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DEPARTMENT OF ECOLOGY

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December 7, 1990

Mr. Steven H. Wisness
Hanford Project Manager
U.S. Department of Energy
P.O. Box 550
Richland, Washington 99352

Re: Ecology Comments on Proposed EII 4.3

Dear Mr. Wisness:

Enclosed are Ecology comments on the following documents:

Environmental Investigations Instruction--Control Of CERCLA And Other Past Practice Waste Site Waste/Manual WHC-CM-7-7/EII 4.3; and, Environmental Investigations Instruction--"Draft Strategy For An Amended Procedure For Managing Investigation Derived Waste".

Our review of these documents has revealed many significant environmental, regulatory and practical concerns relating to the proposed interim storage of RI/FS or RFI/CMS derived wastes. Prominent among these concerns are:

a. There is an indefinite, open-ended storage strategy for site investigation derived wastes;

b. On-site storage practices and container management are ambiguous and ill-defined;

c. Hazardous waste determination and dangerous waste designation is inadequate; and

d. There is a general overall lack of clarity.

Rather than use the standard "Deficiency/Recommendation" format for this review, we have attempted to shorten the comments by simply requesting clarification or making recommendations for needed changes.

Please review these comments at your earliest convenience. We suggest a special meeting among interested parties be scheduled in order to discuss this matter. We are confident that a strategy for storage of investigation derived waste that is environmentally acceptable and meets regulatory intent can be defined and implemented at Hanford. If you have questions, or require additional guidance, please contact Larry Goldstein at (206) 438-7018.

Sincerely,

Timothy L. Nord
Hanford Project Manager
Nuclear and Mixed Waste Management

Enclosure

cc: Paul Day, EPA
T.B. Veneziano, WHC

ECOLOGY COMMENTS ON

Environmental Investigations Instruction and
Site Characterization Manual
WHC-CM-7-7

"CONTROL OF CERCLA AND OTHER PAST PRACTICE WASTE SITE WASTE"
EII 4.3/Rev.0

2.0 SCOPE

This section fails to discuss its intent to comply with applicable federal and state statutes and regulations in the handling and storage of wastes.

Why is the scope of compliance limited to Environmental Engineering, Technology & Permitting (EET&P) personnel and their subcontractors?

3.0 DEFINITIONS

Accumulation Start Date. This term is already defined under 40 CFR 262.34 (a)(2), 262.(c)(2), WAC 173-303-200(1)(c),(2). Definitions in EIIs must be consistent with federal and state regulatory language.

Centralized Liquid Waste Container Storage Area. The definition should reference that this will be a compliant RCRA facility permitted under WAC 173-303.

Facility Generator. The terms for both "facility" and "generator" are provided under 40 CFR 260.10 and WAC 173-303-040; use of the term "facility generator" in this text is unnecessarily confusing and should be avoided.

Generated Waste. Provide a concise definition for purge water in this text and reference the "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington" by title.

Hazardous Waste. The Hazardous Waste definition should also contain "state only" wastes.

Process Knowledge. The regulatory concept for determining hazardous waste characteristics and, in the case of Washington state regulations, toxic, persistent and carcinogenic wastes, is found under 40 CFR 262.11(c)(2) and WAC 173-303-070(5), respectively. These regulations should be cited.

Given the process knowledge available, as evidenced in Operable Unit work plans, the list of sources for process information should also include interviewing current and past Hanford site employees who had specific information on processes undergoing evaluation.

Solid Waste Container Storage Area. This definition and discussion implies that accumulated wastes will be stored out in the open for an indefinite period of time. Such a mode of operation would accelerate container deterioration by exposure to the sun, wind, temperature extremes and moisture, resulting in potential releases to the environment.

This proposal also would lead to an increased chance of accidents and acute human exposure. Federal and state regulations 40 CFR 262.34(a)(4), 265.31 (Subpart I) and WAC 173-303-200(1) govern operation of accumulated waste storage areas.

These regulations must be cited. These regulations limit on-site storage of accumulated dangerous and hazardous wastes to 90 days unless that specific facility has been issued a TSD permit. This section must be self-explanatory and comprehensive.

Suspected Hazardous Waste. Wastes generated by on-site activities must be properly identified in accordance with 40 CFR 261.2,.3, 40 CFR 262.11, and WAC 173-303-070(b). This EII must cite and be consistent with these regulations.

Suspected Mixed Waste and Unknown Waste. See Suspected Hazardous Waste comments above.

Waste Site. We recommend that "waste sites" be called "Subunits" of CERCLA/RCRA Past Practice Operable Units as defined under Section 5.0 of the Hanford Federal Facility Agreement and Consent Order.

Please provide an explanation of the purpose and authority for Hazardous Waste Operations Permits (HWOP).

4.0 RESPONSIBILITIES

4.1 Environmental Engineering, Technology & Permitting Function Manager

1. We recommend deleting the Facility Generator ("FG") acronym. It is unnecessary and ill-defined. See "Facility Generator" definition comment above.

2. This EII and all EIIs should be "stand alone" documents to the extent practicable. Rather than reference other EIIs, which may be incomplete e.g. EII 4.2, it should cite the responsibilities of hazardous waste generators as provided under 40 CFR 262.34 et seq. and WAC 173-303-200(1). Documents WHC-CM-5-16 and WHC-EP-0063-1 should be given a title and specific citations for ease of cross-referencing.

A written description outlining specific responsibilities of the Technology & Permitting Function Manager in regard to site waste generation and management activities should be provided in this section.

4.2 Project Coordinator

Determination of waste site boundaries within an operable unit should be done with approval by the lead agency in accordance with CERCLA 103(d)(1), and Section 6.0 of Hanford Federal Facility Agreement and Consent Order.

Also, see waste site comments under Definitions above.

A written description of specific responsibilities of the Project Coordinator in regard to site waste generation and management activities should be provided in this section.

4.3 Field Team Leader/Cognizant Engineer

2. In order for this requirement to be meaningful, we recommend providing an explanation of what field equipment will be used, and cross-references to other EIIs that discuss detection limits and how field induced errors will be minimized.

6. An Interim Control (IC) form (figure 1) is referenced, but not enclosed with this draft document; a copy should be provided for review.

7. See comments for Definitions - Solid Waste Container Storage Area above.

8. See comments for Definitions - Solid Waste Container Storage Area above.

9. According to WAC 173-303-200 and 173-303-320(1),(2),(3), a written schedule for inspection of the storage site must be developed as well as an inspection log. This EII should incorporate these requirements.

10. Describe specifically 1) what type of storage area radioactive/mixed wastes will be held in, 2) what precautions will be taken to prevent re-release to the environment, 3) how drums will be protected from temperature extremes and wind, 4) what type of inspection program will be implemented, and 5) the time limits on storage of these wastes at the point of generation.

A written description outlining specific responsibilities of the Field Team Leader/Cognizant Engineer in regard to site waste generation and management activities should be provided in this section of the EII.

4.4 Facility Generator

1. Drums containing dangerous/hazardous wastes should be labeled appropriately in accordance with 40 CFR 262.34(c)(1)(ii) and WAC 173-303-200(d). These drums must be labeled with a label or sign which identifies the major risk(s) associated with the contents of a given container.

4. See comments under Field Team Leader/Cognizant Engineer (9).

5. Specify the minimum length of time analytical results must be kept on file in accordance with 40 CFR 262.40(c),(d) and WAC 173-303-210(3),(4), and (5).

6. See comments under Field Team Leader/Cognizant Engineer (9).

7. See comments under Field Team Leader/Cognizant Engineer (10).

8. Summarize the types of records which will be kept in regard to documenting waste activity from generation through final destination as defined under EII 1.6--"Records Management".

A written description outlining specific responsibilities of the Facility Generator in regard to site waste generation/management activities should be provided in this section of the EII.

4.5 Environmental Engineering, Technology and Permitting Point of Contact

A written description outlining specific responsibilities of the Environmental Engineering, Technology and Permitting Point of Contact should be provided in this section of the EII.

In the event of a release of a hazardous substance which poses an imminent threat to public health or the environment, who is responsible for notification and for taking immediate containment action as required under WAC 173-303-145?

5.0 REQUIREMENTS

5.1 Containers/Liners (Drums/Plastic Liners)

2. It should be clarified if drill cuttings will be stored in drums. If these cuttings meet criteria for hazardous/dangerous wastes, these must be containerized in accordance with 40 CFR 262.34(1) and WAC 173-303-200(1)(b).

Is it planned to store Beta emitter wastes in metal drums? If so, describe what precautions will be taken to prevent beta emissions from converting to x-rays in passing through the metal drum wall (*bremsstrahlung*).

5.2 Unique Container Tracking Number

Explain how tracking numbers will be affixed to drums to prevent them from being removed, obliterated, faded, etc.

6.0 Procedure

In order for this EII to be approved, we require specific information on the field equipment, methodology and types of analyses which will be performed in field screening.

See comment on *bremsstrahlung* under Containers/Liners (Drums/Plastic Liners), above.

Describe those hazardous components which are expected to be present in decontamination fluids. It should also be noted that any materials brought on site which, after use become generated hazardous/dangerous wastes in accordance with 40 CFR 262 et seq. and WAC 173-303 et seq., including 90 days on-site storage limitations as specified under 40 CFR 262.34 and WAC 173-303-200. Both administrative and substantive requirements of RCRA would apply with respect to these generated wastes.

It should be made clear that decontamination fluids will be sampled and managed in accordance with the "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington" (Sections 3.2.2 to 3.2.4/90-ERB-073).

Show Figure 3 as referenced in this section. Also, no reference has been made to Figure 2 in the text.

6.1 Container Preparation

1. See comments for 4.1.(3), (9) and (10) above regarding inspections.

2. See comments on *bremsstrahlung* under Containers/Liners above. An explanation of when the "appropriate optional" liner should be used must be provided.

3. See comments under Facility Generator (1), above.

4. See comments under Unique Container Tracking Number.

It should be noted that except during filling and emptying operations, drums containing dangerous/hazardous wastes must be kept closed in accordance with 40 CFR 262.34(a)(1), 265.173(a), WAC 173-303-200(1)(b), and 173-303-630(5)(b).

6.2 Monitoring Drill Cuttings and Well Maintenance Soils/Slurries

1. This section should include general information on monitoring techniques used in association with hazardous waste operations permits and/or radiation work permits. This section should also describe exactly how drill cuttings and slurries will be monitored.

2. In order for this EII to be approved, we require information on analytical capabilities of the on-site mobile field screening facility.

6.3 Unknown Waste Determination and Collection

1. Define anticipated laboratory analysis turnaround time needed to determine regulatory status of segregated unknown wastes.

2. Explain how liquids stored in the Centralized Liquid Waste Container Storage Area will be protected from freezing and from extreme heat.

3. See comments on decontamination fluids found under Procedure comments above.

If sufficient quantities of homogeneous wastes are generated in a given sampling site, consideration should be given to use of bulk waste storage containers (e.g. roll off bins and/or tanks).

6.4 Suspected Hazardous Waste Field Determination and Collection

1. In accordance with 40 CFR 262.34(c)(1) a generator who accumulates acutely hazardous wastes in excess of 1 kilogram, or hazardous wastes in excess of 55 gallons, must remove these wastes from the point of accumulation (satellite accumulation area) within 3 days of exceeding these quantities. Further, in accordance with 40 CFR 262.34(A)(2) and WAC 173-303-200(1)(c), the date of accumulation must be clearly marked and visible for inspection. This EII must reflect these regulatory requirements.

2. See comments on decontamination fluids under Procedure comments above. Also, please define the intent of the EET&P waste minimization plan (WHC-SD-WM-EV-037). Please provide Ecology with a copy of this plan.

3. On determination that contents of a drum labeled "Suspect Hazardous" are found to contain dangerous wastes, drum markings must be changed to "Dangerous Waste" or "Hazardous Waste in accordance with WAC 173-303-200(1)(d). Each container must be marked with a label or a sign which identifies the major risk(s) associated with the waste in the container for employees, emergency response personnel and the public. This EII must reflect these regulatory requirements.

6.5 Radioactive Waste/Mixed Waste Field Determination and Collection

1. See comments on *bremsstrahlung* under Containers/Liners (Drums/Plastic Liners) above.

2. See comments regarding on-site accumulation of dangerous wastes under 3.0 Definitions--Suspected Hazardous Waste, 4.2 Project Coordinator (9) and (10), 4.3 Field Team Leader/Cognizant Engineer and 4.4 Facility Generator (1).

5. This section should describe how containers of radiological materials will be separated from non-radiological materials.

This section should cross-reference appropriate guidance defined in EII 4.2. Because of the overlap between the two EIIs, approval of both will be required.

6.6 Sealing Container

2. WAC 173-303-150 may prohibit blending of decontamination water from different boreholes as proposed. Define what an "approved alternate

container for mixed waste" is. Will mixed waste be handled in a manner different than radioactive waste?

4. See comments regarding on-site accumulation of dangerous wastes under 3.0 Definitions--Suspected Hazardous Waste, 4.2 Project Coordinator (9) and (10), 4.3 Field Team Leader/Cognizant Engineer and 4.4 Facility Generator (1).

Please give specific guidance on how each type of containerized waste will be managed.

6.7 Management of Waste Containers

See comments under Unknown Waste Determination and Collection (2), above.

6.8 Final Disposal

The acronym "SWE" is not defined. Nevertheless, we strongly encourage using standard english in order to make these documents more readable, e.g. spell-out "Solid Waste Engineering".

The manner in which fluids are to be handled under this section needs to be clarified.

It should be made clear in this section that final disposal decisions will be made consistent with the Hanford Federal Facility Agreement and Consent Order, Section 5.4.

a. This section should reference back to requirements defined in previous sections of this EII, e.g. 6.4, 6.5, 6.6.

c. Explain why wet soils/slurries found not to be regulated as hazardous/dangerous wastes are to be disposed outside the zone of investigation. Soil that does not designate as a dangerous waste but is above appropriate cleanup levels may not be disposed of in a uncontrolled area.

d. This statement requires clarification. Containers holding hazardous/dangerous wastes must be marked as discussed above.

g. When collecting and disposing of solid wastes e.g., foil, paper, gloves, it is essential that any dangerous/hazardous waste contaminated materials not be inadvertently or deliberately mixed with non-dangerous/ hazardous wastes. (See comments under Sealing Container [2]).

ECOLOGY COMMENTS ON

Environmental Investigations Instruction
"DRAFT STRATEGY FOR AN AMENDED PROCEDURE FOR
MANAGING INVESTIGATION DERIVED WASTE"

Proposed Ecology Strategy

The key components in a strategy for investigation derived wastes are that wastes must be managed in a manner that ensures protection of the environment and human health, while at the same time maximizes efficient use of resources and limited funds. The basic concepts Ecology believes must be incorporated into this strategy, and EII 4.3 are the following:

a. upon generation waste must be identified and isolated from the environment;

b. upon designation all waste must go to a compliant TSD facility;

c. if waste is not designated, but consists of radioactive or organic substances, then this waste must also go to a compliant TSD facility;

d. if waste contains metals at levels 2 standard deviations above site-wide background, then this waste must also go to a compliant TSD facility.

With these concepts in mind, the remainder of this document summarizes concerns with the "Draft Strategy For An Amended Procedure For Managing Investigation Derived Waste".

Regulatory Background

Paragraph 1

The proposed rule making to the National Contingency Plan (53 FR 51394) has been superseded by 40 CFR Part 300--Final Rule (Volume 55/No. 46--March 8, 1990). On page 8756 of this final rule, EPA has stated that "studies and investigations undertaken pursuant to CERCLA Section 104(b), such as activities conducted during the RI/FS are considered removal actions" and, "removal actions will comply with ARARs to the extent practicable. Thus, the field investigation team should, when handling, treating or disposing of investigation-derived waste on-site, conduct such activities in compliance with ARARs to the extent practicable, considering the exigencies of the situation." According to 40 CFR 300.415(b)(2)(i), hazardous substances or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release are a factor that must be considered in determining the appropriateness of a removal action.

This strategy fails to explain and substantiate why the proposed waiver of on-site storage requirements as promulgated under 40 CFR 262.34(a) and WAC 173-303-200(1) would not be expected to present an increased threat to human health or the environment.

Paragraph 2

We disagree with the rationale provided in the cited memo due to the nature and scope of the investigations to occur at Hanford. Ecology does not agree that historical, site-specific exceptions to regulations that have been allowed by EPA regional offices should become the rule at Hanford.

In this case, those exceptions appear to be based, in part, on the premise that a Record of Decision and remedial action will be reached within a reasonable period of time, i.e. the "exigencies of the situation". This is not the case at Hanford, where the prospect is for large numbers of drums containing highly toxic waste being temporarily stored not for months, but for many years.

Please provide a copy of the March 12, 1990 memorandum from EPA-Region 10 which is reported to provide additional guidance on ARAR's.

Advantages of Proposed Strategy

Reduce Costs

Does the reduced cost argument for on-site storage take into account the following?

a. Additional operation and maintenance costs incurred as a result of storing hazardous and mixed wastes in a non-compliant manner, including construction of all operable unit-specific storage areas, regular inspections, reports, and drum maintenance?

b. The potential for re-release of containerized materials to the environment due to container deterioration, accident or other incidents, with accompanying costs for removal or remediation.

c. Acknowledged difficulty in securing adequate funding, resulting in uncertainties regarding the time to reach Record(s) of Decision, and implementation of remedial action for all operable units. As proposed, an open-ended operable unit-specific storage strategy could result in numerous temporary storage areas being maintained for a period of many years.

Simplify Waste Container Management/Reduce Risks to Waste Workers

We disagree with the argument that drum handling would reduce opportunities for on- or off-site injury and accidents. Regulated containerized wastes must at some point in time be properly disposed; hence, safety related problems will manifest themselves at the time of movement handling. Further, this proposed method of prolonged on-site storage of containerized dangerous/hazardous wastes presents the opportunity for re-release at a later time by container deterioration or accidents.

The third sentence in this section requires clarification. It is understood that not all containerized wastes will require treatment. But what is anticipated for final disposition of these materials, and how does this relate to worker safety?

Reduce Requirements on Limited Permitted Storage Facilities

Please clarify the rationale where it is assumed off-site mixed waste will be given a higher priority for storage than waste generated on-site. Does this assumption take into account the long-term needs associated with implementing the TPA? Also clarify the reference to "low-risk types of waste" that would be stored on-site, and the storage of other wastes "determined to present a significant health risk" at the Central Waste Complex. Specifically, what criteria would be used to make these determinations?

It is stated in this section that the Hanford Central Waste Complex will be expanded in the future to accommodate both off- and on-site waste. We strongly recommend that this effort begin as soon as possible to accommodate investigation derived waste. An effort to begin planning for wastes generated during site characterization activities at Hanford will hopefully result in permitted storage facilities being available in a timely fashion.

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