



CD10-0311

November 1, 2010

Mr. Rusty Lundberg, Executive Secretary
Utah Radiation Control Board
195 North 1950 West
Salt Lake City, Utah 84116

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DEPARTMENT OF
ENVIRONMENTAL QUALITY

Dear Mr. Lundberg:

Subject: Comments on Recommended Language for a Proposed Rule Requiring Performance Assessments

EnergySolutions has reviewed the recommended language for a new proposed rule regarding the preparation of performance assessments as contained in the October 12, 2010 report of the Board performance assessment subcommittee. We hereby offer the following comments for your consideration.

EnergySolutions supports the idea of a rule to require a performance assessment to confirm that waste can be safely disposed at licensed sites. We agree with the subcommittee that this approach is far preferable to attempting to regulate disposal at licensed sites of individual waste streams. It is our understanding that the Board wishes by the passage of this rule to ensure that no waste is disposed in Utah that was not considered in the establishment of the limits on Class A waste as defined in the rules of the U.S. Nuclear Regulatory Commission given in 10 CFR 61.55(a) unless a site-specific analysis (or performance assessment) is prepared to confirm compliance with the performance objectives. Given that understanding, we propose that the revisions to R313-25-8 be reworded as follows (added language underlined – deleted language stricken out):

(1) The licensee or applicant shall conduct a site-specific performance assessment and receive Executive Secretary approval prior to accepting any radioactive waste if:

(a) the waste was not considered in the development of the limits on Class A waste and included in the analyses of the *Draft Environmental Impact Statement on 10 CFR Part 61 "Licensing Requirements for Land Disposal of Radioactive Waste," NUREG-0782, U.S. Nuclear Regulatory Commission, September 1981, and*

(b) the waste to be disposed exceeds either of the following limits:

(i) the waste is likely to result in greater than 10 percent of the dose limits in R313-25-19 during the time period at which peak dose would occur, or

(ii) the waste will result in greater than 10 percent of the total site source term over the operational life of the facility, or

~~(c) for any other reason, the disposal of the waste would result in an unanalyzed condition.~~

~~(2) A licensee that has a previously approved site specific performance assessment that addressed a radioactive waste for which a site specific performance assessment would otherwise be required under R313-28-8(1) shall notify the Executive Secretary of the~~

~~applicability of the previously approved site specific performance assessment at least 60 days prior to the anticipated acceptance of the radioactive waste.~~

The draft proposed rule would require a new performance assessment if the waste results in an unanalyzed condition "...for any other reason." *EnergySolutions* believes the open-ended nature of this wording could lead to debates of the very nature the rule is intended to eliminate. Relying on a specific reference (the Part 61 EIS) to define what has not been analyzed is a more rigorous and sufficiently restrictive way to identify wastes requiring site-specific analysis.

We also believe it is important to change the order of the conditions proposed in the draft rule by first determining whether the waste stream was analyzed in the Part 61 EIS. As written, conditions (1)(a) and (1)(b) could be interpreted to require a performance assessment for wastes that meet the proposed thresholds even if the waste is not an otherwise unanalyzed waste stream. We believe the thresholds are an important element of the proposed rule; however, they should only apply for waste streams that already have been determined to be unanalyzed.

EnergySolutions also proposes that the language "and changing lake levels" be deleted from sections 4(a) and 4(d). The consideration of changing lake levels depends upon the waste to be analyzed and the associated period of performance to be considered. It is not necessarily relevant to a performance period that does not encompass the geologic time span within which the lake levels may or may not rise to the degree that the site will be affected. To require consideration of rising lake levels in every assessment will be at best a meaningless exercise for shorter performance periods and could add to the cost and time of performing such assessments. In any event, rising lake level potential is but one of dozens of such considerations that could be judged to be important. Any attempt to name all important facets of the technical analyses will not only fall short, but will also impose a level of micro-management of the Executive Secretary's discretion that exceeds that appropriate for a rule. The Executive Secretary will have ample opportunity to review the performance assessment against any criteria that is deemed to be important during the required review.

We thank you for the opportunity to provide these comments in advance of the publication of the proposed rule.

Sincerely,



Daniel B. Shrum
Senior Vice President
Regulatory Affairs

ENERGYSOLUTIONS

CD11-0091

January 3, 2011

Mr. Rusty Lundberg, Executive Secretary
 Utah Radiation Control Board
 195 North 1950 West
 Salt Lake City, Utah 84116

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JAN 03 2011

DEPARTMENT OF
ENVIRONMENTAL QUALITY

Dear Mr. Lundberg:

Subject: Comments on Recommended Language for a Proposed Rule Requiring
 Performance Assessments

EnergySolutions has reviewed the recommended language for a new proposed rule regarding the preparation of performance assessments as contained in the November 9, 2010 report of the Board performance assessment subcommittee. We hereby offer the following comments for your consideration.

EnergySolutions supports the idea of a rule to require a performance assessment to confirm that waste can be safely disposed at licensed sites. We agree with the subcommittee that this approach is far preferable to attempting to regulate disposal at licensed sites of individual waste streams. It is our understanding that the Board wishes by the passage of this rule to ensure that no waste is disposed in Utah that was not considered in the establishment of the limits on Class A waste as defined in the rules of the U.S. Nuclear Regulatory Commission given in 10 CFR 61.55(a) unless a site-specific analysis (or performance assessment) is prepared to confirm compliance with the performance objectives. Given that understanding, we propose that the revisions to R313-25-8 be reworded as follows (added language underlined – deleted language stricken out):

(1) The licensee or applicant shall conduct a site-specific performance assessment and receive Executive Secretary approval prior to accepting any radioactive waste if:

(a) the waste was not considered in the development of the limits on Class A waste and included in the analyses of the *Draft Environmental Impact Statement on 10 CFR Part 61 "Licensing Requirements for Land Disposal of Radioactive Waste," NUREG-0782, U.S. Nuclear Regulatory Commission, September 1981, and either (b) or (c) below apply.*

(ba) the waste is likely to result in greater than 10 percent of the dose limits in R313-25-19 during the time period at which peak dose would occur, or

(cb) the waste will result in greater than 10 percent of the total site source term over the operational life of the facility, or

(e) ~~the disposal of the waste would result in an unanalyzed condition not considered in the development of 10 CFR 61.55.~~

(2) A licensee that has a previously-approved site-specific performance assessment that addressed a radioactive waste for which a site-specific performance assessment would otherwise be required under R313-28-8(1) shall notify the Executive Secretary of the applicability of the previously-approved site-specific performance assessment ~~at least 60 days prior to the anticipated acceptance of the radioactive waste.~~

(3) The licensee shall not accept radioactive waste until the Executive Secretary has approved the information submitted pursuant to R313-25-8(1) or (2).

(4) The licensee or applicant shall also include in the specific technical information the following analyses needed to demonstrate that the performance objectives of R313-25 will be met:

(a) Analyses demonstrating that the general population will be protected from releases of radioactivity shall consider the pathways of air, soil, ground water, surface water, plant uptake, and exhumation by burrowing animals, ~~and changing lake levels.~~ The analyses shall clearly identify and differentiate between the roles performed by the natural disposal site characteristics and design features in isolating and segregating the wastes. The analyses shall clearly demonstrate a reasonable assurance that the exposures to humans from the release of radioactivity will not exceed the limits set forth in R313-25-19.

(b) Analyses of the protection of inadvertent intruders shall demonstrate a reasonable assurance the waste classification and segregation requirements will be met and that adequate barriers to inadvertent intrusion will be provided.

(c) Analysis of the protection of individuals during operations shall include assessments of expected exposures due to routine operations and likely accidents during handling, storage, and disposal of waste. The analysis shall provide reasonable assurance that exposures will be controlled to meet the requirements of R313-15.

(d) Analyses of the long-term stability of the disposal site shall be based upon analyses of active natural processes including erosion, mass wasting, slope failure, settlement of wastes and backfill, infiltration through covers over disposal areas and adjacent soils, and surface drainage of the disposal site, ~~and the effects of changing lake levels.~~ The analyses shall provide reasonable assurance that there will not be a need for ongoing active maintenance of the disposal site following closure.

(5)(a) Notwithstanding R313-25-8(1), any facility that proposes to land disposal of significant quantities of concentrated depleted uranium (more than one metric ton in total accumulation) after June 1, 2010, shall submit for the Executive Secretary's review and approval a performance assessment that demonstrates that the performance standards specified in 10 CFR Part 61 and corresponding provisions of the Utah rules will be met for the total quantities of concentrated depleted uranium and other wastes, including wastes already disposed of and the quantities of concentrated depleted uranium the facility now proposes to dispose. Any such performance assessment shall be revised as needed to reflect ongoing guidance and rulemaking from NRC. For purposes of this

performance assessment, the compliance period shall be a minimum of 10,000 years. Additional simulations shall be performed for the period where peak dose occurs and the results shall be analyzed qualitatively.

(b) No facility may dispose of significant quantities of concentrated depleted uranium prior to the approval by the Executive Secretary of the performance assessment required in R313-25-8(5)(a).

(c) For purposes of this R313-25-8(5) only, “concentrated depleted uranium” means waste with depleted uranium concentrations greater than 5 percent by weight.

(a) that the institutional control requirements of R313-25-11(8) have been met:

(b) that additional requirements resulting from new information developed during the institutional control period have been met;

(c) that permanent monuments or markers warning against intrusion have been installed; and

(d) that records required by R313-25-33(4) and (5) have been sent to the party responsible for institutional control of the disposal site and a copy has been sent to the Executive Secretary immediately prior to license termination.

EnergySolutions believes that relying on a specific reference (the Part 61 EIS) to define what has not been analyzed is a more rigorous and sufficiently restrictive way to identify wastes requiring site-specific analysis. The Part 61 EIS is the proper reference, not the tables found in 10 CFR 61.55, as the EIS contains the expected waste types.

We also believe it is important to change the order of the conditions proposed in the draft rule by first determining whether the waste stream was unanalyzed in the Part 61 EIS. As written, conditions (1)(a) and (1)(b) could be interpreted to require a performance assessment for wastes that meet the proposed thresholds even if the waste is not an otherwise unanalyzed waste stream. We believe the thresholds are an important element of the proposed rule; however, they should only apply for waste streams that already have been determined to be unanalyzed.

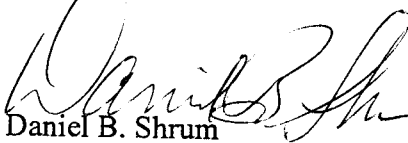
EnergySolutions proposes that the time requirement of 60 days be removed from the proposed rule. The 60 day requirement is irrelevant based on conditions found in (3) that require Executive Secretary approval for any wastes contemplated in (1) and (2). If the 60 days means that the review will be completed in that time period, then *EnergySolutions* agrees with the rule as written.

EnergySolutions also proposes that the language “and changing lake levels” be deleted from sections 4(a) and 4(d), but particularly from 4(a). Changing lake levels cannot be considered a “pathway”, which is the specific topic of 4(a). In addition, 4(a) already includes air, soil, ground water, and surface water exposure pathways, which are normal exposure routes. With respect to 4(d), the consideration of changing lake levels depends upon the waste to be analyzed and the associated period of performance to be considered. It is not necessarily relevant to a performance period that does not encompass the geologic time span within which the lake levels may or may not rise to the degree that the

site will be affected. To require consideration of rising lake levels in every assessment will be at best a meaningless exercise for shorter performance periods and could add to the cost and time of performing such assessments. In any event, rising lake level potential is but one of dozens of such considerations that could be judged to be important. Any attempt to name all important facets of the technical analyses will not only fall short, but will also impose a level of micro-management of the Executive Secretary's discretion that exceeds that appropriate for a rule. The Executive Secretary will have ample opportunity to review the performance assessment against any criteria that is deemed to be important during the required review.

We thank you for the opportunity to provide these comments in advance of the publication of the proposed rule.

Sincerely,



Daniel B. Shrum
Senior Vice President
Regulatory Affairs

R313-25-8. Technical Analyses.

(1) The specific technical information shall also include the following analyses needed to demonstrate that the performance objectives of R313-25 will be met:

(a) Analyses demonstrating that the general population will be protected from releases of radioactivity shall consider the pathways of air, soil, ground water, surface water, plant uptake, and exhumation by burrowing animals. The analyses shall clearly identify and differentiate between the roles performed by the natural disposal site characteristics and design features in isolating and segregating the wastes. The analyses shall clearly demonstrate a reasonable assurance that the exposures to humans from the release of radioactivity will not exceed the limits set forth in R313-25-19.

(b) Analyses of the protection of inadvertent intruders shall demonstrate a reasonable assurance that the waste classification and segregation requirements will be met and that adequate barriers to inadvertent intrusion will be provided.

(c) Analysis of the protection of individuals during operations shall include assessments of expected exposures due to routine operations and likely accidents during handling, storage, and disposal of waste. The analysis shall provide reasonable assurance that exposures will be controlled to meet the requirements of R313-15.

(d) Analyses of the long-term stability of the disposal site shall be based upon analyses of active natural processes including erosion, mass wasting, slope failure, settlement of wastes and backfill, infiltration through covers over disposal areas and adjacent soils, and surface drainage of the disposal site. The analyses shall provide reasonable assurance that there will not be a need for ongoing active maintenance of the disposal site following closure.

(2)(a) Any facility that proposes to land dispose of significant quantities of concentrated depleted uranium (more than one metric ton in total accumulation) after June 1, 2010, shall submit for the Executive Secretary's review and approval a performance assessment that demonstrates that the performance standards specified in 10 CFR Part 61 and corresponding provisions of Utah rules will be met for the total quantities of concentrated depleted uranium and other wastes, including wastes already disposed of and the quantities of concentrated depleted uranium the facility now proposes to dispose. Any such performance assessment shall be revised as needed to reflect ongoing guidance and rulemaking from NRC. For purposes of this performance assessment, the compliance period shall be a minimum of 10,000 years. Additional simulations shall be performed for the period where peak dose occurs and the results shall be analyzed qualitatively.

(b) No facility may dispose of significant quantities of concentrated depleted uranium prior to the approval by the Executive Secretary of the performance assessment required in R313-25-8(2)(a).

(c) For purposes of this R313-25-8(2) only, "concentrated depleted uranium" means waste with depleted uranium concentrations greater than 5 percent by weight.