

Phase I RFI/RI Report Response to EPA Comments

Rocky Flats Environmental Technology Site
Inside Building Closures
(Operable Unit 15)

U.S. Department of Energy
Rocky Flats Environmental Technology Site
Golden, Colorado

Environmental Restoration Program

January 1995

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REVIEWED FOR CLASSIFICATION/UCNI
BY G. T. Ostdiek *GT*
DATE *4-17-95*
OK - PUBLIC Release

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ADMIN RECORD

INTRODUCTION

This document responds to comments received from the U.S. Environmental Protection Agency on the Draft Phase I RFI/RI Report, Operable Unit No. 15, Inside Building Closures, August 1994 via the letter from the Colorado Department of Public Health and Environment dated December 8, 1994. Each comment received is listed and followed immediately by a response. A copy of the original comment letter is provided at the back of the document for reference.

**RESPONSE TO EPA COMMENTS
ON THE DRAFT PHASE I RFI/RI REPORT,
OPERABLE UNIT NO. 15, INSIDE BUILDING CLOSURES**

SPECIFIC COMMENTS

Comment 1 Executive Summary, page 3, last sentence, first paragraph. The text states that the data included in the RI report was judged to be of sufficient quality to support the required decision process. EPA disagrees with this statement. EPA has several QA/QC concerns with the performed sampling activities. These concerns are detailed in the specific comments.

Response: All work performed during the OU15 Phase I RFI/RI field investigation was conducted in accordance with the approved OU15 Phase I RFI/RI Work Plan and the QA/QC requirements specified therein. In EPA's comments on the Draft Technical Memorandum No. 1 (TM#1) (letter dated May 4, 1994), EPA stated "The sampling data is sufficient to evaluate the risk or dose rates to radiological workers in a radiological work setting." The data satisfy the Data Quality Objectives (DQOs) specified in the Work Plan and detailed in Section 4.0 of the Report. Responses to specific comments concerning project QA/QC are provided below.

Comment 2 Executive Summary, page 5, item #4. The identified ARARs for radionuclides (worker radiation protection standards) are not, by themselves appropriate to support a "No Action" decision for OU15. In order to demonstrate full compliance with CERCLA standards, DOE needs to demonstrate that the radioactive contamination in OU15 is present below risk based standards. DOE will need to develop preliminary remediation goal (PRG) concentrations for each radionuclide based on 10^{-6} risk level. Any radioactive contamination found at OU15 needs to be compared to the PRG concentrations. Compliance with worker radiation protection standards may be appropriate while DOE continues to follow existing safety protocols during the operation of the buildings. However, when the uses of the buildings change or when the buildings are ready to undergo decontamination & decommissioning (D&D) activities, the worker radiation protection standards may not apply and radioactive contamination currently present at OU15 IHSSs may present a risk to human health and the environment. Therefore, further cleanup of contaminated areas in OU15 may need to be conducted during D&D activities or as part of final cleanup of the buildings.

Response: DOE disagrees with the EPA assertion that "The identified ARARs for radionuclides are not by themselves appropriate to support a No Action decision for OU15." The Final Phase I RFI/RI Work Plan for Operable Unit 15, Inside Building Closures contains the following statement on page 3-1: "In addition to the clean closure standards, occupational radiation standards based on

Occupational Safety and Health Act standards for ionizing radiation (29 CFR 1910.96) are cited in Table 3.2" of the Work Plan. The 29 CFR 1910.96 regulation states "No employer shall possess, use or transport sources of ionizing radiation in such a manner as to cause any employee within a restricted area to be exposed" to defined levels of Radiation Equivalent Measures for whole body and certain organs or extremities. This regulation encompasses the entire radiation control program in place in the Department of Energy and as implemented at the Rocky Flats Environmental Technology Site, and is sufficient to protect all DOE workers and visitors entering or working in operating buildings. As a result, the ARARs that provide for radiation protection are, in DOE's view, sufficient to meet the CERCLA test of protecting humans and the environment from the threat of a release. Therefore, DOE does not agree with the suggestion that "DOE needs to demonstrate that the radiological contamination in OU15 is present below risk based standards."

It was also specified on page 8-3 of the approved Work Plan that "In accordance with the IAG, if the Clean Closure Performance Standard is met and radiological contamination is below occupational radiation standard thresholds, a HHRA will not be performed." Based on consultation with CDPHE, risk-based standards for indoor contamination were presented in the preliminary draft of Technical Memorandum Number 1 for OU15 (TM#1). Comments received from CDPHE on the Draft TM#1 specifically required DOE to remove the risk-based standards from this document, and to evaluate the data exactly as specified in the Work Plan.

The first portion of EPA Comment No. 2 states that "DOE will need to develop preliminary remediation goal (PRG) concentrations for each radionuclide based on 10^{-6} risk level. Any radioactive contamination at OU15 needs to be compared to the PRG concentrations." This statement is in direct conflict with the approved Work Plan, the approved TM#1, and with prior regulatory agency comments on the use of risk-based standards at OU15. Since prior guidance and comments from EPA and CDPHE approved the use of occupational exposure standards and directed DOE not to use risk-based PRGs, no modifications have been made to the Report.

With regard to the latter portion of EPA Comment No. 2, dealing with building D&D, actions to be taken during building D&D are beyond the scope of the RFI/RI Report. The OU15 IHSSs are small areas within buildings that remain in operation by DOE. The approved Work Plan addressed worker protection and assessed the potential for releases, but did not address final building closure. Therefore, final building closure is not addressed in the Final Phase I RFI/RI Report for OU15.

DOE agrees with EPA's position stated above: "Compliance with worker radiation standards may be appropriate while DOE continues to follow existing safety protocols during the operation of the buildings." The ARARs identified

for this investigation are those applicable to protection of workers as DOE continues to operate the facility - these ARARs were approved by the regulatory agencies on April 22, 1993 in the Final Phase I RFI/RI Work Plan for OU15.

Comment 3 Section 1.2.1, requirements of Interagency Agreement, page 9. The text states that a Baseline Risk Assessment (BRA) is not required for OU15. The use of health and safety radiological standards are inappropriate to justify a "No Action" decision for OU15. If a BRA is not performed, then DOE needs to develop PRG concentrations at 10^{-6} risk level. EPA believes that an industrial exposure scenario is appropriate to be considered during the development of the PRG concentrations. If contamination at OU15 exceeds the risk based standards, then further cleanup activities will be required.

Response: The Work Plan states on page 3-2 that "Because the OU 15 IHSSs are inside buildings, an HHRA for the RCRA hazardous wastes will not be necessary. If radionuclide contamination is detected at levels exceeding the occupational radiation standards identified in Table 3.2, a radiation risk assessment will be completed. The risk assessment will assume that potential human receptors can be limited to RFP workers and visitors for consideration of radionuclide exposure." The radiation control program in place for the RFETS buildings, especially the-buildings containing the OU15 IHSSs, is in conformance with 29 CFR 1910.96. Therefore, the radiological contamination present does not exceed the occupational radiation standards identified in Table 3.2 of the Work Plan, and there is no need for a risk analysis as long as DOE maintains its radiation control program.

Comment 4 Section 3.2. Sampling Activities, page 2. This section needs to explain the rationale for not conducting hot water rinsate verification outside the perimeter of the OU15 IHSSs.

Response: The hot water rinsate verification sampling rationale is presented in Section 3.3.4 of the Report. Verification sampling was conducted at the selected IHSSs identified by CDPHE in their letter dated June 20, 1994, which approved Technical Memorandum Number 1. No sampling outside an IHSS was identified. Please see response to EPA Comment No. 6.

Comment 5 Section 3.3.2. Hot Water Rinsate Sample Collection, page 7. This section failed to describe how equipment cross-contamination is prevented during the rinsate sampling activities. This needs to be addressed in the final RI report. In addition, this section needs to explain how the rinsate concentration is correlated to surface contamination.

Response: Section 3.3.2 of the Report provides only a general discussion of the hot water rinsate sample collection procedures used for OU15. The sampling activities were performed in accordance with the referenced Standard Operating Procedure (SOP) FO.27 (approved by CDPHE and EPA on June 14, 1993). FO.27

incorporates by reference SOP FO.03, which addresses general equipment decontamination. Both FO.03 and FO.27 were followed during the collection of all OU15 hot water rinsate samples.

The correlations between rinsate concentrations and surface contamination levels are explained in Section 5.0 of the Report. For RCRA-regulated constituents, the rinsate concentrations were compared directly to the clean closure performance standards for rinsates that are presented in the RFETS State RCRA Permit. For radionuclides, rinsate concentrations (activities) were converted to dust equivalents using the rinsate volumes, coverage areas, and a surface dust factor. These are described in Section 5.2 of the Report.

Comment 6 Section 3.3.4. Hot Water Rinsate Verification Sample Collection, page 9. This section states that rinsate verification sampling was limited to the actual IHSS location. This section needs to explain the rationale for not conducting verification sampling in areas outside the IHSSs where contamination was encountered during the Stage II sampling effort. EPA cannot concur with the statements made claiming that releases from OU15 IHSSs are not of CERCLA concern. EPA is unable to concur because of lack of verification data outside the IHSSs.

Response: The OU15 Phase I RFI/RI Work Plan (approved by CDPHE and EPA on April 22, 1993) presented a staged approach for the OU15 field investigations. According to the Work Plan, Stage 1 sampling was to be completed first to characterize the IHSS and perimeter areas. Stage 2 sampling to characterize the pathway areas outside the IHSS/perimeter areas was only required if contamination was detected during Stage 1. The Work Plan also allowed for the completion of verification sampling to confirm or deny the presence/absence of RCRA-regulated constituents detected during either Stage 1 or 2 sampling for comparison against the RCRA Clean Closure Performance Standard (6 CCR 1007-3, Section 265.111).

No RCRA-regulated constituents associated with waste operations at the OU15 IHSSs were confirmed to be present upon evaluation at the conclusion of the Stage 1 sampling effort. During the summer and fall of 1993, the initial OU15 Stage 1 and 2 sampling was performed simultaneously based on economical and logistical considerations associated with work in RFETS buildings. The Stage 2 samples taken at that time would have been useful if RCRA-regulated constituents had been confirmed to be present at the end of Stage 1 verification sampling. When, in fact, no RCRA-regulated constituents were confirmed, the initial Stage 2 data were not used for this investigation.

As part of the Stage 1 investigation, verification sampling was conducted in accordance with the general approach presented in the Work Plan, the specific requirements addressed in the June 10, 1994 meeting between DOE, EPA and CDPHE, and the Technical Memorandum Number 1 (TM#1) approval letters

from CDPHE (dated June 20, 1994) and EPA (dated July 5, 1994). In their approval letter, CDPHE stated that "The Division hereby approves OU15 Technical Memorandum Number 1 under the condition that verification sampling be conducted at IHSSs 178, 211 and 217 for inclusion in the Draft Report. Verification sampling at IHSSs 178 and 211 can be limited to butyl benzyl phthalate, and IHSS 217 limited to cyanide." In their approval letter, EPA concurred with this request, stating that "The Environmental Protection Agency (EPA) has reviewed Final Technical Memorandum No. 1 for OU 15 and finds it acceptable with the exceptions expressed in comments from the Colorado Department of Health (CDH)." Verification sampling was completed in accordance with CDPHE's and EPA's request.

EPA and CDPHE approved Technical Memorandum Number 1 (TM#1), whose specific purpose was to determine if releases from the IHSSs to the environment had occurred and if investigation outside the buildings was warranted. The information contained in TM#1 showed that no evidence of releases to the environment from the OU15 IHSSs existed and that no investigation outside the OU15 buildings was necessary.

Comment 7 Section 3.5. Data Quality Assurance/Quality Control, page 10. This section needs to explain why two different hot water sources were utilized during the initial hot water rinsate sampling activities. In addition, this section needs to explain why distilled water was used only for the collection of the verification samples and not for the initial hot water rinsate samples. Using different source of water for the sampling may result in QA/QC sampling problems.

This section states that rinsate blanks of the sampling equipment were collected for the purpose of measuring the effectiveness of sampling equipment decontamination. However, hot water rinsate blanks were not collected during equipment operation prior to conducting the hot water sampling activities. This section needs to address how sampling equipment cross-contamination during sampling activities was avoided or quantified. EPA is unable to accept an explanation to rule out any contaminants detected in the sample analysis based on a possible equipment contamination without any justifiable data presented.

The three equipment blank samples, or hot water rinsate blanks, collected from hot water rinsate sampling at an off-site location are not acceptable.

Response: Approved SOP FO.27 does not require the use of distilled or deionized water for generating rinsate for sampling. Due to the large rinsate volume requirements for the original sampling, the RFETS domestic water supply was used as source water. A single RFETS domestic water tap in each OU15 building (Buildings 447, 881, 865 and 883) was used as the water source for generating the rinsate samples for the IHSS(s) in that building. In accordance with approved SOP FO.27, source water blank samples were collected from each of these four sources and analyzed to determine if the source water contributed to any

detections in the hot water rinsate samples collected from the IHSSs. Distilled water was used for the verification samples because of the smaller total rinsate volume requirements (fewer samples and analyte groups).

Both the original and verification sampling was conducted in accordance with SOP FO.27. The QA/QC sampling requirements specified in FO.27 ensure comparability of sampling results using different source waters.

As described in Section 4.2.2, page 10 of the Report, four types of samples were collected to evaluate field accuracy:

- equipment rinsate blanks, which quantify the efficacy of the equipment decontamination procedures and identify any contaminants associated with sample cross-contamination;
- trip blanks, which identify cross-contamination of samples from sources at RFETS other than the OU15 IHSSs;
- field blanks (source water), which identify contaminants already present in hot water rinsate source water prior to sample collection; and
- hot water rinsate blanks, which identify any contaminants leaching out of the sampling equipment, and which are therefore artifacts of the sampling method.

The results for each of these sample types are provided in the Report in Tables 4-4 through 4-7, respectively.

The need for hot water rinsate blanks had not been anticipated during the original sampling activities in 1993. However, the evaluation of the analytical results from the original samples suggested that certain compounds detected in the samples (e.g., phthalates) could have been leached from the sampling equipment during operation. DOE, EPA and CDPHE agreed in their March 17, 1994 meeting that hot water rinsate blanks should be collected and analyzed to evaluate the potential influence of the hot water rinsate sampling equipment on the hot water rinsate samples collected using that equipment. As described in Section 3.5 of the Report, on April 27, 1994, three samples were collected using the entire hot water rinsate sampling system in full operational mode to rinse a clean glass surface. The system used to collect the blanks consisted of all new equipment (the original system was no longer available), which was identical to the equipment used during the original sampling. The new system was later used to collect the verification samples in May and June 1994.

The objective of the hot water rinsate blank sampling was to isolate the influence of the sampling equipment. The fact that the samples were collected at an off-site location is irrelevant, since this sampling effort was specifically designed to only

examine the effect of the sampling equipment, and not other site conditions. This is further supported within the context that no RCRA-regulated constituents associated with waste operations at the OU15 IHSSs were confirmed to be present in the real samples collected during the OU15 RFI/RI.

Comment 8 Section 4.2.2. PARCC. Field Accuracy, page 9, first bullet. It is not clear how equipment rinsate blanks can be utilized to identify any contaminants associated with sample cross-contamination. The equipment rinsate blank can only be used to identify any contamination that was present in the equipment. However, any contamination identified in the equipment rinsate blank does not necessarily represent contamination in the equipment prior to performing the sampling activities. The reason is that contaminants in the equipment may be washed out of the equipment during the collection of the equipment rinsate blank.

Response: In accordance with the approved Work Plan, equipment rinsate blanks were collected to measure the effectiveness of the field decontamination process for non-dedicated sampling equipment. Results of the equipment rinsate blank analyses reflect the efficacy of the equipment decontamination, and were not used to qualify sample results from subsequent samples. As stated in Section 4.2.2, page 12 of the Report, the equipment rinsate blank results indicated that the equipment decontamination procedures successfully prevented cross-contamination of the samples.

Comment 9 Section 4.2.2. PARCC: Field Accuracy, page 10, second bullet. This statement regarding field blanks (source water) is confusing. The text should clarify that the field blanks identify contaminants present in the source water prior to equipment operation.

Response: DOE believes that the information included in the second bullet is clearly presented and that editorial modifications are not warranted. Additional discussion regarding the source water and corresponding blank samples is provided in Section 3.5 of the Report and in approved SOP FO.27, which is included as Report Appendix B.

Comment 10 Section 4.2.2. PARCC: Field Accuracy, page 10, third bullet. The amount of contaminants leaching out of the sampling equipment are not expected to be constant throughout the entire use of the sampling equipment. This section needs to address any expected concentration variances in the hot water rinsate blanks.

Response: As described in Section 3.5 of the Report, the hot water rinsate blanks were collected under conditions similar to the collection of actual samples (i.e., similar temperature and duration). The result of interest is not the variation of the concentration of constituents leaching from the equipment over time, but rather the final concentration of such constituents in the hot water rinsate. The variability of the final concentration over several sampling rounds was

investigated by taking three sequential hot water rinsate blanks from the same sampling equipment. Additional details are provided in Section 4.0, page 14 of the Report.

Comment 11 Section 4.2.2. PARCC. Field Accuracy-Trip Blanks. page 12. This section needs to explain the rationale for analyzing eight of the nine total trip blanks only for VOCs. In addition, this section needs to explain the presence of metals such as cadmium and lead in the trip blanks.

Response: OU15 trip blank sample preparation, storage, shipment and analysis was completed in accordance with the approved Work Plan and SOP FO.27. All nine trip blanks were analyzed for volatile organic compounds. Section 7.0 of the approved Work Plan specified that trip blanks would only be prepared to accompany water samples being submitted for volatile organic analysis. Trip blanks are typically used to provide an indication of whether volatile, mobile and/or soluble compounds from non-sample sources (e.g., laboratory solvents such as methylene chloride) were able to migrate into the associated real samples during the storage, shipment, handling or analysis phases.

Although not required by the approved Work Plan or SOP FO.27, the trip blank sample associated with the hot water rinsate blanks was analyzed for additional parameters (i.e., semi-volatile organic compounds, metals and cyanide) to provide an additional QA/QC data point. The distilled water used to prepare the trip blank was not laboratory reagent grade and therefore may have contained trace levels of metals and other constituents. As defined in the second bullet of the response to EPA Comment No. 7, trip blanks were used to identify cross-contamination from sources other than the OU15 IHSSs. The system of OU15 trip blanks was not used to identify the source of contamination, but instead was used to identify the presence of contamination. Following final data validation, the only metal detected in the trip blank above the Contract Required Quantitation Limit (CRQL) was cadmium.

Comment 12 Section 4.2.2. PARCC. Field Accuracy-Field Blanks. page 13. This section presents the analysis results of RFP domestic water. The Safe Drinking Water Standards were exceeded for cadmium and chloroform. This needs to be explained. If this analysis is accurate, RFP needs to report these exceedences, so that domestic water at RFP is not used as a drinking source until compliance with the Safe Drinking Water Act standards is achieved.

Response: This information has been provided to the appropriate RFETS personnel.

Comment 13 Section 4.2.2. PARCC. Field Accuracy, Hot Water Rinsate Blanks. page 14, paragraph 4, last sentence. The text states if the analysis results show constituents found in the equipment hot water rinsate blanks, this can be considered artifacts of the sampling procedure. This statement questions the effectiveness and reliability of the sampling techniques. DOE should consider

alternative sampling techniques that have a lower potential for cross-contamination of the samples. In addition, this section needs to present any analysis of the distilled water (source water). EPA questions the validity of the statement made about cadmium, lead and zinc being present in the distilled source water.

Response: The statement does not question the effectiveness and reliability of the sampling techniques, which were approved by EPA and CDPHE in the Work Plan and SOPs. Certain compounds such as phthalates are routinely used in laboratory operations and are also commonly found in all types of plastics. The use of any sampling equipment has the potential to impact the samples it is used to collect. The purpose of the QA/QC sampling program was to provide the data necessary to identify which constituents detected were actually present at the IHSSs.

Various alternative sampling procedures were evaluated during the development of the OU15 Work Plan. Hot water rinsate sampling was selected and included in the approved Work Plan as one of the OU15 sampling methods because it was non-intrusive, could safely be performed within the buildings and could provide the data necessary to meet the sampling objectives. The sample results were directly comparable to the closure performance standards for rinsates in the RFETS State RCRA Permit. Hot water rinsate sampling is also representative of the methods (e.g., steam cleaning or technology-based closure methods) that could potentially be used to close units at RFETS.

The presence of cadmium, lead and zinc in the hot water rinsate blanks was attributed to the distilled source water and/or the metal components in the sampling equipment system. The trip blank, as discussed in the response to EPA Comment No. 11, consisted of the same distilled water that was used as source water for hot water rinsate sample generation, and contained cadmium at a concentration of 17.6 $\mu\text{g/l}$. As a result, the distilled water was cited as a possible source for the corresponding detections in the hot water rinsate blanks. The distilled water used was not laboratory reagent grade and therefore may have contained trace levels of metals and other constituents.

Comment 14 Section 4.2.3. Statistical Evaluation of Smear Data, page 18. EPA agrees that the change in smear samples results (increase) from pre-rinsate to post-rinsate is not attributable to random variation. However, EPA disagrees with the explanation of the results provided later in this section. Throughout the report several statements are made claiming that the sampling technique for collection of rinsate samples cleans the surface. This contradicts the statement that the sampling techniques make contaminants more accessible at the surface, thereby resulting in higher post-rinsate samples. In the event that the sampling process draws contaminants out of cracks and fissures in the surface, the contaminants, once on the surface, should be entrapped in the rinsate stream. This section needs to explain this further.

The fact that post-rinsate smear samples showed higher contamination, demonstrates that the IHSSs are not clean. Therefore, DOE may need to perform further clean up at those IHSSs where contamination was detected.

Response: The statement "The fact that post-rinsate smear samples showed higher contamination, demonstrates that the IHSSs are not clean" is not correct. The evaluation of how "clean" the IHSSs are is not based solely on the existence of some level of radionuclides at any IHSS. The evaluation of the radionuclide levels (including post-rinsate smear data) was made by comparison to the worker protection standards approved as ARARs for OU15. In all cases (except IHSS 204 where no post-rinsate sampling was performed), both the pre-rinsate and post-rinsate data yielded (assuming unrestricted industrial use) maximum predicted dose levels below the worker protection standards. Therefore, although the sampling technique did appear to successfully mobilize constituents in cracks and fissures in the floors (as explained in Section 4.2.3 of the Report), the fact that radionuclide levels fell below the specified dose limits indicates that the IHSSs are indeed "clean" as defined by the approved worker protection ARARs.

Comment 15 Section 5.0, Nature and Extent of Contamination, page 1. The evaluation of contamination associated with OU15 IHSSs is split in two sections; one that addresses the RCRA regulated constituents and one that addresses CERCLA concerns. It is inappropriate to discuss the investigation results based on different regulatory frameworks. The RI report is not the appropriate mechanism to justify decisions based on RCRA or appropriate mechanism to justify decisions based on RCRA or CERCLA requirements. The RI report should discuss the results or the investigations and associated risk from the contamination. The meaning of the results with respect to RCRA and CERCLA should be done via a decision document where a decision is proposed and justified.

Response: The terminology has been revised in several places in the Final Report to refer to "hazardous constituents" versus "radionuclides" as opposed to "RCRA" versus "CERCLA" constituents. The separate presentation of RCRA and CERCLA results in the Report resulted from consultation with EPA and CDPHE during preparation of TM#1.

STATE OF COLORADO

Roy Romer, Governor
Patricia A. Nolan, MD, MPH, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
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December 8, 1994

Steve Slaten
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RE: Comments on OU 15 Phase I RFI/RI Report

Dear Mr. Slaten:

The Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (the Division), as lead regulatory agency for OU 15, hereby transmits comments by the Environmental Protection Agency (EPA) on the Phase I RFI/RI Report.

Comments on this report were previously submitted by the Division. However, an extended review as well as several discussion meetings have delayed the submittal of EPA's comments. Because of this delay, the agencies offer to extend the January 4, 1995 milestone for submittal of the final RFI/RI Report by 91 days to April 5, 1995. It is suggested that DOE submit a written response to comments rather than a revised report.

After addressing the agencies' comments, DOE must propose milestone dates for the activities which will bring closure to this operable unit. We believe that the activities listed in the baselines proposed for the new Cleanup Workplan are the correct activities for which to establish associated milestone dates.

If you have any questions regarding these matters, please contact Carl Spreng at 692-3358.

Sincerely,

Joe Schieffelin, Unit Leader
Rocky Flats IAG Unit
Hazardous Waste Control Program

Enclosure

cc: Kurt Muenchow, DOE
Laurie Peterson-Wright, EG&G
Martin Hestmark, EPA
Arturo Duran, EPA
Laura Perault, AGO
Steve Tarlton, RFPU

EPA's Comments on the Phase I RFI/RI Report
Operable Unit (OU) 15,
Inside Building Closures

Specific Comments

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Section 4.2.2. PARCC, Field Accuracy-Trip Blanks, page 12. This section needs to explain the rationale for analyzing eight of the nine total trip blanks only for VOCs. In addition, this section needs to explain the presence of metals such as cadmium and lead in the trip blanks.

Section 4.2.2. PARCC, Field Accuracy-Field Blanks, page 13. This section presents the analysis results of RFP domestic water. The Safe Drinking Water Standards were exceeded for cadmium and chloroform. This needs to be explained. If this analysis is accurate, RFP needs to report these exceedences, so that domestic water at RFP is not used as a drinking source until compliance with the Safe Drinking Water Act standards is achieved.

Section 4.2.2. PARCC, Field Accuracy, Hot Water Rinsate Blanks, page 14, paragraph 4, last sentence. The text states if the analysis results show constituents found in the equipment hot water rinsate blanks, this can be considered artifacts of the sampling procedure. This statement questions the effectiveness and reliability of the sampling techniques. DOE should consider alternative sampling techniques that have a lower potential for cross-contamination of the samples. In addition, this section needs to present any analysis of the distilled water (source water). EPA questions the validity of the statement made about cadmium, lead and zinc being present in the distilled source water.

Section 4.2.3. Statistical Evaluation of Smear Data, page 18. EPA agrees that the change in smear samples results (increase) from pre-rinsate to post-rinsate is not attributable to random variation. However, EPA disagrees with the explanation of the results provided later in this section. Throughout the report several statements are made claiming that the sampling technique for collection of rinsate samples cleans the surface. This contradicts the statement that the sampling techniques make contaminants more accessible at the surface, thereby resulting in higher post-rinsate samples. In the event that the sampling process draws contaminants out of cracks and fissures in the surface, the contaminants, once on the surface, should be entrapped in the rinsate stream. This section needs to explain this further.

The fact that post-rinsate smear samples showed higher contamination, demonstrates that the IHSSs are not clean. Therefore, DOE may need to perform further clean up at those IHSSs where contamination was detected.

Section 5.0. Nature and Extent of Contamination, page 1. The evaluation of contamination associated with OU 15 IHSSs is split in two sections; one that addresses the RCRA regulated constituents and one that addresses CERCLA concerns. It is inappropriate to discuss the investigation results based on different regulatory frameworks. The RI report is not the appropriate mechanism to justify decisions based on RCRA or CERCLA requirements. The RI report should discuss the results of the investigations and associated risk from the contamination. The meaning of the results with respect to RCRA and CERCLA should be done via a decision document where a decision is proposed and justified.