number	Comment
793	ckdp00053	EPA has not demonstrated that current risks to health or the environment associated with CKD justify listing CKD as a hazardous waste under any circumstance.□□ □□ The Proposed CKD Rule is unnecessary in the face of other existing state and federal regulatory programs and authorities and the fact that cement industry practices discussed in the Proposed CKD Rule have changed substantially since EPA published its Report to Congress on Cement Kiln Dust, December 30, 1993 and first decided to regulate CKD in 1995, Regulatory Determination on Cement Kiln Dust, 60 FR 7366 (Feb. 7, 1995).□□ □□ If ... EPA elects to promulgate a final rule that lists CKD as a hazardous waste under certain circumstances, the proposed rule is so seriously flawed as to be impractical and unworkable.□□ □□ For all of the foregoing reasons ..., listing CKD as a hazardous waste, as proposed in the Proposed CKD Rule, would be arbitrary and capricious, an abuse of discretion, and not in accordance with the law. □□ □□ In light of the inaccuracies in the methods used by EPA in its projections of CKD risks, the trends toward reduced volumes of CKD produced and landfilled, and reduced incidents of mismanagement, and the increasing applicability of other regulatory programs, the burden on the cement industry and beneficial users of CKD associated with the proposed listing of CKD as a hazardous waste is grossly out of proportion to the actual risks posed by CKD. Therefore, EPA should withdraw the Proposed CKD Rule in its entirety, or in the alternative, withdraw the proposed hazardous waste listing and limit this rulemaking to promulgation of voluntary disposal standards and strengthening of other regulatory programs to address environmental concerns associated with CKD.
977	ckdp00060	EPA appears to have found that the principal identifiable health risk, other than direct inhalation, is via the food chain pathway. This pathway is affected only by stormwater runoff, which EPA has found to be adequately regulated, 64 Fed. Reg. at 45674, and via air deposition, Health Risk TBD at 2-4. EPA has not shown what proportion of the estimated health risk comes from air deposition, or that the air pathway alone is significant compared with the surface water pathway. If, in fact, the air pathway is the principal source of unregulated risk due to CKD, EPA should explain why air emissions from CKD piles, hauling, and equipment are better regulated through the Proposed CKD Rule rather than other regulatory programs, such as under the Clean Air Act and SIPs.
978	ckdp00060	EPA projects that a certain number of people will be exposed to PM10 from CKD at levels exceeding the National Ambient Air Quality Standard (NAAQS). EPA offers no evidence that incidents of NAAQS exceedances predicted by EPA have occurred. SLC believes that, if nonattainment of the NAAQS occurred with the frequency predicted by EPA in the Health Risk TBD, facilities causing such nonattainment would be required to take measures under other regulatory programs to control such emissions. EPA should explain why the stringency of regulation of CKD emissions under such situations would be greater under the Proposed CKD Rule than under the existing authority conferred by the Clean Air Act, 42 U.S.C. § 7502(c) and SIPs.
979	ckdp00060	In EPA's Health Risk TBD, EPA concludes that NAAQS for PM10 are exceeded by CKD within 500 meters of many U.S. cement plants. This determination was made by rationing other facility's estimated emissions to estimated emissions from Holnam's Ada OK, plant, and assuming that NAAQS was exceeded by the Ada plant. The Ada plant was assumed to be a "representative facility." Health Risk TBD at 3-21. Thus, EPA assumed that these plants manage CKD in the same way Holnam's Ada, OK plant did in 1991. For these facilities, the distances from the facilities within which the NAAQS exceedances occurred were estimated as a proportion of the Ada plant's NAAQS exceedance distance. When EPA made these approximations, EPA assumed that the majority of plants were significantly different from the Ada plant in terms of CKD hauling distance, road conditions, and exposed CKD landfill surface. For example, although Ada'sCKD is hauled 6 miles on a paved highway, EPA assumed that the model Ada plant hauled CKD on a 1-mile unpaved road. Thus, EPA sought to compare most cement plants to an existing cement plant, but then changed the existing cement plant to reflect what EPA considered more typical. This resulted in EPA's conclusions as to the number NAAQS exceedances and population exposures among the modeled plants. However, SLC is wetting all its CKD thus EPA's comparisons with the Ada plant even less consistent with reality in the field. EPA should explain why its estimates of NAAQS exceedances, based on a now nonexistent CKD disposal facility, accurately reflect the environmental impacts of so many different cement plants. EPA should also explain why, if fugitive dust controls were installed in 1991 at the Ada plant, all of the estimates of PM10 exceedances need not be redone.

Comment Id	Document Number	Comment
1107	ckdpL0003	EPA's Risk Estimates At Most Can Support a Site-Specific Approach - In one of EPA's risk assessment reports [footnote 34], the individual cancer risk estimate for subsistence fishers due to arsenic exposure is recorded as approximately 1 x 10-4. Arsenic is the constituent EPA finds primarily responsible for any CKD cancer risk, and this risk estimate is among the highest, we have been able to locate in any EPA risk documents in the docket.[footnote 35] This risk estimate was derived for Plant J, one of the five cement plants that EPA subjected to detailed modeling. The arsenic concentration in CKD at Plant J used as input for this risk estimate was 13 ppm. Risk estimates for subsistence fishers exposed to arsenic for the other four plants that EPA modeled were orders of magnitude lower. Those risk estimates ranged from 5 x l0-10 to 1 x 10". However, the concentrations of arsenic in CKD used as inputs to the models for these plants were 20 ppm, 15 ppm, 6.9 ppm, and 3.8 ppm.□□ □□ Based on EPA's own estimates, it appears obvious that the cancer risk for subsistence fishers who are "most exposed" to CKD is not at all proportional to the concentration of arsenic in CKD for these five facilities. For example, EPA projected that exposure to 15 ppm results in a cancer risk of 1 x 10-10 at one of the five facilities, while exposure to 13 ppm results in a cancer risk of 1 x 10-4 (six orders of magnitude greater) at another of the five facilities. Such disproportionate results reflect the overwhelming significance of facility-specific characteristics for determining CKD risk. We discuss that significance in more detail later.□□ □□ Similar gaps, errors or apparent leaps of faith seem present in other aspects of EPA's risk assessment. To note one example, for population noncancer effects, EPA predicts that at most 1040 people, among the 3.4 million living within 5 miles of all cement plants nationwide, will be exposed indirectly above a hazard index level of 1.0. EPA characterizes these noncancer population effects as ". less than one-tenth of one percent, from among the 3.4 million within five miles of all cement plants nationwide.." Actually the calculated value is three times lower than one tenth of one percent (1040/3400000 = 0.0003 or three one-hundredths of one percent).□□ □□ Moreover, EPA assumed that a substantial part of this exposed population consisted of recreational fishers, despite available data indicating that little or no recreational fishing pertinently occurs in waters within five miles of the modeled plants which EPA predicted to generate the greatest exposures. A recent review documented that more than half the recreational fishers whom EPA included among these 1040 "individuals at risk" are in fact not exposed to CKD; and that with other appropriate adjustments the total number of potentially exposed individuals associated with a hazard index level above 1.0 is no more than 333---less than one one-hundredth of one percent of the target population of 3.4 million.[footnote 36]□□ □□ EPA's treatment of CKD inhalation risks indicates similarly erroneous or unconnected reasoning. In Preamble Section II.C.4.a, EPA estimates, for all 108 cement facilities, that a national total of between 18 and 4 118 people living within 500 meters of cement plant boundaries may be exposed to airborne PM (CKD) concentrations in excess of an applicable NAAQS.[footnote 37] This range is the result of a projection based on an estimate of only 18 people who may be exposed above the NAAQS limit within this 500-meter "most exposed" zone, at 82 cement facilities for which facility-specific data were available. The non-linear disparity between 18 total potentially-exposed individuals at over 75% of these plants and the projected 225-fold increase in potentially-exposed individuals from adding the further one-quarter of plants raises the same questions---and, if correct, emphasizes the likely dominance of site-specific factors---as noted above.□□ □□ EPA does not interpret its projected inhalation range as representing either a large or a small risk. Other recent review has identified input errors in EPA's air dispersion modeling whose correction would significantly reduce this projected range.[footnote 38] Due to resource constraints we could not go beyond those recent efforts. We note, however, that facilities which bum only conventional (NHW) fuels can and do recycle proportionately far more of their CKD to the process (or for beneficial use) on average, and those NHW recycling rates appear to be increasing over time. Thus NHW facilities should not be lumped with HW facilities for purposes of projecting exposures to airborne PM blown from CKD piles.[footnote 39]□□ □□ Similarly, in Preamble Section VI.B EPA summarizes the indirect individual risks it projected from metals and dioxins in CKD used beneficially for agricultural purposes as a pH buffer in crop-producing soils. EPA focuses on four receptors: farmers, fishers, home gardeners, and children of farmers. EPA purports to propose risk-based limits/kg on the concentrations of five constituents: Cd, Pb, Tl, arsenic, and dioxins. The two greatest risks cited by EPA to justify these proposed limits are individual cancer risk due to arsenic uptake in the foodchain, and non-cancer risk due to thallium uptake in the foodchain.[footnote 40] CKD with concentrations that exceed these limits could not, if the limits were finalized, be used as a liming agent on agricultural soils. Indeed, under the proposed rule such CKD would apparently become a listed hazardous waste, along with everything derived from it, if so used. □□ □□ However, EPA uses its agricultural-application risk projections in sharply divergent ways. Unlike the proposed agricultural limits for the other four CKD constituents, the arsenic proposed limit appears to be based solely on a comparison to average background levels, notwithstanding that this is the single most important potential risk

Comment Id	Document Number	Comment
		which EPA identifies for agricultural uses.□□ □□ Specifically, EPA's proposed limit for arsenic is 13 mg/kg, which EPA characterizes as adopted because the risk-based approach results in a cut-off level for arsenic that is less than background concentrations of arsenic in liming agents or in soils in many (though not all) parts of the country. EPA indicates that such below-background CKD concentrations therefore do not present a cognizable increase in foodchain exposures or risks. This outcome appears to concede that local background levels may be dispositive with respect to the potential risks posed by land-applied CKD, although (for reasons that are unclear) EPA's risk assessment declines to consider this approach for other potential CKD exposures and risks that appear equally site-specific.[footnote 41]□□ □□ We support EPA's suggestion that any limit for arsenic in CKD used for agricultural purposes should at minimum be no lower than the background level of arsenic in soil where that CKD is applied. [footnote 42] It seems obvious that absent special circumstances, no nontrivial increase in potential exposures or risks would be implicated by such an approach. However, for identical reasons this site-specific approach should also apply to each of the other CKD constituents for which EPA attempts to set limits in this area. That result could allow broader use of CKD for agricultural purposes (and therefore could progressively reduce any potential exposures or risks posed by non-beneficial disposal of CKD in onsite dust piles), without compromising health or environmental values.□□ □□ Footnote 34: TBD to RTC, "Human health and environmental risk assessment in support of the Report to Congress on cement kiln dust waste, 1993," Appendix 8-1.□□ Footnote 35: EPA focused on subsistence fishers as one of the three or four population segments likely "most exposed" to CKD indirect foodchain effects.□□ Footnote 36: Calculations are based on information reported in SRI, n. 27 above.□□ Footnote 37: Insofar as this estimate may rest on a more stringent recent PM-2.5 NAAQS (rather than the previous PM-10 NAAQS) whose "safe" or acceptable ambient levels were judicially remanded to EPA as not rationally supported over three months before publication of the proposed CKD rule, it seems questionable. Our risk discussion in text generally assumes applicability of the PM-IO standard but is independent of this additional issue.□□ Footnote 38: See, e.g., SRI as cited above.□□ Footnote 39: This seems particularly true because the proposed rule seeks to impose management standards only on newly deposited CKD, which is merely a small fraction of all CKD that has been "wasted" and disposed in piles. Thus only projected risks from newly-deposited CKD should enter into any risk assessment that purports to justify the proposed rule.□□ Footnote 40: Draft Risk Assessment for Cement Kiln Dust Used as an Agricultural Soil Amendment, June 16, 1998. RTI. Prepared for OSW-EPA.□□ Footnote 41: In fact, EPA's background-risk-based approach for arsenic levels in agricultural CKD appears to go further---it could apparently allow land application of CKD containing 13 mg/kg, even where local soil levels of arsenic may be less. EPA's proposed limit is based upon total arsenic concentrations in agricultural lime ranging from <1 to 13 mg/kg, a slightly different "background risk" approach.□□ Footnote 42: We express no opinion on whether background levels should be the maximum allowable concentrations. See, e.g.,□□ APCA Comments of February 17, pp. 77.

Comment Id	Document Number	Comment
1117	ckdpL0003	EPA's Risk Assessment Confirms that Sound CKD Risk Management Will Inevitably Be Site-Specific-Virtually every aspect of EPA's risk assessment approach recognizes the significance of site-specific information in determining (and hence deciding whether or how to address) exposures and risk. For example, EPA's screening approach differentiates faci,lities where risk is minimal from facilities where risk may be appreciable. EPA's decision to use five different cement facilities to obtain initial risk profiles that could be expanded to the whole population of cement facilities makes clear that a generic cement plant does not exist. That five-plant threshold decision also acknowledges that even where CKD constituent concentrations at two facilities may be the same, their exposure pathway characteristics and resulting risks to potentially exposed individuals and populations may differ substantially. In addition, that multi-plant approach tacitly acknowledges (as EPA has acknowledged elsewhere, but apparently ignores for risk assessment purposes) that facilities which burn only conventional fuels typically recycle much more of their CKD to the process and may more readily sell or mine for beneficial uses what CKD they have stored or disposed.□□ □□ Thus, independent of CKD constituent concentrations, the suite of potential exposures to new and previously deposited CKD at these non-burner facilities would seem to be dramatically reduced vis-a-vis potential exposures posed by HW-burning plants. Any significant increases in burner CKD constituent levels would in general tend to increase this differential in site-specific exposures and risks.□□ □□ We conclude, based in part on our review of the risk assessment reports in the docket and our new analysis of CKD constituents, that: (a) due to the variability in CKD constituents across even facilities that burn only conventional fuels, even a properly-conducted risk assessment based on five facilities is likely too limited adequately to project risks for the diverse population of cement plants; (b) a fully-transparent EPA risk assessment likely would make this (and other significant shortcomings) clear; (c) the exposures and resulting risks posed by "improper" management of newly-disposed or -stored CKD will be dominated by such site-specific factors as weather, distance to groundwater, density or sparseness of adjacent populations, and percentage of CKD diverted from "ND piles" for recycling or other ends; (d) the only obvious "national" risk factor is HW fuels transported long distances for disposal in certain cement kilns although whether those increases elevate risks to levels of concern will also be site-specific; (e) potential risks associated with exposures to stored or disposed CKD can best be addressed, and may only reasonably be able to be addressed, though a site-specific risk management strategy; and (f) the "two dust" approach should be a cornerstone of any such site-specific strategy, because "two dust" either embodies or requires consideration of many of the factors implicit in a site-specific strategy.
1128	ckdpL0003	5 . EPA’s risk assessment does not support this proposal. As detailed in the Technical Comments (pp. 1 1-18), the CKD risks identified by EPA appear to be internally inconsistent, based on erroneous assumptions, and extraordinarily small even if potential overstatements are disregarded.[15] Those risks would tend to be lower still, if model inputs reflected the statistically documented lower total-metals levels of nonburner CKD. In any event, EPA’s methodology and results confirm that the exposures and risks associated with any individual CKD pile will be dominated by a wide range of site-specific factors. Since meaningful risk assessment must be site-specific, risk management should be site-specific as well.□□ □□ [Footnote] 15: The risk “assessment” (several partial assessments produced over five years, partly summarized in a draft 1997 document labelled “draft---do not cite or quote” and never finalized) also contravenes the EPA Science Advisory Board’s forthcoming authoritative risk assessment/risk management guidance. That document repeatedly emphasizes transparency, addressing potential-risk subsets that comprise serious real-world risks, and assessing aggregate systemic risks rather than small slices of exposures viewed in isolation. See, e.g., “EPA Integrated [Risk] Management Report Due Soon,” Daily Env. Report A-4 (Feb. 15,2000); Integrated Environmental Decision Making in the Twenty-First Century, Summary Recommendations and Peer Review Draft (SAB, Integrated Risk Project Steering Committee) (May 1999).

Comment Id	Document Number	Comment
1521	ckdpL0002	Comment: EPA misrepresented cancer risks to humans. EPA's conclusion that 2,3,7,8-TCDD is the most potent carcinogen evaluated by EPA is misleading because there is no direct evidence of carcinogenic effects in humans. Furthermore, animal testing has shown variability in cancer potency in different animal species. EPA should have stated that there has only been evidence of carcinogenic effects in animals. (CKRC 717) Response: The weight-of-evidence classification for 2,3,7,8-TCDD is B2, which qualifies 2,3,7,8-TCDD as probable human carcinogen based on sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans. However, the Agency notes that 2,3,7,8-TCDD is the most potent carcinogen of the dioxins and dioxin-like compounds. In addition, 2,3,7,8-TCDD has one of the highest cancer potency factors for chemicals evaluated by EPA to this time. APCA Response: APCA notes that EPA cites the Agency as the basis for considering dioxin a B2 probable human carcinogen, despite the lack of scientific or widespread consensus on that conclusion as noted elsewhere in this report and as evidenced by the lack of a final Health Assessment Document (a draft was issued in 1994). APCA also notes that there is no cancer potency factor for dioxin included in IRIS, which EPA relies on as the primary reference source for these criteria. APCA believes that EPA must explain the apparent inconsistency and the status of the Agency guidance on the human carcinogenicity of 2,3,7,8-TCDD before any accurate assessment of risk can be formulated.
1523	ckdpL0002	Comment: The CKD Report makes use of indirect risk assessment, a methodology unproven at best, and certainly not one whose reliability merits the methodology's use in a regulatory determination that can easily affect the entire future of an industry. It would appear that EPA has chosen to ignore the cautions of the Agency' s Science Advisory Board that indirect risk assessment, as a methodology, is not ready for application. (AMC LOO5) Response: The Agency acknowledges the concerns raised by the Science Advisory Board concerning the release of the "Addendum to the Methodology for Assessing Health Risks Associated with Indirect Exposures to Combustor Emissions," and agrees that additional efforts to validate and refine this methodology are warranted. As explained in its response to the Science Advisory Board's memorandum, the Agency is continuing its efforts to validate and refine these methodologies [Emphasis Added] through the evaluation of existing data, and to the extent practicable, intends to collect new data to assist in this work ("Response to Science Advisory Board Comments on the Addendum to the Methodology for Assessing Health Risks Associated with Indirect Exposures to Combustor Emissions," memorandum from Carol Browner to the EPA Science Advisory Board, October 1994). While the Agency acknowledges uncertainties associated with the indirect risk estimates presented in the Report, it believes that ignoring these plausible exposure routes could have understated risks associated with the management of CKD to an unacceptable degree. Given the importance of ensuring adequate protection of human health and the environment under RCRA, the Agency believes it was appropriate to incorporate indirect exposure assessment in this analysis. APCA Response: We would appreciate an update on the status of the Agency's efforts to validate and refine this methodology, and how these modifications are consistent with recommendations provided by EPA's Science Advisory Board. There is little evidence that the SAB's recommendations are reflected in the PBRA or risk assessment for CKD as agricultural soil amendment.

Comment Id	Document Number	Comment
1524	ckdpL0002	Comment: EPA's approach conflicts with Congress' clear intent that the risks associated with Bevili wastes be evaluated in a "context-specific" manner, not based on highly conservative assumptions and unrealistic risk estimates. Because the subsistence farming and fishing scenarios are purely hypothetical they cannot be used in this risk assessment. Congress enacted the Bevill Amendment to ensure that stringent Subtitle C controls would not be mechanically applied to Bevill wastes in the absence of a demonstration of "actual risk" to human health and the environment. (SI 853) Response: The Agency's approach does not conflict with Congress' intent that risks associated with Bevill wastes be evaluated in a "context-specific" manner. The assumptions used in this risk assessment are based largely on actual data and likely exposure scenarios. Specifically, the central tendency and high end baseline risk results for the five modeled facilities were based on facility-specific data collected during EPA site visits, through the PCA survey, and from other facility sources where available. For those parameters not available from facility-specific sources, the Agency used databases of regional data such as the Graphical Exposure Modeling System (GEMS) to collect regional data that should be generally representative of site conditions (e.g., for meteorologic parameters). Finally, in cases where site-specific data were not available, best professional judgment based on industry practices and other default values were employed for the remaining parameters needed for the modeling analysis. In general, the Agency used the best available data to estimate high end and central tendency risks in order to account for parameter uncertainty in generating risk estimates for these five facilities. The Agency evaluated several sensitivity analysis scenarios involving upper end or maximum constituent concentrations (based on actual sampling data); high risk CKD pile locations (for example, Exhibit 5-I 8 in the RTC provides an, example of CKD disposal directly adjacent to an agricultural field); and high risk subsistence food consumption exposure scenarios (based on plausible exposures to a subpopulation of individuals living in the rural areas surrounding many cement plants). While the Agency acknowledge in the RTC that these scenarios represented combinations of observed conditions and sampling results that were not observed in combination, it believes that it is plausible that these conditions could be found in combination among existing cement plants [Emphasis Added]. Consequently, the Agency believes that these higher risk scenarios were developed within the context of observed facility characteristics and locations, and given their intent of characterizing the upper tail of potential risks associated with these plants, they represent a fully context-specific analysis in keeping with the intent of Congress. Finally, it is important to note that the Agency bases its regulatory determination on the weight of evidence presented or referenced in the RTC as a whole, and it considers both the results of the analysis of potential danger to human health and the environment and documented damage cases in evaluating potential threats associated with CKD management. Consequently, it would not be appropriate for the Agency to rely alone on documented demonstrations' of actual risk through these subsistence pathways in making its regulatory determination. [Emphasis added.] APCA Response: In light of the Agency's subsequent unsuccessful efforts to locate subsistence farmer and fisher populations near cement plants and the additional data on the implausibility of this scenario provided elsewhere in APCA comments in the cover report, APCA requests this new information be added to EPA's weight-of-evidence consideration of likely exposure scenarios when the risks of CKD are revisited and receptors of concern are selected.

Comment Id	Document Number	Comment
1526	ckdpL0002	Comment: EPA based its terrestrial food chain pathway analysis based on only one actual agricultural field near a facility, while assuming that agricultural fields exist at the other four facilities based on the percentage of agricultural land in their respective counties. Moreover, EPA assumes that the hypothetical fields and grazing lands are located on family farms, though it does not know what crops are actually grown nor how the fields are actually used. These assumptions regarding the existence and location of agricultural fields and pastures greatly exaggerate the potential for CKD constituents to enter the food chain. (SI 853) Response: While the Agency recognizes the rough nature of the assumptions concerning the presence of and distance to agricultural fields, these facilities were generally in rural areas characterized by significant agricultural activity. Consequently, the Agency believes it is reasonable to make assumptions concerning the likely presence of agricultural fields. Based on additional analysis presented in the Technical Background Document for the Notice of Data Availability, the Agency estimated that at least 40 out of the 61 facilities examined had a significant potential for subsistence or backyard farming [Emphasis Added]. APCA Response: APCA would appreciate an update or clarification of which 40 out of 61 facilities had a " significant potential for subsistence or backyard farming," how many facilities were in the subsistence farming vs. backyard farming subsets, and whether EPA believes these figures are still current in light of its subsequent efforts to identify farms near cement plants.
1528	ckdpL0002	Comments: The assumption that the sample plants are representative is not supported from a statistical standpoint. (CWM 685) Mean gross and net CKD generation rates for the sample group may be representative of the industry, but the report does not establish the representativeness of the sample in terms of such factors as physical and chemical characteristics of CKD and depth to ground water. (SI 853) Response: The Agency selected the sample plants so as to reflect a broad range of cement kiln technology types, plant sizes, geographic regions of the U.S., and types of fuel used in the domestic cement industry. Therefore, the Agency believes that the broad range of characteristics provided by the sample plants are adequately representative of the population of CKD-generating plants in the U.S. APCA Response: APCA notes that the first comment was with regard to statistical representativeness, and that the comment appears to be valid (although it was not directly answered). Updates to Agency risk assessments' should include discussion of representativeness of the sample group and associated characteristics.
1533	ckdpL0002	Comments: The commenter knows of no documented subsistence farmers or fishers living within 50 miles of their facilities. (LFC 700) The 1994 Cement Kiln Recycling Coalition Survey found that no facilities reported the presence of subsistence fishermen or farmers adjacent to the facility, nor were there any swimming areas. (CKRC 717) Response: Based partly on these and other comments, the Agency did conduct additional studies, based on available site-specific maps, aerial photographs, and other sources covering approximately 70 percent of U.S. cement plants with active on-site CKD management units, to further evaluate potentials for indirect pathway risks. EPA found that 60 percent of these plants had a lake or stream or both within one half mile, and 80 percent within one mile of an active CKD unit. Almost 60 percent had a rural household and/or a farm field within a half-mile. Comments received from the public on the RTC, regional demographic data, damage case background reports, and information and observations collected during plant visits, also support the conclusion that water-based recreation, fishing, and various forms of agricultural activities are not unusual and are likely to be observed in the vicinity at a significant portion of cement plants. Plant-specific modeling also suggests the likelihood of direct and indirect (foodchain) exposures at some of these facilities. APCA Response: The commenters made highly relevant observations about the lack of nearby subsistence farming and fishing near cement facilities, observations which were not addressed in EPA's response.

Comment Id	Document Number	Comment
476	ckdp00029	Based on the analytical information that we have seen on cement kiln dust (CKD) generated from our three licensed operating facilities, we believe that the levels of contaminants contained in CKD are similar in nature to those found in coal ash, wood ash, foundry sands, paper mill wastes, or steel mill wastes. With the promulgation of the 1993 rules, we now consider all these wastes to be low-hazard industrial waste (i.e., they leach less than ten percent of the hazardous waste limits when using appropriate leaching tests). Low-hazard industrial waste can be disposed in a landfill that has less stringent design standards than a landfill taking more contaminated industrial waste.
1013	ckdpL0001	Attached is Toxicity Characteristic Leaching Potential analyses for four of the five cement kilns in Missouri. At the time of the 1996 sampling, all facilities listed were burning hazardous waste as fuel.
291	ckdp00019	Inconsistent Conclusions Regarding the Need for Management Standards The Agency's data appear to be inconsistent in its findings. For example, EPA states at 64 Fed. Reg. 45637 that it has: . ..determined that current practices are inadequate to limit contaminant releases and associated risks.. . . The Agency believes the following factors warrant additional environmental controls for CKD: 1) the general lack of current regulations applicable to contaminant discharges to groundwater for protection of human health and the environment, 2) the general lack of groundwater monitoring at CKD disposal units, and 3) the existence of damages to groundwater and air that are persistent and continuous, and for which no requirements exist to address the risks posed via these pathways. How does this position reconcile with the Agency's statement on page 45636 that it "predicted a negligible impact to groundwater and consequently low or negligible risk to human health via ingestion of contaminated drinking water"? The only reasonable interpretation is that EPA believes standards are required because in the case of 1) and 2) above that regulations and monitoring do not exist --not because of actual damage to the environment. Claim 3) of "damages" to the environment are partly or completely based on past practices at sites that have since been remediated. Finally, most of these cases of "damages" were not actual harm, but opacity violations, as described elsewhere in this report.
515	ckdp00033	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.□□ □□ Any benefit to health and the environment associated with listing mismanaged CKD as a hazardous waste is negligible compared with the regulatory burden on the cement industry.□□ □□ Listing of CKD as a hazardous waste will discourage its recycling and beneficial reuse, particularly with off-site vendors who may not want to incur the risk of handling a hazardous waste.□□ □□ This proposal will potentially increase the CKD disposed because of its impact on the cost of managing CKD for beneficial reuse.□□ □□ Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.□□ □□ There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of St. Lawrence Cement’s efforts in this regard.
517	ckdp00033	The State of Maryland's regulation of CKD has increased since the time of the EPA's Report to Congress, contrary to EPA's assertion that insufficient state regulations are in place.
655	ckdp00040	Holnam believes that the management standards are counter-productive and were designed based on inaccurate data. These comments demonstrate that CKD should not be classified as a listed hazardous waste, that CKD is already adequately managed by the state, and that the Proposed Rule should not be promulgated.

Comment Id	Document Number	Comment
656	ckdp00040	In 1998 Holnam, Ada landfilled approximately 124,433 short tons of CKD. However, Holnam has been able to achieve significant reduction in CKD generation, and in 1999, landfilled 68,985 tons! As shown in Attachment 1, landfilled CKD has decreased by 50% from 1995 to 1999. This information supports Holnam's assertion that additional regulation of CKD is unjustifiable.
849	ckdp00054	Management controls and monitoring are in place. The Trident plant's "Life of Mine" permit regulates CKD, including ground water, surface, water and fugitive dust. The proposed CKD rule provides an added layer of unneeded regulation.
857	ckdp00054	Additional federal regulation (and listing) of CKD is unnecessary, particularly in light of advances in CKD management practices in recent years and the increasing regulations that address CKD. These regulations include air (including the new NESHAP) and CERCLA and other analogous state programs.
877	ckdp00055	The EPA's assertion that insufficient state regulations for CKD management are in place is not true. Holnam favors reliance on state programs to regulate CKD management. Holnam agrees with EPA's statement that "there may be no need to finalize a Federal program if States with cement facilities that dispose CKD adopt appropriate programs and standards for managing CKD." 64 FR at 45641.
878	ckdp00055	The State of Colorado regulation of CKD has increased in recent years. Holnam has actively sought an amendment to their mining permit to incorporate management standards for CKD. Holnam has been working with the Colorado Department of Natural Resources Division of Minerals and Geology (CDMG) to comply with these regulations.□□ □□ Colorado solid waste laws exempt disposal of on-site generated industrial waste from solid waste regulation. The mine's reclamation plan addresses CKD management with respect to mine reclamation but not with respect to environmental protection. The plant will have enforceable management standards under an amended mining permit for which the plant has actively sought. Groundwater monitoring and fugitive dust controls will be part of the permit. The permit modifications are expected in 2000. The CDMG recently issued a memorandum outlining its policy on CKD management, which is contained in Appendix B. Based on the information presented in this memorandum, the CDMG has the authority to regulate the disposal of CKD to a level equivalent to the EPA. They state that "by exercising existing state authority, [the] Federal rule may be unnecessary." In addition to CKD disposal, Colorado has authority to regulate emissions of fugitive dust from cement plants, including haul roads, transfer points and landfills. In fact, this facility has applied for a Title V permit that addresses many of these issues.

Comment Id	Document Number	Comment
893	ckdp00056	3. Comments in Support of State-Run Program for CKD Management□□ □□ Holnam favors reliance on state programs to regulate CISD management. Holnam agrees with EPA's statement that "there may be no need to finalize a Federal program if States with cement facilities that dispose CKD adopt appropriate programs and standards for managing CKD." 64 Fed. Reg. at 45641. Contrary to the EPA's finding in the 1993 Report to Congress, 1995 Regulatory Determination, and in the proposed rule, CKD regulation has increased in recent years, as is evident in states such as Mississippi. The MDEQ has an established permitting program, and has issued the Artesia a Draft Permit for disposal of CKD. The permit requirements include, among other items, design plans, operating plans, closure and post-closure plans, and ground water monitoring. The development of such a regulatory program further supports the adequacy of a state-based regulation of CKD and the lack of need for a federally mandated program. Additional regulation would be redundant and burdensome.□□ □□ In addition to CISD disposal, the MDEQ has authority to regulate emissions of fugitive dust from cement plants, including haul roads, transfer points and landfills. In fact, this facility has applied for a Title V permit that addresses many of these issues.□□ □□ Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the "state-based" approach proposed by APCA, 64 Fed. Reg. at 45640, and the use of a memorandum of understanding or enforceable agreement, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, either the memorandum of understanding or the state-based approach would be preferable to the Proposed CKD Rule.
908	ckdp00057	3 . Comments in Support of State-Run Programs for CKD Management□□ □□ The Holnam-Fort Collins plant favors reliance on state programs to regulate CKD management. Holnam agrees with EPA's statement that "there may be no need to finalize a Federal program if States with cement facilities that-dispose CKD adopt appropriate programs and standards for managing CKD." 64 Fed. Reg. at 45641. Colorado solid waste laws exempt disposal of on-site generated industrial waste from solid waste regulation. The mine's reclamation plan addresses CKD management with respect to mine reclamation but not with respect to environmental protection. The plant will have enforceable management standards under an amended mining permit for which the plant has actively sought. Groundwater monitoring and fugitive dust controls will be part of the permit. The permit modifications are expected in 2000.□□ □□ The CDMG recently issued a memorandum outlining its policy on CKD management, which is contained in Appendix B. Based on the information presented in this memorandum, the CDMG has the authority to regulate the disposal of CKD to a level equivalent to the EPA. They state that "by exercising existing state authority, [the] Federal rule may be unnecessary."□□ □□ In addition to CKD disposal, Colorado has authority to regulate emissions of fugitive dust from cement plants, including haul roads, transfer points and landfills. In fact, this facility has applied for a Title V permit that addresses many of these issues.
916	ckdp00057	2.2 Summary of Holnam - Fort Collins Plant Future CKD Management Activities□□ □□ The plant has applied for and is negotiating a modification to its mining permit to implement enforceable management standards under the Colorado mining laws. Groundwater monitoring and fugitive dust controls will be part of the permit. The permit modifications are expected in 2000. Monitoring wells were installed for the purpose of determining whether a nearby mined area would be suitable for CKD disposal (see Section 2.3). The CDMG has approved a Technical Review for the use of the proposed landfill site for CKD disposal. An amendment to the current quarry permit is in progress, which will include the portion of the manufacturing process within the plant where CKD is generated into the quarry property boundaries. The new disposal area will not be used until the CDMG approves an amendment to the mining permit with groundwater monitoring and fugitive dust controls.

Comment Id	Document Number	Comment
940	ckdp00058	2.2 Summary of Holnam - Dundee Plant Future CKD Management Activities□□ □□ The Dundee plant landfill has been permitted for an approximate 20-year site life. The management practices are not anticipated to change, as they are similar to those included in the proposed rule.
829	ckdp00053	2. Other regulatory programs are adequate to regulate CKD management. Holnam opposes any regulatory alternative that would list CKD as hazardous waste under any circumstance. EPA has not shown that listing CKD as hazardous waste is warranted based on evidence that there are demonstrated health risks that cannot be regulated by other federal and state programs.□□ □□ The principal potential health risks found by EPA associated with CKD came from indirect risks through the food chain caused by runoff from CKD piles and air deposition, and direct inhalation risks. Risk TBD, Chapters 2 and 3. These risks, however, were not based on field data.□□ Moreover, EPA has never found that groundwater contamination has contributed to direct or indirect health effects. "[EPA] predicted only low or negligible risk potential from on-site management of CKD via conventional direct pathways of constituent transport and exposure (drinking water, incidental direct ingestion, chemical inhalation) via ground water contamination, surface water runoff to streams or lakes, or windblown dust." Regulatory Determination at 7370. Thus, runoff and air deposition are the only pathways for which EPA has ever estimated any risk. EPA elected not to draft regulations to control runoff, finding that "storm-water run-off regulations will be adequate to protect from exposures via the overland runoff routes." 64 Fed. Reg. 45674. Owing to the SIPS, Title V permit process, and the Portland cement NESHAP's applicability to aspects of cement manufacturing_related to CKD, the Agency has proposed CKD management standards that will not measurably enhance control of fugitive air emissions from CKD handling and disposal. If the only migration pathway for CKD constituents not federally regulated is the groundwater pathway, and EPA has not demonstrated' any actual health risk associated with CKD via the groundwater pathway, then EPA is not justified in implementing rules that would list CKD as hazardous waste. Thus, listing CKD as hazardous waste would be arbitrary and capricious.
843	ckdp00053	2.3 Hydrogeologic Investigation Results□□ □□ Holnam's Dundee plant landfill is located in thick (up to 40 feet) glacial till deposits overlying the limestone bedrock (Dundee Limestone) that is quarried for use in the cement manufacturing process. The hydrogeologic investigation that was performed as part of the permitting and licensing process established that the clay was only partially saturated due to the effect of long-term dewatering in the. adjacent quarry. The hydraulic conductivity of these saturated clay zones was low (10 -8 [to] 10 - cm/sec). The underlying limestone exhibited hydraulic conductivities in the 1 x 10 [?] cm/sec range. No structures indicative of karst terrain (collapse features, caves, pipes, etc.) were encountered.□□ □□ The results of the ongoing quarterly monitoring are included in Appendix A. The results indicate that the landfill is not impacting ground-water quality.
868	ckdp00054	Hydrogeologic Investigation Results:□□ □□ The Trident plant performed a hydrogeologic investigation to evaluate the performance of the existing and closed CKD landfills on site. A total of nine monitoring wells and two surface water sampling stations have been monitored since 1994. A map of the site and well locations is presented in Appendix A. A summary of water quality analyses is also presented in Appendix A. These data show that the results did not exceed background ground-water quality on-site, nor did they exceed the Montana Numeric Water Quality Standards (MWQS) for the constituents analyzed. These data demonstrate the lack of impact from the Trident plant's CKD landfill operations, despite the fact that the landfill is not equipped with a basal liner.

Comment Id	Document Number	Comment
884	ckdp00055	The Holnam-Portland plant voluntary installed monitoring wells at the landfill site to evaluate whether CKD disposal was affecting ground-water quality. A map of the landfill site showing monitoring well locations is presented in Appendix A. Cuts 6 and 8, located in the south-central portion of the quarry, were most recently used for landfilling of CKD. Cut 12 is the current disposal area. A total of three monitoring wells were installed to measure the ground-water quality and physical properties. Three more downgradient wells will be installed as a requirement of the permit modification request. The monitoring wells have been sampled twice since they were installed in September 1998. In addition, CKD leaching tests were performed to compare to ground-water quality results. Finally, the infiltration of rainfall was simulated using the HELP model to predict the likelihood of leachate generation and migration from the CKD landfill units.□□ □□ The findings of the hydrogeologic investigation were as follows: [First bullet] The CKD predictably leaches high dissolved solids concentrations, in particular sulfate, plus a high pH. Heavy metals were either not present at method detection limits, or at very low concentrations (see Appendix A). [Second bullet] The ground-water table on-site is estimated to be 30 to 50 feet below the base of the CKD, and is encountered in the Code11 Sandstone unit. [Third bullet] Ground water flows toward and discharges to the Arkansas River, located west of the landfilled area. The hydraulic conductivity of the Code11 Sandstone is estimated to be 1 x 10-6cm/sec based on slug tests performed on the monitoring wells. [Fourth bullet] Ground-water quality results (Appendix A) indicate that the CKD is not affecting ground-water quality. The pH of all the wells monitored is near neutral, and dissolved solids concentrations in downgradient wells are similar to upgradient wells. The lack of elevated levels of these indicator constituents and the low potassium to sodium ratios indicates that leaching of the CKD is not significant, if it is occurring at all. The HELP modeling confirms that leachate is not likely to be released from the CKD.
899	ckdp00056	In January 2000, the Artesia plant received a Draft Permit for a CKD Management Unit from the MDEQ (see Appendix A), and expects to receive a final permit later this year. The management unit is designed utilizing the chalk formation encountered at the base of the existing quarry as the basal liner, plus a leachate collection system designed to maintain leachate heads of less than one foot. A pugmill will be installed at the plant to moisture-condition the CKD prior to transport to the landfill. The CKD will be spread and compacted. Additional dust control measures will be utilized as necessary to control and limit dusting in this area. An automated sprinkler system and water truck are available for this control measure.□□ □□ A hydrogeologic investigation was completed to support the design of the new CKD landfill at the Artesia plant. The investigation report is included in Appendix B. A mined out area of the existing quarry (Selma Chalk formation) was selected as the preferred location for the new landfill. Soil borings and monitoring wells were completed in the vicinity of the new landfill site in order to evaluate background ground water and the hydraulic properties of the landfill site. Soil borings completed outside the limits of the quarry encountered ground water above the elevation of the base of the quarry. Thus as defined in the proposed rule, the base of the landfill will be below the shallow water table on-site. However, the hydraulic conductivity of the chalk formation, which extends 430 feet below the base of the quarry, averaged 5.4 x 10-7 cm/sec based on multiple testing data taken from the quarry floor. The lack of seepage from the sidewalls and base of the quarry is evidence of this low value. Thus the presence of this shallow ground water is not a design concern. In fact, the MDEQ has waived future ground-water monitoring requirements because of the low hydraulic conductivity of the Selma Chalk formation. The first usable aquifer site is located approximately 430 feet beneath the site. A map of the area to be landfilled showing boring and monitoring well locations, representative boring logs and summaries of hydraulic conductivity are contained in Appendix B of this document.

Comment Id	Document Number	Comment
939	ckdp00058	2.1 Summary of Holnam - Dundee Plant Current CKD Management Activities□□ □□ The Dundee plant landfilled approximately 72,000 tons of CKD in 1999 Disposal rates have actually increased compared to previous years because the CKD leaching process was terminated in the latter half of 1998, which reduced the volume of CKD that could be reintroduced into the kiln system. CKD is pneumatically conveyed from the baghouse to a storage silo. From the storage silo, the CKD is either moisture conditioned through the addition of water in the pugmill or distributed for off-site beneficial reuse. The moisture conditioned CKD is discharged from the pugmill to a concrete containment area, and then transported via trucks to the landfill. The CKD is spread and compacted with a bulldozer.The landfill has been operating since August 1998 and is licensed under the MDEQ industrial waste landfill regulations (Type III)(R 299.4301-43 19). It is constructed with a geomembrane liner underlain by up to 40 feet of low permeability natural clay soils, and contains a leachate collection system. The leachate generated from the landfill is used to supplement the makeup water for the kiln. A copy of the license is included in Appendix A, as well as a map of the landfill site.□□ □□ The landfill license includes requirements for ground-water, surface water, and leachate monitoring. Monitoring wells are monitored quarterly for all of the indicator parameters contained in the proposed rule, plus additional water quality parameters, as required by the State of Michigan R 299.43 18).
1055	ckdpL0003	[N]o risks purportedly posed even by the outmoded CKD management practices analyzed by OSW reach a level that remotely justifies uniform national regulation---the greatest risk identified by OSW's extremely conservative "protective" screening analyses is an excess cancer risk of less than 0.04 cases per lifetime in the populations most exposed to CKD. To the extent we can disentangle and professionally assess the EPA risk assessment on which this proposed rule relies, the risks posed by all stored or disposed CKD appear vanishingly small. [New paragraph] Moreover, all available data analyzed as a whole indicate that risks posed by CKD generated while not burning hazardous waste will in general be still lower than this very low all-industry risk level, because the total constituent concentrations in such CKD will be lower overall. Indeed, the most robust subset of these data appears unequivocally to demonstrate that all statistically significant differences in hazardous-constituent concentrations between "burner" and "non-burner" CKD show higher concentrations---for some constituents such as Lead (Pb), average concentrations up to four times as high---in "burner" CKD. [New paragraph] Finally, the risk assessment itself strongly supports a site-specific approach. The wide deviations in pathways, exposures and risks it documents, even among "representative" example plants, can only be reconciled by a conclusion that neither CKD "risks" nor the means necessary to address them are able to be generalized or can responsibly be treated as though they are uniform. This conclusion is further supported by the Coalition's well-documented measurements of CKD from its own members. That data set shows similarly wide deviations in average and median concentrations, even among operations that burn exclusively conventional fuels.
1066	ckdpL0003	Our analyses demonstrate the following: 1. Metals concentrations in CKD and the magnitudes of risk pertinently associated with exposures to these metals tend uniformly to be lower in CKD generated when burning conventional fuels compared to CKD generated when burning hazardous waste-derived fuels. Where data were sufficient to permit the most statistically meaningful conclusions, they showed statistically significant higher concentrations in burner CKD. This may be true even for Thallium (Tl), which prior analyses indicated might be higher in non-burner CKD. Deviations from this general conclusion appear explainable by factors that are unrelated to hazardous waste-derived fuel; are themselves site-specific; and on a site-specific basis, imply greater probabilities of being regulatorily benign. 2. CKD metals concentrations and the magnitudes of risks associated with exposure to these metals are highly dependent on facility- and site-specific characteristics. 3. EPA's risk assessment for exposure to CKD does not justify a national regulatory program.
1067	ckdpL0003	1. Metals concentrations in CKD and the magnitudes of risk pertinently associated with exposures to these metals tend uniformly to be lower in CKD generated when burning conventional fuels compared to CKD generated when burning hazardous waste-derived fuels.

Comment Id	Document Number	Comment
1068	ckdpL0003	Database-We created an omnibus electronic database of approximately 100,000 CKD metals concentration measurements based on CKD samples collected from cement plants over the past 10 years and analyzed for "total metals" concentrations of the twelve RCRA "Appendix VIII" constituents. We obtained these data from sources found in EPA's CKD dockets and from other sources that were referenced in docket materials, but were not physically present in the docket.* We summarized these data and conducted statistical analyses, focusing on the potential differences in metals concentrations of CKD resulting from operations that burn only conventional (NHW) fuels compared to CKD resulting from operations that burn hazardous waste derived (HW) fuels. These summaries and analyses clearly demonstrate lower metals concentrations in CKD generated by operations that burn NHW fuels.
285	ckdp00019	Concerns Regarding Assumptions Used in the Risk Assessments: a. Significance of Risk versus Benefits of Proposed Rule: The Agency estimates on page 45637 the national risk of developing cancer due to current CKD management practices. Its estimate of current risk -- based on models rather than actual data that are likely to produce lower estimates - is 0.006 excess cases of cancer per year, or 0.04 additional cases of cancer over a 70-year period. That is the highest risk the Agency estimates will result due to exposure to current [as of 1994] CKD practices via indirect pathways. This is not the increased risk to one individual, but the entire number of additional causes of cancer its model predicts will potentially occur in the total population of 3.4 million people residing within five miles of all cement plants nationwide over the next seventy years.
1095	ckdpL0003	3. EPA's risk assessment for exposure to CKD does not justify a national regulatory program.□□ □□ To the extent we can interpret the 1997 "draft, nonquotable" EPA population risk assessment in the docket, it strongly supports our conclusion that site-specific factors dominate any CKD risks that are legitimately identified. It also supports our recommendation that because the constituent concentrations and related risks of NHW CKD will tend to be significantly lower on average than the admittedly low concentrations and risks associated with all (including HW-derived) CKD, "non-burner" CKD risks should only be addressed on a site-specific basis that takes this additional factor squarely into account. Thus the risk assessment not only fails to justify a presumptively uniform national regulatory program for "safe" management of stored or disposed CKD; it tends affirmatively to justify the opposite result.□□ □□ EPA's risk assessment for CKD exposures, intended to support the proposed CJSD management rule, is a complex, multifaceted analysis of human exposure to CKD through direct and indirect exposure pathways. It is presented in a variety of complex documents prepared at different times between 1992 and 1997. These are cursorily cross-referenced, rather than integrated, in the most recent document.□□ □□ We attempted to review the risk assessment, but our review was limited by EPA's poor documentation and, in places, erroneous threshold or input assumptions. [footnote 27] Nevertheless, we have concluded the following:□□ 1. Risks associated with. exposure to stored or disposed CKD generated by facilities burning HW or NHW fuels appear to be negligible. However, this conclusion tends to apply more strongly to facilities burning only NHW fuels, in part because exposures associated with NHW CKD piles will more likely approximate local background levels (and therefore will not "increase" baseline risks).□□ 2. To address CKD risks that might, today or in the future, rise to levels of concern, the most efficient risk management strategy is a site-specific strategy.□□ 3. The approach EPA used to conduct its risk assessment necessarily was a site-specific approach. That approach, together with the most logical aspects of the risk assessment, implicitly supports a site-specific risk management strategy.□□ □□ Footnote 27: One such assumption was use of a year-round steady wind of nearly 60 mph to model the cement plant that turned out (not surprisingly) to have the highest projected windblown CKD exposures from “entrained dust.” Decades of actual wind data for this site showed average winds of under 10 mph, with even recorded peak gusts far less than EPA’s assumption. For a detailed discussion of major shortcomings in EPA’s “fmal” 1997 CKD risk assessment, including the Agency’s apparent failure to test any modeled exposures projected by intentionally overconservative screening models against readily-available real-world data, see Discussion and Technical Review of the Technical Background Document “Population Risks from Indirect Exposure Pathways and Populations Effects from Exposure to Airborne Particles from Cement Kiln Dust Waste, ” Scientific Resources, Inc. (Attachment L to comments submitted by the APCA on Feb. 17,200O).

Comment Id	Document Number	Comment
179	ckdp00016	EPA's own data and conclusions on leachate from CKD samples support the expansion of restrictions on rates of application of CKD to include total chromium, barium, and selenium. Under highly alkaline conditions with little or no buffering, chromium and barium are predicted to be more mobile and may move through the unsaturated zone to reach ground water. (See page 45638). Elevated levels of barium and chromium were detected in ground water underlying CKD disposal units at a number of facilities. (Id.) Samples analyzed for selenium and barium exceeded the respective Toxic Characteristic Leachate Procedure (TCLP) standards for these constituents, albeit to a lesser degree than for samples of lead and cadmium. (Exhibit 3-25 in Section 3.3.3 Leachable Concentrations in the Report to Congress). In addition, elevated levels of chromium were detected in surface and ground water samples collected at both Holnam Incorporated in Mason City, Iowa and at Southdown, Inc. in Fairborn, Ohio. Elevated levels of chromium were also found to be a constituent of concern at Texas Industries in Midlothian, Texas. (Exhibit 5-2 Summary of documented Water Damages on pages 5-6 through 5-7 of the Report to Congress).
421	ckdp00025	These results were used in both hydrogeologic modeling and air dispersion modeling to determine the necessity of a leachate collection system and to determine if CKD particulate leaves the Holnam property, respectively. The hydrogeologic modeling scenarios for CKD landfill operations indicate the potential to utilize the site without the need for synthetic liners and/or leachate collection systems (Appendix 2). Air dispersion modeling indicates that the CKD particulate concentrations modeled are well below National Ambient Air Quality Standards (NAAQS) and the concentrations would not be visible emissions. In addition to the air modeling, Holnam operated an air monitoring facility less than 400 yards off the plant property and approximately 900 yards north of the active part of the CKD pile for more than one year. The monitoring data also confirm that the particulate concentrations were less than 40% of the annual average standard, and only 40.4% of the maximum hourly standard during periods of maximum direct exposure.
743	ckdp00048	EPA's own data and conclusions on leachate from CKD samples support a recommendation by the TNRCC to expand restrictions on rates of application of CKD to include total chromium, barium, and selenium. Under highly alkaline conditions with little or no buffering, chromium and barium are predicted to be more mobile and may move through the unsaturated zone to reach ground water. (See page 45638). Elevated levels of barium and chromium were detected in ground water underlying CKD disposal units at a number of facilities. (Id.)□□□ □□□ [II.C.4. New Analyses, (b) Additional Ground-Water Monitoring]
744	ckdp00048	Samples analyzed for selenium and barium exceeded the respective Toxic Characteristic Leachate Procedure (TCLP) standards for these constituents, albeit to a lesser degree than for samples of lead and cadmium. (See Exhibit 3-25 in Section 3.3.3 Leachable Concentrations in the Report to Congress). In addition, elevated levels of chromium were detected in surface and ground water samples collected at both Holnam Incorporated in Mason City, Iowa and at Southdown, Inc. in Fairborn, Ohio. Elevated levels of chromium were also found to be a constituent of concern at Texas Industries in Midlothian, Texas. (See Exhibit 5-2 Summary of documented Water Damages on pages 5-6 through 5-7 of the Report to Congress).

Comment Id	Document Number	Comment
1525	ckdpL0002	Comment: Without access to the model used to modify the outputs from MMSOILS, it is impossible to verify assumptions used to model the risk results presented in the Report. (CKRC 717) Response: Because of the large number of multimedia concentration estimates generated by the MMSOILS model in the CKD risk modeling analysis, the Agency developed a risk post-processing program to calculate human health risks from the ambient concentration data produced by MMSOILS. This simple computer program was programmed in SAS programming language and can be run on any computer equipped with SAS. The program combines the intake and toxicological assumptions presented in the Technical Background Document with the MMSOILS exposure concentration outputs to estimate risks. By following the approach presented in this document, combined with the additional descriptions in the referenced Regulatory Impact Analysis for the Proposed Subpart S Corrective Action Rule, the public can verify these risk results without difficulty. APCA Response: EPA is incorrect to state that the risk results can be verified, with or without difficulty. Not having access to the original MMSOILS files prevents the review of these materials for substantial errors and omissions. As discussed in the attached review of the PBRA, APCA was able to obtain a small and assorted selection of the input files used to run the MMSOILS model and found substantial errors. For example, EPA's MMSOILS dioxin scenario modeling uses the potency slope factor of 156,000 for 2,3,7,8 TCDD in its calculation of all 17 congeners that make up the TCDD TEQ concentration. This overestimates resulting risk by a factor of 2 to 1000 depending on the congener mix model. EPA did not in 1995, and now perhaps cannot, make available critical work product for peer review in order to assess the presence and potential impact of embedded errors. No amount of following the EPA's described approach will identify its hidden errors and their effects.
560	ckdp00034	The ETC did not find a consolidated report prepared by EPA in the administrative record which combined all of the CKD data used to make conclusions in the proposed rule. EPA makes the assertion that there is no difference between CKD from hazardous waste burning cement kilns and CKD obtained from kilns that only fire fossil fuels. To make such a conclusion, EPA should have compiled all of the data into one study and prepared a statistical evaluation to support this point. No such study could be found in the docket to the proposed rule. The CKD data was scattered among many documents, which suggests that EPA did not adequately compile the data for further statistical evaluation.
561	ckdp00034	The ETC did complete a compilation of all of the CKD data scattered throughout the docket. Sources for this compilation include the report on the EPA Region VII survey, data from the 1993 Report to Congress on Cement Kiln Dust, and data submitted by the PCA and by the Non-Hazwaste Burner CKD Coalition. The data was compiled into two groups: kilns that burn hazardous waste and kilns that do not. It can be concluded from the above evaluation that CKD from hazardous waste burning cement kilns is higher in concentrations of lead, cadmium and chromium. This is also true for the dioxin levels. The average dioxin concentration in CKD from hazardous waste burning cement kilns is 180 times higher than the dioxin levels found in CKD from kilns that do not burn hazardous waste.
569	ckdp00034	Attachment I: September 15, 1997 Data Package and Comments Submitted by the Environmental Technology Council Providing Data showing higher concentrations of metals in CKD from hazardous waste burning cement kilns.
687	ckdp00044	Hazardous waste burning plants should be sampled and studied further to determine if the hazardous waste fuel can cause CKD at these plants to exhibit hazardous waste characteristics.

Comment Id	Document Number	Comment
1048	ckdpL0003	Based on the first-ever systematic review of a comprehensive database properly integrating all available individual measurements (about 100,000 such measurements) of RCRA Appendix VIII constituents in CKD, the total constituent concentrations in--- and the presumptive risks associated with---land management of burner CKD are both different and tend uniformly to be greater than for non-burner CKD. Where data of sufficient quality were available to allow formal evaluation, they demonstrated statistically-significant higher constituent concentrations in burner CKD versus non-burner CKD---in every case, and for every constituent, where a statistically significant difference in concentrations was demonstrated. Moreover, even if these constituent concentrations and associated theoretical risks could somehow be equated, any real-world exposures and risks will be dominated by site-specific factors that make irrational any effort to manage CKD through presumptively-uniform "minimum" national requirements.□□□ □□□ These conclusions are supported by EPA's own risk assessment, insofar as that effort can be interpreted. They are also consistent with other comments we reviewed, particularly recent comments of the Environmental Technology Council (ETC). They are consistent with ASTSWMO comments urging that CKD management be addressed solely through state Subtitle D solid-waste programs, in large part due to the regulatory discretion required by divergent site-specific factors that dominate potential risks. From our perspective they are not drawn into question--- much less refuted---by EPA's Preamble or docket items on which the Preamble relies. This is true with respect to CKD constituent concentrations, damage cases, and projected risks.
1063	ckdpL0003	To fully and most helpfully respond to EPA, the Coalition (among other things) retained Price Associates, Inc. (PAI) to combine in one integrated database, statistically qualify to the extent data descriptors (e.g., for how much weight should be given to particular types of CKD samples) were available, and appropriately analyze all CKD measurements that were part of the record in this rulemaking. These data had never before been combined in one analysis. This undertaking constitutes new information.
1065	ckdpL0003	Nevertheless we ultimately created an omnibus electronic database of approximately 100,000 CKD constituent (metals) concentration measurements based on CKD samples collected from a wide range of "burner" and "non-burner" Portland cement plants over the past 10 years. We obtained these data from sources found in the CKD dockets, and from other sources that were referenced in docket materials but were not physically present in the docket.[footnote 7] We used this database in its entirety---as well as specific, well-defined subsets of data possessing greater statistical weight and newly corrected for certain previous errors---for our analyses. □□ □□ Footnote 7: A list of sources is Attachment 1 to this memo. For example, we were unable to find a complete record of CKD metals concentration measurements for samples collected at Ash Grove's Chanute KS and Louisville NE facilities when CKD was generated during burning of conventional fuels, although extant correspondence indicates that EPA staff had access to this entire database and internally adjusted it. Less importantly, we were unable to find individual measurements of CKD samples collected or compiled from one Coalition member by the Coalition's previous consultants in 1996. We were able to use available summary statistics for these data sets to approximate the distribution of missing individual measurements.

Comment Id	Document Number	Comment
1069	ckdpL0003	Descriptive Statistics-We used the total database to produce descriptive statistics and related descriptive plots that provide information about the differences between HW CKD and NHW CKD. We have not applied statistical tests to descriptive statistics derived from the total database because the docket does not contain sufficient information for many of these measurements to assure that formal statistical tests would be valid.[footnote 9] As we noted in preliminary comments for the Coalition dated February 17, 2000, data quality descriptors are missing for many of the measurements, particularly within earlier data sets on which EPA relied. For example, some database entries characterized as individual CKD measurements may be averages of individual measurements, some "multiple" measurements may be merely laboratory splits or replicates of a single given CKD sample, and many measurements may be less than applicable detection limits, but the detection limits and how "non-detects" are treated in reported samples are not clearly specified. [footnote 10] Moreover, in addition to the type of fuel used, the measurements and their interpretation are potentially affected by other site-specific factors. These factors include differences in feed (e.g., local limestone), CKD recycling practices, kiln configuration, and kiln operating characteristics. As a result, formal statistical tests applied to the whole database without accounting for these factors may be meaningless or seriously misleading.□□ □□ However, descriptive statistics and descriptive plots based on the whole database are informative for suggesting the differences that may be expected. Such descriptive statistical procedures are well recognized and frequently used, in the environmental arena and elsewhere, to assess data patterns as a precursor to more formal statistical analysis.□□ □□ Footnote 9: Formal statistical tests of differences between HW CKD metals concentrations and NHW CKD metals concentrations for well-documented subsets of the database are presented later in this report.□□ Footnote 10: See, for example, the Coalition's October 1996 Report to EPA, Appendix C.

Comment Id	Document Number	Comment
1071	ckdpL0003	Descriptive Differences-Our descriptive analysis focuses on measurements of total metals in samples of CKD, as generated. [footnote 11] Table 1 displays the average and median concentrations of the twelve RCRA Appendix VIII metals measured in all docket CKD samples, presented by fuel type (i.e., HW or NHW). These parameters, which are measures of central tendency, indicate three notable differences between HW CKD and NHW CKD. Antimony (Sb) and lead (Pb) concentrations are consistently lower in NHW CKD than in HW CKD, while thallium (Tl) concentrations are higher in NHW CKD.[footnote 12]□□ □□ A different type of descriptive comparison ---one that addresses degree of variability in constituent concentrations and the frequency and potential importance of extreme concentrations---can be extracted from box plots.□□ □□ We constructed box plots from the entire omnibus database of CKD measurements. They are displayed for each Appendix VIII metal in Figures 1A through 1 L. The vertical axis in each plot is the concentration in parts per million (ppm). The shaded box encloses the middle 50% of the measurements. The horizontal line through the middle of each box is the median of all measurements for that metal. The vertical lines and dots above and below the box represent extreme measurements relative to the majority of measurements in the distribution. [footnote 13] Except for Tl, the box plots generally indicate more variability and higher extreme values in HW CKD. Solely with respect to Tl, NHW CKD has a higher median concentration and higher extreme values. [footnote 14]□□ □□ Footnote 11: Nearly all CKD measurements in the docket were of CKD samples "as generated," rather than "as managed" in CKD open-air storage or disposal piles. The Coalition's April 1997 Report (pp. 29-30) and subsequent correspondence with EPA indicated why '&as generated" CKD samples represent a worst-case approximation of potential constituent concentrations and risks, compared to "as managed" samples that may be neutralized, cemented, or otherwise affected by (e.g.) rainfall and weathering. Moreover, the docket entries we reviewed□□ suggest that there may be significantly greater difficulties or ambiguities in assuring that CKD samples taken from dust piles were in fact generated when the relevant kiln was burning HW fuel.□□ Footnote 12: EPA staff apparently recognized early on that high concentrations of Tl are associated with very high rates of CKD recycling to the kiln or process, a circumstance present only in non-burner cement plants. Indeed, at one point after submittal of the Coalition's Reports to EPA, Agency staff apparently suggested that Tl be excluded from any comparative CKD analysis because those measurements could tend to bias results due to this exogenous factor. See Letter, Walters (PSM) to F. Smith (EMRAD/OSW), Sept. 17, 1997. EPA noted in its preamble to the proposed rule that "the highest thallium values in CKD reported from the 15 NHBCC plants are associated with cement kilns that recycle over 90% of their CKD back into the manufacturing process." 64 FR 45639 & n. 17 (August 20, 1999).□□ Footnote 13: Attachment 2 contains more detail on the interpretation of box plots.□□ Footnote 14: The higher levels of Tl in NHW CKD result from high rates of CKD recycling to the cement-making process. As EPA long ago recognized, under applicable hazardous-waste rules burner plants are subject to stringent limits on Appendix VIII concentrations in their CKD. They accordingly have limited ability to recycle their CKD without risking an exceedance of those limits. Non-burners are not subject to these limits, and Tl generally does not affect the quality of the cement product. Therefore it generally is not monitored by non-burner plants and, as a consequence, tends progressively to increase in concentration through recycling. The highest Tl levels identified in the Coalition's own samples of non-burner CKD from its members appeared to be at plants that recycled all or nearly 100% of their CKD to the kiln.

Comment Id	Document Number	Comment
1074	ckdpL0003	Statistically Significant Differences - Ash Grove's facilities at Chanute and Louisville each have two kilns. These facilities bu[rn] HW fuel and NHW fuel at different periods in each kiln. From 1992 though 1995, plant personnel acting under EPA hazardous-waste rules and test protocols collectedand had chemically analyzed samples of CKD generated by each kiln when burning HW fuel and when burning only NHW fuel. These test results or measurements were subsequently provided to the Coalition and to OSW staff, in part as the result of several FOIA requests filed by the Coalition's former consultants (PSM and Emcon) in mid- 1996. □□ □□ The measurements for these samples are the only data in the omnibus database that can be used to make formal statistical comparisons of metals concentrations between HW CKD and NHW CKD.[footnote 15] Because they assess constituent concentrations in CKD generated from the same kiln while processing the same feed, with all other variables except fuel type held relatively constant, these measurements are not influenced by site-specific confounding factors and divergent data quality characteristics that could bias the results of statistical tests or render them uninterpretable.[footnote 16] They therefore constitute a natural "controlled experiment" to assess most robustly the potential differences between these two types of dust. □□ □□ However, EPA appears never to have cited, analyzed, compared, rebutted or systematically considered the implications of these Ash Grove data taken as a whole (and uniquely valuable) separate data set. EPA did include some of the Ash Grove burner data derived from the RCRA § 3007 request in a "discussion draft" set of summary tables of CKD constituent concentrations, later placed in the docket. These tables were never updated for apparent errors or incompleteness, and were never supported by provision of their underlying analysis or derivation for review. The letter accompanying these summary tables neither mentioned the Ash Grove non-burner data, nor explained why it dispersed the Ash Grove burner data among a mass of non-comparable burner measurements from other facilities. The letter misleadingly suggested that while "these different sets of data each have their individual nuances. . .together they represent the best available sources and, to some degree at least, tend to complement each other.[footnote 17] The other sets of summary tables used in this "draft" comparison consisted of CKD samples that were collected from plants apparently treated as entirely "burner" or entirely "non-burner." For each of the data sets summarized in the latter tables, the CKD samples were collected under varying protocols at dissimilar groups of facilities. Comparisons drawn between burners and non-burners are subject to the same data quality and descriptor limitations on statistically meaningful comparisons that we noted above.[footnote 18]□□ □□ We used the Chanute and Louisville data to test for statistically significant differences between metals in CKD generated when burning HW fuel and metals in CKD generated when burning NHW fuels. As detailed in the following paragraphs, we also corrected certain measurements in that data set to more accurately reflect criteria for excluding measurements that could'have been "compromised" by improper use of "below detection" results. This correction had the effect of adding several sets of Ash Grove measurements back into our database. For this reason---and because EPA apparently never conducted a direct comparison of all the Ash Grove "burner" versus "non burner" data, viewed either by themselves or against the information available from the integrated omnibus database--- our Ash Grove analysis is also "new."□□ □□ Not all the Chanute and Louisville data are amenable to statistical testing. Many of these measurements were recorded as "below detection." In some cases, every measurement for a particular kiln in a particular year was "below detection." A high percentage of "below detection" results distorts the statistical distribution of the measurements and may bias any statistical test applied to the measurements. □□ □□ Thus, if more than 15% of either the HW or NHW measurements for a particular metal-kiln-year combination were recorded as "below detection," we did not calculate a statistical test for that combination. In the remaining Ash Grove CKD docket data, the "below detection" measurements had been replaced by one-half of the applicable detection limit.[footnote 19] The docket contained adequate information on detection limits to interpret this approach for five Appendix VIII metals---arsenic, Ba, Cd, Cr and Pb.□□ □□ We accordingly calculated a statistical z-test comparing arsenic, Ba, Cd, Cr, and Pb concentrations between HW and NHW for each year and each kiln where the percentage of "below detection" measurements was less than 15%. [footnote 20] The results, which are recorded in Tables 2C and 2D, indicate lower concentrations of these metals for CKD generated from kilns burning NHW fuel, in every case where concentration differences are statistically significant.[footnote 21]□□ □□ Although the docket contained summary statistics for the other seven metals in the Chanute and Louisville data, we did not apply statistical tests to these data because of the high percentage of "below detection" measurements and lack of information about the precise values used as detection limits. However, we investigated the Ash Grove data for Tl because comparison of HW CKD and NHW CKD based on the omnibus database indicates that higher Tl concentrations might be expected for NHW CKD---a suggestion that appears aberrational given the opposite general trend reflected for the other eleven metals. Put differently, our descriptive statistics indicate

Comment Id	Document Number	Comment
		lower Tl levels may be expected in CKD generated when burning HW fuels than in CKD generated when burning NHW fuels. The Ash Grove data undercut this suggestion. As detailed below, they show virtually no difference in Tl concentrations between the two dusts.□□ □□ Approximately 93% (3922 of 4202) of all measurements of Tl in CKD samples collected from the Chanute and Louisville facilities were "below detection." Summary statistics obtained from the docket for these Tl measurements treat detection limit values as if they were actual measurements. Thus the averages for Tl in these summaries are upper bound estimates for actual Tl concentrations. We could not validly (formally) estimate those actual average concentrations because of the high percentage of "below detection" measurements. However, the presence of many "below detection" measurements does not invalidate informal HW to NHW comparisons of Tl concentrations for any specific year and kiln.□□ □□ The Ash Grove Tl year/kiln averages range from 8.9 ppm to 68 ppm. Our summary of these data by year and kiln, which is arrayed in Table 3, shows virtually no difference between concentrations of Tl in CKD generated when burning HW fuels compared to CKD generated when burning NHW fuels. Thus, on the reasonable premise that no variables but fuel changed significantly at Ash Grove during these CKD sampling periods, if higher concentrations of Tl are in fact present in nonburner CKD, those concentrations are due to site-specific factors other than type of fuel. □□ □□ To summarize: (1) Our omnibus database descriptively indicates that lower overall constituent concentration levels are to be expected for CKD generated while burning NHW fuels, except perhaps for Tl concentrations that appear explainable by other means. (2) Where formal statistical tests were possible because site specific variables that affect metals concentrations are held constant, statistically significant test results indicate lower levels of Appendix VIII metals for NHW CKD in every case. (3) When site-specific factors (such as rate of CKD recirculation to the kiln) are controlled for, Tl may not be higher in NHW CKD than HW CKD. □□ □□ All other things being equal, these lower Appendix VIII constituent concentrations in non-burner CKD--Lwhether metal-for-metal, or based on total metals even if scattered constituents are ambiguous or oppositional--- translate into lower exposure levels and lower risks. This may be true even for inhalation exposures to fine airborne CKD particles, which we do not address further here.[footnote 22]□□ □□ Footnote 15: Source of these data: Coalition FOIA and OSW RCRA $ 3007 request(s) to or through EPA Region VII; PSM follow-up with Region VII FOIA personnel. See, e.g., Walters (PSM) letter to Frank Smith, September 17, 1997.□□ Footnote 16: The confounding factors include metals content of limestone or other local feed that varies across facilities, kiln configuration and operating parameters, and CKD recycling percentages. For reasons previously detailed by the Coalition to EPA, these factors should be virtually constant for CKD samples collected at a particular kiln in a particular year.□□ Footnote 17: Letter and Attachments, F. Smith (EMRAD/OSW) to counsel for the Coalition (Nov. 5, 1997). Virtually identical language appears in the preamble, at 64 FR 45638. The draft tables attached to this letter never referenced at all the Ash Grove nonbumer CKD data, but included only averages of burner data from those plants. For a detailed critique of facial errors, inconsistencies in and inability to verify these tables, which appear to be the major basis for EPA's constituent-related preamble conclusions rejecting a "two dust" approach, see Letter, Levin (for the Coalition) to Smith (Dec. 12, 1997) (incorporated by reference in the Coalition's comments filed Feb. 18, 2000).□□ Footnote 18: These data sets were mainly reported in a 1990 PCA study, and in EPA's 1994 NODA ("Notice of Data Availability") following the Agency's 1993 Report to Congress (RTC) on CKD.□□ Footnote 19: Importantly, the "applicable detection limit" is not a constant. It varies by metal and may vary by sample, especially where different test methods or alternative procedures within the same general approved method are used. Although the summary Ash Grove data in the docket do not include the value used as the detection limit for each sample, the measurements recorded as "below detection" had been replaced with one half their reported detection limit before averages and standard deviations here calculated for arsenic, Ba, Cd, Cr, and Pb.□□ Footnote 20: We did not apply statistical tests to Ash Grove measurements of the remaining seven Appendix VIII metals, either because there were too many measurements "below detection," or the "below detection" measurements had not been replaced with one half of the applicable detection limit, or that replacement was not sufficiently defined. See text below.□□ Footnote 21: We calculated a z-test for each of 50 metal-kiln-year combinations. The overall Type I error rate for this collection of statistical tests was set at 5%. Using the Bonferroni inequality for multiple statistical tests, the decision value for the test was set at 3.29. (See Miller, Simultaneous Inference, Springer-Verlag 1981.)□□ Footnote 22: We understand that a substantial part of particulate inhalation effects is believed due not to the particles themselves, but to their potentially toxic components and/or their role in catalyzing or promoting the effects of such components on receptor sites within the lungs.

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1086	ckdpL0003	2. CKD metals concentrations and the magnitudes of risks associated with exposure to these metals are dependent on facility- and site-specific characteristics.□□ □□ The concentrations of metals in CKD are determined by numerous factors that are specific for individual kilns and that also vary across cement plants and kilns. In addition to the type of fuel used to fire the kiln, the metals content of feed and CKD recirculation patterns are two important factors, We demonstrated the effect of site-specific characteristics by conducting a fresh statistical review of docket data for 15 Coalition facilities that use only NHW fuel. This Coalition dataset was the best defined and documented of those we reviewed. Unlike the Ash Grove data set, it does not permit formal statistical comparisons between constituents in burner and non-burner CKD, as it comprises only measurements of non-burner CKD. However, the data set can support other formal statistical evaluations, including evaluations of the extent to which site-specific factors dominate CKD content. If site-specific factors substantially influence CKD constituents even within this relatively homogeneous universe of small and smaller non-burner cement plants, that influence should be even more powerful for the universe of all cement plants.□□ □□ For these Coalition facilities, the fuel should not contribute metals to CKD in concentrations or directions appreciably different than similar fuels (mainly coal transported considerable distances) used in other non-burner plants. Therefore any significant variation in CKD metals concentrations among these facilities must be due to other factors that are site-specific.□□ □□ We used the data set consisting of measurements for samples collected following a specified protocol at 15 Coalition facilities. [footnote 23] Measurements for each of the 12 metals at each facility are displayed as individual box plots in Figures 2A through 2L. The 15 facilities are identified on the horizontal axis, with constituent measurements by metal in ppm on the vertical axis. These plots allow a simple visual assessment of differences in concentration levels across the facilities and differences in the variation of measurements within any particular facility.□□ □□ Consider, for example, the box plot for arsenic (Figure 2A). [footnote 24] Concentrations of arsenic in Coalition CKD vary principally between 5 and 30 ppm. Two of the facilities, however, have CKD arsenic measurements slightly higher. than 60 ppm. The variation of measurements within facilities is approximately the same for each of the 15 facilities. But the statistically significant differences across these facilities, specifically the significantly higher concentrations shown for facilities CO1 and C02, indicate the significance of site-specific characteristics other than the type of fuel. [footnote 25] (We understand that these two Coalition facilities historically have been associated with very high levels of naturally-occurring arsenic in their local soils and feed, and that those background levels have been documented by feed tests. But this fact further supports the importance of site-specific factors for CKD constituent levels and related risks. Moreover, as detailed below, the same pattern of site-specific significant differences appears even where causative site-specific factors have not been documented.)□□ □□ Pb provides another pattern of measurements across facilities. In Figure 2G, which also supports the dominance of site-specific factors, the levels of Pb in measured CKD differ across facilities. In addition, the variation of measurements within each facility also differs across facilities. □□ □□ The patterns displayed for the other 10 metals in Figures 2 in essence repeat the patterns described for arsenic and Pb. The median level differences across CKD generated by these Coalition facilities are statistically significant for most of the 12 metals. This comports with USGS data indicating that metal concentrations in crust soils vary widely across U.S. geographic regions. [footnote 26] The general pattern of differences across facilities displayed in Figures 2 strongly indicates the importance of site-specific characteristics other than fuel type. The wide variation of metals in surface soils (and hence local feed for cement kilns) confirms this site-specific influence.□□ □□ The magnitude of risk associated with exposure to CKD also is determined by site-specific characteristics. Risk varies, not only with the concentration of constituents in CKD, but in relation to constituent transport pathway and receptor characteristics. These factors ultimately determine who, if anyone, is exposed and the distribution of doses across any exposed population. Thus site-specific characteristics determine metals concentrations in CKD, which concentrations in part determine risk. But site-specific pathway and receptor characteristics also determine risk.□□ □□ For example, even two piles consisting of NHW CKD with precisely the same constituent levels may present vastly different exposures and risks if one pile is located in sparsely populated arid territory with groundwater several hundred feet below the surface. Adding HW CKD to those piles will significantly increase their total Appendix VIII concentrations, based on the new information and analyses above. It will also increase each pile's potential risks, though the piles' overall risks may remain low.□□

Comment Id	Document Number	Comment
		□□ Footnote 23: The data collection protocol is described in NHBCC, April 11, 1997.□□ Footnote 24: Refer to Attachment 2 for more details on interpreting box plots.□□ Footnote 25: Arsenic concentration differences across facilities are statistically significant, A one-way ANOVA was calculated for the log-transformed measurements. The F value = 40 1.6 and the corresponding p-value is less than 0.00 1. A summary of the ANOVAs for the 12 metals is in Table 4.□□ Footnote 26: Boemgen J and Shacklette, H., 1981. Chemical analyses of soils and other surficial materials of the coterminous United States: U.S. Geological Survey Open-File report 8 I-197. USGS, Denver, CO.
1125	ckdpL0003	2 . Arbitrary dismissal of "two dust" data. Both procedural and substantive is EPA's utter failure either to reference in the Preamble the existence of the most robust data set for evaluating potential differences between the dusts, or to place any aspect of EPA's analysis of that dataset in the record. As the attached Technical Comments newly confirm, only an extensive data set of CKD measurements taken at the same two Ash Grove cement plants while those plants were burning and not burning HW fuels allows formal statistical evaluation of meaningful differences in total Appendix VIII metals concentrations between the dusts. All other CKD measurements in the docket (or otherwise available) allow only statistical descriptions of potential differences, due to lack of sufficient data quality descriptors or the presence of numerous confounding factors.□□ □□ Yet EPA never referenced this Ash Grove burner versus nonburner data set in the Preamble, or compared those data in any docket document, or placed in the docket any Agency analysis of these data, athough we know such analyses were conducted. Instead EPA compared summaries of noncomparable CKD measurements from PCA, R. VII burner data viewed in isolation, or other datasets (some of which were also not in the docket) to reach its conclusion that constituent levels in burner and non-burner dust "overlap." Moreover, to justify this conclusion the Preamble selectively compares only noncomparable data for two CKD constituents for a single year (1995), although the Ash Grove data set contains statistically-significant CKD comparisons for four constituents---Ba, Cd, Cr, and Pb---over several years.□□ □□ The Technical Comments document that in every case and for every hazardous constituent and year for which reliable evaluation is possible, each statistically significant difference in CKD total metals concentrations exhibits higher levels of those concentration in burner CKD. Their descriptive analysis of the entire omnibus CKD database tends to confirm this conclusion [see footnote] 8. Moreover, concentrations of thallium (Tl) in these Ash Grove measurements were not statistically different for burner and non-burner CKD. This finding indicates that "type of fuel" alone has little effect on Tl, and confirms that site-specific recycling rates determine those levels.□□ □□ As a predicate to any national rulemaking, EPA should have conducted this Ash Grove analysis and evaluated it against the entire CKD database, integrated and properly weighted for data quality. It did neither. As the D.C. Circuit declared in an analogous context, EPA cannot□□ dismiss such data or pretend they do not exist with a "let them eat cake attitude." [footnote] 9. They must be addressed. If addressed, they would require the constituent-related conclusions above.[footnote 10.]□□ □□ Footnote 8: The descriptive analyses also tend to confirm, based on the omnibus database, that greater constituent variability and extreme concentrations ("spikes") are to be expected in burner CKD for nearly every Appendix VIII constituent.□□ □□ Footnote 9: CMA [v.] EPA, 28 F.3d 1259,1265-66 (1994) (unanimously vacating EPA designation of HAP as ' high risk pollutant" because generic screening analysis bore no relation to real-world exposures and affected parties who raised these objections were brushed off without meaningful EPA response). Accord: Leatheres of America v. EPA, 40 F.3d 392 (DC Cir. 1994) (unanimously vacating Subtitle D beneficial sludge use rules setting "acceptable metals concentrations," for similar reasons).□□ □□ Footnote 10: Also missing from the docket were (a) the Small Business Administration's SBREFA-related comments on the draft proposed rule, and (b) OMB comments as a result of which that draft rule was substantially revised. On (a) the docket contains nothing, so far as we have been able to determine. On (b) it contains several thousand pages of sequential blacklined changes that were presumably made in partial response to OMB objections. However, it would require a decoding machine to decipher or infer the comments that prompted these changes.

Comment Id	Document Number	Comment
42	ckdp00012	Beneficial Reuse of CKD Rule Language - The intent of this suggested language is to remove barriers to the reuse of stockpiled CKD as a raw material in the manufacture of cement. … this method of recycling of CKD is encouraged by the USEPA because it provides the maximum benefit to the environment by removing CKD piles from the environment, and significantly reduces the regulatory cost to the Government and the cement industry.□□ The presently proposed CKD rules include costly barriers which could prevent cement plants from utilizing this method of recycling stockpiled CKD. The barriers include: - Removal of CKD from a pile which would not otherwise be regulated under the proposed rules could cause that pile to become an actively management landfill unit, and - Areas and equipment (such as hoppers and grinders) could become regulated when receiving CKD prior to recycling into the kiln. Either of these could increase the cost and regulatory burden to an industry considering reuse of CKD in the manufacture of cement such that it becomes prohibitive. These barriers can be removed simply by adding the following language to the proposed rules: -Add the **underlined** language to Subpart A § 259.1 (f); 'Nothing in this part prevents, restricts, or regulates the beneficial use of CKD as a...(NCP), **or the process or any appurtenances, areas, or equipment used as part of a process for the purpose of using CKD as a raw material in the manufacture of cement. Removal of CKD from a CKDLF unit for the purpose of reuse in the manufacture of cement does not cause that CKDLF unit to become an actively managed unit.**" -Add the **underlined** language to § 259.2; "Beneficial Use of CKD means... properties. For purposes of today's rule, beneficial use of CKD includes, but is not restricted to,...parking lots **and the use of CKD as a raw material for manufacturing cement**."
45	ckdp00014	Although the State of New Jersey does not have a cement kiln industry, Cement Kiln Dust (CKD) generated elsewhere is used as a product in New Jersey for many purposes, among which are stabilization and solidification of dredge materials, remedial wastes and process wastes. It is in these uses of CKD that the proposed regulation has a significant impact in New Jersey, and is the impetus for our comments.
46	ckdp00014	The NJDEP SRP does not agree with the USEPA's initiative of proposing to regulate "beneficially used CKD [as] non-hazardous waste", where "beneficial use of CKD means the substitution of CKD for another product...is not restricted to, waste stabilization" [and] includes, but and solidification purposes. Rather, The NJDEP SRP believes that when CKD is used in place of a product like Portland cement for waste stabilization and solidification purposes, then CKD should be considered a product and afforded all regulatory considerations as a product.
48	ckdp00014	The NJDEP SRP is aware that the proposed regulation does offer a very limited provisional exclusion at 40 CFR 259.1 (f) for beneficially used CKD. However, the exclusion is only available to CKD used at RCRA cleanups in states Authorized for Corrective Action (CA) and to RCRA cleanups where the USEPA is the lead Agency. Presently, New Jersey is not one of the 33 states Authorized for CA, and so the provisional exclusion will not be available to the majority of remedial projects undertaken in New Jersey.
50	ckdp00014	The NJDEP SRP also observes that even in the 33 states Authorized for CA, the CKD "beneficially used" exclusion of 40 CFR 259.1(f) will only be applicable when used to stabilize and solidify remediation wastes. The exclusion will not apply to stabilizing and solidifying non-remedial wastes (such as process wastes) and dredge materials. Accordingly, the NJDEP SRP believes the proposed regulation will result in CKD being regulated as a hazardous waste in all the states and territories when it is used to stabilize process wastes and dredge materials.
110	ckdp00016	The beneficial uses discussed are acceptable as long as the CKD is properly evaluated for its intended purpose as recommended by the ASTM and as may be required by other applicable regulations. CKD is currently used at some landfills as an alternative daily cover. The dust is mixed with water and other material and is sprayed on the waste. The material forms a hard crust that contains the waste until the next day's waste is applied. Use of CKD in this way appears to be a beneficial use. Land application as fill material should be defined. Clear distinction must be drawn between a "land application as fill material" and a " cement kiln dust landfill".

Comment Id	Document Number	Comment
204	ckdp00017	Cement kiln dust (CKD) is used extensively by WM and other waste stabilization service providers as an economical yet safe material for treating hazardous waste prior to land disposal. WM agrees with EPA that the beneficial reuse of CKD for such purposes should be exempt from the proposed management standards. However, we are concerned that the proposal may not be as clear in that exemption as EPA suggests in the preamble. ...Therefore the agency is not proposing management standards for those beneficial uses of CKD or to list as a hazardous waste CKD used for such practice. We are proposing that beneficially used CKD is non-hazardous waste. The proposed regulatory language at Section 259.1(f), may appear to limit the applicability of the exemption to only remediation waste: Nothing in this part prevents, restricts, or regulates the beneficial use of CKD as a stabilizer or solidifier during RCRA cleanups, CERCLA response actions that carried out in accordance with the requirements of 40 CFR 300v. or when the EPA Regional Administrator (or the state) finds that the beneficial use of CKD in other cases for remedial purposes is protective of human health and the environment.
205	ckdp00017	In addition, the language of Section 259.1(f) regarding approval by the EPA RA or the State may be interpreted to mean that all beneficial uses of CKD beyond the specified remediation authorities must receive prior approval. Finally, the proposed exclusion language at Section 26 1.4 does not mention CKD used as a stabilizing agent.
207	ckdp00018	[USWAG's] comments address two issues presented in the CKD proposal: (1) whether to prohibit the placement of these materials in contact with the water table; and (2) whether to restrict beneficial agricultural uses of these materials. We request that EPA explicitly restrict the applicability of any restrictions on these two practices that might be adopted through the CKD rulemaking. Whether restrictions on mine placement or agricultural uses of materials subject to the forthcoming FFCW regulatory determination are appropriate must be decided based upon the unique properties of those materials and the unique characteristics of their applications.
208	ckdp00018	Because the risk assessment is fundamentally flawed, EPA should not go forward with the proposed limitations on arsenic content of CKD applied as a lime substitute. Furthermore, any limitation on arsenic content adopted in the CKD rulemaking should be limited explicitly to CKD to prevent the inappropriate transfer of this policy decision to other materials such as CCPs that have differing properties and are used in different beneficial applications with distinct levels of risk and economic limitations. Any policy that would dictate with general applicability the constituent concentrations of byproduct materials used in agricultural applications should be established through a comprehensive and wide-ranging study in concert with the U.S. Department of Agriculture.
367	ckdp00023	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%.
373	ckdp00023	Any benefit to health and the environment associated with listing mismanaged CKD as a hazardous waste is negligible compared with the regulatory burden on the cement industry. Listing of CKD as a hazardous waste will discourage its recycling and beneficial reuse, particularly with off-site vendors who may not want to incur the risk of handling a hazardous waste.
457	ckdp00028	There is a diminishing need for additional regulation of CKD, because of the reduced volume of CKD disposed. The attached Table 1 shows the results of Holnam's efforts in this regard. Between 1994 and 1999, Holnam reduced the amount of landfilled CKD by over 40%. Management controls and monitoring are in place or will be in place before the rule effective date, contrary to EPA's general belief about CKD landfills around the country, and therefore the proposed CKD rule provides an added layer of unneeded regulation.

Comment Id	Document Number	Comment
475	ckdp00028	The collection of CKD from #1 and #2 kilns is in a closed loop system. The fine particles of kiln feed are separated from the gas stream in both kiln systems at the electrostatic precipitator (ESP). The gases exit the system to the stack and the fine particles are collected in an ESP and is conveyed through a series of screws to an elevator and finally into a storage bin for each kiln.□□ □□ Tanker trucks can then be loaded by lowering the load out spout inside the enclosed tanker. A dust collection system is operated during the transfer in order to minimize fugitive emissions. After the transfer of CKD to the tanker is complete, the loadout spout is raised and the tanker hatch is sealed in preparation for hauling the materials.□□ □□ In 1999 slightly less that 5,000 tons of CKD was sold as a product for beneficial reuse. Holnam is concerned that if CKD is a listed K-waste that the vendors are less likely to purchase this material due to their perception of the potential risks. As previously stated, the Holly Hill facility does not sell CKD for agricultural uses.
496	ckdp00031	Beneficial Reuse Industries, Inc. is concerned regarding inconsistencies in the Preamble and the Proposed Rule, especially regarding the regulation of CKD waste destined for beneficial use. Beneficial Reuse Industries, Inc. uses CKD as a lime substitute that is mixed with petroleum-contaminated soil to create building products, including landfill cover, soil cement, and stabilized and lot fill. The preamble to the proposed rule indicates the EPA has determined that regulation of these types of beneficial uses of CKD under Part 259, Subchapters II and III of the Solid Waste Disposal Act, as amended, 42 USC §§ 6901, et. seq. (the "SWDA") is inappropriate. Specifically, the Preamble states that: "Most current off-site uses are either currently regulated (under RCRA for hazardous waste stabilization, or under the Clean Water Act in the case of municipal sewage sludge) or appear to present low risk due to low exposure potential. . . . [the] EPA believes that these uses constitute environmentally sound recycling and beneficial use. Therefore, the Agency is not proposing management standards for these beneficial uses of CKD or to list as a hazardous waste CKD used for such practices. We are proposing that beneficially used CKD is non-hazardous waste."
497	ckdp00031	FR 45632, 45639 (August 20, 1999). This clause of the Preamble confirms what the Beneficial Reuse Industries, Inc. has previously found; its beneficial use of CKD poses no threat to the public health, safety or welfare and does not pose a threat to the environment or natural resources. However, the language of the Proposed Rule is inconsistent with the Preamble. Specifically, the Proposed Rule could be interpreted to regulate beneficially used CKD as a solid waste. Such an interpretation would be inconsistent with the Preamble and violative of the intent of the SWDA to govern solely to solid waste. The Proposed Rule should be revised to be consistent with the Preamble and the stated purpose of the Proposed Rule to and the SWDA. To that end, the Proposed Rule must be modified to clarify that beneficially used nonhazardous CKD is not a solid waste regulated under the SWDA.
505	ckdp00033	St. Lawrence Cement (Hagerstown, MD) will have reduced the wasted CKD nearly 66% since 1993. And in fact, actually removed close to 4,000 tons in 1998 for beneficial reuse and is on target to remove in excess of 12,000 tons in 2000. (1999 CKD beneficial reuse beneficial reuse was reduced as a result of the impact on farming by the severe drought in the East). This trend shows the diminishing need for additional regulation of CKD. The product is currently registered with the State Chemist's office of the Maryland Department of Agriculture as a soil amendment. CKD provides not only the lime for field application it also provides the potash and sulfur nutrients required for plant growth. Extensive work is in process to use it as a neutralizer for the poultry manure applied to fields. St. Lawrence Cement - Hagerstown does not consider CKD as a waste material but rather as a co-product and is actively developing markets. Additionally, CKD has been used for hazardous waste remediation projects through cooperation with the Maryland Department of the Environment. The St. Lawrence Cement - Hagerstown plant believes that the proposed "management-based" listing of CKD as a hazardous waste will be deterimental to our efforts to beneficially reuse CKD.

Comment Id	Document Number	Comment
506	ckdp00033	When our existing silo storage capacity is exceeded, CKD has been stored temporarily at the landfill prior to off-site use. In recent years this stored amount has been offset by the demand for beneficially used CKD, which has resulted in the "mining" of our existing CKD landfill. The negative landfill percentage numbers on Table 1 are evidence of this. However, we understand that under the EPA's "active management" policy, our current practice of mining CKD would subject the landfill to the CKD management standards, even though we would not be adding to the pile. We object to this position because it creates a disincentive for the plant to -beneficially reuse CKD, and is contrary to EPA's preference for recycling and reusing wastes. The agency's policy on "active management" of CKD is detrimental to EPA's policy of encouraging beneficial use and recycling of waste material, because it prevents previously stored CKD from being reused without being subject to the CKD management standards.
507	ckdp00033	Although we believe that a CKD rule is not necessary and that the proposed rule should not be promulgated as stated above, if the EPA pursues a final rule we suggest that language be inserted to specifically exempt CKD destined for recycling or beneficial reuse from the management standards.
578	ckdp00035	The agency's policy on "active management" of CKD is detrimental to EPA's policy of encouraging beneficial use and recycling of waste material, because it prevents previously stored CKD from being reused without being subject to the CKD management standards.
586	ckdp00036	The agency's policy on "active management" of CKD is detrimental to EPA's policy of encouraging beneficial use and recycling of waste material, because it prevents previously stored CKD from being reused without being subject to the CKD management standards.
596	ckdp00037	The agency's policy on "active management" of CKD is detrimental to EPA's policy of encouraging beneficial use and recycling of waste material, because it prevents previously stored CKD from being reused without being subject to the CKD management standards.
597	ckdp00037	We understand that under the EPA's "active management" policy, our current practice of mining CKD could subject the landfill to the CKD management standards, even though we would not be adding to the pile (refer to Holnam's corporate comments for additional information on the "active management" issue). We object to this position because it creates a disincentive for the plant to beneficially reuse CKD, and is contrary to EPA's preference for recycling and reusing wastes. Although we believe that a CKD rule is not necessary and that the proposed rule should not be promulgated as stated above, if the EPA pursues a final rule, we suggest that language be inserted to specifically exempt CKD destined for recycling or beneficial reuse from the management standards. This would allow us the option to continue to mine the existing CKD disposal area and avoid the possibility of a mismanagement scenario.
603	ckdp00037	Historically the Devils Slide plant has sold a large percentage of the net CKD generated for the treatment of hazardous waste, and that practice will continue into the future. When our existing silo storage capacity is exceeded, CKD has been stored temporarily at the landfill prior to off-site use. In recent years this stored amount has been offset by the demand for beneficially used CKD, which has resulted in the “mining” of our existing CISD landfill. The negative landfill tonnage numbers on Table 2 are evidence of this trend. We are committed to maintaining a high degree of environmental protection at the plant.
638	ckdp00040	The active management trigger also greatly impacts the incentive for beneficial use of CKD. The Ada plant currently sells approximately 100,000 short tons per year as a beneficial product. In 1994 Ada only sold 37,291 short tons. The stigma of a potential listing would have a devastating effect on the beneficial use of CKD. Most vendors would be less willing to use CKD if such a change was implemented. This is demonstrated by an attached letter (ATTACHMENT 7) from Ada's primary purchaser of CKD, Silver Star Construction Company ("Silver Star"). Silver Star indicates they may no longer use CKD for beneficial uses if the Proposed Rule is promulgated because the liability of dealing with a listed waste is too great a risk. In addition to this letter, Silver Star has submitted additional comments on the Proposed Rule. These comments are incorporated by reference herein. Many of the gains made in the last five years for beneficial use could be lost if CKD has even the potential to be listed. If promulgated, a total exemption from hazardous waste listing and corrective action should be included for CKD which is beneficially used.

Comment Id	Document Number	Comment
688	ckdp00044	CCC does not believe that CKD is a hazardous material and that it does not need to be regulated as either a RCRA Subtitle C hazardous waste or under a contingent management program as proposed by EPA. The conditional classification as a hazardous waste proposed by EPA will have a significant adverse impact on the beneficial use of this material. CCC as well as other cement manufactures have been reducing the amount of CKD that needs to be wasted and anticipates that very little or no CKD will be have to be wasted in the near future. This can only be accomplished by returning more CKD to the process and by continued or increased beneficial use of this product. The conditional listing as a hazardous waste will cause beneficial users to find other materials to replace CKD because of stigma and potential future liability problems. The reduced beneficial use will in turn cause more CKD to be wasted, contrary to the expressed purpose and goal of RCRA.
700	ckdp00047	Designating CKD as a hazardous material risks two reactions: 1) the cement plant will become burdened with additional on-site handling criteria restricting or prohibiting the use of CKD for agriculture; 2) potential agricultural users of CKD will no longer feel comfortable using a material labeled as a hazardous waste (even our organic producers are starting to look closely at its use). Each ton of our Hagerstown CKD is a registered liming material in Maryland. And its fertilizer value above its liming value is almost $20 per ton! Not designating CKD as a hazardous waste will allow this material to continue to be increasing value to farmers in the Maryland area.
702	ckdp00048	The beneficial uses discussed are acceptable to TNRCC as long as the CKD is properly evaluated for its intended purpose as recommended by the ASTM and as may be required by other applicable regulations.
788	ckdp00049	Silver Star Construction has for many years purchased and marketed CKD from cement manufactures for use in road construction, concrete paving, and soil stabilization. We are concerned that the proposed CKD rule will unnecessarily burden our CKD supplier with environmental requirements unrelated to this beneficial use, but serious enough to interfere with this use.
1014	ckdpL0001	The Missouri Department of Natural Resources (MDNR) recommends implementing management standards or guidelines for beneficial use of CKD as fill material. This type of activity is acceptable if it can be done in an environmentally sound manner. As written, reclamation of an off-site quarry would be acceptable. The MDNR recommends placing the CKD above the groundwater table and within an engineered structure, such as structural fill under a foundation or as road base media. The MDNR also recommends defining beneficial use.

Comment Id	Document Number	Comment
1131	ckdpL0003	9. Stigma effects. We do not repeat the Coalition's prior comments on this topic. However, in sharp contrast to EPA's Preamble assertions, the very real threat of widespread adverse impacts on beneficial CKD use from this proposal has recently been demonstrated.□□ □□ Late last year a WV coal company apparently sought regulatory guidance on use of CKD to prevent acid mine drainage. EPA Region III responded that:□□ □□ As you are aware, there is a proposed rule to regulate . ..CKD...as a hazardous waste. While CKD may have promise as a treatment of acid mine drainage, there are concerns. EPA proposed the rule to address...risk to human health and the environment arising from the mobility of toxic constituents due to groundwater contact with CKD....It is my understanding that you "tabled" the use of CFB ash, fly ash [and similar Bevill materials] due to the regulatory uncertainty....I believe that you made a wise choice.... I have no guidance materials to offer you regarding the beneficial use of CKD...as a neutralizing agent. [footnote] 31□□ □□ The immediate effect of this ill-informed letter [footnote 32] was to disrupt widespread use of CKD for this purpose, across two mining states. But the letter has more disturbing implications. If EPA personnel are so confused about the scope and purpose of this proposed rule, the reaction of current or potential CKD customers---who may easily turn to (e.g.) utility fly ash that does not raise HW or related liability concerns---cannot be ignored. [footnote] 33□□ □□ Footnote 31: Letter, Meadows (EPA) to Miller (Coastal Coal Co.) (Feb. 3; 2000)(emphases added).□□ □□ Footnote 32: The Preamble purports to declare that under EPA's preferred approach no regulatory constraints are proposed on any beneficial CKD use except Aglime applications, and that beneficial uses in general are therefore not subject even to contingent RCRA C listing. However, it also lists across-the-board Subtitle C regulation of CKD as an option for comment; and the proposed Part 259 rule itself exempts only CKD used in RCRA corrective actions, CERCLA responses or remediations, or (after express regulatory approval) in "other cases for remedial purposes." 64 FR at 45679/l. This disconnect between intent and rule text should also be clarified by prompt guidance or Response to Comments.□□ □□ Footnote 33: Citations at the end of Point 4 of our February 18 comments were inadvertently omitted from that document. See the Coalition's Feb. 18 Comments, p. 5. The missing citations are: E.g., 64 FR at 45649/2,45665-66,45687-88.

Comment Id	Document Number	Comment
1503	ckdpL0002	Comment: The following comments suggest that the beneficial use of CKD should be encouraged, not jeopardized: [First Bullet] CKD has been proven as an effective resource for many applications and its continued use should be promoted. (CKRC 717) [Second Bullet] RCRA is intended to encourage, not discourage, the beneficial reuse of materials. In addition, the Bevill amendment holds beneficial reuse in high regard in that it specifically recognizes beneficial reuse as one of the eight Congressionally-mandated study factors. (HI 827) [Third Bullet] Given that even EPA acknowledges that the beneficial uses of CKD "do not pose a significant threat to human health or the environment," EPA should take care not to jeopardize the continued viability of this important means of recycling CKD. (SI 853) [Fourth Bullet] Like any product, CKD should be tested prior to use, as necessary for a specific application, and managed appropriately. As additional research and testing continues with CKD, the environmental regulations should promote beneficial use of CKD that cannot be recycled to the cement making process. Clarifying the regulatory status will open doors for many opportunities currently not being promoted. Many of the markets are in a developmental stage. Unnecessary adverse comments related to CKD use, such as the specter of hazardous waste classification, could prematurely terminate these fledgling markets. (CKRC 717) [Fifth Bullet] Subtitle C regulation will deter beneficial off-site reuse, because customers are not likely to use a product that has a hazardous waste connotation, or carries waste codes. (LPC 707, MON 696, SI 853, HC 823, HI 827, CKRC 717) Response: The Agency does not wish to discourage the beneficial use of CKD. The Agency is, however, concerned about the environmental implications of such beneficial uses because they tend to disperse the dust into the environment. The Agency is particularly concerned with some agricultural uses that put CKD in contact with human food chain products. The Agency is continuing to study such issues in order to determine the full range of risks involved. The results suggest the need for further study and research regarding possible human health implications from this current offsite use of CKD. APCA Response: APCA is pleased that EPA does not wish to discourage the beneficial use of CKD. Indeed, we believe the Agency should encourage the beneficial use of CKD, including as an agricultural soil amendment. This would be consistent with the resource conservation and recovery goals of RCRA. APCA did not question EPA's conclusion in 1995 for "the need for further study and conduct research regarding possible human health implications from this current offsite use of CKD." However, as noted elsewhere in this report, APCA objects to the use of modeling results in place of actual data for the purpose of assessing potential risks to human health and the environment. CKD has been used for beneficial purposes for quite some time; consequently, actual data should be available to assess potential risks.
59	ckdp00015	The proposal to list CKD that is considered mismanaged as hazardous waste creates a myriad of problems to a facility that is considering employing alternative demonstrations to the default technical standards for CKD management.
212	ckdp00019	Presented in Table 1, are a series of data comparisons across the three survey periods. The most telling comparisons are those comparing the same plant populations for "90, 95 and 98," "90 and 98," and "95 and 98." Each reflect a decline in CKD wasting or disposal. The data for 1998 can be summarized as follows: approximately 11 million metric tons of CKD was generated by the cement industry in 1998 (the latest year for which data are available). Because of its inherent similarity to the raw materials used in the production process, almost 7.5 million tons of the CKD generated was returned to the manufacturing process as raw material. An additional 850,000 tons were recycled and marketed for other beneficial purposes.

Comment Id	Document Number	Comment
213	ckdp00019	Presented in Table 1, are a series of data comparisons across the three survey periods. The most telling comparisons are those comparing the same plant populations for "90, 95 and 98," "90 and 98," and "95 and 98." Each reflect a decline in CKD wasting or disposal. In sum, over 75 percent of the CKD generated in 1998 was recycled to the manufacturing process or for other beneficial purposes. Just over 2.7 million tons -- the subject of the EPA proposal -- were managed or land disposed on-site at cement manufacturing facilities. Significantly, the amount of CKD that is wasted or disposed has declined by over 600,000 tons since 1995, while the industry has produced 6 million more tons of clinker than it did in 1995. Stated another way, the industry is disposing of less CKD in the aggregate and generating less CKD per ton of clinker produced.
214	ckdp00019	Table 2 presents statistics from the 1998 survey addressing the states where most of the CKD is diposed. In excess of 90 percent of ... on-site disposal occurs in 14 states. This indicates further consolidation when compared with the data from the 1995 survey where 87 percent of the CKD was disposed in 15 states. Notably, little or no CKD was disposed in 28 states.
353	ckdp00020	These concerns regarding the negative effects of EPA's tailored Subtitle C regulations are heightened by the fact that the proposed CKD rules provide only the barest of instruction on how EPA intends its Subtitle C program to work. For instance, the proposed rules are ambiguous as to whether any violation listed under 40 CFR 261.4(b)(8)(ii) removes the Subtitle C exclusion for CKD waste for an entire cement manufacturing facility, or just for the specific CKD waste affected by the violation. By way of example, does the EPA intend for a violation of container storage requirements to convert only the CKD in the container into hazardous waste or all CKD at the facility into hazardous waste, including newly generated CKD? Similarly, can the EPA waive Subtitle C closure and post-closure requirements if it concurs that a facility has resolved its CKD management violations and should return to excluded status? These and a large number of other questions will undoubtedly arise if the EPA adopts its tailored Subtitle C approach as proposed. With this level of uncertainty, the EPA's goal of achieving a "creative, affordable, and common sense approach for the management of cement kiln dust waste" will not be achieved.
363	ckdp00021	EPA has correctly determined that the imposition of full Subtitle C requirements on CKD would be prohibitively burdensome, infeasible under the factors set forth in RCRA section 8002(p), and highly prescriptive with little flexibility for site-specific situations. The agency also was correct in reasoning that the imposition of full Subtitle C controls would add significant compliance costs without adding corresponding reduction in risks from CKD. Finally, EPA is right to be concerned that imposition of full Subtitle C controls would inhibit beneficial recycling of CKD.
56	ckdp00015	The number of states and facilities that would be covered by the rule. The development of a federal regulation for CKD that applies only to a limited number of states is impractical. Based on a nationwide survey conducted by the American Portland Cement Alliance (APCA) of CKD generation and disposal in 1998, ten states account for approximately 80% of the total volume of CKD disposed of, while a total of 14 states accounted for 90% of the landfilled CKD in the U.S. Moreover, this survey reveals that 78 % of the total volume of CKD managed in landfills was generated by 22 cement production facilities. This is 20% of the total number of operating cement plants in the U.S. It appears unnecessary to develop federal requirements for a limited number of states and facilities; the more practical approach is to allow state regulation of CKD.
98	ckdp00015	The need for state involvement in the development of regulations and programs for CKD. Because the primary responsibility for oversight of the management of CKD will rest with the states, they have a large stake in how the program is developed. If federal regulation of CKD (i.e., promulgation of the §259, §261, §266 and §270 requirements) is finalized, the states will share the greatest, if not the entire, portion of implementation and enforcement of these requirements. As discussed above, this limits flexibility for issues that arise which are out of the realm of the proposed rule. The state regulation approaches outlined in the preamble would allow the maximum amount of input and give states the opportunity to develop protective standards for CKD that more specifically address the facilities in their boundaries.
99	ckdp00015	As discussed above, facilities vary widely from state to state, and it is inefficient and inflexible to regulate these facilities at the federal level. Again, the state regulation approaches outlined in the preamble of the proposed rule would assure protective management of CKD without imposing an unnecessary burden on EPA.

Comment Id	Document Number	Comment
111	ckdp00016	The State-Based Approach is not recommended. It would result in a program that would manage CKD in the same way as the preferred option. It would come to this result only after a long period of negotiation between the States and EPA. It does not provide the same consistency as the preferred option and does not provide any time frame for completing CKD management programs in the States. The State-based approach proposes to accomplish, over a longer period of time, what EPA's preferred approach accomplishes in a shorter, more-direct process. There are States that have a policy or legislative mandate that they will not adopt anything that is more stringent than what EPA requires. Those States could adopt EPA's guidance, as guidance, and get a determination of adequacy of their program because it conforms to EPA's guidance, but the recommended standards therein would be unenforceable. Courts have held that guidance documents are not enforceable, which undermines a State-based approach. Furthermore, APCA's proposed schedule for complying with the regulatory standards would be four years after EPA initially proposes the guidance, and this is too long a delay. Many States have been anxious to put appropriate programs in place for some time but have been waiting for EPA regulations so as to be consistent in the regulatory approach.
180	ckdp00016	The proposal should incorporate provisions which allow for approved States to establish additional or more stringent standards than those ultimately established for CKD through rulemaking by EPA. This flexibility would allow State programs to account for site-specific conditions (e.g., groundwater protection in karst topography) which may warrant additional protection for human health and the environment. This is critical since it is difficult to afford protection for all site-specific circumstances on a generic basis, as is being pursued in this rulemaking. By the same token, any rules adopted should provide flexibility for the States to impose reduced requirements when site or other conditions warrant.
218	ckdp00019	The basic principle supporting the State-Based approach is the same principle that underlies APCA's comments today: that the risks from CKD are so minimal that a federal Subtitle C program is unnecessary and unwarranted. Rather, the states should be given guidance to develop their own programs so that the problem EPA perceived in its CKD Regulatory Determination will no longer exist.
219	ckdp00019	APCA proposed that EPA first complete internal work on the CKD management standards that APCA had initially submitted to EPA in 1993. EPA had already begun work on refining these standards in connection with the enforceable agreement discussions. Next, APCA proposed that EPA publish proposed guidance (based on the completed CKD management standards) for public comment in the Federal Register and follow-up with final guidance in response to comment. After the final guidance was published, EPA would give states in which CKD is disposed an opportunity to develop plans based upon their own authority. □□ APCA showed EPA, with APCA's own study of ten representative states, that states already had adequate legislative authority to control CKD disposal and needed only to adopt the appropriate administrative controls to develop acceptable plans. (The APCA survey submitted to EPA on December 3,1996, is hereby incorporated by reference.) APCA also demonstrated that RCRA provided full authority for EPA to take such an approach. (See pages 6-8 of the May 1, 1997, O'Hare letter.) From a policy/legal perspective, implementation of such an approach would assure that "regulatory controls over non-hazardous waste would remain in the hands of the states." May 1, 1997 O'Hare letter at 8. □□ In response to concerns from ASTSWMO, APCA refined its original submission on November 14, 1997, to make clear that there would not be a formal state submission and federal approval process. Rather, EPA would simply review state plans for adequacy based on the regulations and other enforceable mechanisms that are a matter of record. Therefore, so long as EPA found that state controls were adequate, it could determine that no federal controls were needed. O'Hare letter of November 14, 1997, at 2. As stated, this approach would allow federal enforcement for egregious violations and also assure citizen suit opportunities. O'Hare letter of November 14, 1997 at 2-3.□□ We continue to urge EPA to follow the fundamental thrust of the State-Based Approach. We believe EPA's current proposal, in fact, could be made to fit well within such a framework. EPA's August 20, 1999 proposal, for instance, is highly analogous to the initial EPA proposal envisioned by the State-Based Approach, as it contains proposed CKD management standards (in proposed part 259). Based upon public comments, EPA could then issue a supplemental proposal that refines the CKD management standards. These refined standards could then serve as the basis for states to adopt their own programs. Once the states in which significant amounts of CKD are disposed adopt programs or otherwise authorize sound sets of management practices at key plants, EPA could determine that no further federal action is warranted.

Comment Id	Document Number	Comment
220	ckdp00019	As a follow up to the original State-Based Approach, the cement industry initiated a series of workgroups in key states. The objective of the Workgroup process was to establish a mechanism to discuss the implementation of CKD management programs on a state-by-state basis. Each Workgroup was composed of state officials-from either state solid waste management or mining programs-and representatives of each manufacturer of cement in the state. Emphasis was placed on those states where most of the CKD was disposed. Workgroups have been initiated in each of the now 14 key states. In some states, the workgroups have met several times. As noted in Table 3, progress is being made as a result of this process as the majority (90%) of the facilities that dispose of the most CKD are either permitted or otherwise authorized by a state for its CKD management operation or soon will be permitted or authorized.
297	ckdp00020	Lafarge supports a state-based approach that recognizes and builds upon the CKD regulations and permitting requirements that are already in place in many states with cement manufacturing plants. Final state CKD requirements can and should eventually conform with the EPA's final CKD management standards; however, integration of the federal and state programs should be phased in and not result in conflicting interim demands being imposed on cement facilities.
357	ckdp00021	EPA should defer to existing state programs that provide for the protection of human health and the environment. The regulation of cement kiln dust is a matter most appropriately addressed by existing state regulatory programs. □□ The regulation of cement kiln dust is a matter most appropriately addressed by existing state regulatory programs. It has been almost 20 years since the enactment of the Bevill Amendment, as part of the 1980 amendments to the Solid Waste Disposal Act. In that time, state environmental regulatory programs have become ever more sophisticated and effective, including those programs that regulate so-called Bevill wastes.□□ EPA is proposing a regulatory approach for CKD that would essentially override state programs designed to address CKD management practices. In EPA's contingent management proposal, unless an authorized state's CKD regulatory program is at least as stringent as the federal provisions EPA now proposes, the state's regulations would be over-ridden by the EPA rule. This would happen without regard to the effectiveness of the state's approach to regulating CKD management. Any such action by EPA would demonstrate a cavalier disregard of the statute's explicit direction to avoid "duplication of effort"in deciding how to regulate CKD. Sec. 8002(o).* Moreover, by failing to recognize adequately the critically important role that state environmental programs play regarding Bevill wastes, EPA has usurped the legitimate and proper role of the states in regulating those wastes.
376	ckdp00023	Holnam, in conjunction with several other cement manufacturers in Texas, has been working with the Texas Natural Resources and Conservation Commission (TNRCC) to develop enforceable technical standards for CKD management). Under Texas law the Midlothian plant is exempt from permit requirements for CKD disposal. However, Holnam and the other CKD generators in Texas are working with the TNRCC to promulgate enforceable management standards for CKD: Reiterating our previously stated position, the low risk posed by CKD does not warrant additional federal regulation. While the Texas regulatory program is still under development, programs in other states demonstrate that a state-run approach does work. Contrary to EPA's assertions, state programs, are either in place or will soon be in place, making federal regulation redundant. In addition to CKD disposal, the MDNR has authority to regulate emissions of fugitive dust from cement plants, including haul roads, transfer points and landfills. In fact, this facility has applied for a Title V permit that addresses all of these issues.
401	ckdp00025	Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the "state-run"/"state-based" approach proposed by APCA, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, the state-based approach would be preferable to the Proposed CKD Rule.
494	ckdp00030	Without promulgating federal requirements, it may be difficult for Idaho to implement standards for CKD. As stated under comments for the State-Based Approach, Idaho does not adopt standards more stringent than federal requirements regarding solid and hazardous waste.

Comment Id	Document Number	Comment
495	ckdp00030	Idaho has a concern that if a waste is not identified as a hazardous waste, then how could a state-approved Subtitle C Program legally regulate that waste?
607	ckdp00038	Lone Star believes that a state-based approach is protective of human health and the environment. Regulation of CKD at both the state and federal level is redundant and unnecessary.
703	ckdp00048	TNRCC does not support APCA's proposed State-based approach but, instead, recommends that EPA adopt the solely Subtitle D approach under Section III.D. The State-based approach proposes to accomplish, over a longer period of time, what EPA's preferred approach accomplishes in a shorter, more direct process. There are States, including Texas, that have a policy or legislative mandate that they will not adopt anything that is more stringent than what EPA requires.. Those States could adopt EPA's guidance, as guidance, and get a determination of adequacy of their program because it conforms to EPA's guidance, but the recommended standards therein would be unenforceable. Courts have held that guidance documents are not enforceable, which undermines a State-based approach. Furthermore, APCA's proposed schedule for complying with the regulatory standards would be four years after EPA initially proposes the guidance, and TNRCC considers that this is too long a delay. Many States have been anxious to put appropriate programs in place for some time but have been waiting for EPA regulations so as to be consistent in the regulatory approach.
796	ckdp00053	Because existing regulatory programs can be made to address all of the measurable and measured environmental risks associated with CKD, Holnam considers the “state-based” approach proposed by APCA, 64 Fed. Reg. at 45640, and the use of a memorandum of understanding or enforceable agreement, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, as discussed above, would be unlawful as proposed, either the memorandum of understanding or the “state-based” approach would be preferable to the Proposed CKD Rule.
853	ckdp00054	Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the "state-based" approach proposed by APCA, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, the state-based approach would be preferable to the Proposed CKD Rule.
858	ckdp00054	Holnam favors reliance on state programs to regulate CKD management. Holnam agrees with EPA’s statement that “there may be no need to finalize a Federal program if States with cement facilities that dispose CKD adopt appropriate programs and standards for managing CKD.” 64 Fed, Reg. at 45641. The Holnam-Trident plant has been working closely with the MDEQ Hard Rock Bureau to develop regulatory controls at the state level. Currently the landfill is permitted in our “Life of Mine” Permit. The requirements for the operation of our landfill include ground-water monitoring, fugitive dust control, and closure and post-closure monitoring. We believe that additional federal regulation is redundant.□□ □□ In addition to CKD disposal, the MDEQ and other state agencies have authority to regulate emissions of fugitive dust from cement plants, including haul roads, transfer points and landfills. In fact, this facility has applied for a Title V permit that addresses many of these issues.□□ □□ Holnam believes that because area-specific geologic, solid waste, hazardous waste, air quality, and water quality issues are clearly within the focus of the respective local State Agencies, a State-run program for regulating CKD is warranted.

Comment Id	Document Number	Comment
904	ckdp00057	Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the "state-run"/"state-based" approach proposed by APCA, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, the state-based approach would be preferable to the Proposed CKD Rule.
925	ckdp00058	Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the "state-run"/"state-based" approach proposed by APCA, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, the state-based approach would be preferable to the Proposed CKD Rule. [New paragraph] Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the use of a memorandum of understanding or enforceable agreement, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, the memorandum of understanding approach would be preferable to the Proposed CKD Rule.
929	ckdp00058	3 . Comments in Support of State-Run Programs for CKD Management□□ □□ The Holnam-Dundee plant favors reliance on state programs to regulate CKD management. Holnam agrees with EPA's statement that "there may be no need to finalize a Federal program if States with cement facilities that dispose CKD adopt appropriate programs and standards for managing CKD." 64 Fed. Reg. at 45641. Michigan's industrial solid waste program is generally considered the leading state program in the□□ country for regulating CKD, and the ground-water protection standard is already more stringent than the standard included in the proposed rule. Michigan requires all industrial landfills, including CKD monofills, to be permitted and licensed. The industrial solid waste rules, which have been in place since 1993, includes liner design standards based on the waste leaching characteristics, ground-water monitoring, closure standards, post-closure care and financial assurance mechanisms. The liner standards include a minimum of clay with a leachate collection system, and quarterly ground-water monitoring. Holnam, in conjunction with Lafarge Corporation and Southdown, Inc., has□□ been working closely with the MDEQ to comply with these regulations. The proposed CKD rule would add an unnecessary layer of additional regulation.□□ □□ In addition to CKD disposal, the MDNR has authority to regulate emissions of fugitive dust from cement plants, including haul roads, transfer points and landfills. In fact, this facility has applied for a Title V permit that addresses many of these issues.
958	ckdp00060	...because existing regulatory programs can be made to address all of the environmental risks associated with CKD, SK considers the state-based approach proposed by APCA, 64 Fed. Reg. at 45640, and the use of a memorandum of understanding or enforceable agreement, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, as discussed above, would be unlawful as proposed, either the memorandum of understanding or the state-based approach would be preferable to the Proposed CKD Rule.
1015	ckdpL0001	The MDNR does not support a state-base approach to regulate CKD. The department recommends that the EPA finalize the proposed rule to establish baseline national standards.

Comment Id	Document Number	Comment
1057	ckdpL0003	Attachment A-Recommendation-Based on our first-ever integrated review of all available measurements related to CKD constituent levels and related risks, EPA should: (1) defer completely to States' existing authority to evaluate and, where warranted, implement CKD management controls where the state determines on a site-specific basis that further CKD management measures are needed to address meaningful potential effects on human health and the environment.
1127	ckdpL0003	4. ASTSWMO support. Our conclusions also are consistent with key aspects of ASTSWMO's February 17 comments. Those comments reject EPA's "preferred" conditional exemption approach in favor of a pure state Subtitle D approach. They do so to avoid the perverse stigma effects associated with any invocation of Subtitle C in this context, and because "it is difficult to afford protection for all site-specific circumstances, as is being pursued [by EPA] 'in this rulemaking....any rules adopted should provide flexibility for the States to impose reduced requirements [for CKD management] when site or other [facility-specfic] conditions warrant." [footnote] 13 In addition, they repeatedly note that CKD "should be regulated based on its characteristics" as well as other site-specific factors. [footnote] 14 Since little or no CKD is characteristically hazardous, these comments suggest the States would treat CKD differently if consistently different concentration levels were shown, or if EPA's proposal had squarely addressed such differences.□□ □□ Footnote 13: ASTSWMO comments, Cover and pp. 2-6, 15 passim (e-version)(emphasis added).□□ □□ Footnote 14: E.g., ASTSWMO points 5-6, 8.
112	ckdp00016	The Enforceable Agreement or Memorandum of Understanding Approach is not recommended. The memorandum of understanding has no enforceability and will not provide the protection of health and the environment that the Report to Congress stated was needed for CKD. The effectiveness of this approach has not been proven. The legality of an enforceable agreement is questionable, and the previous memorandums of understanding did not provide for enforcement or civil suits. Their presence may limit a State's ability to regulate and correct violations of existing State statutes and regulations. Also, Section III.B., Memorandum of Understanding (MOU), does not seem to provide for facilities that would choose not to participate (i.e., not sign) in the MOU.
221	ckdp00019	We have reviewed the AF&PA MOU in detail, and believe that it could serve as a useful model for an agreement with the membership of APCA. In fact, we believe this would be very much in line with Option 2 of EPA's Report to Congress for CKD, which we supported as the preferable option in our comments of March 8, 1994. Under this option, EPA would retain the Bevill exemption for CKD, "but enter into discussions with the industry, in which they voluntarily implement" various CKD management practices.
222	ckdp00019	We should note here the irony in EPA's proposal and precedent. The AF&PA MOU is less of an "enforceable" document that the Enforceable Agreement submitted by APCA for CKD. The MOU explains in several places that it is "voluntary" on the part of each participating mill. See MOU at part I. The MOU also provides that it can be terminated by any participating mill simply by giving thirty days' notice. See MOU at part X.
223	ckdp00019	Nothing about the APCA CKD Enforceable Agreement would be "voluntary" once it was signed by a cement facility and EPA, nor could a facility terminate its obligations at will. Rather, the Enforceable Agreement provided for federal district court enforcement of its specific terms and penalties for various types of violations.□□ Yet the AF&PA MOU was acceptable to the Agency and stands as precedent, as EPA states in its CKD preamble, while OGC derailed the APCA CKD Enforceable Agreement. As explained in part D immediately below, we strongly disagree with OGC's opinion in this regard. We simply note this here to show the extreme disparity in EPA's approach regarding the wastes from the pulp and paper industry, which could contain dioxin and other hazardous constituents.
371	ckdp00023	Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the use of a memorandum of understanding or enforceable agreement, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment.

Comment Id	Document Number	Comment
402	ckdp00025	Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the use of a memorandum of understanding or enforceable agreement, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, the memorandum of understanding approach would be preferable to the Proposed CKD Rule.
492	ckdp00030	No mention is made as to how facilities that do not sign an MOU are addressed. If a facility does not sign an MOU how are they regulated? Unless a standard MOU is used for all facilities, some MOUs may provide a facility with an unfair advantage over others. If inspection requirements, testing (incomplete sentence)
509	ckdp00033	St. Lawrence Cement recommends that the USEPA not adopt the proposed CKD regulation and recommend that the EPA encourage a partnership agreement such as a memorandum of understanding (MOU) with the cement industry or with the states.
662	ckdp00042	Should the EPA insist on pursuing federal CKD management standards, the memorandum-of-understanding approach (64 FR 45640, Col. 3) is supported by Ash Grove as the most effective and least intrusive of the options involving EPA participation.
679	ckdp00042	Should the EPA insist on pursuing federal CKD management standards, the memorandum-of understanding approach (64 FR 45640, Col. 3) is supported by Ash Grove as the most effective and least intrusive of the options involving EPA participation.
704	ckdp00048	TNRCC recommends that these options not be adopted. By selecting either an enforceable agreement or memorandum of understanding method of regulation, EPA would be embarking in a process whose effectiveness has not been proven. The legality of an enforceable agreement, as discussed in Section II C 2 - Proposed Enforceable Agreement, is questionable, and the previous memorandums of understanding did not provide for enforcement or civil suits. Also, Section 1II.B.. Memorandum of Understanding (MOU), does not seem to provide for facilities that would choose not to participate (i.e., not sign) in the MOU.
854	ckdp00054	Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the "state-based" approach proposed by APCA, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, the state-based approach would be preferable to the Proposed CKD Rule.
885	ckdp00055	[was part of 824] Consequently, because existing regulatory programs can be made to address all of the environmental risks associated with CKD, Holnam considers the use of a memorandum of understanding or enforceable agreement, 64 Fed. Reg. at 45640, unnecessary to protect human health and the environment. However, because listing CKD as a hazardous waste would lead to no demonstrable health risk reductions that could not be addressed by other regulations, would create unjustified burdens for cement producers and CKD recyclers or beneficial users, and, for reasons discussed in Holnam's corporate comments, would be unlawful as proposed, the memorandum of understanding approach would be preferable to the Proposed CKD Rule.
1016	ckdpL0001	The MDNR does not support a memorandum of understanding since it is not an enforceable agreement. A voluntary agreement between the industry and the federal government, such as an MOU, would not give the state authority to oversee proper handling of CKD. We would support EPA's proposed approach-a contingent management scenario that would exempt CKD from classification as a hazardous waste so long as it is managed in accordance with the listed standards.

Comment Id	Document Number	Comment
109	ckdp00016	Pg 45639, co1 2, para 3, EPA requests additional data on hazardous waste burner and nonhazardous waste burner CKD.□□ □□ The Lone Star superfund site in Utah was the result of CKD that came from a kiln that did not burn hazardous waste but the CKD disposal caused an environmental impact. Other older CKD sites that resulted from kilns that did not burn hazardous waste are on the NPL. This would indicate that whether or not a kiln burns hazardous waste does not affect the potential for environmental impact.
113	ckdp00016	The Two-Dust Approach is not recommended. Instead, the waste should be regulated based on its characteristics and not solely by the process by which it was generated. The information in the docket for this rulemaking does not support the two-dust approach. This approach suggests that the CKD that results from using hazardous waste is more toxic than the CKD that results from the burning of "normal" fuels in kilns. If this were true the environmental damage cases cited in the docket should show that CKD from kilns not burning hazardous waste should not show up as often as CKD from kilns that burn hazardous waste. Review of the information in the docket does not support this conclusion.
228	ckdp00019	We should also note for the record our support of EPA's continuous and long-standing rejection of the so-called "two-dust" approach advocated by commercial hazardous waste incinerator interests and others. 64 Fed. Reg. at 45641. These advocates argue that CKD from cement kilns burning hazardous waste should be subject to different regulatory treatment than CKD from kilns that do not burn hazardous waste. Our March 8, 1994 comments showed that there is no significant difference between the CKD from the two types of kilns, and all data that has been added to the record since that time continues to reinforce that point. We strongly urge EPA to continue to reject the arguments of these two-dust advocates, as all available data simply and totally refute their arguments.
389	ckdp00024	We adopt and incorporate by reference comments on this proposed rule by the American Portland Cement Alliance, to the extent they are not inconsistent with these comments and prior Coalition positions. We similarly adopt and incorporate comments by the Environmental Technologies Council, solely with respect to its justifications for a two-dust approach.

Comment Id	Document Number	Comment
392	ckdp00024	We appreciate OSW's responsiveness to certain (aspects?) of our previous submittals or communications on general issues that could particularly impact Coalition members who recycle or sell for beneficial uses all or increasing portions of their CKD. These include the change in title and other efforts to minimize needless, environmentally-counterproductive stigmatization of all CKD. They also include apparent efforts to: make a "two-dust" approach a more genuine comment option; put proposed "flexible" performance standards for covered CKD management more on par as an available option with stringent one-size-fits-all "default" technical design standards that generally track requirements for more risky heterogeneous MSW landfills; better articulate what violations will kick CKD activities into Subtitle C or how Subtitle D status may be reinstated; and avoid or limit direct regulatory constraints on beneficial uses of CKD. However, the proposal appears to reject a "two dust" approach that would regulatorily and substantively distinguish, based on statistically-significant differences in total hazardous metals concentrations, CKD generated by burner kilns, from CKD generated by kilns that burn only conventional fuels (e.g., coal)---unless "new information" substantiating that distinction is presented. E.g., 64 FR at 45639/2, 45641/2. In large part due to this rejection, the potential risks and third-party liabilities of a Subtitle C hazardous-waste designation would significantly continue to threaten small (and other) nonburners who represent the only industry opportunities to approach zero CKD wastage through 100% recycling of CKD to the cement process and/or sale for beneficial use. In large part due to its cursory dismissal of that continuing stigmatization --- and of the way it continues to encourage virtually automatic imposition of uniform technical standards on covered CKD operations in many circumstances --- the proposal erroneously certifies that it "will not have a significant economic impact on a substantial number of small [cement] entities." E.g., 64 FR at 45672-73. We believe these aspects of the proposal are statistically questionable, are unsupported by the full record, internally contradict other proposal elements, and in significant respects diverge from the Agency's expressed intent. They also could constitute counterproductive environmental policy and could raise substantial legal issues, if implemented in their present form. In addition, they gloss over, mischaracterize, or appear to ignore significant aspects of prior Coalition submittals, some of which we have as yet been unable to find in the docket. This proposal could well be treated as immediate guidance by the states, even if it ultimately is not finalized. Moreover, we believe that considered fairly as a whole rather than in isolated instances, the record data sufficient to permit a conclusion on this topic demonstrates statistically-significant differences in CKD metals constituents and constituent variability (including "spikes") between burner and non-burner dust that appear largely due to combustion of HW fuels. Based on a preliminary fresh look at the docket, other record data on CKD constituents may tend with some consistency to support this conclusion. Thus the threshold question may not be new data, but a more robust interpretation of the existing data (which is also new "information").
393	ckdp00024	The preamble asserts once more that because certain CKD constituents "overlap" in isolated samples of burner and non-burner CKD, "metals levels in [all] CKD are not [statistically] different." 64 FR at 45639/l. This purported justification is in essence a biased selection from a larger analysis of data related to many more constituents that was itself seriously flawed and was extensively crituiqued by the Coalition. Smith letter, so far as we know there is no correction, response, or further Agency rebuttal of this critique in the record. Thus its detailed analysis of numerous mathematical, statistical and risk-related flaws remains unanswered, apart from the preamble statement above. More important, the preamble's logic appears statistically unsupportable --- it compares only a narrow subset of available data (two constituents, arsenic and chromium) for one year, without explaining why its "averages" of "means" do not mask countering differences and without regard to the fact that a preponderance of all the statistically-valid constituents data cuts the other way. Put differently, the Coalition never asserted that there was a statistically-significant difference in its favor for every CKD constituent from each kiln for every year. I documented (among other things), based on multiple rather than single samples, that nonburner dust properly assessed is generally lower and less variable in total metals than burner dust, and that (a) these differences are predominantly due to the absence of HW fuels, (b) the most robust data set shows statistically-valid differences of two to four times the levels of at least five key metals in burner versus nonburner dust, and is not statistically rebutted by other data in this set for other constituents, and (c) that these differences relate to the CKD groundwater risk that has primarily driven this de-Bevilling. (Attachment C).

Comment Id	Document Number	Comment
394	ckdp00024	We plan to respond further to the preamble's other "one dust" statements as necessary. We note, however, that to the extent thallium has been shown to be "elevated" in nonburner dust because those plants recycle nearly all their dust to the process, relatively little of their CISD will be disposed. Even with "elevated" thallium levels, a 20,000 ton "CKDLF' most of whose other constituents are significantly lower and less likely to "spike" than burner CKD, should pose less risk under any set of site-specific conditions than a 2 million ton "CKDLF' containing burner CKD. This is independent of the further fact that (as the Agency has recognized) only nonburners are technically capable of recycling very high levels of generated CKD, and only nonburner CKD appears to have significant off-site markets for beneficial use. We also note that with respect to arsenic, the most reliable data appear to show no statistically-significant differences in this constituent between burner and non-burner dust. cf. 64 FR at 45639/l. Moreover, the Coalition's Reports plainly document that concentrations of this constituent in CKD are due not to fuels but to feed. Hence, they (a) represent natural background levels in local geological strata, (b) are local rather than national concerns because no one trucks limestone (unlike HW fuels) hundred of miles to a cement plant, and (c) are particularly amenable to conclusions that they pose little site-specific risk. For example, all the high-end arsenic levels in the Coalition-developed data from its members were from western plants, where surface rock contains high levels of this element and groundwater lies hundreds of feet beneath the surface. The proposal expressly recognizes in other contexts that background levels may define what is "protective" for common-sense regulatory purposes.
429	ckdp00026	We support EPA's continuous and long-standing rejection of the so-called "two-dust" approach advocated by commercial hazardous waste incinerator interests and others. 64 FR. at 45641. These advocates argue that CKD from cement kilns burning hazardous waste should be subject to different regulatory treatment than CKD from kilns that do not burn hazardous waste. APCA's and CKRC's March 8, 1994 comments showed there is no significant difference in the CKD from the two types of kilns, and all data that has been added to the record since that time continues to reinforce that point. We strongly urge EPA to continue to reject the arguments of these two-dust advocates, as all available data refute their arguments.
430	ckdp00026	Despite its basic rejection of the "two-dust" approach, EPA still apparently intends in one limited respect to burden hazardous waste-burning kilns with additional requirements. EPA states that hazardous waste-burning kilns must continue to perform testing under §266.112, and any CKD that exhibits a characteristic would have to be treated as a full-blown hazardous waste. 64 FR at 45655, col. 1.
493	ckdp00030	As identified in the proposal, some non-hazardous CKD waste exhibited levels of characteristic hazardous waste higher than CKD from kilns that burned hazardous waste. This approach does not seem to address varying levels of contaminants in the CKD.
519	ckdp00034	Particularly with the proposed changes to 40 CFR 266.112, the CKD standards must be set in a more protective manner. Therefore, we proposed the following overall approach: 1. A two dust approach that places mandatory Subtitle C management standards on CKD derived from kilns that burn hazardous waste. 2. A more quantitative criterion that identifies action levels for mandatory management of CKD under Subtitle C controls.

Comment Id	Document Number	Comment
559	ckdp00034	In the proposed rule EPA has incorrectly concluded that CKD from hazardous waste burning cement kilns has the same characteristics and concentrations of metals as that produced from kilns that do not burn hazardous waste (64 FR 45636). Based on this conclusion, EPA has eliminated from consideration a "two dust" approach for the disposal of CKD. The generation rate of CKD alone indicates that there is a substantial difference in CKD characteristics. The 18 hazardous waste burning cement plants generate almost half (45.4%) of the total CKD generated by the entire universe of 110 cement plants (see F-99-CKDP-S0263, page 4-12 and Table 4.4). Stated another way, the 18 hazardous waste burning cement plants generate the same amount of CKD as 77 of the cement plants that do not burn hazardous waste. This is because the kilns that do not burn hazardous waste are able to recycle a much higher percentage of their CKD back to cement production. The hazardous waste burning cement kilns, however, must waste most of their CKD because it is so contaminated that it would impact the cement product quality if it were recycled back to the kiln. This fact alone points to a major difference between CKD from hazardous waste burning cement kilns compared with CKD generated by kilns using fossil fuels. Furthermore, a review of the background documents for the rule indicates that hazardous waste derived CKD has significantly higher concentrations of metals than CKD derived from kilns that do not burn hazardous waste. The EPA incorrectly dismisses these differences because of certain data inconsistencies with thallium and arsenic (see 64 FR 45639). The Non-Hazard Waste Burner CKD Coalition (NHWBCC) were able to explain the few cases in which their metals data overlap with data for hazardous waste derived CKD (see F-99-CKDP-S0197). Kilns that do not burn hazardous waste recycle a higher percentage of their CKD (see Exhibits 3-11, 3-12 and 3-13 from the December 1993 Report to Congress on CKD). For thallium, for example, the NHBCC explains that the higher thallium levels are a direct result of the higher recycle rate of CKD in kilns that do not burn hazardous waste. In the case of arsenic, the higher values were attributed to higher arsenic levels in the site-specific raw materials for the population of kilns studied in the NHWBCC report. The preamble discussion minimizes the key conclusions in the NHWBCC studies that show a factor of 3.5 times higher lead concentrations, a factor of 3.8 times higher cadmium concentrations, and a factor of 2 times higher chromium concentrations for CKD derived from hazardous waste burning cement kilns. The NHWBCC provided statistical tests to show that the differences were significant at a 95% level of confidence. Likewise, in the ETC's March 15, 1994, comments on EPA's December 1993 Report to Congress on CKD (F-93-RCKA-FFFFF), the ETC (formerly the HWTC) sorted and summarized the data for lead, cadmium and chromium in CKD (see page 37 of our 1994 comments). This data is reproduced below:...Clearly the burning of hazardous waste results in CKD with significantly higher concentrations of lead, cadmium and chromium.
562	ckdp00034	The ETC also compiled and evaluated the leachate data for lead, cadmium, chromium and arsenic. This data shows that the CKD from hazardous waste burning cement kilns is much higher in leachability for metals, particularly lead. Lead mobility is 16 times higher in CKD from kilns that burn hazardous waste. Given this fact, CKD from hazardous waste burning cement kilns represents a much greater threat from releases to surface water and groundwater. The above data justify a two-dust approach for the regulation of CKD disposal. It is clear that CKD from hazardous waste burning cement kilns has significantly higher levels of lead, cadmium, chromium and dioxin, and also is substantially higher in leachability of metals.
563	ckdp00034	Additionally, a review of background soil data presented in F-99-CKDP-S0263, Tables 7-1 and 7-2, shows that CKD from kilns that do not burn hazardous waste is close to background soil levels with regard to dioxin and metals. CKD from hazardous waste burning cement kilns is over 10,000 times higher in dioxin levels and over 6 times higher in lead levels compared to background soils. It is clear that EPA must regulate the disposal of CKD from hazardous waste burning cement kilns under Subtitle C.
564	ckdp00034	... the recently promulgated MACT Rule for Hazardous Waste Combustors will cause further increases in the metals concentrations in CKD, given that air pollution control systems must have higher removal efficiencies to meet the more stringent metals emission standards. The hazardous waste burning cement kilns have metals emission limits to meet in the MACT rule applicable to their operations. The Portland Cement MACT rule does not have metal emissions standards. Therefore, it can be expected over the next three years that CKD derived from hazardous waste burning cement kilns will be even higher in metals content than CKD produced by kilns that do not burn hazardous waste.

Comment Id	Document Number	Comment
565	ckdp00034	Given that the CKD from hazardous waste burning cement kilns is higher in metals content, it is important to apply more stringent controls to the management of this CKD. Given also that 45% of the total CKD volume generated is from hazardous waste burning cement kilns, it is imperative that EPA regulate this CKD under Subtitle C. The following controls must be applied: [bullet] 1. CKD from hazardous waste burning cement kilns must be listed as a hazardous waste, regardless of how it is managed. [bullet] 2. The design and siting standards for the CKDLF under Part 259 must not allow for any variances for hazardous waste burning cement kilns. The design standards must include the minimum liner standards and capping requirements with no exception. [bullet] 3. The fugitive dust controls that require CKD to be emplaced as conditioned CKD must be applied uniformly for CKD derived from hazardous waste burning cement kilns (4565 1).[bullet] 4. As discussed on page 45657, facility-wide corrective action must be required for hazardous waste burning cement kilns when detection monitoring triggers assessment monitoring. This is justified given the presence of other sources of hazardous constituents associated with hazardous waste storage and blending operations at the cement kiln site. [bullet] 5. The groundwater monitoring program must include all of the metals even for the detection monitoring program [bullet] 6. Financial Assurances must include the full cost of closure and post closure, and liability insurance coverage must be the $4 million and $8 million level. [bullet] 7. CKD from hazardous waste burning cement kilns must be tested for compliance with LDR treatment standards under Part 268 prior to placement in the CKDLF.[bullet] 8. Permits must always be required for CKDLF operated by kilns that burn hazardous waste. The provisions of 270.69 must always be applied to CKD disposal units operated by hazardous waste burning cement kilns. [bullet] 9 No allowance can be provided for "egregious violations" under 40 CFR 261.4(b)(8)(ii)(A). In other words, any violation of any Part 259 standard triggers hazardous waste classification of the CKD and full Subtitle C control.
608	ckdp00038	Lone Star supports USEPA's rejection of a "two-dust" approach for CKD management, and supports the "one-dust" approach contained in the proposed regulation. There is no significant difference in CKD from the two types of kilns.
663	ckdp00042	Ash Grove supports EPA's decision to reject the two-dust approach. In addition to the data already contained in the administrative record for this rulemaking, Ash Grove has generated additional data at its plants that utilize supplemental hazardous waste-derived fuel to affirm EPA's decision that CKD cannot be subcategorized by fuel type.
690	ckdp00044	For small entity cement plants the cost of EPA's proposal would be disproportionally high. The cost to install a lined landfill and meet the other handling and storage requirements would be very expensive. In CCC's operation, the proposed regulation would result in significant initial and annual operating costs. Imports have been a competitive problem for the US cement industry for several years. Any significant cost increase to domestic producers will have an adverse impact on the competitive situation. This can be especially harmful to small entities --- like CCC --- who do not have multinational operations or import facilities. All the small entity cement plants are non hazardous waste burners. If EPA exempts non hazardous waste burning plants from this rule, then not only would unnecessary regulation be avoided but the intent of SBREFA would be satisfied by granting relief to small entities at the same time.
705	ckdp00048	TNRCC does not concur with the two-dust approach. The number of groundwater and surface water damage cases caused by CKD from non-hazardous waste burning plants and the overlap of hazardous constituents in CKD hazardous waste burning plants and non-hazardous waste burning plants provide sufficient justification for treating both CKD wastes under one rule. TNRCC recommends that the waste be regulated based on its characteristics and not solely by the process by which it was generated. NHBCC's proposed two-dust approach takes into account the process which generated the waste, not the waste itself. TNRCC is concerned that the two-dust approach would implement a system with basically two separate sets of rules. This would complicate regulatory interpretations and probably create enforcement nightmares.
1017	ckdpL0001	Based on the data reviewed in Missouri (data provided), the chemical analyses of the CKD does not justify a two-dust approach.
1047	ckdpL0003	As we note ... in the Technical Comments ..., CKD generated by cement plants that burn only conventional fossil fuels cannot be lumped with CKD generated by the relatively small number of plants that burn hazardous waste-derived fuels.

Comment Id	Document Number	Comment
1049	ckdpL0003	We emphasize (as before) that these conclusions do not mean that EPA must "revisit" the Bevill Determination, or that any relevant CKD should be subjected to RCRA Subtitle C regimes. The risks associated with all land-managed CKD appear vanishingly low; especially when projected theoretical risks are corrected for available real-world data and site-specific mitigating factors.' □□ □□ These conclusions do mean that if EPA is able to proceed at all with this proposal, it should: (a) defer any federal regulation of CKD generated by non-burner or small non-burner cement plants, which would automatically continue (without further Agency action) the Bevill Exemption for such plants; (b) distinguish burner from non-burner dust, based on clear differences in constituent levels and associated generic risks; and/or (c) direct states to take these differences into account in determining whether (and to what extent) the unique site-specific factors that dominate risk at each cement plant warrant further CKD management measures.□□ □□ [New paragraph] Under any of these regimes, we believe that regulation of stored or disposed non-burner CKD (at least) would be implemented by competent state solid waste programs that are closer to the problem. This result is particularly appropriate because these programs have been charged for over a decade with the more difficult regulation of heterogeneous MSW landfills that contain significant actual hazardous wastes. It would also avoid the perverse effects on CKD beneficial use of national management standards backed by a looming, ill-defined hazardous-waste listing for "mismanaged" CKD.□□ □□ [New paragraph] To minimize such effects,' EPA should immediately clarify its position in accord with the above, through guidance to states or a Response to Comments document. Otherwise states will tend to treat the proposal as guidance.
1062	ckdpL0003	Introduction-EPA's CKD proposal [footnote 2] outlines a regulatory program consisting of national minimum management standards that the Agency justifies, in part, with a quantitative risk assessment of exposure to CKD constituents and an evaluation of CKD characteristics. [footnote 3] Over roughly the past decade EPA has established four dockets that contain data and analyses underlying its proposed rule. The Non-Hazwaste Burner CKD Coalition (the Coalition) has periodically submitted data and analyses to EPA staff and (it assumed) to these dockets. These data and analyses demonstrated either differences in CKD metals concentrations and potential risks between operations that bum conventional fuels and operations that bum hazardous waste derived fuels, or the invalidity of what appear to be perfunctory EPA attempts to demonstrate the contrary. The Coalition believed that its submittals provided ample justification f&r EPA, if it proceeded with national regulation, to adopt a regulatory distinction between hazardous waste burner CKD and non-hazardous waste burner CKD. EPA's proposed rule rejected this "two dust" approach, based in significant part on use of selective and statistically questionable responses to the Coalition's submittals. However, in the preamble to this proposal EPA committed to reconsider the "two dust" approach if the Coalition produced additional "new information" supporting that approach. [footnote 4]□□ □□ Footnote 2: 64 FR 45632 (August 20, 1999).□□ Footnote 3: EPA relies on damage cases, risk assessment, and waste characteristics to support its proposed regulation specifying CKD management standards. Concerning the relative importance of risk assessment, EPA states “[the risk assessment was intended to complement the damage case study.” (64 FR at 45632, Section II.C.3) This appears to concede that the Agency’s risk assessment cannot stand on its own to justify the proposed rule.□□ Footnote 4: We note but cannot address here the fairness or procedural implications of EPA imposing new, undefined information obligations when it has never directly responded to or rebutted previous “two dust” information, and apparently has never fulfilled prior commitments to provide the Coalition such responses. The Coalition’s April 1997 Report to EPA was a direct response to mutually-def[in]ed questions and is[su]es raised by EPA staff on the Coalition’s October 1996 Report to the Agency. Those questions and the Coalition’s responses were supposed to be def[in]itive. However, this mutual experience has not been replicated with respect to later-submitted Coalition data.□□

Comment Id	Document Number	Comment
1126	ckdpL0003	3. Additional technical support. Our constituent-related conclusions are supported by the following facts.: (a) CKD is an air pollution control byproduct analogous to fly ash, a substance to which hazardous metal constituents predominantly report. (b) EPA independently found, when developing the Hazardous Waste Combustor MACT, "very strong evidence that dioxin...concentrations are systematically higher" in burner CKD, and "emissions of [almost all] other HAPs...could be affected by hazardous waste burning."" (c) These CKD concentrations would only be expected to increase still further through burner-plant compliance with the stringent specific metals limits in that HWCs MACT. Moreover, the metals that EPA believed more likely to be mobilized in CKD leachate included all four of those our new Technical Comments find statistically higher in burner CKD. Notably, those EPA mobilization conclusions did not include Thallium. E.g., 64 FR at 45638/2.□□ □□ Our conclusions are further supported by the two-dust data in ETC's comments (pp. 12-16 and Attachment l), which also attempt to analyze the entire CKD database. Those data indicate (among other things) that HW fuels (not feed) contribute most metals concentrations to burner□□ CKD, that constituent concentrations in burner CKD are consistently higher by multiple factors, and that constituents in non-burner CKD in general tend to approximate background levels in soils. Because they generally compare data summaries rather than sets of individual CKD measurements, and because they have not been evaluated for statistioal significance, these ETC data should properly be viewed as descriptive. But they are suggestive and complementary in that regard.[footnote] 12□□ □□ Footnote 12: ETC apparently did not intend to assert that proposed Part 259 should apply to nonbumer CKD, or to endorse such applicability. Instead ETC focussed on assuring what it viewed as sufficiently protective management standards for more hazardous burner CKD (or other CKD that resembles burner CKD, as defined by constituent-related "action levels). The two-dust portion of ETC's comments, together with ETC's attachment, makes this clear.
1129	ckdpL0003	6. Thallium. The Preamble acknowledges that higher apparent levels of Tl in non-burner CKD result not from feed or fuel, but from the greater rates of CKD recyling to the cement process that are only possible at non-burner plants. 64 FR at 45639. However, it cites this as a second ground for rejecting a two-dust approach, noting that because about half of nonbumer plants reported wasting some CKD in 1995, "disposal of CKD with elevated levels of thallium could still pose a potential hazard. . ."□□ □□ This conclusion is illogical. The Coalition never asserted that no non-burner CKD is ever disposed. Instead we maintained that because "elevated" Th[allium] levels are directly associated with plants that recycle high proportions of their CKD, potential exposures and associated risk will proportionately decrease because relatively little such CKD will be disposed. The Preamble's brief comparison of summary means of reported Tl concentrations viewed in isolation does not rebut this interpretation, since those Coalition means are "elevated" due to the same high nonburner recycling rates that are the issue at hand. EPA's stance is circular---it completely ignores the fact while individual kilograms of CKD may go up in Tl concentration due to recirculation, by definition the number of such kilograms disposed will dramatically go down. If high rates of recirculation are not present, "elevated levels" of Tl will not be present either.[footnote] 16 Moreover, any nonrecirculated nonburner dust will more likely be temporarily stored for offsite beneficial use." In addition, EPA has indicated that Tl in CKD presents relatively little pertinent risk because its mobilization to ground- or surface-water pathways will not be accelerated by CKD leachate characteristics.□□ □□ It is undisputed that the 18 U.S. burner plants individually waste much more CKD and collectively land-dispose nearly half the total CKD disposed by the 108 plants in this industry. That disparity is increasing as non-burner plants find new ways to recirculate and beneficially□□ sell their remaining CKD because they are not subject to HW-related constraints on production processes and CKD markets. EPA's Tl reasoning diverts attention from that potential risk.□□ □□ Footnote 16: The Technical Comments' Ash Grove analysis confirms this point.
1132	ckdpL0003	[EPA should] ... (2) explicitly recognize the differences in CKD constituent concentrations and risks between operations that burn hazardous waste fuels and operations that exclusively bum conventional fuels (i.e., a "two dust approach"), either generically or as a factor that states must consider in evaluating such site-specific risks. To avoid perverse results from states treating the proposal as guidance, both of these steps should promptly be reflected in a clarification or Response to Comments.

Comment Id	Document Number	Comment
1522	ckdpL0002	Comment: A conservative and unbiased treatment of the risk screening results shows that all of the facilities that burn hazardous waste produce CKD that possesses moderate risk for human health and the environment in ground water, surface water, and air. These results are in direct contradiction to the Reports findings, which state that no facility has a high risk potential in any pathway. They should raise a flag because 25 percent of the facilities that burn hazardous waste have a high multipathway risk potential from CKD exposure in the environment. (RES 680) Kilns burning hazardous waste generate CKD having substantially higher levels of cadmium, chromium, selenium, and lead compared to non-hazardous waste-burning kilns. Due to the highly alkaline nature of CKD, these metals are readily released into surface water and ground water, presenting a significant threat to the environment. (TK 179) Response: The Agency has used the terms “high” and “moderate” risk potential, to describe the relative risk among the 15 cement plants [Emphasis Added]. These terms are not intended to be descriptions of the absolute risk at a cement plant. For example, a plant may be ranked as “moderate” overall risk for the risk potential ranking, but further quantitative risk modeling may indicate that the overall risk is less than levels of concern. Based on the Agency’s analysis of the risk potential from CKD at cement plants, no facilities ranked “high” overall, but some ranked high for certain component scores (e.g., exposure potential). Based on the conservative and unbiased ranking submitted by the commenter, only one facility was ranked overall “high” in the ground-water pathway, only one facility was ranked overall “high” in the surface water pathway, and no facilities were ranked overall “high” in the air pathway. Those facilities that were ranked “high” by the commenter were in environmental settings conducive to release from the management unit, transport to receptors, and exposure to receptors. Similarly, only two facilities, Facility Q and Facility L, were assigned an overall score for a pathway of “low” by the commenter. Neither of these facilities generated and managed CKD on site. Thus, the overall risk potential ranking is closely related to site-specific management practices and environmental setting. For each pathway, three of the six highest ranked and four of the eight highest ranked facilities (i.e., 50 percent) in the rankings submitted by the commenter were non-hazardous waste burners. Thus, concluding that hazardous waste burners have higher risks based on the risk potential ranking is unsupported by the comment. The Agency acknowledges that the analysis of means presented in the RTC indicated that CKD generated by hazardous waste burners generally has higher levels of lead, cadmium, chromium, and selenium than CKD generated by non-hazardous waste burners. Subsequent regression analyses generally supported this conclusion. However, the regression analyses also indicated that other factors such as kiln type and raw material composition also may significantly influence CKD composition. Furthermore, the release of CKD into surface water and ground water is highly dependent on site-specific environmental factors, as well as the constituent mobility under alkaline conditions. APCA Response: APCA recommends that the Agency more clearly define the intent of the terms “high” and “ significant,” to facilitate reader and layperson understanding. These appear to be subjective interpretations, rather than assessments based upon review of actual exposure data.
114	ckdp00016	ASTSWMO recommends the adoption of the solely Subtitle D approach. We believe that the States have gained sufficient experience and capability in implementing and managing the municipal solid waste Subtitle D program during the past eight years and can readily adopt a similar program for CKD without any need for EPA back-up enforcement or reliance on Subtitle C rules as a further back-up. EPA would still retain the ability of taking enforcement action in the event of a finding of substantial endangerment. This approach would entail more time for regulation development and EPA may need to be given additional authority under RCRA to regulate this specific non-hazardous solid waste. However, we believe most States would adopt the proposed standards with the support of cement manufacturers. Once adopted, the States would become responsible for enforcement of the regulations. State enforcement, along with the threat of citizen suits, would alleviate the need for Federal enforcement of major violations of the standards.
115	ckdp00016	The Subtitle D program should provide sufficient flexibility to the States to consider the leaching and physical characteristics of the CKD in determining the appropriate waste management standards. The chemical leaching characteristics of CKD, as it is managed today in many States with moisture conditioning and controlled placement, are different than the chemical leaching characteristics of some historically placed CKD. Some CKD managed in the past was not moisture conditioned and was not placed in a controlled manner.

Comment Id	Document Number	Comment
298	ckdp00020	...in Lafarge's opinion, CKD waste can and should be managed outside of the Subtitle C program. Invoking Subtitle C authority, even in a "tailored" fashion, is unjustified based on an analysis of the factors in Section 8002(o) of RCRA. The expansive administrative record compiled by the Agency makes abundantly clear that the low risk posed by CKD waste is no greater than other Bevill exempted wastes (i.e., mining, oil and gas, and utility wastes) for which EPA has determined that application of Subtitle C is inappropriate.
299	ckdp00020	CKD waste also poses no greater, and typically far less, risk than solid wastes which are managed under Subtitle D of RCRA. EPA's proposed CKD standards are patterned in large part after the Subtitle D rules (e.g., design standards, groundwater monitoring requirements). Yet Subtitle D facilities, for which there are a far higher percentage of documented damage cases than there are for CKD facilities, do not operate under the threat that mismanagement of their waste material will trigger Subtitle C regulation. Lafarge believes there is no justification for treating CKD waste differently from solid waste in this respect. Failure to adhere to the CKD rules, once established, should be addressed by the Agency (or a state) in a straightforward manner as a violation of RCRA (or equivalent state statutes), not through the fiction of reclassifying mismanaged CKD waste as a hazardous waste.
445	ckdp00027	The proposed CKD rule appears to reproduce Subtitle D requirements in the areas of disposal, closure and post-closure activities. However, deviation from Subtitle D requirements occurs when persons managing the waste commit "egregious or repeated violations, such as failing to install controls designed to meet the performance standards". Uniquely, CKD waste becomes subject to RCRA Subtitle C regulation while other Subtitle D waste such as municipal solid waste (MSW) do not. This passage from non-hazardous to hazardous classification (and vice-versa), based solely on conformance to management procedures, appears to be simply an administrative matter because the waste characteristics have not changed. Furthermore, management ambiguities arising during the transition period from one classification to another will add additional complications. Managing CKD solely according to RCRA Subtitle D requirements seems far more enforceable and appropriate. In the case when major violations of the proposed CKD standards occur, enforcement should follow the precedents that have been established in Subtitle D.
520	ckdp00034	In addition, while we support the proposed management standards for Subtitle C controls for CKD, we are opposed to all of the exemptions, waivers and variances provided to the proposed Part 259 standards based on demonstrations to the Regional Administrator.
683	ckdp00043	KDHE is supportive of this approach. KDHE realizes the EPA currently has limited authority to regulate non-municipal, nonhazardous solid waste and that the EPA 1995 regulatory determination for CKD waste suggested a need for some level of regulation under RCRA Subtitle C authority. Therefore, KDHE is supportive of revisiting the original regulatory determination and of giving the EPA additional authority to regulate this specific nonhazardous waste.
706	ckdp00048	TNRCC recommends the adoption of the solely Subtitle D approach. We believe that Texas, as well as the other states, has gained sufficient experience and capability in implementing and managing the municipal solid waste Subtitle D program during the past eight years and can readily adopt a similar program for CKD without any need for EPA back-up enforcement or reliance on Subtitle C rules as a further back-up. EPA would still retain the ability of taking enforcement action in the event of a finding of substantial endangerment.
786	ckdp00048	CKD waste currently is not characterized as a hazardous waste and does not warrant regulation as a hazardous waste. TNRCC agrees with EPA's recognition that CKD will not endanger public health and the environment when properly managed in accordance with Subtitle D standards such as proposed in 40 CFR Part.
1018	ckdpL0001	Based on the federal definition of municipal solid waste landfill, a Cement Kiln Dust Landfill (CKDLF) that only accepts CKD would not meet the definition of a Municipal Solid Waste Landfill, and therefore would not be regulated under Subtitle D, without changes to the regulations to compensate for this. Once the rule becomes final, Missouri would evaluate becoming an approved state to implement these new requirements. Should Missouri become an approved state, it would see no need for a federal enforcement presence unless assistance was specifically required.

Comment Id	Document Number	Comment
49	ckdp00014	As a result of the remedial site using "hazardous waste CKD" for stabilizing remediation waste, the site becomes a treatment facility subject to Subtitle C permitting. The stabilized remedial waste is a hazardous waste through the mixture rule, and must be managed to a RCRA Subtitle C permitted facility. If the remedial waste were initially a non-hazardous waste prior to mixing with CKD, the resulting mixture would still require Subtitle C disposal because of the "mixture rule".
116	ckdp00016	ASTSWMO does not recommend the "Subtitle C enforcement without listing CKD as hazardous" approach. The authority under which this option could be done is questionable. In order to enforce the rules on hazardous waste in 40 CFR Part 266 the waste must be characteristic or it must be a listed waste. Any waste that exhibits a characteristic is listed under the number for that characteristic. All these require a waste to be listed before the hazardous waste rules apply. If CKD were not listed no regulatory authority exists to require management standards for it. Even if this were possible, the enforcement under RCRA Sections 3008 (a) or (d)(3) for violations of back-up authorities under Subtitle C would still have a connotation that a hazardous waste is involved whether it is labeled as such or not; otherwise, it would not be subject to "any requirement of this subtitle (Subtitle C)"as stated in Section 3008(a)(l).
117	ckdp00016	ASTSWMO does not recommend the "Subtitle C approach. Regulating all CKD waste under Subtitle C using the same standards as currently proposed under Subtitle D would be a disincentive to better management of the wastes. Under the current proposal (EPA's "preferred approach"), it would be expected that greater efforts would be made to comply with the standards to avoid triggering an action that would place the waste under Subtitle C regulation. This approach has several drawbacks. While the option would accomplish the goal of protection of health and the environment, it would do so at a higher cost to industry. It would also reduce the amount of CKD that is recycled as the waste would have the stigma of being a hazardous waste. In Kansas, and perhaps other States, statutes prohibit the underground disposal of hazardous waste. The listing of all CKD may prohibit disposal in those States.
224	ckdp00019	We have already explained in part B above, that there is residual federal enforcement authority without the need for any Subtitle C controls whatever. See Letter of November 14, 1997 from Andrew T. O'Hare to Michael Shapiro. There is also another avenue for EPA to pursue. We are attaching at Attachment F, a letter of August 24, 1998 from Andrew T. O'Hare to Bill Schoenborn and incorporating that letter and its attachment by reference. As shown in that letter and its attachment, EPA could utilize Subtitle C federal enforcement authority as a back up without labeling CKD as a hazardous waste. ... as we have continually demonstrated over the last several years, CKD is not sufficiently risky to warrant labeling as a hazardous waste. We therefore encourage EPA to consider this alternative if some form of federal backup authority is deemed necessary under Subtitle C. We strongly believe, however, that the State Program Approach indicated in EPA's proposed rule preamble is by far the most preferable approach.
707	ckdp00048	TNRCC believes that enforcement under RCRA Sections 3008 (a) or (d)(3) for violations of back-up authorities under Subtitle C would still have a connotation that a hazardous waste is involved whether it is labeled as such or not; otherwise, it would not be subject to "any requirement of this subtitle (Subtitle C)"as stated in Section 3008(a)(l). TNRCC does not agree with the APCA assertion that mismanaged CICD can be enforced upon under Subtitle C without listing. This is because EPA cannot invoke Subtitle C authority on a non-hazardous waste. Therefore, EPA would lack sufficient enforcement capability under APCA's option. If EPA intends to have enforcement authority it must list CKD under Subtitle C.
1019	ckdpL0001	The MDNR is concerned with the feasibility to promulgate these regulations under Subtitle C if the waste is not characteristic or listed as a hazardous waste. We do not believe APCA's approach is sound, and would bring up questions of enforceability if the waste is not classified as a hazardous waste. [New paragraph] The MDNR recommends that CKD should not be listed as a Subtitle C waste unless it is mismanaged.

Comment Id	Document Number	Comment
107	ckdp00015	Because EPA envisions its proposed federal requirements to be managed by the state agencies, the implications of such an approach will dramatically affect implementation at the state level. Essentially, the myriad of requirements that will be triggered under EPA's proposed "tailored" Subtitle C standards will result in significant and unnecessary burdens on affected state regulatory agencies. Moreover, this approach would preclude states' ability to effectively and efficiently manage CKD disposal by imposing such a multitude of hazardous waste requirements that elicit numerous questions on how they will be implemented. (A more detailed discussion regarding this aspect is included below in Section 3). Suffice it to say that this approach is inconsistent with EPA's contention that there may be no need to finalize a federal program for CKD management if states demonstrate that appropriate programs are in place. Given the nature of CKD and the status of existing state regulations governing CKD disposal,
225	ckdp00019	We realize one option EPA had considered was a "full Subtitle C" approach for CKD, and we appreciate the fact that EPA has rejected this approach. As shown in our Comments of March 8, 1994, such an approach would be wholly unwarranted in light of CKD's minuscule risks and would impose extreme economic burdens on the cement industry. We fully support EPA's conclusion that a full Subtitle C program for CKD would be "prohibitively burdensome on the cement industry." 64 Fed. Reg. at 45642, col. 2. We also believe that EPA's proposed rule's reliance on "tailored" Subtitle C rules, along with its "Management-Based Listing" approach to classifying CKD as a hazardous waste, is unwarranted and unnecessary and would create far more confusion than benefit.
226	ckdp00019	EPA has recently foregone any Subtitle C coverage whatever for demonstrably riskier wastes. For example, in 1998, EPA declined to list as hazardous several petroleum refining and spent solvent waste streams. See 63 Fed. Reg. 42109 and 63 Fed. Reg. 64371. It is accordingly arbitrary and capricious for EPA to saddle the less risky CKD with such a program.
227	ckdp00019	[T]here are many implementation issues regarding this "hybrid" form of Subtitle C coverage that the proposed rule addresses cursorily, if at all. Foremost among the problems, is how an alleged violation of a management standard could, without further legal process, suddenly make a non-hazardous waste a hazardous waste. Another vexing problem is how a CKD disposal facility that had become a RCRA Subtitle C landfill could suddenly "revert" to Subtitle D status without consideration of RCRA closure and post-closure rules, as well as such RCRA provisions as the mixture and derived-from rule. Equally perplexing is how a CKD disposal facility could accept "hazardous" CKD waste for several months if the facility suddenly needed a RCRA Subtitle C permit and could not obtain interim status. Suffice it to say, we urge EPA to avoid all forms of possible Subtitle C regulation and hazardous waste jurisdiction respecting CKD; the State Program Approach is by far the most appropriate in light of the nature of CKD and the recent trends in state regulation.
272	ckdp00019	Summary: The attached Table 5 contains a summary of the proposed management standards for which APCA is requesting modification. EPA's proposal is summarized along with APCA's suggested changes. [The commenter included a Table 5 (Summary of Proposed CKD Management Standards) on their page 66 summarizing the areas in which the commenter is requesting modifications.]

Comment Id	Document Number	Comment
300	ckdp00020	Lafarge recommends that the EPA abandon its tailored proposed Subtitle C approach. In proposing a tailored Subtitle C approach for regulating CKD waste, EPA has further disregarded the fact that the majority of states with active cement manufacturing facilities are already regulating CKD management, in some cases via a state permitting process. Lafarge, for example, has several facilities with state permits that are not free to alter state-imposed requirements or adopt potentially conflicting management standards imposed by EPA. While Lafarge supports EPA working with the states to phase in appropriate CKD standards and reconcile/consolidate the federal and state programs, it is neither logical nor feasible to subject state-permitted facilities to EPA's CKD management standards unless and until this integration and delegation process has been completed. The delegation process should ensure that facilities now regulated by a state permit will remain regulated solely by that permit, lthough applicable management standards may eventually be modified pursuant to EPA's CKD waste initiative. Even for CKD facilities which are not currently regulated under a state permit, there are a myriad of problems associated with EPA's tailored Subtitle C proposal. First, the mere threat of Subtitle C regulation, not to mention an actual triggering of this regulatory authority, will stigmatize facilities engaging in the land disposal of CKD waste, raise unfounded community concerns regarding the minimal risks posed by CKD, and have an adverse effect on developing beneficial uses for CKD in lieu of land disposal. Additionally, neither cement manufacturers nor the EPA are realistically equipped to effectively and timely respond to the triggering of Subtitle C authority, particularly as relates to the Subtitle C permitting process, which typically has taken EPA years to process for other TSD facilities. The reality is that the triggering of Subtitle C authority on a facility-wide basis will in most, if not all, cases compel a cement manufacturing facility to immediately cease on-site disposal, begin disposing of all newly generated CKD waste at an off-site permitted facility, and attempt to correct the alleged violation to regain excluded status rather than seek a Subtitle C permit. This is a potentially unnecessary, disruptive, inefficient, and costly approach for addressing a CKD violation. It further places cement facilities who are challenging an alleged violation in an untenable position inasmuch as the cost of remaining under Subtitle C regulation during the pendency of their challenge will usually exceed the cost of acceding to any demands, reasonable or unreasonable, being made by the EPA.
460	ckdp00028	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.
526	ckdp00034	CKD from hazardous waste burning cement kilns must always be regulated under Subtitle C. The Part 259 standards could still be applied to CKD landfills (CKDLFs) operated by hazardous waste burning cement kilns, but a permit under 40 CFR 270.69 must always be applied to such units.
571	ckdp00034	The ETC agrees that CKD from kilns that do not bum hazardous waste should be subject to tailored Part 259 standards. However, in numerous places the management standards do not go far enough, or too many variance provisions exist that erode the protection provided by the standards. These weaknesses are discussed in detail below.
579	ckdp00035	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.
588	ckdp00036	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.
598	ckdp00037	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.

Comment Id	Document Number	Comment
708	ckdp00048	TNRCC believes that regulating all CKD waste under Subtitle C using the same standards as currently proposed under Subtitle D would be a disincentive to better management of the wastes. Under the current proposal, it would be expected that greater efforts would be made to comply with the standards to avoid triggering an action that would place the waste under Subtitle C regulation.
52	ckdp00014	The NJDEP SRP supports USEPA in its goal of establishing controls for the proper management and disposal of waste CKD (that is, CKD being routed directly to a disposal facility without ever being used as a product). The NJDEP SRP also agrees with the USEPA statement that CKD when used to stabilize wastes constitute environmentally sound recycling and beneficial use practices.□□ □□ State of New Jersey is just one of many states where CKD is commonly used as a product in the following settings:□□ - Hazardous substance discharge remediation projects where CKD is used to stabilize and solidify environmental media and remedial wastes prior to disposal or in-situ management;□□ □□ - Industries where process waste is stabilized or solidified prior to disposal in Subtitle C or Subtitle D permitted facilities;□□ □□ - "Brown fields" redevelopment where on-site soils require stabilization and solidification as part of site rehabilitation; and, □□ □□ - Process dredge material facilities where the dredge materials are stabilized and solidified prior to reuse in upland locations.□□ □□ Any Federal regulation that restricts these environmentally sound uses of CKD as a stabilization and solidification product would be unacceptable to the NJDEP SRP. However, with the proper amendments to the proposed regulation, those restrictions can be removed, allowing for the environmentally safe use of CKD as a product to continue in the above settings.
53	ckdp00015	TXI strongly agrees with the approach of state regulation of CKD and believes that either of the two state regulation methods discussed in the preamble would be appropriate-to ensure adequate management of CKD.
57	ckdp00015	CKD management practices and State requirements governing those practices already address the facilities and states in which the majority of CKD is landfilled, and federal regulation is unwarranted and unnecessary.
58	ckdp00015	[A]dequate management requirements already exist in California and Texas that ensure CKD is disposed of and handled in a manner that is protective of the environment. Furthermore, these programs and those of other states are more closely adapted to the facility-specific nature of CKD management than a broad based federal program, and would logically be better suited for development and administration of CKD management requirements.

Comment Id	Document Number	Comment
101	ckdp00015	TXI operates cement production facilities in Texas and California. In Texas, CKD is classified as an industrial solid waste and is managed under the Solid Waste Disposal Act (SDWA), Texas Health and Safety Code, Chapter 361, and the regulations promulgated pursuant to the SDWA. These regulations are codified in Title 30 of the Texas Administrative Code, Chapter 335 (30 TAC 335) and administered by the Texas Natural Resource Conservation Commission (TNRCC). In short, Texas has an effective mechanism for CKD management already in operation, through which controls are maintained over CKD in a manner that meets the overall criteria EPA is now advocating. Furthermore, specific components of this program can be modified through rulemaking and/or technical guidance to more closely mirror the spirit of the EPA's proposed performance-based management standards that are spelled out in proposed 40 CFR 259. Texas clearly maintains existing statutory authority (the SWDA) to regulate CKD in a manner that is fully protective of human health and the environment and that correctly manages any perceived risks EPA outlined in its Regulatory Determination issued on February 5, 1995. TXI strongly supports this regulatory approach to management of CKD, as it ensures protection of the environment while allowing sufficient flexibility for both TNRCC and industry. California also has regulations in place that address the management of CKD, and TXI feels that this program meets the requirements outlined in the proposed rule. A detailed illustration of the elements in the California requirements follows below. □□ □□ CKD is managed in California under California Code of Regulations, Title 27 (Sections 22470 through 22510, "Mine Waste Management"). The following is a summary of some key components of the Mine Waste Management Regulations in Title 27 (§22470 through 22510) that generally equal or exceed the requirements of the Proposed Rule for management of CKD in California:□□ -Title 27 regulations are administered by the Regional Water Quality Control Boards through the issuance of Waste Discharge Requirements to specifically protect groundwater quality.□□ - Mine waste designations are according to threat to groundwater ("A" - significant, "B" - low, and "C" - none).□□ - Siting and Construction (§22490):□□ Not on a Holocene fault - A & B wastes, and C waste if shown there is no escape of waste, and no damage to containment structure□□ Outside area of rapid geologic change - A & B wastes□□ Protection from flooding and peak streamflow□□ No streambed erosion□□ Liner -A & B waste surface impoundments□□ - Leachate Collection and Recovery Systems - all A & B wastes□□ Precipitation and drainage controls - A, B, & C wastes□□ - Extensive monitoring may be allowed in lieu of certain containment features; however, contingency plans are required if monitoring indicates that disposal procedures are inadequate.□□ Exemptions from these requirements (§22490) are allowed if hydrogelogic investigation shows that there is no threat to groundwater, and the discharge is in compliance with the□□ - Water Quality Control Plan.□□ - Water Quality Monitoring (§22500):□□ - Groundwater and surface water monitoring requirements are the same as those for solid waste management units (Title 27, §20385 - 20430), and are therefore adequate for management of CKD.□□ - Closure and Postclosure Maintenance (§225 10):□□ - Units shall be closed so they no longer pose a threat to water quality□□ - Closure and postclosure plan required □□ Closure standards equal those for solid waste landfnls - A & B wastes□□ Covers - A & B wastes□□ Erosion and sediment protection□□ Containment structure integrity must be maintained□□ Funding for closure and postclosure maintenance costs□□ - Assurance of financial responsibility□□ Ending post closure maintenance when RWQCB determines there is no longer a threat to water quality□□ - The current State requirements therefore meet the proposed EPA requirements for CKD landfill design.

Comment Id	Document Number	Comment
123	ckdp00016	ASTSWMO does not recommend the "States adopting appropriate programs" approach in the context that it is proposed. This option would result in a program that would manage CKD in the same way as the preferred option. It will come to this result only after a long period of negotiation between the States and EPA. It would not provide the same consistency as the preferred option and does not provide any time frame for completing CKD management programs in the States. This option is too indefinite. There are States that cannot adopt appropriate programs without EPA first adopting standards as part of a regulatory scheme. Without such standards in place, there are a number of questions that remain unanswered, including: What yardstick would EPA use to determine when a State program is appropriate? How "similar" to the requirements listed in Sections IV., V., and VI. of the current proposal must the State program's requirements be to be considered appropriate? Will all States be measured by the same yardstick? How long will EPA wait to determine that not all States will adopt a program on their own and EPA must then go forward to re-propose the current proposal (many States have been waiting for years for EPA to promulgate national standards)?
215	ckdp00019	Table 2 presents statistics from the 1998 survey addressing the states where most of the CKD is diposed. ... APCA has been actively engaged in encouraging these key states with the greatest amount of CKD disposal to develop appropriate programs to manage CKD. Much progress has been made in these efforts. Thus, one of the fundamental underpinnings of EPA's CKD Regulatory Determination that state authorities to control potential ground water contamination from CKD disposal sites are inadequate-is swiftly eroding. As the scope of the disposal control situation can be rather efficiently addressed by focussing on relatively few states, any gap in state regulation that may EPA perceive can be resolved without having to resort to a federal Subtitle C rulemaking.
216	ckdp00019	...virtually all of the facilities now disposing of the majority of the CKD in the United States are-or soon will be-operating under the auspices of a state sanctioned program.□□ The 1998 CKD survey data indicate that over 78 percent of the CKD disposed in 1998 was placed in units at 22 cement plants. This represents less than 20 percent of all cement plants that were in operation that year. Interestingly, one of the 22 has stopped generating CKD since 1998, and others continue to reduce their generation. Table 3 presents a detailed look at the status of CKD management at these 22 facilities. 90 percent either are, or expect to shortly be, permitted or authorized by a state agency for operation of their CKD management units.
217	ckdp00019	The Agency indicates in the preamble to the proposal (64 Fed. Reg. 45642 [sic]) that there would be no reason to promulgate a final rule should states "come forth with appropriate programs for managing CKD." [page 45641] APCA believes that this objective is very near fruition.
375	ckdp00023	The EPA's assertion that insufficient state regulations for CKD management are in place is not true. Holnam favors reliance on state programs to regulate CKD management. Holnam agrees with EPA's statement that "there may be no need to finalize a Federal program if States with cement facilities that dispose CKD adopt appropriate programs and standards for managing CKD." 64 FR at 45641.
384	ckdp00023	Holnam, Midlothian plant installed a total of three monitoring wells around the existing landfill to evaluate ground-water flow conditions and potential impacts from the CKD disposal practices. A map of the landfill site with locations of the monitoring wells is presented in Appendix A. In-field hydraulic conductivity tests were performed on each monitoring well and one round of ground-water samples were collected for chemical analysis. Ground water was encountered below the base of the landfill. The hydraulic conductivity test results ranged from 4.8 x 10-5 cm/sec to 1.5 x l0-5cm/sec, indicating ground-water flow beneath the landfill is relatively slow. The ground-water quality results indicated that the existing CKD monofill is not having an impact on ground-water quality. The results are summarized in Appendix A.

Comment Id	Document Number	Comment
407	ckdp00025	Holnam favors reliance on state programs to regulate CKD management. Holnam agrees with EPA's statement that "there may be no need to finalize a Federal program if States with cement facilities that dispose CKD adopt appropriate programs and standards for managing CKD." 64 Fed. Reg. at 45641. Prior to becoming aware of EPA's intentions to draft the proposed CKD Management Standards, representatives of Missouri Department of Natural Resources Solid Waste, Air Quality, Hazardous Waste, Water Quality, and Geology divisions initiated several meetings with representatives from the cement producers in Missouri. MDNR cited their authority for regulating CKD, and their intent to develop a CKD management vehicle designed to provide enforceable and equitable regulation of CKD in Missouri. Management concerns such as site evaluation, monitoring components, closure, and enforcement provisions were discussed, and a permit application form was drafted. As a result of those meetings, Holnam's Clarksville Plant initiated a comprehensive evaluation of their current CKD management practices, and the current disposal area. Further development and finalization of the regulation was stalled by the publication of the current Proposed CKD Rule by EPA. In addition to CKD disposal, the MDNR has authority to regulate emissions of fugitive dust from cement plants, including haul roads, transfer points and landfills. In fact, this facility has applied for a Title V permit that addresses [all/many] of these issues. Holnam believes that because area-specific geologic, solid waste, hazardous waste, air quality, and water quality issues are clearly within the focus of the respective local State Agencies, a State-run program for regulating CKD is warranted. Holnam-Clarksville is also confident that Missouri will resume the regulatory work required to finalize their rules if EPA will not proceed with the current proposal.
422	ckdp00025	At Holnam's Clarksville Plant, adequate controls and monitoring are currently in place, contrary to EPA's belief. The effectiveness of those controls and the feasibility of an appropriate state-based permitting program have been acknowledged by representatives of Missouri Department of Natural Resources. Therefore, the proposed CKD rule provides an added layer of unneeded and burdensome regulation.□□ □□ Monitoring and test data gathered during the last two years confirms that the existing landfill at Clarksville has not exhibited either negative ground water or negative ambient air quality impacts.
424	ckdp00025	Holnam believes that it is appropriate for CKD to be regulated by the states, and that the State Agencies have the authority and the expertise to develop appropriate regulations for the management of CKD without further initiative of the proposed rules by EPA. Additional discussion of state-lead regulatory activities related to CKD is presented later in these comments.
458	ckdp00028	Existing South Carolina regulations provide for protection of groundwater, surface water, and air resources. The proposed rules are redundant in our state. They present an unnecessary regulatory burden by specifying the means by which environmental protection will be achieved. In South Carolina, the intent of the proposed rule can be accomplished with current regulations. The State of South Carolina regulates industrial solid waste with regulations patterned after RCRA Subtitle D. Design requirements for landfills are determined on the basis of TCLP leachate chemistry. These regulations would result in the same requirements for landfill design, and the same level of groundwater protection and limitation of fugitive dust, as the proposed federal rule.
463	ckdp00028	The Holly Hill plant is currently managing its CKD on-site in a portion of its quarry. This unit is being investigated pursuant to the plant's RCRA Part B permit. The investigation has confirmed that the disposal practices employed at Holly Hill have not impacted groundwater beneath the existing CKD disposal area. The plant is in the process of completing an application for a new industrial waste landfill pursuant to SCDHEC's regulations dealing with Industrial Solid Waste Landfills. These regulations are more than adequate to protect human health and the environment, thus, further regulations are unnecessary.
464	ckdp00028	The location standards included in the proposed CKD management regulation are the same as those contained in DHEC's industrial solid waste regulations, with the one exception. For this reason, the proposed rule is redundant in South Carolina. The lone exception is the requirement for dye-trace studies in all areas underlain by carbonate rock, contained in the proposed regulation at § 259.30(a). While karst terrain can develop in any carbonate rock, not all carbonate rock is karst terrain.

Comment Id	Document Number	Comment
477	ckdp00029	Michigan already has regulations in place that manage CKD in an environmentally sound manner. In fact, many aspects of Michigan's regulations are more stringent than those proposed in the federal rule making. These include strict requirements for closure of historical piles, more stringent groundwater monitoring requirements, more stringent requirements related to reusing CKD, and others.
479	ckdp00029	... a provision should be included in the proposed rulemaking to exempt states like Michigan with more stringent regulations in place.
481	ckdp00029	In a letter dated December 29, 1998 (copy enclosed), to Ms. Carol M. Browner, U. S. Environmental Protection Agency (EPA) Administrator, Michigan detailed the progress that we had made in the previous five years related to management of CKD. As an update to that letter, I would like to point out that both Holnam, Inc., and Southdown, Inc., have been issued operating licenses for their CKD disposal areas.
491	ckdp00030	For solid waste and hazardous waste management, Idaho does not adopt requirements that are more stringent than federal requirements. Without EPA promulgating the proposed rule, Idaho would be unable to adopt any state statute or rule for CKD management that are more stringent than federal requirements. In addition, any promulgated guidance regarding CKD would not be adopted or enforceable in Idaho.
508	ckdp00033	The St. Lawrence Cement - Hagerstown plant supports a state-based approach to CKD management, and believes that the proposed rule is redundant. Maryland requires all new industrial landfills, including CKD monofills, to be permitted and licensed. The industrial solid waste rules, which have been in place since 1980, includes liner design standards based on the waste leaching characteristics, ground-water monitoring, closure standards, post-closure care and financial assurance mechanisms. The liner standards include a minimum of clay with a leachate collection system. The cement industry has worked in full cooperation with the Maryland Department of the Environment to comply with these regulations. The proposed CKD rule would add an unnecessary layer of additional regulation.
632	ckdp00039	The California State Water Resources Control Board (SWRCB) has had regulations in place since 1972 that regulate the disposal of municipal solid waste as well as industrial solid waste such as cement kiln dust (CKD). These requirements have been through major revisions in 1984 and 1991 and are currently contained in Division 2, Title 27, CA Code of Regulations. For CKD piles/landfills, these regulations provide thorough water quality protection under a program of design standards, monitoring and response programs, and closure/post-closure standards that are protective of beneficial uses of water and are comparable to, but different from, the USEPA's proposed CKD standards. On page 45641, Section G, of the preamble, under, "States Adopt Appropriate Programs," the USEPA requests comments from states as to whether each state could implement a program to adequately address proper management of CKD. California already has regulations in place that manage CKD in a manner that is protective of water quality. In fact, many aspects of California's regulations are more stringent than those in the proposed federal rule. In California, the USEPA's adoption of a CKD rule would provide no additional water quality protection benefit, but would subject the regulated community and state regulators to the costly and time-consuming necessity of having to address a redundant body of federal regulations that does not mesh well with the existing State program. Worse yet, it is our experience that the existence of a concurrently applicable federal program results in strong political pressure to conform the State's program to the federal, and to eliminate all State standards that are additional to, or more stringent than, the federal standards.
633	ckdp00039	MAIN COMMENT -- On the basis of the foregoing discussion, SWRCB suggests that the USEPA revise the proposed rule to exempt states like California that have equivalent, or more stringent, regulations in place. Furthermore, we suggest that the functional equivalency of a State's program should be judged upon its overall performance, rather than upon detailed comparison.

Comment Id	Document Number	Comment
641	ckdp00040	Oklahoma currently has an adequate regulatory structure in place and sufficient enforcement mechanisms available to effectively manage CKD. Below is a list of all current State CKD regulatory options. ODEQ has permitting authority for Nonhazardous Industrial Solid Waste Landfills for CKD disposal. (Regulation of CKD landfills under ODEQ solid waste rules is voluntary.) Holnam's CKD monofill is currently regulated by ODEQ under this authority. Many of the provisions in the Proposed Rule are covered by existing Oklahoma Solid Waste Management Regulations (Okla. Admin. Code § 252: 520-l et seq.) and are incorporated into the permit language. They include: Location Standards, Design Criteria, Ground Water Monitoring, Closure, Post Closure and Financial Assurance Requirements (Location Standards in Okla. Admin. Code § 252: 520-7-l to 2, are similar to Proposed Rule § 259 Subpart B. Design Criteria in Okla. Admin. Code § 252: 520-9- 1 et seq., are comparable to Proposed Rule § 259 Subpart D. Ground Water Monitoring requirements of Proposed Rule § 259 Subpart E are also found in Okla. Admin. Code § 252: 520-9-9. Closure, Post Closure and Financial Assurance Requirements of Proposed Rule § 259 Subparts F and G are similar to Okla. Admin. Code § 252: 520-23-I et seq.). Holnam, Ada's solid waste permit initially required quarterly ground water sampling for two years. That requirement was reduced to semi-annual sampling based on the positive water quality results. The permit requires Holnam to "conduct corrective action if there is any indication of the potential for or actual release of, contaminants into the environment." Non-compliance with the Oklahoma Solid Waste Management Act and the permit as written may result in "grounds for enforcement action, including permit modification, administrative civil penalties, suspension or revocation, and denial of a pending permit application." The existing permit and regulatory structure cover the same regulatory areas as the Proposed Rule, Part 259. Sufficient compliance "hooks" currently exist making additional regulation of CKD duplicative and unnecessary.
642	ckdp00040	The Oklahoma Clean Air Act (Okla. Stat. tit. 27A, § 2-5-101 et seq.) regulations prohibit handling of a substance capable of being air-borne without taking reasonable precautions to minimize atmospheric pollution. In addition, no visible emissions may discharge beyond the property line (Okla. Admin. Code § 252: 100-29-l et seq.) ODEQ may inspect the facility for visible emissions at any time, or citizens may report emissions to ODEQ. Any further regulation of air quality as written in the Proposed Rule is duplicative.
643	ckdp00040	The ODEQ Water Division implements and enforces Federal and State water regulations. Discharge of industrial wastewater requires an Oklahoma pollution discharge elimination system permit ("OPDES"). OPDES permits are required for discharge from an impoundment and may be required for run off from the landfill (Okla. Stat. tit. 27A, § 2-6-201 et seq.). Effluent limits may be set, in particular, for total suspended solids, total dissolved solids and pH. The Water Division sufficiently regulates CKD surface water issues.
644	ckdp00040	All cement plants in Oklahoma must procure a permit to quarry raw materials through the Oklahoma Department of Mines, Non-Coal Division. As part of the mining permit application, a Reclamation Plan must be submitted and approved which includes a detailed disposal plan for all mine waste, including CKD disposal. Reclamation plans must include a closure plan for the entire affected area. The Oklahoma Department of Mines provides an additional level of regulation for CKD management and disposal.
645	ckdp00040	The Oklahoma Water Resources Board ("OWRB") primarily handles permits for water allocation. The OWRB also determines water quality standards for surface water. Certification is required by the OWRB for an OPDES permit to show the discharge will not violate water quality standards. If industrial activities were predicted to impact, or were impacting, a body of water then the OWRB has the authority to deny certification for an NPDES permit and to initiate corrective action. In a different scenario, if management of CKD at a cement plant affected the ground water of a permitted water user, then the OWRB would have authority to take action. Citizen suits included in various environmental statutes are available as a private remedy to individuals directly affected by CKD mismanagement. In addition, a citizen may bring a private tort or nuisance action against a cement plant if plant activities interfere with property rights. From the above review of the regulatory structure and available enforcement mechanisms, it is clear that the State of Oklahoma is effectively regulating CKD from cradle to grave. The Ada facility's notice of violation for air in 1991(Attachment 4, NOV and Holnam's response) is a prime example of effective regulation of fugitive emissions of CKD through pre-existing state regulatory mechanisms. Holnam supports continued state regulation of CKD and opposes promulgation of the Proposed Rule. Management-based listing of CKD is unnecessary and redundant to existing State regulation.
654	ckdp00040	Holnam, Ada feels strongly that current regulation of cement kiln dust (“CKD”) by the State of Oklahoma is effective, and that the Proposed Rule is duplicative and should not be promulgated.

Comment Id	Document Number	Comment
665	ckdp00042	Ash Grove hereby states its strong support of appropriate state programs (64 FR 45641, Col. 3) as the most practical and effective of the options to address risks from mismanagement of CKD. Data to be supplied to EPA by APCA clearly will show that the need to regulate the management CKD is confined to just a few states that are quite capable of establishing and implementing appropriate CKD management programs.
678	ckdp00042	The data further will show the progress that has been made by the cement industry, overall, towards improving CKD management practices. Consequently, there is no need for implementation of the state-based approach proposed earlier by APCA or any of the other options involving national CKD management standards. Ash Grove has encouraged regulators in each state in which it disposes CKD to develop adequate regulations and/or programs for the management of CKD within those states.
682	ckdp00043	Kansas has an industrial solid waste program in place. While the program is designed to address wastes managed by several industries, Kansas has addressed (or plans to address) the management of CKD under the program. Many of the tenets included in the management program outlined by EPA in the proposal are also contained in KDHE's industrial solid waste program (e.g., location standards, design criteria, groundwater monitoring, etc.). In many instances the general approaches outlined in the proposal are similar to those in KDHE's program.
685	ckdp00043	KDHE is very open to the idea of the States with cement facilities adopting requirements similar to the proposed regulations with the understanding the EPA would not finalize the proposed regulations if State standards were in place. However, the EPA must realize the States must be given a reasonable time period in which to implement new regulations which incorporate the proposed standards.
691	ckdp00045	Kansas has an industrial solid waste program in place. While the program is designed to address wastes managed by several industries, Kansas has addressed (or plans to address) the management of CKD under the program. Many of the tenets included in the management program outlined by EPA in the proposal are also contained in KDHE's industrial solid waste program (e.g., location standards, design criteria, groundwater monitoring, etc.). In many instances the general approaches outlined in the proposal are similar to those in KDHE's program.
709	ckdp00048	TNRCC does not recommend this option because it is too indefinite. There are States that cannot adopt appropriate programs without EPA first adopting standards as part of a regulatory scheme. Without such standards in place, there are a number of questions that remain unanswered, including: What yardstick would EPA use to determine when a State program is appropriate? How "similar" to the requirements listed in Sections IV., V., and VI. of the current proposal must the State program's requirements be to be considered appropriate? Will all States be measured by the same yardstick? How long will EPA wait to determine that not all States will adopt a program on their own and EPA must then go forward to re-propose the current proposal (many States have been waiting for years for EPA to promulgate national standards)?
828	ckdp00053	1. Holnam favors reliance on state programs to regulate CKD management. Holnam agrees with EPA's statement that "there may be no need to finalize a Federal program if States with cement facilities that dispose CKD adopt appropriate programs and standards for managing CKD." 64 Fed. Reg. at 45641. Holnam believes that states are increasingly regulating CKD management under both solid waste and mining programs. As discussed above, Holnam has actively sought out such regulation, and has made considerable progress in most states in which it operates. Therefore, Holnam has reason to believe that this approach will work to protect the environment without a federal program that includes hazardous waste.regulation.
975	ckdp00060	SLC favors reliance on state programs to regulate CKD management. SLC agrees with EPA's statement that " there may be no need to finalize a Federal program if States with cement facilities that dispose CKD adopt appropriate programs and standards for managing CKD." 64 Fed. Reg. at 45641. SLC believes that states are increasingly regulating CKD management under both solid waste and mining programs. As discussed above, SLC has actively sought out such regulation, and has made considerable progress in most states in which it operates. Therefore, SLC has reason to believe that this approach will work to protect the environment without a federal program that includes hazardous waste regulation.

Comment Id	Document Number	Comment
1021	ckdpL0001	The MDNR does not support individual state-adopted programs for regulating CKD due to the inevitable variation between states in implementing management standards. In Missouri, the four cement kilns generating CKD dispose of it on-site in an abandoned quarry or in an unpermitted monofill. Missouri supports EPA approaching the regulation of CKD similar in manner as it did for municipal solid waste. In that approach EPA established a baseline standard for the design and operation of municipal solid waste landfills, commonly known as subtitle D. States that demonstrated to EPA that they had equivalent regulatory requirements were eligible to become approved states and became responsible for the full implementation of those requirements. The MDNR has been supportive of the EPA in this rulemaking process and supports reasonable federal CKD regulations, since we believe this to be the simplest way of getting consistent, effective regulations.
361	ckdp00021	NMA supports EPA's proposal that certain Subtitle C standards need not be applied to the management of CKD subject to the "backup listing". EPA has proposed, rightfully, to limit the parameters for which operators must monitor their CKD units. NMA also supports the agency's proposal not to apply land disposal restrictions, minimum technological requirements and facility-wide corrective action provisions to CKD management. Given CKD's volume, its general lack of hazardous characteristics, and the presence of increasingly effective state regulatory regimes, EPA is more than justified in proposing to apply modified requirements to CKD, rather than the full panoply of Subtitle C requirements. EPA's use of its RCRA sec.3004(x) authority is fully consistent with the opinion of the D.C. Circuit in AISI v. EPA. 886 F.2d 390 (D.C.Cir., 1989). cert.den. 498 U.S. I OS2 (1990).
403	ckdp00025	Cement kiln dust (CKD) should not have the potential to be listed as a hazardous waste, based on the minimal health risk associated with CKD management practices. In fact, CKD is commonly used in the treatment of hazardous waste.
470	ckdp00028	Our exisitng landfill is not exhibiting ground water impacts, demonstrating the low risk of CKD disposal and the unwarranted "management-based" hazardous waste listing included in the proposed rule.
510	ckdp00033	The SLC - Hagerstown plant also has concerns about the potential hazardous waste designation of mismanaged CKD. Aside from our previously stated position that the low risk that CKD poses does not warrant a listing as a hazardous waste, the rule is unworkable in its present form. We believe that it will be very difficult to avoid scenarios that may be considered mismanagement of CKD simply during day-to-day operations, even using the most careful practices. For example, should a baghouse or screw fail or require normal maintenance some CKD may be spilled to ground. Under this regulation this would be considered mismanagement and could trigger a hazardous waste listing. It is unreasonable to "create" a hazardous waste based on normal operational upsets. Furthermore, if a hazardous waste listing did result from such incidences, we see no "re-entry" pathway to non-hazardous status evident in the proposed rule language.
693	ckdp00046	Management standards should not be placed in a single CFR Part dedicated solely to CKD. The proposal places management standards under a new Part 259 dedicated solely to the management of CKD. It is the Department's opinion that this is an unprecedented move to dedicate a CFR Part to a single waste. The Department recommends that the Agency establish a new part titled "Special Management Requirements for Specific Solid Wastes" and place the CKD solid waste management requirements in this Part. This would be analogous to the Subtitle C Part 266 titled Standards for the management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities. The proposal, in fact, places hazardous waste management requirements for CKD in Part 266 when it is not managed according to the solid waste management standards proposed for Part 259. Part 266 presently contains management requirements for lead acid batteries being reclaimed, wastes when precious metals are reclaimed, hazardous waste burned in boilers and industrial furnaces, and military munitions.
941	ckdp00059	We generally find the technical aspects of the proposal acceptable, as they relate to our agency's responsibilities.
946	ckdp00060	Specifically, we would like to reiterate our comments made through the American Portland Cement Alliance (APCA) and also during the discussion we had with EPA staff. SLC believes this proposal will create a disincentive to beneficial use and thus ignoring net environmental improvement.

Comment Id	Document Number	Comment
947	ckdp00060	The proposed rule assume that CKD is a waste where this concept is an obstacle to recognise the value of a co-product. Boundary between goods and residue, or so-called waste, is so thin that in some case the virgin material is more dangerous than the residue. By using the same approach, a major part of all manufactured good would be classified as hazardous waste and could not be use for the good of the society. For instance, asphalt is a co-product that is well known for its common use but could represent risk to the environment if not properly manage and use.
959	ckdp00060	The EPA does not honoured or is in conflict with its guiding principle. EPA as set guiding principle to bring environmental program more efficient by reducing paper work and refocusing its priority. As per EPA document, major effort should be "focus on high risk hazardous waste". As it state by EPA, CKD is a non-hazardous waste representing low risk for environment. Accordingly, EPA should not regulate this co-product but try to enter into partnership agreement, with the industry or with the state, consistent with EPA guiding principle. Also, these guiding principle are promoting innovation and flexibility. SLC believe the proposed rule would have the inverse effect. Thus, contradicting the essence of these guiding principles.
974	ckdp00060	If, notwithstanding the foregoing points, EPA elects to promulgate a final rule that lists CKD as a hazardous waste under certain circumstances, the proposed rule is so seriously flawed as to be impractical and unworkable. Therefore, the Proposed CKD Rule listing CKD as a hazardous waste, would be arbitrary and capricious, and abuse of discretion, and not in accordance with the law.
1010	ckdp00062	Essroc expects the Agency to make its decision regarding the management of CKD based on sound technical decisions that are consistent with the Clean Air Act statutes. If this IS done, human health and the environment will be protected and the people who depend on the portland cement industry for a livelihood will be fairly treated.
1012	ckdp00062	Essroc is concerned that some of the proposed requirements would impose significant and unnecessary burdens on the industry. Essroc believes the industry's concerns can be addressed without compromising the environmental benefits of the rule and hopes that the USEPA will at the very least publish corrections to the proposed rule so that the inaccuracies and misconceptions that are identified in the industry's comments can be clarified.
1042	ckdpL0001	The MDNR recommends that CKD should not be listed as a Subtitle C waste unless it is mismanaged.
60	ckdp00015	Because of the self-implementing scheme for alternative demonstrations, with so many approval steps required for any variation from the prescriptive nature of the default technical standards, facilities are, in essence, prohibited from considering a perfectly satisfactory alternative due to threat of liability if the EPA Regional Administrator or authorized state agency disagrees with the proposed alternative.
118	ckdp00016	ASTSWMO does not support the management-based listing (EPA's preferred) approach because the solely Subtitle D approach can provide a more economical means of accomplishing the same objective of protecting human health and the environment, and will minimize the duplication of efforts between the States and EPA.
253	ckdp00019	EPA is proposing to exclude clinker from regulation as a derived-from hazardous waste when certain CKD is reintroduced to the cement manufacturing process, As EPA explains, this exemption may be necessary to protect clinker from situations in which CKD becomes classified as a hazardous waste under "certain regulatory scenarios." 64 Fed. Reg. at 45655, col. 2. We strongly endorse EPA's proposed approach of specifying that no matter what the regulatory "scenario" might be with respect to reintroduced CKD, any resulting clinker would not in any way be deemed regulated under RCRA Subtitle C. EPA is correct that "when reintroduced, CKD does not contribute any constituents to clinker production that are not already present that such clinker poses no real threats to human health or the environment. Id.

Comment Id	Document Number	Comment
525	ckdp00034	However this position stated on page 45655 of the preamble conflicts with the discussion on page 45642. On page 45642 EPA states that CKD that exceeds the hazardous characteristic would be exempt from regulation as a hazardous waste, provided it is managed in accordance with the Part 259 standards. The ETC is opposed to this position. Any CKD that exceeds the characteristic levels for metals or corrosivity must be classified as a hazardous waste and must be managed under full Subtitle C standards. This is consistent with EPA's definition of hazardous waste under which a generator must determine if a waste is listed and whether it exhibits a characteristic. If a waste is not listed, it still must be managed as hazardous if it exhibits any of the‘ characteristics. This is because the waste still presents a threat to human health and the environment. Therefore, any CKD that exhibits any of the hazardous characteristics certainly must be managed as a hazardous waste under full Subtitle C requirements.
581	ckdp00035	The Theodore plant has concerns about the potential hazardous waste designation of mismanaged CKD. Aside from the fact that the low risk posed by CKD does not warrant a listing as a hazardous waste, the rule is unworkable in its present form. We believe that it will be very difficult to avoid scenarios that may be considered mismanagement of CKD during day-to-day operations, even using the most careful practices. For example, normal preventative maintenance on the kiln pollution control equipment (baghouses) requires the inspection of the baghouse units. When bad bags are found in the units, they have to be replaced and disposed of. If CKD becomes a hazardous waste, will it be reasonable to classify these bags as a hazardous waste due to having pyrosystem dust on them? It is unreasonable to "create" a hazardous waste based on normal operations. Furthermore, if a hazardous waste listing did result from such incidents, we see no "re-entry" pathway to non-hazardous status evident in the proposed rule language. The prospect of such a designation is particularly onerous for the Theodore plant because we recycle all of our pyrosystem dust into the kiln. The potential exists for the plant to be subject to the BIF regulations by virtue of the fact that we would be putting what may be considered a hazardous waste back into the kiln. The fact that our pyrosystem dust is effectively one of our raw materials, makes this type of scenario unfair and unreasonable to our plant.
600	ckdp00037	The Devils Slide plant also has concerns about the potential hazardous waste designation of mismanaged CKD. Aside from our previously stated position that the low risk that CKD poses does not warrant a listing as a hazardous waste, the rule is unworkable in its present form. We believe that it will be very difficult to avoid scenarios that may be considered mismanagement of CKD simply during day-to-day operations, even using the most careful practices. For example, equipment wear and breakdown does occur. During repairs, CKD material may spill or have to be removed from the conveying equipment to enable work on and repair such equipment. This removed CKD material would have a potential to be considered hazardous. This type of repair could be considered mismanagement. Work done in a timely manner where the CKD material is cleaned up and recycled to a storage bin for ultimate removal or reintroduction to the system should be considered a best practice standard and not a potential hazard. Any issue surrounding the immediate area, point of collection, loading, transfer, maintenance, or holding prior to ultimate disposal should not be considered a point of a hazardous material spill. Routine maintenance, emergency breakdowns, and equipment malfunction should be allowed sufficient latitude to work on mechanical problems, clean it up and remove for proper usage or disposal without the potential of risk of hazardous waste generation.
601	ckdp00037	It is unreasonable to "create" a hazardous waste based on normal operational upsets. Furthermore, if a hazardous waste listing did result from such incidences, we see no "re-entry" pathway to non-hazardous status evident in the proposed rule language. For these reasons the rule should not be promulgated.
658	ckdp00041	U.S. EPA should not add another regulatory program. Based on scientific data, they should choose to fully regulate CKD under Subtitle C or Subtitle D. The proposal to conditionally delist CKD if it is disposed in a specific landfill poses complex and unnecessary jurisdictional issues on the national and local level.
664	ckdp00042	Under no circumstance does Ash Grove believe that Subtitle C regulation of CKD management or potential mismanagement is desirable or necessary. Ash Grove recognizes that CKD must be managed in accordance with adequate standards; however, CKD does not present the kinds of hazards to human health or the environment that would justify any form of Subtitle C regulation.

Comment Id	Document Number	Comment
689	ckdp00044	TCLP testing on spot samples of "as wasted" CKD at CCC's facility have not shown metals concentrations near the level required to be characteristic of a hazardous waste. It is important to note that EPA in March 1999 submitted a Report to Congress on Wastes from Combustion of Fossil Fuels. EPA stated that for coal fired utility and non-utility comanaged wastes that " based on limited available data, EPA concludes that comanaged wastes generally are not corrosive, reactive, ignitable, or toxic." EPA also concluded that these wastes --- and the beneficial use of these wastes --- should remain exempt from RCRA Subtitle C. For kilns that burn fossil fuels, like those at CCC, EPA then has concluded that the waste from combustion of fuel does not warrant Subtitle C regulation. If the raw material also does not exhibit hazardous waste characteristics and the fuel waste is not hazardous, then CCC can not rationalize why dust collected from the kiln process would be expected to be hazardous ---- especially for metals. CCC urges EPA to recommend that CKD from non hazardous waste burning plants remain exempt from Subtitle C requirements.
710	ckdp00048	TNRCC does not support the management-based listing approach because the solely Subtitle D approach can provide a more economical means of accomplishing the objective of protecting human health and the environment. It will minimize the duplication of efforts between the states and EPA.
789	ckdp00049	Under the proposed CKD rule, a CKD supplier could inadvertently convert its CKD to a hazardous waste simply by making a technical mistake in handling CKD or an omission in certain paperwork without causing any environmental harm. As a result, sales of CKD could create too much legal risk for our supplier to continue such sales.
1020	ckdpL0001	The MDNR supports EPA's proposed rule to handle properly managed CKD as a solid waste while listing it as a hazardous waste if improperly managed. The MDNR believes this approach is the most sensible option to regulate CKD.
124	ckdp00016	ASTSWMO does not support the alternative management-based listing approach. Although this approach may result in the same environmental protection as the preferred option, the logistics and administration would be far greater in this option. Also, this approach will not provide the protection of a program of ground-water monitoring and corrective action if ground-water monitoring does indicate a problem. It is difficult to develop regulations to encompass all potential mismanagement options. This approach may encourage marginal waste disposal practices which, although such practices would not cause the waste to become listed, may cause significant risk to human health and the environment. There are no identifiable advantages of this approach over the proposed approach. This approach could provide loopholes if the specific types of mismanagement standards were not included in the rule. This approach leaves regulatory agencies and investigators vulnerable when determining if a facility's mismanagement is or is not regulated.
292	ckdp00019	We conclude that EPA has not adequately made its case for the need to regulate CKD. The summary statements that "management of CKD in unlined landfills, under water or in direct contact with the ground water table, without fugitive dust controls, or when used for agricultural purposes without proper controls is likely to pose significant risks to human health and the environment" and that "the CKD management standards proposed today will protect the public from human health risks and prevent environmental damage resulting from current CKD disposal practices" (FR 45642, emphasis added) have in no way been proven by the documents submitted in support of the proposed rulemaking.
712	ckdp00048	TNRCC agrees that under the alternative management-based listing approach it would be necessary to identify all possible ways that CKD could be mismanaged if this approach is to be adopted, including waste piles and surface impoundments. This could result in further extending the time for promulgating any kind of standards. There are no identifiable advantages of this approach over the proposed approach. The alternative management-based listing would not be advantageous to EPA or State agencies. This approach could provide loopholes if the specific types of mismanagement standards were not included in the rule. This approach leaves regulatory agencies and investigators vulnerable when determining if a facility's mismanagement is or is not regulated.

Comment Id	Document Number	Comment
1022	ckdpL0001	The MDNR does not support the alternative management-based listing. Although this section discusses examples of mismanagement practices that would result in CKD becoming a hazardous waste, it does not provide enough information to determine if any type of guidelines/regulations would apply to properly managed facilities. [New paragraph] This approach requires all mismanagement practices to be identified. This option would only set minimum standards necessary for the CKD to be unregulated, but does not state what controls would apply to properly managed CKD. [New paragraph] The regulations should be revised to clarify when the mismanaged CKD becomes a listed Subtitle C waste.
432	ckdp00026	Second, the treatment of CKD as a full-blown hazardous waste leads to some inconsistent scenarios: Facility A burns hazardous waste for energy recovery and Facility B does not burn hazardous waste. Both facilities have a CKD monofill that is in full compliance with all part 259 standards. Assume further that Facility A generates some CKD that exhibits a hazard characteristic by going over the limit for one constituent by 5%, while Facility B generates some CKD that exhibits a hazard characteristic by going over the limit for the same constituent by 50%. Under EPA's proposal, the CKD generated by facility A could not be disposed in facility A's fully-compliant landfill, but would have to be considered a full-blown hazardous waste and taken off-site to a permitted Subtitle C landfill. However, despite its significantly greater exceedance of hazardous characteristic thresholds, the CKD generated by Facility B, could be disposed in a non-Subtitle C landfill.
433	ckdp00026	The whole point to EPA's part 259 standards is to provide management standards for CKD that will protect human health and the environment -- if CKD that exhibits a hazard characteristic is disposed in a fully-compliant monofill, the part 259 standards will operate to protect human health and the environment. Requiring facilities to use a grossly more expensive disposal alternative merely because that facility happens to burn hazardous waste for energy recovery is clearly arbitrary and capricious. Moreover, as EPA's record clearly shows, there is no significant difference in the quality of CKD derived from hazardous-waste burning kilns as compared to kilns that do not burn hazardous waste, thus making this disparate treatment unnecessary and illegal.
482	ckdp00029	Michigan believes that it is important to consider the leaching and physical characteristics of CKD in determining appropriate management standards. The proposed rule does not allow for this step in determining the proper management of CKD. Michigan requests that EPA consider the chemical leaching characteristics of CKD as managed today in the proposed rule.
483	ckdp00029	The management standards for CKD should include waste characterization for sites that propose the use of alternative design standards. This should include the requirement to obtain representative samples of CKD and subject them to an appropriate leaching test. The Toxicity Characteristic Leaching Procedure (TCLP) was designed to simulate the environment in a municipal landfill. We typically use the Simulated Precipitation Leaching Procedure (SPLP) to more appropriately predict contaminant mobility. This would establish the chemical leaching characteristics of the material . The necessary handling and landfill design criteria could then be based on the actual leaching potential of the CKD, and not simply on generalized past practices. [new paragraph] The design criteria for a particular type or class of waste are then established, to be protective of human health and the environment, based on the leaching potential of the waste. In addition to using waste characterizations to aid in choosing design criteria, we utilize waste characterization results as a basis for approving alternative management standards. This approach for managing what many states call high-volume, low-toxicity wastes was not fully considered in these proposed rules.
54	ckdp00015	TXI believes that this reliance upon "tailored" Subtitle C standards and the "Management-Based Listing" approach to designating CKD as a hazardous waste is excessive and unfounded and will result in increased confusion to regulators and industry while providing negligible, if any, environmental benefit. Fundamentally, the risks associated with management of CKD are minimal, especially within the realm of Subtitle C. As such, this approach to its regulation is openly inappropriate. In fact, EPA recognizes in its proposal that "CKD rarely exhibits a hazardous characteristic. " 64 Fed. Reg., 45642. TXI accordingly believes that management of CKD is best implemented with the state-based approach, and strongly recommends that EPA withdraw any Subtitle C requirements. [M]anagement of CKD with state programs would more adequately allow these issues to be addressed by agencies that are familiar with the specific issues facing facilities in their jurisdiction. Moreover, this will ensure that CKD would be governed in a manner that would be protective of the environment while allowing flexibility necessary to address site specific conditions.

Comment Id	Document Number	Comment
609	ckdp00038	The proposal allows EPA to determine that facility mismanagement has occurred thereby triggering Subtitle C. This approach allows EPA to trigger Subtitle C without due process. In addition, the mechanisms to get in and out of Subtitle C have not been adequately developed in the proposed rule. The omission of these mechanisms also results in a lack of due process by not providing an opportunity for comments.
1234	ckdp00015	In summary, TXI has identified a number of concerns with the proposed rule and has listed those concerns in this comment paper. To reiterate the main theme of our approach, TXI believes that reliance upon "tailored" Subtitle C standards and the "Management-Based Listing" approach to designating CKD as a hazardous waste is excessive and unfounded and will result in increased confusion to regulators and industry while providing negligible, if any, environmental benefit. In addition, TXI strongly endorses the state-based approach discussed by EPA in the proposed rule and believes that this mechanism will contribute to protective and effective management of CKD, while allowing site-specific conditions of each facility to be appropriately considered.
255	ckdp00019	As discussed earlier herein, the cement industry is committed to managing CKD in such a manner as to avoid any deleterious effects on human health and the environment. To that end, in 1993 the industry prepared a set of management standards and offered them for consideration by EPA during the preparation of the CKD Report to Congress. The standards were part of a cement industry proposal to voluntarily upgrade management practices and an alternative to a federal program under Subtitle C. Following publication of the CKD Regulatory Determination (60 Fed. Reg. 7366) this set of standards were again submitted to the Agency for consideration, this time as an attachment to the proposed CKD Enforceable Agreement, proposed to EPA in March 1995. Throughout the rest of that year EPA and the cement industry met to discuss the standards. The standards were revised to reflect those discussions, the product of which is attached as Attachment A. The industry stands by these standards. They envision a CKD management program that is performance based, with a capacity to be largely self-implementing. APCA endorses a performance-based program over one premised on a set of minimum technical standards, as the latter is almost certainly too rigid to reflect the varying climates and geologic settings associated with the over one hundred cement plants in the United States. While a set of minimum technical standards may be appropriate for an individual plant to consider, they should not "trump" the preference for a performance-based program.
362	ckdp00021	The contingent management requirements proposed in this rule appear as proposed 40 CFR Part 259. They are extensive, exhaustive, and more suggestive of hazardous waste management requirements under Subtitle C than of solid (i.e., non-hazardous) waste management requirements under Subtitle D.
694	ckdp00046	The proposed Part 259 facility standards appear very similar to existing Part 258 standards for municipal solid waste (MSW) facilities. The Department recommends that EPA reference the 258 standards when appropriate in place of the separate but duplicative disposal facility requirements proposed for Part 259. In some cases, disposal of CKD may indeed occur at MSW facilities meeting the proposed facility requirements.
696	ckdp00046	Expand management standards to cover CKD that is accumulated prior to reuse. The Department believes that whether it is reused or disposed, accumulated CKD improperly managed can impact the environment. Because of this, the Department encourages the Agency expanded the management standards to cover CKD prior to reuse as well, such as containment.
257	ckdp00019	Furthermore, in order to alleviate the confusion that the proposed rule has generated, the term "natural water table" should be replaced by the term "water table," as defined by the American Geologic Institute.
128	ckdp00016	ASTSWMO concurs with EPA's position that placement of CKD in direct contact with the groundwater is not protective of human health and the environment.
467	ckdp00028	Because existing state regulations require protection of groundwater quality, both generically and with specific reference to industrial solid waste landfills, the proposed federal rule is redundant in South Carolina.

Comment Id	Document Number	Comment
473	ckdp00028	The existing CKD disposal site at Holly Hill meets the groundwater protection standards in the proposed rule. In addition, these same standards are included in the DHEC industrial solid waste regulations.
972	ckdp00060	The principal health risks estimated by EPA associated with CKD came from indirect risks through the food chain caused by runoff from CKD piles and air deposition, and direct inhalation risks. Risk TBD, Chapters 2 and 3. EPA has never found that groundwater contamination has contributed to direct or indirect health effects. " [EPA] predicted only low or negligible risk potential from on-site management of CKD via conventional direct pathways of constituent transport and exposure (drinking water, incidental direct ingestion, chemical inhalation) via ground water contamination, surface water runoff to streams or lakes, or windblown dust." Regulatory Determination at 7370. Thus, runoff and air deposition is the only pathways for which EPA has ever estimated any risk. EPA elected not to draft regulations to control runoff, finding that "storm-water run-off regulations will be adequate to protect from exposures via the overland runoff routes." 64 Fed. Reg. 45674. Thus, EPA has elected to draft CKD management standards that may only be shown to affect health risks by controlling fugitive air emissions from CKD handling and disposal. From this, SLC concludes that it is not necessary for EPA to draft rules that would list CKD as hazardous waste if groundwater protection standards are not met. EPA should instead ensure that standards to control fugitive air emissions are enforced.For example, if NAAQS are likely to be exceeded or air deposition of CKD poses unacceptable indirect risks through the food chain, then EPA may takes steps to ensure that the states enforce existing rules by ensuring that approved SIPS adequately address these risks. EPA may also take steps to ensure that Title V operating permits address fugitive emissions from hauling and disposal, and that the Portland cement NESHAP is enforced to minimize emissions from CKD transfer points. Finally, if states do not promulgate standards to protect groundwater, EPA could promulgate landfill criteria pursuant to 42 U.S.C. Q 6944, criteria for sanitary landfills that would apply to CKD waste. See 64 Fed. Reg. at 45641.
4	ckdp00009	40 CFR 259.2 The definition of "cement kiln dust waste landfill unit" includes new units, existing units, and an expansion (horizontal and vertical) of an existing unit. "Expansion" means a lateral or vertical expansion of an existing unit. However, new units mean any CKDLF units or lateral expansion of an existing unit that has not received waste prior to ninety (90) day after the effective date of the final rule and does not include vertical expansions. The unit can have a vertical expansion without any rule requirements.
5	ckdp00009	40 CFR 259.2 The definition of "facility" should include CKD "management" as well as disposal.
6	ckdp00009	40 CFR 259.2 The definition of ground water is inappropriate if ground water protection standards (GWPS) are to [be] established for "springs". Once ground water discharges to the surface from a rock or soil, the ground water becomes surface water. This water does not meet the proposed rule's definition of ground water because it no longer exists below the land surface in a zone of saturation. Indiana suggests to review the definition of ground water and consider defining what is meant by spring so that GWPSs can be clearly established for springs. (Please see comments under 259.45(h).)
7	ckdp00009	40 CFR 259.2 The definition of "person" should include "storage" because 40 CFR 259.20 applies to a person managing CKD in temporary storage.
34	ckdp00010	The definition (of aquifer) should be refined to provide a more quantitative description of which subsurface water bearing zones should be classified as an aquifer. The portion of the definition regarding "....significant quantities.." is arbitrary and undefinable. It is recommended that the definition include a minimum quantitative measurement such as water producing ability. In the present form of the definition, nearly every saturated zone, regardless of yield, thickness, etc., would be defined as an aquifer.
37	ckdp00010	The definition of water table should be revised to include for unconfined conditions only. If a confined saturated zone was penetrated (as per the definition) and the piezometric head elevation rises above the water producing zone the resulting groundwater elevation, by definition, could be considered the water table.

Comment Id	Document Number	Comment
47	ckdp00014	The NJDEP SRP believes the Federal Regulations must establish a distinction between "waste CKD" routed directly to a disposal facility, and the environmentally sound use of "CKD product" in stabilization and solidification of environmental media, dredge materials, remedial wastes, and process wastes.
125	ckdp00016	Unless specific intent or limitations are placed on "operating practices modified to ensure good management", the same attempts could be made as were made in the implementation of Part 258, with the same definition as proposed here, to cover excessive areas with a thin layer of waste before the effective date, which had the result of postponing compliance with the improved lining requirements. Some facilities may attempt, in any way, to circumvent the new requirements. The only way to stop this from occurring would be to place actual date requirements for the definition of a "new" and "existing" unit. This leaves no room for misinterpretation of the requirements. ASTSWMO recommends that a discussion be added to the preamble stating EPA's position regarding extensions to the life of an existing unlined CKDLF unit through the use of vertical expansions.
126	ckdp00016	ASTSWMO is concerned that vertical expansions of the existing CKD landfills (CKDLFs) will not have to comply with the performance standards except for ground-water monitoring and corrective action requirements. This would appear to be an incentive to expand the existing CKDLFs vertically, thus creating mountains of CKD for which adequate cover probably cannot be provided.
131	ckdp00016	The definition of karst terrain is acceptable. However, dye studies are not effective, practical or warranted at all locations.
182	ckdp00016	Sec. 259.2, Pg 45679, col 2: Recommend that in the definition of Beneficial Use of CKD, the second sentence be changed to read: "For purposes of this rule, beneficial use . . . ." when the rule is promulgated. Also, the same sentence should include agricultural use as a lime substitute as an example of a beneficial use if EPA is to continue its promotion for such use. Beneficial Use of CKD needs to give a clear definition of "land application as till material" as discussed in the preamble.
183	ckdp00016	The definition of "Cement Kiln Dust Waste Landfill Unit" is unclear. The combination of the words "landfill" and "unit" is confusing. Is it the landfill or an open area within the landfill (a cell)? Does it mean the area permitted, the area engineered, the area now open, the ultimate footprint, or something else? The interpretation of this term has impact on closure, the closure/ post-closure cost estimate and the calculation of required post-closure financial assurance. The unit concept has given the States problems in their MSWLF programs.
184	ckdp00016	Eliminate possible conflicts due to the use of the phrase "waste boundaries of an existing CKDLF unit" in the definition of Expansion and the definition of Waste management unit boundary.
185	ckdp00016	Page 45679, col 3, in the definition of Saturated zone, "zone" also should be italicized.
235	ckdp00019	There is significant confusion between the preamble and the proposed regulations as to which requirements apply to new units only, and which apply to both new and existing units. First, the various sections of the regulations are for the most part unhelpful on this point. Only Subpart E (Ground water Monitoring and Corrective Action) is clear on this: the requirements apply to both new and existing units. Proposed §259.40(a). Other regulatory sections, such as specifying location standards, storage standards, and design-standards simply do not say whether they apply to new units only or to both new and existing units. At one point in the preamble, EPA says the ground water protection standards apply to all new and existing units, whereas the "performance and technology-based standards" would apply only to new units. 64 Fed. Reg. at 45644, col. 3. But nowhere in the regulatory language is this distinction drawn. Moreover, this leaves uncertain the status of location standards, storage standards, closure standards, and financial assurance standards, which may not fit either the ground water or performance/technology category.

Comment Id	Document Number	Comment
258	ckdp00019	In a related issue, EPA requested comment on "wet handling" of CKD in surface impoundments. See 54 Fed. Reg. 45645, col. 1. The preamble seems to imply that this practice necessarily presents risks to ground water. APCA disagrees with this presumption. Any future EPA language on this issue should point out that wet handling can be consistent with proper management, so long as the disposal unit is designed so that any potential impacts to ground water can be minimized or avoided. This could be ensured through the incorporation of a leachate collection system into the unit design. Another key consideration would be the depth to ground water below the base of the unit. It would be prudent to design these units so that the water table was a safe distance below the base of the management unit.
270	ckdp00019	Distinction Between Standards for Horizontal and Vertical Expansions: The proposed rule does not distinguish between "horizontal" and "vertical" expansions of existing units (§ 259.2) even though the Preamble states that there is such a distinction (45644, col. 3). We agree with the Agency's intent to provide for different standards for horizontal and vertical expansions of existing units, and believe EPA should be more flexible with the various location and design standards applicable to existing units. For example, as long as an existing facility is currently operating□□ without impacts to ground water or surface water, it is unfair to burden them with a lengthy demonstration. This may be applicable to the liner, leachate collection system, or some other component. We also believe that in cases where the landfill was permitted prior to the effective date of the rule, but not constructed and filled until after the rule effective date, the newly constructed area should not be considered a "horizontal" expansion, but can be considered part of the existing unit. Alternatively, in states without landfill permitting programs, the same should apply if a detailed design plan for the expansion has been prepared. This would avoid unnecessary and potentially costly changes to the design plans for a landfill. APCA Recommended Change:Specific language should be incorporated into the rule to distinguish between "vertical " and "horizontal" expansions, and different standards should be applicable to each. The rule language should be more flexible with regard to existing units, and allow sites to continue to operate under existing standards providing they are not impacting the environment. Also, as proposed above, horizontal expansions that are permitted or planned prior to the effective date of the rule (but not filled with CKD until after the rule effective date) should be considered part of an "existing" unit after the rule effective date.
271	ckdp00019	Applicability of Standards to CKD Intended for Beneficial Reuse: We suggest that specific language be adapted to exempt CKD intended for off-site beneficial use or reuse in the kiln from "active management" designation (thus they would not be subject to management standards). This would apply to CKD currently stored on the ground, which could be considered an "active" CKD landfill unit if CKD is, for example, removed for recycling. "For purposes of this rule, EPA views active management as physically disturbing the accumulated wastes [emphasis added] within the accumulated wastes or disposing additional non-Bevill hazardous wastes into existing waste management units after the effective date of this rule.. . .." Thus, disturbing an otherwise inactive CKD management unit could be considered "active management." The proposed rule will cause plants that are engaged in mining old waste for beneficial reuse to stop this practice, which is contrary to EPA's policy of encouraging reuse and recycling.
303	ckdp00020	Lafarge is unclear on what is meant by a "new area of an existing unit" and "lateral expansion of the waste boundary,," and how these terms impact existing CKDLF units. For example, within a permitted and operating CKDLF cell, the waste boundary may be managed to control surface water and to initially fill airspace over the sideslope areas extending over the previous cell. As the unit is filled, the real waste boundary is continually expanded horizontally. In Lafarge's opinion, this should not be considered a lateral expansion. □□ The distinction between a new unit and an expansion is included to prevent the construction of "unnecessarily large units" prior to the effective date of these rules. To address this concern, the preamble states that the definition of an existing unit specifies that expansions "would have□□ to be consistent with past operating practices, or operating practices modified to ensure good management." The rules, however, do not state how this would be determined and what precisely this means. Lafarge thinks that, once the applicability and implementation components are better clarified, this distinction may become unnecessary.

Comment Id	Document Number	Comment
304	ckdp00020	Lafarge recommends that a concise discussion of the applicability of the proposed rules appear in one complete section of text in the rules. The final CKD rule should not apply to CKDLF units that stop receiving waste before the effective date of the rules. The rules should not revoke the permitted status of CKDLF units currently permitted by states, regardless of the stage of construction. If the rules are nevertheless applied to currently permitted units, at a minimum, they should include a variance provision to allow site-specific consideration of these approved, engineered CKD units.
305	ckdp00020	(Lafarge recommended, and provided, a CKD applicability flowchart.)
480	ckdp00029	All three cement manufacturing facilities in Michigan have a certain "permitted" disposal area under our industrial waste regulations that may or may not be constructed, at this time. It would seem logical that any area that is permitted or constructed under a state's approved Subtitle D program should be considered an "existing CKDLF."
583	ckdp00035	The definition of CKD as stated in § 259.2 is inappropriate for the Theodore and Devil's Slide plants. Some/All (plant dependant) dust generated by the pyrosystem during the manufacturing process is recycled back to the kiln. We are able to accomplish this because the hot air from the pyrosystem that contains the dust is used to dry raw material in raw grinding system/rotary dryers (plant dependant). Dust from the dryers is then collected in baghouses, pneumatically conveyed to a dust silo, reused as a raw material, and is used to produce our final product. As such, it is more properly characterized as product. We believe it should be exempt from any regulation under the proposed rule. The definition of CKD should be modified to exempt those kilns where dust generated by the pyrosystem becomes a part of the final product.
587	ckdp00036	We understand that under the EPA's "active management" policy, CKD that is disturbed for any reason after the effective date of the rule would be subject to the CKD management standards. We are concerned about this policy because of the potential that in the future we may have to perform additional work to remediate these landfill sites. Although, we do not believe that rule promulgation is justified based on the low risks posed by CKD, if a rule is promulgated, we request that the specific language be placed in the rule exempting any currently inactive landfill from an "active management" designation under any circumstances.
592	ckdp00036	We object to the definition of CKD contained in the proposed rule (§ 259.2). This definition of CKD is inappropriate for the CKD generated at the Mason City plant. As stated earlier, all of the CKD generated during the manufacturing process is recycled to the kiln. It is more properly characterized as product. As such, we believe it should be exempt from any regulation under the proposed rule. The definition of CKD should be modified to exempt those kilns where CKD is used as a product. This would avoid unneeded regulation under the CKD rule that may be due to inadvertent spills, etc. that could occur in the course of routine operations. These inadvertent releases, should they occur, are adequately regulated under existing regulations.
604	ckdp00037	The definition of CKD as stated in § 259.2 is inappropriate for the Devil’s Slide plant. Some dust generated by the pyrosystem during the manufacturing process is recycled back to the kiln. We are able to accomplish this because the hot air from the pyrosystem that contains the dust is used to dry raw material used in the raw grinding system. Dust from this system is then collected in bag houses, pneumatically conveyed to a raw meal silo, and then reused as a raw material to produce our final product. As such, it is more properly characterized as product. We believe it should be exempt from any regulation under the proposed rule. The definition of CKD should be modified to exempt those kilns where dust generated by the pyrosystem becomes a part of the final product.
606	ckdp00038	The proposed rule and preamble contain ambiguities and even contradictions with regard to the location standards for new vs. existing units. If the Agency intended for there to be a distinction between new and existing units, that should be reflected in the rule. Currently this is not the case.

Comment Id	Document Number	Comment
651	ckdp00040	Active management eliminates grandfather status of historic sites. Holnam is concerned that EPA has not adequately explained its current definition of active management. EPA's active management policy is to treat disturbed wastes in historic disposal sites as newly generated wastes. Although a historic CKD management unit is not subject to any of the proposed CKD management standards, a historic CKD management unit that is disturbed may be considered "actively managed" under EPA's present policy. EPA should clearly explain its intentions with respect to this policy. Many cement companies have old, historic CKD disposal sites and could be subject to enforcement inadvertently as a result of digging up old CKD piles for remediation or recycling. This element of the Proposed Rule is completely unworkable at Holnam, Ada. The plant has been in operation since 1907, and most of the plant is built over historically disposed CKD prior to the existence of any environmental regulation. The presence of CKD is so prevalent that the "active management" trigger would make it impossible to drive a truck over the site without triggering Part 259 standards. This active management provision provides a disincentive for proper and ongoing management of historic piles since any disturbance could initiate active management status and terminate the grandfather status of historic piles. An exemption from the "active management" trigger is essential to promote responsible maintenance of historic CKD piles.
666	ckdp00042	The Proposed Rule Should Clearly Identify the Standards that Apply to Existing CKD Landfill Units. According to the preamble to the proposed rule, the EPA clearly intends that different requirements should apply to existing and new CKD landfill units. In fact, the preamble states that the: ...proposed performance and technology-based standards would apply to new units, and any expansion of an existing CKD landfill unit, defined as any lateral expansion of the waste boundary of an existing landfill unit. Any lateral expansion would be considered a new unit and must meet the requirements applicable to new units. In contrast, any vertical expansion would be considered part of the existing unit and subject only to those requirements applicable to existing units. 64 FR 45644, Col. 3. [Emphasis added.] With the exception of the groundwater monitoring and corrective action standards in Subpart E, however, the proposed rule does not clearly identify which "performance and technology-based standards" apply only to new units. In particular, the proposed rule is silent as to whether the Agency intends the location restrictions in Subpart B to apply to existing CKD landfill units. The applicability of all of the proposed standards that EPA intends to be applicable to existing CKD landfill units should be clearly stated in the rule itself. Furthermore, the proposed rule does not adequately identify the "requirements" applicable to existing units. In fact, the only statement in the rule that even hints at the requirements EPA intends to apply to existing CKD landfill units is found in the definition of that term, which states: Waste placement [in existing CKD landfill units] must be consistent with past operating practices modified to ensure good management. § 259.2, "Existing CKD Landfill Unit." The inclusion of this statement in the definition of an existing CKD landfill unit is inadequate and inappropriate. The statement should be included in a separate section of the proposed regulations to give it emphasis and to provide clarity.
670	ckdp00042	Certain of the definitions provided in § 259.2 are inappropriate, misplaced, incomplete, and/or over-inclusive. These definitions, which are listed below, should be refined for clarity. "Active life" and "active management" - these definitions should be restricted to apply to units that receive CKD waste 90 days (or the otherwise appropriate period of time) after the effective date of the rulemaking.
671	ckdp00042	Carbonate terrain - this definition more appropriately should be included with other definitions clarifying § 259.16, which addresses karst terrains.
672	ckdp00042	Existing CKDLF unit - as discussed previously, the second sentence of this definition relative to operating practices is wholly inappropriate and should be eliminated.
673	ckdp00042	Expansion - the term to defined should be "expansion of an existing CKDLF unit."
674	ckdp00042	Leachate - this term should be defined as liquid that has passed through or emerged from a CKDLF unit.
675	ckdp00042	Qualified groundwater scientist - this is term of general applicability, which should be moved to § 259.2. It is inappropriate to define this term in § 259.40(f).

Comment Id	Document Number	Comment
676	ckdp00042	Run-off and run-on - the terms run-on and run-off are associated with rain water and stormwater. The inclusion of leachate as a source of run-on or run-off is inappropriate.
713	ckdp00048	TNRCC agrees that EPA's concern is a valid one. Unless specific intent or limitations are placed on "operating practices modified to ensure good management", the same attempts could be made as were made in the implementation of Part 258, with the same definition as proposed here, to cover excessive areas with a thin layer of waste before the effective date, which had the result of postponing compliance with the improved lining requirements. Some facilities will attempt, in any way, to circumvent the new requirements. The only way to stop this from occurring would be to place actual date requirements for the definition of a "new" and "existing" unit. That's how it's been done for municipal solid waste management units (landfills). This leaves no room for misinterpretation of the requirements. TNRCC is concerned that this paragraph (Applicability) indicates that vertical expansions of the existing CKD landfills (CKDLFs) will not have to comply with the performance standards except for ground-water monitoring and corrective action requirements. This would appear to be an incentive to expand the existing CKDLFs vertically, thus creating mountains of CKD for which adequate cover probably cannot be provided. TNRCC recommends that EPA revise the proposed rule to define a vertical expansion of an existing CKD landfill unit at a BIF facility to be a "new unit, rather than an "existing" CKD landfill. EPA does not justify its distinction between horizontal expansions which would constitute a "new" landfill under the proposed rule and vertical expansions which EPA proposes to exclude from requirements for "new" landfills; vertical expansions add to the hydraulic loading at a landfill and may increase the risk of migration of hazardous chemicals of concern to ground waters underlying landfills at BIF facilities.
748	ckdp00048	Sec. 259.2 On Pg 45679, col 2, in the definition of Beneficial Use of CKD, TNRCC recommends that the second sentence be changed to read: "For purposes of this rule, beneficial use ..." when the rule is promulgated. Also, the same sentence should include agricultural use as a lime substitute as an example of a beneficial use to continue its promotion for such use as in the preamble.
749	ckdp00048	TNRCC also recommends that on the same page, col 3, in the definition of Saturated zone, "zone" also be italicized.
790	ckdp00053	3. EPA does not significantly distinguish new and existing CKD landfills. EPA distinguishes, in the preamble to the CKD Rule, regulation of horizontal expansions (i.e., "new" CKD landfills) and vertical expansions ("existing" CKD landfills). 64 FR at 45679, (definitions proposed to be codified at 40 CFR § 259.2). EPA does not make this distinction in the proposed Part 259 standards. For example, the preamble states that "no new CKD landfill units may be sited within 60 meters of a fault." 64 FR 45646 (emphasis added). However, the proposed § 259.13(a) states "CKD shall not be managed in a CKDLF within 200 feet of a fault." 64 FR at 45680. This disagreement between the preamble and the rule language is repeated in numerous sections. Consequently, the Proposed CKD Rule is ambiguous as to the applicability of these sections to new or existing landfill units.
841	ckdp00053	2. Holnam is concerned that EPA has not, in its definition of active management, 64 FR at 45679, adequately explained EPA's policy of treating disturbed wastes in historic disposal sites as newly generated wastes in accord with EPA's active management policy. Although a historic CKD management unit is not subject to any of the proposed CKD management standards, an old CKD management unit that is disturbed may be considered to be "actively managed" under EPA's policy. See, 54 FR 15316, 15336, Mining Waste Exclusion (proposed rule, April 17, 1989); 54 FR 36592, 36597 (final rule, codified at 40 C.F.R. §§ 261.3(a)(2)(I) and 261.4(b)(7), Sept. 1, 1989). EPA should clearly explain its intentions with respect to this policy. Many cement companies have old, historic CKD disposal sites and could be subject to enforcement inadvertently as a result of disturbing or digging up old CKD piles for purposes of remediation or recycling. EPA should amend 40 CFR § 261.4(b)(8) to specifically exclude CKD regenerated as a result of active management done for the purpose of remediation, recycling, or beneficial use, from listing as hazardous waste.

Comment Id	Document Number	Comment
951	ckdp00060	Proposed § 259.2, 64 Fed. Reg. 45679, defines cement kiln dust waste (CKD) as "the fine particulate solids, associated with the production of Portland cement, which are collected by air pollution control devices used to clean the kiln exhaust." This definition does not exclude raw materials collected in air pollution control devices from dry process kilns that pass kiln exhaust gases through raw materials drying/grinding systems. These systems are part of the raw materials preparation systems, and this material is does not have the properties of CKD (i.e., it is not calcined, and is neither enriched in trace metals nor does it become highly alkaline in contact with water). To regulate this material, as CKD produces no environmental benefit, yet this material is also a particulate solid collected from kiln gases. SLC urges EPA to exclude this material from the definition of CKD.
952	ckdp00060	SLC is concerned that EPA has not, in its definition of active management, 64 Fed. Reg. at 45679 adequately explained EPA's policy of treating disturbed wastes in historic disposal sites as newly generated wastes in accord with EPA's active management policy. Although a historic CKD management unit is not subject to any of the proposed CKD management standards, an old CKD management unit that is disturbed may be considered to be "actively managed" under EPA's policy. See, 54 Fed. Reg. 15316, 15336, Mining Waste Exclusion (proposed rule, April 17,1989); 54 Fed. Reg. 36592,36597 (final rule, codified at 40 C.F.R. §§ 261.3(a)(2)(I) and 261.4(b)(7), Sept. 1, 1989). EPA should clearly explain its intentions with respect to this policy. Many cement companies have old, historic CKD disposal sites and could be subject to enforcement inadvertently as a result of digging up old CKD piles for remediation or recycling.
953	ckdp00060	EPA does not significantly distinguish new and existing CKD landfills. SLC notes that EPA distinguishes, in the preamble to the CKD Rule, regulation of horizontal expansions (i.e., "new" CKD landfills) and vertical expansions ("existing" CKD landfills). See 64 Fed. Reg. at 45679, (Definitions proposed to be codified at 40 C.F.R. 5 259.2). EPA does not, however, make this distinction in the proposed Part 259 standards. For example, the preamble states that "no new CKD landfill units may be sited within 60 meters of a fault." 64 Fed. Reg. 45646 (emphasis added). However, the proposed 5 259.13(a) states "CKD shall not be managed in a CKDLF within 200 feet of a fault." 64 Fed. Reg. at 45680. This disagreement between the preamble and the rule language is repeated in several sections. Consequently, SLC considers the proposed rule ambiguous as to the applicability of these sections to new or existing landfill units. [EPA Note: 60 meters = 196.85 feet]
1043	ckdpL0001	The regulations should be revised to clarify when the mismanaged CKD becomes a listed Subtitle C waste.
1054	ckdpL0003	[If EPA is able to proceed at all with this proposal, it should ... distinguish burner from non-burner dust, based on clear differences in constituent levels and associated generic risks; and/or direct states to take these differences into account in determining whether (and to what extent) the unique site-specific factors that dominate risk at each cement plant warrant further CKD management measures.
14	ckdp00009	Subpart B Locations restrictions are applicable to new units, existing units, and expansions (horizontal and vertical) of a unit. However, there is no requirement for an existing unit that cannot meet the location demonstration to close. A section should be added to require a unit to close if they cannot meet the demonstration.
237	ckdp00019	To add to the confusion, the preamble contradicts itself and language in the proposed regulation with respect to various location standards. First, the preamble is quite specific that some location standards apply to new units only and that some apply to both new and existing units. According to one section of the preamble, the disposal-below-water-table standard applies to new units only (64 Fed. Reg. at 45645, col. 1); the floodplains standard applies to new and existing units (64 Fed. Reg. at 45645, col. 2); the wetlands standard applies to new units only (64 Fed. Reg. at 45645, col. 3); the fault areas applies to new units only (64 Fed. Reg. at 45646, col. 2); the seismic impact standard applies to new units only (64 Fed. Reg. at 45646, col. 3); and the unstable areas standard applies to new and existing units (64 Fed. Reg. at 45647, col. 1).

Comment Id	Document Number	Comment
259	ckdp00019	Karst terrain demonstration (§ 259.16 and 259.30): EPA's restriction on disposal in karst is overly broad and presumes that all sites are in karst, thus effectively requiring all sites to perform a karst investigation, even though in many cases such an extensive demonstration is not justified. This in turn has lead the EPA to propose a minimum design standard (geomembrane liner for all CKD sites) as an alternative to a site specific design that is stricter than necessary. The EPA has unreasonably broadened the definition of karst terrain by requiring a karst investigation be conducted "Prior to construction of a CKDLF unit in carbonate terrain.. .' (§ 259.30 (a)), thus equating carbonate terrain with karst terrain. Furthermore, the karst demonstration is unnecessarily expensive, given that the above incorrect presumption that all landfill sites are located in karst terrain. Our analysis of the available background information indicates that the requirement for a karst investigation is based on flawed reasoning on the part of the EPA. One of the criteria used by EPA for identifying karst sites, in the absence of specific information, was that the presence of "carbonate rock" (see Table 2-3 and Sec. 2.2.4 of the Draft TBD on Ground Water Controls). Based on this criterion, virtually all sites near cement plants would be considered to be in or have the potential to be in karst terrain. This analysis incorrectly blurs the distinction between sites that exhibit fractured ground water flow (Darcian ground water velocities) and truly karst ground water flow. A closer examination of EPA's methodology indicates that the Agency believes over 70 percent of cement plant sites are located in karst terrain (79 out of 110 total sites). Of those 79 plants, over 70% (57 plants) were considered karst based on the presence of carbonate rock alone or based on no information. Only 22 sites exhibited features considered characteristic of mature karst terrain or karst ground water flow (conduit flow, caves, pipes, subsidence, etc.).□□ As a result of EPA's flawed analysis, the number of sites classified as karst has "risen" from approximately 50% when the Report to Congress (RTC) was published in early 1994 to the 70% level presented in the proposal. With such a high percentage of sites erroneously classified as karst, it is understandable for EPA to be concerned about CKD landfills in karst terrain. Virtually every cement plant and CKD landfill will be located in an area of carbonate terrain, but in no way should this be indicative of the presence of karst terrain, or more specifically the presence of karst-like ground water flow. Ground water in all carbonate terrain, not just karst terrain, flows through joints and fractures. However, one of the major problems with developing a landfill within well-developed karst terrain is the unpredictabilify of ground water flow, which makes ground water monitoring difficult. While fractured rock may exhibit a high ground water flow velocity, the ground water flow patterns could still be predictable and, therefore, not a major concern from a monitoring standpoint. In fact, many of the carbonate environments in which CKD landfills may be developed are only slightly fractured and exhibit low hydraulic conductivities (10 -5 cm/set or less). These carbonate deposits are often associated with deposits of low permeability shales that serve to geologically isolate the carbonate deposits. The Agency appears to have " lumped" most of these sites into a karst classification. In summary, the decision on whether to require a karst investigation should be based on the likelihood of a site to exhibit karst-like ground water movement, not merely the presence of fractured rock. It is interesting to note that EPA in Set 51.6 of the draft TBD on Ground Water Controls proposed a methodology for assessing the presence of karst. This methodology recommended consulting literature, local and state references first, and, where not available, the performance of a site-specific investigation. This approach was not followed in the rule, which specifically requires a field investigation, including dye tracer tests, for all sites. APCA Recommended Change: The rule language should be changed to remove the implicit equivalency between carbonate terrain and karst terrain, and there should be no presumption of the need for a karst investigation. Instead, a "tiered" test for karst could be undertaken. It should first be based on literature information or generally accepted standards within the state or local region. Absent this information, a field verification step should be performed using rock core information and/or hydraulic conductivity tests from boreholes/wells to document potential karst hydrogeology. Based on these data a decision on whether to perform a karst investigation should be made. Alternatively, if it is known that a site is located in full karst terrain from the beginning, these intermediate steps are unnecessary prior to performing a karst investigation can be performed. This approach is consistent with the approach first proposed by the EPA in Sec. 5.1.6 of the draft TBD on Ground Water Controls.
302	ckdp00020	The locational criteria for CKDLF siting should be consistent with a waste's leaching characteristics. In Subpart B, §259.10 through §259.16, the EPA has broadly applied excessively restrictive locational criteria to CKDLF units. For example, 5259.10 states that CKD must be managed in a CKDLF unit with a base that is located above the upper limit of the natural water table, with no provision for variances.The locational criteria in §259.10 through §259.16 should be chosen only after consideration is given to the mitigating effects of CKD as it is managed today, with moisture conditioning and compaction, which substantially affect its physical and leaching characteristics. □□ □□

Comment Id	Document Number	Comment
534	ckdp00034	This same thresholds derived above for floodplain variances should also be required for a variance to the location standards in wetlands and karst terrain. Any CKD exceeding the thresholds defined on both an SPLP and TCLP basis should not be eligible for any variance to the Part 259 location standards.
537	ckdp00034	...the variance provisions to the location standards in Part 259 should be at least as stringent as location standards in 40 CFR 264.18 [sic] and EPA siting guidance. The variance provisions should also consider the volume and concentrations of metals and dioxin in the CKD, with no variance allowed for CKD that exceeds health-based thresholds. The thresholds must consider the leachability of CKD at multiple pH levels, and must be based on application of both the SPLP and TCLP tests. This is justified based on information in the proposed rule, F-99-CKDP-SO59 (Evaluation of Metals Migration from CKD Piles using the EPA CMTP Groundwater Model) and F-99-CKDP-SO260 (Evaluation of Metals Transport Under Highly Alkaline Conditions). These documents show that certain metals in the CKD, such as lead, are highly mobile at alkaline pHs, which is not predicted by the TCLP test alone. Given that the pH of CKD water/mixtures is above 10 (p. 45644) and that pH levels greater than 12.5 have been measured in surface waters that contact CKD piles (p. 45636), it is very important that EPA require testing of metals in multiple leaching media before allowing variances from the Part 259 siting and design standards. Additional justification is the fact that 71% of the existing CKD disposal units are located in Karst terrain.
539	ckdp00034	... none of the variance or alternate location provisions should be allowed for hazardous waste burning cement kilns. The CKD from hazardous waste burning cement kilns contains higher levels of metals and is highly variable in metals loading. The full protection must be provided for disposal of such CKD; therefore, the alternate location restrictions provided for wetlands, seismic impact zones, karst terrain and floodplains must not be allowed. ...the CKDLF design must be to the full extent in Subpart D.
572	ckdp00034	Although the other location restrictions are also appropriate, the ETC is opposed to the alternative that allows for a waiver of the standard if a demonstration is made to the Regional Administrator. While 40 CFR 264.18 also allows for alternate siting standards, the standards under proposed 259 are not as protective. Also, EPA's siting guidance would never allow for siting of a land disposal unit in a floodplain, wetland, karst terrain or seismic impact zone. Yet the Part 259 standards allow for a CKD land disposal unit to be sited in such sensitive settings.
1530	ckdpL0002	Comment: There is a lack of meaningful state or federal siting requirements for cement kilns burning hazardous waste. (MHF 709) Response: Cement facilities need to be located near sources of appropriate raw materials. The Agency is, however, agrees with the commenter and is concerned with the possibility of inappropriate siting of some facilities [Emphasis Added]. APCA Response: APCA requests that EPA provide APCA with specific information on those facilities the Agency believes may have been sited inappropriately.
35	ckdp00010	It is recommended that the regulation be amended to indicate that the base is above the top of the uppermost or shallowest aquifer. Water table, by definition, typically refers to unconfined saturated zones. In areas where only confined saturated zones are present, the top of the uppermost aquifer should be used as the engineering guideline. For confined or semi-confined saturated zones, the piezometric head elevation will typically be some distance above the elevation of the top of the screened saturated zone whereas for unconfined saturated zones the groundwater or water table elevation is generally at or near the elevation of the top of the saturated zone. The base of a CKDLF can be located below the piezometric head-elevation of a confined saturated zone and still be above the zone of saturation. The definition of water table should be revised to include for unconfined conditions only. If a confined saturated zone was penetrated (as per the definition) and the piezometric head elevation rises above the water producing zone the resulting groundwater elevation, by definition, could be considered the water table.
187	ckdp00016	259.10. This may be an overly restrictive locational criterion for a low-hazard waste such as CKD. Municipal solid waste landfills and hazardous waste landfills are allowed to be sited with bases below the natural water level in cases where it is demonstrated that these designs are protective. There is no similar locational restriction for hazardous waste landfills under 40 CFR 264.18 or for solid waste landfills under either 40 CFR 257 or 258.

Comment Id	Document Number	Comment
256	ckdp00019	Outlined in detail below are the perspectives of the cement industry on many of the standards proposed under 40 C.F.R. Part 259. Every effort has been made to explain the specific industry concern and to provide a recommendation as to how the concern may be addressed. Location Standards: Below the water table disposal (§259.10). A total ban on disposal below the water table is not justified based on the available information. The proposed prohibition is apparently based on extreme mismanagement cases cited in the Draft "Technical Background Document on Ground Water Controls at CKD Landfills (June 1998)" (TBD on Ground Water Controls). These sites are not representative of the universe of sites where CKD is managed in units that may be technically below the water table. Furthermore, the cited damage cases were examples in which the water table could be characterized as an "aquifer," as defined in the proposed rule (§ 259.2) ". . .formation capable of yielding significant quantities of ground water to wells or springs." However, in many locations around the country, the water table, using the accepted American Geologic Institute definition ("level below which the ground is saturated"), is encountered in formations that exhibit a sufficiently low hydraulic conductivity that they could not be characterized as an aquifer. In these geologically favorable locations, disposal below the water table, including within quarries, is technically feasible. . In these locations, ground water often evaporates faster than it can accumulate. This management practice occurs in at least two midwestern cement plants, and neither has exhibited ground water or surface water impacts. The placement of landfills (including Subtitle D municipal landfills) below the natural water table is not an uncommon practice in portions of the United States, and in particular the upper Midwest, where evapotranspiration exceeds precipitation, and low permeability soils are present. We concur with EPA's position that below the water table disposal is not appropriate in all cases, including the damage cases referenced in the TBD on Ground Water Controls, and in particular where true karst terrain is documented. However, existing units that are using this disposal practice and demonstrating no ground water impacts should be allowed to continue to operate in this manner. If the surrounding soil and rock exhibit a sufficiently low hydraulic conductivity and the ground water flow system is controlled (as it would be inside of a pumped quarry), placement below the water table should be allowed to continue. Based upon the above discussion, we suggest that the Agency make a distinction between the water table and an aquifer, and recognize that there are situations where ground water may be encountered but it is not a concern. There are several advantages to disposal in quarries, including the preservation of landfill space outside the quarry, protection against fugitive dust, and for aesthetic reasons. As justification for potential prohibition, the Agency also states in the above referenced TBD that financial assurance mechanisms for maintaining site-dewatering activities indefinitely are not adequate. However, they provide no basis for this statement. Contrary to what the Agency asserts, regulatory mechanisms at the state level are available for allowing this practice (e.g., perpetual pumping covenant). In fact, the state of Michigan is currently using this mechanism to allow a cement plant to continue to dispose CKD in its quarry.The language in the CKD Rule should be modified to explicitly provide exceptions to this location restriction. Specifically, units should be excepted if the water table does not meet the definition of an aquifer and it can be demonstrated that: 1) ground water levels can be controlled to minimize contact with the CKD, and 2) the unit will comply with objective criteria for ground water protection considering relevant properties of the geologic formation in which the unit is to be located (e.g., hydraulic properties and position within the hydrogeologic flow system). At the very least, this exception should apply to existing units.
322	ckdp00020	Location Restrictions: Current language in the Proposed Management Standards specifies an absolute ban on the disposal of CKD below the natural water table. Many cement manufacturing facilities are located in areas with shallow water tables. For example, of the five Lafarge Corporation cement manufacturing plants that generate waste CKD, three would be significantly affected by this ban.□□ Due to this absolute ban on disposal units below the natural water table, 71 percent (307,000 tons/year) of Lafarge's excess CKD would require off-site disposal, or disposal in above-grade CKDLF disposal units. The resulting costs would be substantial. For example, for Lafarge's Alpena Plant alone, disposal costs would increase from $34.2 million for an engineered landfill within the quarry, to $79 million for an above-grade disposal unit, to $91.2 million for off-site disposal in a private landfill (based on present worth costs). Supporting cost information for this economic analysis is included in Table 2-1 of Appendix C (1994 estimate). Therefore, the absolute ban on the disposal of CKD in units with a base below the natural water table will result in widespread economic hardship for a majority of Lafarge's operations, and for the industry in general.
345	ckdp00020	Proposed rule §259.10 states that CKD must be managed in a CKDLF unit with a base that is located above the upper limit of the natural water table. This section further states that this level must be uninfluenced by groundwater pumping or other engineered activities. No variances to these provisions are currently allowed in the proposed rules. This is an extremely restrictive locational criterion for a large-volume, low-hazard waste such as CKD. Municipal solid waste landfills and hazardous waste landfills are allowed to be sited with bases below the natural water level, in cases where it is demonstrated that these designs are protective. There is no similar locational restriction for hazardous waste landfills under 40 CFR 264.18 or for solid waste landfills under either 40 CFR 257 or 258.

Comment Id	Document Number	Comment
346	ckdp00020	Water Table: Proposed rule 5259.10 states that CKD must be managed in a CKDLF unit with a base that is located above the upper limit of the natural water table. This section further states that this level must be uninfluenced by groundwater pumping or other engineered activities. No variances to these provisions are currently allowed in the proposed rules. □□ □□ This is an extremely restrictive locational criterion for a large-volume, low-hazard waste such as CKD. Municipal solid waste landfills and hazardous waste landfills are allowed to be sited with bases below the natural water level, in cases where it is demonstrated that these designs are protective. There is no similar locational restriction for hazardous waste landfills under 40 CFR 264.18 or for solid waste landfills under either 40 CFR 257 or 258. Given the fact that this harsh locational restriction does not exist for other solid and hazardous waste landfills, Lafarge questions the Agency's basis for this provision as it applies to CKDLFs. □□ □□ In many settings in the U.S., favorable sites for landfills are in low-permeability settings where the water table is close to the surface. Numerous engineering designs facilitate the construction and maintenance of landfill liners below the natural water table, including inward gradient landfills and engineered control of the water table (e.g., long-term pumping commitments). □□ □□ Cement manufacturing plants exist where the appropriate raw materials are available. This often means that a shallow groundwater table condition also exists. Above-grade landfills are prohibitively expensive (refer to Section 10 of this report). In addition, it is aesthetically objectionable to locate above-grade landfills in proximity to below-grade quarries. Off-site disposal of large-volume, low-hazard residual wastes is also prohibitively expensive (Section 10) at the numerous cement manufacturing sites that would be impacted by this restriction. □□ □□ Although the Agency explains that it believes that this stringent restriction is necessary because of damage to the environment at two sites where CKD was historically managed in an old quarry that was allowed to fill with water, Lafarge believes that this limited evidence warrants further consideration. Lafarge believes that these historical sites are not comparable to CKDLF units under the proposed rule for several reasons. The CKD in these historical sites was likely not moisture conditioned and placed in a controlled manner. It was likely either placed dry or as a slurry. Neither of these types of CKD is going to hydrate and set up like most of the CKD placed today. The leaching characteristics of such CKD are very different from moisture-conditioned CKD placed in a controlled manner. Another difference is that these historical sites likely did not have liners, covers, or leachate collection systems. The absence of these engineering controls means a greater effect on the environment. □□ □□ On the basis of the above discussion, Lafarge requests that the Agency reconsider this severe locational restriction. Lafarge recommends that the ban on locating CKD below the natural water table be deleted from these rules where the leaching characteristics of the CKD and engineering controls do not warrant it. Lafarge questions whether the Agency has sufficient scientific basis for this restriction. □□ □□ Furthermore, the requirement that the water table be uninfluenced by groundwater pumping or other engineered activities is also overly stringent. Many cement plants dewater quarries to allow mining operations. These facility owners are experienced at operating and maintaining dewatering facilities. Some Lafarge quarries have as much as 100 years of rock reserves in-place, indicating that dewatering will continue for an extended period to allow for continued cement production. Lafarge believes that providing financial assurance to commit to continued dewatering is a prudent mechanism available to the Agency that would allow this portion of the proposed rule to be amended. For example, the perpetual care fund used by the State of Michigan at the Lafarge Alpena Plant demonstrates a workable solution. □□ □□ The proposed rules currently do not account for permanent changes in the natural water table elevation that have occurred as a result of changes in topography. Topographic changes or other engineered activities at CKD sites can be significant, due to quarrying activities, construction of surface water drainage or diversion channels, or other significant changes in the natural topography. The water table can be permanently changed (lowered) at these locations. Many of these topographical changes are permanent, causing a permanent change in the pre-existing elevation of the water table. □□ □□ Without these amendments to the proposed rule, the potential economic impacts of this provision are severe. At one Lafarge site, the additional costs to locate and operate the CKDLF unit above the natural water table is estimated, in year 2000 dollars, to be $44.7 million dollars. The potential economic impacts of this provision of the proposed rule are discussed furhter in Section 10.□□ □□ Lafarge recommends that the outright ban on managing CKD below the natural water table be deleted from the proposed rule. The proposed rules should be amended to broaden the definition of "natural" water table to

Comment Id	Document Number	Comment
		include permanent changes in the water table elevation that have occurred as a result of permanent changes in the topography. If site-specific conditions warrant managing CKD below the water table, the CKD should be moisture conditioned, placed in a controlled manner to limit leaching potential, and appropriate financial assurance mechanisms and/or engineering controls be put in place to provide for continued dewatering. □□ □□ Lafarge recommends that, at an absolute minimum, a variance provision to this rule be provided.
417	ckdp00025	A ban on CKD disposal below the water table is not justified based on the available information used by the EPA. The prohibition is based on isolated extreme mismanagement cases, and does not include data from current, correctly managed sites. Disposal below the water table, as it is defined by the EPA, is technically feasible in many locations if geologic conditions are favorable, including within quarries. Holnam - Clarksville believes that below the water table disposal is not appropriate in most cases and in particular where true karst terrain is documented. However, if the quarried rock exhibits a sufficiently low hydraulic conductivity and the primary ground-water flow is under confined conditions well beneath the quarried rock (validated by monitoring wells), placement below the water table as defined by the EPA should be allowed. As shown at Holnam - Clarksville (MO), steps have been taken to prove that the quarry is safe for CKD disposal. They include: (1) Hydrogeologic studies at the site conclude the geology at the site is consistent with the geology of the area. No karst features were identified during the investigations. The bedrock formations under the CKD landfill site consist of the Kimmswick, Decorah, Plattin, Joachim and St. Peter formations. (2) Hydrogeologic testing was also conducted to determine the impervious nature of the bedrock at the CKD disposal site. (3) A sump is located at the lowest elevation of the quarry floor to collect rainwater. This is pumped out to settling basins, which flow to a permitted NPDES outfall. The sump is not used to lower ground water levels in the quarry.
418	ckdp00025	Correctly managed CKD disposal sites within quarries, and below the water table have been shown to be safe and effective. There are several advantages to this method of disposal for our site, including the preservation of landfill space outside the quarry, protection against fugitive dust leaving the plant property, and a naturally effective engineering design control to manage disposed CKD.
446	ckdp00027	The proposed rule totally bans disposal below the water table and does not even allow a demonstration for a variance. A similar ban is not established for either hazardous waste landfills (40 CFR 264.18) or solid waste landfills (40 CFR 257). This ban seems to be based solely on non-technical arguments since leachate from hazardous waste landfills and solid waste landfills are more chemically variable and have a higher potential for degrading the environment and adversely affecting human health. From a technical perspective, depleted quarries are often underlain by vast thickness of impermeable bedrock such as shale that would be ideal for disposal cells. This kind of geologic setting, coupled with groundwater control could establish nearly ideal disposal conditions, but would not even be considered in the current rule. In some parts of the country this ban would significantly increase surface transportation of CKD to other disposal sites. A certain outcome from this restriction is a significant economic impact to cement manufacturers with a possible decrease in protectiveness to the environment.
484	ckdp00029	The proposed Section 259.10 states that CKD must be managed in a CKDLF unit with a base that is located above the upper limit of the natural water table. The section further states that this level is uninfluenced by groundwater pumping or other engineered activities. No variances to these provisions are currently allowed in the proposed rules. [new paragraph] We believe that this is an overly restrictive locational criterion for a low-hazard waste such as CKD. Municipal solid waste landfills and hazardous waste landfills are allowed to be sited with bases below the natural water level in cases where it is demonstrated that these designs are protective. There is no similar locational restriction for hazardous waste landfills under 40 CFR 264.18 or for solid waste landfills under either 40 CFR 257 or 258. Based on the fact that this type of locational restriction does not exist for other solid and hazardous waste landfills, Michigan questions the EPA basis for this provision as it applies to CKDLFs.

Comment Id	Document Number	Comment
485	ckdp00029	The EPA explains that they believe this stringent restriction [of placement of CKD above the water table] is necessary because of damage to the environment at two other sites where CKD was historically managed in an old quarry that was allowed to fill with water. However, Michigan believes that this small amount of evidence warrants further consideration. Michigan also believes that these historical sites are not comparable to CKDLF units under the proposed rule for several reasons. The CKD in these historical sites was likely not moisture conditioned and placed in a controlled manner. It was likely either placed dry or as a slurry. Neither of these types of CKD is going to hydrate and set up like most of the CKD placed today. The leaching characteristics of such CKD are very different from moisture-conditioned CKD placed in a controlled manner. Another difference is that these historical sites likely did not have liners, covers, or leachate collection systems. The absence of these engineering controls means a greater effect on the environment. □□□ □□□ Based on the above discussion, Michigan requests that the EPA reconsider this severe locational restriction. Michigan recommends that the ban on locating CKD below the natural water table be deleted from applying to CKD placed under these rules because the leaching characteristics and engineering controls do not warrant it.
487	ckdp00029	Furthermore, the requirement that the water table is uninfluenced by groundwater pumping or other engineered activities is also overly stringent. Many cement plants, as well as gypsum mines, coal mines, aggregate-mining operations, etc., dewater quarries to allow mining operations. Therefore, these facility owners are experienced at operating and maintaining dewatering facilities. Some quarries have as much as 100 years of rock reserves in place, indicating that dewatering will continue for some time to allow for continued cement production. Michigan believes that providing financial assurance to commit to continued dewatering is a prudent mechanism available to the EPA that would allow this portion of the proposed rule to be amended.
489	ckdp00029	In many settings in the United States, favorable sites for landfills are in low-permeability settings where the water table is close to the surface. Numerous engineering designs facilitate the construction and maintenance of landfill liners below the natural water table, including inward gradient landfills and engineered control of the water table (e.g., long-term pumping commitments).□□ □□ Cement manufacturing plants exist where the appropriate raw materials are available. This often means that a shallow groundwater table condition also exists. In many locations, it is aesthetically objectionable to locate above-grade landfills in proximity to below-grade quarries.
532	ckdp00034	The ETC is in general agreement with the management standards under proposed 40 CFR 259. In particular, the ETC is in full agreement with the requirement under 259.10 that the CKDLF unit base be above the upper limit of the natural water table. This standard needs to be strengthened, however, by adding some measure of variation and a buffer for some margin of protectiveness. An assessment should be done of 25 year seasonal variations, and the water table defined in terms of a 99% confidence limit upper bound plus an additional safe margin of 10 feet that ensures there is no possibility of contact of the CKDLF unit with the water table.
652	ckdp00040	Ban on Placement of CKD Below the Water Table (Proposed Rule 40 CFR § 259.10). The Proposed Rule bans placement of CKD below the natural water table. Portions of disposed CKD at the Ada facility are below the water table. This is not unexpected, given the age of the historic CKD disposal area. Currently, however, no CKD is being placed below the water table. Furthermore, as stated previously, the historic placement of the CKD below the water table has not resulted in any ground-water impacts. This data demonstrates that CKD can be safely disposed below the natural water table in the proper hydrogeologic environment. Due to the low hydraulic conductivity of the hydrated CKD, the CKD behaves more like a confining layer and ground water tends to flow around rather than through it. Therefore, a total ban on disposal below the natural water table as required under the Proposed Rule is inappropriate. Instead, an option for site-specific demonstration should be provided if the Proposed Rule is promulgated.
659	ckdp00041	U.S. EPA should add the definition of CKD to 40 CFR §260.10.
714	ckdp00048	TNRCC concurs with EPA's position that placement of CKD in direct contact with the groundwater is not protective of human health and the environment.

Comment Id	Document Number	Comment
750	ckdp00048	Sec. 259.10 On Pg 45680, co1 1, para (b), line 1, TNRCC recommends that a comma be added after "section".
836	ckdp00053	Holnam believes that certain CKD landfill base locations may be below the natural water table as defined in the CKD Rule, 64 Fed. Reg. at 45680, but are unlikely to cause environmental harm. This is because the presence of water in a shallow well adjacent to a landfill is not always indicative of a potential for releases to otherwise useable aquifers or because other geological features mitigate any potential environmental consequences. For example, Holnam's Clarksville plant has installed wells surrounding the CKD landfill but has found no releases, even though the base of the CKD is well below the "water table." Holnam requests that EPA amend the proposed management standards to permit facilities to demonstrate that there is no potential for migration from a CKD landfill as an alternative to the absolute prohibition stated in the CKD Rule. § 259.10, 64 FR at 45679.
894	ckdp00056	With respect to disposal below the natural water table, the conditions at the Artesia plant landfill clearly demonstrate that ground water can be controlled and will not present an environmental problem. In fact the quarry site is preferable to other sites located outside the quarry because it provides a more effective buffer to fugitive dust, conserves land outside the quarry, and is a more aesthetically favorable location. We suggest that the EPA modify the language in the proposed rule to allow disposal below the natural water table based on consideration of the unique hydrogeologic features of a site.
999	ckdp00060	SLC believes that certain CLD landfill base locations may be below the natural water table as defined in the CKD Rule, 64 Fed. Reg. at 45680, but are unlikely to cause environmental harm. This is because the presence of water in a shallow well adjacent to a landfill is not always indicative of potential for releases to otherwise useable aquifers or because other geological features mitigate any potential environmental consequences.
186	ckdp00016	Pg 45680, col 1, para (b)(2): In the definition of 100-year flood, the term should be changed to "100-year flood, or base-flood,". Paragraph (b)(3) uses the term "base flood" but there is no correlation between that and the100-year flood. Section 257.3-l (b)(l) gives the same definition for "Based (sic) flood" as Section 259.11 (b)(2) proposes for 100 -year flood.
533	ckdp00034	For example, the location standards under 40 CFR 264.18 require that among other factors, the physical and chemical characteristics of the waste and concentration of hazardous constituents be considered before a unit is sited in a floodplain area. The proposed Part 259 standards do not provide for any such determination. Considering the highly alkaline nature of CKD (pH 10 and higher, pp. 45636 and 45644), and the higher leachability of metals (particularly lead) predicted by EPA's groundwater modeling, it is crucial that the variance provisions consider the metal loading of the CKD. No variance should be allowed for siting in a floodplain if the CKD contains levels of lead and other metals above a health based threshold, which could be defined on the basis of delisting levels. The model used to derive these thresholds should assume that the CKD unit is located in a floodplain with direct contact with surface waters. The tests used to demonstrate the levels of metals in the CKD should consist of both TCLP and SPLP leachate mediums in order to ensure that the metals will not be mobile in the floodplain.
751	ckdp00048	Sec. 259.11 On Pg 45680, co1 1, para (b)(2), in the definition of 100-year flood, TNRCC recommends that the term be changed to 100-year flood. or base flood. Paragraph (b)(3) uses the term "base flood" but there is no correlation between that and the 100-year flood. Section 257.3-l(b)(l) of 40 CFR 257 gives the same definition for Based [sic]flood as Section 259.11 (b)(2) proposes for 100-year flood.
677	ckdp00042	Section 259.12 of the proposed regulations is devoted to creating a scenario under which demonstrations can be made to support the location of a CKD landfill unit in a wetlands. These standards seem to reproduce the Clean Water Act 404 permitting requirements and actually may conflict with those requirements. Inasmuch as Clean Water Act 404 has jurisdiction over the deposit of dredged or fill materials in wetlands, the provisions contained in this regulation are redundant and should be removed.

Comment Id	Document Number	Comment
129	ckdp00016	Pg 45646, col. 3, para 1, last sentence.□□ □□ The [ASTSWMO] Work Group concurs with the location restriction as proposed since it is consistent with the restriction for municipal solid waste and hazardous waste landfills. The concept of a location restriction based on fault areas and a 60-meter setback requirement is a good protective measure. EPA studies have shown that leachate from CKD landfills, not CKD itself, is the waste material which has impacted surface and ground-water. This concept is just another measure which may protect water sources which could be impacted due to damage of a CKD management unit in a fault area, should an earthquake occur.
535	ckdp00034	40 CFR 268.18 [sic] does not allow for any variance. A 200 foot setback is required from a fault with no alternate variance mechanism provided. The proposed Part 259 standards, however, allow for a variance from this setback distance from a fault. No such variance should be allowed, given the hazards posed by the fault to the structural integrity of the CKD landfill unit.
536	ckdp00034	... there is no mechanism for prior Agency review and approval of the alternate standards. The operator simply applies the alternate standard and places a notation in the operating record. A more rigorous technical submission must be made to the Agency justifying any alternate standard as certified by an independent licensed Professional Engineer. The Agency must then perform a review and only approve the alternate standard after opportunity for public notice and comment.
716	ckdp00048	TNRCC concurs with the location restriction as proposed since it is consistent with the restriction for municipal solid waste and hazardous waste landfills. The concept of a location restriction based on fault areas and a 60-meter setback requirement is a good protective measure. EPA studies have shown that leachate from CKD landfills, not CKD itself, is the waste material which has impacted surface and ground-water. This concept is just another measure which may protect water sources which could be impacted due to damage of a CKD management unit in a fault area, should an earthquake occur.
66	ckdp00015	EPA discusses its proposed approach for seismic impact zone location standards in section IV. A. 3. e., on page 45646 - 45647 of the Register. The requirements outlined in this section have significant impacts on CKDLF unit design, construction and operation in geologically active areas of the U.S., including, for example, California. In fact, nearly all of California is located within a seismic impact zone using EPA criteria. The proposed rule will make design and construction of new CKDLF cells and expansions of existing cells in California substantially more expensive, while the marginal benefits derived from additional engineering and construction of CKDLF units are questionable. On page 45646 of the proposal, EPA bases its rationale for standards on CKDLF units in seismic impact zones on another rule that regulates municipal solid waste landfill (MSWLF) units. This basis is questionable, given the different nature of CKDLF units and MSWLF units. CKD landfills are monofills, and the material's cementitious qualities allow it to be compacted and formed into a mass that exhibits strength and low permeability (i.e., 10-7 to 10-5), which differs significantly from the heterogeneous makeup of waste in a MSWLF unit. This characteristic results in greater inherent stability within a CKDLF unit than in a MSWLF unit, and can reduce or eliminate adverse impacts resulting from seismic movement. Requiring additional design and engineering standards for CKDLF units in seismic impact zones yields minimal incremental benefits, and EPA's approach relying on MSWLF units is unwarranted.
130	ckdp00016	P.45646, column 3 second paragraph, last sentence.□□ □□ ASTSWMO concurs with the approach as proposed.
717	ckdp00048	Seismic impact zones: TNRCC concurs with the approach as proposed.

Comment Id	Document Number	Comment
68	ckdp00015	On page 45647 of the preamble, section IV. A. 3. f., EPA discusses the limitation of siting CKDLF units in carbonate terrain to areas where a karst demonstration can be made. This penalizes facilities which are located in areas of low annual rainfall simply because adequate ground water is not available to make the karst demonstration. Furthermore, it does not allow for the use of any performance standards that would be more practical and realistic, i.e., in the spirit of the common-sense approach for management of CKD, but would still assure protection of groundwater resources. Landfills located in such areas do not present a significant health risk, as drinking water is typically very deep below the surface. In addition, the annual volume of rainfall is low; hence, the probability for migration is very low. The rule should allow for a demonstration to be made in areas of low annual rainfall to assess probability for migration.
69	ckdp00015	[T]he requirement to use dye-tracer studies for the karst determination should be considered on a case-by-case basis, primarily because it is not feasible to conduct dye tracer studies at all locations. Furthermore, the broad nature of this requirement for every CKDLF unit in carbonate terrain is restrictive and narrow, due to the expense of implementing a dye-tracer-study and the potential lack of information that can be gained. For example, sites located in areas with low annual rainfall will have a difficult time injecting enough dye into the ground to make adequate demonstrations as to the direction of ground water movement. Areas with perched water tables also create difficulties in conducting dye tracer studies as the perched water areas are not often interconnected and may give the appearance of karst if not adequately studied. Before requiring the dye tracer study, the rule should allow for an evaluation as to its necessity and potential information value. Factors in this evaluation should include assurance that: 1) the proposed site is underlain by a limestone formation; and, 2) adequate rainfall occurs in the area to create enough groundwater to make the study results feasible. EPA should not require a dye-tracer study without first allowing for an evaluation to determine whether it is necessary.
70	ckdp00015	As outlined on page 45647 of the Register, section IV. A. 3. f., karst topography is defined as a formation comprised of limestone, dolomite, gypsum or other soluble rock. In addition, the proposal outlines assessment requirements (i.e., dye-tracer studies) for facilities siting CKDLF units in carbonate terrain. Carbonate terrain is defined on page 45679 of the proposal (proposed §259.2 - Definitions) as “carbonate bedrock (e.g., limestone or dolomite) that consists chiefly of carbonate minerals.. . ” Prior to requiring any type of karst demonstration, facilities should be allowed to demonstrate whether or not the proposed CKDLF unit is located in an area of limestone. Although a particular site’s geology could consist of a limestone formation overlying a clay or shale formation (i.e., carbonate terrain), if the proposed CKDLF unit is planned to be sited in the clay or shale formation, migration into groundwater is unlikely. Furthermore, clay or shale does not exhibit karst groundwater flow characteristics, rather the hydraulic conductivity of these matrices is much lower, causing them to act as aquatards or aquacludes that inhibit or impede groundwater flow. CKD disposal areas that are located on clay or shale deposits should not be required to make karst demonstrations or conduct dye tracer studies.
132	ckdp00016	The effectiveness and validity of the data gathered through dye studies depend on topography, ability to define fracture patterns and preferential pathways, and possibly premature assumptions on landfill size and depth. The use of dye studies should not be a requirement for a karst study at all CKD landfills. The specific components of a karst groundwater study should be left to the discretion of the EPA Regional Administrator or Director of an approved State. (The use of the terms "Director of an approved State", "approved State" or "State Director" hereafter reflect the ASTSWMO's recommendation that the management standards be finalized under Subtitle D authority.)
378	ckdp00023	The EPA's "Draft Technical Background Document on Ground Water Controls" (June 1998) (Ground Water TBD) considers the Midlothian, Clarksville, Trident, Fort Collins and Dundee plants as located in karst terrain, based solely on the presence of carbonate rock, and springs (Trident). However, the Midlothian, Clarksville, Trident and Dundee plant sites do not satisfy any of the criteria noted above in the definition of karst, nor does it meet the EPA's own definition of karst ((§ 259.16 (b) ".. .rapid ground-water flow velocities which exceed Darcian flow velocities.. .", and further "Darcian ground-water flow is typically linear and laminar, travels from 1 x 10 -11 to 1 x 102 cm/sec.. ."). Based on the relatively low hydraulic conductivities exhibited by wells finished in the limestone beneath the landfill site, and the lack of karst-like features, the Midlothian, Clarksville and Dundee landfill sites are clearly not located in karst terrain.

Comment Id	Document Number	Comment
385	ckdp00023	The EPA's location standard for karst terrain unreasonably restrict CKD disposal options, in light of Holnam's site-specific data that indicate that a karst investigation as required in the proposed rule is unwarranted. The EPA's restrictions on disposal in karst terrain (§ 259.16 and 259.30) contained in the proposed rule are unwarranted, especially given the evidence from the Midlothian, Fort Collins and Trident plants landfills. The proposed rule (§ 259.30 (a)) requires that a karst ground-water investigation be performed "prior to construction of a CKD landfill unit in carbonate terrain" [emphasis added]. Therefore, the EPA appears to presume that all sites are located in karst, because virtually every cement plant is located in carbonate terrain. Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain. Examples of these definitions include the following: 1) Karst Topography - Topography of the type found in the Karst, a limestone plateau on the eastern coast of the Adriatic. It is marked by sinkholes, interspersed with abrupt ridges and irregular protuberant rocks and by caverns and underground streams. (Rice, 0. M. 1946. Dictionary of Geological Terms, Edward Brothers, Inc. p 202); 2) A type of topography that is formed in limestone, gypsum, and other rocks by dissolution, and that is characterized by sink holes, caves, and underground drainage. (Bates, R. L. 1980, Glossary of Geology, American Geological Institute, p 387); 3) The word karst denotes any terrain underlain by compact carbonate rocks in which circulating water has dissolved the rock, creating such physical features as enclosed depressions, sink holes, swallow holes, long dry valleys, scarcity of surface streams, and subterranean drainage through solution openings. (Astier, J. L. 1984, Guide to the Hydrology of Carbonate Rocks, UNESCO, p16).□□ □□ [New paragraph] The EPA's "Draft Technical Background Document on Ground Water Controls" (June 1998) (Ground Water TBD) considers the Midlothian, Clarksville, Trident, Fort Collins and Dundee plants as located in karst terrain, based solely on the presence of carbonate rock, and springs (Trident). However, the Midlothian, Clarksville, Trident and Dundee plant sites do not satisfy any of the criteria noted above in the definition of karst, nor does it meet the EPA's own definition of karst ((§ 259.16 (b) ".. .rapid ground-water flow velocities which exceed Darcian flow velocities.. .", and further "Darcian ground-water flow is typically linear and laminar, travels from 1 x 10 -11 to 1 x 102 cm/sec.. ."). Based on the relatively low hydraulic conductivities exhibited by wells finished in the limestone beneath the landfill site, and the lack of karst-like features, the Midlothian, Clarksville and Dundee landfill sites are clearly not located in karst terrain.□□ □□ [New paragraph] We suggest that the EPA revise the language in the proposed rule to perform some interim steps, including rock cores and slug tests, before being required to perform a full karst investigation. Depending on the results of that preliminary investigation, a site should be allowed to opt out of performing a karst site investigation. [New paragraph] Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain.
423	ckdp00025	The EPA’s location standard for karst terrain and the ban on disposal below the natural water table unreasonably restrict CKD disposal options. Holnam’s site-specific data will indicate both that a karst investigation as required in the proposed rule is unwarranted and that disposal below an inadequately defined water table has not impacted, and will not in the future impact ground-water quality.
636	ckdp00039	There are only three active cement kiln dust (CKD) piles/landfills in California. All three CKD piles are located in the drier portions of this dry western state. Although we recognize that CKD piles in karst terrain could present special problems, California has very limited karst terrain. Given the rarity of active CKD piles/landfills, their location at dry sites, the State's careful regulation of such Units, and the absence of karst terrain, discharges of CKD to land do not pose a significant threat to water quality in California.
718	ckdp00048	TNRCC concurs with the proposed definition of karst terrain and the approach for identifying karst hydrology.
881	ckdp00055	We suggest that the EPA revise the language in the proposed rule to perform some interim steps, including rock cores and slug tests, before being required to perform a full karst investigation. Depending on the results of that preliminary investigation, a site should be allowed to opt out of performing a karst site investigation.
896	ckdp00056	We suggest that the EPA revise the language in the proposed rule to perform some interim steps, including rock cores and slug tests, before being required to perform a full karst investigation. Depending on the results of that preliminary investigation, a site should be allowed to opt out of performing a karst site investigation.

Comment Id	Document Number	Comment
910	ckdp00057	The EPA's location standard for karst terrain unreasonably restrict CKD disposal options, in light of Holnam's site-specific data that indicate that a karst investigation as required in the proposed rule is unwarranted. The EPA's restrictions on disposal in karst terrain (§ 259.16 and 259.30) contained in the proposed rule are unwarranted, especially given the evidence from the Midlothian, Fort Collins and Trident plants landfills. The proposed rule (§ 259.30 (a)) requires that a karst ground-water investigation be performed "prior to construction of a CKD landfill unit in carbonate terrain..." [emphasis added]. Therefore, the EPA appears to presume that all sites are located in karst, because virtually every cement plant is located in carbonate terrain. Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain. Examples of these definitions include the following: 1) Karst Topography - Topography of the type found in the Karst, a limestone plateau on the eastern coast of the Adriatic. It is marked by sinkholes, interspersed with abrupt ridges and irregular protuberant rocks and by caverns and underground streams. (Rice, 0. M. 1946. Dictionary of Geological Terms, Edward Brothers, Inc. p 202); 2) A type of topography that is formed in limestone, gypsum, and other rocks by dissolution, and that is characterized by sink holes, caves, and underground drainage. (Bates, R. L. 1980, Glossary of Geology, American Geological Institute, p 387); 3) The word karst denotes any terrain underlain by compact carbonate rocks in which circulating water has dissolved the rock, creating such physical features as enclosed depressions, sink holes, swallow holes, long dry valleys, scarcity of surface streams, and subterranean drainage through solution openings. (Astier, J. L. 1984, Guide to the Hydrology of Carbonate Rocks, UNESCO, p16). [New paragraph] The EPA's "Draft Technical Background Document on Ground Water Controls" (June 1998) (Ground Water TBD) considers the Midlothian, Clarksville, Trident, Fort Collins and Dundee plants as located in karst terrain, based solely on the presence of carbonate rock, and springs (Trident). However, the Midlothian, Clarksville, Trident and Dundee plant sites do not satisfy any of the criteria noted above in the definition of karst, nor does it meet the EPA's own definition of karst ((§ 259.16 (b) ".. .rapid ground-water flow velocities which exceed Darcian flow velocities.. .", and further "Darcian ground-water flow is typically linear and laminar, travels from 1 x 10 -11 to 1 x 102 cm/sec.. ."). Based on the relatively low hydraulic conductivities exhibited by wells finished in the limestone beneath the landfill site, and the lack of karst-like features, the Midlothian, Clarksville and Dundee landfill sites are clearly not located in karst terrain. [New paragraph] We suggest that the EPA revise the language in the proposed rule to perform some interim steps, including rock cores and slug tests, before being required to perform a full karst investigation. Depending on the results of that preliminary investigation, a site should be allowed to opt out of performing a karst site investigation. [New paragraph] Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain. Examples of these definitions include the following: 4) Karst Terrane - A terrane, generally underlain by limestone or dolomite, in which the topography is chiefly formed by the dissolving of rock, and which may be characterized by sinkholes, sinking streams, closed depressions, subterranean drainage, and caves. The term karst unites specific morphological and hydrological features in soluble (mostly carbonate) rocks. Morphological features include karren, dolinas (sinkholes), jamas, ponors, uvalas, poljes, caves, caverns, etc. Hydrological features include basins of closed drainage, lost rivers, estavelles, vauclusian springs, submarine springs, more or less individualized underground streams and incongruity of surface and underground divides. Karst is understood to be the result of natural processes in and on the earth's crust caused by solution and leaching of limestones, dolomites, gypsum, halite, and other soluble rocks. 5) Karst Topography - Topography dominated by features of solutional origin. Geomorphically, the dominant features usually but not always obviously present, are sinkholes and caves. In tropical regions, karst towers (e.g. mogotes) may also dominate the landscape. 4) And 5) EPA, 1999, A Lexicon of Cave and Karst Terminology with Special Reference to Environmental Karst Hydrology, EPA/600/R-99/006, January 1999.

Comment Id	Document Number	Comment
917	ckdp00057	2.4 Comments on Location Standards□□ □□ The EPA's restrictions on disposal in karst terrain (§ 259.16 and 259.30) contained in the proposed rule are unwarranted, given the evidence from the Trident plant landfill. The proposed rule (§ 259.30 (a)) requires that a karst ground-water investigation be performed "prior to construction of a CKD landfill unit in carbonate terrain... " [emphasis added]. Therefore, the EPA appears to presume that all sites are located in karst, because virtually every cement plant is located in carbonate terrain. Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain. Examples of these definitions include the following:□□ □□ 1) Karst Topography - Topography of the type found in the Karst, a limestone plateau on the eastern coast of the Adriatic. It is marked by sinkholes, interspersed with abrupt ridges and irregular protuberant rocks and by caverns and underground streams. [ref. 1] Rice, 0. M. 1946. Dictionary of Geological Terms, Edward Brothers, Inc. p 202.□□ □□ 2) A type of topography that is formed in limestone, gypsum, and other rocks by dissolution, and that is characterized by sink holes, caves, and underground drainage. [ref. 2] Bates, R. L. 1980, Glossary of Geology, American Geological Institute, p 387□□ □□ 3) The word karst denotes any terrain underlain by compact carbonate rocks in which circulating water has dissolved the rock, creating such physical features as enclosed depressions, sink holes, swallow holes, long dry valleys, scarcity of surface streams, and subterranean drainage through solution openings. [ref. 3] Astier, J. L. 1984, Guide to the Hvdroloav of Carbonate Rocks, UNESCO, p16.□□ □□ 4) Karst Terrane - A terrane, generally underlain by limestone or dolomite, in which the topography is chiefly formed by the dissolving of rock, and which may be characterized by sinkholes, sinking streams, closed depressions, subterranean drainage, and caves. The term karst unites specific morphological and hydrological features in soluble (mostly carbonate) rocks. Morphological features include karren, dolinas (sinkholes), jamas, ponors, uvalas, poljes, caves, caverns, etc. Hydrological features include basins of closed drainage, lost rivers, estavelles, vauclusian springs, submarine springs, more or less individualized underground streams and incongruity of surface and underground divides. Karst is understood to be the result of natural processes in and on the earth's crust caused by solution and leaching of limestones, dolomites, gypsum, halite, and other soluble rocks.□□ □□ 5) Karst Topography - Topography dominated by features of solutional origin. Geomorphically, the dominant features usually but not always obviously present, are sinkholes and caves. In tropical regions, karst towers (e.g. mogotes) may also dominate the landscape. [ref. 4 and 5] EPA, 1999, A Lexicon of Cave and Karst Terminology with Special Reference to Environmental Karst Hydrolonv, EPA/600/R-99/006, January 1999.□□ □□ The EPA's "Draft Technical Background Document on Ground Water Controls" (June 1998) (Ground Water TBD) considers the Fort Collins plant as located in karst terrain, but does not provide a basis for this classification. However, the Fort Collins plant site does not satisfy the criteria noted above in the definition of karst, nor does it meet the EPA's own definition of karst ((§ 259.16(b) "... rapid ground-water flow velocities which exceed Darcian flow velocities.. ." and further "Darcian ground-water flow is typically linear and laminar, travels from 1 x 10[^]-11 to 1 x 10[^]2 cm/sec.. ."). Based on the very low hydraulic conductivities exhibited by wells finished in the on-site geologic formations (see Appendix A), and the lack of karst-like features as discussed in Section 2.3, the Fort Collins landfill site is clearly not located in karst terrain.□□ □□ We suggest that the EPA revise the language in the proposed rule to perform some interim steps, including rock cores and slug tests, before being required to perform a full karst investigation. Depending on the results of that preliminary investigation, a site should be allowed to opt out of performing a karst site investigation.
933	ckdp00058	We suggest that the EPA revise the language in the proposed rule to perform some interim steps, including rock cores and slug tests, before being required to perform a full karst investigation. Depending on the results of that preliminary investigation, a site should be allowed to opt out of performing a karst site investigation.

Comment Id	Document Number	Comment
1026	ckdpL0001	Pg 45648, col 1, para 1, last sentence, EPA requests comments on practical difficulties with dye studies and characterizing karst terrain, and whether there are other alternative approaches to ensure protection of human health and the environment.□□□ □□□ The MDNR believes the type of investigation should not be specified, since it should be based on site specific information. Though a dye trace study would be extremely valuable, the time frames to conduct a study of this nature may take longer than the time frames specified to implement the groundwater monitoring system.
15	ckdp00009	40 CFR 259.30(a) and (b) The karst investigation to establish a monitoring system for CKD facilities located in karst terrains should be moved to 259.41(a). This is not a design criteria nor is it a demonstration for karst terrain as described under 259.16. Although the design of a CKD facility should consider the geologic setting it will be placed in, designing a monitoring system is more of a study of hydrogeology in the area; this is covered under 259.4 1 (a). If the facility is trying to locate monitoring points for the CKD facility and the facility is known to be located in karst terrain, then either a demonstration required under 259.16 has already been performed or it has been concluded not necessary due to obvious karst features. The next step would be designing the monitoring system, much like what is required in any other geologic environment described under 259.41.
38	ckdp00010	(part a): The dye tracer study should not be a requirement but rather an option for evaluating karst terrains. If potable groundwater exists in an area and dye tainted water appears at a residence tap then the US EPA could be partly responsible and held liable for decreasing the aesthetic qualities of potable water in an area. Health studies regarding the various dyes, which are used in groundwater tracer studies, should be considered before the US EPA requires companies that manage CKD to inject non-naturally occurring chemicals into valuable groundwater resources. Impact to the aesthetic and chemical quality of potable groundwater has significant liability implications. I recommend that US EPA attorneys review this portion of the proposed rule and consult with US EPA hydrogeologists before requiring a dye tracer study as part of the final rule.
190	ckdp00016	(Pg 45682, col 3, para (a)) Eliminate the second sentence, "The karst ground-water investigation shall include, but . . . related to the CKDLF unit." Give the States flexibility to determine the requirements of the study.

Comment Id	Document Number	Comment
318	ckdp00020	Karast and Other Unstable Areas: Lafarge agrees that CKD landfills located in unstable areas must have structural integrity to mitigate potential impacts from subsidence, slope failure, or other mass movement. However, the proposed rules are unclear as to the objective of the karst investigation. It is uncertain whether the ability to monitor groundwater, or the stability of the CKDLF is the key concern that the karst investigation is intended to address. The proposed standards use a very broad definition of unstable areas with respect to karst. We believe that the standards may be overly restrictive at sites where there is no evidence of unstable conditions caused by karst. If unstable conditions caused by karst features are not evident on the landscape or quarry walls, that evidence should be weighted heavily in evaluating whether unstable conditions are present at a site. The walls of an existing quarry offer an excellent opportunity to investigate the potential presence and characteristics of karst features. Information available from mining investigations should also be used to determine if further karst investigation is warranted. □□ □□ Further, requiring that new measures be taken to ensure structural integrity of existing landfills may be cost-prohibitive and physically impossible, since these measures could require major changes in the construction of an existing landfill. These measures are not described in the proposed standards, and it is unclear how substantial they might be.□□ □□ There are additional reasons why the required karst investigations could be costly yet inconclusive. The standards require that a karst groundwater investigation be conducted prior to construction of a landfill in carbonate terrain to define the direction of groundwater flow and points of discharge. Because cement plants, and therefore CKD sites, are nearly always located in carbonate terrain, this requirement applies to essentially all CKD sites. The burden of proof is on the facility to demonstrate that no karst is present at the site; however, the broad definition developed by the EPA in the standards may make it extremely difficult and costly to prove no karst is present. Previously, the EPA has determined that no karst is present at certain CKD sites without having to use dye tracer tests. The proposed regulations state that a literature search may be conducted to help determine the presence or absence of karst. However, unless it is conclusive that no karst exists beneath the site, it is stipulated that a basin-wide karst investigation must be conducted. This requirement is unnecessarily severe. □□ □□ The proposed regulations dictate that one or more dye tracer tests be conducted to identify groundwater pathways. Karst investigations involving monitoring wells, springs, and dye tracer tests are difficult to conduct. Major practical difficulties are involved in injecting dye tracers into the groundwater beneath a site, and then monitoring a broad, basin-wide area for the appearance of the tracer that could take weeks or months to show up, if it shows up at all. It is extremely difficult to predict when (and where) the dye might appear, requiring a substantial commitment of resources over a long period. In some cases, the dye may never appear if it becomes trapped in a low-permeability unit. □□ □□ Such a major effort is unjustified with respect to a number of CKD sites. Some minor karst features may be acceptable at sites where it can be demonstrated that the presence of karst will not result in significant impact on the groundwater from the CKD. If the concentration of CKD leachate or the permeability of the CKD is so low that the actual mass of constituents migrating to the groundwater is negligible, then the potential to affect groundwater will also be negligible.
319	ckdp00020	Many states have existing regulation that govern groundwater investigations and stabilization desing measures at solid waste facilities. Lafarge recommends that the proposed standards allow for existing state regulations regarding karst and other unstable areas to be used to evaluate its potential presence. Also, Lafarge recommends that a variance from requirements for basin-wide karst investigations be clearly allowed in the rules if a demonstration is made that there is an extremely low potential for significant mass flux from the CKD to the groundwater due to the low-permeability and/or low-leaching characteristics of the CKD. The mass flux from CKD will be extremely low if one of the following conditions is met: (1) the leachate from a CKD leaching test has concentrations that are all below Table 1 (5259.30) values; or (2) the leachate from a CKD leaching test has concentrations that are all below 10 times the Table 1 values, and the hydraulic conductivity of the CKD is 10-6 cm/s or less. Lafarge recommends that a variance from the basin-wide karst investigation requirement be granted if either of the two conditions listed above is met. Furthermore, if there are existing state regulations regarding stabilization design measures, it is recommended that those state regulations be applied to facilities in unstable areas.

Comment Id	Document Number	Comment
320	ckdp00020	Karst Groundwater Investigation Costs: The economic impact of the proposed karst groundwater investigation requirements is significant, both in terms of the actual cost of the investigation, and the costs that will likely be incurred due to delays in operations until the investigation is completed. Based on a similar ongoing investigation for a landfill in Tennessee, it was estimated that karst investigations involving dye tracing, geophysics, and hydrogeologic interpretation would cost between $100,000 and $250,000 per investigation. It is anticipated that karst groundwater investigations would be required at four Lafarge sites at a cost of approximately $550,000 to Lafarge. These costs could increase substantially if a long period of monitoring is required to complete the study. □□ □□ An undefined, but potentially much higher cost, could be incurred by delaying the operations of a plant until a lengthy karst investigation is completed. Since the time of arrival of a dye tracer cannot be predicted with accuracy (but is potentially at least months), this creates not only a potentially substantial cost, but adds a significant degree of uncertainty regarding the schedule for operations to begin/continue at a site.
377	ckdp00023	The EPA's location standard for karst terrain unreasonably restrict CKD disposal options, in light of Holnam's site-specific data that indicate that a karst investigation as required in the proposed rule is unwarranted. The EPA's restrictions on disposal in karst terrain (§ 259.16 and 259.30) contained in the proposed rule are unwarranted, especially given the evidence from the Midlothian, Fort Collins and Trident plants landfills. The proposed rule (§ 259.30 (a)) requires that a karst ground-water investigation be performed "prior to construction of a CKD landfill unit in carbonate terrain..." [emphasis added]. Therefore, the EPA appears to presume that all sites are located in karst, because virtually every cement plant is located in carbonate terrain. Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain. Examples of these definitions include the following: 1) Karst Topography - Topography of the type found in the Karst, a limestone plateau on the eastern coast of the Adriatic. It is marked by sinkholes, interspersed with abrupt ridges and irregular protuberant rocks and by caverns and underground streams. (Rice, 0. M. 1946. Dictionary of Geological Terms, Edward Brothers, Inc. p 202); 2) A type of topography that is formed in limestone, gypsum, and other rocks by dissolution, and that is characterized by sink holes, caves, and underground drainage. (Bates, R. L. 1980, Glossary of Geology, American Geological Institute, p 387); 3) The word karst denotes any terrain underlain by compact carbonate rocks in which circulating water has dissolved the rock, creating such physical features as enclosed depressions, sink holes, swallow holes, long dry valleys, scarcity of surface streams, and subterranean drainage through solution openings. (Astier, J. L. 1984, Guide to the Hydrology of Carbonate Rocks, UNESCO, p16).
379	ckdp00023	We suggest that the EPA revise the language in the proposed rule to perform some interim steps, including rock cores and slug tests, before being required to perform a full karst investigation. Depending on the results of that preliminary investigation, a site should be allowed to opt out of performing a karst site investigation.
408	ckdp00025	The EPA's location standard for karst terrain unreasonably restrict CKD disposal options, in light of Holnam's site-specific data that indicate that a karst investigation as required in the proposed rule is unwarranted. The EPA's restrictions on disposal in karst terrain (§ 259.16 and 259.30) contained in the proposed rule are unwarranted, especially given the evidence from the Midlothian, Fort Collins and Trident plants landfills. The proposed rule (§ 259.30 (a)) requires that a karst ground-water investigation be performed "prior to construction of a CKD landfill unit in carbonate terrain..." [emphasis added]. Therefore, the EPA appears to presume that all sites are located in karst, because virtually every cement plant is located in carbonate terrain. Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain. Examples of these definitions include the following: 1) Karst Topography - Topography of the type found in the Karst, a limestone plateau on the eastern coast of the Adriatic. It is marked by sinkholes, interspersed with abrupt ridges and irregular protuberant rocks and by caverns and underground streams. (Rice, 0. M. 1946. Dictionary of Geological Terms, Edward Brothers, Inc. p 202); 2) A type of topography that is formed in limestone, gypsum, and other rocks by dissolution, and that is characterized by sink holes, caves, and underground drainage. (Bates, R. L. 1980, Glossary of Geology, American Geological Institute, p 387); 3) The word karst denotes any terrain underlain by compact carbonate rocks in which circulating water has dissolved the rock, creating such physical features as enclosed depressions, sink holes, swallow holes, long dry valleys, scarcity of surface streams, and subterranean drainage through solution openings. (Astier, J. L. 1984, Guide to the Hydrology of Carbonate Rocks, UNESCO, p16).

Comment Id	Document Number	Comment
410	ckdp00025	Adding to the above comment: The EPA's restriction on disposal in karst is overly broad and presumes that all sites are in karst, thus effectively requiring all sites to perform a karst investigation, even though in many cases such an extensive demonstration is not justified. This in turn has lead the EPA to propose a landfill design standard that is stricter than necessary. The EPA has unreasonably broadened the definition of karst terrain by requiring a karst investigation be conducted "Prior to construction of a CKDLF unit in carbonate terrain.. ." (§259.30 (a)), thus equating carbonate terrain with karst terrain. This is turn leads to the conclusion that virtually all sites need to perform a karst investigation, because they are all located where carbonate rock exists. This analysis incorrectly blurs the distinction between carbonate sites that exhibit fractured ground-water flow (Darcian ground-water velocities) and truly karst ground-water flow. The decision on whether to require a karst investigation should be based on the likelihood of a site of exhibit karst-like ground-water movement, not merely the presence of fractured rock. It should be noted that at Clarksville, the elevation of the quarry floor, i.e. the base of the CKD pile is lower than the elevation of the bed elevation of the Mississippi River, which is approximately ½ mile east of the quarry. Surely, if the EPA's assumptions were true, and the terrain was karst, the quarry would be flooded by water from the Mississippi.
447	ckdp00027	Most cement manufacturing facilities will be located in terrains underlain by carbonate rocks. The proposed rule improperly classifies all these sites as karst terrain. This classification then requires a groundwater investigation, including die tracer testing to establish monitor well locations. Well-developed karst certainly creates problems with selection of monitoring points because flow occurs in unpredictable (non-Darcian) solution features, but it is not valid to assume that all carbonate regions are karst.
465	ckdp00028	While karst terrain can develop in any carbonate rock, not all carbonate rock is karst terrain. Karst is a "diagenic facies, an overprint in subaerially exposed carbonate bodies, produced and controlled by dissolution and migration of calcium carbonate in meteoric waters, occurring in a wide variety of climatic and tectonic settings, and generating a recognizable landscape" (Esteban and Klappa, p. 11). In general, karst terrain is characterized by landforms such as sinkholes, caves, pinnacles, lapies, dolinas, poljes, springs, disappearing streams, and closed drainage basins, and by heterogenous (or non-diffuse) groundwater flow. Karst aquifers become both heterogenous and anisotropic with time (Ford and Williams, p.134). Karst cavities and channels form because meteoric water is not in chemical equilibrium with the host rock.
466	ckdp00028	Conditions conducive to karst formation do not exist in saturated limestone or dolomite in which groundwater is in chemical equilibrium with the host rock. Present-day saturated conditions do not rule out the possibility that karst features formed under different hydrogeologic conditions prior to saturation. However, in the absence of other karst features, saturated conditions in a carbonate rock formation indicate that active karst formation is unlikely. There is no evidence of karst formation in the vicinity of the Holly Hill Plant. This conclusion is supported by the following observations: (1) Karst landforms are not present. Examination of the USGS topographic map of the area clearly shows that Home Branch flowed directly to Four Hole Swamp without disappearing underground. Four Hole Swamp flows into the Edisto River. No closed drainage basins are evident on the topographic map. Other than the seeps in the quarry walls, which result from the artificial lowering of the water table by the quarry pump system, there are no known springs in the area. (2) Karst features have not been encountered in the subsurface in the vicinity of the units. No voids were logged in any of the borings. (3) Diffuse groundwater flow conditions exist in the shallow limestone and overlying clays in the vicinity of the units. The geologic units are hydraulically interconnected and water table conditions exist in both formations. The expression of the water table in the quarry is a planar zone of saturation near the base of the quarry wall. (4) The geologic formations underlying the site (Cross Formation, Santee Limestone and Black Mingo Formation) and the Holnam quarry are saturated, locally under confined conditions, and serve as regional aquifers. (5) Exposures of limestone in the quarry walls are devoid of features that would indicate enhanced or secondary porosity, such as fractures, collapse breccias or caverns. There are no indications that karst conditions exist in the limestone formations beneath the units. While the strata underlying the units include limestone formations, the units are not located in karst terrain. Therefore, the requirement for dye-trace studies is unnecessary.

Comment Id	Document Number	Comment
513	ckdp00033	The EPA's restrictions on disposal in karst terrain (§ 259.16 and 259.30) contained in the proposed rule are unwarranted, especially given the evidence from site specific plant landfills within the industry. The proposed rule (§ 259.30 (a)) requires that a karst ground-water investigation be performed "prior to construction of a CKD landfill unit in carbonate terrain... ." [emphasis added]. Therefore, the EPA appears to presume that all sites are located in karst, because virtually every cement plant is located in carbonate terrain. The EPA needs to realize that CKD landfills always will be located within the zone of groundwater impact from the quarry. Ground water flow direction beneath the landfill will be towards the quarry offering containment of any releases that may occur. We suggest that the EPA revise the language in the proposed rule to perform some interim steps before being required to perform a full karst investigation. Depending on the results of that preliminary investigation, a site should be allowed to opt out of performing a karst site investigation. The EPA's location standard for karst terrain unreasonably restricts CKD disposal options.
612	ckdp00038	The EPA's restriction on disposal in karst is overly broad and presumes that all sites are in karst, thus effectively requiring all sites to perform a karst investigation, even though in many cases such an extensive demonstration is not justified. This in turn has led the EPA to propose a landfill design standard (geomembrane liner for all CKD sites) that is stricter than necessary.
613	ckdp00038	The decision on whether to require a karst investigation should be based on the likelihood of a site to exhibit karst-like ground-water movement, not merely the presence of fractured rock.
617	ckdp00038	§259.16 and 259.30: The rule language should be changed to remove the implicit definition of carbonate terrain as karst terrain, and there should be no presumption of the need for a karst investigation. Instead, a "tiered" test for karst could be undertaken.
623	ckdp00038	The EPA has unreasonably broadened the definition of karst terrain by requiring a karst investigation be conducted “Prior to construction of a CKDLF unit in carbonate terrain...” (259.30 (a)), thus equating carbonate terrain with karst terrain. Virtually all sites near cement plants would be considered to be in or have the potential to be in karst terrain.
624	ckdp00038	Virtually every cement plant and CKD landfill will be located in an area of carbonate terrain, but in no way should this be indicative of the presence of karst terrain, or more specifically the presence of karst-like ground-water flow. Many of the carbonate environments in which CKD landfills may be developed are only slightly fractured and exhibit low hydraulic conductivities (10 -5 cm/set or less). One of Lone Star’s CKD monofills is located on a layer of carbonate deposit. The stone layer currently being quarried could have been construed to exhibit karst type features. In reality, these features were the result of glacier activity, which impacted the surface layer of carbonate. However, the carbonate underlying the monofill, which has not been mined because it is unsuitable for cement production, is clearly not karst terrain and forms a vertical barrier beneath the monofill. Under the current proposal, this material would be classified as karst.
646	ckdp00040	Karst Presumption (Proposed Rule 40 CFR § 259.16 and 259.30). EPA's assumption that all carbonate is true Karst terrain is inaccurate and places an extremely high burden on the Plant to disprove the Rule's assumption. The Ada facility is located in limestone terrain but exhibits no Karst characteristics such as springs, vertical shafts, disappearing streams or sinkholes as Karst is defined by EPA in their Hazardous Ranking System Regulations. The type of Karst investigation required by-the Proposed Rule could cost in excess of half a million dollars. Holnam's monofill-landfill is not located in Karst terrain based upon the information presented in the EPA's Ground Water TBD. We agree with this assessment, as the site ground-water data show no evidence of Karst hydrogeology. EPA has already indicated in their TBD that the site is not considered in Karst but the Proposed Rule would still require a detailed investigation, absent a waiver from EPA. The presumption of Karst terrain does not reflect reality. The investigation requirements are overly burdensome for existing landfills, and, in particular, the Ada landfill which has operated since 1958 and exhibits no ground water impacts.
837	ckdp00053	EPA's determinations of karst terrain are unrealistic. The Proposed CKD Rule relies on assumptions that the geology underlying CKD landfills is primarily karst terrain to conclude that there is the potential for off-site migration. There is insufficient basis to conclude that a majority of the U.S. cement plants are located in karst terrain. Thus, EPA overstates the potential for migration from CKD landfills in karst locations.

Comment Id	Document Number	Comment
860	ckdp00054	2.4 Comments on Location Standards□□ □□ The EPA's restrictions on disposal in karst terrain (5 259.16 and 259.30) contained in the proposed rule are unwarranted, given the evidence from the Trident plant landfill. The proposed rule (8 259.30 (a)) requires that a karst ground-water investigation be performed "prior to construction of a CKD landfill unit in carbonate terrain... " [emphasis added]. Therefore, the EPA appears to presume that all sites are located in karst, because virtually every cement plant is located in carbonate terrain. Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain. Examples of these definitions include the following:□□ □□ 1) Karst Topography - Topography of the type found in the Karst, a limestone plateau on the eastern coast of the Adriatic. It is marked by sinkholes, interspersed with abrupt ridges and irregular protuberant rocks and by caverns and underground streams. [ref. 1] Rice, 0. M. 1946. Dictionary of Geological Terms, Edward Brothers, Inc. p 202.□□ □□ 2) A type of topography that is formed in limestone, gypsum, and other rocks by dissolution, and that is characterized by sink holes, caves, and underground drainage. [ref. 2] Bates, R. L. 1980, Glossary of Geology, American Geological Institute, p 387□□ □□ 3) The word karst denotes any terrain underlain by compact carbonate rocks in which circulating water has dissolved the rock, creating such physical features as enclosed depressions, sink holes, swallow holes, long dry valleys, scarcity of surface streams, and subterranean drainage through solution openings. [ref. 3] Astier, J. L. 1984, Guide to the Hvdroloav of Carbonate Rocks, UNESCO, p16.□□ □□ 4) Karst Terrane - A terrane, generally underlain by limestone or dolomite, in which the topography is chiefly formed by the dissolving of rock, and which may be characterized by sinkholes, sinking streams, closed depressions, subterranean drainage, and caves. The term karst unites specific morphological and hydrological features in soluble (mostly carbonate) rocks. Morphological features include karren, dolinas (sinkholes), jamas, ponors, uvalas, poljes, caves, caverns, etc. Hydrological features include basins of closed drainage, lost rivers, estavelles, vauclusian springs, submarine springs, more or less individualized underground streams and incongruity of surface and underground divides. Karst is understood to be the result of natural processes in and on the earth's crust caused by solution and leaching of limestones, dolomites, gypsum, halite, and other soluble rocks.□□ □□ 5) Karst Topography - Topography dominated by features of solutional origin. Geomorphically, the dominant features usually but not always obviously present, are sinkholes and caves. In tropical regions, karst towers (e.g. mogotes) may also dominate the landscape. [ref. 4 and 5] EPA, 1999, A Lexicon of Cave and Karst Terminology with Special Reference to Environmental Karst Hydrolonv, EPA/600/R-99/006, January 1999.□□ □□ The EPA's "Draft Technical Background Document on Ground Water Controls" (June 1998) (Ground Water TBD) considers the Trident plant as located in karst terrain, reportedly based on the presence of carbonate rock and springs. However, the Trident plant site does not satisfy the criteria noted above in the definition of karst. Montana has large quantities of limestone comprising several major geologic formations. The area surrounding the Trident Plant is composed mostly of limestone. However, the fact that a formation is limestone does not qualify it as karst. The vicinity of the Lewis and Clark Caverns, located within 20 miles of the plant displays features of karst terrain. The features include caves and caverns formed by dissolution of limestone. The karst features were formed and have since gone through mountain□□ making activities such as folding and faulting. The dissolution of limestone to create large features like caves and caverns requires large flows of water. Although the karst features are present, the area is not characterized by karst hydrology. Ground water does not flow in this terrain at the velocities and quantities associated with karst hydrology.□□ □□ The area around the Trident Plant does not exhibit the features described as karst. There are no sinkholes, there are no caverns, and there is surface water flow. The plant site does not meet the required combination of morphology and hydrology to satisfy the definition of karst.□□ We suggest that the EPA revise the language in the proposed rule to perform some interim steps, including rock cores and slug tests, before being required to perform a full karst investigation. Depending on the results of that preliminary investigation, a site should be allowed to opt out of performing a karst site investigation.

Comment Id	Document Number	Comment
879	ckdp00055	2.4 Comments on Location Standards□□ □□ The EPA's restrictions on disposal in karst terrain (§ 259.16 and 259.30) contained in the proposed rule are unwarranted, especially given the evidence from the Portland plant landfill. The proposed rule (§ 259.30 (a)) requires that a karst ground-water investigation be performed "prior to construction of a CKD landfill unit in carbonate terrain..." [emphasis added]. Therefore, the EPA appears to presume that all sites are located in karst, because virtually every cement plant is located in carbonate terrain. Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain. Examples of these definitions include the following:□□ □□ 1) Karst Topography - Topography of the type found in the Karst, a limestone plateau on the eastern coast of the Adriatic. It is marked by sinkholes, interspersed with abrupt ridges and irregular protuberant rocks and by caverns and underground streams. [ref. 1] Rice, 0. M. 1946. Dictionary of Geological Terms, Edward Brothers, Inc. p 202.□□ □□ 2) A type of topography that is formed in limestone, gypsum, and other rocks by dissolution, and that is characterized by sink holes, caves, and underground drainage. [ref. 2] Bates, R. L. 1980, Glossary of Geology, American Geological Institute, p 387□□ □□ 3) The word karst denotes any terrain underlain by compact carbonate rocks in which circulating water has dissolved the rock, creating such physical features as enclosed depressions, sink holes, swallow holes, long dry valleys, scarcity of surface streams, and subterranean drainage through solution openings. [ref. 3] Astier, J. L. 1984, Guide to the Hvdroloav of Carbonate Rocks, UNESCO, p16.
880	ckdp00055	The EPA's "Draft Technical Background Document on Ground Water Controls" (June 1998) (Ground Water TBD) considers the Portland plant as located in karst terrain, based on the presence of carbonate rock alone. However, the Portland plant site does not satisfy any of the criteria noted above in the definition of karst, nor does it meet the EPA's own definition of karst ((§ 259.16 (b) "... rapid ground-water flow velocities which exceed Darcian flow velocities.. ."", and further "Darcian ground-water flow is typically linear and laminar, travels from 1 x 10[^] -11 to 1 x 10[^] -2 cm/sec.. ."). Based on the hydraulic conductivities exhibited by wells finished in the formations beneath the landfill□□ site, and the lack of karst-like features on-site , the Portland landfill site is not located in karst terrain.
895	ckdp00056	With respect to karst terrain, the EPA's requirement for performing a karst investigation at all sites is unwarranted and appears to be based on flawed assumptions. The EPA's "Draft Technical Background Document on Ground Water Controls" (June 1998) (Ground Water TBD) considers the Artesia plant as located in karst terrain. Based on the low hydraulic conductivities exhibited by wells finished in the chalk formation beneath the landfill site, and the lack of extensive fractures and visible seeps within the quarry, the Artesia landfill site is clearly not located in karst. Ground-water flow velocities are several orders of magnitude less than even the broadest definition of karst hydrogeology. The EPA's requirement for a karst investigation appears to presume that all sites are located in karst. It is noteworthy that roughly 70 % of the cement plant sites in the country are considered to be located in karst terrain, and that approximately 70% of that 70% were classified as karst based on no information or the presence of carbonate rock alone. This is an overly broad evaluation criterion, and clearly inappropriate in the case of the Artesia landfill. It would be impractical and unnecessary to perform a karst investigation at this site.

Comment Id	Document Number	Comment
931	ckdp00058	2.4 Comments on Location Standards□□ □□ The EPA's restrictions on disposal in karst terrain (§ 259.16 and 259.30) contained in the proposed rule are unwarranted, especially given the evidence from the Dundee plant landfill. The proposed rule (§ 259.30 (a)) requires that a karst ground-water investigation□□ be performed "prior to construction of a CKD landfill unit in carbonate terrain..." [emphasis added]. Therefore, the EPA appears to presume that all sites are located in karst, because virtually every cement plant is located in carbonate terrain. Equating carbonate and karst is clearly inappropriate, given the accepted definitions of karst terrain. Examples of these definitions include the following:□□ □□ 1) Karst Topography - Topography of the type found in the Karst, a limestone plateau on the eastern coast of the Adriatic. It is marked by sinkholes, interspersed with abrupt ridges and irregular protuberant rocks and by caverns and underground streams.□□ □□ 2) A type of topography that is formed in limestone, gypsum, and other rocks by dissolution, and that is characterized by sink holes, caves, and underground drainage.□□ □□ 3) The word karst denotes any terrain underlain by compact carbonate rocks in which circulating water has dissolved the rock, creating such physical features as enclosed depressions, sink holes, swallow holes, long dry valleys, scarcity of surface streams, and subterranean drainage through solution openings.□□ □□ [ref 1] Rice, 0. M. 1946. Dictionary of Geological Terms, Edward Brothers, Inc. p 202□□ [ref 2] Bates, R. L. 1980, Glossary of Geologv. American Geological Institute, p 387□□ [ref 3] Astier, J. L. 1984, Guide to the Hvdrolonv of Carbonate Rocks, UNESCO, p16□□ □□ The EPA's "Draft Technical Background Document on Ground Water Controls" (June 1998) (Ground Water TBD) considers the Dundee plant as located in karst terrain, based on the presence of carbonate rock alone. However, the Dundee plant site does not satisfy any of the criteria noted above in the definition of karst, nor does it meet the EPA's owndefinition of karst ((0 259.16 (b) ". . . rapid ground-water flow velocities which exceed Darcian flow velocities.. .", and further "Darcian ground-water flow is typically linear and laminar, travels from 1 x 10^ -11 to 1 x 10^2 cm/set.. ."). Based on the hydraulic conductivities exhibited by wells finished in the Dundee Limestone beneath the landfill site, and the lack of karst-like features as discussed in Section 2.3, the Dundee landfill site is not located in karst terrain. Furthermore, the MDEQ did not require a karst investigation as part of the permitting and licensing process for the landfill. Finally, all ground water beneath the landfill site flows toward the quarry (see map in Appendix A) due to the strong effect of the quarry dewatering. Therefore ground-water flow on-site is well defined, unlike flow in a karst setting.
545	ckdp00034	The ETC is in general agreement with the design criteria in Subpart D. However, the requirement for a Karst terrain ground-water investigation under proposed 40 CFR 259.30(b) must never be waived, given the large hazard that exists from release of metals to the ground-water from disposal units located in karst terrain. The fact that 71% of existing CKD disposal units are located in Karst terrain is justification not to waive the 259.30(b) assessment requirements.
17	ckdp00009	40 CFR 259.30(c)(l) Since it has been noted as a concern in the proposed rule, should not the constituents listed in Table 1 be included to the proposed Appendix I list? If the design is to ensure that the limits for these metals are not to be exceeded, then should not these metals be checked regularly in the ground water.
39	ckdp00010	[259.30(c) Table 1] (part c): Concentrations listed in Table 1 may be exceeded by natural background concentrations at some sites. It is recommended that concentrations not exceed those concentrations listed in Table 1 or natural background concentrations whichever is higher.
71	ckdp00015	The use of performance-based standards for protective management of CKD is preferable over implementation of default technology-based standards that are discussed in Section IV, A., 5. TXI strongly endorses the use of performance-based standards, primarily because, as discussed in the above comment, CKDLF units differ significantly from MSWLF units.

Comment Id	Document Number	Comment
73	ckdp00015	In order to meet the performance standard for protection of groundwater without reverting to an overly stringent default technical standard, TXI proposes that EPA recognize the use of CKD as a liner material for CKDLF units. EPA discusses this option in Section IV., A. 5 - Technology-Based Standards for the Protection of Groundwater, on page 45649 of the Register, and TXI firmly agrees with this approach. To illustrate, CKD was successfully used as compacted fill and alternative cover to close a sanitary landfill at the TXI Oro Grande, California facility. TXI Oro Grande was able to gain regulatory approval for use of CKD as an alternative cover material through geotechnical laboratory testing and modeling to demonstrate its suitability. Several advantages of using CKD, such as its workability over a wide range of moisture contents make the use of CKD for fill and cover applications advantageous over typical earthfills. Use of CKD as a liner and cover material also represents significant cost savings to facilities that generate CKD that is landfilled. Finally, the agencies (California Integrated Waste Management Board and RWQCB) emphasized their satisfaction in the outcome of this beneficial use of CKD as cover material at this site.
133	ckdp00016	ASTSWMO supports the proposal's use of Maximum Contaminant Levels (MCLs), when available, to define limits for metals in groundwater at the point of compliance. The use of MCLs at the point of compliance has a well-documented history of use in monitoring disposal sites. To change this usage for this rule would cause confusion in the regulated community and with existing State regulations. Many State environmental regulations use MCLs as a basis.
188	ckdp00016	Sec. 259.30 Pg 45683, col 1, para (c)(l): Recommend that the reference to paragraph (d) be changed to paragraph Q, which is the paragraph that relates to the relevant point of compliance. The MCLs given in Table 1 for some metals are different than the MCLs given in Table 1 for 40 CFR 258.40. EPA should reconcile the differences.
193	ckdp00016	Add requirements for the development by the owner and approval by the EPA Regional Administrator or State Director of a construction quality assurance plan to ensure the landfill is constructed per the requirement of Sec. 259.30(c).□□ □□ Add requirements that an independent Professional Engineer certify the landfill was constructed per the construction quality assurance plan.

Comment Id	Document Number	Comment
301	ckdp00020	Chemical Waste Characterization: Lafarge believes that it is important to consider the leaching and physical characteristics of CKD in determining appropriate management standards. The proposed rule does not allow for this important step in deter mining the proper management of CKD.□□ □□ It is important to recognize that the chemical leaching characteristics of CKD, as it is commonly managed today, with moisture conditioning and controlled placement, are different than the chemical leaching characteristics of some historically placed CKD. Some CKD managed in the past was not moisture conditioned and was not placed in a controlled manner. Lafarge believes that these past management practices were considered too strongly in determining the management standards necessary going forward. Lafarge requests that the proposed rule consider the chemical leaching characteristics of CKD as managed today. □□ □□ The management standards for CKD should include a step of waste characterization for sites that propose the use of alternative design standards (see comments in Section 7). This should include obtaining representative samples of CKD and subjecting them to a water leaching test, such as ASTM D3987 (see Appendix A). This would establish the chemical leaching characteristics of the material, and the necessary handling and landfill design criteria could be based on the CKD's actual leaching potential, not simply on generalized past practices. □□ □□ This recommended approach is consistent with many states' industrial waste rules. Some states (e.g., Illinois, Indiana, Michigan, Ohio, Texas, Wisconsin) require waste characterization that establishes a type, classification, or pollution potential of the waste based on its chemical leaching characteristics. The design criteria for a particular type or class of waste are then established; criteria that will be protective of human health and the environment, based on the waste's leaching potential. Other states (e.g., Michigan, New York, Tennessee) utilize waste characterization results as a basis for approving alternative management standards. The approach used by these states in developing appropriate standards for managing high-volume, low-toxicity wastes was not fully considered in these proposed rules. The various states' consideration of a waste's leaching characteristics are often reflected in different design criteria for liners and different locational criteria.□□ □□ This recommendation is also consistent with most states' approach to determining the appropriateness of a proposed beneficial use of a waste material. Most states require chemical characterization or leaching test results in evaluating a proposed beneficial use. While the proposed rule states that the Agency wants to encourage beneficial use of CKD, it does not include a key piece of information necessary to evaluate and promote beneficial uses. □□ □□ Without the benefit of considering the leaching potential of the CKD, the current proposed rule is seriously flawed. □□ □□ Lafarge recommends that the final CKD rules include a chemical waste characterization step using a water leaching test for sites at which the use of alternative design standards is proposed. Furthermore, the rules should contain clear and workable procedures (e.g., variance procedures) for evaluating and approving justifiable alternate design standards based on the results of the chemical waste characterization. □□ □□ Physical Waste Characterization: In the proposed rule, the Agency recognizes the benefit of moisture conditioning and compacting CKD. However, the proposed rule does not go far enough in considering the physical characteristics of CKD. It is important to note that, when CKD is moisture conditioned and placed in a controlled manner with minimal compactive effort, CKD hydrates. The pozzolonic nature of the CKD, combined with water, allows the CKD to set up and gain strength. The resulting waste material is similar to a solidified cement mortar. This is a vital consideration in determinin g appropriate slopes and leachate systems, and even in the initial step of chemical characterization. The representative sample for chemical characterization should be representative of CKD that is moisture conditioned and compacted. This approach was used by the State of Michigan for the Lafarge Alpena Plant (see Appendix A). Lafarge recommends that the final CKD rules allow for the leaching of a solidified block of CKD, representative of the CKD as managed.
335	ckdp00020	Several sections of the rules allow the Regional Administrator to approve of alternative designs or other items. However, the time frames for reviewing these demonstrations are not stated. This does not allow cement plants to adequately plan for compliance□□ Lafarge recommends that the administrative procedures be clearly stated in the rules, with appropriate time frames, including time frames for reviewing, and responding to, those demonstrations made to the Regional Administrator.

Comment Id	Document Number	Comment
411	ckdp00025	Membrane Liner Requirement (§ 259.30) The geological properties of our present quarry (the bedrock formations under the CKD landfill site consist of the Kimmswick, Decorah, Plattin, Joachim and St. Peter formations.) make it an ideal site for a CKD landfill, considering the low hydraulic conductivity of the limestone, the isolation from groundwater and the absence of Karst structure. Holnam believes that those same geological properties negate the need of a membrane liner, and that by mandating a liner for all sites EPA would be making invalid assumptions about geological properties which should be evaluated on a case by case basis.
412	ckdp00025	Leachate Collection System (§ 259.30) Holnam believes that an additional leachate collection system is not warranted at the Clarksville facility, because there will be no leachate if the CKD pile is managed effectively. Rain water exposed to the current landfill surface area will be collected in the existing quarry rain water sump, then pumped to settling ponds and an NPDES permitted outfall which has monitoring requirements in place.
573	ckdp00034	In addition, the ETC opposes the alternate CKDLF design allowed under proposed 259.30(h) for CKD containing high levels of metals above a threshold discussed below, as well as for CKD derived from hazardous waste burning cement kilns. Such CKD contains high levels of metals and must be managed to the full protection provided by the design standards in 259.30(c) through (g).
574	ckdp00034	The variance provisions to the CKDLF design standards in Part 259 must consider the volume and concentrations of metals and dioxin in the CKD, with no variance allowed for CKD that exceeds health-based thresholds. The thresholds must consider the leachability of CKD at multiple pH levels and must be based on application of both the SPLP and TCLP tests. This is justified based on information in F-99-CKDP-SO59 (Evaluation of Metals Migration from CKD Piles using the EPA CMTP Groundwater Model) and F-99-CKDP-SO260 (Evaluation of Metals Transport Under Highly Alkaline Conditions). These documents show that certain metals in the CKD, such as lead, are highly mobile at alkaline pHs, which is not predicted by the TCLP test alone. Given that the pH of CKD water/mixtures is above 10 (p. 45644) and that pH levels greater than 12.5 have been measured in surface waters that contact CKD piles (p. 45636), it is very important that EPA require testing of metals in multiple leaching media before allowing variances from the Part 259 design standards. Additional justification is the fact that 71% of the existing CKD disposal units are located in Karst terrain.
719	ckdp00048	TNRCC supports the proposal's use of Federal Maximum Contaminant Levels (MCLs), when available, to define limits for metals in groundwater at the point of compliance. A similar approach is taken in establishing groundwater remediation requirements under the Texas Risk Reduction Program.
758	ckdp00048	On Pg 45683, col 1, TNRCC recommends that in paragraph (c) (1) the reference to paragraph (d) be changed to paragraph (f), which is the paragraph that relates to the relevant point of compliance. Also, the MCLs given in Table 1 for some metals are different than the MCLs given in Table 1 for 40 CFR 258.40. TNRCC recommends that EPA reconcile the differences.
759	ckdp00048	Sec. 259.30. Paragraph (c) indicates that CKD must be managed in CKDLF units and lateral expansions under strict requirements. Again (See comment 12 also), it appears that the rule would promote vertical expansion of CKDLFs so the facility would not to have to comply with the CKDLF design performance standards, resulting in mountains of CKD for which adequate cover probably cannot be provided. TNRCC recommends that EPA place specific limitations on vertical expansions.
989	ckdp00060	In comments submitted separately by APCA, SLC and Holnam's cement plants, SLC describes its current and planned management practices. Of those cement plants that dispose of CKD: All plants either monitor groundwater in proximity to active CKD disposal areas, or are obtaining permits for new disposal areas that include monitoring or demonstrations of no potential for migration.
16	ckdp00009	40 CFR 259.30(c) Why is "lateral expansion" mentioned specifically in this section? It is included in "expansion" in the definition of "CKDLF unit". The term "expansion" includes both "lateral and vertical". Indiana would not want to argue that this section does not apply to vertical expansions.

Comment Id	Document Number	Comment
18	ckdp00009	40 CFR 259.30(d) Indiana agrees that CKD waste should be placed on a composite liner system consisting of an FML, clay, and a leachate collection system. If the waste is placed on the composite liner, the leakage rate will approach zero. The lack of water directly flowing beneath a facility will minimize the downward migration of clay into voids. This minimization of flow decreases the possible occurrence of soil subsidence structures forming under a facility.
72	ckdp00015	[L]iners as well as leachate collection and recovery systems (LCRS) would not be technically prudent for the majority of CKD disposal areas, and municipal solid waste technology for both liners and LCRS' should not be applied to CKD disposal areas. [B]ecause of the cementitious and hydrophilic properties of CKD, moisture migration through CKD is minimal. In addition, a LCRS for a CKD disposal area would not be effective because it would tend to clog or be cemented off due to the characteristics of CKD. Further, studies performed by TXI on one of our facilities showed that moisture content in a CKD landfill is generally low (1 to 15 percent) in CKD units up to 100 feet thick. Moisture values do not show a pattern indicative of migration through the piles.
74	ckdp00015	How does EPA propose to regulate the actual leachate that is generated from these landfills? Is there any type of exemption which would allow re-use or re-application of this water onto the CKD landfill, which, in some cases, may exhibit the hazardous characteristic for corrosivity (pH greater than 12.5)? No discussion has been presented as to how EPA proposes to manage the leachate removed from the CKD landfills and EPA should clarify requirements for this component of CKD management.
134	ckdp00016	The minimum liner thickness of 30 mils presents several problems. First, welding of a liner of this thickness presents many problems. Slight variance in temperature of the welding equipment can cause a poor weld or a hole in the liner. Second, liners of this thickness are very easy to fold and will be very difficult to meet the quality assurance guidelines used in many States. Good liner installation requires that no folds or creases exist when the protective cover is placed. This standard would be hard to meet with the very flexible 30-mil liner standard proposed in the rule. Third, the subsurface preparation for installation of a 30- mil liner will have to be more rigorous than for thicker liners. A 30-mil liner does not have the elongation coefficient as a thicker liner, therefore, any imperfections in the material below the liner will be more likely to cause a failure. A 60-mil liner is the industry standard for most landfill applications and should be considered here.
189	ckdp00016	Sec. 259.30 Pg 45683, col 1: Paragraph (c) indicates that CKD must be managed in CKDLF units and lateral expansions under strict requirements. It appears that the rule would promote vertical expansion of CKDLFs so the facility would not to have to comply with the CKDLF design performance standards, resulting in mountains of CKD for which adequate cover probably cannot be provided. EPA should place specific limitations on vertical expansions.
191	ckdp00016	(Pg 45683, col 1, para (c)) Must all CKDLF units be lined within 2 years or should the word "new" be added before CKDLF? If "new" is added, "lateral expansions" should be deleted since the definition of new units includes lateral expansions.
192	ckdp00016	(Para (c)(2)) Eliminate the 30 cm maximum leachate depth requirement over the liner. Kansas has one composite lined CKD landfill where CKD is slurried into the landfill. Excess water from the slurry is allowed to accumulate in the bottom of the cell to a depth greater than 1 foot. The water is pumped out on a regular basis and is reintroduced as slurry make up water. The benefit of slurry application of CKD to suppress dust outweighs the negative impacts of the temporary accumulation of high levels of leachate.

Comment Id	Document Number	Comment
262	ckdp00019	Membrane Liner Requirement (§ 259.30): EPA's composite liner requirement (as a minimum technical standard) cannot be justified based on the analysis completed in the background documents for the proposed CKD rule. As discussed earlier in our comments, EPA's analysis of karst sites was flawed. This deficiency, in turn, resulted in the selection of the geomembrane standard. In addition, EPA failed to consider options other than CKD and a membrane as a liner. A single membrane liner and soil liners such as clay or a mixture of clay and silt were not evaluated at all by EPA (see Chapter 4 of TBD on Ground Water Controls). The Agency evaluated only two types of CKD liners, a "CKD Low" and "CKD High." The sites were modeled to determine whether the selected landfill design would provide sufficient leachate containment to achieve the ground water protection standard. If the modeling results failed to achieve the required ground water protection standard, a Subtitle D design (geomembrane plus clay backup) was assumed as the default. Furthermore, only sites that were considered non-karst were evaluated. Karst sites were considered too complex hydrogeologically to model, and the default Subtitle D design (geomembrane plus clay) was assumed for these sites. EPA's modeling actually demonstrated that at 16 of the 18 "non-karst" sites considered, a liner composed of compacted CKD provided adequate ground water protection. However, a composite was chosen as the technical standard, to be presumably to be situated in karst terrain because the EPA classified so many sites. In addition to these shortcomings of EPA' s analysis, this simplistic approach does not appear to consider the differences between municipal waste and CKD. CKD leachate, when exposed to compacted clay, has been shown to have little or no effect on the permeability of the clay (Bhattacharja, 1998). Clay also has the ability to significantly attenuate metals (Peters, 1999). Relatively small amounts of clay soil can control the high pH of the leachate, which may be a concern in the environment because of secondary leaching of metals. In considering a reasonable liner standard, EPA should more strongly consider the leaching characteristics of moisture conditioned CKD, and not focus on isolated past practices that were less than adequate. Constituents in moisture conditioned CKD have been shown to be considerably less leachable than those in loose, uncompacted CKD (Martin et al., 1998). Moisture conditioned and compacted CKD also exhibits a low permeability and the ability to absorb water. Because the Agency's evaluation of liner options is incomplete, their selection of a composite as the technical standard cannot be supported. A membrane liner is not justified as a baseline standard, other than for sites that exhibit karst-like ground water flow characteristics (conduit flow, etc.).The language in the rule should be modified to eliminate the geomembrane as the technical standard, and rely on a performance standard demonstration to determine the appropriate liner design. An approved methodology for determining the appropriate level of protection would be required.
263	ckdp00019	EPA's modeling in the background documents (HELP model plus MULTIMED) is one potential option for a demonstration. The geomembrane liner standard should be considered as a default option if an applicant chooses not to consider site-specific criteria in the design. The rule language should also be amended to provide variances in cases where background ground water concentrations exceed the values in Table 1. (§259.30, 64 Fed. Reg. 45683)
264	ckdp00019	Leachate Collection System (§ 259.30): While we support the concept of leachate management, the requirement for a "leachate collection system" is too prescriptive. Some parts of the country may not generate leachate because evapotranspiration rates exceed precipitation rates. In□□ these cases, a requirement for documenting less than one foot of head may be superfluous, and using a term such as "leachate collection" system would be inappropriate. However, in cases where leachate is generated it would be appropriate to demonstrate that leachate heads are being controlled. The language in the rule should be changed to "leachate management" from "leachate collection," and provide for an evaluation to determine whether a leachate collection system is warranted (similar Part 258). Based on the evaluation, a leachate collection system may or may not be employed as a performance-based standard. The rule language should also clearly allow for alternative leachate controls.

Comment Id	Document Number	Comment
266	ckdp00019	Support of CKD as Liner and Cover Material (Preamble at 64 FR 45649) EPA has requested comment on the use of CKD as a liner or cover material for CKD landfills. CKD, when appropriately moisture conditioned and compacted, can be an effective hydraulic barrier and should be allowed to be used as a liner or cover material. There is a large body of data, including the data summarized in Section 6 of the EPA's Draft TBD on Ground Water Controls (June 1998) to suggest that hydraulic conductivities of at least 10-5 cm/sec can be routinely achieved in the field with compacted CKD. This is equivalent to the minimum standard that EPA is proposing for caps on existing CKD landfills. In many cases, much lower hydraulic conductivities are possible as the TBD on Ground Water Controls indicates. Field experience suggests that when CKD is placed in a conditioned and compacted state over existing liners, leachate volumes are reduced considerably, if not entirely. This is well documented at several cement plants. EPA's incorrect classification of many sites as karst precluded many sites from being considered for a CKD liner, because these "karst" sites were assigned the default geomembrane liner without the opportunity for technical analysis. For 16 of the 18 sites that EPA did consider as non-karst (see Table 4-4 of the TBD on Ground Water Controls), the CKD liner design achieved the ground water protection standard. If a more realistic number of sites were considered non-karst, it is reasonable to assume that a far greater percentage of sites also would have achieved the ground water performance standard. This in turn supports the use of CKD liners and covers as a more accepted practice. At a minimum, a standard for an " equivalent" thickness of 6 0 CKD compared to a conventional soil liner (based on hydraulic equivalency) should be allowed.
267	ckdp00019	Explicit language allowing the use of compacted CKD as liner material should be included. It may be appropriate to require some compaction when CKD is specifically intended for use as a liner.
269	ckdp00019	Ambiquitv/Discrepancies between Preamble and Rule a. Standards for Existing Units: According to the preamble to the proposed rule, EPA clearly intends that different requirements should apply to existing and new CKD landfill units. In fact, the preamble states that the:. . .proposed performance and technology-based standards would apply to new units, and any expansion of an existing CKD landfill unit, defined as any lateral□□ expansion of the waste boundary of an existing landfill unit. Any lateral expansion would be considered a new unit and must meet the requirements applicable to new units. In contrast, any vertical expansion would be considered part of the existing unit and subject only to those requirements applicable to existing units. 64 Fed. Reg. 45644, co/. 3 [Emphasis added] With the exception of the ground water monitoring and corrective action standards in Subpart E, however, the proposed rule does not clearly identify which "performance and technology-based standards" apply only to new units. In particular, the proposed rule is silent as to whether the Agency intends te location restrictions in Subpart B to apply to exisiting CKD landfill units. On the contrary, the proposed rule appears, for example, to make it illegal to manage CKD in any CKD landfill unit that is not located above the upper limit of the water table. The applicability of all of the proposed standards that EPA intends to be applicable to existing CKD landfill units should be clearly stated in the rule itself. Furthermore, the proposed rule does not adequately identify the "requirements" applicable to existing units. In fact, the only statement in the rule that even hints at the requirements EPA intends to apply to existing CKD landfill units is found in the definition of existing CKD landfill unit, which states: Waste placement [in existing CKD landfill units] must be consistent with past operating practices modified to ensure good management. 64 Fed. Reg. 45679, co/. 3. The inclusion of this statement in the definition of an existing CKD landfill unit is inadequate and inappropriate. This statement should be included in a separate section□□ of the proposed regulation to give it emphasis and to provide clarity. APCA Recommended Change: To make the proposed regulation accomplish the intent expressed by EPA in the preamble, APCA recommends that a new section be added to Subpart A, General Provisions. This section would clarify what standards and requirements apply to existing CKD landfill units. The suggested language is provided as follows: §259.3 Applicability to existing CKDLF units: The location and management standards contained in Subpart B, C and D of this part do not apply to existing CKDLF units, as that term is defined in these regulations, including any vertical expansion. CKD waste placement in such existing CKDLF units must be consistent with past operating practices or operating practices modified to ensure good management.

Comment Id	Document Number	Comment
323	ckdp00020	In lieu of ensuring that the concentration values listed in Table 1 of 5259.30 are not exceeded in the uppermost aquifer, a composite liner system for CKDLF units is required. The regulation requires a composite liner consisting of a flexible membrane liner (FML) and a low-hydraulic conductivity soil layer. Lafarge asserts that a composite liner requirement is excessive and unwarranted for moisture-conditioned and compacted CKD. Depending on site-specific conditions, a number of liner alternatives may be appropriate. This approach is consistent with many states' liner requirements for high-volume, low-toxicity wastes.□□ □□ For example, in Michigan, a landfill for the disposal of wastes that meet the criteria for low-hazard industrial solid waste has several options for liner design. These options include a natural soil liner (provided specific criteria are met) or several engineered liner systems. The engineered liner system options include the following:□□ - A 3-foot-thick compacted soil liner with a maximum hydraulic conductivity of 1 x 1O-7 cm/s□□ - A composite liner□□ - An FML installed over native soil with a maximum hydraulic conductivity of 1 x 10-7 cm/s□□ - Other liner materials, modified soil, or technologically advanced liner systems, provided supporting data are available to demonstrate its adequacy.□□ □□ These options allow for consideration of site-specific conditions and are based on the leaching characteristics of the waste. Lafarge recommends that the rules allow for various types of liner systems.
324	ckdp00020	The appropriate liner designs should be dictated by the physical properties of the CKD. The proposed rules require that new CKDLF units and lateral expansions be designed to ensure that Table 1 concentration values are not exceeded at the point of compliance. The concentration at a point of compliance will be directly related to two CKD parameters: the leachate concentration, and the hydraulic conductivity of the CKD. If the hydraulic conductivity of the CKD is sufficiently low, the mass flux of constituents leached from the CKD into the groundwater will be extremely low, and will be slowly titrated into the groundwater system. In fact, it has been Lafarge's experience that conditioned and compacted CKD does not release any leachate once the initial lift of waste has been placed over the liner. In practical terms, the concentrations of constituents in the groundwater at the point of compliance will be extremely low, with a reasonable'assurance that the Table 1 values are not exceeded at the point of compliance in the groundwater, if the hydraulic conductivity of the CKD is 10-6 cm/s or less, and the concentrations from a leaching test of CKD are less than 10 times the Table 1 values. □□ □□ Lafarge recommends that the composite liner requirement be deleted and replaced with language that allows for various types of liner systems. The requirements for determining appropriate liner designs should be reflective of the physical properties and the low rate of leachate release of CKD.
325	ckdp00020	Leachate Collection System: Section 259.30 requires that a leachate collection system (LCS) be designed and constructed to maintain less than a 30-cm depth of leachate over the liner. Conditioned and compacted CKD has a high affinity for water and a very low hydraulic conductivity (typically ranging between 10-6 and 10-8 cm/s). As a result, CKD does not generate leachate as other types of industrial or municipal wastes do. The only "leachate" that must be managed in a CKDLF unit is precipitation runoff that contacts the CKD. In a properly operated CKDLF, this contact water is absorbed by the CKD since the typical amount of water added to moisture-conditioned CKD does not equal the entire amount of water that can be absorbed by the CKD. Lafarge appreciates and concurs with the fact that the rule allows for a variety of leachate collection system designs.

Comment Id	Document Number	Comment
326	ckdp00020	CKD as a Landfill Cap or Liner: The June 1998 Draft Technical Background Document on Ground Water Controls at CKD Landfills reports that CKD properties, such as soil texture, particle size distribution, density, and porosity have been studied to determine if CKD is an acceptable cap or liner material. The properties of CKD appeared to support its use as a cap or cover. The only inconsistency was that CKD could be sufficiently compacted in laboratory tests to reach a low hydraulic conductivity (less than 1 x 10-7 cm/s), but maintaining the compaction in the field was difficult, which limited CKD's utility as a cap or liner.□□ □□ Several facilities have proposed CKD as capping material and have been approved despite the discrepancy between laboratory and field compaction results. Three sites, Lehigh Cementon, Lehigh Alsen Site, and Independent Cement Corporation, have experienced problems□□ maintaining the laboratory compaction results. Their respective average hydraulic conductivities are 3.2 x 10-6 cm/s, 5 x 10-5 cm/s, and 2.1 x 10-5 cm/s; and the acceptable conductivity for a cover is less than 1 x 10-5 cm/s. The Alpena, Michigan, facility had similar experience with laboratory results and full-scale field results (see Appendix B). Another site in Washington, Lehigh Portland Cement Company, proposed to use CKD as a cap, but the proposal was rejected because the CKD would be placed on steep slopes, which is problematic for maintaining compaction.□□ □□ Seven CKD samples were taken from Lafarge's Ft. Worth Landfill, and Flexible Wall Permeability Tests were performed on them. The permeability results ranged from 1.28 x 10-8 to 7.94 x 10-8, with an average of 4.43 x 10-8cm/s.□□ □□ Although CKD is an acceptable cover and liner material in terms of strength, stability, and settlement studies, the primary concern is if it can maintain compaction and low hydraulic conductivities in the field. CKD can be used successfully as a cap or liner, and Lafarge concurs with the flexibility in the proposed rules.
390	ckdp00024	Under the proposal, most "CKDLF' requirements for which there is a choice are still powerfully driven towards "default" technical standards that do not require an open-ended demonstration and "Regional Administrator" or state approval. If the state does not provide a Subtitle D approval process, technical standards would automatically apply. But even if the state does so, the burdens and planning uncertainties of showing that an alternative meets what appear to be non-comparable "no risk" criteria will hit smaller cement companies particularly hard (if they do not prevent such efforts as a practical matter). Whether or not this proposal goes forward, there seems no reason why fully-self-implementing performance standards (with the genuinely "flexible" "no further action" and other criteria noted above) should not be the norm. For example, a cement company whose CKD pile overlies an aquifer that is regularly monitored because it supplies municipal drinking water, should not have to install groundwater monitoring generically required for MSW landfills. The NSPS program was self-implementing for 20 years under a mainstay provision of the Clean Air Act. Under such an approach, the incentives for facility operators to avoid potential RCRA C complications, or state solid waste entanglements, should generally encourage overcompliance.
448	ckdp00027	The proposed liner system requires the use of a flexible membrane liner (no less than 30 mil) placed on a minimum 2 foot layer of compacted soil with a hydraulic conductivity of less than 1 x 10-7 cm/sec. This prescriptive design standard does not account for the physical properties of CKD or the environmental conditions (e.g. arid areas) where CKDLF units may be constructed. Studies sponsored by the Portland Cement Association (PCA) show that newly placed CKD can be compacted to a relatively low permeability of 1 x 10-6 cm/sec. Further, test results conducted at a CKD landfill in Fort Worth, Texas indicate that CKD placed in 1986, without compaction, has a permeability in the range of 5 x l0-8 cm/sec. This information indicates that moisture conditioned and properly placed CKD will be very impermeable. This impermeability establishes conditions in which very little leachate can be generated. A performance issue at Subpart D landfills is related to the slope stability of the liner system. The use of a flexible membrane liner will decrease the slope stability of CKD landfills and increase the potential for CKD release to the environment. This potential is highest in seismic areas. The proposed rule does not consider that natural soil or amended soil liners may be not only preferable, but also offer better performance.

Comment Id	Document Number	Comment
514	ckdp00033	The St. Lawrence Cement plant supports the use of compacted CKD as a liner and/or cover material. St. Lawrence Cement performed laboratory testing to determine moisture-density relationships and hydraulic conductivity of its CKD when moisture-conditioned and compacted. The results of this testing indicate that using the proper compaction methods and under optimal moisture contents, the CKD is capable of achieving hydraulic conductivities of 1 x 10-7 cm/sec or less which is equivalent to compacted clay. The moisture-conditioned and compacted CKD is also less leachable compared to loose, uncompacted CKD, as has been demonstrated in the literature (Martin et al., 1998).
614	ckdp00038	A single membrane liner and soil liners such as clay or a mixture of clay and silt were not evaluated at all by the EPA. The EPA's modeling actually showed that at 16 out the 18 "non-karst" sites considered, a CKD liner provided adequate ground-water protection. EPA's approach does not appear to consider the differences between municipal waste and CKD. CKD leachate, when exposed to compacted clay, has been shown to have little or no effect on the permeability of the clay (Bhattacharja, 1998). One of Lone Star's monofills is located on a naturally occurring, deposit of low permeability clay. The clay at a depth of six inches below the CKD/clay interface showed no presence of CKD constituents nor a breakdown of the clay matrix. There are no CKD constituents in the underlying groundwater and the site does not generate leachate. In considering a reasonable liner standard, the EPA should strongly consider the leaching characteristics of moisture conditioned CKD. Moisture conditioned and compacted CKD also exhibits a low permeability and the ability to absorb water.
615	ckdp00038	While we support the concept of leachate management, the requirement for a "leachate collection system" is too prescriptive. Some parts of the country may not generate leachate because evapotranspiration rates exceed precipitation rates.
619	ckdp00038	§259.30: Recommended change: The language in the rule should be modified to eliminate the geomembrane as the technical standard, and rely on a performance standard demonstration to determine the appropriate liner design.
620	ckdp00038	Recommended change: The rule language should be changed to "leachate management" from "leachate collection", and provide for an evaluation to determine whether a leachate collection system is necessary (similar to what was done for Subtitle D). Based on that test, a leachate collection system may or may not be considered as a performance-based standard. The rule language should also clearly allow for alternative leachate controls.
621	ckdp00038	Recommended change: Explicit language allowing the use of compacted CKD, as liner material should be included.
626	ckdp00038	CKD, when appropriately moisture conditioned and compacted, can be an effective hydraulic barrier and should be allowed at CKD landfills. There is a large body of data, to suggest that hydraulic conductivities of at least 10 - 5 cm/sec can be routinely achieved in the field.
634	ckdp00039	Most of the CKD sites studied in preparing this rule were in karst terrain. The Design Criteria section [Section 259.30] begins with two paragraphs that apply only in "carbonate terrain." It looks like their main concern is to provide good lining for CKD Units in karst terrain. However, from paragraph (c) on, the wording is mostly lifted from the federal MSW regulations' design section [40CFR258.40], and there is no further mention of karst terrain. Non-composite liners have worked well for CKD Units in dry areas in California, a state lacking karst terrain. Absent a demonstrated need for composite liners at non-karst CKD sites, the use of composite liners as a prescriptive standard appears very heavy-handed. We suggest that the USEPA limit the prescriptive standard of paragraph 259.30(c) to CKD Units in karst terrain.

Comment Id	Document Number	Comment
647	ckdp00040	CKD is Effective as Liner and Cover (Proposed Rule 40 CFR § 259.16 and 259.30). Holnam uses CKD very effectively as a liner and a cap at the Ada facility. This specification is written into their permit. The CKD hardens and creates an effective barrier. All of the ground water testing done on Ada indicates that no water is percolating through the pile. No impacts to surface water or ground water have been identified at Ada. Holnam completed nine ground-water monitoring wells and twenty-seven soil borings within, and adjacent to, the CKD landfill to assess the site hydrogeology. Five monitoring wells were located around the perimeter of the landfill and four additional wells were placed on Holnam's property south of the landfill. All of the borings encountered limestone throughout the entire depth of the boring, and limestone was encountered beneath the CKD material. Eight rounds of ground-water monitoring have been conducted at the facility between June 1996 and June 1999. The results indicate that the landfill does not impact ground-water quality. The upgradient wells are generally of poorer quality than the downgradient wells due to the natural lithology of the region.
648	ckdp00040	CKD samples were collected for physical testing analysis, including hydraulic conductivity. Undisturbed samples could not be collected in the field with Shelby tube samplers due to the competency and hardness of the CKD. Therefore, bulk samples were collected from selected borings and from freshly placed CKD for evaluation. CKD samples were prepared in the manner described to best simulate placement conditions for laboratory hydraulic conductivity tests. The results ranged from 2.8 x 10-5 to 4.4 x l0-8 cm/sec, which is equivalent to hydraulic conductivities exhibited by liner materials. These data are consistent with the lack of ground water impact at the site. Based on this information, the proposed technical standard for the liner design and leachate collection component of the ground-water protection standard is not necessary to adequately protect ground water, as demonstrated by the ground-water data collected from the Ada landfill. The data further demonstrate that when properly managed, moisture-conditioning and modest compaction, the CKD acts as a hydraulic barrier and alleviates the need for an enhanced liner. The CKD hydraulic conductivity results (10-5 to l0-8 cm/sec) are comparable to those presented in the Ground Water TBD and other published literature values (PCA, 1992). Furthermore, these are likely conservative, that is, more permeable, values than actual field values, given the fact that the field samples were too hard to collect a sample. This demonstrates that the methods of CKD placement at the site are capable of achieving hydraulic conductivities typical of some natural liner and cover materials. Based on Holnam's experience, we suggest eliminating a prescribed cap and liner technical standard altogether for CKD landfills and focusing on proper siting and management of the CKD landfill.
861	ckdp00054	2.5 Comments on Ground-Water Protection Standard□□ □□ The ground-water quality results from the Trident plant demonstrate that land disposal of CKD does not present a significant risk to ground-water. The EPA even acknowledges that CKD poses low to negligible risk via ingestion of drinking water (Preamble at 45636 col. 1). Based on this information, the liner design criteria is too stringent and should be eliminated in favor of a site-specific performance-based approach. We favor an approach that considers climatic conditions as an initial evaluation criterion, plus the leaching characteristics of the CKD. The Trident plant is located in a semi-arid climate with less than 12 inches of precipitation per year, and evapotranspiration rates exceed precipitation rates. These conditions, in conjunction with the results of the 1998 site investigation, indicate that the Trident plant landfill will not generate leachate if properly managed. Integrating climatic factors into the landfill design is similar to the approach taken in Subtitle D.□□ □□ Furthermore, the leaching characteristics of the CKD should be considered before determining the landfill design. Numerous studies have been completed that document the quality of CKD leachate (PCA, 1992). CKD leachate is generally characterized by a high pH and total dissolved solids concentration, particularly potassium, which is not a constituent of health-based concern. CKD in general and the Trident plant specifically exhibits low concentrations of heavy metals. The pH and metals impacts, if present at all, are largely attenuated by the underlying soil and ground water (Peters, 1999). Thus secondary leaching of metals in the surrounding media is not an issue of concern. In□□ most cases even a modest thickness of soil is sufficient to address potential leaching concerns from CKD. The EPA has presented no compelling evidence to support the geomembrane liner design.
862	ckdp00054	The Trident plant would support the use of CKD as a liner and cover material. We have performed laboratory compaction tests to evaluate the moisture density relationships in the CKD, and to help determine the optimal water content at which the CKD should be moisture-conditioned. The results are summarized in Appendix A. These results indicate that CKD has the potential to be compacted to high densities, appropriate for use as a liner material.

Comment Id	Document Number	Comment
882	ckdp00055	2.5 Comments on Ground-Water Protection Standard□□ □□ The ground-water quality results from the Portland plant demonstrate that land disposal of CKD does not present a significant risk to ground-water. The EPA even acknowledges that CKD poses low to negligible risk via ingestion of drinking water (Preamble at 45636 col. 1). This information, in conjunction with information from the other Holnam plants supports our position that the potential listing of CKD as a□□ hazardous waste is not warranted. As such, the liner design criteria (geomembrane/clay composite liner with leachate collection) is too stringent and should be eliminated in favor of a site-specific performance-based approach. We favor an approach where the design considers climatic conditions as an initial evaluation criterion, plus the leaching characteristics of the CKD. The Portland plant is located in a semi-arid climate with approximately 13 inches of precipitation per year, and 'evapotranspiration rates exceed precipitation rates. These conditions indicate that the Portland plant landfill will not generate leachate if properly managed. This is supported by the HELP modeling□□ performed as part of the hydrogeologic investigation (see Section 2.3). Integrating climatic factors into the landfill design is similar to the approach taken in Subtitle D.□□ □□ Furthermore, the leaching characteristics of the CKD should be considered before determining the landfill design. Numerous studies have been completed that document the quality of CKD leachate (PCA, 1992). CKD leachate is generally characterized by a high pH and total dissolved solids concentration, particularly potassium, which is not a constituent of health-based concern. CKD generally exhibits low concentrations of heavy metals. The leaching test results from the Portland plant CKD are consistent with these observations. The pH and metals impacts, if present at all, are largely attenuated by the underlying liner materials and ground water (Peters, 1999). Thus secondary leaching of metals in the surrounding media is not an issue of concern, because as the pH is neutralized, the solubility of many metal species of concern (for example lead and cadmium) decreases. These trends are also supported by the data from the wells monitored at the Portland plant landfill (see Appendix A). The EPA has presented no compelling evidence to support the geomembrane liner design.
897	ckdp00056	The requirement for a geomembrane and clay composite liner is too stringent and unwarranted based on our site-specific data. The low hydraulic conductivity and extensive thickness of the chalk formation beneath the site is at least equivalent to the membrane clay liner, thus rendering the latter redundant. While we understand that a facility has the option of electing to pursue an alternative landfill design, the proposed technical standard is not justified given the low risk to ground water (Preamble at 45635-45636). We propose that the prescriptive membrane liner standard be eliminated and replaced by a completely performance-based standard. The landfill design criteria should be based upon consideration of the hydrogeologic conditions at the site and be capable of meeting the ground water quality standards at the compliance point.□□ □□ In addition, the MDEQ has waived the requirement for ground-water monitoring at the landfill site, due to the thickness and low hydraulic conductivity demonstrated by the geologic unit in which the landfill will be constructed. This is further evidence that the EPA's assumptions regarding the relative environmental risk at CKD landfill sites is clearly flawed and should be reevaluated.
911	ckdp00057	The liner design criteria (geomembrane/clay composite liner with leachate collection) is too stringent and should be eliminated in favor of a site-specific performance-based approach. We favor an approach where the design considers climatic conditions as an initial evaluation criterion, plus the leaching characteristics of the CKD. The Fort Collins plant is located in a semi-arid climate with approximately 13 inches of precipitation per year, and evapotranspiration rates exceed precipitation rates. These conditions indicate that the Fort Collins plant landfill will not generate leachate if properly managed. Integrating climatic factors into the landfill design is similar to the approach taken in Subtitle D. Furthermore, the leaching characteristics of the CKD should be considered before determining the landfill design. Numerous studies have been completed that document the quality of CKD leachate (PCA, 1992). CKD leachate is generally characterized by a high pH and total dissolved solids concentration, particularly potassium, which is not a constituent of health-based concern. CKD generally exhibits low concentrations of heavy metals. The leaching test results from the Fort Collins plant CKD are consistent with these observations, and further supports Holnam's position that CKD poses little or no risk to ground water. Therefore the EPA has no compelling evidence to support the geomembrane liner design.

Comment Id	Document Number	Comment
934	ckdp00058	Comments on Ground-Water Protection Standard - The Holnam-Dundee plant supports the use of compacted CKD as a liner and/or cover material. A decisions was made to construct a landfill with a geomembrane liner, the Dundee plant did investigate the physical properties of CKD to determine whether compacted CKD could be used as a liner substitute. Laboratory testing was performed to determine moisture-density relationships and hydraulic conductivity of CKD when moisture-conditioned and compacted. The results of this testing are presented in Appendix A, and indicate that using the proper compaction methods and under optimal moisture contents, the CKD is capable of achieving hydraulic conductivities of 1 x 10 -7 cm/sec or less, which is equivalent to compacted clay. The moisture-conditioned and compacted CKD is also less leachable compared to loose, uncompacted CKD, as has been demonstrated in the literature (Wenzel et al., 1998).
19	ckdp00009	40 CFR 259.41 Indiana agrees that in many cases that a CKD facility located in karst terrain will need to monitor their activities using non-standard monitoring points and increased sampling frequency based on flow characteristics. In such cases Indiana agrees that springs and cave streams may be the best available choice to monitor ground water in karst terrain. Many references pertaining to karst areas express the unpredictability of flow in karst terrains, and the need for dye trace confirmation of monitoring locations. Therefore, Indiana agrees that an extensive study for monitoring be performed on facilities located in karst terrains, especially the proposal to require a dye trace study be performed. The extensive study ensures that proper monitoring points are selected for groundwater monitoring activities. In addition to the dye trace study, Indiana believes that the EPA should include other studies such as geophysical studies and direct boring programs to help define the karst areas. Proper geophysical work and confirmatory boring program will: 1) identify any potential catastrophic cover collapse potential, 2) map the soil bedrock interface to identify subsoil infiltration structures (sinkholes and other detritus covered karst features), and 3) may aid in locating up gradient monitoring locations.□□ □□ 40 CFR 259.41 (a) As a note, springs are not "installed". By definition, they are natural occurrences. Indiana suggests that the initial paragraph in (a) be reworded.
21	ckdp00009	40 CFR 259.44 Indiana believes that in addition to the proposed Appendix I constituents identified in 259.44 for a detection monitoring program, the constituents listed below should be required for detection monitoring and that not all the constituents be subjected to a statistical evaluation. Presently, Indiana's experience with ground-water monitoring at CKD facilities has included the constituents listed below and those proposed in Appendix I and has been those facilities located in karst terrain; however, Indiana believes the listed constituents including the proposed Appendix I constituents for a detection monitoring program are appropriate for all hydrogeologic settings. Alkalinity Bicarbonate Carbonate Calcium□ Magnesium Manganese□ Selenium□ Total Dissolved (TDS)□ Total Solids (TS) Field Temperature Field Turbidity□ Field Dissolved Oxygen□ Field Oxidation Reduction Potential (Eh)
22	ckdp00009	(40 CFR 259.44) In addition, Indiana recommends that pH be omitted from a statistical evaluation because all of the components of the buffering system in ground water are included in the list above. Monitoring the carbonate buffer will enable a facility to determine a detrimental affect of the release of a high pH leachate into the aquifer before the buffering capacity of the aquifer is exceeded and the pH increases to match that of the waste leachate. Field pH should be concurrently compared with any alterations in carbonate/bicarbonate in the aquifer before moving to assessment monitoring, and if the pH exceeds ten (10) standard units or falls below five (5) standard units, the an assessment monitoring program should be established.

Comment Id	Document Number	Comment
23	ckdp00009	Using the above detection monitoring list, Indiana suggests that a single statistical exceedances without any other comparison method should not trigger a facility into an assessment monitoring program. Since other constituents listed above are indicative of a whole buffering system in the ground water, these other associated constituents should show significant change as well before progressing to an assessment monitoring program. This significant change is evaluated through a continuous geochemistry study performed in association with the statistical evaluation. For example, bicarbonate if exceeding its prediction limit individually would not institute an assessment program until a shift was also seen concurrently by another constituent such as calcium, sulfate, potassium, sodium, or chloride. This concurrent shift would be compared to a piper diagram also, as a confirmatory tool.
24	ckdp00009	40 CFR 259.44(a)(2) The proposed rule allows for an alternative list for detection; monitoring to be established substituting inorganic constituents in lieu of some or all heavy metals. This is confusing since the proposed Appendix I list does not contain any heavy metals unless the EPA considers Potassium and Sodium as heavy metals; generally these two constituents are thought of as alkali metals and not heavy metals.
25	ckdp00009	40 CFR 259.44(d) Through experience, Indiana has found that the field parameters listed above in addition to pH and specific conductance of Appendix I, should not be subjected to a statistical evaluation as proposed, especially since one statistical exceedances will trigger a facility into an assessment monitoring program. There is too much spatial variability associated with all the above field parameters, including pH and specific conductance. Such spatial variability adds to the high occurrence of false positives, which in turns creates unnecessary additional site investigations. If "intralocational" evaluations are performed, Indiana realizes that spatial variability is not as great of an issue, but seasonality may be.
30	ckdp00010	Unfiltered groundwater samples are collected to analyze for total concentrations which can include low solubility parameters adsorbed on very small particles known as colloids. Colloids typically range in size from less than 0.1 micron (pm) to 10 pm in diameter and may migrate during natural groundwater flow. Colloids can be removed by the common field filter size of 0.45 pm which is sometimes used to determine concentrations of dissolved constituents in groundwater. Where groundwater is sampled in fine-grained formations and groundwater sample turbidity (i.e. formation solids) is unavoidable, variations in turbidity levels between upgradient and downgradient monitoring wells can lead to false positive statistically significant increases (SSI's). Analyses of dissolved concentrations in groundwater at sites where variations in groundwater sample turbidity are unavoidable can assist in addressing the false positive SSI's. In Missouri, we have conducted analyses of samples of limestone that contain high background concentrations of many inorganics. Totals analyses on samples of limestone collected in Missouri have detected chloride, sodium, and sulfate at concentrations of 19.5 mg/kg, 376 mg/kg, and 227 mg/kg, respectively. It is easy to understand that solid rock material (i.e. turbidity) collected with groundwater samples can have a significant impact on groundwater concentrations and statistical evaluations. The regulation should be amended to indicate that analyses of dissolved concentrations in groundwater are acceptable at sites where variations in groundwater sample turbidity are present. The US EPA has indicated that when sample turbidity is unavoidable, filtering of groundwater samples can be performed. The ability to accurately assess changes in groundwater concentrations over time will significantly increase by using filtered and unfiltered groundwater data. This addition to the regulation will eliminate, in part, the need to prepare multiple demonstrations if SSI's in groundwater concentrations are related to turbidity and not the waste management unit. Solid waste landfill companies that are subject to similar regulations have spent large sums of money preparing demonstrations related to unavoidable variations in groundwater turbidity which can cause SSI's. If dissolved concentrations are not added to the regulation, the same type of problem and cost impact will be realized by companies managing CKD.
32	ckdp00010	It is recommended that groundwater sampling be conducted over a longer time period to account for seasonal and temporal variability in groundwater concentrations. The collection of four samples from the same well over a very short time frame could provide an unintended and costly statistical bias to the groundwater dataset.
75	ckdp00015	EPA is proposing groundwater assessment and detection monitoring for CKDLF units. By imposing these requirements, EPA is essentially limiting disposal of CKD into areas that have groundwater. In other words, areas where groundwater cannot be monitored (i.e., due to depth and/or low annual rainfall) will not be considered by EPA as suitable for siting of CKDLF units. Limiting disposal from areas without ground water, as proposed in the rule, may in fact cause wastes to be moved from areas of low groundwater migration potential to areas where a potential for groundwater migration exists.

Comment Id	Document Number	Comment
76	ckdp00015	A specified number of down gradient monitoring wells is unreasonable and does not allow flexibility for site-specific geological and hydrogeological conditions that can be present. Such conditions (hydrogeology, surface water, etc.) should be considered in determining an effective number of wells to monitor groundwater quality, because wells can represent significant costs both for installation and monitoring, In addition, multiple wells allow for more spatial variability of geochemistry data that can complicate the comparison of down gradient versus up gradient groundwater quality using EPA criteria. Variation in natural geochemistry at each well could result in a statistically significant difference between up gradient and down gradient wells, resulting in a false positive indication of a release, as has been demonstrated at many MSW landfills.
77	ckdp00015	The approximate cost for a groundwater monitoring well installation at the TXI Oro Grande, California facility is $25,000 per well ($100,000 for four wells at one CKD landfill unit), plus monitoring costs every quarter (approximately $20,000 per year). EPA should revise the default four well requirement for groundwater monitoring in the proposed rule to allow for an alternative demonstration that will consider site specific conditions at the CKDLF unit site. This approach is consistent with the performance-based standard for the protection of ground water, outlined on page 45648 in Section IV. A., 4.
78	ckdp00015	Only CKDLF units that are active at the time the rule becomes effective (i.e., existing or new units) should be subject to the rule.
135	ckdp00016	EPA proposes, in the requirements of §259.44(a), to use pH, conductivity, total dissolved solids, potassium, chloride, sodium, and sulfate as parameters for detection monitoring. EPA states these parameters "should provide a reliable indication of inorganic releases from the CKD waste management unit to ground water." Instead of collecting and analyzing ground- water samples for parameters which "should" indicate a release of contaminants, ASTSWMO recommends facilities, during detection monitoring, be required to sample for the metal contaminants of concern (antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and thallium). By collecting and analyzing groundwater samples for metal contaminants in detection monitoring, facilities would more directly achieve the goal of detecting groundwater contamination caused by the CKD landfill.
136	ckdp00016	(Sec.259.41(a)) Allows the use of monitoring methods that do not use a comparison of upgradient to downgradient wells. Wherever the terms "background and downgradient" occur in relation to ground-water sampling or statistical analysis the ability to use other methods as allowed in §259.41(a) should be reflected.
137	ckdp00016	(Pg 45684, col. 3, para (b)) The proposed regulations should be amended to require facilities to have sampling and analysis plans approved by the Regional Administrator or State Director prior to implementation.
138	ckdp00016	(Pg 45685, col. 1, para (g)) The requirement to perform statistical analysis after each sampling event should be omitted. If the groundwater samples are analyzed for the metals in §259.45(b), there is no need for statistical analysis on the data unless laboratory results indicate levels of metals above the MCL. Add language to allow statistical analysis if a metal is detected in a sample from a downgradient well at levels greater than the MCL. The facility could be allowed to use statistical analysis to demonstrate there is no statistically significant difference between background and downgradient well data.
139	ckdp00016	(Sec. 259.43(h)(2); Pg 45685, col. 1, bottom line) The term "Type I experimental error rate" is called "Type I experiment wise error rate" in §258.53(h)(2) and "Type I experiment wise error rate" in §264.97(h)(2). Recommend standardizing the terminology.
140	ckdp00016	(Sec. 259.43(g); Pg 45684, col. 3) The phrase "hazardous constituent" at the end of the first sentence and the middle of the second sentence should be changed to "of the monitoring parameters or constituents required in the particular ground-water monitoring program that applies to the CKDLF unit" as found in §259.43(e).

Comment Id	Document Number	Comment
141	ckdp00016	(Sec. 259.44; Pg 45685, col. 3, para (a)) The proposed detection monitoring constituents are pH, conductivity, total dissolved solids, potassium, chloride, sodium, and sulfate as parameters for detection monitoring. In the preamble (page 45649, col. 3, para 2), EPA states these parameters "should provide a reliable indication of inorganic releases from the CKD waste management unit to ground water." Instead of collecting and analyzing groundwater samples for parameters which "should" indicate a release of contaminants, facilities, during detection monitoring, should be required to sample for the metal contaminants of concern (antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and thallium). By collecting and analyzing groundwater samples for metal contaminants in detection monitoring, facilities would more directly achieve the goal of detecting groundwater contamination caused by the CKD landfill.
142	ckdp00016	(Pg 45685, col. 3, para (b)) EPA should eliminate the requirement to collect and analyze four independent samples from each monitoring well during the first semi-annual sampling event. Multiple samples from the same sampling event can not be considered "independent," and do not provide enough variation to establish background conditions in the aquifer.
143	ckdp00016	(Pg 45686, col. 1, para (d)) Recommend adding the underlined phrase, for consistency with usage in the preceding paragraphs (b) and (c), to "If the person managing CKD waste. . . in Appendix I to this part, or the alternative list approved in accordance with paragraph (a)(2) of this section, at any monitoring well . . . "
144	ckdp00016	(Pg 45686, col. 1, para (d)(2), last line) Recommend revising the phrase "(c)(3) of this section" to read: "(d)(3) of this section", or "subparagraph (3) of this paragraph".
145	ckdp00016	(Pg 45686, col. 1, para (d)(3)) Paragraph (d)(3) allows for a demonstration that an SSI was not caused by the CKDLF unit or that the SSI was from an error in sampling analysis, statistical evaluation, or natural variation in ground-water quality. A report documenting the demonstration is to be placed in the operating record. This section indicates that once a facility successfully demonstrates an erroneous SSI, the facility may return to detection monitoring. It appears that the facility will make the determination that the demonstration is successful. The demonstration should only be considered successful if approved by the Regional Administrator or the approved State. In paragraph (d)(3) the next-to-last sentence in column 1 should be changed to insert the underlined phrase as follows: "A report documenting this demonstration. . . ground-water scientist and be approved by the EPA Regional Administrator or the approved State and placed in the operating record." (§259.40 (b), pg 45683, col. 3).
146	ckdp00016	(Sec. 259.44(a) and Appendix I) The monitoring constituents for detection monitoring listed in this section and Appendix I are to serve as indicator parameters for the parameters of concern which are listed in Appendix VIII of 40 CFR 261. The concentrations of the indicator parameters in Appendix I are not chemically tied to the parameters of concern. The indicator parameters show wide variability in most ground-water monitoring situations. This wide natural variation in the indicator parameters could easily mask the more important and smaller changes that would occur as a result of changes in the parameters of concern. The cost to the cement industry of using an analysis of the parameters of concern would be in the area of $300.00 per sample event. This cost is very small compared to the cost of ground-water remediation or to the health risks that could be caused by missing an increase in the concentration of one of the parameters of concern because invalid indicator parameters were used.
230	ckdp00019	Some of the most significant issues in any regulatory regime concern the questions of applicability and timing. Exactly which facilities are subject to which requirements, and when must they comply? Unfortunately, the proposal handles many of these most fundamental issues vaguely and/or inconsistently. Of greater concern, is the handling of some issues in a mannerthat is apparently illegal. We should stress that we urge EPA to issue clarifying amendments to the proposal at the earliest practicable date to fix these problems. This is because we believe the best outcome would be for the states (that have CKD disposal sites in their jurisdiction) to use the proposal as a model and adopt it so that EPA would never have to finalize the proposal as a federal rule-as EPA has indicated might be the case in the preamble.

Comment Id	Document Number	Comment
265	ckdp00019	Unfiltered Ground water Sample Requirement (§ 259.43): This requirement is contrary to most states' solid waste programs. It is adapted from Part 258 and there remains controversy as to whether it is appropriate. First, in many cases, because of naturally high turbidity in ground water samples, reproducible data may be difficult to obtain, and there is a greater likelihood of a false positive result. Second, because many states still require filtered samples for analysis, there is a lack of a historical data for comparisons. It is inappropriate, therefore, to compare filtered and□□ non-filtered ground water sample results. Finally, it may be unnecessarily timeconsuming and expensive in some ground water environments to require samples to be collected without filtering due to the slow sampling procedures required. Some states, such as Wisconsin, obtained Part 258 program approval without the requirement for unfiltered ground water samples. Therefore, the requirement is unnecessary.This requirement should be eliminated and replaced with language requiring collection of ground water samples capable of providing "representative ground water quality."
268	ckdp00019	Ground water Monitoring (§ 259.41): The proposed rule should allow for an alternate-monitoring program when a ground water flow system is well defined. For example, for disposal within or immediately adjacent to quarries, surface water monitoring through NPDES monitoring could be substituted. While the proposed rule currently recognizes some alternate monitoring points to wells, such as springs, it does not specifically allow for surface water monitoring as an alternative. Such a monitoring program would be practical when the landfill unit is located within or adjacent to a quarry where the dewatering of the quarry directs all the ground water flow to a central point or points where it will be discharged to the surface. In this case the surface water monitoring point is effectively monitoring ground water. This monitoring system is currently employed at a CKD□□ landfill site in Michigan.The rule language should be modified to specifically allow surface water monitoring as an alternative to ground water monitoring, if it can be demonstrated that all ground water at that location discharges to surface water or can otherwise be monitored, for example, as a spring discharging into a quarry. It should be noted that Michigan solid waste rules have language specific to this issue, a version of which could be adopted.
328	ckdp00020	Groundwater Monitoring: The indicator parameters that are listed for analysis during detection monitoring are reasonable for detection of potential releases of constituents to the groundwater. However, Lafarge believes that the extremely low leaching potential of conditioned and compacted CKD should be considered in setting standards for the frequency of monitoring. The extremely low permeability (typically 10-6 to 10-8 cm/s) of the conditioned and compacted CKD will limit the volume of leachate generated from the CKD. Based on numerous laboratory leaching tests (see□□ Appendix'A), leachate concentrations are likely to be extremely low. □□ □□ A pattern of groundwater concentrations from downgradient locations may become evident at a site after a period, one that is consistently comparable to background concentrations. In these situations where a pattern of low groundwater concentrations in downgradient locations is□□ observed consistently, a long period of semiannual monitoring may become redundant. After a sufficient period of time in which a consistent pattern of downgradient concentrations that are comparable to background is demonstrated, annual monitoring will be protective of human□□ health and the environment.Lafarge recommends that the proposed standards be revised to allow for a reduction in the frequency of monitoring from semiannual to annual, if, in samples from downgradient monitoring points, stable concentrations are demonstrated that are not significantly different from background statistically, after a sufficient period of monitoring.

Comment Id	Document Number	Comment
329	ckdp00020	Flexibility in the groundwater monitoring requirements should be incorporated into the rules to account for hydrogeologic conditions at a site and the leachate generation characteristics of the CKD. Lafarge has observed that no leachate is being produced at its sites that place conditioned□□ and compacted CKD in CKDLFs. The rules should allow for a reduced frequency of groundwater monitoring, and/or eventual elimination of groundwater monitoring if conditions are protective of the groundwater. For example, groundwater monitoring could be reduced and eventually eliminated if there is no leachate being produced in the landfill, after a period of monitoring that shows no exceedences of background concentrations or Table 1 values in downgradient monitoring wells. Monitoring of surface water, rather than groundwater, might be appropriate if upward hydraulic gradients characterize the site. While §259.40(b) allows for groundwater monitoring to be suspended if a demonstration is made to the EPA Regional Administrator that there is no potential for migration of hazardous constituents in the groundwater, Lafarge believes that it may be unnecessarily cumbersome and difficult to obtain a suspension of monitoring from the EPA Regional Administrator.□□ □□ Lafarge recommends that the rules be revised to specifically allow for reduced frequency or elimination of groundwater monitoring if it is demonstrated, to either the EPA Regional Administrator or another appropriate authority at the state's regulating agency, that conditions at the CKDLF are such that a reduced frequency of monitoring will be protective of the groundwater system.
330	ckdp00020	The requirement that all groundwater samples be unfiltered is unnecessary to ensure that samples that are representative of groundwater quality are collected. For naturally occurring inorganic constituents, collecting an unfiltered sample may result in substantial bias in the analytical results if fine-grained sediment is incorporated into the sample. At many sites, fine-grained aquifer sediment is common, and it can be impossible to collect samples with no turbidity. The presence of even small amounts of suspended fine sediment in a water sample can significantly bias the sample results for inorganic constituents. Problems with sampling that results in inconsistent degrees of turbidity in samples can cause highly erratic results that imply much higher concentrations of dissolved constituents in the groundwater than are actually there. What, in effect, is being measured is the total suspended solids of the samples, not the concentrations of dissolved constituents. Many state solid waste groundwater□□ monitoring programs recognize the problems associated with unfiltered inorganic groundwater samples, and therefore allow filtered groundwater samples to be collected. Some of these states, such as Wisconsin, have also obtained Subtitle D approval without requiring that water□□ samples be unfiltered.Lafarge recommends that the proposed rules be amended to remove the unfiltered sample requirement, and instead specify that samples must be collected that are representative of water quality, which allows the use of filtered samples.
331	ckdp00020	Groundwater Monitoring: Increased costs for groundwater monitoring are likely to be incurred as a result of the proposed CKD rules. The proposed rules specify that semiannual monitoring is to occur, which is twice the frequency of some state programs. It is likely that additional sampling points will also be required, at springs for example, to comply with the proposed rules. Together, the increased monitoring costs are likely to be significant.At the Alpena, Michigan, site, annual groundwater monitoring costs would likely increase by approximately $35,000, due to increasing the frequency of monitoring to semiannual and by adding several additional monitoring points. An additional one-time cost of approximately $10,000 per facility would also be incurred due to the need to utilize low-flow pumps in order to collect unfiltered water samples.□□ □□ Summary: A case study is presented below for the Lafarge Alpena, Michigan, cement plant. Alpena is one of Lafarge's largest U.S. operations with a sound environmental management structure. The current CKDLF is permitted by the Michigan Department of Environmental Quality (MDEQ). Table 1 demonstrates the expected increased environmental burden if the proposed federal management rules become final. (See Table 1 in original document, p. 35)
360	ckdp00021	The extensive groundwater monitoring requirements, including detection and assessment monitoring, would be more appropriately applied to hazardous waste management under Subtitle C.

Comment Id	Document Number	Comment
449	ckdp00027	The proposed rule requires the analysis of unfiltered groundwater samples for groundwater monitoring. (Section 259.43). Unfiltered groundwater samples will include constituents whose sources are both dissolved phase chemicals and suspended sediment levels. Suspended sediment is present in nearly all groundwater wells due to turbidity resulting from well installation, purge activities or environmental conditions. In this event, poorly constructed wells or fine-grained aquifers can yield confusing or misleading results. This proposed rule should recognize that the receptor aquifer is likely to be an unconfined, water table aquifer that is subject to high background contaminant levels. Considering that the rule proposes comparison to drinking water MCL's, it is difficult to believe that the collected data will be useful in defining impacts from CKD disposal. A more reasonable approach would be to utilize filtered groundwater samples and consider a monitoring program that compares background conditions to compliance monitoring points.
531	ckdp00034	... a period of two years to comply with the groundwater monitoring provisions is excessive. Monitoring wells can be installed and groundwater monitoring initiated within 6 months. Given that 71% of CKD disposal units are located in karst terrain (p. 45643), and the highly alkaline nature of CKD which promotes the release of metals (pp. 45636 and 45644), it is important to begin assessment of groundwater quality as soon as possible. A six month compliance period for installing wells and beginning monitoring is readily achievable. This will also be beneficial in expediting corrective action at those units that have releases.
546	ckdp00034	The ETC supports the requirements for ground-water monitoring and corrective action for all CKDLF units. There are specific areas, however, where EPA is allowing for variances which are not justified and will threaten groundwater resources.
547	ckdp00034	Under proposed 259.40(b), a CKDLF unit operator can petition for a waiver or suspension of the groundwater monitoring provisions of Subpart E. Such a waiver or suspension must not be allowed for CKD that has the potential to contain elevated metals and dioxin. This is true of CKD derived from the burning of hazardous waste, and suspension of groundwater monitoring must not be allowed for such CKD. Hazardous waste is highly variable in metals content, and the resulting CKD will also be highly variable. The various sources of metals data in the Docket F-99-CKDP as well as in the 1993 Report to Congress shows that CKD derived from hazardous waste burning kilns is more concentrated in metals. Also, given the highly alkaline nature of CKD and the high leachability of metals under alkaline conditions, changes in metal content from varying hazardous waste feed can result in significant metals releases to surface waters and ground water. Therefore, groundwater monitoring must be required for all kilns that burn hazardous waste without exception.
548	ckdp00034	The parameters required for detection monitoring under proposed 259.44(a) are insufficient to ensure protection of groundwater resources. The list of minimum constituents under 259.44(a) and Appendix I should include the metals antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, selenium, silver and thallium. These metals must be required for all CKDLF units at cement kilns that burn hazardous waste, since the hazardous waste is highly variable in metals content, and the concentration of metals in the CKD will likely be high. In addition, the frequency of monitoring under 259.44(b) must be at least quarterly for CKDLF units from cement kilns that burn hazardous waste. Given the high mobility of metals in the alkaline CKD, and the high concentrations of metals in CKD from hazardous waste burning kilns, more frequent groundwater monitoring is needed to protect groundwater resources and to detect a release early enough to be able to take effective corrective action. No alternate monitoring frequency should be allowed under 259.44(c) for CKDLF units from hazardous waste burning cement kilns. This is justified on the basis of the highly variable content of the waste and the high mobility of metals from alkaline CKD.

Comment Id	Document Number	Comment
628	ckdp00039	There are several places in this proposed rule where an environmentally important decision is left in the hands of the owner/operator, with no provision for review or approval.□□□ □□□ For example, under paragraph 259.44(d), upon discovering a release, the owner/operator must report this to the Regional Administrator [paragraph (d)(l)], but paragraph (d)(3) allows the owner/operator to make a demonstration that the release was not caused by the Unit and allows this to stand without any review. Therefore, the owner/operator is given the power to declare that his/her demonstration is "successful." Such a determination relieves them from having to initiate an assessment monitoring program. A similar un-reviewed demonstration [paragraph 259.44(g) (2)] allows an owner/operator in an assessment monitoring program to avoid moving to corrective action. In both cases, the owner/operator determines whether or not the demonstration is successful. We suggest that all such demonstrations be subject to review and approval by the USEPA Regional Administrator.
635	ckdp00039	The data analysis portions preserve the outstanding flaws of the USEPA's MSW regulations, including: (1) Pushing ANOVA methods, in spite of their well-demonstrated inapplicability to ground water detection monitoring applications [see "STATISTICAL METHODS FOR GROUNDWATER MONITORING," by Dr. Robert D. Gibbons, 1994, John Wiley & Sons, Inc., pages 258-260]; (2) Containing no provision allowing, or regulating the use of, retests; (3) A lack of any realistic false-positive rate control, except for the inappropriate ANOVA methods. We suggest dispensing with the false-positive rate rule and requiring that any statistical method is allowed as long as it passes the USEPA's Reference Power Curve test, based on a single constituent at a single well (see Section 5 and Appendix B of "Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities - Addendum To Interim Final Guidance," USEPA Office of Solid Waste, Washington, D.C., July, 1992); (4) Containing no consideration for the strong effects that sample size has on the power of the method to reliably detect a release; (5) Containing no allowance of nonstatistical methods for constituents that are seldom detected in background except by laboratory error. This is especially inappropriate because the validity of the Poisson-based statistical methods, which are the only methods that the USEPA statistical guidance suggests using in such circumstances, have been strongly questioned lately in a professional statistical paper [see RETHINKING POISSON-BASED STATISTICS FOR GROUND WATER QUALITY MONITORING, by J.C. Loftis, H. K. Iyer, and H. J. Baker, in GROUND WATER, Vol. 37, No. 2, (March-April, 1999), pp. 275-281]; (6) Providing only for responses to statistically significant increases over BACKGROUND [see paragraph 259.43(i)], in spite of the fact that, after entry into an assessment monitoring program, all testing will be against the water-quality protection standard, which may not be the background value; and (7) Forcing ongoing statistical analysis after a constituent statistically exceeds its water quality protection standard at a well, even though such testing serves no further purpose until the proof period at the end of a successful corrective action. Under such circumstances, it makes much more sense to require concentration-versus-time plots.
720	ckdp00048	TNRCC concurs with the adequacy of the proposed parameters for detecting releases.
760	ckdp00048	Sec. 259.43 On Pg 45685, co1 1, in paragraph (h)(2), in the bottom line, the term "Type I experimental error rate" is used, but it is called "Type I experiment wise error rate" in §258.53(h)(2) of 40 CFR 258 and "Type I experiment wise error rate" in §264.97(h)(2) of 40 CFR 264. TNRCC recommends that the terminology be standardized.
761	ckdp00048	Sec. 259.44 On Pg 45686, co1 1, for consistency in paragraph (d) with usage in the preceding paragraphs (b) and (c), TNRCC recommends adding the underlined phrase to "If the person managing CKD waste . . . in Appendix 1 to this part, or the alternative list approved in accordance with paragraph (a)(2) of this section, at any monitoring well ...."
762	ckdp00048	Sec. 259.44. TNRCC also recommends that in paragraph (d)(2), last line, "(c)(3) of this section" be changed to (d)(3) of this section, or subparagraph (3) of this paragraph to reflect the correct reference.

Comment Id	Document Number	Comment
763	ckdp00048	Sec. 259.44. Paragraph (d)(3) allows for a demonstration that an SSI was not caused by the CKDLF unit or that the SSI was from an error in sampling analysis, statistical evaluation, or natural variation in ground-water quality. A report documenting the demonstration is to be placed in the operating record. This section indicates that once a facility successfully demonstrates an erroneous SSI, the facility may return to detection monitoring. It appears that the facility will make the determination that the demonstration is successful. The demonstration should only be considered successful if approved by the Regional Administrator or the authorized State. Therefore, TNRCC recommends that in paragraph (d)(3) the next-to-last sentence in column 1 be changed to insert the underlined phrase as follows: "A report documenting this demonstration ... ground-water scientist and be approved by the EPA Regional Administrator or the authorized State and placed in the operating record." See approval of demonstration requirement in §259.40 (b), pg 45683, co1 3.
1027	ckdpL0001	Pg 45649, col 3, para 2, last sentence, EPA requests comment on the adequacy of the detection parameters for monitoring releases proposed in the paragraph and whether metal constituents are necessary.□□□ □□□ The MDNR recommends metal constituents be added to the detection monitoring because metal constituents leaching into groundwater have been documented.
1133	ckdpL0003	Attachment B-Memo- 2. It is disturbing that EPA relies on groundwater damage cases to justify groundwater monitoring, instead of modeling. Out of 110 plants in the universe, there are 13 identified damage cases, or less than 12 percent. As we understand, most of these damage cases involve deposits in floodplains or quarries before 1980 (with no management). Obviously, these practices are not carried on to present day.
1136	ckdpL0003	2. Advocacy would like to see the instances of these groundwater damage cases broken out by date, firm and damage case (i.e., how the damage occurred and remedial action taken). While the agency asserts that the management practices that led to these cases continue, it has no evidence of such. The agency admits that did not complete a census. Therefore, it is not unreasonable that these damages may have been either caused by one or several "rogue firms, " or most of these cases occurred around ten to fifteen years ago. Industry representatives suggest that most of these damage cases involve CKD deposited in floodplains or quarries before 1980. While EPA asserts that these management practices occur today, it has no hard data to substantiate this claim. Surely, if these practices were going on to the present day, all sorts of enforcement questions and issue would be raised (the agency cites no OECA data). Thus. the agency can not rely on this evidence to issue a proposed rule. One solution is a partnership with industry to develop best management practices or a similar partnership approach with the regulated community.
26	ckdp00009	40 CFR 259.45 Assessment monitoring should reflect the raw materials used and any previous waste classification data in addition to the inorganics listed in Appendix VIII. For example some facilities may use black shales as their silica source. As such, any heavy metals known to occur in the shales could be present in the resulting CKD. Uranium is of particular concern along with vanadium. The solubility nature of these elements makes them the most likely to be mobile in the environment which results from CKD leachate. (This being a highly calcic water with oxidized metals, and high PH.)
27	ckdp00009	40 CFR 259.45(h) The establishment of ground water protection standards (GWPS) may not be the proper approach for springs. It has been Indiana's experience that trying to establish GWPSs for water that transitions into surface water can be confusing and inappropriate. Defining GWPSs for springs should be better defined.
147	ckdp00016	Pg 45650, col. 1, para 3, last sentence.□□ □□ The Work Group concurs with the proposal as written, since there is flexibility for the Regional Administrator or State Director to establish alternative time periods.
161	ckdp00016	Also, (Pg 45695, col 1, paragraph (f)(2), last line) "§259.48" be changed to §259.47 for accuracy.

Comment Id	Document Number	Comment
164	ckdp00016	Also, (Pg 45695, col 3, paragraph (j)(3), fourth line from the end) "§259.48" be changed to §259.47 for accuracy.
173	ckdp00016	(Sec. 259.48 Pg 45689, col 2, in paragraph (e)(2)(i)) "Extent and concentration of the release;" should be revised to add , both vertical and horizontal, after the word "extent" to read: Extent, both vertical and horizontal, and concentration of the release;.
195	ckdp00016	(Pg 45686, col 2, para (a)) Recommend adding, for consistency with §259.44(b) and (c), the following underlined text at the end to read: ". . . in the Appendix I of this part, or the alternative list approved in accordance with §259.44(a)(2)."
196	ckdp00016	(Pg 45686, col 2, para (b), last sentence) Recommend replacing ". . .required by paragraph (b) of this section. . . " with ". . . required by this paragraph . . ." .
197	ckdp00016	(Pg 45686, col 3, para (b)(5)) Recommend deleting "and" at the end.
198	ckdp00016	(Pg 45687, col 1, para (g)(2)) Recommend deleting "increase" after "SSI" in the third line as redundant.
199	ckdp00016	Pg 45687, col 1, para (g)(2): Recommend revising the second sentence by inserting the underlined phrase as follows: "A report documenting this demonstration. . . ground-water scientist and be approved by the EPA Regional Administrator or the State Director and placed in the operating record." The demonstration should not be considered successful unless approved by the Regional Administrator or the State Director. (§259.40 (b), pg 45683, co1 3).
200	ckdp00016	(Pg 45688, col 1, para (c)(l)(iv)) Recommend revising the last two lines to delete "and" and replace "of" with or, to read: ". . . excavation, transportation, redisposal, or containment;" as at the end of item (vi), following. [The same error exists in §258(c)(l)(iv).]
201	ckdp00016	(Pg 45688, col 2, next-to-last line) Recommend deleting "(g) or"since §259.45(g) does not establish any ground-water protection standards and only refers to those established under paragraph (h). (§259.45(h) on the opposite line in column 3).

Comment Id	Document Number	Comment
321	ckdp00020	Composite Liner Requirements: In Subpart (c)(l) of s259.30, CKDLF units and lateral expansions must be designed to ensure that concentration values listed in Table 1 are not exceeded in the uppermost aquifer at the relevant point of compliance (POC). This is a performance-based standard that does not allow for variances based on existing background levels in the aquifer. Several cement manufacturing plants are located in areas where the background water quality does not meet Federal Secondary Drinking Water MCLs. □□ □□ For example, at the Lafarge Davenport, Iowa, plant, regional groundwater contains substantial quantities of dissolved solids. The only area where the regional aquifers are suitable for potable use is in the northern and eastern parts of the state. According to the Silurian-Devonian aquifer maps (Horick, 1984), the aquifers in the Scott County area exhibit the following general water quality profile:□□ - Sulfate: 50 to 100 mg/L□□ - Hardness: 300 to 400 mg/L□□ - Sodium: 50 to 100 mg/L□□ - Fluoride: less than 1 mg/L□□ □□ Approximately 40 miles southwest of the Lafarge Davenport Plant, the concentration of sulfates and total dissolved solids in the Silurian and Devonian aquifers exceed Federal Secondary Drinking Water Standards and the concentration of fluoride exceeds the Primary Drinking Water Standards. In these areas, the Silurian and Devonian aquifers are not suitable for potable use without treatment.□□ □□ To a certain point, the proposed regulations allow variances to determine the relative POC, but not to account for background concentrations in and of themselves. To account for existing background groundwater concentrations at the CKDLF area, Lafarge recommends that this subsection be revised to say that assessment monitoring will not be triggered if it is demonstrated that there is no statistically significant difference between background concentrations of constituents listed in Table 1 and downgradient concentrations at the site.
550	ckdp00034	The assessment monitoring provisions under proposed 259.45 should be expanded to include some organic parameters as well as dioxin. Also, the monitoring frequency should be greater than annual, given that the assessment monitoring is being performed due to a demonstrated increase of contaminants in downgradient wells. The monitoring frequency should be monthly until the nature of the increase can be explained, or the downgradient wells return to below background levels.
551	ckdp00034	The specific measures for corrective action, upon confirmation of the presence of contamination in an assessment monitoring program, are weak in that they are covered under Part 259 on a self-implementing basis. As EPA points out in the preamble on page 45658, "Because EPA does not directly regulate non-hazardous solid waste under RCRA, today's proposed rule would not create enforceable requirements for CKD management, but only conditions for avoiding Subtitle C regulation." It is important that if assessment monitoring indicates contamination; that the corrective action be fully enforceable and controlled by a permit. Therefore, if assessment monitoring confirms the presence of contamination, the facility must immediately be subject to fill corrective action standards under 40 CFR 264 Subpart F, and must be issued an enforceable RCRA permit covering corrective action. Only then can the corrective action program be thorough, enforceable and undergo adequate public comment and review. Also, facilities that burn hazardous waste must be subject to facility-wide corrective action, if the assessment monitoring indicates contamination. This is to determine if other sources of contamination could be impacting groundwater quality.
552	ckdp00034	At a minimum, facilities that burn hazardous waste should have the corrective action for the CKDLF controlled by the RCRA permit. These facilities already have a requirement to have a RCRA permit for their hazardous waste storage and burning operations. This RCRA permit therefore provides an enforceable and effective framework for corrective action implementation for the CKDLF. Some permits that have been issued may already address corrective action for CKD disposal units (see for example the permit for Ash Grove Cement, Chanute Kansas, and TXI in Midlothian, TX).
629	ckdp00039	In paragraph 259.46 (d), the owner/operator chooses the corrective measures to apply and, in paragraph 259.47 (d), establishes the schedule for initiating and completing each such measure. The owner/operator must include in a report to the Regional Administrator the reasoning for choosing the corrective measures, but there is no provision for the Regional Administrator to reject an inadequate report. Such important decisions should not be regulated solely through means of citizen lawsuits.

Comment Id	Document Number	Comment
721	ckdp00048	TNRCC concurs with the proposal as written, since there is flexibility for the Regional Administrator or State Director to establish alternative time periods.
764	ckdp00048	Sec. 259.45. On Pg 45686, co1 2, for paragraph (a), TNRCC recommends that, for consistency with §259.44(b) and (c), EPA add the following underlined text at the end to read: ". . . in the Appendix I of this part, or the alternative list approved in accordance with §259.44(a)(2).
765	ckdp00048	Sec. 259.45. TNRCC also recommends that in the same column, in paragraph (b), in the last sentence; EPA replace ". . . required by paragraph (b) of this section . . . " with ". . . required by this paragraph . . ."
766	ckdp00048	Sec. 259.45. TNRCC further recommends deleting the "and" at the end of paragraph (c)(5) in column 3.
767	ckdp00048	Sec. 259.45. On Pg 45687, co1 1, para (g)(2), TNRCC recommends deleting "increase" after "SSI" in the third line as redundant. TNRCC also recommends that the second sentence be changed to insert the underlined phrase as follows: "A report documenting this demonstration . . . ground-water scientist and "be approved by the EPA Regional Administrator and" placed in the operating record." The demonstration should only be considered successful if approved by the Regional Administrator. See approval of demonstration requirement in §259.40 (b), pg 45683, co1 3.
768	ckdp00048	Sec. 259.47 TNRCC also recommends that in column 2, in paragraph (d)(2), in the next-to-last line, EPA delete "(g) or"since §259.45(g) does not establish any ground-water protection standards and only refers to those established under paragraph (h). [See reference to §259.45(h) on the opposite line in column 3.]
769	ckdp00048	Sec. 259.48 On Pg45689, co1 2, in paragraph (e)(2)(i), TNRCC recommends that "Extent and concentration of the release;" be revised to add, both vertical and horizontal, after the word "extent" to read: Extent, both vertical and horizontal, and concentration of the release.
840	ckdp00053	5. Holnam opposes facility-wide corrective action. EPA requests comment on whether facility-wide corrective action should apply to facilities with CKD landfills that do not comply with the proposed standards. 64 FR at 45657. Holnam is opposed to any corrective action under this rule as a result of hazardous waste listing. Because Holnam questions EPA's authority to list CKD as a hazardous waste based on its method of management, Holnam also believes that EPA lacks authority to require any corrective action, including facility-wide corrective action resulting from CKD management practices.
236	ckdp00019	With regard to the air protection standards for fugitive CKD emissions, the preamble specifies that the standards apply to all new and existing CKD disposal units. 64 Fed. Reg. at 45650, col. 3. The regulatory language, however, does not say this.
395	ckdp00024	If groundwater risks from nonburner CKD are very low, and surface water risks are adequately addressed by existing authorities, air risks become the principal justification for this proposal. However, this asserted justification largely ignores both documented widespread SIP control of windblown dust emissions in nonattainment and attainment areas alike, and such recent developments as still more stringent national EPA standards addressing PM 2.5 and visibility. We remain mystified why unimplemented potential stormwater permits are sufficient to address surface water risks, but air standards must be shown to be perfectly implemented to pass the same test. If air risks are now the major basis for this proposal, OSW's authority to proceed across-the-board for all CKD seems very questionable in light of RCRA's coordination mandates.
544	ckdp00034	The rule could [be] more effective in controlling fugitive CKD dust emissions by prohibiting storage in outside piles and by requiring covers and enclosures for conveyors and transfer points. In addition, the rule should require periodic ambient air monitoring for metals and particulate at the property line of the facility to ensure that the public is not exposed to harmful levels of metals. This should be required for hazardous waste burning cement kilns as well as kilns with CKD metals concentrations exceeding the air thresholds defined above.

Comment Id	Document Number	Comment
104	ckdp00015	On page 45650 of the Register in Section IV, B. 1., EPA discusses results of screening-level modeling on five case-study plants. EPA indicates that this modeling shows fugitive emissions (i.e., windblown dust from uncontrolled CKD piles) could exceed EPA's National Ambient Air Quality Standard (NAAQS) for particulate matter 10 microns in diameter or less (PM10). This is also discussed on page 1 of the Technical Background Document on Potential Risks of Cement Kiln Dust in Support of the Cement Kiln Dust Regulatory Determination, which was prepared by EPA Office of Solid Waste, dated January 31, 1995.
382	ckdp00023	However, we have not received Notices of Violation using our existing dust control measures.
468	ckdp00028	The Holly Hill plant reduces fugitive emissions through a series of "Product Recovery Units" (PRU). The PRUs are maintained pursuant to federally-enforceable State-issued construction permits. The plant has also paved most of its haul roads and continuously operates a water truck for dust suppression in order to further reduce fugitive emissions. All of these measures are consistent with the requirements of SC REGS. 61-62.6, Control of Fugitive Particulate Matter. All of the emissions points for fugitive emissions have been inventoried in Holnam's Title V Operating Permit application pending review by SCDHEC pursuant to its delegated review and permitting authority. It is anticipated that these PRUs and other control devices along with the dust contrl measures referred to above will be incorporated into the final Title V Operating Permit when issued.
127	ckdp00016	ASTSWMO recommends that EPA revise the proposed rule to define a vertical expansion of an existing CKD landfill unit at a facility to be a "new" unit, rather than an "existing" CKD landfill. EPA does not justify its distinction between horizontal expansions which would constitute a "new" landfill under the proposed rule and vertical expansions which EPA proposes to exclude from requirements for "new" landfills; vertical expansions add to the hydraulic loading at a landfill and may increase the risk of migration of hazardous chemicals of concern to ground waters underlying CKD landfills.
527	ckdp00034	The rule should be applicable to all CKDLFs on final publication of the rule. Given that the rule allows a two year period to come into compliance, it is reasonable and practical for cement facilities to cease use of their existing CKDLFs that do not meet the standards and construct new disposal units that comply with the Part 259 standards. This would avoid the issues associated with lateral and vertical expansions of existing units that are made overly large to avoid compliance with the new standards.□□□ □□□ EPA is concerned that an incentive might be created by the rule for operators to build unneeded units or unnecessarily large units prior to the effective date of the rule, so that these units can be classified as "existing" and therefore not subject to the new Part 259 standards. EPA's proposed fix for this issue is to classify lateral expansions as "new or expanded units" and also to require that "waste placement must be consistent with past practices." However this fix is not good enough to avoid oversizing of existing units, and since it is a highly subjective call as to what placement is "consistent with past practices." To avoid oversizing of existing units done to avoid compliance with the new standards, EPA must include some sort of sunset provision that forces operators to cease use of existing units that do not meet the Part 259 standards.□□□ □□□ Given that the rule has a two year compliance period, there is no reason why operators cannot construct new units that meet the standards and cease use of the existing units. Without such a requirement there will be no benefit to the rule as operators will be able to continue to use existing sub-standard units for many years. The damage cases and the risk of releases of metals to groundwater and surface water from alkaline CKD disposal are strong reasons why operators must be required to meet the 259 design standards quickly.□□□ □□□ The ETC therefore urges EPA to disallow any exemption for existing units, and to require that CKD must be in units that meet the Part 259 standards within two years of publication of the rule.

Comment Id	Document Number	Comment
838	ckdp00053	4. Holnam opposes regulating inactive portions of existing CKD landfills. EPA requests comment on whether "inactive portions of existing CKD landfills" should be subject to air controls. 64 FR at 45651. Air controls should be the subject of regulation in state and federal air pollution control regulations. Under the Proposed CKD Rule and EPA's active management policy, installation of air controls could result in disturbances to historical CKD management units. These activities could, under EPA policy, physically regenerate new CKD subject to active CKD landfill requirements. Thus, installation of air controls on inactive portions of historical CKD disposal sites could cause a CKD landfill to come under regulation as a new or expanded landfill. Therefore, Holnam believes that inactive portions of CKD landfills should not be subject to regulation under the Proposed CKD Rule.
980	ckdp00060	SLC opposes regulating inactive portions of existing CKD landfills. EPA requests comment on whether " inactive portions of existing CKD landfills" should be subject to air controls. 64 Fed. Reg. at 45651. SLC's position is that air controls should be the subject of regulation in state and Federal air pollution control regulations. Under the Proposed CKD Rule and EPA's active management policy, discussed supra, installation of air controls could result in disturbances to historical CKD management units. These activities would, under EPA policy, □ □ physically regenerate new CKD subject to active CKD landfill requirements. Thus, installation of air controls on inactive portions of historical CKD disposal sites could cause a CKD landfill to come under regulation as a new or expanded landfill. Therefore, SLC believes that inactive portions of CKD landfills should not be subject to regulation under the Proposed CKD Rule.
1023	ckdpL0001	The MDNR agrees with the concept of defining "existing unit" to limit the unnecessary expansion of existing disposal sites. In Missouri, the majority of CKD has been disposed of in abandoned quarries with little management practices or records. It would be difficult to determine if the facility continued to dispose of CKD consistent with past operating practices.
1024	ckdpL0001	The EPA is proposing to modify the Code of Federal Regulations Parts 259.26, 266 and 270. None of these parts deal specifically with air regulations, and therefore, cannot be adopted into Missouri's State Implementation Plan. Under Missouri Air Conservation Law Section 643.055, the Missouri Air Conservation commission may not adopt guidelines that are stricter than those required under the provision of the federal Clean Air Act Amendments.
1025	ckdpL0001	Currently, the fugitive emissions from CKD disposal units located on the property of the kiln are regulated under the Title V operating permit. The MDNR believes the proposed CKD standards may provide some additional control of fugitive emissions from CKD storage and disposal sites. The MDNR recommends that the EPA reconsider their current course of action, including the addition of regulations that would allow the state to enforce any new fugitive emission requirements for CKD storage, handling and disposal.
65	ckdp00015	[M]odeling fugitive impacts using a screening tool is acceptable for showing that a facility meets a standard; however, it is inadequate for claiming potential health threats. A more refined analysis (i.e., site-specific model) would result in predicted impacts at least one order of magnitude less than the screening approach used by EPA. The claim that exceedances of the NAAQS for PM10 are occurring based on screening model runs is inappropriate and fails to justify EPA's claim that fugitive emissions from CKD handling are creating health problems. Furthermore, if EPA is truly concerned about NAAQS violations due to the handling of CKD, have these areas been classified as non-attainment for PM10, and has EPA begun ambient monitoring in these areas to protect the public? EPA should reconsider the basis for its proposed requirements for management of fugitive CKD emissions by using a more refined modeling approach that will result in a realistic evaluation of the potential impacts of fugitive emissions from a CKDLF unit.
90	ckdp00015	In estimating fugitive emission impacts to support the air criteria proposed in the rule, EPA has made no adjustment to coordinate wind dependent emissions estimates with wind speed impact predictions. Namely, fugitive models typically predict maximum impacts at lower wind speeds while actual emissions of fugitives typically go down significantly as wind speeds diminish. The approach taken by EPA therefore grossly overpredicts the off-property impacts by not adjusting emission rates for slower wind speeds utilized in the screening model exercise.

Comment Id	Document Number	Comment
312	ckdp00020	Daily Cover: §259.22 requires that CKD must be disposed in CKDLF units and expansions such that CKD is: " Covered with suficient thickness ofearthen material at the end of each operating day, or at more frequent intervals if necessary.. . " The purpose of cover is generally to limit blowing of wastes, to reduce infiltration of rainfall, to prevent vermin access to waste, to limit surface erosion, and to provide a stable surface that is aesthetically suitable. Municipal solid waste exhibits characteristics that would require daily cover. However, conditioned CKD exhibits characteristics substantially different from municipal solid waste, and which do not require daily cover. Conditioned CKD is nonputrescible, has low permeability to water, is compatible and cohesive, and has a uniform texture. CKD that is conditioned and compacted upon placement to mitigate the potential for generating fugitive dust results in a surface that is hard and solid, and one that is less susceptible to blowing debris, odors, water infiltration, or infestation by vermin and vector. In fact, CKD has been used as an alternative cover material for engineered barrier layers. □□ □□ Municipal solid waste landfills are commonly required to cover the waste with earthen material at the close of every working day. Alternatives to earthen material can be used as daily covers if they are demonstrated to control problems, such as odor and blowing litter. The utility of CKD as an alternative cover and liner is discussed in the June 1998 Draft Technical Background Document on Ground Water Controls at CKD Landfills. The document states that CKD has been approved as an alternative cover material when mixed with other materials. A mixture of sewage sludge and CKD, known as N-Viro Soil ®, has been approved by the EPA as an alternative daily or intermediate cover and is used at several municipal landfills. Posi-Shell@, a mixture of CKD, recycled paper pulp, and short recycled polyester fiber and water, has also been approved as an alternative daily or intermediate cover for several landfills. Although these mixtures have been approved, CKD has not been approved independently as an alternative daily cover. □□ □□ Lafarge recommends that daily cover not be required for CKDLF units that accept conditioned CKD.
452	ckdp00027	Daily Cover. The rule proposes application of a daily soil cover. This requirement seems to be based on MSW characteristics, which are significantly different than CKD. MSW, due to its unstable, biodegradable and putrescible characteristics, requires a daily cover. However, placement of daily cover on CKD landfills can not be justified on this basis. In fact, it could be argued that placing a daily soil cover would deteriorate the already conditioned and stable CKD surface. Additionally, placement of a daily cover consumes valuable disposal volume, shortening the life of the disposal cell. In lieu of prescriptive and redundant fugitive dust emission standards, moisture-conditioning language seems far more appropriate. Further study of the moisture relationship with wind dispersal would aid in identifying appropriate conditioning levels. [new paragraph] The proposed rule requires that a final cover system must be installed at all CKDLF units to minimize infiltration and erosion. The proposed rule also requires that closure activities must be completed within 210 days after the date on which the final receipt of CKD.
543	ckdp00034	The ETC is supportive of the proposed standards to control fugitive emissions of CKD. However, as with the location restrictions, the ETC is opposed to the alternate measures that would be allowed under proposed 259.20(c), 259.21(b) and 259.22(c). Furthermore, there is no mechanism for Agency prior review and approval of the alternate measures. The operator simply implements the alternate measure and places a notation in the operating record. A more rigorous technical submission must be made to the Agency justifying that the alternate measure is effective, and the justification must be certified by an independent licensed Professional Engineer. The Agency must then perform a review and only approve the alternate measure after opportunity for public notice and comment. There should be no alternate measure allowed for a CKD Waste that contains elevated levels of metals. Thresholds should be developed based on a health-based model considering air exposure pathways. A CKD stream containing metals above these universal thresholds would not be eligible for an alternate to the air criteria for landfills defined in 259.22(d). In addition, CKD derived from hazardous waste burning cement kilns should not be eligible for the alternate standards under 259.20(c), 259.21(b) and 259.22(d).
938	ckdp00058	The daily cover requirement is also not appropriate for CKD. As indicated above, the Dundee plant has been successful at controlling fugitive dust using its existing practices. The addition of daily cover is not only not necessary, but also possibly detrimental to the objectives of fugitive dust control. CKD that has been moisture-conditioned will "set up" and hardened in the field, forming a crust, which helps to control fugitive dust. The act of placing daily cover over the CKD will actually disturb the surface causing more fugitive dust. Furthermore, the daily cover consumes valuable landfill air space. As has been documented at municipal landfills, up to 25 to 30% of the air space can be taken up by daily cotver. This will result in more land being used for landfills and shorter site life. Daily cover is applied to municipal landfills primarily as a means to control vectors and odors, neither of which are concerns at a CISD monofill.

Comment Id	Document Number	Comment
9	ckdp00009	40 CFR 259.20(a)(2) Appropriate ASTM, API or UL standards should be specified for this section. How can this be enforced if the standard is not specified?
84	ckdp00015	Proposed §259.20 (b) - Temporary Storage. On page 45682, proposed §259.20 (b), temporary storage is defined as "interim storage prior to sale, recycle or disposal. " What length of time stipulates storage ? Since temporary storage of CKD requires placement in containers, buildings or structures it should be well defined within the rule.
150	ckdp00016	(Sec. 259.20; Pg 45682, col. 1, para (a)) The regulation states CKD must be covered or stored in tanks or containers but the only requirements given are for engineered structures (tanks or containers). What are the requirements for covers?
172	ckdp00016	The 90 day period is reasonable for all elements of the proposed regulation except temporary storage. The preamble discussed temporary storage in a man-made structure with foundation walls and a roof. Time for design, weather delays, and contract bidding should be factored in. Also, §259.20 discusses covering CKD, but the preamble discusses only storage in a tank, container, and building. If covering alone is not acceptable, the wording of §259.20 should be changed, specifically the statement,"Such CKD must be covered or otherwise managed to control wind dispersal of dusts, or stored in tanks, containers or buildings - - -."
181	ckdp00016	(Pg 45682, col 1, para (b)) The definition states that temporary storage means interim storage for recycling, sale or final disposal. There is no time frame to limit the amount of time that CKD could be temporarily stored. A 90 to 180 day limit should be established to avoid speculative accumulation.
248	ckdp00019	Discrepancy on Storage. There is a major discrepancy between the preamble and the rule with respect to the issue of temporary storage of CKD. The preamble says that storage cannot take place in or on land-based units, but can only take place in tanks, containers, or buildings. 64 Fed. Reg. at 45651, col. 3. The proposed regulatory language says that such storage must take place in tanks, etc., a must be "covered or otherwise managed to control wind dispersal of dusts." Proposed §259.20(a). The proposed rule language is the correct approach, as the very nature of CKD is such that it can be securely contained without the need for man-made structures such as tanks or containers. We urge EPA to adhere to the language in the proposed rule, and clarify the preamble to avoid further confusion.
311	ckdp00020	Temporary storage: The proposed regulations call for temporary storage of CKD in "man-made structures." For those facilities currently not in compliance with these requirements, it would reasonably take much more than 90 days to design, construct, and integrate new facilities to meet these standards. Lafarge recommends 1 year.
669	ckdp00042	The Proposed Rule Should Allow for the Temporary Storage of CKD in a Structure with an Earthen Floor or Foundation Subpart C of the proposed rule ostensibly sets forth standards required for "Air Criteria," yet § 259.20(a) requires that CKD placed in temporary storage be stored in tanks, containers, or buildings that meet minimum standards for an engineered structure with a non-earthen floor, walls, and roof "all of which prevent water from reaching the stored CKD." These standards do not address air issues (i.e., wind dispersal of dusts) and should, therefore, be removed from § 259.20(a). Furthermore, the requirement for the provision of a non-earthen floor for the temporary storage of CKD prior to disposal, sale, or recycling simply is not required to achieve its stated purpose, which is to isolate CKD from contact with rain water and stormwater runon. Consequently, any standards relating to the protection of temporarily stored CKD from contact with ambient water should be confined to those that achieve the stated objective. An earthen floor or foundation effectively can serve this purpose.
752	ckdp00048	Sec. 259.20 On Pg 45682, col 1, para (b) states that temporary storage means interim storage for recycling, sale or final disposal. There is no time frame to limit the amount of time that CKD could be temporarily stored. TNRCC recommends that a 90 to 180-day limit be established to avoid speculative accumulation.

Comment Id	Document Number	Comment
313	ckdp00020	On-site Handling: The air criteria for vehicles transporting CKD (§259.21) state that CKD waste transported in trucks or other vehicles must be covered or otherwise managed to control wind dispersal of dust. Alternative measures for fugitive dust control may be approved by the EPA Regional Administrator. □□ □□ Documentation at numerous CKD generation sites indicates that water conditioning CKD is one alternative measure that is effective in controlling wind dispersal of CKD. Thus, Lafarge recommends that §259.21 be revised to specifically include water conditioning CKD as an acceptable alternative measure for managing CKD transported in open vehicles (e.g., scrapers or haul trucks).
349	ckdp00020	Temporary Storage: Section 259.21 includes language that requires temporary storage of CKD, designated for recycling, sale, or final disposal, in tanks, containers, or buildings that are engineered structures made of nonearthen materials providing structural support. Recompacted earth is an acceptable material for liner materials used for the long-term disposal of CKD wastes. Lafarge thinks that a suitable temporary storage pad for CKD could be constructed of earthen materials, such as compacted clay. Lafarge recommends that the text stating that "...made of non-earthen materials providing structural support" be deleted from the rule.
10	ckdp00009	40 CFR 259.22(b) This section may present problems. First, in (l), it would be better to specify what covers are allowed. Does this cover include a tarp? This may be a performance standard, however, if there are some covers that would be acceptable, they should be listed. In (3), the "sufficient thickness of earthen material" should be specified as "6 inches of cover material."
11	ckdp00009	40 CFR 259.22(b) Indiana believes that requiring both, (2) emplaced CKD conditioned and (3) earthen material, is too stringent. Mixing the earthen material with the emplaced conditioned CKD would impede the future possibility of reuse of this material. Some facilities are actually excavating the material for reuse.
85	ckdp00015	Proposed §259.22(b)(3) - Daily Cover Requirements. On page 45682, proposed §259.22(b)(3) states that CKD disposed in the CKDLF unit must be "covered with a sufficient thickness of earthen material at the end of each operating day, or at more frequent intervals if necessary.. . to control blowing dust. " "Daily cover" is not specifically defined in this section and it is unclear to facilities that utilize the landfill areas 24 hours per day how this requirement must be implemented. Moreover, "at the end of each operating day" should be defined for these facilities which operate their landfills around the clock.
86	ckdp00015	Proposed §259.22 - Air Criteria for Landfills. The proposed rule does not elucidate on what this demonstration is to include. It simply states that a demonstration must be made that the alternate is as effective as the technical standard. It almost implies that the facility would have to implement the technical standard and record or estimate emissions in some way, and then implement the alternative and document comparative emissions with the new standard. Because it is difficult to estimate fugitive emissions, this setting allows regulatory authorities the ability to make almost any interpretation of this requirement. In order to allow facilities equitable opportunities to employ alternative control technologies that will be protective of the environment, EPA should clarify specifically what this demonstration should entail. Finally, since the fugitive control standards are required within 90 days of the effective date of the rule, facilities that seek to use alternate methods of controlling fugitives will have to place the demonstration in the record and operate prior to agency approval of alternate technology. This leaves the facility vulnerable to enforcement if the agency does not approve the demonstrated technology, and it allows little flexibility for the implementation of alternative control methods.
148	ckdp00016	As written, proposed §259.22(a) applies to all CKDLF units, both active and inactive. "Inactive area" should be defined. If an inactive area has cover soil, no fugitive dust controls are necessary. However, if an inactive area is an exposed dust pile, some fugitive dust control measures may be necessary. ASTSWMO recommends that the requirement also be made applicable to waste piles. These and uncovered inactive landfill units could be much larger and be subject to more wind dispersal than new, smaller landfill units.
151	ckdp00016	(Sec. 259.22; Pg 45682, col. 2, para (b)(3)) "Covered with a sufficient thickness of earthen material" should be changed to read Covered with a minimum of six (6) inches of earthen material.

Comment Id	Document Number	Comment
413	ckdp00025	95% Proctor Compaction Standard (§ 259.22) The EPA's proposed standard for field compaction of CKD (95% of the Standard Proctor maximum dry density) is impractical and unnecessary in order to control fugitive dust. Holnam - Clarksville has developed good management practices in order to control dust, without using such strict standards. These practices have lowered fugitive dust emissions from the pile compared to mismanaged or non-managed piles. Also, the fact that the pile is located within the quarry (a low elevation) help control the wind factors that would normally contribute to a problem with fugitive dust emissions. Tests from the Hydrogeological Workplan indicate the in-place CKD material has a moisture of 21% (Appendix 2). CKD is temporarily stored, then placed into the site using a conveyor belt, daily. Resulting in the CKD with a 21% moisture being covered every day with freshly pugged material. Water is pumped and sprayed on the active pile surface, as needed.
415	ckdp00025	Daily Soil Cover Requirement (§ 259.22) The EPA's proposal on daily soil cover is impractical and unnecessarily stringent. Holnam - Clarksville believes the combined pugging and irrigation spraying techniques currently employed at the Clarksville Plant demonstrate that wetting is an effective control for particulate. Our management of CKD has been evaluated and found to be effective, without daily cover. EPA should consider that particulate and hydrocarbon emissions generated from the stripping, transportation, and placement of soil cover materials would far outweigh reductions to fugitive particulate emissions achieved beyond the control effectiveness of wetting. EPA should also note that while daily cover may be appropriate for control of rodents and decomposition odors at municipal waste sites, CKD is a stable, inert material, which will hydraulically react and gain stability when exposed to moisture. Daily soil cover requirements, over and above effective alternative methods such as pugging and wetting would also significantly reduce landfill space and site life with little or no offsetting benefits for the human health or the environment.
450	ckdp00027	The proposed CKD rule requires two minimal standards for controlling fugitive dust emissions. These standards relate to field compaction and daily cover and are redundant.
512	ckdp00033	The daily cover requirement is also not appropriate for CKD. As indicated above, moisture conditioned CKD has been successful at controlling fugitive dust. The addition of daily cover is not only not necessary, but also possibly detrimental to the objectives of fugitive dust control. CKD that has been moisture-conditioned will "set up" and harden in the field, forming a crust, which helps to control fugitive dust. The act of placing daily cover over the CKD will actually disturb the surface causing more fugitive dust. Furthermore, the daily cover uses up valuable landfill air space. As has been documented at municipal landfills, up to 25 to 30% of the air space can be taken up by daily cover. This will result in more land being used up for landfills and shorter site life. Daily cover is applied to municipal landfills primarily as a means to control vectors and odors, neither of which are concerns at a CKD monofill.
610	ckdp00038	The EPA's proposed standard for field compaction of CKD (95% of the Standard Proctor maximum dry density) is unnecessary in order to control fugitive dust.
611	ckdp00038	The EPA's requirement for soil daily cover over compacted CKD is not justified. Significant reductions in fugitive dust are achieved by moisture conditioning and wet compaction alone. Furthermore, daily cover can significantly reduce airspace and landfill site life, and placement of daily cover can potentially increase fugitive dust by disturbing an already compacted and hardened CKD surface. In addition to the emissions created by the disturbance of the hardened CKD surface. The loading, transport, unloading and spreading of a daily soil cover result in fugitive particulate emissions. In fact, the soil cover is more likely to create wind blown fugitive particulate emission than is the "conditioned" CKD, which forms a hardened crust. Placement of daily cover can actually be a deteriment to controlling fugitive dust because it can result in greater surface disturbance and a higher potential for fugitives than if the CKD is left undisturbed and sprayed with water and/or dust suppressing agents. Furthermore, the addition of daily cover mixes materials such that the landfill would no longer be a monofill, the CKD would be less likely to form a hardened monolith, which is one of its unique properties that inhibits leachate formation. □□ §259.22: Recommended change: Compaction of moisture-conditioned CKD should be maintained as a general standard, but the prescriptive 95% compaction standard should be eliminated. The language can be modified to specify compaction by some acceptable device (for example, compactor, scraper, truck, bulldozer, etc.), that would be described in a "Fugitive Dust Control Plan", that is prepared and submitted to the regulatory agency for approval. The plan should be directed toward achieving a strictly performance-based standard. We suggest that this standard be no visible emissions beyond the property line.

Comment Id	Document Number	Comment
625	ckdp00038	Thus, the act of placing cover on the CKD may offset the potential benefits of the protection it is intended to provide. Controlled water addition to CKDLF surface after placement has been shown to be effective in controlling dust, and does not disturb the surface.□□ □□ Daily cover is appropriate for municipal landfills where it is intended to control vectors and odors, not fugitive dust. It is not appropriate for CKD.□□ □□ Recommended change: The daily cover technical standard should be eliminated as a technical standard, and left as an option for the "Fugitive Dust Control Plan" which would be required to be submitted for approval.
649	ckdp00040	Daily Cover Requirement (Proposed Rule 40 CFR § 259.22). The daily cover requirements in the Proposed Rule are excessive and unnecessary. Daily cover requirements for landfills are designed to control vectors, rodents, blowing trash and odors -none of which are present in a CKD monofill. In addition, daily cover requirements would substantially increase fugitive air emissions by disturbing an already compacted and hardened CKD surface. EPA's requirement for daily soil cover over compacted CKD cannot be justified based on their own background analysis. In fact, EPA's analysis suggests that significant reductions in fugitive dust are achieved by moisture conditioning and wet compaction alone. Furthermore, daily cover can significantly reduce airspace and landfill site life. In addition, the geology of the area is such that soil for daily cover would have to be excavated several miles away and transported by truck to the plant. Transportation and placement of loose dirt would create significantly more fugitive dust than disposal of CKD. Daily cover requirements should be determined on a case by case basis. By EPA's own admission in background documents, mechanical disturbance can break down conditioned CKD and cause it to become airborne. Thus, the act of placing cover on the CKD may offset any potential benefits it intends to provide. Controlled water addition to CKD landfill surface after placement has proven effective in controlling dust and does not disturb the surface. The daily cover requirements of the Proposed Rule cause environmental harm and should not be promulgated.
650	ckdp00040	95% Proctor Compaction Standard (Proposed Rule § 259.22). Compaction requirements found in the Proposed Rule are counter-productive. The rule implies that mechanical compaction with a roller will be required. Current management practice involves grading CKD, which is all that is necessary to prepare for the next layer. Compaction is used in municipal solid waste landfills to reduce odor and decrease landfill space, which are not issues at a CKD landfill. Compaction of CKD will create more fugitive dust and will be an unnecessary burden of time and excessive monetary costs to the site.
715	ckdp00048	As written, proposed §259.22(a) applies to all CKDLF units, both active and inactive, and TNRCC considers this to be appropriate. TNRCC recommends that the requirement also be made applicable to waste piles. These and uncovered inactive landfill units could be much larger and be subject to more wind dispersal than new, smaller landfill units.
753	ckdp00048	Sec. 259.22 On Pg 45682, col 2, para (b)(3), TNRCC recommends that "Covered with a sufficient thickness of earthen material" be changed to read Covered with a minimum of six (6) inches of earthen material. TNRCC also recommends that in para (c), line 1, a comma be added after "section".

Comment Id	Document Number	Comment
985	ckdp00060	SLC is opposed to daily cover requirements, 64 Fed. Reg. 45682 (proposed rule to be codified at 40 C.F.R. § 259.22(a)(3). In SLC's experience, conditioning CKD by combining or spraying with water adequately controls fugitive dust emissions. Moreover, SLC is concerned that, once such conditioning is done, handling daily cover will generate more fugitive emissions than it prevents. Thus, SLC believes that the daily cover requirement is not appropriate. Moreover, SLC is concerned that the requirement of daily cover reduces effective CKD landfill capacity by requiring landfills to place significant amounts of materials in addition to CKD into the landfills. Finally, EPA does not, in the Proposed CKD Rule, provide supporting data that shows that daily cover will reduce fugitive emissions beyond the reductions caused by conditioning with water. SLC notes that the requirement for daily cover on municipal solid waste landfills is based on the need to "control disease vectors, fires, odors, blowing litter, and scavenging," 40 C.F.R. § 258.21(a), which are not matters of concern at CKD landfills.□□ Furthermore, EPA's investigation of the effectiveness of fugitive dust controls found that wet compaction eliminated all or substantially all of the fugitive emissions from CKD. Fugitive Dust TBD at 3-24. Thus, EPA does not justify requiring daily cover. Also, SLC would like to point out that some municipal landfills are currently using CKD as daily cover. It would be most inappropriate for EPA on in one hand it does not allow such practice where in another the state allows it.
91	ckdp00015	Emissions Estimation Methodology, Wind Erosion. The use of the fastest mile equation from AP-42 typically overpredicts emissions from storage piles. Furthermore, the fastest mile data is difficult to obtain on a site-specific basis. In addition, EPA indicated that fastest mile values will represent high emission estimates, through assumption that the mean annual fastest mile will occur between every disturbance of the CKD piles, rather than on a less frequent, more realistic basis (page 3-4 of the document). The resulting circumstance is that emissions modeled from this equation will overpredict estimated ground level concentrations off-property, and provide an unrealistic picture of the impacts of windblown CKD emissions.
92	ckdp00015	Emissions Estimation Methodology, Unpaved Road Travel. In support of controls on fugitive emissions from CKD management, EPA evaluates emissions from unpaved roads in the background document (page 3-4). More specifically, it appears that EPA included unpaved road emission estimates from the delivery of CKD to the landfill in modeling off-property values from CKD fugitive emissions to determine health impacts from CKD handling. This approach does not represent the contribution of CKD fugitive emissions to off-property impacts, and the road emissions during transport to the landfill should not be included in this model, or should be reduced to factor the actual percentage of CKD that is contained in road dust. Since plant roads are typically constructed of gravel and treated with chemicals, little CKD is available for re-entrainment into the atmosphere. Furthermore, the only CKD available to contribute to fugitive emissions would be from spillage from previous trips. An assumption of 100% of the unpaved road as CKD does not adequately represent the content of CKD from road emissions, and EPA should revise the approach to reflect only the proportion of CKD that could contribute to fugitive emissions.

Comment Id	Document Number	Comment
93	ckdp00015	Emissions Estimation Methodology, Bulldozing. EPA estimated emissions from bulldozing of CKD in a landfill using the equation for removal of overburden from Table 11.9-2 of AP42 (page 3-8 of the document). This equation has a quality rating of D, assuming that site-specific data are used for silt and moisture content of the material. A number of facts in the use of this equation are worth discussing:□□ First, EPA assumes that CKD being bulldozed is 90% silt and that the moisture content is 1 percent (assuming "weathering" of CKD, the moisture content was presumed to increase from the initial 0.25 percent). The applicable ranges of factors for this equation and listed in AP-42 on page 11.9-9 included moisture content of 2.2 - 16.8 percent and silt content of 3.8 - 15.1 percent (for overburden). These are well out of the range that EPA assumed in the calculations. Also, given that EPA assumed that moisture content would increase with "weathering" of the CKD, shouldn't the silt content be lowered by some factor? There was no adjustment in the equation and calculations for this.□□ Secondly, the assumption of 90% silt content for CKD that EPA uses does not adequately address site specific silt content, and hence would further limit the already low quality of the AP-42 estimate calculation. EPA's assumption also does not consider how much wetted material will reduce the silt content of the CKD prior to spreading.□□ Overall, the result is an emission estimate that will over-predict the emissions from bulldozing. This can be examined by looking at the calculations performed for example Facility A, presented in Exhibit 3-3 of the background document on page 3-10. Calculated PM30 estimates from bulldozing temporary storage piles totaled more than 85 million pounds. This translates to nearly 43,000 tons of CKD being emitted to the air as fugitive emissions. The total volume of CKD generated by the facility for the entire year was 67,438 tons. Was 64% of the CKD that was generated lost as fugitive emissions during landfilling? The resulting estimates are clearly overblown and excessive. The outcome is an overstatement that misleads the public about the true impacts of CKD management, and an approach that is questionable and leads to inaccurate information about the true nature of fugitive emissions from CKD bulldozing.
94	ckdp00015	Fugitive Dust Control Techniques, Management of CKDLF Units. On page 3-14 of this background document, EPA discusses the option of applying chemical agents to the CKDLF Unit to suppress dust emissions following placement in the unit. Overall, the addition of chemicals or other materials to the landfill appears questionable since more materials will limit landfill space available for CKD disposal. In addition, has EPA considered the potential impacts that additional chemicals used as dust suppressant could have on ground water?
95	ckdp00015	Control Efficiencies for Fugitive Dust Control Technologies. To estimate fugitive emissions from rolling vehicles over wet CKD to compact the material, EPA used the unpaved fugitive road equation from AP42, and assumed that baseline conditions are represented by a 90% silt content in the CKD. This approach is unrealistic and well outside the range of acceptable inputs as described in AP42 for unpaved road fugitive emission calculations (AP42, Fifth Edition, page 13.2.1-3.). The acceptable range for silt content in the calculation of fugitive emissions in this scenario is 4.3% to 20%. The "B" quality rating of the equation in AP42 would not be retained under EPA's approach, and the baseline uncontrolled fugitive emissions that EPA uses for the two example facilities are therefore inaccurately overestimated. Furthermore, the assumed operational scenario assumed by EPA for lift development in this section (page 3-22 of the document) appears unworkable. The lift was assumed to be 1 yard deep and 3 yards wide (approximately the width of the delivery vehicle). Lifts are typically added in only increments of about one foot before any compaction. The bulldozer cannot adequately work a lift that is 1 yard high without breaking down the ledge. Lifts typically cover a large area of several acres in size and are brought up as an entire area with one foot added to one area of the landfill and so on until the entire area has been raised.
96	ckdp00015	Daily Cover of CKDLF Units. In this background document as well as the rule proposal, EPA discusses the need for the working surfaces of CKDLF units to be covered with material (i.e., soil) at the end of each operating day. Did EPA factor in emissions from handling and dumping of cover materials? The use of additional materials will increase fugitive emissions from CKD management operations due to road emissions, dumping, bulldozing, and wind erosion. In addition, this requirement essentially provides minimal net improvement of fugitive emissions, while adding substantial cost to the operation of the landfill following wetting and compaction. Because the greatest volume of fugitive emissions occur when materials are dumped onto the landfill prior to compaction, this requirement does not address this primary source of fugitive emissions, and rather will result in little, if any, incremental benefit. Finally, EPA's estimates utilizing wet compacted materials produce very low emissions estimates and off-property impacts. Based on this demonstration, it is unclear why additional treatment (i.e., daily cover) is required for wetted and compacted CKD. There does not appear to be adequate justification for adding the expense and effort if wetting and compacting will suffice as shown.

Comment Id	Document Number	Comment
105	ckdp00015	Draft Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities - Emissions Estimation Methodology. EPA supports its□□ contention of potential fugitive emission impacts from CKD management activities in the Draft Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities, prepared by the Office of Solid Waste and dated March 20, 1998. In this documentation, fugitive emission estimates were calculated utilizing equations from AP-42, and EPA makes the assumption of 90% silt content for CKD (listed on page 3-2, Exhibit 3-1 of the document). While this may be accurate for dry CKD, wet CKD partially hydrates, allowing particles to combine and adhere to one another, which results in reduced silt content. EPA's estimates do not account for this drop in silt content and emission estimates are significantly overstated using these assumptions. EPA should revise its approach and provide a more accurate value for CKD silt content.
149	ckdp00016	Pg 45651, col. 3, para 3.□□ □□ The Work Group recommends that the disposal of ash in a slurry form be investigated as an additional conditioning method.
260	ckdp00019	95% Proctor Compaction Standard (§ 259.22): The EPA's proposed standard for field compaction of CKD (95% of the Standard Proctor maximum dry density) is impractical because it is difficult to consistently achieve and is also unnecessary in order to control fugitive dust. First, the 95% compaction standard requires that the optimum moisture content be added at a pugmill. While optimum moisture content and density is achievable under controlled laboratory conditions, it is difficult continually to reproduce these conditions in the field. Factors such as temperature variability of the CKD entering the pugmill or other moisture-conditioning device can have a significant impact on the performance of the moisture conditioning process. In addition, the character of the CKD will change due to variations in raw materials or kiln process controls, which will in turn cause variations in its physical behavior in the field. Second, EPA has presented no technical basis for a 95% Proctor compaction standard. In fact, conditioning CKD to 95% Proctor is not necessary to achieve sufficient fugitive dust control. EPA's own background documents (Exhibit 3-8 from "Draft Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities" (3/20/98) [Fugitive Dust TBD]) indicate that in the simulated "wet compaction scenario," even a modest addition of water (10%) would significantly reduce dust generation. Based on the EPA's own data from the Fugitive Dust TBD and field experience with CKD, a10% moisture content in the CKD is well below the optimal value for maximum or near maximum compaction (generally between 20 and 40 % moisture). Thus the additional benefit received from 95% Proctor compaction of moisture conditioned CKD is not warranted for dust control only. EPA appears to have misinterpreted the term " conditioned" as it was originally intended in the discussion with APCA on the proposed management standards (See Attachment A). In those standards, "conditioned" CKD was intended only to mean CKD wetted to the degree necessary to achieve the objective of fugitive dust control. The resulting water content may or may not have been at "optimum water content" for 95% Proctor compaction. As discussed above, less water is required simply for dust suppression than maximum compaction. Compaction was never considered by APCA to be an essential element of CKD conditioning, but only necessary to achieve a sufficiently low hydraulic conductivity to meet a ground water performance standard. This is discussed later in our comments. APCA Recommended Change: Compaction of moisture-conditioned CKD should be encouraged as a general standard, but the prescriptive 95% compaction standard should be eliminated. The language can be modified to specify compaction by some acceptable device (for example, compactor, scraper, truck, bulldozer, etc.), that would be described in a site specific "Fugitive Dust Control Plan", that is prepared and submitted to the regulatory agency. The plan should be directed toward achieving a strictly performance-based standard. We suggest that this standard be no visible emissions beyond the property line.

Comment Id	Document Number	Comment
261	ckdp00019	Daily Cover Requirement (§ 259.22): The Fugitive Dust Control TBD does not support EPA's requirement for daily soil cover over compacted CKD. In fact, the TBD suggests that significant reductions in fugitive dust are achieved by moisture conditioning and wet compaction alone. Furthermore, the addition of daily cover mixes materials of different characteristics such that the landfill would no longer be a monofill. As a result, CKD would be less likely to form a hardened monolith, which is one of its unique properties that inhibits leachate formation. Moreover, daily cover can significantly reduce airspace and landfill site life, and placement of daily cover can potentially increase fugitive dust by disturbing an already compacted and hardened CKD surface and by the emissions generated by the loading, transport, unloading, and spreading of the soil cover. In fact, the soil is more likely to create windblown fugitive dust than is conditioned CKD, which forms a much harder surface. EPA modeled uncontrolled dust emissions from cement plants and resultant efficiencies from various control mechanisms (Section 3 of the Fugitive Dust TBD). Rather than model daily covering separately from other control mechanisms (wet compaction, etc.), which would allow these control mechanisms to be assessed independently, daily cover was modeled in conjunction with these other mechanisms (Exhibit 3-8). "Covered CKD Lifts" are shown to emit no fugitive CKD, which is intuitively obvious because the CKD is covered. There is no comparative analysis to indicate whether wet compaction of CKD alone or wet compaction plus other controls provides an acceptable level of fugitive emissions control. The Agency simply concludes that daily cover should be a technical standard for controlling fugitive dust. However, EPA's data clearly show that even a modest addition of water in a compaction scenario provides significant dust control. In fact, placement of daily cover can actually be a detriment to controlling fugitive dust because it can result in greater disturbance and a higher potential for fugitives than if the CKD is left undisturbed and sprayed with water and/or dust suppressing agents. By EPA's own admission in background documents (Section 3.2.4.5 of "Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities") mechanical disturbance can break down conditioned CKD and cause it to become airborne. Thus, the act of placing cover on the CKD may offset the potential benefits of the protection it is intended to provide. Controlled water addition to the CKDLF surface after placement has been shown to be effective in controlling dust, and does not disturb the surface. Another major disadvantage of applying daily cover is that it consumes valuable landfill air space and consequently site life. A typical daily cover application may reduce landfill site life by as much as 25 to 30%. At municipal landfills, where daily cover is typically applied, partially overcome this problem by removing the cover at the beginning of each operating day. However, at a CKD landfill this practice would result in significant disturbance of the landfill surface and increase fugitive emissions, thus defeating the original purpose of applying daily cover. Daily cover is appropriate for municipal landfills where it is intended to control vectors and odors, not fugitive dust. It is not appropriate for CKD. APCA Recommended Change: The daily cover technical standard should be eliminated as a technical standard, and left as an option for consideration in drafting a "Fugitive Dust Control Plan," which would be required to be submitted for approval. It may be reasonable, however, to suggest the placement of intermediate cover on portions of the exposed CKD that have not been active for some period of time (a typical period may be 6 months to one year) as a possible fugitive dust control alternative.

Comment Id	Document Number	Comment
307	ckdp00020	Conditioned CKD: In 5259.22, a definition of conditioned CKD is given as "Cement kiln dust that has been compacted in the field at appropriate moisture content using moderate to heavy equipment to attain 95% of the standard Proctor maximum dry density value according to ASTM D 698 or D 1557 test methods." □□ □□ ASTM D698 and D1557 are both laboratory compaction tests that provide the basis for determining the percent compaction and water content needed to achieve required engineering properties, such as shear strength, compressibility, or permeability for soil. These standards are not suitable as parameters for the control of wind dispersal of fine particulate. Furthermore, the 95 percent Standard Proctor requirement is excessive. In geotechnical engineering practice, 95 percent Standard Proctor is typically specified for engineered fill, including embankments, foundation pads, and road bases. Lafarge asserts that there is no technical basis for a requirement of this degree of compaction. The 95 percent Standard Proctor requirement is unnecessary, excessive, and impractical. □□ □□ It is unnecessary because conditioned CKD sets up and attains compressive strengths typically well above 100 pounds per square inch simply with controlled placement (see Appendix A). Conditioned CKD test results indicate that a large range of mixing water content allows for satisfactory physical performance of CKD. Field placement often dictates that operators adjust moisture so that a uniformly wetted CKD is delivered to the CKDLF. Moisture addition is often dictated by the temperature of the CKD and the production process. The process of conditioning minimizes fugitive dust and provides sufficient moisture for compaction. At many CKD sites, simply the traffic involved in placing CKD in lifts provides sufficient compaction to result in a dense, strong mass of CKD. □□ □□ The 95 percent Standard Proctor requirement is excessive because other wastes placed in landfills are not held to this stringent level of engineering control. Decades of engineered landfills have demonstrated that a variety of landfill types, from municipal solid waste to other types of industrial wastes such as foundry waste landfills and pulp and paper mill landfills, can be constructed and remain stable without applying the compaction standard applicable to building foundations and road bases. In addition, the 95 percent Standard Proctor requirement is excessive because it is an inappropriate measure of effective fugitive dust control. Effective fugitive dust control is dependent on the amount of water added, the temperature of the CKD, and the placement techniques. The excessive density requirement will not aid in meeting air criteria. □□ □□ The 95 percent Standard Proctor requirement is impractical because there is no consistent means to demonstrate compliance. Due to the chemical hydration reaction that occurs when CKD is moisture conditioned, typical methods of testing compaction do not reliably work for CKD. Lafarge's experience in managing CKD demonstrates that the nuclear density gauge cannot be used to obtain reliable compaction information for the following reasons: (1) heat releases due to the hydration process, (2) inherent variability in the moisture distribution within the conditioned CKD, (3) interference with the hydrogen-rich cementitious materials, and (4) hardening of the CKD material soon after placement. Because the moisture content of conditioned CKD changes as the material hydrates, it is impractical to measure. □□ □□ Although the proposed rule does not specify a test frequency, Lafaige seriously doubts whether a workable confirmatory test exists. It is impractical to core the CKD after 7 days or 28 days and test the compaction, although this method is normally the most reliable. Cores do not reflect the as-placed density of the material. As conditioned CKD sets up, moisture and density is in a state of flux. Finally, the ramifications of a failed test (i.e., relative compaction less than 95 percent) are unclear. Once conditioned CKD is compacted in-place and sets up, the material cannot be removed without significant expense. □□ □□ In accordance with the above discussion and the test results included in Appendix A, Lafarge recommends that the 95 percent Standard Proctor requirement for conditioned CKD placement be deleted from the technical rule requirements. We recommend that the language be revised to simply require that sufficient water be added to create a conditioned CKD that is workable (i.e., sufficient moisture to control fugitive dust) and that it be placed in a controlled manner.
308	ckdp00020	Compaction: To meet a rigid 95 percent relative compaction specification, specialized equipment (e.g., vibratory drum rollers or pad-foot compactors) would be required. Obtaining and integrating this type of equipment into a cement manufacturing plant's operations fleet within 90 days would be an economic hardship and would likely be impossible due to equipment availability. In addition, extensive laboratory testing programs would be required to obtain suitable parameters for the relative compaction requirements. Because conditioned CKD is not a typical soil, it would require specialized laboratory procedures and analysis to obtain moisture-density-relationships. Again, it would be infeasible to set up testing programs and compliance programs within 90 days. Lafarge recommends that this provision be deleted (see Subsection 6.1).

Comment Id	Document Number	Comment
309	ckdp00020	Moisture conditioning;: In addition to the technical difficulties in obtaining specified compaction densities, it would also take specialized equipment to adequately control the moisture conditioning of the CKD transported to the CKDLF units. For example, a pug mill may be required with a solid flow meter to control water addition. Based on experience, the design, procurement, installation, and integration of this type of operation would take longer than 90 days. Lafarge recommends 1 year.
310	ckdp00020	On-site hauling The proposed regulations call for the transportation of CKD in covered vehicles. The transition for open hauling of conditioned CKD to covered hauling would be a difficult one to make within 90 days. Lafarge recommends 180 days.
381	ckdp00023	The EPA's proposed fugitive dust control standard is too stringent given the success that the Midlothian, Trident, Portland, Fort Collins and Dundee plants and other Holnam plants have had in controlling fugitive dust. In particular, the 95% maximum Proctor compaction standard and the daily cover requirement are not necessary and even counterproductive in some instances. We do not measure our field compaction, and it is unlikely that the CKD would meet a 95% compaction standard in the field.
451	ckdp00027	Field Compaction. Based on field observations at cement manufacturing facilities, the addition of approximately 10% to 15% water by weight causes CKD to become "plastic", effectively eliminating fugitive emissions from windblown dust. Studies by PCA show that an additional 15% moisture content is required to compact CKD to a maximum dry density. The increase in moisture content from 15% to 30% would be for compaction purposes only. The rule proposes a field density standard, 95 % of standard proctor, to control fugitive dust. This proposal does not acknowledge the operational and weather constraints on delivering this very stringent placement condition. Also, this proposal also does not acknowledge that field density standards are not appropriate to control wind dispersion of dust. Rather, field density standards are performed to achieve engineering properties such as shear strength, and compressibility. As an example, surfaced highways typically require 95% standard proctor and off-road highways require 90% standard proctor. Considering the unclear link between compaction and dust control; the adherence to a 95% of standard proctor is not appropriate as a control mechanism to limit fugitive emissions. Moisture conditioning should form the basis of this section of the proposed rule.
511	ckdp00033	The EPA's proposed fugitive dust control standard is too stringent given the characteristics of CKD. Moisture conditioned CKD sets up and forms a crust which is successful in controlling dust. In particular, the 95% maximum Proctor compaction standard and the daily requirement are not necessary and even counterproductive in some instances. The CKD is moisture-conditioned and transported to the landfill in trucks. We do not measure our field compaction, and it is unlikely that the CKD would meet a 95% compaction standard in the field. The additional compactive effort required to meet a 95% Proctor standard would likely necessitate larger compaction equipment, a substantial cost impact. The added benefit from the additional compaction is clearly not justified. The 95% Proctor compaction standard may be appropriate for using CKD as a liner, but is not warranted for controlling fugitive dust.
839	ckdp00053	6. Holnam is opposed to daily cover requirements, 64 FR 45682 (proposed rule to be codified at 40 CFR § 259.22(a)(3). Conditioning CKD by combining or spraying with water adequately controls fugitive dust emissions. Once such conditioning is done, handling daily cover will generate more fugitive emissions than it prevents. The daily cover requirement is not appropriate. The requirement of daily cover reduces effective CKD landfill capacity by requiring landfills to place significant amounts of materials in addition to CKD into the landfills. Finally, EPA does not, in the Proposed CKD Rule, provide supporting data that shows that daily cover will reduce fugitive emissions beyond the reductions caused by conditioning with water. The requirement for daily cover on municipal solid waste landfills is based on the need to "control disease vectors, fires, odors, blowing litter, and scavenging," 40 CFR § 258.21(a),which are not matters of concern at CKD landfills. Furthermore, EPA's investigation of the effectiveness of fugitive dust controls found that wet compaction eliminated all or substantially all of the fugitive emissions from CKD. Fugitive Dust TBD. Thus EPA does not justify requiring daily cover.

Comment Id	Document Number	Comment
863	ckdp00054	The EPA's proposed fugitive dust control standard is too stringent given the success that the Midlothian, Trident, Portland, Fort Collins and Dundee plants and other Holnam plants have had in controlling fugitive dust. In particular, the 95% maximum Proctor compaction standard and the daily cover requirement are not necessary and even counterproductive in some instances. We do not measure our field compaction, and it is unlikely that the CKD would meet a 95% compaction standard in the field. [New paragraph] However, we have not received Notices of Violation using our existing dust control measures. The additional compactive effort required to meet a 95% Proctor standard would likely necessitate larger compaction equipment, a substantial cost impact. The added benefit from the additional compaction is clearly not justified. The 95% Proctor compaction standard is only appropriate for using CKD as a liner, but is not warranted for controlling fugitive dust.
865	ckdp00054	The daily cover requirement is also not appropriate for CKD. As indicated above, the Trident plant has been successful at controlling fugitive dust using its existing practices. In fact, the level of water conditioning and compaction currently employed has been approved by the MDEQ as the dust control measure. The addition of daily cover is not only not necessary, but also possibly detrimental to the objectives of fugitive dust control. CKD that has been moisture-conditioned will "set up" and hardened in the field, forming a crust, which helps to control fugitive dust. This has been witnessed at the Trident plant by the MDEQ at the closed CKD landfill (see documentation in Appendix A). The act of placing daily cover over the CKD will actually disturb the surface causing more fugitive dust. Furthermore, the daily cover uses up valuable landfill air space. As has been documented at municipal landfills, up to 25 to 30% of the air space can be taken up by daily cover. This will result in more land being used up for landfills and shorter site life.
883	ckdp00055	2.6 Comments on Fugitive Dust Requirements□□ □□ The EPA's proposed fugitive dust control standard is too stringent given the success that the Portland plant and other Holnam plants have had in controlling fugitive dust. In particular, the 95% maximum Proctor compaction standard and the daily cover requirement are not necessary and even counterproductive in some instances. We do not measure our field compaction, and it is unlikely that the CKD would meet a 95% compaction standard in the field. However, we have not received Notices of Violation from the Colorado Department of Public Health and Environment, Air Pollution Control Division., thus our existing dust control measures (see Section 2.1) are adequate.□□ □□ The existing dust control measures will be improved with the addition of conditioning equipment in 2001. However, given our experience to date at the site, it will not be necessary to compact the moisture-conditioned CKD at a 95% Proctor density effort to achieve sufficient fugitive dust control. Achieving this level of compaction would require the use of larger compaction equipment at a substantial additional cost. The added benefit from the additional compaction is clearly not justified. The 95% Proctor compaction standard may be appropriate for using CKD as a liner, but is not warranted for controlling fugitive dust.□□ □□ The daily cover requirement is also not appropriate for CKD. As indicated above, the Portland plant has been successful at controlling fugitive dust using its existing practices. The addition of daily cover is not only not necessary, but also possibly detrimental to the objectives of fugitive dust control. The addition of water at the pug mill will cause the CKD to "set up" and hardened in the field, forming a crust, which acts to control fugitive dust. The act of placing daily cover over the CKD will actually disturb the surface causing more fugitive dust. Furthermore, the daily cover uses up valuable landfill air space. As has been documented at municipal landfills, up to 25 to 30% of the air space can be taken up by daily cover. Over the long term this will require more land for landfills and a shorter site life.

Comment Id	Document Number	Comment
912	ckdp00057	2.6 Comments on Fugitive Dust Requirements□□ □□ The EPA's proposed fugitive dust control standard is too stringent given the success that the Fort Collins plant and other Holnam plants have had in controlling fugitive dust. In particular, the 95% maximum Proctor compaction standard and the daily cover requirement are not necessary and even counterproductive in some instances. We do not measure our field compaction, and it is unlikely that the CKD would meet a 95% compaction standard in the field. We are already inspected for air emissions by (1) the United States Environmental Protection Agency, (2) Colorado Department of Public Health and Environment; Air Quality Control Division, and (3) Larimer County Department of Public Health and Environment; Environmental Division. While are always striving for improved dust control measures, our existing dust control measures (see Section 2.1) are adequate to satisfy the regulatory agencies.□□ □□ The daily cover requirement is also unnecessary for CKD. As indicated above, the Fort Collins plant has been successful at controlling fugitive dust using its existing practices, which includes periodic water sprays and weekly cover. Daily cover uses up valuable landfill air space. As has been documented at municipal landfills, up to 25 to 30% of the air space can be taken up by daily cover. Over the long term this will require more land for landfills and a shorter site life.
935	ckdp00058	2.6 Comments on Fugitive Dust Requirements□□ □□ The EPA's proposed fugitive dust control standard is too stringent given the success that the Dundee plant and other Holnam plants have had in controlling fugitive dust. In particular, the 95% maximum Proctor compaction standard and the daily cover requirement are not necessary and even counterproductive in some instances. As stated above the CKD is moisture-conditioned at the pugmill and transported to the landfill in trucks. Field compaction is not measured and it is unlikely that the CKD would meet a 95% compaction standard in the field. The additional compaction effort required to meet a 95% Proctor standard would likely necessitate larger compaction equipment, resulting in a substantial cost impact.□□ □□ The EPA has presented no technical basis for a 95% Proctor compaction standard. In fact, conditioning CKD to 95% Proctor is not necessary to achieve sufficient fugitive dust control. EPA's own background documents (Exhibit 3-8 from "Draft Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities" (3/20/98) (Fugitive Dust TBD)) indicate that in the simulated "wet compaction scenario", even a modest addition of water (10%) would significantly reduce dust generation. Based on the EPA' s own data from the Fugitive Dust TBD and our own experience with CKD, a 10% moisture content in the CKD is well below the optimal value for maximum□□ or near maximum compaction (generally between 20 and 40 % moisture). Thus the additional benefit received from 95% Proctor compaction of moisture conditioned CKD is not warranted for dust control only. The 95% Proctor compaction standard may be appropriate for using CKD as a liner, but is not warranted for controlling fugitive dust.
981	ckdp00060	In EPA's Health Risk TBD, EPA concludes that most of the direct and indirect health risks associated with CKD are a result of fugitive air emissions from CKD management units and hauling. In the Fugitive Dusf TBD, EPA asserts that approximately 90% of the fugitive emissions associated with CKD come from unpaved roads on which CKD is hauled. All of SLC's plants have applied for operating permits under 40 C.F.R. Part 70. These operating permits address fugitive emissions from haul roads. The Proposed CKD Rule does not address fugitive emissions from haul roads. EPA should explain how the Proposed CKD. Rule would significantly affect the majority of fugitive CKD emissions and why this level of control of fugitive emissions justifies listing CKD as a hazardous waste.
982	ckdp00060	The new Portland cement NESHAP rule ads additional air regulation not considered in the risk assessment. 40 C.F.R. Part 63, Subpart LLL is applicable to "each conveying system transfer point at any Portland cement plant which is a major source." 40 C.F.R.5 63.1340(b)(7). A point where a conveyed material is discharged by a conveyor may include a storage unit or pile. The NESHAP does not exclude any materials conveyed in cement plants, including CKD. EPA should explain why this rule is inadequate to regulate fugitive CKD emissions□□ from transfer points and whether, in light of this rule, the potential for migration of fugitive emissions is not substantially reduced by compliance with the NESHAP.

Comment Id	Document Number	Comment
28	ckdp00009	40 CFR 259.50 Indiana believes that the requirements for closure should be modified. It is much more important for an existing facility, that doesn't have an composite bottom liner, to have a more protective cover. It is recommended that (a)(1) be changed to require any unit that does not have a composite bottom liner as specified in 40 CFR 259.30(c)(2) and (d) that closes after the effective date of this rule to have a final cover that includes a geomembrane and earthen material. However, because of the expense of the composite covers, the efficacy and protectiveness of the bottom liner and the low permeability of the CKD waste, new units designed to 40 CFR 259.30(c)(2) and (d), should only be required to have a cover that consists of 24 inches of clay at 1 x 10-7 cm/sec, a twelve (12) inch granular drainage layer of 1 x 10-l cm/sec and twenty-four (24) inches of vegetative cover material. Indiana believes that alternatives to this design should be allowed.
63	ckdp00015	Closure. EPA discusses in its proposal the outlined approach for closure requirements in the Preamble of the Register on Page 45652. EPA discusses the requirement for specific closure actions (proposed §259.50) for CKDLF units that stop receiving waste after the date of publication of the proposal, but before the effective date of the final rule. [T]his approach is clearly retroactive and essentially requires facilities to plan for compliance with a rule that has not even been finalized. A CKD landfill that became inactive after the time of the proposed rule date (July 30, 1999), and before the final rule effective date should not be held to the standards of the proposed rule.
87	ckdp00015	Proposed §259.50 and §259.51- Closure/Post-Closure Planning Requirements. EPA stipulates that both the closure plan and post-closure care plan be prepared and placed into the operating record no later than the effective date of the rule, which, according to the preamble, is 90 days after the publication of the final rule in the Federal Register. Imposing this time constraint on facilities removes the flexibility for demonstration of alternative mechanisms to meet performance standards, Facilities that want to demonstrate alternative means of final cover, for example, would be hard-pressed to develop, test and gain regulator approval for substitute mechanisms within this 90-day window. The preamble of the proposal (page 45656) - "Final Rule Effective Date, " distinguishes between those requirements that are proposed to be effective 90 days after the final rule publication date and those requirements that are proposed to be effective 24 months after the final rule publication date. In this discussion, EPA states that, among other requirements (i.e., record-keeping, CKD listing, agricultural application), closure and post-closure planning will be required within 90 days of the publication date. On the other hand, those components chosen for 24-month implementation (i.e., landfill design, ground water monitoring, corrective action, financial assurance) were assigned based on the need for interactions with or determinations by state or federal regulatory bodies. This logic contradicts the 90-day requirement for closure and post-closure planning - which would require some interaction if a performance demonstration were attempted. [T]his results in reduced flexibility and essentially compels facilities to accept the default standards, because the possibilities of obtaining alternative demonstrations in such a short amount of time are scant. EPA should revise any requirements that could allow for an alternative performance demonstration, to be implemented in the more realistic 24-month time frame following publication of the final rule.
152	ckdp00016	(Pg 45689, col. 3, para (a)(2)) The synthetic liner requirements in the final cover system alluded to in this paragraph are not warranted at all CKD landfills and that wording in para (b)(l) does not give the State enough flexibility to allow alternate final closure designs.
153	ckdp00016	(Pg 45690, col. 1, para (f), next-to-last line) Recommend changing "environmental" to environment.
334	ckdp00020	In addition, the requirements for construction quality assurance of CKDLF units are not included in the rules. Although certification of closure must be placed in the operating record, the certification requirements are unclear.
350	ckdp00020	Closure criteria included in Subpart F, §259.50 (f) and (h), require that closure activities begin no later than 30 days after the final receipt of wastes, and that a certification of closure be placed in the operating record within 14 days following closure. Both of these time frames are unreasonable. In many states, construction activities are limited to certain times of the year. In some cases, construction may need to be delayed as much as 270 days to allow completion of construction activities within a single construction season. Once construction is completed, 60 days is a more reasonable time frame for completion of closure certification. Lafarge recommends that the closure activities begin no later than 270 days after the final receipt of wastes, and that a certification of closure be placed in the operating record within 60 days following closure.

Comment Id	Document Number	Comment
453	ckdp00027	Cover System. At both new and existing CKD landfills, the proposed cover system will consist of two layers: the infiltration layer and erosion layer. The minimum standard for the infiltration layer requires that the hydraulic conductivity is equivalent to the saturated hydraulic conductivity of any bottom liner system or natural subsoils or 1 x 10 -5 cm/sec, whichever is less. Geologic features such as shale exhibit hydraulic conductivity's that range to 1 x 10 -10 cm/sec. In these environmental conditions, it is likely that liners can not be designed to achieve these conditions. Once again, the rules need to recognize the low permeability of CKD and the beneficial properties of CKD as a low infiltration layer. Considering the engineering properties (i.e. shear strength, compressibility) and the low permeability characteristics of CKD, the rules should be modified to allow the use of CKD as a low infiltration layer.
454	ckdp00027	Completion of Closure Activities within 210 Days. The rules need to recognize site constraints and regulatory delays in adopting this requirement. Climate is often a condition that determines the feasibility for constructing erosion layers and implementing final revegetation efforts. For example, in some northern states, revegetation can only be completed within a 4 to 5 month window. Regulatory approval of the closure plan is also likely to delay construction of the final cover system. Together, site constraints and regulatory approval may jeopardize compliance with this rule.
555	ckdp00034	The proposed Subpart F standards provide that the Closure Plan and final Closure Report with the independent PE certification are simply placed in the operating record, with only a notice sent to the Agency. This is not sufficient for some CKDLF units which contain elevated levels of metals. Any CKDLF unit at a cement kiln that burns hazardous waste, as well as any unit for which assessment monitoring has resulted in the need for corrective action, must have more Agency review and approval for closure of that CKDLF. Therefore, for these units, the Closure Plan and final Closure Report should be submitted to the Agency for review and approval. Also, no variance to the final cover requirements should be allowed under 259.50(b) for such units. The justification is that if releases from the CKDLF have been documented in an assessment monitoring program, then the closure of such unit must be rigorously controlled.
770	ckdp00048	Sec. 259.50. On Pg 45689, co1 3, TNRCC recommends that in para (a)(2), the hyphen in "18 -inches" be deleted.
771	ckdp00048	Sec. 259.50. On Pg 45690, co1 1, in paragraph (f), next-to-last line, TNRCC recommends that "environmental" be changed to environment.
1033	ckdpL0001	Pg. 45690, Sec. 259.50(d): The person managing CKD waste must notify the EPA Regional Administrator that a closure plan has been prepared and placed in the operating record no later than the effective date of this rule.□□ □□ The MDNR recommends the facility submit the closure plans to the permitting authority for review and approval on application of the permit.
1034	ckdpL0001	Pg. 45690, Sec. 259.50(h): The MDNR recommends the owner submit the certification to the permitting authority for review and approval. Upon submittal of the closure documentation, the permittee shall request approval of final closure of the landfill. The permitting authority should conduct a final closure inspection and closure should be approved or denied based on the closure documentation and the inspection.

Comment Id	Document Number	Comment
64	ckdp00015	Post Closure Care. EPA states that post closure care will be required for 30 years after closure of each CKDLF unit, which is comprised of repair and maintenance of the final cover and leachate collection system as well as groundwater monitoring. This specified 30-year maintenance period is excessively restrictive based on a number of reasons. First of all, CKD is an inert material, containing no organic matter that can decompose and generate landfill gas, requiring long-term monitoring. In addition, leachate generation does not occur with adequate cover and drainage controls in place and impacts to groundwater, if any, would be expected to occur within about 15 years. Thus, a more reasonable post-closure maintenance period would be up to 15 years or less, based on specific characteristics of each CKDLF unit. This estimate is based on plume modeling performed at TXI's Oro Grande facility as part of the evaluation monitoring process for an onsite landfill (Water Quality Solid Waste Assessment Test Report, Riverside Cement Company, Oro Grande, California. November 1996. EMCON. ; and Draft Evaluation Monitoring Report, Sanitary Landfill and Former Brick Disposal Area, Riverside Cement Company, Oro Grande Plant, Oro Grande, California. September 8, 1999. EMCON and SECOR International Incorporated). EPA should not categorically require a 30-year post-closure period to monitor and manage CKDLF units, but rather should revise its approach to reflect the nature of CKD as well as site-specific conditions of each individual CKDLF unit.
306	ckdp00020	Post-closure Period: The 30-year post-closure term specified in 5259.51 mimics the closure period required in Subtitle D for municipal solid waste landfills. For a municipal solid waste landfill, this post-closure term is required to assess and address the effects of waste that is susceptible to bio-degradation over time. For example, peak landfill gas generation in a municipal landfill will occur during the post-closure period. Much of the waste disposed in a municipal landfill will degrade over time resulting in subsidence, gas generation, variable leachate chemistry, and other time-dependent effects. □□ □□ In contrast, CKD is a stable mineral-compound material that does not degrade over time. Placed in a conditioned and compacted state, CKD has been demonstrated to possess high strength and low permeability. The final surface of the closed landfill and the CKD in the landfill will be stable over time. For these reasons, the main objectives of the final closure should be to develop a low-permeability cap layer, and to establish surface vegetation that resists erosion. These items do not require 30 years to establish or demonstrate; hence, a much□□ shorter closure term is warranted. □□ □□ A shorter post-closure care period is codified in many states for various types of industrial wastes, such as 10 years in Ohio and 5 years in Texas. Lafarge requests that a more careful review of other post-closure care periods for similar industrial wastes be conducted by the Agency.□□ □□ Lafarge believes that a closure period of 10 years is appropriate, provided that the post-closure maintenance and monitoring program indicates that the CKDLF is meeting its design objectives. Lafarge recommends that the post-closure care program be deemed satisfactory and complete at the 10-year point, provided that the following conditions exist: Cover vegetation is well established and self-sufficient; Slopes remain stable and devoid of erosion; The volume and quality of leachate collected are stable and acceptable; Groundwater quality, as measured by the monitoring well network during the post-closure monitoring period, does not indicate a risk to human health or the environment.
355	ckdp00020	...post-closure care requirements (proposed 40 CFR 259.51) must be met for 30 years, the same period required under hazardous waste post-closure regulations at 40 CFR Part 264.
556	ckdp00034	Likewise, no variance from the post closure care requirement of 30 years [259.5 1(b)] should be allowed for hazardous waste derived CKD disposal units, or units that have had documented releases triggering assessment monitoring and/or corrective action. Such units need the full period of post closure care given the documented releases have occurred, and the high potential for releases of metals from the disposal unit for CKD elevated in metals content.
1035	ckdpL0001	Pg. 45690, Sec. 259.51 (d): The MDNR recommends the facility submit the post-closure plans to the permitting authority for review and approval on application of the permit.

Comment Id	Document Number	Comment
1044	ckdpL0001	Pg. 45690, Sec. 259.5 1 (e) Within 14 days following completion of the post-closure care period of each CKDLF unit, the person managing CKD waste must notify the EPA Regional Administrator that a certification.. .verifying that post-closure has been completed in accordance with the closure plan, has been placed in the operating record.□□ The MDNR recommends the owner submit the certification to the permitting authority for review and approval.
154	ckdp00016	Pg 45653, col. 1, para 1, last sentence.□□ □□ The Work Group recommends that cost estimates receive prior approval by the Administrating Authority before placement in the operating record, including reducing the existing financial assurance when the cost estimate exceeds the maximum cost of closure, post-closure care or corrective action during the life of the CKDLF unit. Approval of cost estimates is required in most State rules and should be required by the proposed rule to maintain consistency with other federal and State programs. Cost estimates for landfill closure and post-closure are sometimes based on inaccurate data or false assumptions. The amount of the estimate is often contentious. Therefore, the estimates must have prior approval to ensure adequate financial assurance.
155	ckdp00016	ASTSWMO agrees that risks from CKDLFs are more similar to those from MSWLFs than those from TSDFs and therefore the third-party liability issue for CKDLFs should be treated the same as for MSWLFS.
156	ckdp00016	(Subpart G; Pg 45691, col. 1) Recommend that cost estimates, where required in this subpart, receive prior approval by the Regional Administrator, or approved State, before placement in the operating record, including reducing the existing financial assurance when the cost estimate exceeds the maximum cost of closure, post-closure or corrective action during the life of the CKDLF unit.
157	ckdp00016	Subpart G; On Pg 45691, col 1, Recommend that, with respect to financial assurance and the proposed requirement of maintaining it in the operating records, the original financial assurance mechanism(s) used to demonstrate closure, post-closure or corrective action be submitted to the Regional Administrator, or approved State, and copies placed in the operating records of the person managing CKD waste. This recommendation is made based on the fact that information needed to draw on the mechanism, including the original mechanism, is often required before the Regional Administrator, or approved State, can obtain the funds necessary to close the CKDLF.
158	ckdp00016	(Sec. 259.60; Pg 45691, col 1,) The term "owner or operator" has been introduced and used predominantly in lieu of "person managing CKD waste" in Subpart G although "person managing CKD waste" has been used exclusively in the preceding subpart. It would be less confusing if the two usages of "person managing CKD waste" (§259.61(a)(4) - second sentence, and §259.64 -second sentence) were replaced by "owner or operator", especially since the functions involved are more appropriate for an owner or operator of a CKDLF than for a person managing CKD waste.
159	ckdp00016	(Sec. 259.64; Pg 45692, co1 2, para (a)(5) middle of the paragraph) In paragraph (a)(5), middle of the paragraph, the semicolon after "whichever is later" be replaced with a comma to maintain connectivity between "initial payment" and "in the case of closure and post-closure care". This will facilitate the understanding of the intent of the statement. [See proper usage at paragraphs (f)(2) and (j)(3), and §258.74(a)(5), (b) and (c).] The same correction should be made at the following locations: a. Pg 45692, co1 3, paragraph (b), first line. b. Pg 45692, co1 3, paragraph (c), bottom line. c. Page 45693, col 1, paragraph (d), middle of the paragraph. d. Page 45694, col 2, paragraph (e)(2)(ii), middle of the paragraph.
160	ckdp00016	Also, (Pg 45694, col 3, paragraph (e)(3), middle of paragraph) "solid" be deleted from "cement kiln dust solid waste" for consistency in terminology.
162	ckdp00016	Also, (Pg 45695, col 2, paragraph (g), third line from the end) "Of" be changed to of.

Comment Id	Document Number	Comment
163	ckdp00016	Also, (Pg 45695, col 3, paragraph (j)(3), fifth line) Although not inappropriate, "solid" be deleted for consistency since "receipt of waste" has been used consistently.
165	ckdp00016	(Pg 45693, col 1, para (d)) Any regulator's dependence upon insurance to "... ensure that the funds necessary to meet the costs of closure, post-closure care, and corrective action for known releases will be available whenever they are needed" is problematic, at best. Insurance companies may deny, delay or mitigate any large claim. We can be sure that litigation will be necessary to collect a claim if any provision of the insurance contract is unclear and needs to rely on historical legal precedent for interpretation. In the case of insurance policies for closure, post-closure care and corrective action, there is no history of litigation, and therefore no precedent. A worse situation arises when the insured entity also owns, or substantially impacts the business of, the insurance company. Therefore, use of captive insurance companies to provide financial assurance for closure, post-closure care, and corrective action should be prohibited in this rulemaking.
166	ckdp00016	(Sec. 259.64(a)(b)(c)(d) Allowable Mechanisms - General) To make these mechanisms viable methods of financial assurance, each lettered paragraph should contain language to prohibit use of an affiliated company to provide the financial assurance instrument, for instance: "The provider of the financial assurance instrument shall be unrelated to the owner or operator."
167	ckdp00016	(Sec. 259.65 Pg 45695, co1 3) Recommend that the proposed Discounting in §259.65 be removed from the rules since discounting does not comply with the purpose of requiring financial assurance as specified in the preamble. The preamble states that the purpose of financial assurance is to ensure that adequate funds be available when needed to cover the costs of closure, post-closure or corrective action if the owner or operator becomes unwilling or unable to do so. Discounting allows a person managing CKD waste to demonstrate less financial assurance than the full amount required for the life of the site. Discounting relies on time and rate of return to build up a cash investment over some determined life. The problem with discounting and operational life is not knowing how long the owner or operator will be willing and able to perform closure, post-closure or corrective action and if the investment will be adequate and available when the Regional Administrator or State Director has to call on it. This is an unnecessary financial risk for a Regional Administrator or State Director to take and therefore it is recommended that the risk be removed through the removal of discounting in the proposed rule.
557	ckdp00034	The ETC supports the proposed financial assurance requirements under Subpart G that provide for closure and post closure funding. The ETC also supports the proposal to require financial assurance for third party liability, similar to that required for hazardous waste management facilities under 40 CFR 264.147. The coverage for CKD landfills should be in the amount of $4 million and $8 million for sudden and non-sudden occurrences, as discussed in the preamble at page 45653. This amount should especially be applied to CKDLF units operated by hazardous waste burning cement kilns, as well as for units that are in corrective action. These units have the greatest potential to release toxic metals to groundwater and require the greatest coverage for third party liability.
722	ckdp00048	TNRCC recommends that cost estimates receive prior approval by the Administrating Authority before placement in the operating record, including reducing the existing financial assurance when the cost estimate exceeds the maximum cost of closure, post-closure care or corrective action during the life of the CKDLF unit.
723	ckdp00048	TNRCC agrees that risks from CKDLFs are more similar to those from MSWLFs than those from TSDFs and therefore the third-party liability issue for CKDLFs should be treated the same as for MSWLFS.
772	ckdp00048	Subpart G On Pg 45691, co1 1, TNRCC recommends that cost estimates, where required in this subpart, receive prior approval by the Administrating Authority before placement in the operating record, including reducing the existing financial assurance when the cost estimate exceeds the maximum cost of closure, post-closure or corrective action during the life of the CKDLF unit.

Comment Id	Document Number	Comment
773	ckdp00048	Sec. 259.60 On Pg 45691, co1 1, the term "owner or operator" has been introduced and used predominantly in lieu of "person managing CKD waste" in Subpart G although "person managing CKD waste" has been used exclusively in the preceding subpart, TNRCC suggests that it would be less confusing if the two usages of "person managing CKD waste" (§259.61(a)(4) - second sentence; and §259.64 - second sentence) were replaced by "owner or operator", especially since the functions involved are more appropriate for an owner or operator of a CKDLF than for a person managing CKD waste.
774	ckdp00048	Sec. 259.64 On Pg 45692, co1 2, TNRCC recommends that in paragraph (a)(5), middle of the paragraph, the semicolon after "whichever is later" be replaced with a comma to maintain connectivity between "initial payment" and "in the case of closure and post-closure care". This will facilitate the understanding of the intent of the statement. [See proper usage at paragraphs (f)(2) and (j)(3), and §258.74(a)(5), (b) and (c).]
775	ckdp00048	Sec. 259.64. TNRCC recommends that the same correction be made at the following locations: A. Same page, column 3, paragraph (b), first line; B. Same page, same column, paragraph (c), bottom line; C. Page 45693, column 1, paragraph (d), middle of the paragraph; and D. Page 45694, column 2, paragraph (e)(2)(ii), middle of the paragraph.
776	ckdp00048	Sec. 259.64. TNRCC recommends that on the same page (45694), column 3, paragraph (e)(3), middle of paragraph, "solid" be deleted from "cement kiln dust solid waste" for consistency in terminology. TNRCC recommends that on page 45695, column 1, paragraph (f)(2), last line, "§259.48" be changed to §259.47 for accuracy.
777	ckdp00048	Sec. 259.64. TNRCC recommends that on the same page, column 2, paragraph (g), third line from the end, "Of" be changed to of.
778	ckdp00048	Sec. 259.64. TNRCC recommends that on the same page, column 3, paragraph (j)(3), fifth line, although not inappropriate, "solid" be deleted for consistency since "receipt of waste" has been used consistently.
779	ckdp00048	Sec. 259.64. TNRCC recommends that on the same page, same column, same paragraph, fourth line from the end, "§259.48" be changed to §259.47 for accuracy.
780	ckdp00048	Sec. 259.64. With respect to financial assurance and the proposed requirement of maintaining it in the operating records, TNRCC recommends that the original financial assurance mechanism(s) used to demonstrate closure, post-closure or corrective action be submitted to the Administrating Agency and copies placed in the operating records of the entity managing CKD waste. This recommendation is made based on the fact that information needed to draw on the mechanism, including the original mechanism, is often required before the Administrating Agency can obtain the funds necessary to close the CKDLF.
781	ckdp00048	Sec. 259.65 Pg 45695, co1 3, TNRCC recommends that the proposed Discounting in §259.65 be removed from the rules since discounting does not comply with the purpose of requiring financial assurance as specified in the preamble. The preamble states that the purpose of financial assurance is to ensure that adequate funds be available when needed to cover the costs of closure, post-closure or corrective action if the owner or operator becomes unwilling or unable to do so. Discounting allows an entity managing CKD waste to demonstrate less financial assurance than the full amount required for the life of the site. Discounting relies on time and rate of return to build up a cash investment over some determined life. The problem with discounting and operational life is not knowing how long the owner or operator will be willing and able to perform closure, post-closure or corrective action and if the investment will be adequate and available when the Administrating Agency has to call on it. This is an unnecessary financial risk for an Administrating Agency to take and the TNRCC recommends removal of the risk through the removal of discounting in the proposed rule.

Comment Id	Document Number	Comment
945	ckdp00059	The financial assurance requirements under this proposed rule are patterned after requirements in Subtitle D for municipal solid waste landfills. The lack of clarity in the insurance requirements under Subtitle D allows for compounding problems with the financial assurance demonstrations.□□ □□ [New paragraph] The first problem is the minimal requirements placed on the insurer. We suggest the regulatory language be amended to state that the insurer " . . .be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in the state where the insured activity occurs".□□ □□ [New paragraph] The second problem is the lack of sufficient clarifying language to preclude surety type coverage being demonstrated in lieu of closure 'liability' coverage. The current language references a "guarantee" that funds will be available for closure. In insurance terms, "guarantees" are normally used in surety insurance. For example, the surety guarantees that if the operator fails to close, the surety insurer will pay for the costs. A possible amendment to the "insurance" mechanism is to include a prescribed certificate of insurance form, or in some other manner, clearly identifying that the insurer is the first responsible party when it comes time to close the facility.□□ □□ [New paragraph] Finally, we are concerned that the insurance demonstration can be reasonably interpreted to allow demonstrations by captive insurers. Consideration to exclude the use of captive insurers should be evaluated. Captive insurers normally rely on, and are evaluated on, the financial ability of their parent corporation. To allow such a financial assurance, without a thorough evaluation of the parent's financial situation, is an insufficient financial assurance. If captive insurers are allowed to provide coverage, the captive insurer should be evaluated on the basis of the current federal financial means test and corporate guarantee financial assurance demonstrations.
1028	ckdpL0001	Pg 45653, col 3, para 3, next-to-last sentence and last sentence, EPA requests comment on whether or not to require financial assurance for third-party liability for CKD landfill units.□□□ □□□ The MDNR believes that if a CKD facility is placed under the jurisdiction of Subtitle C regulations, the liability coverage should be the same as other hazardous waste facilities. If a facility is at high risk and has difficulties obtaining financial assurance mechanisms, this should be another reason to require it. It is unfair to the regulated community to require facilities at a lesser risk to provide liability coverage and exempt those with a high risk.
1029	ckdpL0001	Pg 45653, col 1, para 1, last sentence, EPA requests comment on whether cost estimates need prior approval by the EPA Administrator.□□ □□ The MDNR recommends requiring approval of the cost estimates and annual approval thereafter based on the rate of inflation for closure, post-closure, and corrective action care. Any modifications in cost estimates should be submitted in writing to the director of the approved state and should require written approval from the permitting authority.
1036	ckdpL0001	Pg 45691, Set 259.61(a)(1): The term "the largest area" should be changed to "the entire area" or "all non-closed areas."
1037	ckdpL0001	Pg 45691, Set 259.61(a)(2) and 259.62(a)(2): Corporations and small independent owners/operators should be required to adjust the Financial Assurance Instrument (FAI) on an annual basis. Since cost estimates are required to be adjusted, annually, the need to calculate the rising cost of waste disposal is apparent. The rule and law should be changed to require the FAI to reflect annual adjustments of the cost estimates. The MDNR recommends the last portion of this sentence should read ". . . the owner and / or operator must annually adjust the closure cost estimate and the financial assurance instrument (FAI) for inflation."
1038	ckdpL0001	Pg 45691, Set 259.61(a) (4) and Set 259.62(a) (4): The MDNR recommends modifying the paragraph to . . .The owner and/or operator may request a reduction of the closure (post-closure) cost estimate and adjust the amount of financial assurance provided under paragraph (b) of this section, if the estimate exceeds the maximum cost of closure for the entire area, at any time, during the remaining life of the CKDLF unit.

Comment Id	Document Number	Comment
1039	ckdpL0001	Pg. 45693, Sec. 259.64(d) Insurance: The MDNR recommends the proposed rule disallow insurance policies from issuing agents, companies and/or corporations owned by the permittee/owner/operator, by a subsidiary of the permittee/owner/operator or s "sister corporation" of the permittee/owner/operator. This so-called "captive insurance" represents an unnecessary risk to states and is not recognized in some states due to insurance restrictions.
1040	ckdpL0001	Pg. 45693, Set 259.64(e) and (f): The MDNR believes the Corporate Financial Test and corporate guarantees need to be more stringent to prevent possible abuses by corporations whose financial health may be in question.
622	ckdp00038	As described in detail in APCA's comments, EPA's proposal to regulate CKD under RCRA's Subtitle C, if it has been mismanaged, is fraught with significant implementation problems.
12	ckdp00009	40 CFR 259.23(b) and (d), 40 CFR 259.30(g) and any other reference to "the public". The requirement to allow all records to be "available to the public" should be changed to read "available to the EPA regional administrator or EPA representative".
13	ckdp00009	40 CFR 259.23(c) This violates the self-audit privilege in Indiana at IC 13-28-4 and could not be adopted by the state.
168	ckdp00016	The requirements contained in proposed §259.23 are sufficiently specific and appropriate. Information is to be placed in the operating record as it becomes available and the Regional Administrator or State Director is to be notified when the documents are placed in the operating record. Providing an extended time frame for notification would deprive the Regional Administrator or State Director of timely knowledge of information such as reports of violation which are available to the public as soon as the reports are placed in the operating record. Also, ASTSWMO believes that since alternate locations must have pre-approval, no further restrictions are required for the location of the records.
169	ckdp00016	Paragraph (a) requires that the operating record for a CKDLF contain nine different types of records. The person managing CKD must notify the appropriate regulatory authority that the documents required have been placed in the operating record. There is no oversight concerning whether the documents demonstrate compliance with the rule or not. EPA should revise the rule to require that the person managing CKD submit to the regulatory authority, at the time of notification, copies of the documents placed in the operating record. This will provide the regulatory authority the opportunity to make an early determination if the documentation demonstrates adequate compliance with each of the nine requirements.
251	ckdp00019	Requirement to Report Violations. Proposed §259.23(c): This requirement does not appear in the municipal solid waste landfill regulations (part 258), which EPA used in large part as a model to draft the CKD part 259 proposal. APCA objects to this requirement being included in the CKD regulations. If anything, facilities regulated by part 258 are riskier than CKD facilities because part 258 facilities may receive truly hazardous waste (i.e., hazardous waste from RCRA small quantity generators and "household" hazardous waste). At the very least, the language should be modified to provide that such a notice be given whenever the facility personnel become aware of a violation. Precedent for this is contained in EPA's regulations for Subtitle C permits. See 40 C.F.R. §270.30(I)(6)(1).
668	ckdp00042	Subpart C contains standards related to "Air Criteria" for temporary storage of CKD, trucks transporting CKD, and CKD disposed in landfills. Nevertheless, provisions for recordkeeping, which are not limited to recordkeeping addressing these air standards, are included in this subpart. Provisions for recordkeeping should be included in the General Provisions or elsewhere in the proposed regulations as appropriate. Furthermore, § 259.23(b) requires that the EPA be notified each time certain documents are placed in the operating record and that the entire operating record be made available for public inspection. These requirements are unprecedented and will place an undue burden on facility operators and should be removed.

Comment Id	Document Number	Comment
724	ckdp00048	TNRCC believes that the requirements contained in proposed §259.23 are sufficiently specific and appropriate. Information is to be placed in the operating record a~ it becomes available and the Regional Administrator is to be notified when the documents are placed in the operating record. Providing an extended time frame for notification would deprive the Regional Administrator or State Director of timely knowledge of information such as reports of violation which are available to the public as soon as the reports are placed in the operating record.
725	ckdp00048	TNRCC believes that the proposed language in §259.23 with respect to location of the records is satisfactory. On a case-by-case basis the Regional Administrator or State Director may approve an alternate location as long as reasonable access to the public can be provided. To address EPA's concern about having the operating records available to the public, TNRCC recommends that information contained in the operating record be available on the Internet as well as maintained at the physical location where the CKD is being managed, or an alternate location as may be approved by the Administrating Authority. The location where the operating records are maintained should be available to the public during regular business hours.
755	ckdp00048	Sec. 259.23. Paragraph (a) requires that the operating record for a CKDLF contain nine different types of records. The person managing CKD must notify the appropriate regulatory authority that the documents required have been placed in the operating record. There is no oversight concerning whether the documents demonstrate compliance with the rule or not. TNRCC recommends that EPA revise the rule to require that the person managing CKD submit to the regulatory authority, at the time of notification, copies of the documents placed in the operating record. This will provide the regulatory authority the opportunity to make an early determination if the documentation demonstrates adequate compliance with each of the nine requirements.
756	ckdp00048	Sec. 259.23. With respect to paragraph (b), TNRCC recommends that information contained in the operating record be available on the Internet as well as maintained at the physical location where the CKD is being managed, or an alternate location as may be approved by the Administrating Authority. The location where the operating records are maintained should be available to the public during regular business hours.
832	ckdp00053	The Proposed CKD Rule impermissibly requires violators of any CKD management standards to notify EPA of violations. □□ □□ Proposed 40 C.F.R. § 259.23 requires persons managing CKD waste to notify EPA "whenever any standard of this rule is violated." 64 FR at 45682 (proposed rule to codified at 40 CFR § 259.23(c)). This provision creates an affirmative duty by violators of the management standards to determine whether those standards have been violated and then to notify EPA. Certain defined violations constitute "not managed in accordance with Part 259. " 64 Fed. Reg. at 45696. "CKD not managed in accordance with the standards . . . is proposed to be listed as a hazardous waste." 64 Fed. Reg. at 45641. The requirement would inappropriately require CKD facilities to make legal judgments. It would also discourage voluntary environmental compliance audits, by making any violations discovered in an audit subject to mandatory reporting and, therefore, ineligible for the benefits conferred under EPA's audit policy. This is contrary to EPA's audit policy.□□ □□ For purposes of criminal penalties under 42 U.S.C. § 6928(d), knowingly violating certain provisions of the Proposed CKD Rule may subject a person to criminal prosecution. In addition; knowingly disposing of CKD in violation of the standards, which may be construed to constitute knowingly disposing of a listed hazardous waste, may be considered a crime. Thus, failure to notify EPA that one has violated a standard could mean failure to admit violating a criminal statute. The provision requiring such admissions is an impermissible requirement for a violator to be a witness against himself in a criminal case. U.S. Const. Amend. V.
942	ckdp00059	The notice seems to imply much of the cement kiln dust (CKD) managed under this proposed rule would be handled, stored, and disposed on the site of generation (with the exception of CKD used for agricultural purposes). However, the language of the rule itself does not preclude off-site transport, storage, disposal, or agricultural use. Because this is a contingent management standard (i.e., considered non-hazardous only if properly managed), it seems appropriate to require the generator of the CKD to notify the 'person(s) managing CKD', as defined in Section 259.2, of the characteristics of the CKD and their responsibilities under this proposed rule. The person(s) managing CKD' might otherwise be unaware of the potential hazards posed by the CKD or of the management standards they might be responsible for implementing. Such notification could also prevent inappropriate uses of CKD.

Comment Id	Document Number	Comment
943	ckdp00059	We have an overall concern with the use of contingent management standards for the reclassification of hazardous waste to non-hazardous waste because the only way one can verify the reclassification is by knowing that all of the required management standards were met. If the waste remains onsite at the point of generation, this is not an issue. However, where the waste is taken offsite, unless the waste is manifested, the receiver may not have a complete record showing all the management standards were met, and could be accepting hazardous waste. Testing of the waste itself is not an indicator of its classification when contingent management standards are in place. This means that non-hazardous solid waste handlers and landfill owner/operators are at risk of accepting hazardous waste and may be assuming the associated liability.
993	ckdp00060	D. The Proposed CKD Rule impermissibly requires violators of any CKD management standards to notify EPA of violations.□□ Proposed 40 C.F.R. § 259.23 requires persons managing CKD waste to notify EPA "whenever any standard of this rule is violated." 64 Fed. Reg. at 45682 (proposed rule to codified at 40 C.F.R. § 259.23(c)). This provision creates an affirmative duty by violators of the management standards to determine whether those standards have been violated and then to notify EPA. Certain defined violations constitute "not managed in accordance with Part 259." 64 Fed. Reg. at 45696. "CKD not managed in accordance with the standards . . . is proposed to be listed as a hazardous waste." 64 Fed. Reg. at 45641. For purposes of criminal penalties under 42 U.S.C. 5 6928(d), knowingly violating certain provisions of the Proposed CKD Rule may subject a person to criminal prosecution. This requirement would inappropriately require CKD facilities to make legal judgments. This reporting obligation would also discourage voluntary environmental compliance audits, contrary to EPA's audit policy, by making any violations discovered in an audit subject to mandatory reporting and, therefore, ineligible for the benefits conferred under EPA's audit policy.□□ □□ In addition, knowingly disposing of CKD in violation of the standards, which may be construed to constitute knowingly disposing of a listed hazardous waste, may be considered a crime. Thus, failure to notify EPA that one has violated a standard could mean failure to admit violating a criminal statute. The provision requiring such admissions is an impermissible requirement for a violator to be a witness against himself in a criminal case. U.S. Const. Amend. V.
333	ckdp00020	The proposed rules are unclear regarding administrative procedures. Although §270.10 indicates that facilities that do not comply with Part 259 must comply with 40 CFR 270.69, there are no provisions within the proposed Part 259 for the application, issuance, and administration of permits. Perhaps the intent is to let states' rules cover these procedures, but the omission should be remedied.
566	ckdp00034	Under the proposed rule, permits for the CKDLF under 270.69 would only be required if the facility failed to comply with the Part 259 standards. This approach requires EPA to determine that such non-compliance is occurring, and may be difficult to enforce. Years could go by where the CKD disposal is poorly regulated and controlled, and significant environmental releases could occur. Instead, the ETC urges EPA to also apply the 270.69 permit requirements in the following cases: [bullet] 1. Permits should apply to all CKDLF operated by hazardous waste burning cement kilns. [bullet] 2. Permits must be issued under 270.69 whenever assessment monitoring indicates the need to implement further corrective action. [bullet] 3. Permits must be issued under 270.69 whenever a variance to any Part 259 standard is requested to ensure that there is some enforceable safeguard to the alternative standard. [bullet] 4. Permits must be issued under 270.69 whenever there is any concern expressed by the public over the operation of the CKDLF.
567	ckdp00034	The issuance of a permit will provide further controls and enforcement mechanisms for EPA and the state agency to oversee operations of the CKDLF. The ETC is strongly opposed to EPA sub-categorization of the 259 standards into various degrees of severity up to "egregious" violations (p. 45658/3). Particularly, the ETC is opposed to EPA's statement that: "In general, EPA believes that facilities should not necessarily be fully subjected to RCRA Subtitle C for every violation of today's proposed management standards."
784	ckdp00048	Part 270 - EPA-Administered Permit Programs: The Hazardous Waste Permit Program: TNRCC does not have any comments on this part.

Comment Id	Document Number	Comment
171	ckdp00016	Pg 45655, col 2, para 2, middle of paragraph.□□ □□ Unless information is presented that CKD passed part one and failed part two, the [ASTSWMO] Work Group concurs with the elimination of part one.
434	ckdp00026	Since 1991, all CKD from kilns burning hazardous waste have been subject to a "two-part test" under 40 CFR § 266.112. Under "part 1" of the test, the operator may assess its CKD to determine whether the concentrations of certain constituents have increased significantly when compared to CKD produced by the facility when it is not burning hazardous waste. Under this approach, one focuses on the total concentrations of hazardous constituents in the CKD, not the concentrations that may be available to the environment through leaching. Under "part two" of the test, the operator may assess its CKD to determine whether concentrations of certain constituents exhibit a hazard characteristic when applying the toxic characteristics leaching procedure (TCLP). Under this approach, one focuses on the concentrations available to the environment through leaching. Compare § 266.112(b)(1) with § 266.112(b)(2). If the CKD in question "passes" either the part 1 or part 2 test, it will remain protected by the Bevill amendment (and will not, therefore, become a hazardous waste through operation of the derived-from rule). Id.
435	ckdp00026	In its CKD proposal, EPA states that it is proposing to eliminate part of the two-part test because "the Agency knows of no case where the CKD has passed the second test, but failed the first." 64 FR 45655, col. 2. While CKRC has provided rationale to support the elimination of the 266.112 testing requirement as a whole, it is opposed to eliminating one part of the two-part test should facilities continue to be subject to 266.112.□□□ □□□ BIF cement kilns must test their CKD in accordance with the two-part test under 40 CFR § 266.112 to determine whether that CKD can retain its Bevill-exempt status as a non-hazardous waste. Thus, BIFs follow required waste analysis plans (WAP) to characterize CKD and maintain exempt status. These WAPs provide for testing CKD as often as necessary to show that CKD is not a hazardous waste.□□□ □□□ Part one of the two-part test involves "comparison of waste-derived residue with normal residue." 40 CFR § 266.112(b)(1). EPA proposes to eliminate this testing alternative. The impact of the proposed rule change is that, at BIFs where the nature of the CKD does not change by virtue of burning hazardous waste, an exceedance of the health-based limits would mean that the subject CKD would be a hazardous waste. BIFs would be denied the opportunity to demonstrate that the nature of the CKD has not changed. CKRC opposes the proposed elimination of the second part of the test.□□□ □□□ EPA's distinction between CKD from cement plants burning hazardous waste and those that do not is unwarranted. As EPA stated,"[B]ased on available data [EPA] does not accept [the] assertion of lower risk for nonhazardous waste burner CKD relative to hazardous waste burner CKD for the following reasons. . . EPA believes that the new information supports the Agency's previous conclusion that metals levels in CKD are not substantially different, whether generated by kilns that burn hazardous waste or kilns that do not burn hazardous waste." 64 Fed. Reg. at 45639 (responding to information supplied by an association of nonhazardous waste burning cement facilities requesting a "two-dust approach"). □□ □□ BIF facilities have collected CKD test data in accordance with WAPs since 1991 and CKRC concurs with EPA's conclusion that there is no difference between CKDs from burning and non-burning plants. The fact that EPA "knows of no case where CKD has passed the second test, but failed the first," id., does not mean that there is no need for a two-part test. Without the availability of the two-part test, facilities that burn hazardous waste could be compelled to build storage units that comply with 40 CFR Part 264 hazardous waste facility standards to hold all of the CKD accumulating while the CKD is being sampled and characterized. The size of temporary storage could amount to hundreds of tons. Facilities that could otherwise demonstrate that the nature of the CKD has not changed would then be faced with the burden of management of a hazardous waste, which would be unwarranted if the CKD does not change.

Comment Id	Document Number	Comment
439	ckdp00026	The cement manufacturing process is likely to produce changes in CKD characteristics with respect to metals content during changes affecting internal cyclic processes. One process shown empirically to produce such changes is recycling of CKD within kiln systems. This fact was pointed out to EPA in Portland Cement Association, 1992, An Analysis of Selected Trace Metals in Cement and Kiln Dust, PCA Report SP109T, Skokie, IL. (PCA CKD Report) at 3. EPA recognized the cyclic processes affected by CKD recycling in the RTC. RTC at 3-20. "Through recycling, chlorine and alkalies can continue to build up in the kiln system as alkalies and alkali salts tend to accumulate in the gross CKD that is generated." Id. EPA did not acknowledge in the RTC that cyclic processes affect other materials, such as trace metals, that volatilize and condense in the same temperature range as alkalies and alkali salts.□□□ □□□ Nevertheless, EPA explicitly recognized this phenomenon in the BIF rule, 56 FR 7134, 7176 (final rule, Feb 21, 1991). Thus, EPA is aware that an increase or decrease in recycling rates of CKD will increase or decrease the concentrations of certain components of the dust. Because available data and evidence, as acknowledged in the BIF rule and reported in the PCA CKD Report, supra, regarding cement kiln operation suggest that commonplace process changes other than use of waste-derived fuels may cause changes in CKD characteristics, the two-part test should be retained to permit hazardous waste-burning cement kilns to demonstrate that there is no change in CKD characteristics. While reason exists to maintain the two-part test, no reason has been presented to eliminate the two-part test. Because EPA concludes that there is no difference between waste-derived CKD and non-waste derived CKD, there is no need to regulate waste-derived CKD differently from non-waste derived CKD. Consequently, CKRC urges EPA to withdraw its proposed change to 40 CFR § 266.112(b).
521	ckdp00034	...the ETC is opposed to any change to 40 CFR 266.112, since it is important to ensure that the CKD is not significantly affected by the burning of hazardous waste. If the CKD characteristics show an impact from hazardous waste burning, more protective controls than the proposed Part 259 standards are needed.
522	ckdp00034	It is important to retain the testing requirements under 266.112 for hazardous waste burning cement kilns, as CKD containing high levles of metals needs to be regulated as a hazardous waste. Without the testing required under 266.112, there would be no incentive for cement kiln operators to limit the metals in their hazardous waste feed and to control the CKD recycle rate to maintain levels of metals in the CKD below the thresholds in Part 266.112. Further justification for retaining the 266.112 standards is the highly alkaline nature of CKD and the fact that 71% of existing CKD disposal units are located in Karst terrain. The 266.112 standards provide a further level of protection against releases of metals and must be retained.
523	ckdp00034	EPA must at a minimum retain the 266.112 standards until the CKDLF meets the Part 259 design standards and groundwater monitoring is fully in place. Given that the proposed rule allows a two year compliance date, and also allows the continued use of substandard existing units, it is important that the 266.112 standards be retained to afford some protection against metal releases during this long implementation period.
524	ckdp00034	The ETC supports EPA's position on page 45655 that CKD from hazardous waste burning cement kilns that exhibits a hazardous characteristic must be managed under full Subtitle C requirements. The ETC agrees with EPA's conclusion that such a standard will create an incentive for hazardous waste burning cement kiln operators to control their waste burning practices to maintain the CKD metal levels below hazardous levels.
575	ckdp00034	The ETC strongly opposes any changes to 40 CFR 266.112 applicable to cement kilns that bum hazardous waste. It is still very relevant if the burning of hazardous waste in cement kilns influences the CKD characteristics compared with the burning of fossil fuels. The Part 259 standards are lesser, tailored standards that do not provide the full protection given under Subtitle C. Disposal units under Part 259 do not meet the same stringent design standards as hazardous waste disposal units under Parts 264 and 270. Therefore, the fact that Part 259 standards are being applied to CKD disposal units is no justification for eliminating the tests under 266.112 that are used to determine if hazardous waste burning has a significant impact on the CKD.
660	ckdp00041	U.S. EPA should add an EPA hazardous waste number along with a listing description to 40 CFR §261.32. The listing description should explicitly state that the listed waste includes only CKD that is not managed in accordance with the standards in 40 CFR §259.

Comment Id	Document Number	Comment
797	ckdp00053	7. Holnam opposes elimination of the two-part test to determine whether hazardous waste derived CKD is a hazardous waste. EPA proposes to modify the two-part-test to determine whether CKD from hazardous waste burning cement kilns should be excluded from hazardous waste listing. 64 FR at 45655. Currently, a cement kiln that burns hazardous waste (BIF) must test its CKD in accordance with 40 CFR § 266.112 to determine whether that CKD can retain its Bevill-exempt status as a non-hazardous waste. Thus, BIFs follow required waste analysis plans (WAP) to characterize CKD and maintain exempt status. These WAPs provide for testing CKD as often as necessary to show that CKD is not a hazardous waste.
798	ckdp00053	Under current rules, the required CKD test is a two-part test. BIFs must show that either health-based limits for toxic metals and organic compounds are not exceeded or that the nature of CKD is not changed by burning hazardous waste. In practice this often means that if a health based limit is exceeded in a CKD test under the WAP, a facility will examine whether the nature of the CKD has changed. If the nature of the CKD has not changed, the CKD retains its Bevill exclusion, The Proposed CKD Rule changes this: "EPA is proposing elimination of part one of the two-part test, as set forth in 40 CFR 266.112(a)(1) because the Agency knows of no case where CKD has passed the second test, but failed the first." 64 FR at 45655 (emphasis added).□□ □□ Part one of the two-part test involves "comparison of waste-derived residue with normal residue." 40 CFR § 266.112(b)(l). EPA proposes to eliminate this testing alternative. The impact of the proposed rule change is that, at BIFs where the nature of the CKD does not change by virtue of burning hazardous waste, an exceedance of the health-based limits would mean that the subject CKD would be a hazardous waste. BIFs would be denied the opportunity to demonstrate that the nature of the CKD has not changed. Holnam opposes this proposed change.□□ □□ Moreover, EPA's distinction between hazardous waste-derived CKD and non-hazardous waste-derived CKD is unwarranted. As EPA stated,□□ □□ "[B]ased on available data [EPA] does not accept [the] assertion of lower risk for non-hazardous waste burner CKD relative to hazardous waste burner CKD for the following reasons. . . EPA believes that the new information supports the Agency's previous conclusion that metals levels in CKD are not substantially different, whether generated by kilns that burn hazardous waste or kilns that do not burn hazardous waste."
799	ckdp00053	64 FR at 45639 (responding to information supplied by an association of non-hazardous waste burning cement facilities requesting a "two-dust approach"). Holnam's BIF facilities have collected CKD test data in accordance with WAPs since 1991. Holnam concurs with EPA's conclusion that there is no difference between waste derived and non-waste derived CKDs as to metals levels and leachability. The fact that EPA "knows of no case where CKD has passed the second test, but failed the first," id., does not mean that there is no need for a two-part test. Without the availability of the two-part test, Holnam facilities that burn hazardous waste could be compelled to build storage units that comply with 40 CFR Part 264 hazardous waste facility standards to hold all of the CKD accumulating while the CKD is being sampled and characterized. The size of temporary storage could amount to hundreds of tons. Facilities that could otherwise demonstrate that the nature of the CKD has not changed would then be faced with the burden of managing a hazardous waste, which would be unwarranted if the CKD does not change.
800	ckdp00053	The cement kiln process is likely to produce changes in CKD characteristics with respect to metals content during changes affecting internal cyclic processes. One process shown-empirically to produce such changes is recycling of CKD within kiln systems. This fact was pointed out to EPA in Portland Cement Association, 1992, An Analysis of Selected Trace Metals in Cement and Kiln Dust, PCA Report SP109T, Skokie, IL. (PCA CKD Report) at 3. EPA recognized the cyclic processes affected by CKD recycling in the RTC. RTC at 3-20. "Through recycling, chlorine and alkalies can continue to build up in the kiln system as alkalies and alkali salts tend to accumulate in the gross CKD that is generated." Id. However, EPA did not acknowledge in the RTC that cyclic processes affect other materials, such as trace metals, that volatilize and condense in the same temperature range as alkalies and alkali salts. Nevertheless, EPA explicitly recognized this phenomenon in the BIF rule, 56 FR 7134, 7176 (final rule, Feb 21, 1991). Thus, EPA is aware that an increase or decrease in recycling rates of CKD will increase or decrease the concentrations of certain components of the dust.

Comment Id	Document Number	Comment
801	ckdp00053	Because available data and evidence, as acknowledged in the BIF rule and reported in the PCA CKD Report, regarding cement kiln operation suggest that commonplace process changes other than use of waste-derived fuels may cause changes in CKD characteristics, the two part test should be retained to permit hazardous waste-burning cement kilns to demonstrate that there is no change in CKD characteristics. There is reason to maintain the two-part test and no reason to eliminate the two-part test, and there is no rational basis to change 40 CFR § 266.112(b) as proposed. Because EPA concludes that there is no difference between waste-derived CKD and non-waste derived CKD, there is no need to regulate waste-derived CKD differently from non-waste derived CKD. If any change is appropriate at all with respect to the requirements for waste derived CKD, it is a change in 40 CFR § 261.4(4)(b)(8) to read "(8) Cement kiln dust waste." In the absence of this alternative, EPA should leave 40 CFR § 266.112(a) unchanged. Consequently, Holnam urges EPA to withdraw its proposed change to 40 CFR § 266.112(b).
802	ckdp00053	Holnam strongly disagrees with EPA's belief that cement plants can readily control the metals content of CKD. EPA states, "EPA believes that subjecting characteristically hazardous CKD from hazardous waste burning kilns to RCRA Subtitle C regulations will provide an incentive for cement kiln owners and operators to reduce metals levels in their CKD to remain eligible for the tailored standards." 64 FR at 45655. This statement suggests that notwithstanding the overriding influence of CKD recycling on metals levels in CKD, cement kilns can readily reduce the metals levels in CKD. This policy would create an incentive for cement kilns to waste more CKD and not to recycle CKD. Such a practice would work directly against efforts at waste minimization by cement plants. Holnam believes that EPA has not justified any regulation that distinguishes hazardous waste-derived CKD from non-hazardous waste-derived CKD, and that, a consequence, such regulation would be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 USC § 706(a)(2).
803	ckdp00053	Finally. if EPA believes that CKD from hazardous waste-burning cement kilns is different from non-waste-derived CKD, EPA must conduct an analysis of data on waste-derived CKD and its environmental impacts to demonstrate that a different rule for the latter is justified. EPA has not demonstrated that the factors in 40 CFR 261.11(a)(3) were evaluated with respect to such CKD. Thus, EPA cannot now adopt a different rule for each of the two wastes without first conducting a complete analysis under 40 CFR 261.11 (a)(3).
51	ckdp00014	The NJDEP SRP recommends that the proposed Federal regulation should be amended to allow CKD to be used as a product without first becoming regulated as a waste. Accordingly, the proposed regulations should expressly state, "CKD when used as a product is not a waste as defined by 40 CFR Parts 259 and 261".
119	ckdp00016	(Secs. 261.4(b)(8)(ii)(A)(2) through (7) and 261.4(b)(8)(ii)(B)) Recommend that wherever "Regional Administrator" is used it be followed by (or the State, in approved States) as is found in 261.4(b)(8)(ii)(A)(l).
120	ckdp00016	(Pg 45696, col. 2, para (b)(8)(ii)(A)(6)) Is there a grace period for location restrictions?
121	ckdp00016	(Pg 45696, col. 2, para (b)(8)(ii)(B)) Facilities are required to correct any mismanagement practices within thirty days of receiving written notice. Thirty days may not be sufficient time. EPA should change the time allowed to correct mismanagement practices to ninety days, and add a provision that the Regional Administrator or State Director can extend the time period upon request of the facility.
240	ckdp00019	When one reviews the list of requirements specified in proposed §261.4(b)(8)(ii)(A)(l)-(6) one may wonder what type of violation would not be "egregious." For instance, under proposed §261.4(b)(8)(ii)(A)(l), a violation of any provision of proposed §259.22 would be "egregious." Yet under proposed §259.22(a), any violation of any requirement of a Clean Air Act State Implementation Plan (SIP) would be a violation of §259.22. As is obvious from even a cursory review of any SIP (See 40 C.F.R. part 52), each SIP contains a plethora of purely procedural, non-substantive requirements such as reporting and recordkeeping, monitoring, etc. It would be nonsensical to view any single violation of any such requirement as "egregious."

Comment Id	Document Number	Comment
242	ckdp00019	Due process: Under the second and third basic ways Subtitle C may be triggered under the proposal, a mere notice from the Regional Administrator alleging a violation (or alleging "repeated" violations) would suffice. See proposed §261.4(b)(8)(ii)(A)(7), §261.4(b)(8)(ii)(B). No opportunity for the facility to contest or dispute the allegations is contemplated or provided under the proposal. Thus, on the mere unsubstantiated whim of a regional official, non-hazardous waste could suddenly become hazardous waste. Even if regional personnel honestly believed that serious violations were occurring, the facility may well have knowledge of facts or other circumstances that would show no violation. As the consequences of becoming a hazardous waste are overwhelmingly significant to the facility (and indeed, to any party who becomes involved in the waste's "cradle-to-grave" life), we believe the proposal is in this regard manifestly unfair and violates fundamental tenets of due process of law.
243	ckdp00019	It is important to stress in this context that the entire structure of proposed §261.4(b)(8) is defective as a matter of administrative and constitutional law. For even in the case of so-called "egregious" violations, the proposed regulation is totally silent as to the issue of under what process a facility or party may be deemed to "fail to comply" with one of the specified requirements, thus triggering Subtitle C. Most certainly, a mere notice or allegation from a regional office could not suffice to convert a non-hazardous waste into a hazardous waste, because of due process requirements, as discussed above. To pass constitutional muster, some form of notice and comment or opportunity for a hearing would have to be provided before a regional allegation could be converted into a finding sufficient to trigger hazardous waste status. Unless the regulation is re-written to provide due process before hazardous waste/Subtitle C status is triggered, it is illegal and unconstitutional. See Goldbero v. Kelly, 397 U.S. 254 (1970).
254	ckdp00019	We believe, however, that the proposed regulatory language EPA has chosen to articulate this exclusion (proposed §261.4(b)(8)(iii) is not sufficiently clear. This language refers only to CKD waste "that has been listed in Subpart D of this part." 64 Fed. Reg. at 45697, col. 2. Yet it appears from the structure of the proposed regulation that if and when Subtitle C is triggered at a facility, there would be no "listing" in Subpart D. Certainly, at least, there is no language purporting to modify Subpart D anywhere in the proposal. We suggest it may be more appropriate for EPA to word §261.4(b)(8)(iii) in a manner that refers to CKD waste that has become hazardous waste by operation of §261.4(b)(8)(ii).

Comment Id	Document Number	Comment
339	ckdp00020	If the conditions or risks that caused the Agency to regulate CKD under RCRA or to include a specific performance or location standard in the proposed rules do not relate to a specific circumstance or facility, the regulations should provide the Regional Administrator with the authority to issue a variance from individual requirements of the proposed rule. Lafarge proposes the following variance language: □ □ [bullet 1] Any person may request, in writing, the Regional Administrator to issue a variance from any provision of the rules at Parts 259 or 266. □ □ [bullet 2] Application: The request for variance shall identify the provision(s) of the regulations from which the variance is requested and state the reasons for requesting the variance, the justifications for it, and all pertinent data regarding the request as the Regional Administrator may require to satisfy the decision criteria for the variance.□□ □ [bullet 3] Decision Criteria: To be approved, the applicant must demonstrate that the construction and/or operation and/or closure/post-closure/financial assurance activities at the CKDLF will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bio-accumulation, persistency in the environment, toxicity, chronic toxicity, or synergistic propensities. □ □ [bullet 4] Procedures: 1. In granting a variance, the Regional Administrator must identify the specific provision(s) from which the variance is granted and shall state any terms and conditions relating to the variance. 2. Upon the filing of a petition for a variance, the Regional Administrator may grant the variance, grant the variance with modifications or restrictions, or deny the variance. However, should the Regional Administrator fail to render a final decision within 180 days of the filing of the initial petition for the variance, the variance shall be deemed to be granted, and the party petitioning for the variance shall be permitted to construct or operate its facility in accordance with the variance requested. 3. If the Regional Administrator determines that the variance does not meet the decision criteria, the Regional Administrator may, for a facility receiving a variance because of a failure of the agency to act on the petition for variance within the prescribed period, subsequently revoke the variance after providing the petitioner with notice and an opportunity to be heard at an evidentiary hearing. Such a revocation shall only become effective after a reasonable period of time sufficient to enable the petitioner an opportunity to modify its operations to comply with the regulations absent the variance. □ □ [bullet 5] Appeal: The decision to grant or deny a request for a variance may be appealed under subpart E of 40 CFR Part 124, Procedures For Decision Making.
352	ckdp00020	Similarly, can the EPA waive Subtitle C closure and post-closure requirements if it concurs that a facility has resolved its CKD management violations and should return to excluded status?
431	ckdp00026	First, EPA's rejection of a two-dust approach is derived from the fact that there is no significant difference between CKD produced at plants that burn waste-derived fuel and those that do not. This fact is supported by this rulemaking record and the enormous amount of data collected by industry via compliance with the BIF regulations under 266.112. This database provides a technically sound and data-supported basis on which to reduce the testing burden of 266.112. Once management standards are in place that EPA believes are protective of human health and the environment, the need for this testing burden becomes highly questionable. Under 266.112, CKRC members have spent hundreds of thousands of dollars each year for the past nine years and have collected well over 200,000 data points that consistently demonstrate the low-toxicity characteristics of CKD from BIF plants; thereby, more than satisfying the original intent of promulgating the 266.112 requirements. It would be prudent for the Agency to reassess the appropriateness of continued testing under 266.112. The Agency should properly consider the wealth of information that has been submitted via compliance with this testing requirement which clearly indicates that continued testing provides no benefit to health and the environment. Thus, CKRC questions the justification for continuing to reference 266.112 in part 261.4(b)(8) of this rule. EPA should remove the reference to 266.112 in part 261.4(b)(8). At the very least, EPA should consider developing an approach that would enable facilities to demonstrate through data that ongoing testing is no longer necessary.

Comment Id	Document Number	Comment
443	ckdp00026	The proposed regulatory language EPA has chosen to articulate this exclusion (proposed §261.4 (b)(8)iii)) is not sufficiently clear. This language refers only to CKD waste "that has been listed in Subpart D of this part." 64 FR at 45697, col. 2. Yet it appears from the structure of the proposed regulation that if and when Subtitle C is triggered at a facility, there would be no "listing" in Subpart D. There is no language purporting to modify Subpart D anywhere in the proposal. It may be more appropriate for EPA to word §261.4(b)(8)(iii) in a manner that refers to CKD waste that has become hazardous waste by operation of §261.4(b)(8)(ii).
590	ckdp00036	The Mason City plant also has concerns about the potential hazardous waste designation of mismanaged CKD. Aside from our previously stated position that the low risk that CKD poses does not warrant a listing as a hazardous waste, the rule is unworkable in its present form. We believe that it will be very difficult to avoid scenarios that may be considered mismanagement of CKD simply during day-to-day operations, even using the most careful practices. For example, a kiln baghouse screw could lock up and CKD could spill onto the concrete pad below, this would then be considered a hazardous waste based on a normal operational upset.
695	ckdp00046	CKD not meeting the conditions of the proposed exclusion should be managed according to existing hazardous waste management requirements. The Department recommends that the agency not adopt specific hazardous waste management requirements for CKD that is not managed according to the proposed solid waste management standards. The Department believes that the proposed 266 standards are similar to existing hazardous waste management requirements. The proposed conditional exclusion is a very attractive incentive for people to manage their CKD as solid waste and the Department expects few if any facilities to opt for managing their waste as a hazardous waste. If a facility does not follow the conditions under the conditional exclusion, they should be subject to the full hazardous waste management requirements, not another set of requirements that are separate from the existing hazardous waste management requirements.
782	ckdp00048	Sec. 261.4 On Pg 45696, co1 2, para (b)(8)(ii)(A)(5), second line, TNRCC recommends as a reminder that "proposed today" be deleted before promulgation.

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831	ckdp00053	D. The Proposed CKD Rule does not clearly explain when CKD becomes a hazardous waste.□□ .□□ The Proposed CKD Rule identifies several categories of mismanagement that would lead to removal of the hazardous waste listing exclusion. 64 Fed. Reg. at 45696 (proposed rule to be codified at 40 C.F.R. $0 261.4(b)(8)(i) and (ii)). According to EPA, "[I]f persons mismanage-CKD waste, depending on the nature in which it is mismanaged, the non-compliant waste may become. subject to Subtitle C requirements which would include enforcement action for violations of the proposed management standards." 64 Fed. Reg. at 45642. However, EPA's proposed hazardous waste listing of "mismanaged" CKD is not sufficiently definite for a person managing CKD to know whether that CKD is a hazardous waste. Thus, persons managing CKD would not have sufficient warning that their conduct could become subject to enforcement of hazardous waste rules, or criminal enforcement pursuant to 42 U.S.C. § 6928(d).□□ □□ The Proposed CKD Rule would amend 40 CFR § 261.4(b)(8) by limiting the exclusion to hazardous waste listing to CKD waste "so long as it is managed in accordance with Part 259 of this chapter." 64 FR 45696. The amendment then clarifies that CKD is "not managed in accordance with Part 259" when a facility fails to comply with any management standard listed in that subsection. Id. Of particular concern are proposed subparagraphs 40 CFR §§ 261.4(b)(8)(ii) (A) and (B), which list the circumstances under which CKD would not be in compliance. 64 FR at 45696. The following are examples of possible noncompliance under § 261.4(b)(8)(ii) which are of particular concern: [First bullet] Many of the management standards in the Proposed CKD Rule are subject to default technology-based standards: CKD would only become hazardous waste subject to RCRA Subtitle C regulation when persons managing the waste commit egregious or repeated violations, such as failing to install controls designed to meet the performance standards, or failing to manage CKD in units that conform to specific default technology-based standards. 64 Fed. Reg. at 45642. [Second paragraph of first bullet] Many of the proposed management standards allow persons to apply to the EPA Regional Administrator for permission to comply with performance standards as an alternative to compliance with the default standards. Thus, EPA has discretion to determine whether aproposed management approach complies with the CKD Rule. EPA has not provided a sufficiently objective basis for determining whether or not facilities that manage CKD are in compliance with the proposed Part 259 standards if they opt for performance standards. By comparison, under a permit program, a person receiving a waste management permit is provided sufficient information within the permit application and the permit to understand what conduct constitutes compliance with the permit. Under the Proposed CKD Rule, each person managing CKD must be able to demonstrate compliance with default or performance criteria within specified time frames of six months and two years, depending on the standard. If EPA and the facility do not resolve certain compliance issues within the applicable time frames, the facility could suddenly find itself in violation of one or more of the criteria for listing CKD as a hazardous waste under proposed subparagraph § 261.4(b)(8)(ii). [Third paragraph of first bullet] Thus, a facility opting to comply with performance standards could become a generator of hazardous waste CKD and then be subject to civil or criminal enforcement each time the EPA Regional Administrator disagrees with the facility as to the adequacy of the CKD management approach. Those facilities that do not obtain EPA's approval within the time frames allowed for compliance will be compelled to either dispose of CKD off-site at prohibitive cost or risk becoming hazardous waste CKD generators. This creates unreasonable risk of hazardous waste listing or civil/criminal enforcement. Thus, conditions that may lead to hazardous waste listing are impermissibly vague; [Second bullet] The Proposed CKD Rule appears to give the EPA Regional Administrator the authority to determine whether specific CKD is a hazardous waste based on whether the management standards used by a facility are appropriate. This discretion is not authorized by RCRA. In fact, 42 USC § 6921(b)(l) requires that the Administrator "promulgate regulations . . . listing particular hazardous wastes." Thus, EPA should promulgate a regulation each time it chooses to list particular CKD as hazardous waste; [Third bullet] Certain types of violations have no objective criteria for determining whether the management practices will cause CKD to be a hazardous waste. Under proposed 40 CFR § 261.4(b)(8)(ii) (A)(7), 64 FR 45696, repeated violations, i.e., repeated failures to comply with provisions of the Proposed CKD Rule, are described as "not managed in accordance with Part 259." Id. No number of repeat violations is given as a criterion for "failure to comply." This is not a sufficiently objective basis either for hazardous waste listing or for civil or criminal enforcement. Facilities that handle CKD would not know how many violations of a certain type would cause a certain quantity of CKD to become a hazardous waste. EPA has not established any criteria for determining how many violations justify such a determination. Therefore, this provision is impermissibly vague, and susceptible to arbitrary application; [Fourth bullet] Under proposed 40 CFR § 261.4(b)(8)(ii)(B), failure to comply with certain Part 259 standards within 30 days of receiving a written notice of non-compliance is also described as "not managed in accordance with Part 259." Id. EPA does not define "failure to comply" as used in this subparagraph. For example, it is not clear whether "failure to comply" means failure to complete corrective actions or failure to initiate corrective actions. Thus, this is not a sufficiently objective basis either for hazardous waste listing or civil/criminal enforcement. Therefore, this provision is impermissibly vague. Assuming that other parts of the Proposed CKD Rule are lawful, EPA should clarify that initiating corrective action within 30 days complies with this subparagraph; and [Fifth bullet] Under the proposed § 259.20, EPA states, "This section applies to cement kiln dust waste placed in temporary storage. Such CKD must be covered or otherwise managed to control wind

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		dispersal of dusts." 64 FR at 45682. Under state air quality programs, fugitive emissions from CKD storage units are likely to result in warnings or notices of violation requiring some sort of corrective action. Under proposed § 261.4(b)(8)(ii)(A)(2), such an occurrence constitutes a failure to comply with a proposed Part 259 standard, which may automatically render such CKD a listed hazardous waste. Thus, the CKD in such temporary storage may become subject to many other hazardous waste standards. Under proposed § 261.4(b)(8)(ii)(A)(1), similar fugitive dust incidents anywhere at a CKD facility could result in CKD being designated as listed hazardous waste. [Second paragraph of the fifth bullet] Moreover, if only "mismanaged" CKD were a hazardous waste under the Proposed CKD Rule, chemically and physically identical CKD at a facility could be hazardous waste in one location, storage device, or transportation device within the facility and a non-hazardous waste in another location, storage device or transportation device within the same facility. If a plant stores identical CKD in two tanks and one tank emits fugitive dust in violation of a SIP, the latter tank may contain hazardous waste CKD. Such a regulatory distinction without a chemical or physical difference in the CKD is arbitrary and capricious. EPA also should clarify the mechanism for determining that a given quantity of CKD has become a hazardous waste so that facilities are certain as to the extent of the newly listed hazardous waste that should be managed differently from the nonhazardous waste CKD. The uncertainty of when this transformation to hazardous waste takes place will create considerable confusion as to whether a facility storing CKD must subsequently handle the CKD as a hazardous waste.
957	ckdp00060	SLC requests, in the event that EPA applies its active management policy to CKD management units, that EPA amend either 40 CFR § 261.4(b)(8) or 40 CFR Part 264 Subpart S to specifically exclude CKD regenerated as a result of active management for purposes of remediation, recycling, or beneficial use, from listing as hazardous waste.
441	ckdp00026	EPA is proposing to exclude clinker from regulation as a derived-from hazardous waste when certain CKD is reintroduced to the cement manufacturing process. As EPA explains, this exemption may be necessary to protect clinker from situations in which CKD becomes classified as a hazardous waste under "certain regulatory scenarios." 64 FR at 45655, col. 2. We strongly endorse EPA's proposed approach of specifying that no matter what the regulatory "scenario" might be with respect to reintroduced CKD, any resulting clinker would not in any way be deemed regulated under RCRA Subtitle C.
442	ckdp00026	EPA is correct that "when reintroduced, CKD does not contribute any constituents to clinker production that are not already present in the production process." Id. Moreover, EPA has correctly concluded that such clinker poses no real threats to human health or the environment. Id.
1001	ckdp00061	EPA has determined that a need for CKD management standards exists because (a) there is evidence that the potential exists for hazardous constituents, including metals, to migrate from CKD waste sites and that CKD has caused documented impacts at levels of concern, (b) EPA□□□ conducted risk screening and risk modeling studies which identified potential risks from on-site management and off-site uses of CKD, (c) EPA found that the pH level in precipitation run-off from CKD storage and waste piles exceeded the 12.5 characteristic standard for corrosivity, and (d) EPA believes that existing regulations and practices pertaining to CKD are inadequate.□□□ □□□ Without commenting on the validity of EPA's determinations for CKD, Solite submits that they do not apply to LAKD [lightweight aggregate kiln dust]. For LAKD, (a) there is no documented evidence of damage, (b) because of the low volumes generated and low intrinsic hazard associated with LAKD it is highly unlikely that any site-specific risk modeling studies would find any significant risks, (c) LAKD is not highly alkaline and does not generate high pH leachate, and (d) existing non-hazardous waste regulations are adequate. Because of the low levels of hazardous constituents associated with LAKD, combined with its low permeability and the relatively low volumes in which it is generated, a landfill meeting Subtitle D standards would be a LAKD disposal option fully protective of human health and the environment. With regard to airborne releases, Solite plants are subject to air permits and regulatory requirements that include controls on LAKD emissions, including fugitive emissions.

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1002	ckdp00061	EPA should specify in 40 CFR Part 261 that LAKD generated by lightweight aggregate kilns subject to the NESHAPS for hazardous waste combustors is not a hazardous waste when it is reintroduced into the production process, recycled for use as a lightweight aggregate product, or used for other beneficial purposes. LAKD that is disposed of also should not be subject to regulation as a hazardous waste provided that it does not have any hazardous characteristics.
1003	ckdp00061	The technical appendix to these comments contains analytical data on the chemistry of LAKD. This data applies only to baghouse dust. Solite's plants do not presently generate sludge, and this rulemaking does not address the status of the "raw fines" generated by crushing and screening slate and shale raw materials. Solite has not used wet scrubbers as a pollution control device for hazardous waste burning kilns since before the effective date of the Boiler and Industrial Furnace Rule. Accordingly, We have not included old data on sludge composition in this submission. Such data has been submitted to EPA in previous Bevill Amendment-related rulemakings. However, Solite will make such data available to EPA if requested.
1004	ckdp00061	Solite Corporation is unaware of any damage cases involving the management, use, or disposal of LAID. Solite believes that the potential environmental dangers associated with LAKD are minimal, for the following reasons:□□ □□ (a) LAKD is intrinsically a low hazard material, as demonstrated by the analytical data presented in the technical appendix. Also, as a result of the implementation of the NESHAPS for Hazardous Waste Combusters (64 Fed. Reg. 52828, September 30, 1999) the already low level of hazardous constituents in LAKD will be tirther reduced. Specifically, the NESHAPS emissions standards include limits for semivolatile and low volatile metals that are substantially more stringent than the existing limits applicable to Solite facilities under the Boiler and Industrial Furnace Rule. Compliance with the new standards is based on limiting the feed rates of semivolatile and low volatile metals in waste fuel. Also, the new, more stringent NESHAPS dioxin/furan standard is based on quenching kiln gas temperatures at the kiln exit so as to minimize dioxin&ran formation, thereby minimizing any dioxin/&rans that might be associated with LAKD. Finally, the NESHAPS Hydrochloric acid/chlorine gas standard is based on the use of dry sorbent (e.g. lime) injection, which by increasing the lime content of LAKD will further reduce both the concentration and leachability of any metals contained in the LAKD.□□ □□ (b) As EPA has previously noted, LAKD is not generated in volumes that are as high as CKD or other Bevill wastes such as fossil fuel combustion waste. The average volume of fossil fuel combustion waste generated by a power plant is over 230,000 tons per year. A large cement plant can generate 200,000 tons of CKD per year. In contrast, the current average generation rate for LAKD from a Solite lightweight aggregate plant is approximately 12,000 - 15,000 tons per year. Because it is generated in low volumes, LAID would pose far smaller risks to public health and the environment than other Bevill wastes, even if it possessed the same intrinsic level of hazard and was managed in the same ways.□□ □□ (c) The existing and potential future uses of LARD do not involve land disposal, as explained below. If landfilling of LAKD becomes necessary in the future, it will take place in industrial waste landfills subject to Subtitle D requirements.

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1005	ckdp00061	All LAKD that is currently generated at Solite plants is recycled as an ingredient in a product known as “block mix,” which is used in the manufacture of lightweight concrete masonry blocks. The LAKD is pneumatically conveyed from the bag house in which it is generated to a silo. It is then added to lightweight aggregate that has been crushed and sized to produce block mix. Block mix is composed of lightweight aggregate ranging in size from 3/16 of an inch in diameter to very fine material. The LAKD comprises less than ten percent of the block mix. Fine material is a necessary component of block mix, and if it is not introduced in the form of baghouse dust, crushing must produce it. The block mix must comply with ASTM Standard No. C 33 1. The block mix is then shipped to concrete block plants, where it is combined with cement, sand and other aggregates, and formed into lightweight concrete blocks. Lightweight concrete blocks are typically used in□□ walls and other structures.□□ □□ Although essentially all LAKD produced by Solite is presently used in block mix, it is anticipated that because of changes in Solite’s product mix, LAKD may be used for other purposes in the future. If Solite’s plants should shift to the production of a high percentage of structural lightweight aggregate, which does not contain fine material, Solite may produce more LAKD than is necessary for use in block mix. Alternative uses of LAKD could include use as a raw material in the manufacture of portland cement, as a placement or enhancer of cement, as a mineral filler in hot plant mix asphalt, as a mortar pigment, as an oil absorbent, as a paint additive, and, because of its low permeability, possibly as a landfill cap material. Finally, because of lack of demand or uneconomically high transportation costs, at some point in the future it might be desirable to dispose of excess LAKD in an industrial waste landfill.
33	ckdp00010	Based on experience with similar requirements for solid waste landfills, it is recommended that the 24-month period be extended to at least 36 months to allow enough time for compliance. Site characterization, design regulatory review, and construction of a CKD landfill can not be realistically achieved in 24 months.
79	ckdp00015	Furthermore, the retroactive nature of the §259.50 requirement outlined in Section IV, Part J leaves one to question how approval can be gained through an agency under a rule which is not yet in place. The closure requirements for landfills closed prior to the effective date somehow have to be conducted under an approved closure plan which must meet rules which won't exist at the time of closure. This implies that alternate procedures that will be afforded facilities after the rule is in place are not available for landfill closures prior to the effective date of the rule. It is difficult for facilities to envision closure under a rule that is not yet final. How do we adjust closure if the requirements from the proposed rule change prior to final issuance? A CKD landfill that became inactive after the time of the proposed rule date (July 30, 1999), and before the final rule effective date should not be held to the standards of the proposed rule.
80	ckdp00015	While facilities that implement EPA's default technical standards could ostensibly meet the requirements of the 90-day components outlined by EPA, it is doubtful if this amount of time will be sufficient enough to allow alternative demonstrations to be made. In fact, in order for alternative demonstrations to be made, such as final cover, closure or fugitive emission control alternatives, correspondence with the EPA Regional Administrator or authorized state agency will be necessary. Does EPA not reason that the purpose for allowing more time (i.e., 24 months) for specific actions to come into compliance with the rule is to give facilities time to interact with regulatory authorities as well as to perform testing and scientific analysis? These kinds of activities are also associated with alternative performance demonstrations, not only landfill design or financial assurance. Facilities should have the same opportunities afforded them for activities that require time for regulatory interaction and analysis - regardless of whether they are alternative demonstrations, or design, corrective action, groundwater monitoring or financial assurance actions. What EPA is proposing in the Register is a rule that allows little, if no flexibility in the amount of time given to make alternative demonstrations. Moreover, it results in reduced flexibility and essentially compels facilities to accept the default technical standards, because the possibilities of obtaining alternative demonstrations in such a short amount of time are scant. EPA should revise all requirements that could allow for an alternative performance demonstration to be implemented in the more realistic 24-month time frame following publication of the final rule.

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231	ckdp00019	The most problematic part of the proposal is EPA's attempt to make certain requirements effective upon proposal. The way the proposal is currently drafted, the only CKD disposal units that will be totally exempt from the requirements of the new part 259 rules are those that stopped receiving CKD as of August 20. 1999, when the proposal appeared in the Federal Resister. 64 Fed. Reg. at 45656, col. 3. If a disposal unit receives CKD after that date, the proposal specifies that the unit must, within six months after receipt of its last waste, comply with the new final cover requirements of proposed s259.50. Otherwise, the CKD unit will be fully subject to the new part 259 rules (even though the unit may have been closed years before the new rules are finalized and become effective). See $259.1 (d). While one could presume that this was an error, EPA makes it clear in the preamble that it was not. EPA says it intends to impose "some regulatory requirements" for units that stop receiving waste after the date of proposal because this "would help prevent releases of CKD waste." 64 Fed. Reg. at 45656, col. 3. EPA further explains this would help limit the production of leachate and fugitive dust. Id. EPA is thus attempting to impose requirements that govern present-day conduct through a regulation that has only been proposed for public comment. Under the Administrative Procedure Act, EPA may in limited circumstances issue a rule without prior notice and comment. 5 U.S.C. §553(b)(3)(B). EPA did not even attempt to do this here, however. As the proposed regulations are now drafted, disposal units that receive CKD after August 20, 1999, are subject to the landfill "cover" requirements specified in $259.50 of the proposed regulation. See proposed s259.1 (d). The proposal also states that this cover must be installed within six months after the unit's last receipt of CKD waste. Id.□□ Both substantive and procedural requirements are imposed by proposed 5259.50. For instance, detailed standards respecting hydraulic conductivity and minimum infiltration layer specifications are imposed. §259.50(a). Moreover, the proposal specifies that closure activities must be initiated within 30 days after the unit has received its last deposit of CKD. §25950(f). In addition, notifications must be made to the Regional Administrator, although it is not clear whether EPA intends for these subsections to be immediately effective. §25950(e), (h), (i). It is clear, however, that a unit failing to meet the proposed cover requirements within six months of the last receipt of CKD will be subject to all the numerous requirements of part 259, even if the unit is closed years before part 259 ever becomes effective in the state in question. §259.1 (d).□□ RCRA authorizes EPA only in very limited circumstances to make Subtitle C regulations effective less than six months after the date of the final regulation's publication. RCRA §3010(b). [EPA did not, however, attempt to make this proposal fit any of these circumstances.] If EPA's authority to make final Subtitle C regulations immediately effective is so strictly limited by the statute, it appears inconceivable that RCRA could be read to authorize EPA to make Subtitle D standards effective upon the date of proposal. This notion is particularly ridiculous in a proposal that explicitly acknowledges that a final rule might not be necessary. Further, we are not aware of any RCRA precedent-whether Subtitle C or□□ Subtitle D - for such a drastic and unconventional legal approach. In the Subtitle D municipal waste landfill regulations, one section looks somewhat similar to the section we are concerned about. It, however, regulates waste disposed after the date the final regulation is published. See §258.1(d)(l). With respect to Subtitle C requirements for other areas, such as hazardous waste landfills, land farms, surface impoundments, we are not aware of any instance in which EPA has purported to make an element of a proposed rule effective immediately. Since EPA's record is clear that CKD is far less risky than hazardous waste, any attempts to treat CKD disposal so much more harshly appear to be arbitrary and capricious per se.□□ On September 24, 1999, APCA counsel sent a letter to EPA expressing these concerns, and asking EPA to take action to clarify this matter as soon as possible. On November 17, 1999, Mr. Michael Shapiro of EPA wrote back to APCA's counsel. (Copies of letters attached as Attachment J and K.) Mr. Shapiro's letter states that EPA did not intend for its proposal to mean that CKD monofills closing after August 20, 1999, but before the date of the final rule, would have to comply with the proposed closure requirements. He states that EPA will issue a Federal Register notice clarifying that "such units will have six months after the effective date of the final rule to comply." As of this writing, EPA has not issued the Federal Register notice promised in Mr. Shapiro's letter. If EPA does issue such a clarification, then some of our concern about the proposal will be alleviated. Mr. Shapiro's letter still may be interpreted, however, to mean that CKD monofills that close after Auqust 20. 1999 will be subject to the new closure requirements. If this is EPA's intent, then much of the criticism set forth above still applies. Most fundamentally, EPA has never taken such an approach to Subtitle C units or to municipal solid waste units, and the record is overwhelmingly clear that such units handle waste that has a much higher degree of risk that CKD waste. (For instance, municipal solid waste units legally accept certifiably hazardous waste from "small quantity" generators and households. This accentuates the travesty of subjecting CKD units to more stringent standards than municipal solid waste units.) If this is EPA's intent, therefore, we believe the approach is arbitrary and capricious and we urge EPA not to follow such an approach in a final rule. As EPA has always provided in its Subtitle C and municipal solid waste rules, the applicability to units should be pegged to units that close on or after the date of the final rule - not the proposed rule.

Comment Id	Document Number	Comment
232	ckdp00019	On the issue of effective dates of various requirements, the preamble indicates that EPA is fairly clear. According to the preamble, the following requirements are to be effective 90 days after publication of the final rule in the Federal Register: recordkeeping, closure and post-closure planning, CKD listing, agricultural application standards, and fugitive dust emission standards. The following requirements are to become effective 24 months after publication of the final rule in the Federal Register: landfill design, ground water monitoring, corrective action, and financial assurance requirements. 64 Fed. Reg. at 45656, col. 2. There are at least three problems with this, however: □□ a. For 47 out of the 50 states, the preamble is wrong. For the 47 states with authority to implement the RCRA "base" program, the standards cannot become effective until some time after the state officially adopts the rule, which in virtually every case is certain to be well after the 90-day and 24-month periods EPA specifies.□□ b. The proposed regulation does not say what the preamble says. While the proposed regulation is clear on the effective date for ground water monitoring (proposed §259.40(c)), it is not the least bit clear on the effective dates for landfill design, corrective action, and financial assurance.□□ c. The preamble fails to mention when the storage standards and location standards are to become effective, and the proposed regulations also fail to make this clear. □□ APCA particularly urges EPA to clarify at the earliest practicable date that, as explained above, the rule's effectiveness can not be pegged to the Federal Register publication date in 47 out of the 50 states. In its current state, EPA's proposal is highly misleading to the regulated community and other interested parties.
233	ckdp00019	It is very clear from the proposal that “new” units are in a different category for regulatory purposes than “ existing” units. Unfortunately, the proposal is often very unclear as to the significance of the distinction. While the details are often difficult-if not impossible-to decipher, it is fair to say that at least in some respects, “new” facilities are subject to more stringent requirements than “existing” facilities. 64 Fed. Reg. at 45644, col. 3. Very generally (a major exception is noted below), a unit will be considered "existing" if it is already receiving CKD on the date which is 90 days after the final rule is published in the Federal Register. A unit will be considered "new" if it has not started receiving CKD by the date which is 90 days after the final rule is published in the Federal Register. Proposed §259.2. At this point, however, there is already a fundamental legal problem. As noted above, the rule will not be effective in 47 out of the 50 states with the mere publication in the Federal Register. Rather, after EPA publishes the rule, each of the 47 states will have to go through the process of adopting its own rule and this process could take years. In fact, it is likely that there will be 47 different effective dates and also 47 different dates for determining what is new and what is existing.
234	ckdp00019	To add to the confusion, EPA has included a new condition purportedly designed to prevent abuse. EPA claims that operators would create new units or unnecessarily expand existing units before the rule's effective date in order to avoid requirements that applied to new units but not to existing units. 64 Fed. Reg. at 45644, col. 3. As a purported remedy, the proposal adds the following to the definition of "existing unit": "Waste placement must be consistent with past operating practices or operating practices modified to ensure good management."Proposed §259.2. Apparently, this means that EPA will examine existing units as of the rule's effective date and determine whether a unit should instead be classified as a new unit. It is unclear how such a requirement could be enforced. The standard is so vague and subjective that uneven and inconsistent application seems virtually guaranteed. This specific requirement would certainly throw a major cloud over many units. For instance, a facility might initiate disposal of CKD in a new unit in October of 1999 and operate under the assumption that would be an "existing" unit under the upcoming CKD rules. Four years later, however, a State that had adopted EPA's proposal verbatim could inform the facility that its CKD management had not been "consistent with past operating practices" and therefore, the unit would be considered a "new" unit even though it was four years old. The unit would therefore be subject to more stringent requirements.
252	ckdp00019	EPA proposes to require a RCRA Subtitle C permit once Subtitle C is triggered (64 Fed. Reg. at 45656, col. 2) even though EPA had stated in its 1994 Regulatory Determination that a Subtitle C permit would not be necessary under its "tailored" Subtitle C approach. APCA strongly encourages EPA to delete the Subtitle C permit requirement. There are major implementation concerns with Subtitle C permitting that EPA has not addressed in the proposal, and based on the very minimal risk posed by CKD, CKD disposal facilities should not be subjected to this conundrum. EPA has left not addressed, for instance, such critical issues as: (1) how a unit may obtain "interim status" at some unspecified time in the future", and (2) how a unit that becomes a Subtitle C landfill can, instantaneously, lose Subtitle C status with all the closure, post-closure and other accompanying baggage.

Comment Id	Document Number	Comment
337	ckdp00020	The language of Section IV(J) implies that the effective date of some parts of the rule is not the date of promulgation (date of publication in the Federal Register); Subpart E, 259.14(c)(l) implies that the effective date of the rules is the promulgation date. In addition, although summarized in the preamble, the proposed rules are not clear on the effective dates for requirements other than the groundwater monitoring requirements. Lafarge recommends that a concise discussion of the implementation of the proposed rules appear in one complete section of the rules and clarify these inconsistencies or ambiguities.
338	ckdp00020	The preamble and rules are also unclear about the process that individual states must go through to adopt these proposed rules, and how the timing of this would affect the implementation period for these rules. Lafarge recommends that the EPA's proposed dates required for compliance recognize the time required for individual states to adopt the rules.
455	ckdp00027	The proposed fugitive dust emission standards are not appropriate for meeting their intended purpose. In the case that these fugitive dust emission standards are promulgated, then implementation is certainly to exceed a 90-day time period. This is due to the need to acquire or modify existing moisture conditioning equipment, pilot test field compaction equipment and methodology, and verify compaction results on a continuous basis.
726	ckdp00048	TNRCC does not foresee any technical factors that would hinder compliance with a 90-day implementation time frame.
991	ckdp00060	SLC is concern by the retroactive adoption date of the proposed rule. The proposed CKD rule shall be in affect by August 20,1999 to classify existing landfill as a new landfill determination if it received CKD after that date. SLC believes that this requirement is unprecedented in a proposed rule and subjective determination that is non protective to the environment.
1030	ckdpL0001	Pg 45656, col 2, para 3, last sentence, EPA requests comment on whether there are technical factors which make the 90-day period for implementation of the proposed fugitive dust emission standards difficult to comply with.□□ □□ The MDNR believes the 90-day time frame to comply with fugitive dust emission standards may be unrealistic if the facility chooses a performance based standard. In order to comply, the facility would have to prove to the department's satisfaction compliance with the performance standard.
3	ckdp00009	40 CFR 259.1 There is a discrepancy between the last sentence of (d) and (e). An existing unit in (d) is subject to all the requirements of part 259 if the unit has not completed cover installation within six (6) months after the effective date of the final rule. However, existing units in (e) have two (2) years to comply with all the requirement of part 259. Also (e) requires compliance for all units that receive-waste after the effective date of the rule, however to be an "existing unit" waste must be received as of ninety (90) days after the effective date of the rule. What designations are the units given that have taken CKD waste but stop taking it within the ninety (90) days after the rule becomes effective. They would not be a "new unit" either because new units have not received waste prior to the ninety (90) days after the effective date of the final rule. There seems to be a discrepancy between these terms.
29	ckdp00009	Please clarify if any existing unit that is used after ninety (90) days after the effective date of this rule becomes a new unit and subject to the new unit requirements?
102	ckdp00015	Section IV, Part J - Final Rule Effective Date. In Section IV, Part J - Final Rule Effective Date, the proposed §259.50 requirements are worded as to suggest that CKD landfill (CKDLF) units closed prior to the effective date of the rule are Subject to the rule. More specifically, this section states on page 45656 that “CKDLF units that stop receiving CKD waste prior to the date of today’s proposed rule . . . will remain outside the scope of today’s proposed rule. ” However, CKDLF units “which stop receiving waste in the window between the date of today’s proposed rule and the effective date of the final rule... [must] have a final cover installed according to provisions specified . . . under §259.50. ” This is certainly counterintuitive, because rules typically take effect on the date they are promulgated (effective date).

Comment Id	Document Number	Comment
103	ckdp00015	The preamble of the proposal (page 45656) - "Final Rule Effective Date," distinguishes between those requirements that are proposed to be effective 90 days after the final rule publication date and those requirements that are proposed to be effective 24 months after the final rule publication date.□□ In this discussion, EPA states that record-keeping, closure and post-closure planning, CKD listing, agricultural application standards, and fugitive dust emission standards will be required within 90 days of the publication date of the final rule. On the other hand, those components chosen for 24-month implementation include landfill design, ground water monitoring, corrective action and financial assurance. According to EPA, this latter group was assigned the two-year period based on the need for interactions with or determinations by EPA or delegated state agencies. Further, EPA states that it believes the additional time would allow facilities to perform the studies and other actions necessary to bring their facilities into compliance.
206	ckdp00017	We recommend that EPA make clear in both Section 259.1 (Applicability) and Section 26 1.4 that the exemption is extended to CKD used as a stabilizing agent for the treatment of other wastes.
244	ckdp00019	It is clear from the overall structure and the wording of key provisions that the entire thrust of the proposal is to regulate CKD units that receive CKD waste after the rule's effective dates. The proposed rule is not intended to apply to units that are closed and receive no new CKD waste after the rule's effective date. See, e.g., proposed definitions of "existing" and "new" CKDLF Unit in proposed §259.2. See also EPA's preamble discussion on p. 45657 on the decision not to include any requirements for "old CKD disposal units" in the proposed rule. This is an important distinction, because CKD in old, closed units may from time to time be disturbed or removed for purposes of remediation or to "mine" the unit to beneficially reuse the already-disposed CKD. Yet the wording of the proposed rule may create some confusion in this regard, because proposed §259.1 (b) may be read to imply that the part 259 regulations would apply to any CKD "actively managed" 90 days after the effective date of the rule. Under EPA's traditional use of the phrase "active management" in the Subtitle C context, this could be read to mean that disturbing the deposited material in any manner could trigger regulatory requirements. See 54 Fed. Reg. at 36596 (1989). Under the most extreme interpretation of this provision, any remediation in an old CKD unit or removal of CKD from an old CKD unit for beneficial reuse would trigger the part 259 requirements in a manner that would make them applicable to the old unit. As such a reading would obviously impose a major impediment to environmentally-beneficial activities such as remediation and recycling, we encourage EPA to clarify this point in its final rules and specify that CKD disturbance or removal activities at such units will not trigger the part 259 requirements for such units so long as no new CKD is received by the units.
336	ckdp00020	The language defining the effective date is confusing, and there is effective date language in the preamble that is not reflected in the proposed rule.
344	ckdp00020	In §259.1(d), the proposed rules require that CKDLF units that receive waste after the date of publication of the proposed rules, but stop receiving waste before the effective date of these rules, must meet the final cover requirements of the proposed rules within 6 months of ceasing receipt of CKD waste. Literally interpreted, this proposed closure requirement will likely become effective and applicable to CKDLF units ceasing waste disposal before the CKD rules are finalized and effective. Lafarge asserts that these proposed rules should not affect closure activities implemented before the proposed rules become effective, and the Agency should resolve this issue without further delay.
354	ckdp00020	The language of the Proposed Management Standard's preamble and the General Provisions of §259.1 contain inconsistencies and ambiguities which make it difficult to discern the applicability of the proposed rules. As such, Lafarge has been unable to clearly ascertain how the proposed standards would apply to its existing and proposed CKD disposal facilities. The company is specifically concerned about the application of closure requirements to facilities that stop receiving waste before the effective date of the rules, and to the approach for defining and applying these rules to existing and new units.□□ In §259.1(d), the proposed rules require that CKDLF units that receive waste after the date of publication of the proposed rules, but stop receiving waste before the effective date of these rules, must meet the final cover requirements of the proposed rules within 6 months of ceasing receipt of CKD waste. Literally interpreted, this proposed closure requirement will likely become effective and applicable to CKDLF units ceasing waste disposal before the CKD rules are finalized and effective.□□ Lafarge asserts that these proposed rules should not affect closure activities implemented before the proposed rules become effective, and the Agency should resolve this issue without further delay.

Comment Id	Document Number	Comment
364	ckdp00022	Virginia Power is a member of the Utility Solid Waste Activities Group (USWAG) and agrees with the separate comments filed by USWAG.
365	ckdp00022	Virginia Power requests that EPA not extend the cement kiln dust policies to the management of coal combustion by-products. Any Agency policy regarding the management of coal combustion by-products must be dependent upon the properties of coal combustion by-products, and the review of data specific to the management of coal combustion by-products. Virginia Power urges EPA to limit the applicability of any policies developed per this proposed ruling to cement kiln dust.
498	ckdp00031	The purpose of proposed Part 259 is to "establish minimum national criteria for all CKDLF units." Proposed Rule § 259.1 (a), 64 FR 45632, 45679 (August 20, 1999). However, proposed subsection 259.1 (b) states that the "[r]egulations in this part apply to any CKD waste actively managed [90 days after the effective date of the final rule], except as otherwise specifically provided in paragraph (d) of this section." [emphasis added] Proposed Rule 40 CFR 259.1(b). "Cement Kiln Dust waste" is broadly defined as "the fine particulate solids, associated with the production of Portland cement, which are collected by air pollution control devices used to clean the kiln exhaust." Proposed Rule § 259.2, 64 FR 45632, 45679 (August 20, 1999). Though "Beneficial Use" is defined, the Proposed Rule does not except from regulation as CKD waste that which is destined for Beneficial Use. Paragraph (d) of Section 259.1 provides an exemption for CKD Landfill Units accepting CKD that stop accepting CKD waste on or before the effective date of the Final Rule. A purported exception contained in paragraph (f) of this section is confusing and may be read to imply that the only beneficial use exempted is that used as a stabilizer or solidifier in EPA-sanctioned CERCLA or RCRA cleanups. It is also problematic that the exceptions to paragraph (b) are not referenced therein as are the exceptions contained in paragraph (d). Though, as a practical matter, most of the provisions of Part 259 can only be applied where there is a landfill or agricultural land application activity, to avoid confusion, the Proposed Rule should be revised to be consistent with the Preamble and the stated purpose of the Proposed Rule; that any beneficial use of CKD will be exempt from the definition of solid waste and regulation thereunder.
499	ckdp00031	For the Proposed Rule to be consistent regarding Beneficial Use of CKD, as defined therein, we propose the following amendment to the Proposed Rule:§ 259.1 -- Purpose, scope, and applicability. *** (d) (1) CKDLF units that receive waste after the date of publication of this proposal, but stop receiving waste before [the effective date of the final rule], are exempt from all the requirements of this part 259, except the final cover requirement specified in § 259.50. The final cover must be installed within six months of last receipt of CKD waste. Units described in this paragraph that do not have a complete cover installation within this six month period will be subject to all of the requirements of this part 259, unless otherwise specified. **(2) The Beneficial Use of CKD exempt from all the requirements of this Part 259.** (f) Nothing in this part prevents, restricts, or regulates the beneficial use of CKD as a stabilizer or solidifier during RCRA cleanups under sections 3004(u), 3004(v) and 3008(h), CERCLA response actions that are carried out in accordance with the requirements of 40 CFR Part 300-the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), or when the EPA Regional Administrator (or the State, in authorized States) finds that the beneficial use of CKD in other cases for remedial purposes at CKDLF units is protective of human health and the environment. §261.4 -- Exclusions. (b) * * * (8)(i) Except as provided in § 266.112 of this chapter for facilities that burn or process hazardous waste, the Beneficial Use of CKD, and CKD waste managed at CKDLF units [strikeout of the following] so long as it is managed [end strikeout] in accordance with Part 259 of this chapter. (ii) CKD waste is not managed at CKDLF units in accordance with Part 259 of this chapter when a facility: (A) ***§266.120 -- Applicability and requirements. (a) The purpose of this part is to establish national criteria under the Resource Conservation and Recovery Act (RCRA or the Act), as amended, for cement kiln dust waste at CKDLF units that is not characteristically hazardous waste under the provisions of 40 CFR 266.112 and is not managed in accordance with the provisions of Part 259 of this chapter. (b) Persons who generate, transport or store CKD that is regulated under this Subpart, as set forth at 266.120(a), above, are subject to the requirements in paragraphs (b)(1) through (7) of this section. These requirements operate in lieu of requirements in 40 CFR Parts 262-265, and 40 CFR Part 268 except where portions of those Parts are specifically cross-referenced.
616	ckdp00038	The proposed rule requires any landfill that receives CKD after the date of the proposed rule to comply with final cover requirements within six months of the receipt of its last waste. If the facility fails to do so, it is fully subject to the proposed rules. This imposes proposed requirements before the final rule is promulgated.

Comment Id	Document Number	Comment
631	ckdp00039	The draft rule's preamble indicates that an owner/operator whose CKD pile is not in compliance with these regulations will be subject to regulation under RCRA Subtitle C. However, the rule itself doesn't seem to address this issue. We propose that the USEPA revise Section 259.1 to address this issue and to clarify what it means to not be in compliance.
976	ckdp00060	The proposed rule set unprecedented requirement by characterizes CKD dispose after August 20,1999 as a new landfill unit.
67	ckdp00015	A brief analysis of MSWLF disposal costs in California illustrates the potential economic impacts of this portion of the proposed rule. The cost for off site disposal of CKD approaches $70 per ton (disposal and transportation fees), which would result in $14,000 per day or approximately $5,000,000 per year, assuming 200 tons are generated at the plant per day. The result is a diminished marginal environmental benefit to, and a disproportionate economic impact on, the facility constructing and operating the CKDLF unit.
294	ckdp00020	Lafarge Corporation's cement producing facilities will be significantly adverse affected if the Standards for the Management of Cement Kiln Dust are adopted as proposed.
380	ckdp00023	Given the favorable water quality results exhibited at the current Midlothian plant landfill, the liner design criteria (geomembrane/clay composite liner with leachate collection) is too stringent and should be eliminated in favor of a site-specific performance-based approach. The Midlothian plant landfill already has in place a compacted shale liner per TNRCC requirements. Ground-water quality monitoring indicates that the site is not causing an impact to ground water. The site is also not located in karst terrain. The fact that this landfill and all other Holnam plant landfills do not exhibit karst features (see Holnam plant comments submitted separately), when the EPA indicated that all but one Holnam plant is located in karst terrain, suggests that the EPA's analysis is flawed. As a result, the basis for requiring a geomembrane /clay liner standard is invalid. Furthermore, the Midlothian plant landfills only about 400 tons/month of CKD. Given the low risk that CKD poses to ground water, as demonstrated by the ground water quality results from the Midlothian plant, the substantial additional capital cost required to develop a geomembrane/clay lined facility compared to the incremental benefit received is not warranted for such a small volume of CKD. The Midlothian plant intends to develop the new landfill site using similar ground-water protection measures (shale liner) to the existing site.
1122	ckdpL0003	Attachment B- Memo - 1. pg. 166 - "With respect to the per-cent-of-sales cost criterion, EPA's high end engineering cost estimates project that not more than one or two small companies will experience initial compliance costs greater than one percent of baseline sales. In fact several of the small companies-particularly those that do not land-dispose any wasted dust- should thus realize higher net annual profits as a result of these market impacts." What is the sentence supposed to mean? Not only is it confusing, but it is unsubstantiated as well. How will companies make money? If facilities haveto construct "temporary bins" to hold CKD that is to be recycled and do groundwater monitoring even if they are managing CKD in a manner that exempts them from RCRA Subtitle "C," how can they "make money on the deal? Are all of these costs supposed to be passed through? If so, how does EPA justify this pass through? I do not see anywhere is the text where the cost and frequency of groundwater monitoring are costed out.

Comment Id	Document Number	Comment
1123	ckdpL0003	Memo-This memorandum is a reply to the response given by EPA to our memorandum of November 12, 1998. Several of SBA's initial questions were of a general nature; in this correspondence, I will endeavor to be as specific as possible. Also, issues addressed in this memorandum reflect outstanding concerns with the draft proposal; however, any issue not addressed herein (stigma effects) may be revisited in an additional memorandum tomorrow. We are still looking at this issue internally. 1. In its response to Advocacy's prior memo EPA indicates that "for some of the small plants, new shed or hoppers for temporary storage prior to recycle, off-site shipment or on-site land disposal might be necessary as a means of controlling wind blown dust. If required as part of a compliance plan, compared to other costs of dust handling or disposal...temporary storage would be a relatively small component of dust management cost." It must be possible to quantify "dust management cost" in both the aggregate and a component-by-component basis. If these cost are highlighted somewhere in all of the background materials, we would appreciate being forwarded the citation to the material. I can not find where these costs are broken out, and if they are included in the agency's SBREFA analysis. It seems reasonable if an entity has to build temporary bins, purchase "protective covers" for their vehicles, etc., to control windblown CKD, then there is a cost associated with these actions. We would like to see what these costs look like.
1134	ckdpL0003	Attachment B-Memo- 3. The preamble calls for sampling of CKD to be used to as an agricultural lime substitute (for six constituents of concern), but it does not address the costs of the sampling or the frequency.
1135	ckdpL0003	Attachment B-Memo-EPA's assumption that "stigma effects" about CKD use (the agency assumes for a variety of reasons that stigma effects would have already been felt by the industry by now) seem to be misplaced since this is the first formal rulemaking that the agency has undertaken to address this issue. It is fair for industry to assume that they will lose all of their markets (or customers) especially since there are other products that serve the same function as CKD does (for example, fly ash). Therefore, the agency's certification that this rule will not have a significant economic impact on a substantial number of small entities is incorrect.
1137	ckdpL0003	Memo- 3. Perhaps Advocacy should have been clearer about this issue, as the "correct" answer supplied is not adequate. Since the agency has not addressed the costs of sampling or the frequency for the 10 or so constituents of concern, it simply cannot dismiss the associated costs as minimal. Advocacy would like to see these cost for those firms who do not recycle all of their CKD. In addition, other problems arise. For example, if a firm exceeds the level for a particular constituent (or constituents) and falls under the rules requirements, is there a way it can "test out" of the rule? Perhaps the exceedance is a one-time occurrence. Additionally, if this type of testing is required weekly, and a firm always "passes the test," shouldn't there be an option to relax testing requirements to a monthly or even annual basis?
409	ckdp00025	The EPA's "Draft Technical Background Document on Ground Water Controls" (June 1998) (Ground Water TBD) considers the Midlothian, Clarksville, Trident, Fort Collins and Dundee plants as located in karst terrain, based solely on the presence of carbonate rock, and springs (Trident). However, the Midlothian, Clarksville, Trident and Dundee plant sites do not satisfy any of the criteria noted above in the definition of karst, nor does it meet the EPA's own definition of karst ((§ 259.16 (b) ".. .rapid ground-water flow velocities which exceed Darcian flow velocities.. .", and further "Darcian ground-water flow is typically linear and laminar, travels from 1 x 10 -11 to 1 x 102 cm/sec.. ."). Based on the relatively low hydraulic conductivities exhibited by wells finished in the limestone beneath the landfill site, and the lack of karst-like features, the Midlothian, Clarksville and Dundee landfill sites are not located in karst terrains.

Comment Id	Document Number	Comment
286	ckdp00019	In contrast, on FR 45669 and 45670, EPA expects the economic impacts of annually managing 3.3 million metric tons of CKD (1995 figures) to be $44 million per year at the 68 plants that would be affected by the rule. EPA estimates annual compliance costs will range from under $100,000 to $3.5 million per facility. The average added cost per plant would be approximately $646,000 per year, or just over $13 per metric ton of CKD. According to EPA on page 45671, five to seven kilns, including one facility, may close down and 500 full-time jobs may be lost as a result of this proposed rule. b. Concerns Regarding Assuming the Existence of Subsistence Farmers: Current EPA screening-level risk assessment (RA) guidance for combustion facilities requires the analysis of exposures for receptors characterized as “subsistence farmers and fishers” and their children. No definition of a subsistence farmer or fisher can be found in a search of EPA databases and guidance documents. A surrogate□□ definition can be derived from the largely unreferenced default parameters regarding lifestyle, ingestion and exposure factors assigned to these receptors, values that tend to vary over time and between guidance documents. EPA guidance further assumes the presence of individuals who meet these characteristics whether or not they exist at a specific facility. This same assumption regarding the existence of subsistence farming was apparently incorporated in the RA prepared by EPA to support the proposed new management standards for CKD. According to EPA assumptions, subsistence farmers and fishers are assumed to eat set quantities of beef and dairy products, garden vegetables, and fish which they have grown or raised or caught themselves at the point of maximum impact from the facility. For the subsistence farmer, it is assumed that he produces on site 100% (or in the case of the PBRA, a 40% increase over baseline ingestion values) of his and his family’s requirements for beef, poultry, pork, milk, eggs, fruits, vegetables, and drinking water. It is further assumed that these consumption rates occur 350 days per year, for 40 years of an assumed 70-year lifespan. Although these lifestyles were once more common, current research indicates that such individuals are now rare, perhaps exceedingly rare and confined to specific cultural subpopulation in well-defined locales.30 Most socioeconomic research indicates this level of subsistence activity disappeared before World War ll.31 In fact, no such individual meeting these thresholds has ever been found in the course of preparing any recent RCRA multi-pathway risk assessments. There are some individuals outside the cultural groups mentioned earlier that probably come close to this definition of subsistence, but how many, and are any of them located in close proximity to a cement plant, or likely to be in the future? i) Efforts to Locate Subsistence Farmers and Fishers: Using the EPA-required exposure assumptions, subsistence farmers and fishers frequently become the receptors of greatest concern, and indirect exposure to these receptors often drives many risk assessment results and permit limits. Earlier drafts of EPA combustion facility risk assessment guidance allowed more site-specific□□ information to be included in place of these default assumptions. As a result, several efforts have been made to survey the areas of maximum impact surrounding various combustion facilities for evidence of subsistence farming or fishing. Although there are obvious difficulties in proving a negative, initial EPA guidance allowed for one or both of these receptors to be excluded from the risk assessment process if it could be shown that no such receptors existed near the facility. We have summarized the studies of which we are aware. The supporting data on which they are□□ based, however, are taken from reports available in EPA regional dockets.: Waste Technologies, Inc. (Wl/) - East Liverpool, Ohio Although not a cement plant, WTI is a combustion facility that EPA has studied intensely.32 In this report, site-specific data were used to estimate that residents□□ in the vicinity of the plant obtain 15% of their beef diet from locally raised livestock, and that approximately 30% of local residents have home gardens. Information on local home gardening practices was ‘collected and used to estimate the fraction of homes in the area surrounding WTI that have gardens and the fraction of residents ’ fruit and vegetable diets that are homegrown. This information is available in the EPA dockets for this facility in Region V. While not directly related to CKD, the information illuminate how EPA has assessed and interpreted local farming, fishing and gardening practices in the past, and how these methods and values can be incorporated into other EPA site-specific risk assessments such as in support of CKD rulemaking. Texas Industries, Inc. (TX) - Midlothian, Texas The TXI cement facility is permitted to process up to 100,000 tons of hazardous waste per year and has been the subject of close public scrutiny for the past decade. EPA Region VI and the Texas Natural Resource Conservation Commission, the state environmental protection authority, both undertook risk assessments of the area. Both concluded after extensive investigation that no subsistence level farming or fishing existed in the area, and the risk assessments were reportedly completed without these particular receptor scenarios. Subsequent conversations with staff indicate no subsistence farmer or fisher has been documented to date near any RCRA facility in the state, of which there are many, despite thorough investigation. This information is available in the EPA□□ dockets for these facilities in Region VI. Ash Grove Cement - Foreman, Arkansas Preliminary modeling by EPA Region VI of this facility indicated unacceptably high risks to subsistence fishers in the area of this facility, located in a rural area of southwestern Arkansas. In response, the state and facility owner sampled fish in area ponds versus control sites, and an extensive study of local subsistence farming and fishing activity was undertaken. The Arkansas Department of Environmental Quality agreed with the study’s conclusions that no evidence of subsistence farming or fishing could be found, and directed the risk assessment to be completed with a scenario called the ‘Rural Resident.’ This scenario incorporated increased (Le., close to subsistence farmer) but more defensible fractions of homegrown dietary components based on local practices. This□□

Comment Id	Document Number	Comment
		detailed local survey is also in the EPA Region VI docket for this facility. Lone Star Cement Company - Cape Girardeau, Missouri A survey was conducted to locate subsistence farmers or fishers near this cement plant on the Mississippi River. None could be documented within the□□ area of maximum impact from facility emissions. These receptors were excluded from the risk assessment with the agreement of EPA Region VII and the Missouri Department of Natural Resources. Site-specific data from the farmer closest to the area of maximum impact were used to derive site-specific estimates of risk to him and his family. These family-specific input parameters were determined to be characteristic of farming in the region and did not approach the degree of subsistence assumed in the subsistence farmer scenario. Subsequent conversations with EPA Region VII staff also indicated that no subsistence farmers or fishers had ever been located near RCRA facilities in this EPA region, which reportedly has the nation's highest concentration of cement facilities burning waste-derived fuels. Detailed information about the local survey and□□ resulting risk assessment is available in the RCRA docket for this facility in EPA
296	ckdp00020	Lafarge has estimated ... that it will incur capital costs of $23,502,000, and annual costs thereafter of $1,338,000 (based on present worth costs), simply to build and operate an upgraded CKD disposal units at one of its plants. Once Lafarge commits to an investment of this magnitude, from a business perspective it cannot bear the financial risk that, at any moment, an alleged violation could render the bulk, if not all, of its capital investment temporarily or permanently worthless, while at the same time triggering new and devastating off-site disposal costs.
314	ckdp00020	Fugitive Dust Controls: In Section IV, Part J of the Preamble (Final Rule Efictiue Date), the EPA states that significant additional capital is not required to fund facility changes needed to implement the proposed fugitive dust controls, including compaction and daily cover requirements. Lafarge believes that this statement is inaccurate and that the proposed additional fugitive dust controls will lead to significant additional capital and operating expenditures. □□ □□ Compaction -Compliance with the 95 percent Proctor (Standard or Modified) compaction requirement will require significant capital and operating expenditures for CKDLF units. To meet this compaction specification, specialized compaction equipment and methodologies will be required. Current industry practice is to place conditioned CKD with compaction occurring essentially via the weight of the placement equipment. This practice has resulted in a controlled fill with minimal fugitive dust. To consistently obtain the specified 95 percent compaction requirement, smooth-drum vibratory rollers and/or pad-foot compactors will be required. In addition, conditioned CKD would have to be placed in loose lifts on the order of 6 to 8 inches thick. This would require heavy equipment capable of spreading the material to the required lift thickness. The purchase, operation, and maintenanc.e of dedicated, specialized placement and compaction equipment will be unnecessarily expensive. The increased annual cost to meet compaction requirements at Lafarge's Alpena CKDLF is anticipated to be $445,400. □□ □□ In addition to the increased field efforts, a compliance program will likely have to be developed, also at a significant cost. Because conditioned CKD sets up (i.e., rapid strength gain) fairly quickly upon placement and compaction, cores would have to be obtained to determine if the material meets the specified densities. This is an expensive and unnecessary process. Simple field density measurements (e.g., nuclear density gauges) are not well suited for CKD measurements (see Subsection 6.1). The frequency of required density tests could also tend to inflate compliance costs. Additionally, the ramifications of a failed test (i.e., relative compaction less than 95%) are not clearly stated. Once conditioned CKD is compacted in-place and sets up, material not meeting a compaction specification cannot be removed without significant expense. All of these issues lead to an expensive and unwarranted compaction compliance program. This further supports Lafarge's recommendation in Subsection 6.1 to delete this provision in the proposed rule.
315	ckdp00020	Daily Cover: At municipal solid waste landfills, a significant component of daily operating costs is devoted to daily cover requirements. For an intermediate-volume municipal solid waste landfill (100 ton/day), it is estimated from experience-that daily cover requirements account for approximately $500/day of operating costs. Because the proposed CKD management standards mimic Subtitle D requirements, we assume that compliance with proposed cover requirements will result in a similar daily operating cost. The majority of Lafarge's cement plants operate 7 days per week, 50 weeks per year. The annual expected operating costs to comply with daily cover requirements is then approximately $175,000 per facility ($875,000 for the five facilities which landfill CKD on-site). This is a significant additional cost when consider-mg that conditioned CKD, in and of itself, is highly effective in controlling airborne releases of CKD particulate.

Comment Id	Document Number	Comment
316	ckdp00020	In addition to the operating costs required for placing daily cover, loss of airspace must be factored into the economic evaluation. For municipal solid waste landfills, daily cover consumes a significant portion of the airspace. Generally, a ratio of 6:l waste to cover is achieved. Assuming that this ratio holds for CKD, Lafarge would expect approximately 38,667 CY of lost airspace at the Alpena facility each year. At a unit disposal cost of $8.39/CY, the increased annual cost due to lost airspace would be $324,400 at the Alpena facility alone.
317	ckdp00020	Temporary Storage Facilities: For facilities temporarily staging CKD in storage facilities or areas not in compliance with the “man-made structures” proposed in language of §259.21, additional costs to design, construct, and integrate new facilities to meet these standards will be incurred.The estimated construction cost for a concrete stave industrial silo with a 25-foot diameter and a 75-foot height is $85,500. It is anticipated that three of Lafarge's facilities would require a storage facility of this type. This would result in an increased cost to Lafarge of $256,500.
327	ckdp00020	Landfill Design and Construction Costs: In Subsection 7.1 of this report, Lafarge recommends that the leaching characteristics of the CKD□□ dictate the type of liner system that is required. Absent the revision of the composite liner s requirement in the proposed rules, Lafarge expects significant increased expenditures at a number of its facilities. In Appendix C, expected unit costs are detailed for a compacted clay liner□□ ($3.19/CY if borrowed on-site; $9.34/CY if borrowed off-site). For those facilities without appropriate clay borrow on-site (note that cement plants are generally located in areas of readily accessible limestone and dolomite, which often lack natural clay deposits), significant additional□□ cost burdens are expected. The Lafarge Alpena Plant is one facility without appropriate clay borrow on-site. Compliance with the proposed composite liner requirements for the remaining phases of the Alpena CKDLF would increase costs by approximately $2,832,800.
420	ckdp00025	Current practices, which will continue through the life of the landfill will include quarterly ground water monitoring at four monitoring wells sited near the CKD waste pile. (One up-gradient, and three down-gradient.) In addition, several local potable wells are monitored yearly. The water is tested for Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, pH, Specific Conductance, Sulfate, Total Dissolved Solids, and Chloride. Pug mixing the CKD with water before conveying it to the active pile area, as well as water spray of the pile as needed, will also continue for control of potential fugitives. Holnam intends to follow the established responsible management practices of the past: as the landfill area expands horizontally following the developing quarry, inactive areas will be covered with topsoil and developed with vegetative cover. The current Clarksville CKD management system has been observed by many representatives of Missouri Department of Natural Resources' Air Quality, Hazardous Waste and Solid Waste divisions. One of the most recent inspections evaluating our current management practices is attached (Appendix 1). The Hydrogeological Workplan field activities commenced on October 19, 1998. The investigation activities included CKD sampling and testing, bedrock sampling and testing, groundwater sampling and analysis, monitoring well installation and leachate migration modeling. Groundwater sampling was done to determine the characteristics of the local groundwater flow direction and to establish a baseline for groundwater chemical constituent concentrations around the present disposal area. Four monitoring wells (one up-gradient and 3 down-gradient) were installed and four existing potable water wells were evaluated. The monitoring wells were installed within the proposed 150-meter point of compliance as described in the proposed CKD rule. The initial analytical evaluation is included in the Hydrogeological Workplan (Appendix 2). These wells are currently evaluated quarterly and results are included in Appendix 3. No significant alterations of chemistry have been found in the evaluations, indicating no leakage of the CKD into the groundwater. The permeability of the bedrock was tested at the base of the quarry to evaluate the potential for constituent migration away from the CKD disposal area. Results of the permeability test performed on the rock core indicate the permeability of the rock to range from 2.4 x l0-l4 m2 to 4.54 x l0-l4 m2. This is equivalent to a hydraulic conductivity of approximately 1 x 10-5 cm/sec. These data indicate that the quarry rock beneath the CKD pile exhibits a low potential for constituent migration, and that the existing landfill site is very favorable for continuing future disposal. The geology at the site is consistent with the geology in the immediate area. No karst features were identified during the investigation. The bedrock formations under the CKD landfill site consist of the Kimmswick, Decorah, Plattin, Joachim and St. Peter formations.

Comment Id	Document Number	Comment
1529	ckdpL0002	Comments: The following comments [and others not reprinted] were made on the adverse impact of CKD regulation on companies that purchase CKD from cement plants and sell it for beneficial use: [Bullet] Small independent companies specialize in the sale of CKD for beneficial uses. Under EPA Options 3, 4, and 5, these companies would be forced to close. Jobs within rural communities would certainly be lost. Small companies such as Iowa-based Midwestern Bio-Ag and Meeker Farms Trucking could be forced out of business if the market for CKD disappears. [Emphasis Added] (CKRC 717) Response: Once again, most commenters here seem to be addressing impacts of a Full Subtitle C listing decision which would treat all CKD as a listed hazardous waste with various dire implications for recycling and off-site reuse. Although the Agency-rejected Regulatory Options Three and Four could have been interpreted in this vein for the hazardous waste-burning segment of the industry, causing all waste CKD to be listed was never an Agency proposal. EPA recognizes and agrees with the above commenters that market-driven reclamation as cement clinker or beneficial off-site uses (so long as they do not damage human health or the environment) generally represent superior CKD management options for both the environment and the economy. Under the Agency's follow-up to the final Regulatory Determination, these uses will be further evaluated and given every possible consideration for continued and expanded application, within a framework of environmental protection. APCA Response: APCA does not believe EPA's response addresses the above comment in bold, and requests that consideration of the economic impacts of this rule on workers who may lose their job as a result of this rule.
404	ckdp00025	Any benefit to health and the environment associated with listing mismanaged CKD as a hazardous waste is negligible compared with the regulatory burden on the cement industry. Listing of CKD as a hazardous waste will discourage its recycling and beneficial reuse, particularly with off-site vendors who may not want to incur the risk of handling a hazardous waste.
459	ckdp00028	Holnam is concerned that if CKD is a listed waste, that the vendors are less likely to purchase this material due to their perception of the potential risks.
386	ckdp00024	If the proposal's SBREFA certification is not supported based on consideration of all relevant factors and record evidence, OSW would (among other things) have to convene a SBREFA Advocacy Panel and identify feasible further steps to mitigate potential impacts on protected small entities, in order to have issued a valid proposal or before this proposal could meaningfully be implemented. e.g., 5 USC §§ 605(b), 609, 611.
391	ckdp00024	We have just obtained the RIA and may comment further on these issues. However, to the extent OSW's SBREFA certification rests on the Air Office's cement industry model, that model's basic validity has been seriously questioned. Among other things, that model appears irrationally to assume cement company " monopoly power" to pass on most compliance costs despite intense foreign and domestic competition. It therefore tends to conclude that the more stringent a regulation, the greater industry profits will be. Cf., e.g., Att. B, pp. 4-10. Perhaps more important, the certification appears to rest on modeled rather than direct documented small entity compliance cost increases of from a factor of four to a factor of 50, representing minimum costs of several hundred thousand dollars annually to small entities who must buy all their fossil fuel and receive no displacement benefits or offsetting revenues from accepting hazardous waste. See, e.g., SBREFA Response supra, pp. 9-15. Contrary to the preamble's dismissive assertion, this is not a "double worst case scenario" because (among other things) "performance standards" are especially likely to "default" to technical standards for small entities; Coalition members' estimated site-specific costs appear substantially greater than the model inputs, even adjusting for present modifications in the proposal; member scenarios also assumed only a 50% [not solely l00%] loss of offsite CKD markets from stigmatization; and many stigma-like effects --- such as purchasers' potential inability to know until after the fact whether their CKD purchase is hazardous waste, unlike utility ash --- could continue.

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396	ckdp00024	Only a (shrinking) 15% of the industry currently burns HW fuels, and the amount of CKD recycled to the process or sold for beneficial uses by nonburners (especially small and smaller nonburners) has steadily increased each year since the Report to Congress. The current proposal, if finalized, would mainly apply only to " CKDLFs" that actively receive waste after its effective date, leaving the vast majority of CKD disposal units to non-EPA state regulation in any event. Moreover, given the proposal's current structure and states' dislike of EPA second-guessing, "default" technical standards could become the only available (or only feasibly available) option in many instances, though they could represent significant overkill with respect to site-specific risks. For these and other reasons, we accordingly urge OSW promptly and at minimum to further clarify --- within the context of this proposal --- that performance standards should not only be self-implementing to at least the same degree as technical standards, but should expressly take into account (a) the nature of the dust disposed as well as (b) de minimis risk concepts for applicable requirements, and should include (c) an explicit option of "no further management practices than currently being implemented or proposed to be implemented through meaningful financial commitments." This is not in lieu of or in any derogation of the Coalition's broader proposals, which we believe are substantially supported. In particular, express deferral of this proposal's potential applicability to small or all nonbumer CKD would be consistent with the RTC and Determination ---- which merely concluded there was not sufficient information at that time to distinguish between the dusts. Such deferral (as we have repeatedly stated) would not require OSW to "revisit" or "reimpose the Bevill exclusion." cf. 64 FR at 45641/l. Instead it would continue the Bevill Exclusion for CISD not subject to regulation, by operation of law. But it could also conserve resources while focusing any reasonable national regulatory efforts on national factors, such as the ready transportability of HW fuels. It seems especially compelling in light of the fact that EPA recently "tentatively concluded" not to de-Bevill most aspects of yet another in the line of "special wastes" that arguably either are indistinguishable from CKD or exhibit greater constituent levels and risks than CKD, but directly compete with nonbumer CKD for beneficial uses. See, e.g., 64 FR 22280 (Aug. 12, 1999); id. 50788 (Sept, 20, 1999) ("remaining" utility and industrial fossil-fuel combustion wastes). We understand that EPA is continuing down this "retain the exclusion" path for such combustion wastes.
397	ckdp00024	Moreover, the Agency has repeatedly found impacts on 20% of potentially affected small entities to be a " substantial number." It also has indicated than the 2%-of-sales yardstick is not necessarily dispositive. Id. Here, it has completely ignored the issue of whether direct cumulative impacts on cement plants from numerous simultaneous EPA rules reasonably must be considered in a SBREFA "no impacts" analysis. Because the certification requirement is an exception to the statutory mandate that full-scale SBREFA steps must be completed by EPA before a rule may be proposed or made final --- and therefore must be construed against easy escapes from these obligations --- we believe the Act's "will not have" language requires some such consideration. That OSW may not be able to evaluate all such impacts at the same level of detail does not mean that no evaluation whatever of composite impacts on affected small entities is permissible. Indeed, such evaluation should be easier because RIAs for many of those other rules are available.

Comment Id	Document Number	Comment
1056	ckdpL0003	Erroneous SBREFA certification. [T]he Preamble's SBREFA conclusion (64 FR at 45672-73) that this rule, if promulgated, will not have a significant economic impact on a substantial number of the eight small cement companies, is separately and fatally flawed.□□ □□ Like the Preamble's fugitive dust projections, this SBREFA analysis dismisses significantly greater real-world cost estimates laboriously prepared by these small companies, in favor of cost elements derived from modeling hypothetical plants. It similarly dismisses the potentially disastrous perceptual effects of a hazardous-waste stigmatization on current or future markets for CKD beneficial use.(footnote 25) Despite numerous unstigmatized products that compete for these uses, and despite customers' inability to determine in advance whether CKD they buy or use may come from a "mismanaged" facility---and thus could subject those customers to federal or state corrective action and citizen suits---it assumes that no such effects whatever will occur. It also assumes that small entities will generally be able to use proposed "safe harbors" from full-scale design standards, despite the burdensome and costly demonstrations required to reach those harbors (where they exist). And it apparently does not scale up estimated compliance costs to address the small companies' reasonable assumption that half of their existing CKD markets would be affected, requiring 50% more CKD disposal with associated dust-management expense. (footnote 26)□□ □□ These dismissals and assumptions show no recognition that small entities protected by SBREFA are different legally and in kind from their large competitors, not merely different in degree. Nor do they recognize that the proposal will hit these small entities differentially hard, because small cement companies have led the industry in exploiting beneficial uses. These companies also have far fewer resources to hire lawyers and consultants for pursuit of open-ended technical demonstrations. Like other non-burners they must buy all their fuel, and are not paid to receive fuel.□□ □□ In addition, the Preamble's SBREFA analysis omits or substantially understates numerous costs associated with this proposal. For example, it does not mention or appear to include the cost of financial assurance, which can be heavy for small entities unlikely to qualify as self-insurers. Nor does it appear to include the costs of daily CKD sampling for agricultural use, of complex additional recordkeeping or reporting (such as RQ-related "release" reporting, see 64 FR at 45677-78), of CKD-related permitting under state Subtitle D programs, or of reserves or insurance against third-party liability claims." It assumes the cost of constructing facilities tohandle potentially large amounts of newly-stored CKD (whether for eventual recycling to the process because it cannot be sold, or for longer temporary storage due to disruption of offsite markets) will be an extraordinarily low $10,000/year for each of these companies. It does not reflect any groundwater assessment or monitoring costs for these newly-required storage structures, although the proposal apparently requires such monitoring.□□□ □□ Finally, the analysis does not mention or reflect foreign or inter-regional competition in the cement industry---a significant, growing constraint on cement price increases that may have increased further due to the current national building boom. [footnote 28] Instead it concludes---quite remarkably---that regional cement prices are quasi-monopolistic, and therefore that most of the proposal's compliance costs will not only be passed on to customers by affected small companies, but that compliance will cause many of these companies 'profits to increase. 64 FR at 45673/l. By the same token, a more stringent rule would increase small companies' profits still further. This conclusion makes no economic sense. It also violates economy-of-scale principles dictating that small companies are typically disfavored in such circumstances. [footnote 29] The Preamble's SBREFA analysis does not appear to dispute that the compliance costs estimated by the Coalition to be incurred by small cement companies may in fact be "significant." Instead it assumes away those costs component by component, largely with questionable or unsubstantiated assertions. It then assumes away most remaining cost impacts in its formal certification that SBREFA protections do not apply to these companies.□□ □□ SBREFA was enacted expressly to stop regulatory agencies from end-running or giving mere lip service, through empty certifications, to small business protection. It focussed particularly on EPA in this regard. See, e.g., 5 U.S.C. 605(b), 609 as amended. It requires more than the Preamble's slippery reasoning before EPA may escape those presumptively-applicable mandates.[footnote 30]□□ □□ Footnote 25: For a recent incident of statewide stigmatization under the proposed CKD rule, perpetrated by EPA personnel, see point 9 below.□□ Footnote 26: On all the above, see also SBA Comments (Attachment B) sharply questioning EPA's reasoning and lack of substantiation.□□ Footnote 27: The Preamble implies that little small-company CKD may previously have been marketed for " aglime" use. To the extent this offhand observation is accurate, it reflects the fact that few small companies were willing to risk selling CKD for agricultural use in light of regulatory uncertainties and potential third-party liability. Other liabilities that likely would increase as a result of this proposal include common-law nuisance or toxic-tort suits, and damages incurred by CKD customers entitled to break their purchase contracts. No EPA declaration that properly-managed CKD is not a listed hazardous waste would provide significant protection

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		against such actions. That seems particularly true given the intimidating set of reasons for listing CKD in Preamble Appendix I.□□ Footnote 28: Increased US demand for cement accompanied by higher cement prices appears to have increased waterborne shipments to or across the US, evidenced in part by construction of new receiving docks and terminals over the last few years. Moreover, the domestic industry is currently producing very close to capacity, and cannot easily expand that capacity.□□ Footnote 29: Cf. Coalition's February 18 comments, pp. 2-3, 6-7 and cited Attachments.□□ Footnote 30: We further note that EPA's underlying Regulatory Impact Analysis (RIA) appears to assume that SBREFA protections are not triggered where small-entity percent-of-sales compliance cost impacts do not differ materially from percent-of-sales compliance cost impacts□□ on large businesses. See, e.g., Final RIA (June 1998), pp. 6-5 to 6-6. To the extent that is true this certification facially violates SBREFA. Congress, reconfirming the anticompetitive effects of one-size-tits-all regulations and the natural economic compliance advantages of larger□□ companies within identifiable industrial segments, made a different policy choice.
1537	ckdpL0002	Comment: Environmental justice is beyond the scope of the study factors identified by statute. One commenter noted that environmental justice is not one of the study factors listed in Section 1 .O of the Report. One commenter also stated that such concerns did not belong in a technical document such as the Report to Congress. (LFC 700, CKRC 717)□ □ Response: According to Executive Order 12898, Federal Actions To Address Environmental Justice in Minority Populations and Low-income Populations, EPA has the responsibility of addressing environmental justice in its programs and policies. Therefore, EPA investigated whether there were environmental justice concerns that warranted consideration during the regulatory process. As noted before, EPA was unable to conclude that there are environmental justice concerns for cement kilns on a national basis. (EPA did identify some facilities, which are located in high minority and poverty areas.)□ □ APCA Response: EPA has a responsibility under this environmental justice rule to assess the impacts to the 500 workers (and their families and communities) who will lose their jobs as a result of this rule and likely suffer significant economic and health consequences.□
701	ckdp00048	Among the factors considered by the agency that led to the selection of the solely Subtitle D approach is that the proposed rule does not address the number of resources that an authorized state would be required to spend if it adopted the CKD rules as proposed. In the discussion of the requirements of the Unfunded Mandates Reform Act (See page 45674, Section IX.F.), EPA states that the proposed action imposes no enforceable duty on any state, local or tribal government. However, the rule contemplates that in authorized states (Texas included) the state be allowed to review and make determinations as to the sufficiency of alternative cement kiln dust landfill (CKDLF) designs and of facility plans for groundwater monitoring, corrective action, closure and post-closure care, and financial assurance. (See page 45658, Section V.B., Implementation of Part 259 and RCRA Subtitle C Backup Standards). The resources that will be expended by the state to implement the program may be substantial if all CKDLFs request alternative designs and management practices which must be approved by the state. Inspection of CKD facilities would probably become more complicated and time consuming considering that the inspector will have to review most of the documentation requirements for design, corrective action, closure and post-closure and financial assurance that will be required to be placed in the operating record. Further, a facility that loses the proposed exemption would be required to obtain a RCRA permit. The permitting process would also require the expenditure of state resources that have not been contemplated. Although EPA has stated that the proposed action imposes no enforceable duty on states and therefore the $100 million limitation that may be imposed on states under the Unfunded Mandates Reform Act does not apply, TNRCC believes that EPA should address what percentage of the $100 million burden would be expected to be borne by the states in view of the other statement, in Section VIII - State Authority, that EPA strongly encourages states to adopt the proposed Part 259 rules. Most of the burden would be borne by approximately half of the states.
680	ckdp00042	Even though Ash Grove does not support the promulgation of federal CKD management standards, Ash Grove is concerned that the proposed regulations -- which include location restrictions for CKD landfills; air criteria for the storage, transportation, and disposal of CKD; and design criteria for CKD disposal sites -- may be utilized by states as a model for their own regulatory schemes. Consequently, it is imperative that EPA correct this rulemaking to eliminate flaws and ambiguities.

Comment Id	Document Number	Comment
1046	ckdpL0003	We believe the proposed rule cannot be promulgated because it is fatally flawed procedurally. Among other things, critical information on which the Preamble and central EPA decisions expressly relied (and stated to be in the docket) was not present in the docket, was not publicly available for review by interested parties, and could not be used to assess the validity of Agency conclusions that shaped the proposal. [New paragraph] Even if these procedural defects were corrected, the record would not support this proposed rule.
41	ckdp00011	Photos of Alpena plant and graphics.
62	ckdp00015	Proposed RCRA Subtitle C Backup Standards. The proposed rule states that CKD not managed in accordance with the requirements of §259 will be subject to the hazardous waste requirements of RCRA Subtitle C (through proposed §266.120). To wit, any number of misinterpretations within the framework of the proposed rule, such as placement of daily cover, temporary storage, or even not placing a tarp over a hauling truck, would result in the triggering of Subtitle C requirements. In essence, EPA intends to designate waste classification by the truckload, and facilities would be compelled to maintain tailored Subtitle C landfills on site as well as temporarily exempt facilities. It is ludicrous to believe that if a driver forgets to cover his load that the entire load is hazardous. Furthermore, how can a facility manage as hazardous, CKD that has already been placed in the landfill? Does the entire landfill then become hazardous even though only one load was mismanaged? In addition to this aspect, the concept of imposing Subtitle C regulation on a waste that is neither listed nor characteristically hazardous is overly burdensome and soundly inconsistent with EPA's reference in the proposed rule to an "affordable and common sense approach." 64 Fed. Reg. 45632. Since there is not a K listing for CKD, is it considered characteristically hazardous, even though it does not exhibit any of the characteristics? EPA has even stated in the proposed rule that "CKD rarely exhibits a hazardous characteristic." EPA should reevaluate fugitive controls as being serious violations of the standards. These should only apply if repeated, ignored or failed to be implemented. Overall, EPA should reconsider this approach of designating CKD as hazardous waste for any mismanagement practice under the proposed technical standards in §259, because it allows considerable interpretation by the regulating authority as to what constitutes mismanagement.
122	ckdp00016	(Sec. 266.120; Pg 45696, col. 3, subsection (b), fourth line) "(b)(1) through (7)" should be changed to "(b)(l) through (5) since (5) is the last provision.
783	ckdp00048	Sec. 266.120 On Pg 45696, co1 3, subsection (b), fourth line TNRCC recommends that "(b)(1) through (7)" be changed to "(b)(1) through (5)" since (5) is the last provision.
558	ckdp00034	EPA proposes on page 45657 to waive the LDR provisions under Part 268 for CKD on the basis that the Part 259 CKDLF design standards provide protection. However, given all of the possible variances allowed to the design standards, ground water monitoring, and the alternatives to the siting provisions, the protections may not be adequate. The Part 268 standards should therefore be retained under certain cases, to provide additional protection. These cases include the following: 1. CKDLF units that have been-given a variance to the CKDLF design standards. 2. CKDLF units that are located in floodplains and Karst terrain that have been given variances to the siting standards. 3. CKD that exceeds any of the hazardous characteristics. 4. CKD from hazardous waste burning cement kilns. [new paragraph] The above cases represent situations in which CKD disposal in accordance with Part 259 can still pose a substantial risk to human health and the environment. The Subpart D treatment standards of Part 268 would provide assurances that hazardous constituents will not be present at levels that pose a risk of significant releases to the environment.

Comment Id	Document Number	Comment
332	ckdp00020	Corrective Action: The Preamble to the proposed rule requested comment on whether the rule should require facility-wide corrective action at facilities that fail to fully adhere to the 40 CFR 259 standards in the proposed rule.Lafarge opposes the imposition of the facility-wide hazardous waste corrective action program onto CKD facilities. □□ □□ Were such an option imposed, a facility that failed "to comply with any requirement identified in a notice received from the Regional Administrator because of repeated violations...", [40 CFR 261.4(b)(8)(ii)(A)(7)] , would suddenly become a hazardous waste facility with facility-wide corrective action obligations. Under the regulatory scheme set out in the proposed rule, an entire facility could suddenly become a Subtitle C hazardous waste facility upon receipt of an unadjudicated Notice of Violation. Under the proposed rule, the facility could quickly revert to non-hazardous status, thereby also ending the corrective action requirements. Imposition of facility wide corrective action as part of the proposed rule would cause unpredictable and arbitrary and capricious consequences.□□ □□ Lafarge asserts that is inappropriate and impractical to alter the classification of an active CKD unit based on whether an owner/operator adheres to the Part 259 standards. It is more inappropriate and arbitrary to determine the regulatory requirements applicable to old, inactive CKD piles based on the compliance status at active units (e.g., a CKD storage facility), when the inactive units are not altered or affected by the compliance status at the active units.□□ □□ Although it is not assured by the proposed rule, presumably if the EPA decided that a "violation" had been abated and reinstated the exclusion, [40 CFR 266.1211, the facility-wide corrective action obligations would no longer apply. Application of facility-wide corrective action based on changing classifications of CKD would be neither fair nor feasible.□□ □□ The regulatory burden imposed by the facility-wide corrective action program is disproportionate to the problem. There is little, if any, relationship between full compliance with the Part 259 standards at active units and the need for facility-wide corrective action affecting inactive CKD sites. The data cited by the Agency in the preamble to the proposed rule states that all but two of the thirteen damage cases involving CKD are at old inactive CKD disposal piles. Since the potential for a finding of non-compliance with the Part 259 standards would only attach to active ("existing") CKDLF sites, the old inactive sites (where all but two of the damage situations listed by the Agency occur) would not be affected. The corrective action program, therefore, is not an effective way of addressing the damage sites identified by the Agency as the basis for this proposed regulatory action.□□ □□ Facility-wide corrective action, as it has been implemented, has not typically been a flexible, common sense program. The program has been characterized by expensive studies by consultants, whose work is exhaustively critiqued by EPA employees or consultants retained by□□ EPA, resulting in successive exchanges of paperwork, but long delays and high costs before remediation actually begins. It is an inefficient and slow-moving program. □□ □□ Corrective action is not a good fit for CKD. The conditioned CKD required by the proposed rule does not represent a significant risk to human health or the environment. CKD is a low risk material that has been determined to be safe for application on farm fields and other beneficial uses.□□ The risk that CKD presents when placed on land is less than that presented by waste disposed at Subtitle D municipal landfills, which are not subject to the facility-wide corrective action program. Therefore, the corrective action program should not be expanded to CKDLF facilities.
553	ckdp00034	The ETC agrees with the proposal on page 45657 that facility-wide corrective action would be required at facilities that fail to maintain the terms of CKD management under the Part 259 standards. This is justified because under the contingent management option, such CKD would be a hazardous waste. The prospect of facility-wide corrective action would be an incentive for cement kilns to maintain compliance with the 259 standards.
554	ckdp00034	The ETC urges EPA to also apply facility-wide corrective action to cement kilns that burn hazardous waste. Such a requirement is justified given that contaminants can also be released from storage, blending and transfer operations associated with the hazardous waste. If the detection and/or assessment monitoring programs for the CKDLF indicate the presence of a release, then facility-wide corrective action is needed since the source of the release could be associated with other hazardous waste operations.

Comment Id	Document Number	Comment
992	ckdp00060	SLC opposes facility-wide corrective action. SLC is opposed to any corrective action under this rule as a result of hazardous waste listing. SLC questions EPA's authority to list CKD as a hazardous waste based on its method of management, SLC also believes that EPA lacks authority to require any corrective action, including facility-wide corrective action resulting from CKD management practices.
1031	ckdpL0001	Pg 45658, col 1, para 1, next-to-last sentence, EPA requests comment on the use of facility-wide corrective action authority for CKD that is mismanaged.□□ □□ It is unclear in the regulations if corrective action at Solid Waste Management Units would be applied site wide or not. This item should be clarified. Also, when egregious violations occur and the CKD is identified as a hazardous waste, when do the cost estimates increase from a CKDLF to a RCRA Subtitle C facility?
108	ckdp00016	We [ASTSWMO] were surprised to see that the proposal also invited comments on the Subtitle D option we had heretofore considered unavailable as a realistic alternative. When our Work Group members conducted their analysis of the proposal with this additional option available, a number concluded that, given that choice, their State program office would prefer to regulate CKD wastes under their State's Subtitle D authorities. Frankly, we are not clear as to how the Agency would or could reverse earlier decisions like the 1995 determination in order to make Subtitle D management possible, nor are we entirely comfortable with the amount of additional time it would take to achieve those changes at the national level and produce another proposed rule. States need to achieve certainty on the management of these CKD wastes, and many have held up their own rulemaking efforts to allow for the completion of the federal rule before proceeding. Nevertheless, there appears to be a growing preference among those State managers who are members of the Work Group that CKD management under Subtitle D authority would be preferable to other options presented, including the preferred approach.
174	ckdp00016	Pg 45659, col 2, para 4, first sentence. The description of the alternate enforcement policy proposal is unclear. EPA states it would generally not commit to take any enforcement action that would result in RCRA Subtitle C regulation for a period of 90 days after the date of the violation. Later, EPA states it has the jurisdiction to bring enforcement action, but would not commit to do so. ASTSWMO is not in favor of the "enforcement policy approach" if the EPA is stating it may not take any enforcement action even after the 90 days have expired. The Enforcement paragraph indicates that EPA will also consider repeated lesser violations as a significant violation but no guidance was given concerning the number of repeated violations. ASTSWMO questions whether all lesser violations are given equal weight when considering the number of repeated violations, or are some lesser violations more "egregious" than others. Without some guidance on the number of lesser violations that must occur before designation as significant, a consistent determination is not possible. EPA should provide better guidance on the issue.
175	ckdp00016	ASTSWMO is supportive of extending the time to correct minor violations to 90 days. Some instance may arise which requires the service of a contractor or extensive field work, e.g., the replacement of a well, requiring more time than 30 days to complete. ASTSWMO also suggests a provision be added to §261.4 which allows the EPA Regional Administrator or State Director the authority to extend the 90-day period if justified. An approach that would allow for some time frame within which the person managing CKD could correct lesser violations without the violation counting-toward the designation as a significant violation would probably provide incentive to inform the appropriate regulatory agency of the violations and timely correction/ remediation of the violation.
238	ckdp00019	Another section of the preamble and a portion of the proposed regulation contradict the following, however. In the section of the regulations specifying which types of part 259 violations would be considered "egregious" and therefore trigger RCRA Subtitle C, it appears the drafters were assuming that all location standards apply to new units only. See 64 Fed. Reg. at 45658, col. 3, proposed §261.4(b)(8)(ii)(A)(6). Table 4 summarizes the discrepancies between the rule and preamble as to the applicability of location standards to new and existing units. [Note: The commenter provided a table labeled "Table 5" (there is no Table 4 provided by the commenter) entitled "APPLICABILITY OF LOCATION STANDARDS TO NEW AND EXISTING CKD LANDFILL UNITS." The table identifies differences between wording in the rule and in that given in the preamble regarding regulatory applicability of proposed location standards.]

Comment Id	Document Number	Comment
239	ckdp00019	Under proposed amendments to 40 C.F.R. §261.4(b)(8), which currently codifies the Bevill exclusion for CKD, CKD waste could lose Bevill protection - and thus be subject to RCRA Subtitle C - in several situations. 64 Fed. Reg. 45696, cols. l-2. Bevill protection would be lost in three basic ways: (1) if CKD waste is not managed in accordance with any of several provisions of the part 259 management standards specified in proposed §261.4(b)(8)(ii)(A)(1)-(6); (2) if CKD waste is managed "in repeated violation" of any other part 259 standards (i.e., other than those referenced in §261.4(b)(8)(ii)(A)(1)-(6)) and the Regional Administrator notified the facility of such repeated violations; and (3) if CKD is managed in violation of any other part 259 standards (i.e., other than those referenced in §261.4(b)(8)(ii)(A)(1)-(6)) and the facility fails to comply with such standard within thirty days after receiving notice of such violation by the Regional Administrator. In the preamble, EPA explained its Subtitle C-triggering approach as follows: "Under the proposed approach, CKD would only become hazardous waste subject to RCRA Subtitle C regulation when persons managing the waste commit egregious or repeated violations, such as failing to install controls designed to meet the performance standards, or failing to manage CKD in units that conform to specific default technology-based standards." 64 Fed. Reg. at 45642, col. 1, emphasis added.□□ In another portion of the preamble, EPA emphasizes that it does not intend for every type of part 259 violation to trigger Subtitle C. Rather it intends only for "significant" violations to trigger Subtitle C. 64 Fed. Reg. at 45658, col. 3. Aside from the overarching defect that CKD management should in no event trigger Subtitle C, we have two fundamental problems with EPA's proposed Subtitle C-triggering approach. First, the list of "egregious" violations is far too comprehensive, and second, the approach would deny facilities due process of law.
241	ckdp00019	Similarly, under proposed §261.4(b)(8)(ii)(A)(2), a violation of any provision of proposed §259.20 would be "egregious." Yet under proposed §259.20(a) (first clause), any time a flap to a cover over a CKD storage pile became unfastened, this could constitute a violation. Again, it would be silly to classify such an event as "egregious" in the context of EPA's preamble discussion. Most clearly, EPA would need to refine far more carefully its list in proposed §261.4(b)(8)(ii)(A)(l)-(6) of the so-called "egregious" violations. The Agency would have to elaborate as to why each would meet the "egregious" test. We note, for instance, that this list is not even consistent with the preamble's description of the list. See 64 Fed. Reg. at 45658, col. 3,45659, col. 1. Moreover, the lengthy list of routine requirements now included in the proposed list makes a mockery of the preamble's generic description of "egregious" violations as "failing to install controls designed to meet the performance standards, or failing to manage CKD in units that conform to specific default technology-based standards."
245	ckdp00019	Need To Clarify That Spills and Other Incidental Releases Will Not Be Regulated As CKDLF Units. It is also clear from the overall structure and wording of key provisions that the entire thrust of the proposal is to regulate discrete land areas that are intended to receive disposed CKD as CKDLF units, and an area on the ground that happens to receive a spill or other incidental release of CKD is not deemed a CKDLF unit. See, e.g., proposed §§259.2, 259.10(a), 259.30(a). All of the design, location, and other standards for CKDLF units would be preposterous if they were deemed to apply to areas receiving spills. We believe EPA should clarify any final rule in this regard. We would not object if EPA included separate management requirements for dealing with spills or other releases. Such requirements might specify the length of time that may pass before a spill is addressed and require that all reasonable measures be taken to remove the residues of the spill from areas that are not regulated. The bottom line, however, is that the rule should make clear that land upon which a spill occurs does not thereby become a "CKDLF unit" by virtue of the spill.
247	ckdp00019	Inconsistencies on What Triggers Subtitle C: It is clear from EPA's proposed regulatory language that only violations of certain significant part 259 provisions will trigger Subtitle C. Proposed §261.4(b)(8). Yet several places in the preamble, EPA's language can easily be read to mean that any part 259 violation will trigger Subtitle C. For instance: "CKD not managed in accordance with the standards, on the other hand, is proposed to be listed as a hazardous waste under 40 CRF 261.11." 64 Fed. Reg. at 45641, col.3. We encourage EPA to clean up these inconsistencies. See secion III D.1., above.
249	ckdp00019	EPA's Lack of Inspection Authority. Several times in the preamble, EPA claims that there would be federal inspection authority over CKD facilities that are regulated by the states under the part 259 framework. 64 Fed. Reg. at 45658, col. 3; 64 Fed. Reg. at 81,45668, col. 1. EPA's inspection authority under RCRA §3008, however, is limited to hazardous waste facilities. Under EPA's proposed CKD regulations, CKD would not become a hazardous waste unless a facility committed one or more "egregious" part 259 violations. As long as a facility has not been found to commit one of these violations, it is not managing a hazardous waste. As long as it is not managing a hazardous waste, EPA has no authority to inspect it. EPA should clarify this point in any final preamble.

Comment Id	Document Number	Comment
351	ckdp00020	...the proposed rules are ambiguous as to whether any violation listed under 40 CFR 261.4(b)(8)(ii) removes the Subtitle C exclusion for CKD waste for an entire cement manufacturing facility, or just for the specific CKD waste affected by the violation. By way of example, does the EPA intend for a violation of container storage requirements to convert only the CKD in the container into hazardous waste or all CKD at the facility into hazardous waste, including newly generated CKD?
383	ckdp00023	Practical Plant Operations Issues Related to CKD Rule Compliance: The EPA needs to clarify that spills and other incidental releases will not be regulated as CKD landfill units. It is clear from the language in the proposed rule that the thrust of the proposal is to regulate discrete land areas intended to receive CKD as CKD landfills, and not areas on the ground that happen to receive incidental releases of CKD. See e.g. proposed § 259.2, 259.10 (a), 259.30 (a). In the process of routine maintenance activities, some spillage is unavoidable, yet it is unreasonable to apply standards intended for CKD landfills to these areas. Although we do not believe that a final rule is necessary, if a final rule is promulgated, this issue needs to be clarified by the EPA. We would not object if EPA included separate management requirements for addressing spills or other releases. Such requirements might specify the length of time that may pass before a spill is addressed and require that all reasonable measures be taken to remove the residues of the spill area that are not regulated. The rule should make clear that land upon which a spill occurs does not thereby become a "ND Landfill Unit" by virtue of the spill.
568	ckdp00034	The concept that violations of most of the 259 standards could be overlooked would severely undermine the contingent management listing approach. EPA must enforce all of the 259 standards, and the violation of any of the Part 259 provisions must trigger management of the CKD under Subtitle C. Otherwise, EPA would severely undercut the incentive for the cement kilns to diligently meet the terms of the exclusion. The contingent management approach would become essentially an unconditional exclusion and would afford no protection.
692	ckdp00046	The Department has concerns that the proposed rule may be difficult to implement because it is an exclusion from the hazardous waste management requirements that relies on compliance with solid waste management requirements for the waste. The Department is unclear how solid waste program oversight will be transferred to the hazardous waste program when and if proposed 259 management standards are violated. It is also not clear if CKD facilities will automatically lose the conditional exemption for their waste if any, even minor, solid waste management requirement is violated. The Agency is encouraged to clarify these issues more fully in the final rule.
711	ckdp00048	EPA did not address in the rulemaking how the transition from Subtitle D regulation to Subtitle C regulation and back to Subtitle D would be handled if the hazardous waste exclusion is subsequently reinstated. TNRCC believes that EPA should have included a procedure whereby a facility losing its hazardous waste exclusion would assume Subtitle C interim status pending completion of its Subtitle C permitting process within a stated period of time. In the meantime, any Subtitle D permit would be suspended. The permit application process must be diligently pursued, but if the facility regains its exclusion during this period the owner/operator may request that the permit application be withdrawn. If the permit is issued and the facility later regains the exclusion the regulatory agency may suspend the Subtitle C permit and the facility would revert to its Subtitle D status. Suspension of a permit, rather than revocation, would be beneficial to both the facility owner/operator and the regulatory agency because of the potential saving in resources if the transition from one subtitle to another becomes necessary again.
727	ckdp00048	The Enforcement paragraph indicates that EPA will also consider repeated lesser violations as a significant violation but no guidance was given concerning the number of repeated violations. TNRCC questions whether all lesser violations are given equal weight when considering the number of repeated violations, or are some lesser violations more "egregious" than others. Without some guidance on the number of lesser violations that must occur before designation as significant, a consistent determination is not possible. TNRCC recommends that EPA provide better guidance on the issue.

Comment Id	Document Number	Comment
728	ckdp00048	TNRCC agrees with EPA's proposal to give facilities 90 days to correct lesser violations before CKD is considered mismanaged and become listed. An approach that would allow for sometime frame within which the person managing CKD could correct lesser violations without the violation counting toward the designation as a significant violation would probably provide incentive to inform the appropriate regulatory agency of the violations and timely correction/remediation of the violation.
867	ckdp00054	Practical Plant Operations Issues Related to CKD Rule Compliance:□□ □□ The EPA needs to clarify that spills and other incidental releases will not be regulated as CKD landfill units. It is clear from the language in the proposed rule that the thrust of the proposal is to regulate discrete land areas intended to receive CKD as CKD landfills, and not areas on the ground that happen to receive incidental releases of CKD. See e.g. proposed § 259.2, 259.10 (a), 259.30 (a). In the process of routine maintenance activities, some spillage is unavoidable, yet it is unreasonable to apply standards intended for CKD landfills to these areas. Although we do not believe that a final rule is necessary, if a final rule is promulgated, this issue needs to be clarified by the EPA. We would not object if EPA included separate management requirements for addressing spills or other releases. Such requirements might specify the length of time that may pass before a spill is addressed and require that all reasonable measures be taken to remove the residues of the spill area that are not regulated. The rule should make clear that land upon which a spill occurs does not thereby become a "ND Landfill Unit" by virtue of the spill.
898	ckdp00056	There does not seem to be any allowance for normal upset conditions in the proposed rule. Even in our Title V Air Operating Permit there are procedures for upset conditions, malfunctions, and maintenance. There has to be some operation and maintenance guidelines and procedures that are allowed in order to address equipment upsets, maintenance and malfunctions. It is not practical to expect equipment to operate without any guidance or exemptions for malfunctions. Occasionally we have a wire break in the Electrostatic Precipitator, a screw that plugs up or breaks a pin, a bucket hangs up in the elevator, or some other problem that would require us to unstop or make a quick repair to the system. These failures seldom occur, but we need some way to handle these plant operational issues.
965	ckdp00060	EPA's proposed hazardous waste listing of "mismanaged" CKD is not sufficiently definite for a person managing CKD to know whether that CKD is a hazardous waste. Thus, persons managing CKD would not have sufficient warning that their conduct could become subject to enforcement of hazardous waste rules, or criminal enforcement pursuant to 42 U.S.C. § 6928(d). Of particular concern are proposed subparagraphs 40 CFR §§ 261.4(b)(8)(ii)(A) and (B), 64 Fed. Reg. 45696, listing the circumstances under which CKD would not be in compliance.
967	ckdp00060	...the Proposed CKD Rule appears to give the EPA Regional Administrator the authority to determine whether specific CKD is a hazardous waste based on whether the management standards used by a facility are appropriate. SLC is concerned that this discretion is not authorized by the Solid Waste Disposal Act, 42 U.S.C. §§ 6901 to 6922. In fact, 42 U.S.C. § 6921(b)(l) requires that the Administrator "promulgate regulations . . . listing particular hazardous wastes." Thus, EPA should promulgate a regulation each time it chooses to list a particular hazardous waste.
968	ckdp00060	2 . Certain types of violations have no objective criteria for determining whether the management practices will cause CKD to be a hazardous waste. Under proposed 40 C.F.R. § 261.4(b)(8)(ii)(A)(7), 64 Fed. Reg. 45696, repeated violations, i.e., certain failures to comply with provisions of the CKD Rule, are described as “not managed in accordance with Part 259.” Id. No number of repeat violations is given as a criterion for “failure to comply.” This is not a sufficiently objective basis either for hazardous waste listing or civil/criminal enforcement. Facilities that handle CKD would not know how many violations of a certain type would cause a certain quantity of CKD to become a hazardous waste. Moreover, EPA has not established any criteria for determining how many violations justify such a determination. Therefore, this provision is impermissibly vague, and potentially arbitrary.

Comment Id	Document Number	Comment
969	ckdp00060	3. Under proposed 40 C.F.R. § 261.4(b)(8)(ii)(B), failure to comply with certain Part 259 standards within 30 days of receiving a written notice of noncompliance is also described as "not managed in accordance with Part 259." Id. EPA does not define "failure to comply" as used in this subparagraph. For example, it is not clear whether "failure to comply" means failure to complete corrective actions or failure to initiate corrective actions. Thus, this is not a sufficiently objective basis either for hazardous waste listing or civil/criminal enforcement. Therefore, this provision is impermissibly vague. Assuming that other parts of the Proposed CKD Rule are lawful, EPA should clarify that initiating corrective action complies with this subparagraph.
984	ckdp00060	4. Under the proposed § 259.20, EPA states, "This section applies to cement kiln dust waste placed in temporary storage. Such CKD must be covered or otherwise managed to control wind dispersal of dusts." 64 Fed. Reg. at 45682. Under state air quality programs, fugitive emissions from CKD storage units are likely to result in warnings or notices of violation requiring some sort of corrective action. Under proposed § 261.4(b)(8)(ii)(A)(2), such an occurrence constitutes a failure to comply with a proposed Part 259 standard, which may automatically render such CKD a listed hazardous waste. Thus, the CKD in such temporary storage may become subject to many other hazardous waste standards. Under proposed 9 261.4(b)@)(ii)(A)(Z), similar fugitive dust incidents anywhere at a CKD facility could result in CKD being designated as listed hazardous waste. Moreover, EPA seems to suggest that chemically and physically identical CKD at a facility could be hazardous waste in one location, storage device, or transportation device and a non-hazardous waste in another location, storage device or transportation device. Thus, the transformation of one quantity of CKD to hazardous waste would not apply to another. The□□ uncertainty of when this transformation to hazardous waste takes place will create considerable confusion as whether a facility storing CKD must subsequently handle the CKD as a hazardous waste.
997	ckdp00060	The following are examples of possible violations of concern to SLC.□□ □□ 1. Many of the management standards in the Proposed CKD Rule are subject to default technology-based standards: "CKD would only become hazardous waste subject to RCRA Subtitle C regulation when persons managing the waste commit egregious or repeated violations, such as failing to install controls designed to meet the performance standards, or failing to manage CKD in units that conform to specific default technology-based standards." 64 Fed. Reg. at 45642.□□ □□ Many of the proposed management standards, however, allow persons to apply to the EPA Regional Administrator for permission to comply with performance standards as an alternative to compliance with the default standards. Thus, EPA has discretion to determine whether a proposed management approach complies with the CKD Rule. See, e.g., 64 Fed. Reg. 45682 (proposed rule to be codified at 40 C.F.R. § 259.22) (allowing persons to use alternative measures for fugitive dust control). In a permit program, a person receiving a waste management permit is provided sufficient information within the permit application and the permit to understand what conduct constitutes compliance with the permit. SLC is concerned that EPA has not provided a sufficiently objective basis for cement facilities to determine whether or not they are in compliance if they opt for performance standards.□□ □□ Under the Proposed CKD Rule, each person opting to comply with performance standards could become a generator of hazardous waste CKD and then be subject to civil or criminal enforcement each time the EPA Regional Administrator disagrees with an owner/operator of a disposal facility as to the adequacy of the management approach. Cement facilities would each have a finite time period in which to establish CKD management practices that satisfy EPA. However, those facilities that do not obtain EPA's approval within the time-frames allowed for compliance will be compelled to either dispose of CKD off-site at prohibitive cost or become hazardous waste CKD generators. This creates unreasonable risk of hazardous waste listing or civil/criminal enforcement. Thus, SLC is concerned that conditions that may lead to hazardous waste listing are impermissibly vague.
1032	ckdpL0001	Pg 45659, col 2, para 2, first sentence, EPA requests comments on adopting a minimum period (e.g. 90 days) to correct violations as a matter of enforcement policy as an alternative to allowing 30 days after receiving written notice.□□ □□ The MDNR recommends the facility notify the department when a violation has occurred in order to determine when the 90-day deadline has passed.

Comment Id	Document Number	Comment
176	ckdp00016	EPA should explain the discontinuity in Pg 45659, col 3, between the last paragraph in section 1 and section 2 regarding the hazardous waste designation removal procedures. Can the one example truckload of CKD from the previous section which failed a transportation management standard and became nonexempt and had to be managed as hazardous waste (e.g., manifested and sent to a Subtitle C landfill with tailored 266 standards) ever have the hazardous waste designation removed? This past violation can never be corrected. Can any CKD have the hazardous waste designation removed?
591	ckdp00036	It is unreasonable to "create" a hazardous waste based on normal operational upsets. Furthermore, if a hazardous waste listing did result from such incidences, we see no "re-entry" pathway to non-hazardous status evident in the proposed rule language. For these reasons the rule should not be promulgated.
681	ckdp00043	The proposed regulations attempt to regulate CKD as both a hazardous and a nonhazardous waste. The regulations outline provisions under which the CKD originally classified as nonhazardous waste could become a listed hazardous waste, and later the same CKD waste could have the hazardous waste designation removed. The scenario created results in unneeded confusion, particularly in Kansas where the underground disposal of a hazardous waste is forbidden by State statutes.
729	ckdp00048	Page 45660, Section V.B.2., Removal of a Hazardous Waste Designation, states that if action is not taken on an application to remove a hazardous waste designation within 60 days then the application for removal of the designation is deemed granted, retroactive to the date of the application. This does not give the regulatory authority sufficient time to determine if the application meets the criteria or if further information is required on the application. This also does not allow for the request, submittal and evaluation of further information by the regulatory agency. Therefore, TNRCC recommends that at least 120 days be allowed for a decision on the application. This will provide for sufficient time for investigation and evaluation of changes in management procedures to prevent further violations.
827	ckdp00053	1. The Proposed CKD Rule does not provide objective criteria for returning listed CKD waste to nonhazardous status. Holnam is concerned that regulatory authorities applying the Proposed CKD Rule do not have objective criteria for determining when CKD may return to nonhazardous waste status after corrective actions have been taken. See proposed 5 266.12 1, 64 Fed. Reg. at 45696. Holnam requests that clear guidance be provided to regulatory agencies to ensure that the required corrective actions are clearly understood by cement facilities and regulators. CKD should return to non-hazardous status automatically as soon as the violation that triggered the listing has been remediated or the CKD has been moved to a unit that complies with all applicable management requirements.
990	ckdp00060	SLC is concerned that regulatory authorities applying the Proposed CKD Rule do not have objective criteria for determining when CKD may return to non-hazardous waste status after corrective actions have been taken. See proposed § 266.121, 64 Fed. Reg. at 45696. SLC requests that clear guidance be provided to regulatory agencies to ensure that the required corrective actions are clearly understood by cement facilities and regulators. CKD should return to non-hazardous status automatically as soon as the violation that triggered the listing has been remediated or the CKD has been moved to a unit that complies with all applicable management requirements.
994	ckdp00060	SLC is concerned that, just as each instance of listing CKD as a hazardous waste as a result of a specific violation of a management standard should be subject to rulemaking requirements, de-listing of CKD in response to corrective actions could require separate rulemaking actions that could unreasonably delay the de-listing process.

Comment Id	Document Number	Comment
177	ckdp00016	The alternative approach suggested by the cement industry is counter to many State programs which require approval through the permit process. In general, any program that removes the requirement for State approval through the permit process is counter to current State programs and would create confusion for the regulated community. State programs also provide the public involvement that is lacking or uncertain in the alternative approach. ASTSWMO does not recommend adoption of EPA's Alternative Approach to Structuring the Performance Standards. While self-implementation may cause some people to appear to become compliant quicker, self-implementation does not lead to consistent interpretation and implementation. More than likely, people will comply with the notification process but will not adequately meet the performance standards. Compliance with self-implementation can be potentially illusory and conceal deficiencies in meeting the performance standards. Self-implementation shifts the burden of confirming compliance to the public and the regulatory authority. Self-implementation may give the facility owner a false sense of security.
246	ckdp00019	Beneficial Reuse: In its preamble, EPA says that beneficially used CKD is not a hazardous waste (except for agricultural uses in certain circumstances). 64 Fed. Reg. at 45661, col. 2. The regulatory language on this point is confusing, however, and may be read to imply that the only beneficial use exempted is use as a stabilizer or solidifier in EPA-sanctioned CERCLA or RCRA cleanups. Proposed §259.1 (f). The regulatory language should be clarified to provide, consistent with the preamble, that any bona fide beneficial use of CKD will be exempt from the definition of solid waste.
730	ckdp00048	TNRCC does not recommend adoption of EPA's Alternative Approach to Structuring the Performance Standards. While self-implementation may cause some people to appear to become compliant quicker, self - implementation does not lead to consistent interpretation and implementation. More than likely, people will comply with the notification process but will not adequately meet the performance standards. Compliance with self-implementation can be potentially illusory and conceal deficiencies in meeting the performance standards. Self-implementation shifts the burden of confirming compliance to the public and the regulatory authority. Self-implementation may give the facility owner a false sense of security.
731	ckdp00048	TNRCC is concerned that the proposed rule would allow the unregulated use of CKD as an agricultural liming agent with only limitations on the concentrations of arsenic, thallium, lead, cadmium and chlorinated dioxins and furans. TNRCC is particularly concerned with the potential impacts to groundwater and surface water from CKD that not only has these constituents but also others that are normally found in CKD, and the effect that these potential impacts may have on Clean Water Act action plans being developed.
1504	ckdpL0002	Comment: CKD is often used as a stabilizing or neutralizing agent in the solidification of hazardous wastes prior to landfilling, rendering these wastes nonhazardous. If CKD were to be regulated under Subtitle C, requirements such as the land disposal restrictions could make such beneficial use impossible. (Cl 948, HI 827) Response: With today's decision the beneficial use of CKD will not necessarily cease. The Agency believes there are off-site uses that may be appropriate for CKD (e.g., in waste stabilization or certain construction uses). As it develops a regulatory program for CKD, the Agency will evaluate the need for additional controls for a limited number of off-site uses of CKD (such as use as a lime fertilizer on agricultural fields). However, for most off-site uses, including waste stabilization, EPA's current record indicates there are no significant risks. The Agency will restrict its focus to those off-site uses for which there are significant risks. [Emphasis added.] APCA Response: As shown in the technical analyses of the subsequent PBRA2 and risk assessment for the use of CKD as an agricultural soil amendment, use of CKD in this manner is not a "significant" risk - either to actual receptors of concern, by level of exposure relative to established thresholds, or by actual data. EPA is requested to reconsider and its conclusion of "significance," or reissue the risk assessments with the supporting data corrected according to the comments it has received so that the basis of this determination can be reviewed.

Comment Id	Document Number	Comment
106	ckdp00015	Section VI. - Standards for CKD Used as a Lime Substitute. 'EPA outlines its proposed limitations on CKD that is used as a lime substitute (i.e., soil amendment for pH adjustment) on pages 45661 through 45666 of the Register. In this portion of the proposal, EPA discusses the risk assessment and resulting limitations on constituents in CKD they believe pose risk to receptors in the environment. These include the metals lead, thallium, arsenic and cadmium as well as chlorinated dioxins/furans. Throughout this section, EPA states that most CKD already meets the cutoff limits that are being proposed for agricultural use (i.e., Section VI., C., 1 on page 45664). In addition, the proposed cutoff levels were arrived at by very conservative assumptions used in the risk assessment, such as the assumption of application of a maximum amount of CKD to the soil for a maximum amount of time, 5 tons per acre every two years for 100 years. The combination of these factors results in an overstatement of the potential risks associated with specific concentrations of CKD being applied to the land for agricultural use and an overly protective and unnecessary standard. The imposition of these limits will also create an unfavorable perception with the agricultural users of CKD. Again, the specter of potential hazardous waste regulation that hovers over CKD acts as a potent disincentive to prospective beneficial reuse. The approach to consider mismanaged CKD, which in this case includes CKD applied in volumes over the maximum assumed amount of 5 tons per acre every 2 years, as a hazardous waste is inconsistent with EPA's claim that the proposed regulatory approach is based on common sense and practicality. Moreover, is it absolutely necessary to add this provision - in light of the fact that most CKD already meets the proposed limits? The ultimate result could actually be that more CKD is placed in landfills for disposal, instead of being beneficially reused as an agricultural amendment. Given the overly proscriptive nature of the proposed limits, EPA should reconsider its position on agricultural uses of CKD.
504	ckdp00032	This product is tailor made for agriculture and is endorsed by our local County Agent, the State of Maryland Chief Chemist Office, and the farm community in general.
739	ckdp00048	TNRCC recommends that EPA include consideration of the dermal exposure pathway in its assessment of the risks/hazards associated with the agricultural application of CKD. While this pathway is likely to be a more significant risk contributor for dioxins/furans than for metals, it is an exposure pathway that is relevant to several of the scenarios being considered in the EPA proposal (i.e., farmer, farmer child). TNRCC recommends that EPA follow the recommendations outlined in the most recent version of the Draft Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Interim Guidance in assessing this pathway.
1532	ckdpL0002	Comment: Should cement kiln dust be regulated as a (listed) hazardous waste, N-Viro Resources, Inc., would soon cease to exist. The products we represent and the processes that use them would be unsalable and unmarketable. We recognize, however, the need to provide some standards or guidelines for the management of the byproduct, whether it be sold or disposed. We regularly test the kiln dusts we market as a part of quality control and so that we can determine their suitability for given applications. As many of the uses for cement kiln dust produce products which are later land applied, we have generally relied on the standards established by the EPA for land application of sewage sludges as our measure of suitability. These standards are found in Tables 1 (Ceiling Concentrations) and 3 (Pollutant Concentrations) found in 40 CFR 503. (NVR 957) Response: EPA agrees that listing CKD as a hazardous waste would impose impacts on current consumers of CKD, including N-Viro Resources. In such a situation, CKD users would likely need to obtain alternative materials (e.g., lime). However, the Agency agrees that there are offsite uses that may be appropriate for CKD. EPA believes that regulations under 40 CFR 503 are sufficient to protect human health and the environment from risks posed by the use and disposal of sewage sludge, but that further evaluation of other beneficial uses of CKD is necessary to determine whether additional controls are needed. APCA Response: APCA requests the Agency provide a comparison of the risks posed by the same compounds of concern in CKD used as a soil amendment versus in biosolids and also fossil fuel residues. This should include a comparison of the assumptions and criteria used to derive limits for each to ensure consistency in application across Agency oftices, and include the newly proposed limit of 300 ppt dioxin TEQs in biosolids applied to the land as fertilizer (versus 40 ppt TEQs proposed for dioxins in CKD). It is hoped this explanation will help clarify this and other discrepancies in permitted or proposed concentrations. Arsenic, the risk driver for carcinogens in CKD, is allowed at six times higher concentration in biosolids than CKD (75 vs. 13 ppm), but only half the amount of lead (840 vs. 1500), and thallium is not regulated at all in biosolids.

Comment Id	Document Number	Comment
1510	ckdpL0002	Comment: [Not included, as the APCA concern is with the Agency response] Response: The Agency disagrees and does not believe that the Report gives a distorted picture of metals data from the ROD. The Agency notes that it is the maximum value of a contaminant released to the environment and not the mean concentration that causes acute environmental damage [Emphasis Added]. While the Agency recognizes that certain risk analyses indicate low risk, the data used in these risk analyses are overly conservative. The risk analyses are based on static data and population encroachment, cumulative effects from multiple sites and other factors increase the plausible risks that the Agency must consider. APCA Response: While the above bolded statement may be true for acute risks, only chronic risks were evaluated in the risk assessments. Instead, the risk assessment of CKD as agricultural soil amendment appears to have used maximum measured values in CKD rather than a distribution of data. This is an example of the inappropriate use of data cited elsewhere in APCA comments.
1520	ckdpL0002	Comment: IRIS cancer slope factors are derived using very conservative assumptions and contain hidden biases that may undermine their scientific integrity, including the use of extremely conservative models and assumptions when dealing with scientific uncertainty. Such models and assumptions reflect policy judgments that have not been distinguished from the actual scientific assessment of risk, and greatly distort actual risks by relying on worst-case estimates. IRIS also provides insufficient information on the scientific basis for the uncertainty factors used to develop specific RfDs for noncarcinogens. Moreover, there has been a lack of public participation in the IRIS data base and a lack of external peer review of final IRIS work group determinations. (SI 853) Response: IRIS is EPA's preferred and traditionally used source of toxicity information for hazardous waste risk assessments. It contains verified reference doses and slope factors as well as the Agency's most up-to-date health risk and regulatory information for numerous chemicals. Contrary to the commenter's assertion, EPA is continually taking comment and new information from the public on IRIS and factoring that input into the development or revision of toxicity values. In short, the values in IRIS are the most current, accepted, and defensible numbers to use for the CKD risk assessment. APCA Response: APCA would appreciate clarification of what is meant by "verified reference doses and slope factors" above.
503	ckdp00032	To put a hazardous label on this product will stop all applications for agriculture forcing many farmers to use much higher priced materials that are excessively high in concentrations.
737	ckdp00048	TNRCC encourages EPA to make sure that, to the extent possible, fate and transport parameters (e.g., chemical/physical values, biotransfer factors) applied in the risk assessment for the CKD constituents are consistent with parameters used in the EPA risk assessment in support of the technical standards for emissions from hazardous waste combustion units (USEPA, 1999).
81	ckdp00015	In this risk assessment, EPA utilized uptake factors that were determined for metals from sewage sludge, which were analyzed in the assessment supporting EPA's Standards for the Use or Disposal of Sewage Sludge. In addition, phytotoxicity risk evaluation was not separately performed for CKD application, but rather EPA relied on the assessment conducted for the 40 CFR part 503 sewage sludge disposal requirements. In the analysis, the metal concentrations that were evaluated and developed as limitations were proposed on a total concentration basis. These constituents should be based on leachable concentrations rather than total concentrations, as non-leachable metals do not pose a threat to human health because they are unavailable for uptake into a plant, EPA should re-evaluate these metals concentrations to more accurately determine if leachable metals exceed health standards. As it stands, this type of regulatory restriction will have adverse implications on agricultural uses of CKD, and will ultimately result in more CKD requiring on-site disposal and reduce the amount that is beneficially reused, as discussed above.

Comment Id	Document Number	Comment
1505	ckdpL0002	Comment: In the first group of references (Nos. 178-186) the various positive effects of adding CKD to animal feeds mainly center around increased animal weights and digestion efficiencies. Additionally, the USDA grade quality of various test animal carcasses was better than those of control animals. Sheep, swine, and rats exhibited positive responses to CKD diet supplements, although most of the studies were performed on cattle. A review of the literature confirms the USEPA report comments. (CKRC 717) Response: The use of CKD as a livestock feed ingredient has not been approved by the FDA. The Agency does not believe that this use of CKD appears to be viable in the U.S. in the near future, though most research has reported positive or neutral effects. APCA Response: These data may represent a significant source of actual research data with which to evaluate the effects of exposure to the food chain. APCA would endorse the use of this data to assess food chain risks in lieu of surrogate modeling data. Further, as EPA notes in its response, the FDA is the appropriate agency to determine whether CKD will be an approved livestock dietary supplement.
1506	ckdpL0002	Comment: The use of CKD as a livestock feed ingredient serves as real time hard data of effects on cattle that consume fairly large quantities of CKD. It seems imminently logical that real-time hard data about animal consumption of CKD would be preferable to risk analysis based entirely upon assumptions. (GCI 826) Response: The Agency's analysis of the use of CKD as livestock feed ingredient also represents "real time hard data," since it is based on past research that has been conducted on the subject. The connection between this topic and EPA's risk analysis is unclear [Emphasis Added]. The risk analysis presented in the RTC comprised a multi-media assessment of risks to humans through various exposure pathways, while the livestock studies referenced were focused on production of animals for food. APCA Response: The connection between this topic and EPA's risk analysis is that to exclude consideration of relevant scientific information in favor of modeling is a policy decision, not a scientific one. Excluding data on food chain exposure -- when it has been identified as the primary source of risk to affected populations -- compromises a thorough evaluation of risk via food chain exposure, especially where the Agency desires the outcome to be "as realistic as possible." As EPA has pointed out elsewhere in the proposed rule, the risk through all other pathways is "negligible," which make the availability and use of these data of even greater significance.
283	ckdp00019	Incorrect Interpretation of Lead Effects: EPA states twice--at 64 Fed. Reg. 45663 and on page 6-5 of the risk assessment for CKD as agricultural soil amendment--that for lead analysis, estimates of risk to children are determined by comparing total blood lead level estimated by the IEUBK model with a "threshold value of 10 ug Pb/dl. Adverse health effects from lead exposure have been observed to occur at or above this level." APCA requests EPA provide the basis of this assertion, as to our knowledge EPA has never established a threshold level for blood lead levels. The Centers for Disease Control and Prevention screening level of 10 ug Pb/dl does not meet the definition of "threshold" or associated health effects described above.
284	ckdp00019	APCA also finds the summary of the results of the lead exposure to be missing or misleading in the proposed rule, and that the results of the risk assessment could be understood based only on the information presented above. Any future documents addressing CKD risk assessment should mention that the estimated mean blood lead levels were determined through EPA modeling (not actual measurements) to be 2.9 ug Pb/dl, and that the probability of blood lead levels over 10 ug Pb/dl was estimated to be 0.43%. These are clearly not levels of lead that "may pose unacceptable health risk," as stated at FR 45665 and elsewhere throughout the proposed rule. Further, it should be noted that this level of risk based on current exposure does not represent exposure via the food chain, as suggested elsewhere in the proposal as the most important source of exposure, but children ingesting 85-135 mg of soil and dust daily. On the basis of the information presented above and elsewhere in this report, it would not appear that a scientifically adequate basis has been made to limit concentrations of lead, dioxins, or other compounds in CKD when used as an agricultural soil amendment. The risk assessment should be significantly revised and resubmitted.

Comment Id	Document Number	Comment
416	ckdp00025	As an added tool for the evaluation of Holnam's Multi-Pathway Risk Assessment, a study of tissue taken from a harvested deer which was believed to have received maximum exposure to compounds of concern from the stack and the historic CKD pile. The specimen had been identified and observed for several years, during which time the browsing and feeding range was confined to a maximally exposed area impacted by the main stack and the vegetative cover of the closed CKD pile. The deer was confined due to an obviously debilitating handicap resulting from being hit by a motor vehicle, which restricted its ability to stray from the immediate area. A copy of the tissue study is attached (Appendix 4). It illustrates that some assumptions EPA made regarding health risks related to CKD are seriously flawed. The EPA even contradicts itself by stating, [there is a] "low, or negligible risk potential from onsite management of CKD via direct exposure pathways", and only at mismanaged sites did the EPA find any health risks. This further illustrates that the rule is inaccurate and unnecessary.
1507	ckdpL0002	Comment: While the inclusion of CKD into animal diets can have beneficial effects, research also indicates that some metals may accumulate in the tissues of some animals as a result of a diet, which includes CKD. Therefore it would be prudent to forbid the feeding of CKD to animals destined for human consumption. (LFC 700) Response: The Agency's research revealed that most experiments conducted on the use of CKD as animal feed have reported positive or neutral effects. In any case, there is currently little or no use of CKD as an animal feed supplement in the U.S., due to controls established by the U.S. Food and Drug Administration (FDA), as discussed in Chapter 8 of the RTC. APCA Response: The Agency may wish to consider expanding its research described above to include consideration of human ingestion of the tissues of these animals, either by actual measurements or by modeled estimates of the measured animal tissue concentrations. This should be done as a matter of scientific interest in the potential exposure of humans to CKD via the food chain, and independent of the question of whether or not CKD should be used as an animal feed supplement.
88	ckdp00015	The modeling conducted by use of the screen model overestimated impacts and is not representative of actual off-property impacts. Comparison of EPA's results for sites where refined ISC modeling has been conducted show the EPA screening results to be at least one order of magnitude too high. Modeling of TXI's Midlothian cement plant for CKD emissions determined off-property impacts to be 0.45 mg/m3 instead of the 7 mg/m3 reported by EPA. In addition, modeling conducted at the Capitol Aggregates facility in Texas showed maximum off-property impacts for the entire site, including CKD emissions, to be 18 mg/m3. EPA has reported 47 mg/m3, for impacts from CKD alone. It can be assumed by the emission rates associated with the handling of CKD that the impacts at the Capitol Aggregates facility will not come close to the value reported by EPA, and the actual value is presumably lower by about one order of magnitude. EPA's use of screen model results and reported exceedances of the NAAQS does not appear to be accurate, which results in misinformation to the public of the dangers associated with the level of impacts from CKD emissions.
82	ckdp00015	Limiting Concentrations Approach. EPA discusses the assumption of agronomic use of CKD at maximum levels of 5 tons per acre every two years on pages 45664 - 45665 of the proposed rule. More specifically, EPA states that use of CKD for agricultural purposes in excess of this maximum assumed amount would subject it to RCRA regulation (i.e., designate it a hazardous waste). As stated above, this proposal will hinder current beneficial reuse, and agricultural uses specifically will be discouraged due to the increased perception that CKD is not appropriate for use. Other-reuse activities will also be discouraged as well due to potential liabilities linked with handling CKD, therefore logically resulting in increased amounts of CKD requiring disposal instead of the encouragement of recycle and reuse. The proposal to regulate CKD under 259 and use RCRA enforcement authority makes more sense if the goal is to allow beneficial reuse of CKD. Also, the proposal for creating a Memorandum of Understanding could be a means of improving current management standards without reducing the ability to recycle or reuse CKD.
540	ckdp00034	The proposed thresholds for metals in CKD intended for agricultural use are not protective and may present a significant health risk. First, EPA has defined thresholds for only four metals: arsenic, cadmium, lead and thallium. Thresholds must also be defined for other toxic metals found in CKD, particularly chromium, antimony, beryllium, mercury, selenium and nickel.

Comment Id	Document Number	Comment
541	ckdp00034	...the thresholds for the four metals are set at too high a level to be protective. For example, lead is set at a threshold of 1500 mg/kg. This is 75 times the naturally occurring background level in soil (see Table 7-1 of F-99-CKDP-S0263). Likewise, the dioxin threshold of 40 ppt is over 49 times the background level in soil (see Table 7-2 of F-99-CKDP-S0263). Both of these constituents are easily absorbed by crops and concentrated in the produce that is sold to consumers. By allowing such high thresholds, EPA would be promoting the elevation of toxic constituents in agricultural soils and potentially exposing the public to dangerous levels of these toxic constituents. EPA has not provided adequate modeling and justification of safe thresholds of metals and dioxins in CKD intended for agricultural use.
732	ckdp00048	TNRCC notes that there is a discrepancy in the CKD statistics in Tables 2-l and 8-l of the risk assessment that should be corrected. Table 2-l states that the 95" percentile lead concentration in CKD is 1,346 mg/kg. However, based on the same data, Table 8-l indicates that 14 of 63 facilities (22%) which produce CKD measure lead concentrations above the risk-limiting concentration of 1,500 mg/kg. After reviewing the Dataset provided in Appendix A; TNRCC determined that these 14 facilities actually exceeded the soil concentration which is protective of soil exposure (400 mg/kg), rather than the risk-limiting concentration for lead in CKD (1500 mg/kg).
733	ckdp00048	The final risk-limiting concentrations for constituents in CKD are much higher than the risk-based soil concentrations, due to consideration of physical dilution in soil and various fate and transport processes (e.g., losses due to leaching from soils). While recognizing that application of CKD to soils will tend to reduce constituent concentrations, this "reduction factor" (the ratio between the risk-based soil concentration and the risk-limiting concentration in CKD) varies by several orders of magnitude among CKD constituents, and results in very high allowable concentrations in CKD for several metals (e.g., nickel, chromium VI, selenium). For certain constituents, the basis for the reduction factor is unclear (e.g., lead and cadmium have approximately the same reduction factor, although their soil-water partitioning coefficients vary by 3 orders of magnitude, suggesting differences in terms of migration potential). TNRCC recommends that USEPA re-evaluate the basis for each of the risk-limiting CKD concentrations to ensure that any anomalies among the reduction factors are justified.
734	ckdp00048	To a significant extent, the magnitude of the risk-limiting concentration is determined by the assumptions regarding use practices for CKD (e.g., depth of incorporation, total number of applications, application rate). While it is generally outside of our area of expertise, TNRCC encourages USEPA to seek peer review from experts who can provide feedback in terms of the technical validity of these critical assumptions.
735	ckdp00048	Because of the potential variability of the 10 BIF metals and selenium, nickel, zinc, dioxins and furans at different sites, TNRCC recommends a site-specific CKD characterization approach rather than EPA's broad-based holistic approach. Therefore, TNRCC recommends that EPA establish allowable risk-based concentration limits for the agricultural land application of CKD.
736	ckdp00048	TNRCC further recommends that EPA revise the rule to require each facility to also establish site-specific baseline CKD concentrations for the 10 BIF metals and selenium, nickel, zinc, dioxins and furans. Prior to land application, the facility must determine that the allowable concentration limits are not exceeded. The facility will be required to re-analyze CKD to demonstrate continued compliance if there are any changes in the process (e.g., fuel, operational, raw material, etc.) that would significantly change site-specific baseline concentrations for the 10 BIF metals and selenium, nickel, zinc, dioxin and furans.
738	ckdp00048	The Draft Risk Assessment for Cement Kiln Dust Used as an Agricultural Soil Amendment document does not provide sufficient technical detail in several key areas of the assessment. Specifically, TNRCC requests that USEPA clearly outline how constituents which have both carcinogenic and non-carcinogenic effects were evaluated in calculating risk-limiting concentrations in CKD. Also, since the equations in Appendix A are structured such that they calculate risks/hazards in the forward sense, more detail on how risk-limiting concentrations were back calculated should be provided.

Comment Id	Document Number	Comment
740	ckdp00048	TNRCC notes that Appendix B of the risk assessment lists several incorrect toxicity factors for beryllium. The cancer slope factor for beryllium is listed as 4.3 (mg/kg-day)-1, with IRIS cited as the source. However, this cancer slope factor has been removed from IRIS; and the current file states that the oral database should be considered inadequate for the assessment of carcinogenicity. Therefore, TNRCC recommends that beryllium not be evaluated as a carcinogen; from an oral exposure standpoint. Additionally, the oral reference dose listed in the proposal (5 E-03 mg/kg-day) should be changed to 2 E-03 mg/kg-day to be consistent with IRIS. Even in using these incorrect values, there appear to be errors in the calculation of the acceptable soil concentration (200 mg/kg) which is the basis for the CKD limit. Solely based on consideration of the soil ingestion pathway, cancer risks associated with exposure to beryllium in soil at 200 mg/kg would significantly exceed the proposal's target cancer risk level of 1 x 10-5. This observation is supported by the 1996 USEPA Soil Screening Guidance: Technical Background Document, which lists a risk-based soil screening value for beryllium of 0.1 mg/kg (based on consideration of soil ingestion and use of a 1 x 10-6 risk level). Given these discrepancies, it may be advisable to undergo additional QA/QC efforts for all CKD constituents evaluated in this proposal.
741	ckdp00048	In the proposal, the risk-limiting concentration for dioxins/furans is set based on consideration of the average toxicity equivalency quotient (TEQ) background soil concentration in the United States (8 pg/g) cited in the draft 1994 EPA document Estimating Exposures to Dioxin-Like Compounds. However, the toxicity equivalency factors (TEFs) which were the basis for this background soil concentration have been updated by the World Health Organization (WHO). Therefore, TNRCC recommends that EPA recalculate the background soil concentration for dioxins/furans based on the new TEFs (Van den Berg et al., 1998). Also, TNRCC notes that the units for the background soil concentration of dioxins/furans cited in Table 8-6 of the proposal are mistakenly listed as parts per trillion, whereas they actually represent concentrations in parts per billion.

Comment Id	Document Number	Comment
1527	ckdpL0002	Comment: Commenters drew conflicting conclusions from the basic quantitative and qualitative findings of the off-site use analysis: □ □ [Bullet] CKD should not be regulated on the basis of risk because it does not pose a risk to human health or the environment when used as a hazardous waste stabilizing agent, as a sewage sludge stabilizing agent, as a building material, or in road construction. The Agency concludes that central-tendency multiple-pathway cancer risks never exceeded 1 xl O-6 and were generally less than 1 xl O-8. These quantitative risk estimates are confirmed by the fact that there has never been a documented incident of harm to human health from CKD [Emphasis Added]. The Agency explains that CKD has been beneficially used as a livestock feed ingredient in numerous U.S. and international tests. (SI 853, CKRC 717, LFC 700)□ □ Response: EPA agrees that many off-site uses of CKD were not determined to pose a significant threat to human health and the environment. The Agency evaluated seven potential off-site uses for CKD and based on a qualitative evaluation, determined that five of the uses presented have limited potential to impact human health and the environment. Two uses (hazardous and non-hazardous waste stabilization) currently are regulated under other EPA regulations. Three other uses (road sub-base, additive to asphalt, and materials addition) were determined to pose insignificant threats to human health and the environment because (1) CKD makes up only a small portion of the matrix; and (2) the solid matrix generally is not susceptible to significant releases to ground water, surface water, and air. EPA modeled the final two uses (road sub-base and agricultural liming) and concluded that road sub-base presents low risks and agricultural liming presents a significant risk (i.e., greater than 1x10-6) in the best estimate, maximum high-end, and bounding estimate exposure scenarios.□ □ EPA acknowledges that central tendency risk estimates never exceeded 1x10" for any of the exposure pathways considered, and the beneficial off-site uses of CKD do not appear to pose significant risks to human health [Emphasis Added]. However, the risk assessment should be protective of sensitive subpopulations, and consequently evaluated high end exposure scenarios. These scenarios, although conservative in nature, indicate that risks greater than 1x10-6 may occur as a result of exposure to surface water, ingestion of vegetables, and ingestion of fish. In addition, sensitivity analyses used to define the potential range of risks indicate that under highly conservative scenarios, risks may be significantly higher (e.g., greater than 1x10-2 for high end estimates of maximum dioxin concentrations in the subsistence fishing exposure scenario). EPA recognizes that many conservative defaults were used in developing these high end risk estimates, but the exposure scenarios (e.g., subsistence farmer, subsistence fisherman) used for the analysis are not highly implausible [Emphasis Added].□ □ APCA Response: APCA requests clarification of how the risks of regulating CKD may be justified given lack of a single documented case of damage to human health in over a century of liberal use of CKD as an agricultural soil amendment, as noted by the comment above. APCA also requests clarification as to whether there is a difference between "plausible" and not highly implausible" in its determination of appropriate exposure scenarios.□
97	ckdp00020	EPA discusses the risk assessment and resulting limitations on constituents in CKD they believe pose risk to receptors in the environment. These include the metals lead, thallium, arsenic and cadmium as well as chlorinated dioxins/furans. Throughout this section, EPA states that most CKD already meets the cutoff limits that are being proposed for agricultural use (i.e., Section VI., C., 1 on page 45664). In addition, the proposed cutoff levels were arrived at by very conservative assumptions used in the risk assessment, such as the assumption of application of a maximum amount of CKD to the soil for a maximum amount of time, 5 tons per acre every two years for 100 years. The combination of these factors results in an overstatement of the potential risks associated with specific concentrations of CKD being applied to the land for agricultural use and an overly protective and unnecessary standard. The imposition of these limits will also create an unfavorable perception with the agricultural users of CKD. Again, the specter of potential hazardous waste regulation that hovers over CKD acts as a potent disincentive to prospective beneficial reuse. The approach to consider mismanaged CKD, which in this case includes CKD applied in volumes over the maximum assumed amount of 5 tons per acre every 2 years, as a hazardous waste is inconsistent with EPA's claim that the proposed regulatory approach is based on common sense and practicality. Moreover, is it absolutely necessary to add this provision - in light of the fact that most CKD already meets the proposed limits? The ultimate result could actually be that more CKD is placed in landfills for disposal, instead of being beneficially reused as an agricultural amendment. Given the overly proscriptive nature of the proposed limits, EPA should reconsider its position on agricultural uses of CKD.

Comment Id	Document Number	Comment
178	ckdp00016	EPA should take an additional step to prevent the contamination of ground-water resources underlying land on which CKD is used for pH adjustment on agricultural lands. EPA, in its final rulemaking, should limit land application rates to no more than five tons per acre every two years. EPA should also restrict concentrations of arsenic, thallium, lead, cadmium, and chlorinated dioxins and furans that may be present in CKD, and also such chemicals of concern as chromium (total), barium, and selenium, which it overlooked in its proposal along with the potential for migration of these constituents into groundwater. Accordingly, in its final rule- making, EPA should propose limits on rates of application of CKD to agricultural lands to prevent leaching of all nine toxic metals to the ground water prior to pH balancing on agricultural lands.

Comment Id	Document Number	Comment
1501	ckdpL0002	Comment: In EPA's comparison of CKD dioxin/furan data from dry process and wet process kilns, the highest dioxin/furan data point was an anomaly and should not be considered. If the non-detect levels had been listed as zero and the data compared to background concentrations, no differences would have been found. EPA has erroneously concluded that dry process kilns generate CKD with higher levels of organic constituents than wet process kilns. (CKRC 717) Response: The Agency disagrees. The commenter does not explain why the highest dioxin/furan data point was an anomaly and therefore why it should not be considered. As explained in the response to the 4th comment following this one, the commenter's suggestion that non-detect levels be listed (treated) as zero is not appropriate and is not a generally accepted method of statistically treating such data. The Agency believes that its treatment of the data and its analysis of and conclusions about characteristics of CKD from dry and wet process kilns are correct, and the Agency has not been presented with information supporting a contrary position. APCA Response: See grouped response below. Comment: EPA overestimated dioxin and furan concentrations by assigning detection limits to samples for which no constituent was detected. The detection limits were used to calculate average and average detected concentrations, biasing the averages high. This technique greatly overstates risk. In addition, in one instance, the maximum value reported for a constituent was the detection limit for that constituent, which was not detected in the sample. The commenters noted that by reporting results this way, EPA suggests that the results are higher than the actual laboratory analyses. EPA reported primarily non-detect values for dioxins/furans analyzed in CKD from the other five plants sampled in Phase II. Had EPA properly reviewed the data by reporting zero for non-detects to address contaminants detected in the blank, data for the single plant (generally found above detecting limits) would have been reported as slightly above background. Had EPA compared dioxins/furans data from the "anomaly" facility to background levels, as it did for metals in Exhibit 3-20, these data would have been considered insignificant. (CKRC 717, LFC 700) Response: The Agency disagrees with the commenter. First, the focus of the CKD study with regard to dioxins/furans was to evaluate whether (and at what concentrations) these compounds are present in CKD and to determine whether hazardous waste fuel burning affects the formation of such compounds. The Agency does not believe it is proper or appropriate, nor is it generally accepted practice when treating such analytical data, to assign zero values to non-detects; this is because the true value is likely to fall somewhere between zero and the detection limit – assignment of zero for non-detects is not appropriately conservative. The Agency's choice of assigning the sample detection limit is considered a generally acceptable practice in the evaluation of such analytical data, and is appropriately conservative given the highly toxic nature of the analytes involved. In addition, zeroing of data that are associated with blank contamination also is not conservative (although EPA agrees that such data should be viewed as "qualified"). Lastly, unlike EPA's comparison of CKD metal concentrations to the concentration of metals found in native soils (i.e., background), a likewise comparison for dioxins suggested by the commenter is inappropriate because dioxins do not normally occur in nature. APCA Response: See grouped response below. Comment: The commenter attached tables illustrating the effect of assigning a zero value to non-detects and contaminated samples in determining dioxin and furan concentrations in as-managed and as-generated CKD. The commenter stated that EPA contradicts its own laboratories by improperly including non-detects and contaminated samples in its calculations. The commenter suggested that dioxin/furan TEQ readings of 10 ppt in the United States could be considered background, since 10 ppt is background for remote parts of Canada. (CKRC 717) Response: EPA acknowledges that the assigning of a zero value to non-detects will change the statistical results of EPA's analysis. As stated in responses to preceding comments in this section of this document however, the commenter's suggested procedure is not considered to be generally acceptable practice in the treatment of such data. The Agency in general believes that it is necessary and appropriate to implement a conservative approach to assigning values to non detects, and especially for highly toxic compounds such as dioxins and furans. In regard to the commenter's statement that EPA contradicts its own laboratories by improperly including non-detects and contaminated samples in its calculations, the Agency notes that the purpose (and use) of the data generated for the RTC and other laboratories (cited by the commenter) are different, and as such, do not have to be evaluated in the same manner. The Agency notes, for example, that it historically has reviewed analytical data in both the RCRA Listing and Delisting programs using assigned values for non-detects (either at l/2 or at the detection limit) and qualified data, which is a generally accepted procedure. Lastly, the Agency notes that the background levels of dioxin/furan in Canada (or the United States) is not relevant for the analysis at hand.

Comment Id	Document Number	Comment
		EPA is evaluating the presence of dioxin/furans in CKD for inclusion in its risk assessment analyses. APCA Combined Response: In determining an appropriately conservative yet representative and plausible concentration of dioxins' in CKD for use in risk assessment, several issues regarding data collection, manipulation and characterization must be addressed. I.) As-generated dioxin data for CKD should be collected using EPA Method 23, DETERMINATION OF POLYCHLORINATED DIBENZO-P-DIOXINS AND POLYCHLORINATED DIBENZOFURANS FROM STATIONARY SOURCES. Certain requirements in calculating results concentrations and in data reporting exist. The following excerpt is from 40 CFR Part 60, Appendix A, Method 23, Section 9. It states: "Any PCDD's or PCDF's [sic] that are reported as nondetected (below the MDL) shall be counted as zero for the purpose of calculating the total concentration of PCDD's and PCDF's [sic] in the sample." This is a federal regulation and as such explicitly directs the treatment of nondetects for Method 23 data results. The end use of these data is not relevant. 2.) There are varying techniques for dealing with the variability of data such as a maximum reported value and the uncertainty of data represented by concentration data at or below the detection limit. Regarding high-end data point used from a distribution, EPA's risk assessments accepted under CERCLA generally use the LOWER of either the maximum reported value or the 95% upper confidence limit on the mean. Alternately, in other risk assessments, the 95th percentile of a data distribution is sometimes used. (95% UCL does not equal the 95'h percentile). On the low end of the distribution, EPA uses either the highest detection limit or half of the highest detection as a lower bounding value. EPA's response that this is an 'acceptable practice' is subjective but not incorrect given the frequency of use for the practice. However, an acceptable practice is not necessarily the best practice. Use of the detection limit (all other things being equal) will result in an overestimation of risk by some unknown amount (uncertainty). Use of half the detection limit may or may not result in an over-estimation of risk (again the uncertainty). For large data sets with both some minimum number of detects and the remainder nondetects, distributions can be projected for the universe of results by techniques such as Helsel's Method. Establishing a frequency distribution allows a value selection using the earlier mentioned statistics of the 95% UCL or, less desirably, the 95th percentile. Creation of a distribution also allows for probabilistic assessment techniques to be employed, greatly enhancing the reviewer's perspective on the influence of variability and uncertainty in the risk estimates. 3.) Given the superficial and inconsistent treatment of the data, no observation can be made regarding the similarities or difference between the types of cement kilns generating CKD. 4.) EPA's rejection, as inappropriate, that it present a comparison of dioxin concentrations in CKD to background dioxin concentrations is itself inappropriate and great/y diminishes the value of the risk assessments. If EPA desires to assess the risk associated with dioxins in CKD, then by definition the dioxin must originate in the CKD. Dioxins may be infrequently created in nature but their occurrence is ubiquitous. To the extent that non-facility related sources of dioxin may contribute to the dioxin concentrations in CKD in the as-managed state, the issue of "background concentrations" (this is actually a source attribution issue) is germane. It is improper to dismiss this comment on the basis of man-made versus natural dioxins.

Comment Id	Document Number	Comment
1502	ckdpL0002	Comment: Although the Report notes that dioxins and dibenzofurans were found in CKD samples from hazardous waste burners and non-waste burners, EPA makes no reference to background dioxin concentrations, or dioxins from other sources (e.g., coal-fired power plants, wood burning fireplaces). EPA implies that all dioxin/dibenzofuran levels require control, but control of these compounds to zero levels is impossible. (GCI 826) Response: Although the commenter's concern is unclear, EPA disagrees with the need to compare dioxin levels found in CKD to those in residues from other activities. The focus of the RTC in this aspect was to evaluate whether (and at what concentrations) dioxins were present in CKD and to determine whether hazardous waste fuel burning affected the formation of such compounds. APCA Response: The commenter may have been trying to make the point that it is important for a regulatory agency to be able to put risks into proper context, both for itself and for the regulated public, if truly informed rule and decisionmaking is to result. EPA makes consistent referral to the presence of dioxins in CKD as posing a "significant health risk" without stating that these levels are in the range of background levels of exposure, thus creating the perception of risk where none may exist.
209	ckdp00018	As we explained in detail, the underlying risk assessment utilized multiple, unrealistic and overly conservative assumptions, and provides no defensible foundation for a decision to impose limitation on beneficial utilization of byproduct materials. USWAG also takes issue with the specific limits EPA has proposed for arsenic content of CKD used as a substitute for agricultural lime. EPA found arsenic to be the only CKD constituent for which the risk assessment returned a risk-limiting concentration lower than the reported national average background concentration, based on a 3.0 E-5 high-end lifetime cancer risk. EPA rationally decided against using this limiting concentration as the regulatory limit. However, EPA reacted to this flawed and overly conservative risk assessment by choosing a limit based on the arsenic concentration found in agricultural lime, a substitute product. We do not find scientific justification for this limitation in the record.
500	ckdp00032	We use it [CKD] for pH correction the very same way that burnt lime is used. The uniqueness of this product (CKD) is it contains two major elements in growing all crops. These are potash and sulfur. By using 1 ton per acre of CKD every 3-4 years we do not need to purchase any potash, sulfur, calcium, or zinc from any other sources. This makes CKD an outstanding product in agriculture. We do extensive soil tests before the product is applied and only apply it at pH recommendations. The product we use has had moisture added to it before it is applied to the fields to alleviate any dust problems. It is a damp material.
502	ckdp00032	We have also tested the product for metals; it is almost identical to hydrated limestone. We apply approximately 12,000 - 15,000 tons per year which is more than the plant produces per year and therefore need to "mine" previously disposed CKD. Under this rule this would not be allowed.
8	ckdp00009	40 CFR 259.17: Indiana believes that section (a) would be more reader friendly if it were put in a table. The reference in section (d) to "company representative" is not clear. Does this mean the generating company representative, the transporting company representative, or the laboratory company representative?

Comment Id	Document Number	Comment
340	ckdp00020	Agricultural Use: The proposed rules prohibit the "use" of CKD for agricultural purposes unless the CKD is mixed with sewage sludge and subject to 40 CFR 503 standards or the "waste" meets concentration limits for arsenic, cadmium, lead, thallium, chlorinated dioxins and furans. The proposed rules, however, do not regulate the use of CKD: they only regulate the generators' testing, record-keeping and sale of CKD destined for agricultural use. □□ □□ In the preamble to the proposed rules, the EPA finds that there is no need for "regulatory limits or record keeping requirements on the rate and frequency of application of CKD used as an agricultural lime substitute because the Agency believes that today's proposed standards are protective across the range of anticipated, agronomically viable application parameters." 64 F.R. 45666. The rules regulate the product specifications and the sampling and analysis, certification, and record keeping by generators of CKD to be sold for agricultural use, but the□□ use of CKD as an agricultural lime substitute is not regulated. This limitation on the scope of the proposed rules is appropriate for the reasons set forth in the preamble and also because the generator cannot control the actual use of CKD once it is sold for agricultural purposes.
341	ckdp00020	The proposed rules require that CKD that is "destined for agricultural use be sampled and analyzed by the generator prior to shipment for agricultural use to determine whether the waste has concentrations of toxic constituents in excess of those established in" the regulation 64 F.R. 45666. The text does not specify the frequency or the analytical methods to be used to demonstrate compliance. The preamble, however, states that if CKD that is sold for agricultural use is not analyzed on a daily basis, and is later determined to have exceeded the constituent limits, "all CKD transported for agricultural use since the previous successful analysis [will be considered by the Agency] to have been mismanaged, and, therefore, . . . hazardous waste." This presumption, retroactively imposed after the CKD has been applied to soil, is unreasonably and unnecessarily harsh. This is especially true because the proposed rules do not include any requirements with respect to sampling frequency. □□ □□ The proposed rules should specify the sampling and analysis required to demonstrate compliance with the constituent limitations. If, as the preamble suggests, the Agency intends to enforce minimum standards, those standards should be m-the rules.Sampling techniques, analytical methods, and the required frequency of the sampling and analyses that will result in the exemption of CKD should be proposed as part of the rules and offered for comment by interested parties.
342	ckdp00020	After establishing reasonable and specific sampling and analysis requirements for the generator, the EPA should enforce them as any other RCRA requirement. Adopting the fiction that a failure to properly sample or analyze will cause CKD used for agricultural purposes to be a listed hazardous waste is an arbitrary remedy which will seldom, if ever, be justified by the chemical characteristics of the CKD or the effect of placing the CKD on soil. If the Agency determines that (1) a generator has failed to comply with the sampling and analysis requirements in the regulation, and (2) that failure resulted in CKD with constituent levels exceeding limitations in the regulation being placed on soil, the Agency may appropriately find that a violation of RCRA has occurred, but any remedy imposed should be commensurate with the actual circumstances (e.g., testing the soil upon which the CKD was applied).□□ □□ The modified regulation should specify reasonable sampling and analysis, certification, and record-keeping requirements that are necessary to retain the exemption. Failure to adhere to the requirements of the requirements in the regulation should be a violation of RCRA, but it should not cause the CKD to be presumed to be something that it is not, a listed waste.
343	ckdp00020	The regulation should not prohibit the generator from using CKD for agricultural purposes on land needing pH adjustment that is owned by the generator if the CKD used in this manner is the same product as the generator sells for this use to other parties.

Comment Id	Document Number	Comment
347	ckdp00020	The language of the rules should consistently reflect the limitation on the scope of the rules described in the preceding paragraph. The regulation should be modified to more clearly state what the Agency intends to regulate, i.e., the maximum constituent limits, confirmational sampling and analysis, certification, and record keeping by the generator with respect to CKD destined for sale for agricultural use. The first sentence of subsection 40 CFR 259.17 should be modified to read: "CKD may not be sold for agricultural use unless the CKD is mixed with sewage sludge and subject to 40 CFR Part 503 standards or the CKD meets the following requirements," i.e., concentration limitations for arsenic, cadmium, lead, thallium, chlorinated dioxins and furans in the regulation.□□ □□ The Agency purports to impose standards on generators of CKD concerning its sale as a lime substitute for the purpose of amending the soil to optimize pH or to promote the growth of crops or other foodstuffs. The purpose is to ensure a high degree of confidence and consistency in this product. However, the standards in the proposed rules inadequately identify what a generator of CKD must do to ensure that the CKD is exempted.
348	ckdp00020	Moreover, the restriction on generator use of CKD for agricultural purposes in subdivision 40 CFR 259.17(e) should be clarified to provide that the sale of CKD for agricultural purposes "solely for use on the generator's property" is intended to prevent disposal disguised as agricultural use.
542	ckdp00034	...the testing and implementation requirements in proposed 259.17 are not protective enough. Although 259.17(c) requires sampling and testing, there is no minimum frequency provided, and there is also no multiple sampling required to ensure that the CKD sampling is representative and accounts for process variability. A minimum of 4 samples should be required initially, and the results should be submitted to the EPA or authorized state for review, similar to the approach taken in the November 19, 1999 proposed HWIR rule (see 64 FR 63398). Subsequent shipments must require additional analytical testing on a minimum frequency, proportional to volume. A similar approach to the November 19, 1999 proposed HWIR rule could be followed (see 64 FR 63404/3) although the testing frequency must be more frequent, given the direct exposure of the CKD to the human food chain.
630	ckdp00039	Section 259.17 establishes limitations on the beneficial use of CKD, including maximum allowable concentrations of metals, dioxins, and furans. This looks like a very helpful and well-thought-out section.
697	ckdp00046	Establish constituent limits for CKD being used as an agricultural amendment. The Department supports the standards for CKD when used as a soil amendment. The Department supports similar constituent limits being developed for all wastes used in agriculture including biosolids and K061 wastes (baghouse waste from the primary smelting of steel using electric arc furnaces). However, the Department strongly recommends the Agency set general standards for all potential waste derived soil amendments and that such standards be protective to the environment and human health. The basis for establishing these standards should be the same regardless whether the source of the soil amendment is from K061, CKD or biosolids.
699	ckdp00047	During the 15 years I have been the county agent in Hagerstown, I have seen the utilization of kiln dust from the Hagerstown plant increase from several thousand tons per year to about 15,000 tons now. This cement-making by-product is an excellent liming material and contains significant percentages of magnesium, potassium and sulfur. These properties make it a valuable soil amendment.
742	ckdp00048	EPA should take an additional step to prevent the contamination of ground-water resources underlying land on which CKD is used for pH adjustment on agricultural lands. TNRCC recommends that EPA, in its final rulemaking, limit land application rates to no more than five tons per acre every two years. EPA should also restrict concentrations of arsenic, thallium, lead, cadmium, and chlorinated dioxins and furans that may be present in CKD, and also such chemicals of concern as chromium (total), barium, and selenium, which it overlooked in its proposal along with the potential for migration of these constituents into groundwater. Accordingly, in its final rulemaking, EPA should propose limits on rates of application of CKD to agricultural lands to prevent leaching of till nine toxic metals to, the ground water prior to pH balancing on agricultural lands.

Comment Id	Document Number	Comment
89	ckdp00015	Wind Erosion Emission Calculations. The wind erosion estimates outlined on page 4 of this background document do not account for the fact that wetted and compacted CKD is very resistant to wind dispersal, due to its cementitious nature. CKD partially hydrates forming a temporary bond: which increases particle density and results in crust formation on the surface of the material. This "crust" makes wind dispersal less likely than that of pre-compacted material. In addition, EPA claimed wind erosion that would generate fugitive emissions from the entire landfill area, instead of just the active portions. Emission estimates using the entire portion will tend to over-predict off-property impacts from the disposal area. Taking these considerations into account, the impacts of CKD fugitive emissions have not been accurately represented; EPA should reconsider its assumptions when calculating and modeling fugitive emissions to provide a more accurate basis for CKD management controls.
1041	ckdpL0001	Pg. 45667, B. Clean Air Act. □□ While this portion of the rule would help reduce fugitive emissions of CKD into the ambient air, EPA has not given state air programs the authority to implement it. The regulation proposes to establish RCRA requirements to address fugitive emissions from transportation, storage and disposal of CKD. None of the regulations proposed to be modified (Parts 259, 261, 266 and 270) deal specifically with air regulations, and therefore, cannot be adopted into Missouri's State Implementation Plan. The Missouri Air Conservation Commission may not adopt guidelines that are stricter than those required under the provision of the federal Clean Air Act Amendments.
745	ckdp00048	TNRCC recommends that the proposal incorporate provisions which allow for authorized states to establish additional or more stringent standards than those ultimately established for CKD through rulemaking by EPA. This flexibility would allow state programs to account for site-specific conditions (e.g., groundwater protection in karst topography) which may warrant additional protection for human health and the environment. This is critical since it is difficult to afford protection for all site-specific circumstances on a generic basis, as is being pursued in this rulemaking.
359	ckdp00021	To the extent that any RCRA Subtitle C regulation for CKD is warranted, then EPA should use RCRA Section 3004(s) to develop tailored Subtitle C standards. In the August proposed rule, CKD subject to the "backup listing" would be subject to certain Subtitle C requirements. The proposed rule indicates that EPA is determined to impose some form of federal RCRA Subtitle C regulation on CKD. To the extent that the agency does impose Subtitle C rules on CKD, the agency should employ its authorities under RCRA section 3004 (x) to develop tailored Subtitle C standards for CKD. In this way, the unnecessary, wasteful impacts of that hazardous waste regulatory system will be lessened.□□ In the case of any Bevill Amendment waste found to warrant regulation under Subtitle C, sec. 3004(x) provides the EPA Administrator with authority to modify the following requirements of subsection 3004:□□ (c) on liquids in landfills, (d) on prohibitions on land disposal, (e) on solvents and dioxins, (f) on deep injection well disposal, (g) on additional land disposal prohibitions, (o) on minimum technological requirements, (u) on continuing releases at permitted facilities, and section 3005(j) on permitting of interim status surface impoundments.□□ In making modifications to these requirements, the Administrator is to consider the special characteristics of such wastes, the practical difficulties associated with implementation of such requirements, and site-specific characteristics, including but not limited to the climate, geology, hydrology and soil chemistry at the site, so long as modified requirements assure protection of human health and the environment.□□ 42 U.S.C. 6904(x)
684	ckdp00043	...if the proposed regulations are adopted as proposed, the EPA must better explain the ramifications of CKD becoming listed immediately under HSWA when disposal occurs in a State which has not adopted the pre-HSWA tailored management standards. The preamble to the proposed regulations state, "The flexibility provided by these tailored management standards is irrelevant until the States revise their programs and become authorized to regulate CKD." Is the EPA saying that CKD is subject to full RCRA Subtitle C authority in States which have not adopted the tailored management standards? Conversely, how will CKD being disposed using tailored management standards but located in States which failed to adopt management standards be regulated? Clarification of this issue is very important to a State where the underground disposal of a listed hazardous waste is prohibited.