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## American Ecology

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October 5, 2009

Mr. John Hayes  
U.S. Nuclear Regulatory Commission  
Two White Flint North, Mail Stop T8F5  
11545 Rockville Pike  
Rockville, MD 20852-2738

Via electronic mail to: [john.hayes@nrc.gov](mailto:john.hayes@nrc.gov)

**RE: Westinghouse Electric Company Alternate Disposal Request (Docket #0700036)**

Dear Mr Hayes;

US Ecology Idaho, Inc. ("USEI"), the proposed recipient of specified Westinghouse Electric Company ("WEC") waste from the Hematite, Missouri decommissioning project as described in the above docket, wishes to supplement comments made by our company at the well-attended July 28, 2009 NRC public meeting in Grand View, Idaho and our August 20, 2009 letter to NRC with the following comments.

USEI wishes to confirm that the types and concentrations of radioactive material proposed to be disposed at the company's Grand View facility are within limits established in the Waste Acceptance Criteria ("WAC") of the facility's permit, (Enclosure 1). The USEI permit also provides an established concurrence review process by the Idaho Department of Environmental Quality ("IDEQ") for accepting such waste based on prior NRC alternate disposal authorizations and related exemptions and USEI's own safety assessment. Idaho's review process and existing, formal radioactive materials regulatory program is further described in the attached letter from the IDEQ to Idaho Representative Steve Hartgen (Enclosure 2).

As stated by parent American Ecology Corporation's Chief Executive Officer at the NRC public meeting, the USEI permit also requires a comprehensive radiological control and safety program encompassing performance assessment and safety evaluations, environmental monitoring, personnel dosimetry, training, audits and related activities suitable to the types and concentrations of radioactive materials we receive. This required program, overseen by qualified IDEQ staff, including health physics personnel, was developed based on US Ecology Washington, Inc.'s experience since 1965 operating a Class A, B and C licensed Low-Level Radioactive Waste ("LLRW") disposal facility

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near Richland, Washington as well as other US Ecology LLRW disposal facilities. The close proximity between our Washington and Idaho sites and our corporate office in Boise, Idaho has facilitated experience and knowledge transfer to USEI operations. In collective years no other company in the nation can match our experience operating and properly closing LLRW disposal facilities licensed under the Atomic Energy Act.

We encourage the NRC to contact IDEQ program managers directly to obtain an independent assessment of USEI's commitment to regulatory compliance and safety. For the record, USEI has not been cited for a single permit violation since acquiring the Grand View, Idaho facility in February 2001.

Our Grand View operation's commitment to safety is further evidenced by the facility's status as an Occupational Health and Safety Administration ("OSHA") Voluntary Protection Program ("VPP") STAR site; the highest VPP recognition level. We encourage the NRC to contact the responsible OSHA region officials regarding this demonstrated safety commitment.

We also wish to take this opportunity to address comments submitted to the above docket by our direct competitor *EnergySolutions* ("ES") on September 4, 2009 and Jim Lieberman of Talisman International on August 3, 2009. We are disappointed that the Talisman comment letter did not disclose that Talisman provides consulting services to ES on this matter. Please note that the majority of the comments presented in the attachment to the ES cover letter and the Talisman letter are basically identical. Accordingly, both the ES and Talisman comments accordingly have an economic interest regarding this docket and that their comments and any potential Part 2 hearing request involving them or their agents should be evaluated with this fact in mind.

As a general matter, the ES/Talisman comments seek a reversal of established NRC policy allowing generators to utilize existing provisions of the Title 10 regulations to obtain cost-effective disposal services consistent with protection of public health and safety and the environment. Such policy and procedural objections are inappropriate in the context of a case-specific application pursuant to those regulations. USEI's responses to specific ES/Talisman comments follow:

**EnergySolutions Comment:** *"The disposal of special nuclear material in a landfill not licensed in accordance with 10 CFR Part 61 is inappropriate."*

**Response:** ES has an economic interest in achieving a monopoly over disposal of all special nuclear material, regardless of concentration, generated in those 36 states (including Missouri) that do not have access to the Part 61 facilities in Richland, WA or Barnwell, SC. The NRC has, however, approved disposal of low concentrations of special nuclear material at RCRA Subtitle C and RCRA Subtitle D facilities under the 10 CFR 20.2002 process and license release protocols. Recent examples include special nuclear material from Connecticut Yankee Nuclear Power Plant and Big Rock Point Nuclear Power Plant. In the case of Connecticut Yankee, the NRC also issued an exemption under 10 CFR

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Part 70.17. ES further objects to exemption of byproduct material for purposes of disposal at non-Part 61 sites, of which there is even broader precedent.

The 10 CFR 20.2002 process is a valid process to determine the safety of disposing low activity source, byproduct and special nuclear material at a Subtitle C hazardous waste disposal facility. NRC's review will determine whether the USEI siting, permitting, and regulatory oversight provided by the State of Idaho is adequate for the Hematite wastes proposed. The WEC application reviews environmental, worker safety and public impacts, and provides a criticality analysis demonstrating that USEI's facility is safe and appropriate for disposal of the proposed waste.

**EnergySolutions Comment:** *"The exemption process contained in 10 CFR 20.2002 was not designed for and is not adequate for evaluating the disposal of such material."*

**Response:** As discussed previously, the 10 CFR 20.2002 process was designed to provide a structured means by which NRC could evaluate and approve alternate disposal. The procedure includes a detailed evaluation of calculated doses to members of the public and workers, a performance assessment of long-term impacts on the people and the environment, and a criticality analysis. This thorough review is adequate for assessing the appropriateness of an alternate disposal approval.

**EnergySolutions Comment:** *"The use of 10 CFR 20.2002 process to assess and disposal [sic] of SNM is not only inappropriate, it is unprecedented. There has been no previous application of this regulation to SNM of this enrichment or quantity."*

**Response:** As noted above, precedent clearly exists for alternate disposal of SNM material and issuance of a related Part 70 exemption. The Nuclear Criticality Safety Assessment included with WEC's application as Attachment 5 conclusively demonstrates that the percent enrichment is immaterial. The controlling limit is the mass concentration of the U-235 isotope in the volume of waste. Established procedures undertaken by WEC and overseen by the NRC will ensure that only very low concentrations of enriched uranium will be shipped to USEI. This will ensure worker and public safety consistent with the 10 CFR 20.2002 alternate disposal authorization.

**EnergySolutions Comment:** *"...once the material is exempted, it is completely outside the control of the NRC or an Agreement State. Thus there is no mechanism for tracking the ultimate disposal location of this SNM."*

**Response:** The NRC's review, alternate disposal authorization and license amendment process provides appropriate means to specify and verify that the Hematite, MO facility could only dispose of specified types and quantities of

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waste within specified concentration levels pursuant to the established regulatory requirements for disposal of radioactive materials at USEI's Grand View, Idaho facility. As in past cases, we anticipate that NRC approvals would be specific and limiting.

It is false that "there is no tracking mechanism for tracking the ultimate disposal location of this SNM." The WEC's application (Section 9) commits that it will use DOE/NRC Form 741, *Nuclear Material Transaction Report* to document all transfers of SNM to USEI. Signed shipping manifests will complete the transaction record. Finally, USEI is required by its RCRA permit to maintain records of the location of buried waste within its disposal cells.

In summary, appropriate accountability exists for the secure disposal of the proposed waste under the conditions of the requested NRC exemption, license amendment, and other laws, regulations and permit conditions governing waste transport and disposal.

**EnergySolutions Comment:** *"The applicant has not sufficiently evaluated nor justified the environmental, health and safety impacts of the proposed amendment."*

**Response:** ES incorrectly states that the Decommission Plan has not been submitted when in fact WEC submitted its Decommissioning Plan to NRC on August 12, 2009. Westinghouse's alternate disposal application and the submitted Decommissioning Plan are both a matter of public record and provide an appropriate basis to proceed. The NRC may also request additional information from WEC if additional information is necessary for NRC to complete its review.

**Talisman Comment:** *"We believe that disposals of licensed material should not be done through an exemption process. Rather, we believe disposal of licensed material, especially unique material such as highly enriched SNM should be reviewed within a regulatory framework under the Atomic Energy Act that would allow for NRC and Agreement State control and oversight."*

**Response:** A December 16, 2004 Letter from the NRC's Paul Lohaus to the IDEQ (Enclosure 3) confirms NRC policy that 10 CFR Part 20.2002 alternate disposal authorizations and exemptions under Parts 30.11, 40.14 and 70.17 (which governs SNM), may be simultaneously approved by NRC as requested in the pending docket. It is a matter of record that NRC has issued past approvals consistent with such authority and the December 2004 policy letter. Moreover, as stated by NRC at its July 28, 2009 public meeting, more than 100 alternate disposal authorizations have been approved over the years. The process being undertaken by the NRC includes a detailed technical review of the WEC proposal to ensure protection of public health and safety and the environment. Regulated entities reasonably rely upon existing NRC policy and precedent when planning and undertaking decommissioning activities.

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**EnergySolutions / Talisman Comment:** *“A performance assessment approach based on the performance objectives of Part 61 should be applied rather than a license termination rule (L TR) approach based on Part 20, subpart E.”*

**Response:** The standard applied by NRC of “several millirem per year” for calculated doses is more restrictive than the limits set in Part 61. The WEC submittal now under review by NRC includes a risk-based, site-specific performance assessment and safety evaluation developed using public domain modeling codes to demonstrate that this more restrictive standard will be met. The approach and process being taken are consistent with the regulations and past alternate disposal authorizations issued by NRC.

**EnergySolutions / Talisman Comment:** *“The time period for an analysis should adopt the peak dose approach of NUREG-1573 and not rely on the 1000-year time period of the LTR given the long half lives involved.”*

**Response:** WEC, in consultation with USEI health physics personnel involved in developing the site-specific performance assessment, utilized the RESRAD computer model to assess post-closure doses. Use of this model and site-specific information used for the Grand View site have been accepted in the past by NRC in approving other alternate disposal authorization and exemption requests. Specific source term data for the Hematite project were employed to update the model used to calculate post-closure doses including an intruder scenario. Using a 1000-year timeframe, a peak dose of 0.92 mrem was calculated in year 246. This calculated dose drops quickly to negligible levels in year 1000.

While we disagree that a 10,000 year time is required for regulatory purposes, USEI provided WEC with modeling analyses based on 10,000 years. The resulting calculated doses remain bounded at year 246, and well within the “several millirem per year” standard.

**EnergySolutions / Talisman Comment:** *“The necessary performance assessment should consider all isotopes that have been disposed at the disposal site so that the assessment takes into consideration the previous accumulation of disposed material as well as potential for future disposal of material.”*

**Response:** This is already provided for. USEI is required by its permit to maintain cumulative source term data for the Grand View facility. Relevant information has been provided to the NRC to assist its review of the WEC submittal. Additional information can be provided by WEC if needed with USEI’s support.

**EnergySolutions / Talisman Comment:** *“The stability of the site should consider the disposal operations including how the materials are buried, compacted, and potentially eroded with time.”*

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**Response:** Information on site characteristics including surface topography and drainage, geology and hydrogeology is included in the WEC submittal, which also describes waste receipt, placement and burial procedures consistent with the facility operating permit. The Grand View site is situated on high ground with no upgradient surface water drainage onto the site. It is considered superior from a long-term erosion standpoint to the ES facility in Utah.

**EnergySolutions / Talisman Comment:** *“Given the half-lives of the SNM, the analysis should address reconcentration of the SNM that would have to be considered at a Part 61 site. This should include the impact of leachate control with its potential for reconcentration in the leachate system.”*

**Response:** A detailed analysis of this subject is included as Attachment 5 of the WEC submittal. The analysis concludes that reconcentration of SNM in the landfill or leachate is not plausible under the conservative scenarios evaluated.

**EnergySolutions / Talisman Comment:** *“The performance assessment should consider all pathways including the intruder scenario. The basis for the scenarios considered should be explained.”*

**Response:** The performance assessment provided in Attachment 4 of the WEC submittal includes an intruder scenario.

**EnergySolutions / Talisman Comment:** *“Criticality is a potential issue with SNM. Criticality controls at the disposal site and during the transportation process should be considered. This includes controls on moisture during shipping and cleaning trucks and rail cars; configuration controls once material leaves the generator's site including the transshipment from rail cars to dump trucks; and need for radiation surveys of trucks and rail cars used in transportation.”*

**Response:** Criticality is addressed in the Nuclear Criticality Safety Assessment included as Attachment 5 of the WEC submittal. This assessment concludes that criticality is not plausible under the conservative packaging, transport, disposal and post-disposal scenarios considered. The WEC submittal described redundant controls to ensure that only low-activity SNM material consistent with the WEC request and the facility permit would be shipped for disposal.

**EnergySolutions Comment:** *“Because the disposal is being considered under an exemption process, the NRC will have no authority or control over the material should it grant the exemption. Given this absence of oversight, the NRC should address how it will ensure compliance with any conditions or applicant assurances related to the criticality and MC&A concerns listed [in our comments].”*

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**Response:** As previously noted, NRC has complete authority to specify all conditions for disposal at USEI in its approval to WEC and concurrent license amendment. This would include volume and activity limits, control and tracking mechanisms required, and any specific requirements related to criticality and MC&A.

**EnergySolutions / Talisman Comment:** *“NRC should consider requiring a full environmental report that would support an EIS given the unique nature of the disposal and the cumulative impacts at the disposal site.”*

**Response:** The intended Environmental Assessment discussed by NRC staff at its July 28, 2009 public meeting is considered sufficient and appropriate. The time and resources required to complete a full EIS are not warranted given the very low concentrations of radioactive material proposed for disposal, the performance assessment (including cumulative source term) and safety assessment indicating that calculated doses would be within several millirem per year, the radiological controls employed by WEC in Missouri and by USEI at the receiving facility, and applicable regulatory oversight.

**Talisman Comment:** *“Talisman recommends that the staff consult with the Commission before a decision is made on this matter.”*

**Response:** In 2006, the staff provided the Commission detailed background information on alternate disposal authorizations including past use of permitted RCRA hazardous waste facilities and public involvement in the NRC review process. In a Staff Requirements Memorandum (SECY 06-0056 dated 9 March 2006), the Commission provided public involvement policy guidance to staff (Enclosure 4). The July 28, 2009 public hearing is consistent with the transparency called for by this guidance. In short, the Commission has already provided policy direction to staff on the conduct of case-by-case reviews which now is being implemented. As noted above, regulatory entities reasonably rely on NRC to carry out its established policies, which the agency has a record of doing.

For good reason, the Commission did not request that each individual case be submitted to them. Commission involvement in specific case-by-case assessments would create schedule delays and uncertainty in decommissioning project planning. It is in the public interest to expand access to cost-effective, risk-informed disposal options, allowing limited resources to be applied to expeditious decommissioning of those sites and facilities requiring such work. Restricting disposal options for low activity radioactive material generated by NRC and Agreement State licensees to Part 61 sites would be at odds with this valid public purpose by eliminating pricing competition in the 36 states not able to access to the Northwest and Atlantic Compact facilities. This would increase overall societal costs and delay decommissioning work.

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In addition to our response to the comments by ES/Talisman, we would also like to respond to misleading statements found on the website found at <http://cleanidaho.org> and attributed to Citizens for a Clean Idaho (“CCI”).

**CCI website claim:** *USEI is “unregulated.”*

**Response:** This is false. US Ecology is regulated by both the IDEQ and the U.S. Environmental Protection Agency. The facility’s existing Resource Conservation and Recovery Act (RCRA) permit issued by the IDEQ allows the facility to dispose of radioactive materials in concentrations consistent with the Westinghouse submittal to the NRC. Compliance is monitored by IDEQ on a regular basis as part of a formal regulatory program authorized by Idaho statute and rules (see IDEQ letter in Enclosure 2). As noted above, USEI has an excellent compliance record with no permit violations issued since our company acquired the facility in 2001.

The website adds that USEI is not regulated by the NRC. This statement is misleading since the NRC does not directly regulate any commercial LLRW disposal facility in the United States. US Ecology’s Class A, B and C LLRW facility in Richland, WA is regulated by the State of Washington. The same is true of the other LLRW facilities in Barnwell and Clive, which are regulated by the States of South Carolina and Utah, respectively.

**CCI claim:** *IDEQ has “quietly signed off on a state permit for U.S. Ecology to take this waste.”*

**Response:** This is false. In fact, the Grand View site permit was modified to accept waste of this nature in May 2008 after a lengthy, open process that included public hearing and comment opportunities on an amendment to Idaho Rules and the above permit modification. The Rule change included public comment opportunities before both the Idaho Environmental Quality Board and the two legislative committees of jurisdiction. No objections were raised during any of these public input opportunities. This open, transparent process is further described by the IDEQ in their letter of September 14, 2009 (Enclosure 2).

**CCI claim:** *The NRC alternate disposal authorization process is “precedent setting” and use of a “loophole.”*

**Response:** As noted above, NRC licensees have obtained authorizations under 10 CFR Part 20.2002 for years pursuant to established processes. Use of existing exemption provisions is also not precedent-setting nationally or for the Grand View facility. NRC has used this regulatory authorization over 100 times in the past, including several exemptions for disposal of waste at USEI.

**CCI claim:** *USEI and disposal of Westinghouse waste would threaten the Snake River.*

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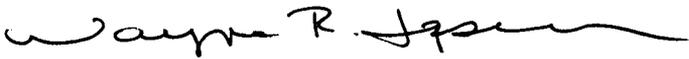
**Response:** As set forth in the WEC submittal, this is false. The facility is not hydrologically connected to the river, being situated approximately 3,000 feet above an underlying regional aquifer which is overlain by favorable geology including thick clay deposits.

**CCI claim:** *NRC is required to withhold relevant information on the waste and "can't tell us what it is."*

**Response:** As set forth in the WEC submittal, this is false. The submittal provides detail on waste forms and concentrations. Maximum levels proposed to be shipped to the Grand View facility are clearly specified along with the protocols to be used to ensure that these levels are maintained.

We appreciate the opportunity to comment on the record and request that the NRC proceed in a timely manner with review of the WEC application consistent with existing regulations and established policies and processes.

Sincerely,



Wayne Ipsen  
Corporate Counsel

Enclosures

- Enclosure 1: USEI Waste Acceptance Criteria
- Enclosure 2: September 14, 2009 letter from IDEQ
- Enclosure 3: December 16, 2004 letter from Paul Lohaus, NRC
- Enclosure 4: SECY 06-0056, 9 March 2006