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A. DESIGN AND OPERATION OF FACILITY: SECTION 1.0: 40 CFR § 264

1. Introduction: 40 CFR § 264.31

The implication is made that only the 242-A evaporator condensate will be treated in this waste water treatment facility. The introduction must include all waste waters that will be treated at this facility.

DOE-RL/WHC Response: The permit application will be modified to delete references to all waste water streams except the 242-A Evaporator process condensate. If other waste streams are to be treated, a description of the additional waste water streams will be added to the permit application.

2. The waste codes in this section indicate that only F003 and F005 as well as WT02 designate the waste. This should be clarified to apply only to the 242-A Evaporator waste stream. The designation of the other waste streams should also be discussed in this section.

DOE-RL/WHC Response: The permit application will be modified to deleted the discussion of waste water streams other than the 242-A Evaporator process condensate.

B. DEMONSTRATION PLAN: SECTION 2.0: 40 CFR § 270.65

1. Test Procedures/Plans: 40 CFR § 270.65

The frequency of submittal of the Test Procedures and the Test Plans/Reports should be clarified in Section 2.1.1 and 2.1.2. These plans and reports are to be submitted to EPA and Ecology for review. There is no schedule for detailed test plans and when they will be available for EPA and Ecology review. The Test Reports should be submitted on a quarterly basis. The outline provided of the test plan report must be expanded to assure that sufficient information will be provided with these reports to at a minimum document the following:

- a. Treatment efficiency achieved
- b. Calculations/evaluations performed to determine the treatment efficiency
- c. Sampling and analytical methods and QA/QC procedures followed for the testing, including identification and discussion of any deviations from the established methods.

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<p>d. Complete QA/QC report of all analysis, including raw data sheets. e. Copies of monitoring log/records of critical operating parameters. f. Copies of records documenting instrument calibration.</p>	<p>DOE-RL/WHC Response: A statement was added to the permit application to require submittal of quarterly reports that include test plans and reports to the EPA for review. The text of the permit application will be modified to include the items detailed in Comment B.1 a through f.</p>	
<p>2. Treatment Technologies: 40 CFR § 270.65</p>	<p>Table 2-1 on Treatment Technologies should be clarified. All technologies whether primary or secondary or tertiary should be specified as treatment technologies which will be included in this RD&amp;D Permit. If additional technologies or testing locations, other than at the 1706-KE Building or at the LERF, are required at a later date this will require an additional RD&amp;D Permit or at a minimum a Class 3 permit modification to include them. Therefore all technologies, testing locations, and applicable information should be included in the RD&amp;D permit application prior to EPA issuance. Additional technologies unless specifically identified in the RD&amp;D Permit will not be allowed to be developed or demonstrated. All technologies identified must be addressed in Section 4.0, including at a minimum the type of information (e.g., equipment description, critical parameters and safety features, piping and instrumentation diagram) and level of detail provided for the technologies currently identified in Section 4.0. If it is likely that DOE may want to include UV system(s) which incorporate ozone into the treatment scheme, DOE needs to address this in Section 4.0, as this addition to the treatment scheme would result in significant additional critical operating parameters and equipment.</p>	
<p>DOE-RL/DOE Response: Because sufficient detail is not available on the secondary technologies, the secondary technologies will be deleted from the permit application. The permit application will include testing at the 1706-KE Building and the LERF only. The permit application will be modified to include additional technologies or test locations. Text will be added to Section 4.0 to include safety features, critical parameters, and the additional information requested. The inclusion of ultraviolet treatment units using an ozone process is not planned at this time.</p>		

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C. GENERAL WASTE ANALYSIS: SECTION 3.0: 40 CFR § 264

1. Off-site Waste: 40 CFR §§ 264.13(a)(4) and (b)(5)

There is no mention of off-site wastes. If no off-site wastes are to be treated this should be stated in Section 3.1.1 Description of Waste Streams.

DOE-RL/WHC Response: A statement was included in Section 3.1.1 to clarify that no offsite waste will be accepted at the waste water pilot plant.

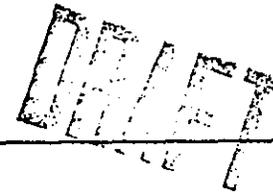
2. Operating Envelope: 40 CFR § 264.13(b)(1)

Table 3-1 The Operating Envelope should address all critical parameters. This should address all systems including the carbon/activated charcoal filter and the HEPA filter identifying the other constituents which may utilize filter capacity. Each technology train (i.e., including the intermediate storage tanks, test equipment, and tank trailer loading and unloading system) should be comprehensively evaluated to identify constituents which could be present in the air stream from these technology trains into the filters which either utilize capacity in the carbon/activated charcoal filter or the HEPA filters, or constituents which could effectively make apparent capacity in the filters unavailable for use (e.g., moisture, particulates). Simply designating on page 4-5 that ambient air will be bled into the system ahead of the charcoal filter to prevent plugging by moisture does not adequately address the concern for potential plugging by moisture. Specifics on the rate of introduction of ambient air, expected maximum saturation levels of ambient air, expected moisture levels from air stream from waste processes, and calculations to interrelate this information to document that plugging will not occur needs to be included in the application.

The presentation of the Operating Envelope should include a discussion of all the critical operating parameters (e.g., temperature, pressure, corrosion) and to the extent applicable, tie these parameters back to waste physical and/or chemical properties (e.g., pH, volatility, etc.) or at a minimum if not applicable to physical and/or chemical properties to tie these parameters back to the operating controls on Table 4-3, with an extensive discussion of basis for the nonapplicability.

DOE-RL/WHC Response:

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| 3.  | <p>Analytical Methods: 40 CFR § 264.13(b)(2)</p> <p>Table 3-2: Waste Analysis Plan Analytical Methods: This table should also identify the preparation methods and extraction methods for the waste water streams that will be treated in the waste water treatment plant.</p> <p>DOE-RL/WHC Response: Table 3-2 will be modified to more clearly define the preparation and extraction methods that will be used in waste water pilot plant analyses.</p>   |                    |
| 4.  | <p>Methods to Sample Wastes: 40 CFR § 264.13(b)(3)</p> <p>Tables 3-2 and 3-3 should specify the radionuclide Hanford Site "onsite" methods listed.</p> <p>DOE-RL/WHC Response: A description of the Hanford Site radionuclide analysis will be included as an appendix in the permit application. Table 3-2 and 3-3 will be modified to include the names of the analytical methods described in the appendix. Treatment of the radioactive portion of the waste is not within the scope of the permit application. The information is provided for general knowledge.</p> |                    |
| D.  | SECTION 4.0 PROCESS INFORMATION: 40 CFR §§ 264.13(b)(6) and 270.65   |                    |
| 1.  | <p>Waste Characterization: 40 CFR § 264.13(b)(6)</p> <p>This section must address the waste codes for the other waste streams identified in Section 1.0 Introduction.</p> <p>DOE-RL/WHC Response:</p>  |                    |
| 2.  | <p>Critical Parameters: 40 CFR § 270.65</p> <p>a. Figures 4-1 through 4-19 should include both the range of the specific parameter being measured (e.g., temperature, pressure, etc.) and the set point/range which is established for that parameter. In addition, the pH limitation of the specific unit should be identified (i.e., the specific limit which would be unsafe should be specified). The Table 2-1 needs to be tied into this Section regarding primary and secondary technologies.</p> <p>DOE-RL/WHC Response:</p>                                       |                    |



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3. Process Flow Diagrams: 40 CFR § 270.65

The process diagrams should include the monitors of all the critical parameters and instrument legends. These monitors and all alarms/sensors associated with the monitors should be assigned an identification code/number which should be referred to on Table 4-3. Tables 4-3 and 4-4 must also address the critical parameters for operation of the tank trailer load/unload system and the intermediate storage tanks. In addition the calibration of this equipment to the manufacturer's specifications should also be addressed. A calibration log should also be maintained at the facility. The monitor specifications on Table 4-4 must indicate in all cases the extent of full scale/full range so that it may be correlated with the acceptable levels/ranges specified on Table 4-3.

DOE-RL/WHC Response:

4. Spill Prevention and Containment: 40 CFR § 270.65

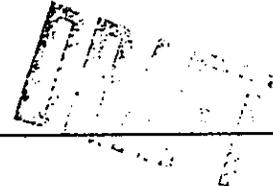
The catch pan footprint needs to address the spray potential of ruptured treatment units under pressure. The basis for the extent for the catch pan footprint needs to be provided. The footprint for the catch pans designated on page 4-3 (i.e., 1 foot greater in each horizontal dimension than the footprint of the equipment), is inconsistent with the length specified on Table 4-1 for the reverse osmosis unit (i.e., .5 foot greater). The RD&D application must document how the secondary containment system will address equipment which is ancillary to the primary test equipment such as pumps, valves, etc. The RD&D application needs to provide details on how the secondary containment and leak detection requirements of Section 264.193, referred to on page 4-23, are being met for the trailer (e.g., materials of construction for the berms, compatibility of containment construction materials with wastes, adequacy of constructed containment to withstand expected loading, etc.).

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E. GENERAL INSPECTION REQUIREMENTS: SECTION 5.0 40 CFR § 264.15		
1. Inspection Schedule: 40 CFR § 264.15(b)	<p>The schedules for inspecting monitoring equipment, safety, and emergency equipment, security devices, and operating and structural equipment that are vital to prevent, detect, correspond to environmental or human health hazards must be included in the permit application.</p> <p>DOE-RL/WHC Response:</p>	
2. Items to be Inspected: 40 CFR § 264.15(b)(1)	<p>This section must address the specific inspections which will be conducted on each item of operational equipment and address the maintenance, repair and replacement of equipment. The inspection should be conducted in accordance with and specify the manufacturer's specification. The details of the type of readout/records (e.g., strip charts) to be collected and maintained in the operating record for the critical parameter monitoring equipment and the frequency of their collection must also be provided.</p> <p>DOE-RL/WHC Response:</p>	
3. Types of problems for which each item is inspected: 40 CFR § 264.15(b)(3)	<p>a. Inspection checklists must be included in the RD&amp;D Permit Application.</p> <p>b. A Preventative Maintenance Plan should be included in the RD&amp;D Permit Application.</p> <p>c. This Operational Readiness Review must be submitted after completion to EPA and Ecology to determine if the RD&amp;D Permit needs to be updated/changed prior to issuance.</p> <p>DOE-RL/WHC Response:</p>	

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4. Inspection Frequency: 40 CFR § 264.15(b)(4)

The inspection frequency must be specified in the permit application for the inspection checklist.

DOE-RL/WHC Response:

F. CONTINGENCY PLAN: SECTION 6.0: 40 CFR §§ 264.14(b), 264

1. Implementation of Plan: 40 CFR § 264.51

The contingency plan must stand on its own, no references to other portions of the permit application or other documents for information may be made unless they are separately attached to the contingency plan.

DOE-RL/WHC Response: To include all relevant emergency information, the permit application will include as appendices the contractor's *Emergency Plan*, the *Emergency Plan for the 1706-KE Buildings*, and the *Building Emergency Plan-200 Area Tank Farms*.

2. Contents of Plan: 40 CFR § 264.52

a. The specific information on the waste types, hazards, and chemicals which are present in the Waste Water Treatment Facility 1706-KE Building and the LERF Facility must be included in the contingency plan.

b. The specific building emergency plan for the Waste Water Treatment Facility 1706-KE and the LERF, Appendix F, must be specific to waste water treatment operations, addressing the actual waste types to be handled, specific types of emergencies which may occur (e.g., chemical reaction from water entering acid tanks, vessel rupture due to overpressure, etc.) and the types of emergency equipment on hand including decontamination solutions etc., specific shutdown procedures, identifying personnel protection equipment needed for the various potential waste water treatment technology demonstrations, and specific steps and materials for clean-up of emergency equipment.

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3.	Emergency Coordinators: 40 CFR §§ 264.52(d), 264.55	
	The names as well as the phone #'s of the Waste Water Treatment Facility emergency personnel must be included in the contingency plan. The other personnel must be identified.	
	DOE-RL/WHC Response: The emergency coordinators, including the building emergency director, are assigned by position. Hanford Facility policy is to include position titles and not individual names.	
4.	Notification: 40 CFR § 264.56(a)	
	The notification authorities in Section 5.3.2 for 1706KE must be clarified. It is not clear what the specific role of the "HWVP" line management is regarding the RD&D Permit and technology demonstration. The notification authorities, incident assessment, and facility restart notification must include EPA Region 10.	
	DOE-RL/WHC Response: The text will be modified to read the "1706KE" line management. A sentence will be added to state that the Occurrence Notification Center has the responsibility for notifying the regulators, including the EPA Administrator, Region 10.	
5.	Evacuation Plan: 40 CFR § 264.52(f)	
	The evacuation routes from the 1706KE Building and the LERF Facility must be identified, as well as the location of the staging areas, in the contingency plan.	
	DOE-RL/WHC Response:	

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G. PERSONNEL TRAINING: SECTION 7.0: 40 CFR § 264.16

1. Program Director: 40 CFR § 264.16(a)(2)

It is not clear that there is a Training Director nor that this individual is properly qualified.

DOE-RL/WHC Response: The text will be modified to more clearly state that the waste water pilot plant manager is responsible for training. The manager will be qualified through training listed in Tables 7-1 and 7-2.

2. Training Program Contents

This section should also indicate that the courses outlined in the Building Training Plan for waste water personnel will be completed within 6 months of assignment. In addition no unqualified personnel will be allowed to operate the waste water treatment facility unless properly qualified.

DOE-RL/WHC Response: A statement incorporating the 6-month requirement and a statement that only qualified personnel will be allowed to operate the pilot plant will be included in Section 7.0.

H. APPENDIX C

Appendix C should include the extraction and preparatory methods which will be used. In addition the specific sampling procedures must also be addressed.

DOE-RL/WHC Response: A listing of preparatory and extraction methods to be used on the samples will be included in Table 3-2. The sampling methods for waste characterization are included in Sections 3.3.1 for tanker sampling and in Section 3.3.2 for sampling at the 242-A Evaporator and the LERF.