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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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May 23, 2008

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Mr. John Martell
Washington State Department of Health
309 Bradley Boulevard, Suite 201
Richland, Washington 99352

Re: Comment Responses for the Engineering Evaluation/Cost Analysis (EE/CA) for the Northern Part of the BC Control Area (UPR-200-E-83)

Dear Mr. Martell:

The Department of Ecology appreciates your comments on the EE/CA for the Northern Part of the BC Control Area. Enclosed are responses from the United States Department of Energy (USDOE) to the comments you provided. Following your review, we will arrange a meeting with USDOE, Department of Health, Fluor Hanford, Inc., and Ecology to discuss these comments and responses further.

If there are questions, contact me at 509-372-7916.

Sincerely,

Mandy Jones

Mandy Jones
Environmental Specialist
Nuclear Waste Program

aa
Enclosure

cc w/enc:
Fred Adams, WDOH
Al Danielson, WDOH
Earl Fordham, WDOH
Administrative Record: 200-UR-1
Environmental Portal

Commenter: John Martell, Manager
Radioactive Air Emissions
State of Washington Department of Health, Office of Radiation Protection

Comment 1: The Radioactive Air Emissions Section has reviewed the information contained in the aforementioned EE/CA. We are interested in this project because of the potential for radioactive air emissions and possible impacts to nearby state licensed facilities and the public. Our comments on the EE/CA are provided below.

The list of Applicable or Appropriate and Relevant Requirements (ARAR) for radioactive air emissions seems to consider some of the minimum design and emission standards of Washington Administrative Code (WAC) 246-247. However, important requirements seem to be lacking:

1. Monitoring of radioactive air emissions is not addressed.
2. The As Low As Reasonably Achievable (ALARA) emission standard is not addressed.
3. Provisions to demonstrate and record compliance to these standards are not addressed.
4. Factors affecting the Best Available Radionuclide Control Technology (BARCT) analysis are not sufficiently addressed.

These comments, which may affect potential costs, are appropriate to consider at this stage of planning.

Response to Comment 1: The Tri-Party Agencies appreciate your time to review and provide comments on this EE/CA. The requirements you identify will be addressed in the Removal Action Work Plan (RAWP) for the BC Controlled Area, which is approved by the lead regulatory agency and placed in the Administrative Record.

The cost estimate for air emission controls and monitoring was based on past knowledge from removal actions and approved methods that were used successfully at similar sites.

Comment 2: Whether near-field ambient monitors are sensitive enough for compliance determination remains questionable, and subject to review and approval by regulatory authorities. At the least, a detection limit of 1 mrem/yr is required, which equates to 10% of the radionuclide concentrations listed in Table 2 of Appendix F of 40 Code of Federal Regulations (CFR) 61. Standard practice at Hanford is to report any emissions in excess of this limit to the Washington State Department of Health. To demonstrate compliance with the activity-specific ALARA standard will, in general, require a greater detection sensitivity and a careful consideration of how monitoring is to be done. It is the responsibility of the regulatory authority to assure monitoring is adequate to demonstrate compliance to the standards. It is not sufficient that the Hanford site as a whole remain below the 10 mrem/yr standard of 40 CFR 61.92. An activity-specific ALARA standard exists in WAC 246-247, by reference to WAC 173-480-050. Each activity will have an emission limit, deemed to represent ALARA by the regulatory authority.

Response to Comment 2: The requirements you identify will be addressed in the RAWP for the BC Controlled Area, which is approved by the lead regulatory agency and placed in the Administrative Record. Monitoring sensitivity and compliance determination will be addressed in the RAWP.

Comment 3: Demonstration of compliance to emission, construction, monitoring standards, and the preservation of records establishing such compliance are fundanental parts of the state regulation. They are necessary to determine the environmental impacts of cleanup at the Hanford site. Though some of these requirements may have been deemed merely administrative, it is clearly in accord with the directives of public policy to ensure the utmost transparency in regard to radioactive air emissions resulting from Hanford cleanup. Routine demonstration of compliance, monitoring, and accessible record keeping are in the public interest, and should be included as requirements.

Response to Comment 3: The Parties agree. The ARAR table found in the EE/CA (page 5-4) identifies requirements that address the fundamental parts of the state regulation.

Comment 4: It should be recognized that the BARCT standard of WAC 246-247-040 requires an activity- specific BARCT evaluation, as described in WAC 246-247-120. BARCT evolves, as technology evolves and what was BARCT in 1990 or 2000 may not be BARCT today. The regulatory authority is responsible to ensure a thorough and complete BARCT evaluation that addresses the specific conditions of the subject activity, at or near the time of performance of the activity. So, for example, a simple statement that water and fixatives constitute BARCT for excavation activities fails to establish BARCT, in that it does not provide the present analysis required by the standard.

Response to Comment 4: Prior to the removal action, a best available radionuclide control technology (BARCT) evaluation will be performed and included in the RAWP. The EE/CA identifies the requirements. The addition of water and fixatives are examples to be used for the BARCT. In general, the BARCT evaluation for an outdoor, shallow, relatively short-term removal action supports using proven technology on a cost/benefit basis.

Comment 5: Monitoring of all radioactive air emissions is required, particularly for activities having a potential-to-emit greater than 0.1 mrem/yr. This can usually be attained only through containment, ventilation, and monitoring of the ventilation stack, unless an alternative method is approved. In some activities (e.g., the excavation of low-level contaminated soil where the potential-to-emit is less than 0.1 mrem/yr) emissions may be estimated by calculation using soil sample data and a calculation method approved by the regulatory authority. Containment, ventilation, and stack monitoring must be duly considered in the BARCT analysis. Reliance by default on near-field ambient air monitoring is insufficient.

Response to Comment 5: The ARAR table addresses these primary requirements and the RAWP will document what is sufficient for each.