

ER/WM&I DDT



000111036

Performance Measure

Source/Driver: (Name & Number from ISP, IAG milestone, Mgmt. Action, Corres. Control, etc.)

Closure #: (Outgoing Corres. Control #, if applicable)

February 18, 1997

Due Date

W. R. Sproles
Originator Name

G. D. DiGregorio
QA Approval

A. M. Tyson
Contractor Manager(s)

A. K. Sieben
Kaiser-Hill Program Manager(s)

T. G. Hedahl
Kaiser-Hill Director

Document Subject:

TRANSMITTAL OF THE FINAL SAMPLING AND ANALYSIS PLAN TO SUPPORT THE SOURCE REMOVAL AT THE MOUND SITE, IHSS 113, REV. 0 - AMT-019-97

KH-00003NS1A

Discussion and/or Comments:

Please find enclosed the *Final Sampling and Analysis Plan to Support the Source Removal at the Mound Site* (SAP) and the Responsiveness Summary (Attachment A) for submittal to the Environmental Protection Agency (EPA) for approval. Per telecon with EPA on February 18, 1997, responses to all comments have been adequately addressed. Approval of the SAP is requested by February 26, 1997. Please find enclosed four copies for Kaiser-Hill, five copies for the Department of Energy and four copies for the EPA. If you have any questions regarding this document, please contact Wayne Sproles at extension 5790.

Enclosures:
As Stated

WRS/aw

cc:
M. C. Broussard
J. L. McAnally
W. R. Sproles
A. M. Tyson
M. R. Wood

Correspondence Control
ER Records Center (2)

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DRAFT

February 18, 1997

97-RF-XXXXX

Norma Castaneda
ES&H Program Assessment
DOE/RFFO

TRANSMITTAL OF THE FINAL SAMPLING AND ANALYSIS PLAN TO SUPPORT THE SOURCE REMOVAL AT THE MOUND SITE, IHSS 113, REV. 0 – AKS-XXX-97

Please find enclosed the *Final Sampling and Analysis Plan to Support the Source Removal at The Mound Site* and the Responsiveness Summary (Attachment A). This revision of the SAP includes the responses to EPA and CDPHE comments. Per telecon with the EPA on February 18, 1997, responses to all comments have been adequately addressed. Approval of the SAP is requested by February 26, 1997.

Please find enclosed five copies of the Final SAP for the DOE and four copies for the EPA. If you have any questions regarding this transmittal, please contact me at (303) 966-9886.

Ann K. Sieben
ER/WM&I Operations

Enclosures:
As Stated

DRAFT

February 3, 1997

Tim Rehder
United States Environmental Protection Agency
Rocky Flats Project
999 18th Street, Suite 500
Denver, CO 80202-2466

TRANSMITTAL OF THE FINAL SAMPLING AND ANALYSIS PLAN TO SUPPORT THE SOURCE REMOVAL AT THE MOUND SITE, IHSS 113, REV. 0

Please find enclosed the *Final Sampling and Analysis Plan to Support the Source Removal at The Mound Site* and the Responsiveness Summary (Attachment A). This revision of the SAP includes the responses to EPA and CDPHE comments. Per telecon with your staff on February 18, 1997, responses to all comments have been adequately addressed. We are requesting approval of the SAP by February 26, 1997.

We appreciate your continued support in meeting our accelerated project schedules. If you have any questions regarding this transmittal, please contact me at (303) 966-4839, or Norma Castenada of my staff at (303) 966-4226.

Steve Slaten
Manager, Regulatory Liaison

Enclosures:
As Stated

Attachment A

RESPONSIVENESS SUMMARY

Draft Sampling and Analysis Plan to Support the Source Removal
at the Mound Site, IHSS 113, Rev 0, January 13, 1997

Comments from T. Rehder, Environmental Protection Agency

Comment #1. Page 6, Paragraph 4, last sentence: This section describes the sampling grid which will be utilized for excavations with known exceedances. We request that samples not only be taken at the corners of the 10' X 10' grid, but most importantly at the center of the failed sample location.

Response #1 *The SAP will be modified to reflect that a sample will also be collected at the center of each original failed sample location.*

Comment #2 Page 8, Paragraph 1: This section discusses expectations for radiological presence, and states that it is assumed that soil excavated during this project will be returned to the site after treatment. Please include an additional sentence which states that "only those treated soils that are at or below the agreed-on replacement levels for radionuclides (put-back levels) for subsurface soils will be returned to the trench."

Response #2 *The SAP will be modified to provide clarification regarding the put-back of radiologically contaminated soil exceeding RFCA Tier II Subsurface Soil Action Levels. Treated soil that does not exceed "three times background" when measured with a FIDLER during excavation will be returned to the excavation without further radiological characterization. Samples will be collected from soils exceeding "three times background" for isotopic analysis. Based on analytical results, treated soils exceeding a total sum of ratio of 1.0 (based on the 95% upper confidence limit of the mean) for radionuclides will not be dispositioned without concurrence from the agencies.*

Comment #3 Page 8, Paragraph 2; Page 9, Paragraph 1: This section discusses radiological verification of soils. The last sentence on page 8 and the first sentence on page 9 state that the screening rate may either be increased or decreased depending upon detections; however, they do not describe how much the rate will increase or decrease. Please provide this information.

Response #3 *The screening frequency may be reduced from screening individual buckets of soil to screening individual dump truck loads based on evaluation of the data by radiological controls personnel. The screening frequency may be modified if debris or visibly stained soil is encountered. The screening frequency will not be less than one per dump truck load. Section 3.2.1 of the SAP will be modified to provide clarification.*

Comment #4 Page 9, Paragraph 1, 2, and 3: Since there is "no direct correlation between the FIDLER response and the RFCA action levels," understanding the empirical relationship between action levels and the radiological screening level is critical for determining the validity of using the FIDLER for field screening. More information on the method and data used to establish this relationship should be provided along with the minimum detection limit of the instrument. Because the position of the instrument with relation to the soil volume is an important aspect of the FIDLER response, a more detailed discussion of sampling protocol should be included.

Response #4

A minimum detectable activity (MDA) cannot be established for a sodium iodide detector like the FIDLER. The FIDLER is a screening tool that detects an increase of activity in the soil. The relationship between the FIDLER and the RFCA Action Levels is based on FIDLER readings and radiological analytical data from numerous environmental restoration projects performed at RFETS. The most recent project was the T-3/T-4 Project performed in 1996. As documented in the T-3/T-4 Completion Report, eighteen composite soil samples (SS01001RM-SS01018RM) were collected from T-3 soil that was segregated based on FIDLER readings below 5,000 CPM. The total sum of ratio (95% upper confidence limit of the mean) for these samples was 0.42 using the Tier II Subsurface Soil Action Levels. Twenty composite soil samples (SS01035RM-SS01054RM) were collected from T-4 soil that was segregated based on FIDLER readings below 5,000 CPM. The total sum of ratio for these samples was 0.26 using the Tier II Subsurface Soil Action Levels. In addition, sixteen samples were collected from the soil that was segregated based on FIDLER readings above 5,000 CPM. Approximately one third of the samples that were collected were below a total sum of ratio of 1.0 when using the Tier II Subsurface Soil Action Levels. Further correlation data will be compiled from the Operable Unit 1 Hot Spot Removal and Ryan's Pit Projects.

All screening will be performed in accordance with Radiological Operating Instruction (ROI) 6.6, Use of the Bicon FIDLER. Only trained and qualified technicians will be performing the surveys.

Comment #5

Page 9, Paragraphs 2 and 3: This section discusses the segregation of soils which exceed three times background; however, it did not describe where these materials will be stored and the method of storage. Also not included is an explanation of what the procedures will be if the material fails the quantitative analysis. Please provide this information.

Response #5

The soils exceeding three times background will be transported separately to the CSFS, segregated within the CSFS, and temporarily staged in accordance with section 3.2.2 of the PAM. Based on analytical results, the total sum of ratio (95% upper confidence limit of the mean) will be calculated using the Tier II Subsurface Soil Action Levels. If a total sum of ratio of 1.0 is exceeded, the soil will be treated separately, returned to the CSFS until final disposition of the soils can be determined. If the total sum of ratio is less than 1.0, the treated soil will be returned to the excavation.

Comment #6

Page 9, Paragraph 3, First Sentence: This sentence states the following: "Samples of radiologically segregated material may be analyzed by a radiochemistry laboratory for isotopic uranium, plutonium, and americium, or may be analyzed on-site using a gamma spectroscopy analysis." Please provide clarification as to why the type of instrument to be used for analysis has not already been selected, provide rationale for the use of one method over the other, and at a minimum include the word "either" in this sentence to designate that at least one method will be used.

Response #6

The word "either" was added to the subject sentence. The reason for including this flexibility in the SAP, is that rapid analytical turn around can be achieved using the onsite HPGe method. However, the availability of qualified personnel to analyze the samples is uncertain at this time, and if not available, the option of performing the analysis using conventional radioisotopic techniques can be used.

Per our conversation on February 13, 1997, the HPGe system is capable of detecting environmental background levels for the radionuclides of concern.

Comment #7 Page 10, Section 3.2.1 Sampling Frequency to Establish Baseline Conditions: Reduction of sampling frequency after establishing baseline conditions would seem valid only if the most contaminated soils are used to establish those baseline conditions. A commitment to use the apparently most contaminated soils should be included.

Response #7 *The soils containing the highest levels of VOCs will be stockpiled in a location within the CSFS that will be accessible for treatment during the establishment of baseline conditions. The SAP will be modified to provide clarification.*

Comment #8 Comment #6b of the PAM comments requested criteria for the term "high winds;" however, this question has yet to be answered. Please provide this information.

Response #8 *The RFETS Environmental Restoration Field Operations Procedure, FO.01, Air Monitoring and Dust Control, will be utilized to control dust generating activities in the field. Procedure FO.01 will be modified to be consistent with plant procedures and will require the following controls for monitoring wind speed (based on sustained wind speed for two consecutive 15 minute intervals):*

15 mph The Health and Safety Site Officer will review all field activities and provide approval on a case-by-case basis.

30 mph Terminate all earth moving or other significant dust generating activities.

45 mph Terminate all outside construction activities.

Health and Safety approval to resume field operations will be based on sustained wind speed readings for two consecutive 15 minute intervals.