

**RESPONSES TO COLORADO DEPARTMENT OF HEALTH COMMENTS/ISSUES
FINAL PHASE I RFI/RI WORK PLAN
OPERABLE UNIT 15**

- Comment #1: Table of Contents: Any page numbering changes resulting from the comments below should be corrected.
- Response #1: EG&G and DOE concur. The comment has been addressed accordingly.
- Comment #2: Table 3.1: On the first page, the second entry under the Citation column probably should be moved up to align with the beginning of the tanks system closure description. The first section cited under the Comments column should be 265.197 rather than 265.147.
- Response #2: EG&G and DOE concur. The comment has been addressed accordingly.
- Comment #3: Section 5.7.1: Although DOE's Responses to Comments document states that the work plan "has been modified to indicate that Clean Closure Performance Standards will serve as the risk-based remedial action goals for OU15," this change has not been made in the text.
- Response #3: The OU 15 Work Plan was previously modified to indicate that the Clean Closure Performance Standards will serve as the risk-based remedial action goals for OU 15. Section 5.7.1 does not reflect this change since Section 5.7.1 addresses environmental media outside of the buildings. However, for clarity, Section 5.7.1 has been retitled "Remedial Alternatives Development and Screening for Environmental Media."
- Comment #4: Section 7.0: Steam rinsate sampling and analyses are proposed for six IHSSs, followed by up to three additional steam cleanings. The additional steam cleanings constitute remedial action and may be appropriate to propose as part of an IM/IRA, but not in a RFI/RI work plan. References to "steam cleaning" should be eliminated from this field sampling plan including Section 7.3 (page 7-9), Section 7.3.1.4, Section 7.3.2 (for each of the IHSSs), Table 7-2, and Figure 7-1. The paragraph on page 7-8 describing cleanup should be renamed and refocused.

- Response #4: EG&G and DOE concur. The comment has been addressed accordingly.
- Comment #5: Section 7.3.1.3: Please justify the need to reduce the number of on-site beryllium analyses to as few as 20% of the swipe samples taken for radioactivity.
- Response #5: Beryllium sample screening takes a considerably longer length of time to complete than radioactive sample screening. However, the total number of beryllium samples per IHSS is minimal; therefore, all samples from IHSSs 179 and 180 that will be screened for radioactivity will also be screened for beryllium.
- Comment #6: Section 7.3.2: The following are IHSS-specific comments pertaining to the OU-15 Field Sampling Plan. Several of these comments are a result of a site inspection. Other modifications to the field sampling plan may be appropriate and will be considered by the Department.
- Comment #6A: IHSS 178: A small circular area marked by faded and scuffed paint on the opposite side of the pillar from the designated IHSS area was noticed during a site inspection. This area is similar in size and shape to the designated drum storage area and should be included in the investigation.
- Response #6A: EG&G and DOE concur. The comment has been addressed accordingly.
- Comment #6B: IHSS 179: Since Building 865 is scheduled to undergo "transition" sometime in the next several months, it will be necessary to coordinate the RFI/RI investigation with building clean-up efforts. Use of the large steam cleaning/vacuum unit in this building should be weighed against a smaller machine dedicated to OU-15.
- Response #6B: EG&G and DOE concur. However, complete coordination of OU 15 Work Plan implementation with building "transition" may not be possible without delay of the IAG schedule. To the extent practicable, all OU 15 work will be coordinated with "transition" of the building.
- Comment #6C: IHSS 204: The interior of the Chip Roaster could probably be sufficiently characterized by sampling through various access

ports rather than by steam rinsate sampling. The additional incidents involving the Chip Roaster which were mentioned during the site inspection should be documented for consideration as part of Stage 1 data. Consider including ancillary equipment mentioned in the original closure plans as part of this sampling plan. This equipment includes flue ducts, gear reducer, cyclone separator, plenum pre-filter, heat exchanger, blower, and equipment used to wash and feed chips into the roaster.

Response #6C:

Documentation of additional incidents regarding IHSS 204 have been incorporated into the OU 15 Work Plan. In addition, significant changes to the sampling at IHSS 204 have been made based on the site inspection performed by the agencies on November 11, 1992. These changes are discussed below.

EG&G and DOE feel that the samples obtained via the inlet and outlet access ports during Stage 1 sampling will indicate the possibility of internal contamination of the chip roaster with Target Compound List (TCL) volatile organic compounds (VOCs) or TCL semi-volatile compounds. However, these constituents are not expected to be present inside the Chip Roaster due to the operating temperature (@ 600°C) subsequent thermal destruction (@ 500°C) for nonflammable 1,1,1-trichloroethane. Analytical results characterizing the inlet and outlet of the chip roaster will be used to evaluate the necessity of sampling ancillary equipment including flue ducts, gear reducer, cyclone separator, plenum pre-filter, heat exchanger, and blower. Because the wash rack, located in Room 31, is not attached to the chip roaster, thermal destruction of any RCRA-regulated contaminants would not occur during operation of the chip roaster. Therefore, the wash rack will be characterized in the same manner as the inlet and outlet of the chip roaster.

Comment #6D:

IHSS 217: Laboratory personnel indicated during the site inspection that various chemical substances other than cyanide may have been processed at the Bench-Scale Treatment unit. This possibility should be investigated as part of Stage 1 and the knowledge used to expand the analyte list, if necessary. All cyanide-contaminated ancillary equipment mentioned in the original closure plans (2 4-liter bottles, cyanide still, chlorine specific electrode) as well as surrounding walls and floor should be included. Because of the risk of spreading contaminants by

steam sampling, use of a decontamination foam cleaning agent or other sampling method is suggested. Whether an IM/IRA or a ROD/CAD process is used to close this unit, it can be disposed of at DOE's discretion once the appropriate decision document is issued.

Response #6D:

Because laboratory personnel presently working at RFP cannot exclude specific analytes as having been present within the chemical hood (originally installed in 1952), sampling at IHSS 217 will be performed for the full suite of analytes specified in Table 7-1 of the OU 15 Work Plan. EG&G and DOE believe that steam sampling, rather than foam, is the most appropriate sampling methodology and solvent solution for the full suite of analytes.

Radiological swipes and screening will be conducted prior to steam rinsate sampling. Potential spread of radiological or other contamination during steam sampling will be mitigated by using steam vacuuming equipment and other engineering controls.

The location of all ancillary equipment mentioned in the Closure Plans will be researched. If the ancillary equipment cannot be located its disposition will be documented to the degree possible.

Comment #7:

Section 8.1: The paragraph which begins on the middle of page 8-2 must be expanded to be complete. Sections VII.D.1.a, VII.D.1.b, and VII.D.1.c of the Statement of Work each require DOE to submit a technical memorandum. These memoranda respectively are to list hazardous substances present at each IHSS, to describe use exposure scenarios, and to list the toxicological and epidemiological studies utilized for the toxicity assessment. Section VIII of the SOW allows these risk assessment components mentioned above to be combined into one consolidated technical memorandum. If one or more of these components does not apply due to a lack of contamination, then its elimination should be briefly justified in that consolidated technical memorandum.

Response #7:

EG&G and DOE concur. The comment has been addressed accordingly.

**RESPONSES TO ENVIRONMENTAL PROTECTION AGENCY COMMENTS/ISSUES
FINAL PHASE I RFI/RI WORK PLAN
OPERABLE UNIT 15**

Paragraph #A: DOE intends to remove Individual Hazardous Substance Site (IHSS) 212 from the OU 15 schedules of the IAG and address the closure in the Mixed Residue Permit Modification as RCRA Unit 63. The permit closure plan will need to specifically address radioactive contamination and cleanup of the unit. Corrective Action beyond the unit must be performed pursuant to the IAG. This approach is acceptable to EPA if the Mixed Residue Permit Modification, specifically Part VIII of the permit, can be approved by CDH. The permit modification, at least for Unit 63, should be reviewed and approved by CDH before final acceptance of this approach. It should also be clearly stated in the RFI/RI Work Plan that inclusion of RFI/RI work for RCRA Unit 63 in the Mixed Residue Permit Modification does not remove the IHSS from the IAG. DOE will ultimately need to issue a CERCLA decision document closing the unit.

Response #A: We do not concur. It is our understanding that IHSS 212 will not be addressed as part of OU 15 as per CDH comments on the Draft Phase I RFI/RI Work Plan for OU 15. Part VIII of the RFP RCRA Part B Mixed Waste Permit Application and/or its modification includes Closure Plans which will specifically address radioactive contamination as part of the mixed waste which is regulated under RCRA.

Paragraph #B: IHSS 204, the original uranium chip roaster, is included in the OU 15 RFI/RI Work Plan. It is EPA's understanding that this unit will continue to operate for the purpose of oxidizing uranium "chips" that are not contaminated with RCRA hazardous waste. The RCRA closure status of this unit is unclear and should be clarified before proceeding with the RFI/RI Work Plan. If the chip roaster has been RCRA closed then it is not necessary to sample and analyze for RCRA hazardous waste. If it has not been RCRA closed the RFI/RI should be consistent with a RCRA closure plan for hazardous waste constituents. At this time sampling and analysis for radioactive contamination seems pointless because continued use will re-contaminate the unit which will require the unit to be re-addressed when the operation is discontinued. The radioactive contamination portion of the RFI/RI work for IHSS

204 should therefore be delayed until that time and coordinated with RCRA/CERCLA activities associated with facility decontamination and decommissioning.

Response #B:

We concur that radioactive contamination at IHSS 204, if present, should be addressed during decontamination and decommissioning and should be delayed with regard to OU 15. Radiological samples will not be obtained from IHSS 204 as part of the OU15 Work Plan to characterize radiological contamination or to fulfill closure requirements. However, radiological sampling will be performed for the purpose of monitoring the health and safety of the workers implementing the OU 15 Work Plan.

Based on information obtained during a site inspection performed on November 11, 1992 with the agencies, EG&G and DOE are proposing a modification to the sampling of IHSS 204 as presented in Section 7.0 of the Final Phase I RFI/RI Work Plan. Sampling for RCRA-regulated constituents at IHSS 204 will include the chip roaster and the enclosed rooms (i.e., 502 and 32) surrounding the chip roaster. Investigation of Rooms 31 and 501 will not provide information useful for characterization of either contamination related to the IHSS or release pathways to environmental media outside of the building. Room 31 has been flooded historically. Therefore the presence of RCRA contaminants, if any, in this room would not necessarily be related to IHSS 204. Room 501, a RCRA-permitted treatment unit, has been routinely cleaned as part of normal operating procedures for access and health and safety. Results of radiological screening and sampling previously conducted within the room will be researched, provided as an Appendix to the OU 15 Work Plan, and used to evaluate the need for sampling Room 501.

Only verbal information provided by RFP employees who performed the work is available to substantiate RCRA closure of the chip roaster. This issue has been discussed previously during meetings with the agencies and in EG&G and DOE responses to agency comments on the OU 15 Work Plan. If this is sufficient information for the unit to be considered closed under RCRA, EG&G and DOE request that the agencies indicate so in writing. If verbal information is not sufficient for RCRA closure, this should also be indicated in writing to finally resolve this issue.