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Department of Energy
Richland Operations Office
P.O. Box 550
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APR 17 1998



Mr. Vince Panesko
1114 Marshall Avenue
Richland, Washington 99352

Dear Mr. Panesko:

PUBLIC COMMENTS ON DOE/RL-97-11, REV. 0, PHASE I FEASIBILITY STUDY FOR
THE CANYON DISPOSITION INITIATIVE (221-U FACILITY)

47827

The U.S. Department of Energy, Richland Operations Office (RL) acknowledges receipt of the public comments submitted by you on November 18, 1997. A copy of your comments and the responses to those comments will be recorded in the Administrative Record file for the 221-U Facility.

Below are your comments with the RL response.

COMMENT 1: Page 1-3, Section 1.2.1, No Action Alternative

The statement is made that the no action alternative is included in all CERCLA documentation as a baseline to determine the appropriateness of conducting a remedial action. A more correct baseline without remedial action is to maintain the building in a status quo which DOE has incorrectly interpreted as walking away from the building with no future surveillance and maintenance. That is a ludicrous alternative.

A true baseline without remedial action is to maintain the building and conduct surveillance as required to ensure public safety. DOE cannot select a baseline which endangers workers and the environment. That is ludicrous.

DOE has chosen the words, "CERCLA requires us to do it that way." CERCLA does not require DOE to select an unsafe option. CERCLA does not force DOE to exclude maintenance in the NO REMEDIAL ACTION option.

DOE has chosen to take interpret the NO ACTION option as no action, i.e., walk away leaving it sit. The CERCLA intent was to have a NO REMEDIAL ACTION option which includes all of the routine actions DOE normally performs to keep their facilities safe.

DOE needs to include surveillance and maintenance in Alternative 0. Then alternative 2 would contain only minimal remedial actions of decontaminating (all or some?) Of the radioactive material and sealing the building to prevent intrusion.

RL Response: The significance of the no action alternative in a phase I feasibility study (FS) is negligible in that alternatives are merely screened for a future final FS. Comparison to the no action alternative is not a critical item at this time. The suggestion to include a no action "to maintain the buildings in a status quo" mode will be implemented in the final FS for the canyon disposition initiative.

COMMENT 2: Page 1-7, Section 1.3.1.3, 292-U Filter Building

While the Section title uses the number 292-U, the following text uses 291-U for the filter building. The discrepancy should be corrected.

RL Response: Agree, text will be change to "292-U Filter Building."

COMMENT 3: Page 1-7, bottom line on page

The last sentence on page 1-7 states that a tank farm is physically located with UO-3 Plant. Since the words "tank farm" are usually reserved for underground tanks with capacities of 500,000 to 1,000,000 gallons, perhaps the wording could be altered to avoid confusion. Maybe the term, "above ground tanks" would be more appropriate.

RL Response: Agree, "a tank farm" will be replaced with "above ground tanks."

COMMENT 4: Page 1-8, Section 1.3.1.6, 3rd paragraph.

The first word is "Aliases" for the 241-WR Vault. This is a poor choice of word insomuch as it reflects an attempt to hide the original identity. That meaning does not apply here. A better choice of words might be, "Other names used for the 241-Vault."

RL Response: Agree, "Aliases" will be replaced by "Other names."

COMMENT 5: Page 1-8, Section 1.3.1.8, 275-UR Warehouse.

This building as well as the 222-U Lab are not labeled on Figure 1-8. While these buildings may not matter much, there is no description of where the building is located nor what potential hazards may be involved. For example, this is called a chemical storage warehouse. A similar building east of REDOX received a great deal of attention and the entire building, concrete pad and soil underneath the pad were shipped out of state to meet requirements for proper disposal. All buildings/waste sites discussed in Sections 1.3.1 and 1.3.2 should be shown on Figure 1-8. The condition of 275-UR as a potential source term should be addressed.

RL Response: Agree, location of buildings and waste sites mentioned in the FS will be added to Figure 1-8. Inclusion of source terms and other hazards specific to waste sites and facilities is generalized in section 3.0 of the FS. Detailed hazard information is not available at this time. Efforts are currently underway to obtain data for input to a future final FS for the canyon disposition initiative.

COMMENT #6: Page 1-8, Section 1.3.1.9, 2714-U Storage Facility

The reader is not given the location or the description of 2714-U. Both should be added together with source terms which must be addressed.

RL Response: Please see response to comment #5.

COMMENT #7: Page 1-9, Section 1.3.2, Waste Sites.

Sentence #3 states, "The exact number of sites will be determined based on the actual size of the barrier and are discussed in Section 3.0 of this FS." The uncertainty of the barrier should be made more clear. I could not locate a discussion of the exact number of sites in Section 3.0. Please add the subsection number of this discussion.

RL Response: Agree, locations will be provided in Figure 1-8. The third sentence of section 1.3.2 will be revised to read "...size of the barrier."

COMMENT #8: Page 1-9, Section 1.3.2, Waste Sites.

Without the location of the U-1, U-2 and U-8 Cribs being given, the reader is not able to agree on whether these cribs should be part of this FS, or whether it is acceptable that they are part of another FS. The locations of these cribs should be provided.

RL Response: Agree, the approximate location of waste sites will be included in Figure 1-8.

COMMENT #9: Page 1-9, Section 1.3.2.

The 216-U-4 Reverse Well and the 216-U-4A French Drain are stated to be included in the Focused FS for the 200-UP-2 Operable Unit. Since they are located within the 221-U entombment footprint, these sites should be addressed in this FS. The random intermingling of sites between FSs is not an acceptable practice.

RL Response: Agree, descriptions of the 216-U-4 and U-4A sites will be included in section 1.3.2.

COMMENT #10: Page 1-9, Section 1.3.2.

The statement that the 216-U-10 Pond (located over a half-mile away) is included in another FS appears to have little value. Please consider deletion, or if there is a significance of facilities located over a half-mile away, please explain it.

RL Response: Agree, sentence will be revised to read "...are not included in this FS due to location outside the 221-U complex; instead...."

COMMENT #11: Page 1-9, Section 1.3.2.

The original ditch to U Pond begins outside of the entombment footprint; however, the piping to the ditch begins underneath the planned footprint. Actions necessary to seal the underground waste lines need to be addressed in Section 1.3.10. While great effort appears will be taken to seal the aboveground portion of the entombment, the below ground portion has not received a great deal of attention in this FS and appears to be an Achilles heel.

RL Response: Piping is addressed in sections 3.1.2.1, 3.1.2.2, 3.1.2.3, 3.1.2.4, 3.1.2.5, and 3.1.2.6. In general, piping systems will be removed for the full removal alternative and isolated and sealed for entombment alternatives.

COMMENT #12: Page 1-11, Section 1.3.2.8, Unplanned Release Sites.

A historical document written by Harold Maxfield in 1977-78 may contain information about the UPRs which could be included here. These sites appear to contain radioactivity which seeped into the ground. The question as to whether these sites will be dug up or stabilized in place is not answered. There is no information provided in this FS about stabilizing such sites. The reader should be given enough information to understand how the UPR sites will be handled in this FS.

RL Response: The intent of the phase I FS is to screen potential alternatives for final disposition of the 221-U Facility. A future final FS will provide more detailed information based on future acquired data. The phase I FS does not select a final alternative; it merely identifies alternatives for future consideration. The final FS will identify in detail, how waste sites and associated buildings will be remediated based on the disposition of the 221-U Facility consistent with decisions in applicable operable units. Final disposition of the canyon will provide the presumptive remedy for associated waste sites and facilities (i.e., if the canyon is entombed, waste sites will be left in place dependent on the size of the barrier. It is unknown at this time how associated waste sites will be prepared for entombment).

COMMENT #13: Page 1-11, Section 1.3 Conclusion.

While the title of this FS is 221-U, there are a large number of facilities and waste sites involved in this FS. There are 9-10 buildings, 10 waste disposal sites and 7 UPR sites involved in this FS. That complexity should be made clear up front. The disposition of these facilities should also be made clear, i.e. it appears that their destiny is essentially unknown in all of the alternatives. I am quite uncomfortable in the knowledge that this FS addresses 27 plus sites with limited knowledge of each site, and limited understanding how each site will be addressed in each of the scenarios. Perhaps a table showing how each of these sites would be addressed in each of the alternatives would provide a better overview.

RL Response: See response to comment #12.

COMMENT #14: Page 2-19, Section 2.6.1, last sentence.

The last two sentences of Section 2.6.1 appear they should be combined.

RL Response: Agree, sentences will be combined.

COMMENT #15: Page 2-20, Figure 2-1, Conceptual Model.

The model has non-standard linkages. It is strange to have diverse links from 221-U such as volatilization and leaching feeding the same collector bar. The diverse collector bar feeds four Media Receiving Waste boxes. A more accurate model would have had specific links from Release Mechanisms to the Media Receiving Waste Boxes. For example, Infiltration would have linked directly to vadose zone moisture with no link to Airborne. There are many more improvements to be made about the linkages. They need to be reworked.

RL Response: Agree, conceptual model will be revised as necessary for the final FS.

COMMENT #16: Page 2-22, Table 2-1, COPC Identified.

This listing pops up in Table 2-1 without much discussion in the text. The value of the listing would be enhanced if it was (1) facility specific, (2) given a context of where it was found, and (3) provided descriptive elements such as how firmly it was emplaced.

Could water leaching through the soil move the material?

RL Response: Agree, discussion will be added as follows: "Table 2-1 provides a list of COPC which are a direct result of 221-U operations and a list of COPC discharged from 221-U to various waste site in the 200-UP-2 operable unit."

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COMMENT #17: Page 3-1, Section 3.1.1.2, Functional Analysis.

The three top-level master functions shown in Figure 3-2 need to be explained in the text. The reader has to look at Figure 3-2 and imagine what the 3 boxes mean. For example, the second box, "Operate the Complex" does not apply to facilities which have been shut down.

RL Response: Agree, the following text will be added to the first paragraph of section 3.1.1.7. "The three top-level functions are a summary of the basic steps to disposition of the 221-U Facility. Prepare the complex includes activities necessary to carry out any alternative. Such 'preparation' includes characterization, mobilization, site infrastructure, and includes physical preparation of the facility for remediation activities. Operate the complex is the function to implement the actual alternative, i.e., remove and decontaminate, or 'operate' as a waste disposal facility. Close the complex is the step to 'walk away' from the site after establishing the required monitoring systems."

COMMENT #18: Page B-1.

As referenced from page 3-1, Appendix B contains the subfunctions. Subfunction 1.1 talks about establishing hazards protections when the hazards are not identified until subfunction 1.5. Hazards identification should be performed before most other work. Subfunction 1.5 should be moved earlier in the work flow.

This comment reflects a problem with the entire FS. The entire FS is very weak on identifying the source terms of radioactive and hazardous material which must be dealt with. Without a better understanding of these source terms, it appears that the FS is a superficial effort which will result in unsafe conditions and injuries to workers. The FS process appears to be driven to make decisions without understand the safety issues which are very important in shaping the decisions.

RL Response: As described earlier in the response to comment #12, details on source terms and other hazardous substances are not available at this time. All hazards will be characterized and analyzed for each alternative prior to recommending a remedial action.

COMMENT #19: Page 3-2, Section 3.1.2.1.

The last bullet on page 3-2 indicates that Alternative 1 will disposition only 3 of the 27 plus facilities/waste sites/UPRs. The future of the 24 or so other facilities remains in doubt under this alternative. The FS process thus appears to be flawed. All 27 plus facilities need to be addressed. There is no reason to go through the expense of removing all of the radioactive contamination associated with the 221-U canyon and yet leave a contaminated reverse well a few feet away.

RL Response: Alternative 1 does not address any facilities or waste sites not physically attached to or located outside of the 221-U complex. An additional assumption will be added as follows: "Remediation of any waste sites will be addressed by the remedial action alternative selected for the 200-UP-2 operable unit waste sites."

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COMMENT #20: Page 3-3, Section 3.1.2.1.1

The paragraph entitled "Establish Hazards Protection," states that "The potential personnel and environmental hazards associated with this alternative are a combination of hazards normally encountered on the Hanford Site during routine operations, and those hazards involving the nonroutine activities of large-scale demolition operations." Such a statement that hazards will be routine and nonroutine is almost worthless.

The key point is that wide variety of unplanned events will occur as workers unfamiliar with the conditions in 221-U construction and unfamiliar with materials located in unexpected locations stumble into accident after accident. Complete demolition of a building that processed high levels of radioactive materials is extremely high risk. Hanford experience with small scale demolitions has repeatedly revealed surprise after surprise, sometimes with personal injury. The point that the operations will be high risk should be made.

RL Response: Agree, first sentence of "Environmental Hazards Protection" will be revised to read "...are a combination of high risk hazards normally encountered during routine operations...of large scale demolition operations at nuclear processing facilities."

COMMENT #21: Page 3-4, Radiological Hazards.

The statement is made that radiation exposure will be between 2 and 100 mrem/hr. It is not clear that these numbers apply to the 221-U canyon or are general numbers. The question is what is the dose in the 221-U canyon? The dose associated with contact handled equipment should be made clear.

RL Response: The exposure number is a general range that will not be exceeded. This is the estimated dose until work is more clearly defined after future design, dependent on the alternative selected.

COMMENT #22: Page 3-4, Radiological Hazards.

The statement is made that "Mitigation of airborne contamination will be accomplished with local exhaust ventilation of the decontamination equipment, etc." does not make sense when applied to a building containing radioactive cells being torn apart as the building is disassembled from one end to the other. The ventilation system ceases to function as designed once the building integrity begins to be demolished. Greater thought needs to be given to control of radioactive contamination.

RL Response: The following discussion will be included in the Radiation Hazards section, "Decontamination or fixing of loose and smearable contamination will be performed prior to any removal/demolition activities." Future best available radionuclide control technology (BARCT) will be performed as required by Washington Administrative Code 246-247 which may define additional controls for ventilation.

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Mr. V. Panesko

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COMMENT #23: Page 3-8, Section 3.1.2.1.2.

The Equipment Removal section starts by stating that "Operations in the 221-U Facility galleries will begin with the removal of material and debris followed by radiological surveys to determine the extent and location of radioactive contamination." The order of work is backwards. The radiological survey should occur first. This is a major safety error which could have resulted in accidental exposure and contamination of workers.

RL Response: Agree, section will be clarified to more accurately represent sequence of activities. Noncontaminated material and debris will be removed after full surveys are conducted.

Thank you for taking the time to comment on the subject document. If you have any questions or require additional information, please contact me at (509) 372-2282.

Sincerely,



J. P. Sands, Project Manager
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DDP:JPS

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