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STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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Dirk Kempthorne, Governor
C. Stephen Altred, Director

February 10, 2003

Ms. Kathleen Hain, Team Leader
Environmental Restoration Program
Idaho Operations Office
Department of Energy
850 Energy Drive
Idaho Falls, Idaho 83401-1563

RE: Remedial Design/Remedial Action Work Plan, Phase II, for Waste Area Group 5

Dear Ms. Hain:

The Idaho Department of Environmental Quality (DEQ) has completed its review of the above-referenced document and provides the enclosed comments. Both general and specific comments are provided. DEQ received the Work Plan on January 10, 2003.

We look forward to working with your staff to address these concerns during the comment resolution period. If you have any questions regarding these remarks, please contact Ted Livieratos or Daryl Koch at (208) 373-0217, or 373-0492 respectively.

Sincerely,

Ted Livieratos
WAG 5 Project Manager
State Office of Technical Services

TL:ls \WAG 52003\RDRA\Phil\wkp\deq

Enclosure

cc: Carol Hathaway, DOE-ID
Rick Poeton, EPA Region 10
Dean Nygard, DEQ-WM&RD
Daryl Koch, DEQ-WM&RD
CERCLA Source File
COF

GENERAL COMMENTS

- 1) There are several sections in the document that mention areas of exposed basalt in the excavation areas. The work plan should propose the method that will be utilized to remove the contamination in those areas. For example, exposed basalt areas could be scraped with heavy earthmoving equipment to remove surface contamination above remediation goals. The areas will then be field checked and if contamination remains above remediation goals, the use of brushes, brooms, and HEPA vacuums may be employed to remove the contamination. If contamination remains after all removal efforts have failed, the area should be considered for Institutional Controls (ICs).
 - 2) Please check the drawings in the document for locations of lay-down and stockpile areas in regard to the prevailing wind direction (see specific Comment Number 18).
 - 3) It would be beneficial if Appendix J included a summary as to the effect of the calculated air emissions. Information regarding a "no level for concern" determination, or what the concern may be, should be included.
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SPECIFIC COMMENTS

- 1) **Section 1.1, Eleventh Bullet, Page 1-3**

The title of Appendix I is Safety Category Designation and Record, as well as the document in the appendix. Please correct the bullet.
- 2) **Section 1.1, Statement Following Seventeenth Bullet, Page 1-3**

Since DEQ had received the Quality Assurance Project Plan (2002) and the Operations and Maintenance Plan (2000) earlier and separately from the remainder of the documentation, it is recommended the sentence be reworded to state: "In addition, five separate documents are associated with the Work Plan."
- 3) **Section 1.2, Figure 1-2, Page 1-6**

The photograph of the Auxiliary Reactor Area 01 (Chemical Evaporation Pond) and the drawing have north arrows that do not seem to match in orientation. Please clarify, if not correct.

4) Section 1.2, Figure 1-3, Page 1-7

The drawing does not contain any legend description for the elliptical gray area (highest concentration?) within the "simulated source area." Please provide.

5) Section 1.2.3, First Sentence, Page 1-8

The description states that ARA-23 is a 240-acre, windblown contamination area with 42-acres contaminated above risk-based concentrations. Figure 1-4 shows a contamination area at least half the size of ARA-23. Please provide more detail in the figure if ARA-23 is much larger than the figure represents. Figure 1-4 also does not state if this is only above the risk-based concentrations, or if it is the total plume from the windblown contamination.

6) Section 1.3.1, First Paragraph, Fifth Sentence, Page 1-8

PBF-16 needs to be evaluated by the agencies as to whether ICs are necessary. Based on the sampling and analysis performed in 2000, DEQ concurs that the site status should be no further action. According to guidance, "no further action" implies the use of ICs, while a "no action" determination denotes that the site is immediately available for unrestricted use, and ICs are not required. It is recommended that the site be evaluated for risk, with the most recent sampling and analysis results. Although mercury and lead are below remediation goals, some locations are above background concentrations, and ICs may be necessary unless the site can be released for unrestricted use. An extreme scenario could include the construction of a childcare center with an infant ingesting soil from the area of highest COC concentrations.

7) Section 1.2, Figure 1-4, Page 1-9

The drawing within this figure does not possess a "north" arrow. Please provide an arrow. Explain the dashed line on the photograph, or remove.

8) Section 1.2, Figure 1-5, Page 1-10

Please illustrate the relative position of the drawing to the photograph, as it does not appear that PBF-16 is represented in the photo.

9) Section 1.3.2.1, Page 1-11.

Please provide an explanation within this section regarding the disposition of 21 drums that were contained within the CERCLA Waste Storage Unit in Revision 0.

Section 1.3.2.2, End of Paragraph, Page 1-12

The last three sentences appear to have been written prior to the current groundwater sampling effort. Samples have been collected since the ROD, and are being collected annually, at least until the 5-year Review.

Section 2.2.2, Fifth Bullet. Last Sentence, Page 2-2

Recommend that the sentence is reworded to state that ICs will not be required after remediation if all contaminated media are removed, or if contaminant concentrations allow unrestricted use of the site. ICs that are put into place will be maintained until discontinued, based on the results of a 5-year Review.

Section 2.2.2, Last Paragraph, Last Sentence, Page 2-3

ICs may still be required if all soil is removed down to basalt and contamination remains that may not allow for unrestricted site use. Please correct the statement. It is suggested that the wording in the previous comment be utilized.

Section 2.2.2, First Paragraph, Second Sentence, Page 2-3

Realizing that a number of in-situ, real time measurement techniques are available for deployment in the area of excavation, there is a concern that utilization of the GPRS in any area that has been excavated of contaminated soils is questionable. To elaborate, the GPRS, mounted on the four-wheel drive vehicle, is of extreme value for the detection and delineation of large areas, such as those encountered within ARA-23. However, once the first layers of soils are removed (three inches in some areas, six in others), the use of the GPRS unit may be analogous to "a bull in a china shop." With the project goal of waste minimization in mind, a host of potential "dragout" issues seem plausible, from tire dragout of impacted soils into (now-clean) areas to the fugitive dusting generated by such a vehicle. Water spraying of the area, to be traversed by this unit, may exacerbate the tire dragout potential while reducing the fugitive dust generation. Please provide more detail regarding the use of the GPRS, following the initial excavation, so that cross contamination issues can be minimized.

Section 2.2.2, Second Paragraph, Third Sentence, Page 2-3

The text outlined within Section 5.3.5 provides a discretionary evaluation, by the RCTs, of the effectiveness of the fugitive dust control efforts. This approach is questionable; a discretionary evaluation by one RCT may be very different from another's. It is suggested that an air-monitoring program be implemented as part of the soil excavation effort for each of the areas. Windblown dispersion of

contaminants, as investigations have shown, has been a leading cause of present-day remedial actions over this large area.

Section 2.2.2, Second Paragraph, Last Sentence, Page 2-3

Please state if tarps will be used in conjunction with the "burrito bag" liners.

Section 2.6, Fourth Bullet, Page 2-5

Please verify if the mention of "background levels" should be changed to "risk-based concentrations."

Section 3.3, First Paragraph, First Sentence, Page 3-2

Suggest adding a bullet for decontamination areas. In addition, please clarify what types of materials are destined to be placed in the "stockpile areas," and indicate the difference to the reader between "lay-down" and "stockpile" areas.

Section 3.6, First Paragraph, Sixth Sentence, Page 3-3

This statement, although commendable in intent, has not been illustrated to be true within the document. Sheet C-1 of Appendix A contains a rectangular area labeled, "lay-down area," immediately north of the ARA-23 Project Area. Throughout the document, various references have been made regarding the prevailing wind direction being from southwest to northeast. The lay-down area, indicated on this sheet, is located downwind from a large portion of the excavation area. Suggest all stockpile and lay-down areas for ARA 01 and ARA-23 (and ARA-12 as well) sites be located at upwind locations from the soil excavation areas. Please provide an explanation, or correct as necessary.

Section 4.1, Last Paragraph, Second Sentence, Page 4-1

There is a possibility that if soil is removed down to basalt and contamination above remediation goals remains, that brushing, vacuuming, and similar decontamination methods may remove the loose contamination in the basalt to an acceptable level. Please include this effort in the work plan.

Section 5.1.2, Last Sentence, Page 5-1

The site may no longer be an acceptable risk; however, it should be evaluated to see if it can be released for unrestricted use, otherwise ICs may have to be implemented.

21) Section 5.3.2, Bullets, Page 5-2

This section could benefit from the addition of other illustrative bullets, such as air monitoring stations and enumeration of the common components for each task site (i.e., decontamination, stockpile and lay-down areas, etc.).

Section 5.3.4, Second Paragraph, Page 5-2

Please offer an expanded text regarding this clearing and grubbing process. For instance, no mention is made regarding the status of the vegetation that is present within the soil excavation target areas. Since constituents of concern may be contained on/in the vegetation, please provide information on management of the debris that is to be grubbed. In addition, Appendix L of this document does not address this material. During the actual removal process, the equipment utilized is expected to generate fugitive dust (high desert vegetation will normally be dry, and when uprooted, can generate copious amounts of dust when moved). This "soil" is plausibly the same soil that is the target of this remedial action. In addition, the task of grubbing could also "drive" the surface contamination deeper. Please explain how this scenario will be addressed.

Section 5.3.5, Second Paragraph, Second Sentence, Page 5-3

As mentioned in a previous comment, this approach to RCT evaluation of the effectiveness of an air-monitoring program is undesirable. Without any commitment to the provision of "hard evidence" (air monitoring) that the engineering controls are effective, the entire soil excavation project will not have the benefit of demonstrating that the project did not spread additional contamination to surrounding, downwind areas, unless those areas are then surveyed at a later date. In the case of ARA-23, windblown deposition of constituents has left the large footprint that is currently scheduled for remediation.

Section 5.3.5, Second Paragraph, Last Sentence, Page 5-3

This sentence, although not specifically mentioning all equipment, should be cognizant of the special needs of the GPRS, if used within the soils excavation areas following the first cut and excavation of contaminated soils.

Section 5.3.5, Second-last Bullet, Page 5-3

Please add, "and reclaim all disturbed task area support sites."

Section 5.3.5, Entire Section, Page 5-3

Soil Excavation Sequencing: the soil excavation and removal approach proposed within this document is, for the most part, very well thought out and detailed.

One extremely valuable concept regarding waste minimization efforts for all of the WAG 5 remedial areas, that bears mentioning, is the sequence of each area's soil handling activities. For example, knowing that the prevailing wind direction in the WAG 5 area is from the southwest to the northeast, all support facilities should be located upwind of the soil excavation boundaries. Likewise, the progression of soil removal tasks should commence from the furthest upwind locations and proceed downwind in a phased fashion. Ideally, the excavation equipment can be matched to the task ("tight areas" versus vast expanses such as those found in ARA-23) and load-out areas located accordingly. With meteorological data available to the project team, "tweaking" can occur as the weather patterns shift.

The points mentioned above are only examples of the level of detail that must be considered by the excavation team if recontamination is to be avoided, and additional waste generated as a result of fugitive (contaminated) soils being re-deposited onto "clean areas." Note: dust suppressants and water sprays have their own limitations and cannot totally be relied upon to contain errant emissions from newly-exposed soil areas; one 25-35 mph extended wind event can negate all previous efforts to remove contaminated soils, if the project area is in a downwind location from an upwind contaminated zone. As many pre-mobilization concepts should be entertained, and evaluated for merit, as possible.

Section 5.3.7, Second Paragraph, First Sentence, Page 5-4

This sentence should be modified to reflect the results of air monitoring as a condition of project status determinations.

28) Section 5.3.8, First Paragraph, Last Sentence, Page 5-5

Since the tarps may tear throughout the duration of the project, please add, "...before initial use *and throughout the duration of the transfer process.*"

Section 5.3.8, Second Paragraph, Page 5-5

Please offer an explanation of how, in a preventative effort, the trucks will be loaded in an area/manner that minimizes tire and chassis contamination. The document does not offer an explanation of the where or how the waste hauling vehicles are to be managed. Please comment.

Section 5.4.2, First Paragraph, Third Sentence, Page 5-6

The reference to the Drawing contained within this section should be appropriately referenced as Drawing "C-8."

Section 5.4.3, Third Paragraph, Page 5-7

This section comprises the first time the reader is introduced to the "Soil Areas A and C." Please offer an idea of where these two defined areas are located (Sheets C-4 and C-6). Note: it is acknowledged that Sheet T-2 (later in the document) specifies what these two locations are.

Section 5.7, Entire Paragraph, Page 5-8

This section represents a topic that may be explored further by all parties in the pursuit of controlling project costs. For example, there may be flexibility in expanding the workweek and providing "incentive" for the contractor to finish early. This could compensate/offset the tendency of the contractor to remove as much soil as possible (more tons = more \$). Of course field surveys (and other support areas) would need to cooperate as well (ICDF hours of operation, etc.). The time of year the project occurs could drive this process also (onset of winter/spring, rain, etc.).

Section 5.8.1, Last Sentence, Page 5-8

Title of table should be moved to the next page.

Section 5.11, Entire Section, Page 5-12

This section needs additional text explaining the additional types of materials to be generated by the project including grubbing debris, air monitoring filters, etc.

Section 5.12, Entire Section, Page 5-13

The first goal of a decontamination (decon) program is to avoid having to decontaminate at all, wherever possible. To that end, please add language to the effect that all support areas will be located such that downwind contamination potential will be minimized. In addition, please describe the components of the listed "decontamination pads" and whether or not (or how) these units can be deconned between uses. Also, when using "plastic" as a decon pad, please describe the mil and type of plastic envisioned, the base/sub-base established below the plastic (to minimize loss of integrity), and whether or not these articles were included in the Appendix L waste material volume calculations.

Appendix A, Sheet T-2 Symbol Key

Please add a symbol for the lava bed/basalt outcrops.

Appendix A, Sheet C-1

Sequencing of soil removals (upwind/downwind location discussions) between adjacent "ARAs" should consider relative (potential impacts). For example, what would be the effects on a "clean" ARA-01 if the area of ARA-23 (immediately west of it) were subsequently remediated with a "wind event"?

Appendix A, Sheet C-2

This area of ARA-23 represents the furthest downwind area. It is suggested, for reasons of downwind deposition of upwind areas, that this area be saved for the end of the project.

Appendix A, Sheets C-3, 4, and 5

Same upwind/downwind comment for these areas. Sheet C-5: please clarify what Note 1 references. In addition, please offer an explanation if other CERCLA storage units are being referenced by Note 3 since all CERCLA storage units depicted are outside of the excavation boundary.

Appendix A, Sheet C-6

Please darken Area A Soil Stockpile area boundary. Also, please describe the area (rectangular) that is present southeast of Area A.

Appendix A, Sheets C-6, 7, 8, and 9

Identical upwind/downwind comments for all areas. Sheet C-8: please provide an explanation of the procedure envisioned to excavate around the junipers. Note 3 denotes the presence of existing brush piles yet the drawing does not depict piles.

42) Appendix C, Section 3.2, Last Paragraph, Second to the Last Sentence, Page 3-2

Please indicate additional sources of standby and downtime such as high winds, adverse weather, ICDF hours of operation, etc.

Appendix C, Section 3.3, First Paragraph, Page 3-2

Please see earlier comments regarding the use of the GPRS after the first layer of soils are removed. Also, please clarify if hand digging around an exposed basalt outcrop is envisioned to be the first simplistic method utilized.

**Appendix C, Section 3.3, Last Paragraph, Second to the Last Sentence,
Page 3-2**

Please change the year to 2003.

Appendix C, Section 3.4, Second Paragraph, Last Sentence, Page 3-3

A random grid is sufficient for most of the pond. However, it is recommended that biased sampling be performed in the area near the pond inlet, where the contaminant concentrations are higher.

Appendix C, Figure 3-2, Page 3-5

Please correct legend to state that the Ag-108 contour is 0.75 pCi/g.

Appendix C, Section 3.5, First Paragraph, Last Sentence, Page 3-7

Please indicate the possible selenium location on Figure 3-2 to ensure this area is covered by the removal effort.

Appendix C, Section 3.5, Second to the Last Sentence, Page 3-7

If there is a possibility that 3-in. lifts would remove the contamination, this effort should be completed first, followed by a field screen of the area to see if an additional 3-in. lift is necessary.

Appendix C, Section 3.6, First Paragraph, Page 3-7

It is again confusing (see specific Comment Number 5) as to whether the windblown contamination areas surrounding the ARA-I and ARA-II facilities is 42-acres or 240-acres, as both numbers are used in this paragraph. Please clarify if the 42-acres consists of the original boundaries of the site and the 240-acres is the windblown contamination, or vice versa.

Appendix C, Section 3.6, Last Sentence, Page 3-7

Reference should be "Section 3.7."

51) Appendix C, Section 3.6, First Paragraph, Seventh Sentence, Page 3-9

Please provide a brief explanation (or a reference to where the information can be found) for how depth distribution of the contaminants will be made by HPGe measurements.

Appendix C, Section 3.7, First Paragraph, Second Sentence, Page 3-9

Please clarify if this volume of contaminated rock is a volume of “free” rocks “showing” and/or a volume anticipated being uncovered and worked-free during soil removal operations.

Appendix C, Section 3.7

This section is titled large rock and debris. Please provide information on small rocks (i.e., small rocks will be decontaminated or disposed of with the soil). Please also provide information on the types of debris that is expected to be encountered during the project. The section only covers rocks, although the title is large rocks and debris.

Appendix C, Section 3.8, Entire Section, Page 3-10

This section is the most-likely location within the text to elaborate on the waste soil sequencing strategy in consideration of the “upwind/downwind” discussions presented earlier within these comments.

Appendix C, Section 3.8, First Bullet, Page 3-10

Equipment decontamination should be performed as necessary so as not to cross-contaminate areas.

Appendix C, Section 4.1, Entire Section, Page 4-1

Additional suggestions regarding the waste minimization goal, versus contractor \$/ton payment basis:

- Provide a substantial safety incentive for excellent lost-time/workdays record;
- Early finish bonus (each project area or entire project);
- Bonus for “no dragout/spill retrieval” events; and
Single mobilization/demobilization for all targeted WAG 5 remedial areas.

Appendix C, Section 4.1, First Sentence, Page 4-1

Although several factors are listed, it would also be supportive to mention which of these factors weigh in more in the efficiency of soil removal. The order of importance would be useful in determining how efficient the soil minimization strategy is. A brief discussion here would be helpful.

Appendix E, Entire File

Please explain what provisions will be made to excavate rocks when encountered in a remedial soil area (equipment to be used, depth of excavation, survey frequencies at depth, etc.).

Appendix E, Section 3.0, Page 3

If the majority of the rocks are in piles, one waste minimization technique could include removal of the rocks from the tops of the piles and screen them for free release since 90% of them are free from contamination.

Appendix F, ARA-23: ARA-I Facility

Please state if the highly contaminated material stored in the area is the CERCLA storage unit.

Appendix F, ARA-23: ARA-II Facility

Please indicate in the work plan if the asphalt will be screened for disposal in the INEEL commercial landfill or the ICDF. Since there is no discussion of asphalt removal in the work plan, please provide further information in the appropriate section.

Appendix G, Section 1.1, Second Paragraph, Third Sentence, Page 1-1

Figure 2-4 has not been provided as referenced.

Appendix G, Section 3.1, First Paragraph, Second Sentence, Page 3-1

Typographical error, please correct stratum 2 to indicate the area of the pond.

Appendix G, Section 3.3, Second Paragraph, Second-Last Sentence, Page 3-5

No maps provided that depict alternate sampling locations (B1-A).

Appendix G, Section 3.3, Last Paragraph, Page 3-5

The sentence pertaining to the use of isopropanol needs further explanation.

Appendix J, Page J-1, Third Paragraph

Please state if emission factor calculations were performed for the movement of the GPRS unit during remediation.

67) Appendix L, Section L1.5, Page L-3

It is unclear within this document whether the rock volume has been added to the soils calculations for each area. In addition, no line item/provision for the area grubbing or existing shrub stockpiles is evident. Please explain or modify accordingly.