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STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

January 29, 2001

Kathleen Hain
US Department of Energy – IOO
850 Energy Dr.
Idaho Falls, ID 83401-1563

Subject: WAG 13/14 Remedial Investigation and Feasibility Study (RI/FS)

Dear Ms. Hain:

As discussed in prior meetings and correspondence, the Department of Environmental Quality (DEQ) does not consider the RI/FS proposed by DOE to be sufficient to reach a supportable decision for the remediation of the transuranic pits and trenches at WAG 13/14. Although DOE and DEQ have agreed on the suite of potential remedial alternatives to be evaluated, the RI/FS proposed by DOE does not provide adequate information to determine the appropriate combination of alternatives and process methods.

Following our meeting of December 19, 2000, the attached table was prepared with DEQ management to describe the minimum information needed to reach a supportable decision. The table includes a strawman alternative used as a foundation to determine what information is needed to discriminate among alternatives and process methods.

DEQ believes that this issue has remained unresolved for too a long period, which will delay needed action in the long term. Within 45 days, we need DOE to provide us with a plan and schedule for meeting these information needs as part of the RI/FS process. We are prepared to work with DOE and EPA on this issue, but if we cannot resolve the issue quickly, we will need to resolve our dispute under Section IX of the FFA/CO.

Sincerely,

Dean J. Nygard
Site Remediation Program Manager
Waste Management and Remediation Division

DJN:tg

attachment

STRIP AN REMEDY: Localized retrieval with *in situ* grouting of remaining waste areas and containment via slurry wall and cap; continuation of vapor vacuum extraction as necessary.

Remedial Alternatives and Data Needs			
Remedy	Questions to Resolve for the Decision	Data to Make the Decision	Method
Retrieval (strawman assumes localized retrieval)	<p>Remedial Investigation: Are there areas posing sufficient risk to require retrieval?</p> <ul style="list-style-type: none"> • What is the radioactive & chemical mass that needs to be removed to ensure there does not remain an unacceptable risk? • What is the radioactive mass that must be removed to achieve confidence that there will not be a criticality event? <p>Feasibility Study: What is the relative effectiveness, cost and implementability of retrieval based on remedial investigation data?</p> <p>What is anticipated scale and what are the corresponding process options for retrieval?</p>	<p>Waste locations</p> <p>Waste volumes</p> <p>Waste concentrations (radiological & chemical, including VOCs)</p> <p>Waste types</p> <p>FS: Comparative cost, effectiveness, implementability of retrieval process options</p>	<p>Confirm historic inventory through waste mapping with GIS, probing, geophysics and selected physical sampling of waste and contaminated media.</p> <p>Selected physical samples are necessary because:</p> <ul style="list-style-type: none"> • Experience and anecdotal evidence indicate a need for physical confirmation of historic inventory. For example, recent gamma logging of probeholes indicates the presence of a greater mass of plutonium in some locations than was previously expected. • Other proposed nonphysical data collection methods are limited in their ability to confirm waste locations, concentrations, etc. • Selected physical data is necessary to confirm logging mass (activity), concentrations and determine location of "hot spots." • Physical data may also be used to try to correlate the buried, pre-1970 Rocky Flats inventory with above-ground stored, post-1970 Rocky Flats inventory. If wastes can be correlated, information from more accessible, post-1970 inventory may be used to make remedial decisions on pre-1970 waste. <p>FS: Because of absence of retrieval of TRU waste at other DOE sites under current requirements, some scaled demonstration of retrieval technology is needed to fairly estimate cost, effectiveness and implementability of retrieval process options. Independent review of design assumptions, applicability of administrative requirements (e.g., DOE orders) and DOE cost estimates.</p>

<p>Stabilization (strawman assumes grout)</p>	<p>RI: what areas pose an unacceptable risk and are candidate sites for evaluation of stabilization in the FS?</p> <p>FS: What are the process options for stabilization? What are the effectiveness, implementability and cost of stabilization process options in controlling migration of contaminants in the SDA?</p>	<p>Data to answer RI (same as identified under retrieval)</p> <p>FS: Determine the stability of stabilized waste forms.</p> <p>Determine the leaching rate from stabilized waste.</p> <p>Comparative costs, effectiveness & implementability and process options for stabilization.</p>	<p>FS: Treatability Study to test grouting process options for INEEL waste types</p> <ul style="list-style-type: none"> • Cold Test on simulated waste forms to test application of grouting operation, leachability, and long-term durability. • Evaluate grout mixes. • Evaluate interference effects from organic sludge waste form on grout strength, permeability, and longevity; laboratory tests to evaluate VOC diffusion through grout. <p>Sampling of underburden and leachate.</p> <p>Treatability Study to test ISV process option for INEEL waste types</p>
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<p>Containment (strawman assumes slurry wall, cap & continued vapor extraction)</p>	<p>RI: what areas need to be isolated to avoid unacceptable risk from remaining contamination?</p> <p>FS: What are the effectiveness, implementability and cost of a cap and slurry wall in controlling migration of contaminants in the SDA?</p> <p>What is need for continued vapor extraction?</p>	<p>Data to answer Retrieval RI questions should also answer containment questions.</p> <p>FS: Comparative costs, effectiveness & implementability and process options</p> <ul style="list-style-type: none"> • Hydraulic conductivity • Diffusion rate of VOCs through the contaminated material 	<p>Treatability Study Laboratory Tests to determine diffusion rates.</p>
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