



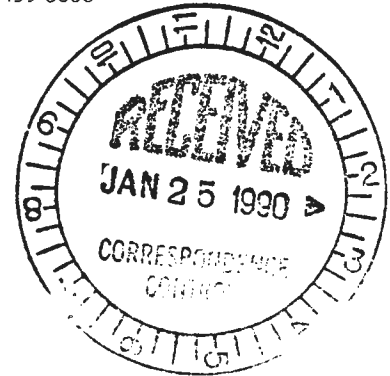
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January 22, 1989



Mr. John Broderick
Operable Unit Manager
U.S. Department of Energy
P.O. Box 550
Richland, Washington 99352

Dear Mr. Broderick:

**Re: Ecology Comments on USDOE and WHC Response to
Ecology Review of the 100-HR-1 Operable Unit Work Plan**

Attached for your review, comments and incorporation into the 100-HR-1 Operable Unit Work Plan are Ecology comments and specific recommendations for improvement based on responses received from USDOE and WHC.

Ecology and EPA look forward to discussing this document with key technical and policy staff from USDOE, WHC and its contractors at the earliest possible date. We should endeavor to resolve as many issues as possible prior to a formal meeting. Any questions concerning these comments are encouraged and welcome.

Sincerely,

Larry Goldstein
Operable Unit Manager
Hanford Project

- cc: S. Wisness, USDOE
- M. Thompson, USDOE
- P. Day, USEPA
- J. Waite, WHC

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COMMENTS ON USDOE and WHC RESPONSE TO ECOLOGY REVIEW
OF THE 100-HR-1 OPERABLE UNIT WORK PLAN

The following comments are in response to those received from USDOE and its contractors concerning the 100-HR-1 Operable Unit Work Plan. The numbering for these comments follow the numbering of comments in the initial review and the corresponding responses from USDOE. Responses not addressed in this document are determined to be adequate as clarifying language has been provided and will be incorporated into the work plan, or the recommended changes have been acknowledged and are being made in the work plan.

Comment

2. Disagree. This comment was written to encourage a more direct and positive general description of what is to be accomplished during implementation of the RFI. CERCLA and RCRA guidance documents are for purposes of providing an overview of the accepted approach and technical requirements necessary for writing and implementing work plans. They are guidance documents and should not be considered regulatory in nature.

There is no requirement that the language "necessary and sufficient" be included in the work plan. Expectations established under the Tri-Party Agreement indicate we can and should be aggressive in defining goals for site characterization, determining the need for corrective measures, and beginning cleanup at Hanford.

The concepts in Figure 2 present clear objectives that integrate the RFI work into the CMS objectives.

Recommendation

A paragraph explaining how the specific objectives of the RFI will be integrated into the objectives and goals of the CMS, as they apply to Hanford, would help satisfy this deficiency.

Comment

4. Disagree. There is nothing "inappropriate" or "inaccurate" with referencing, and using to the fullest extent possible, the most current and applicable documentation available. Writing and approval of work plans is a collaborative and iterative process that is designed to produce the best document possible to guide field work and subsequent decision making.

Milestone M-12 requires work plans written for RCRA Past Practice units to meet requirements of RCRA. Note also the requirement in Section 7.4.4 of the

Action Plan calling for the CMI work plan to be done in accordance with "current applicable regulations, guidance documents, and written policy available at any time during the corrective action process." Work plan development, and data gathered during the RFI, is part of the corrective action process, and must satisfy the requirements of the CMI. This is particularly important, when, as acknowledged on page WP-3 of this work plan, "the RFI and CMS are conducted concurrently in an interactive form".

Recommendation

Reference the most recent applicable documentation as indicated in the original recommendation for this deficiency, and as noted in other comments.

Comment

6. We acknowledge that the recent guidance document, Department of Ecology Quality Assurance Management Plan (November 1989) was not available when this work plan was first being written. It will be adopted by the department before this work plan is approved, will be implemented state-wide, and should be referenced. A copy will provided for your review.

On the matter of guidance, please note the critical document for compliance, permitting, site characterization and remedial activities at Hanford is the Hanford Federal Facility Agreement and Consent Order. This agreement provides for full integration of CERCLA and RCRA as appropriate and necessary. Also recall the requirements found in Section 121(d) of CERCLA regarding ARARs. Ecology's guidance document addressing quality assurance is a "relevant and appropriate" document under ARARs.

Recommendation

Cite the aforementioned QA document, also, the draft Data Quality Strategy for Hanford Site Characterization. The latter should also be adopted by the parties prior to final approval of this work plan.

Comment

7. This is a reasonable response, and the problem of writing work plans in a climate of frequent changes in programmatic and technical requirements is acknowledged. See first paragraph, response #4 above.

Comment

8. Inclusion of this figure as presented will not result in disapproval of the work plan. The main criteria for any figure is whether it is legible (can be read), and whether it succeeds in providing accurate information to the reader (can be understood). Figures should also be able to "stand alone."

Recommendation

Recommendation

USDOE should consider revising its "style requirements". Ecology and EPA would appreciate receiving a copy of these requirements to help us with future interpretations.

Comment

10. Response accepted with incorporation of the recommendation.

Recommendation

Incorporate the cross-references in the work plan provided in this response. Include basin volume estimates.

Comment

30. Disagree. The purpose of this section is to define the facility background and operable unit setting in order to develop a conceptual understanding of potential risks to the environment and public health. In this respect the section functions to provide information normally found in a scoping study. Just as the narrative "history of operations" is an integral component of the conceptual site model, so is a description of historical land uses. This is particularly important when it is reasonable to expect recent land uses at this site are not likely to continue, and there is potential for the site (or selected areas) to be restored and enjoyed for historical uses.

Current RI/FS guidance (EPA/540/G-89/004, Section 2.2.2), and RFI/CMS guidance (OSWER Directive 9502.00-6D, Section 2.2.1.1) require descriptions of land use. An additional requirement of CERCLA is identification of potential and existing threats to public health, e.g., CFR 300.410(c)(1)(iv) and 300.415(2)(i). In order to satisfy these requirements, certain historical information, such as land use, must be considered if we are to have a comprehensive understanding of what has occurred in the past, and what is likely to occur in the future in the Hanford region.

There is little information provided in this work plan concerning land use. If, as noted in the current draft, institutional controls are a potential means of protecting the public health, then a discussion should be presented to place this possibility in context. For example, past uses should give an indication of how the land may be used in the future when institutional controls are ended. This should include an estimate of the period of time that institutional controls may exist at Hanford. Will it be 30, 50, 100 or more years? If this answer is unknown, provide information that describes how and when this important issue will be addressed.

Finally, there is nothing in the current draft version of WAC 173-340-350(6)(c)(v) to preclude a discussion of historical land use. As mentioned above, it reasonable and prudent to discuss past land uses in order to make meaningful determinations as to what potential land uses might be.

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Comment

45. From the response, Ecology's comment requires clarification. It is noted, for example, that the concentration of ^{239,240}Pu is less in the sample than is shown for background. The authors of the work plan must have made some interpretation of the data presented in these tables to be able to develop the text in the work plan. No discussion of this interpretation is provided.

Recommendation

Present a brief discussion on interpretation of data given in the Tables 13 through 18, and the relationship between analytical detection limits and background determinations.

Change title of Table 13 to read, "Summary of Preliminary Background Soil Quality Data From Operable Unit 300-FF-5, Borehole S-7".

For Table 16, please note the reference to Figure 16 appears to be in error, and should read "Table 18."

Comment

48. If the ground water data obtained in the 100-HR-3 investigation is not scheduled to be available until sometime in late 1994 (proposed time frame for the Preliminary RFI Report), how can necessary ground water information be available to develop the risk assessment for the 100-HR-1 operable unit?

Recommendation

Integrate data collection, analysis and reporting under 100-HR-3 to serve the 100-HR-1 investigation.

Comment

49. This comment highlights problems associated with ground water and source operable unit integration, where so little verifiable information is known about source loading, and so much reliance is being placed on a prolonged study of ground water and other media under the auspices of the ground water operable unit investigation.

Please note that subsequent to this draft work plan being written, USDOE Secretary Watkins has expressed his intention to release historical air emissions data from the Hanford Site.

Recommendation

Reference to the new USDOE policy should be made, with an indication of how and when data will be available, verified and incorporated into the database necessary to implement this work plan.

Comment

50. Disagree. Interpreting and applying the relevance and applicability of text book stated precision, sampling rules, and limits of accuracy as they apply in a given situation is appropriate. Much of the background information for this basic requirement is already provided in Appendix C of the SAP, which can be cross-referenced. Improving this subsection requires minimal additional effort, and will be useful for providing needed discussion for other similar determinations made in this work plan.

Recommendation

Briefly explain why the standard deviation is considered useful in this case, referencing the information found in Appendix C.

Comment

52. Good response.

Recommendation

Please provide cross-references in the appropriate work plans as noted.

Comment

58. Disagree in part; use of herbicides. General guidance under CERCLA and RCRA call for at least a narrative description of hazardous constituents known to have been disposed, treated or stored on-site. This is normally accomplished in a scoping study, and is necessary in order to define necessary activities for site characterization.

Note that CERCLA and RCRA address existing and potential releases. To dismiss potential releases, or possible existing contamination, due to assumed "normal uses" is inappropriate and unwarranted. It is possible, for example, an unknown spill of an herbicide has occurred which constitutes a potential release from the vadose zone into ground water.

Listing a hazardous constituent as a contaminant of concern is prudent, meets regulatory intent, is a show of "good faith", and does not necessarily result in additional action or liability.

Recommendation

List those herbicides and soil sterilants known to have been stored and used at Hanford as potential contaminants of concern, and note that routine analyses of soil and ground water will screen for the hazardous constituents associated with these substances.

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Comment/Recommendation

61. Cross-reference in the work plan appropriately, as noted in the USDOE response. Also, see Comment #67.

Comment

64. Disagree. This matter requires further development, and is being addressed in the Data Quality Strategy for Hanford Site Characterization. At issue is clarification on how EPA's Data Quality Objective guidance and requisite analytical levels should be applied at Hanford.

Recommendation

Cross-reference specific language in Section 4 as noted in the response. Incorporate additional clarifying language available in the Data Quality Strategy for Hanford Site Characterization as appropriate.

Comment

65. This comment serves as an example of the need to better define operable unit investigations in consideration of area-specific situations. For example, the approach for the source operable units located in the 100 and 300 Areas may be different than that taken for the 200 Areas due to the movement of potential contaminants from the source operable units. In general, contaminants may still be found in the soils beneath the 200 Areas, whereas in the 100 and 300 Areas, except for active units, contaminants may already have moved into the ground water and towards the Columbia River.

Recommendation

This broad issue is currently being addressed by the parties. Agreement as to the best approach to be taken will have to be incorporated into this work plan.

Comment

67. Disagree. The work plan as a whole does not demonstrate adequate consideration for how data will be generated, the quantities of data to be generated, and how it will be organized. Presenting data management as an integrated concept of the remedial investigation would not "violate" any rote adherence to the categorization of RFI/CMS tasks.

Recommendation

Ecology and EPA have been informed via a brief presentation at the November 1989 General Topics Meeting how this issue is being addressed. It is

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understood this issue will be resolved by the updated and forthcoming Data Management Plan. Additional, specific comments on this issue will be directed accordingly.

Comment

68. Disagree, in part. Table 30 identifies those data types for which sufficient information exists. Therefore, the location, quantity, quality and type of data is known.

The term "data dictionary" in this context is a listing of data elements and a description of relevant information concerning the data element. In some systems, it will be an automated function integral to the software.

Recommendation

Provide references to this data and references to associated documentation.

Comment

70. Disagree. The distinction being made in this response undermines the goal of integration. The work plans must be mutually supportive in order to meet near-term goals for corrective action.

The response begs the question, "what defines a ground-water operable unit vs a source operable unit? There is no distinction defined in the Tri-Party Agreement, nor in CERCLA or RCRA guidance documents. The concept is unique in its application to a site as large and complex as Hanford, and must be creatively applied in order to work.

Recommendation

This issue is being addressed by the parties. Agreement as to the best approach to be taken will have to be incorporated into this work plan.

Comment

71. Please note a typographical error in stating, "Section 4.1.3, p. WP-107 to 111". The statement of deficiency should read as follows:

Section 4.1.4, p. WP-107 to 111

The quantity of data needed to make a determination on the need for the Corrective Measures Study, or to support this study is not adequately described. The information offered in this section is good, as far as it goes. For example, preliminary estimates of the minimal data quantities required for site characterization are not identified.

Recommendation

Base estimates on minimum analysis requirements. Summarize the data quantity requirements by media and type. Table 30 identifies those data types for which sufficient information exists. The quantity of data for those data types should be closely estimated. The recommendation of the Section 4.1 deficiency concerning data quantity (see Ecology Comment #63) can be implemented here.

Comment

74. Disagree. The response indicates clarification of Ecology's comment is needed.

The gamma ray spectroscopy is a survey method, as is x-ray fluorescence, soil gas, and ground-penetrating radar. This technique will save time and money, but only supplements other types of analyses. If gamma-emitting radionuclides are still retained in the soils, gamma-ray spectroscopy provides a more complete survey of the soils.

A soil sample is a point sample that is assumed to represent a larger universe. It is acknowledged that it will be analyzed for a more complete spectrum of chemicals and radionuclides, however, it is only a single representation of a spatially diverse population.

Recommendation

Implement the original recommendation.

Comment/Recommendation

77. After considering #76 and #77 comments and responses, Ecology suggests that the level of survey accuracy be selected with consideration given to the overall requirements of developing and maintaining a Geographic Information System for the entire Hanford site.

Information will be incorporated into the GIS, and will require being digitized in some fashion.

Comment/Recommendation

84. Make the appropriate cross-references as noted in the response.

The term, "site-wide" data points reference background as applied to the entire Hanford Site.

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Comment

86. Disagree. A finding of no "substantial" amounts of hazardous substances in the septic system sludge, or no sludge, is insufficient justification for not sampling soils beneath a common point source for contamination at industrial facilities. What criteria will be applied to make this determination? What if only trace amounts are found in the analyses?

The response does not adequately address the merits of careful soil sampling prior or during excavation necessary to sample these tanks and drainfields.

Recommendation

The term "substantial" must be quantified.

Implement the original recommendation.

Comment

87. There is no disagreement that subsequent biological investigations or monitoring programs must be focused on project objectives. A brief presentation on a general approach toward an integrated biotic survey (General Topics Meeting, November 1989) indicates this will occur.

Recommendation

Final language on this issue will be depend on the resolution of integration and definition of a better focused work plan.

Comment

92. What "previous investigations" in the 100-HR-1 operable unit screened for PCBs?

Recommendation

Please provide additional information concerning earlier work involving PCBs.

See Comment #58 above.

Comment

95. Disagree, in part. The assertion that "most soils on the Hanford Site have not been influenced by disposal practices" has yet to be verified. Although soils sampled at some depth below wind deposited materials should not be affected by Hanford operations, this will depend on the location the background samples were taken, and at what depth.

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It is generally acknowledged there are enough unknowns about past operations and disposal practices (intentional and unintentional) at Hanford that finding on-site locations for background soil data, i.e., unaffected by Hanford activities, will be difficult at best. Almost any site could be the location of some surface disposal of chemicals or even radionuclides. For example, is there an accurate listing of where uranium piles have been located? If there is a list, are the Hanford coordinates accurate?

Pending additional data, there must be some comparison of Hanford soils with similar soil types off-site.

Recommendation

The limitations of existing data should be acknowledged in the text. The proposed Hanford Site Soil Background Study presented to Ecology and EPA (December 1989 General Topics Meeting) should be cited. Specific details of how the general approach taken, data collection, analyses, reporting and integration of new data into the SAP and the Phase I RFI Report should be provided.

Funding for timely completion of this important study must be assured.

Comment

97. Given the acknowledged paucity of verifiable information concerning past practices, including discharges and source inventories, it is reasonable to require 3 soil borings in the trenches. This is necessary to ensure the data generated will be representative of the entire units and sufficient to justify any determinations concerning needed corrective action.

Recommendation

See original recommendation.

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cc: J. L. Waite		
Subject: ECOLOGY COMMENTS ON USDOE AND WHC RESPONSE TO ECOLOGY REVIEW OF THE 100-HR-1 OPERABLE UNIT WORK PLAN		

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