Attachment 1
13-ECD-0073
(89 Pages)

Hanford Facility RCRA Permit Modification Notification Forms
Part III, Operating Unit 4
242-A Evaporator

Hanford Facility RCRA Permit Modification Notification Forms

Part III, Operating Unit 4

242-A Evaporator

Index

Page 2 of 4: Chapter 3 Justifications

Page 3 of 4: Chapter 3 Justifications

Page 4 of 4: Chapter 6 Justification

Submitted by Co-Operator:		Reviewed by ORP Program Office:	
	9/10/13		9/11/13
R.E. Wilkinson	Date	T.W. Fletcher	Date

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part
Unit Name	**Part III, Operating Unit 4**

Description of Modification:

Chapter 3, Waste Analysis Plan

The following Class 2 permit modification justifications are as follows:

- A process is proposed to be added to Section 3.5 to address operational or maintenance waste or water additions to candidate feed tanks and the Evaporator feed tank after isolation. Operational and maintenance activities need to take place which can lead to additions to a candidate feed tank that already has been isolated and sampled. The process establishes an evaluation requirement to ensure that the waste acceptance criteria can still be met.
- The waste acceptance process will not involve estimating the concentration of critical analytes to determine the minimum number of feed tank samples needed for compliance. The concept of "critical analytes" was only used to estimate the number of samples that was required under the Environmental Protection Agency guidance (EPA, 2001, *Data Quality Objectives Decision Error Feasibility Trials*, EPA QA/G-4D, Version 4.0). This guidance is no longer being used because operating history showed that the number of required samples did not vary and a standard number of samples are being incorporated (see below).
- Ammonia emission limits will not be evaluated separately from other organics. Compliance with the air emission requirements within the permit, established pursuant to WAC 173-303-690 incorporating by reference 40 CFR 264 Subpart AA, does not require a specific ammonia emission limit.
- Four representative samples, from a single riser, will be taken from candidate feed tanks including one at the surface and three subsurface samples. Subsurface sampling depths will be based on professional judgment (e.g., depending on whether layering is suspected to exist). Table 3.3, "Candidate Feed Tank Sample Point Selection" provides sampling detail based on the presence or absence of layering. The new sampling approach was based on the operational history showing that estimating the number of samples was no longer necessary, as well as showing sampling from one riser was equivalent to sampling from two risers. Regarding the number of samples, historical pre sampling estimates determined 3 samples were necessary, where post sampling refinements through the 2001 EPA guidance resulted in only 2 samples. Therefore, in lieu of estimating sample numbers, four samples will be taken from each candidate feed tank. Regarding sampling of supernatant from one riser or two, one riser is adequately representative because lateral heterogeneity is not observed in tanks as convection currents keep the supernatant mixed laterally.

WAC 173-303-830 Modification Class [1] [2]	Class 1	Class '1	Class 2	Class 3
Please mark the Modification Class:			X	

Enter relevant WAC 173-303-830 WAC 173-303-830(4)(b), Class 2 Modifications.
WAC 173-303-830, Appendix I, B.1.d, Other changes to waste sampling and analysis methods.

Modification Approved: ☐ Yes ☐ No (state reason for denial) Reason for denial:	Reviewed by Ecology:
	S. L. Dahl-Crumpler Date

[1] Class 1 modifications requiring prior Agency approval.

[2] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to a Class '1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part
242A Evaporator	**Part III Operating Unit 4**

Description of Modification:

Chapter 3, Waste Analysis Plan (con't)

- A second statistical analysis to verify the number of samples necessary will no longer occur. With elimination of the 2001 EPA guidance, the second step in the old sampling number estimation process in no longer needed.
- Riser selection, for sampling purposes, will be determined using best professional judgment. The justification for this change is the same as what was described above for eliminating sampling from two risers.
- Clear sample bottles will be used in lieu of amber-colored sample bottles for surface samples to determine the existence of separable organics. This change will allow visual observation in the laboratory to determine layering.
- New test methods will be used for separable organics and ammonia. Separable organic determinations will use visual inspection, a percent water method, or a total carbon/total inorganic carbon method. Ammonia determinations will include an option to use an ion chromatography method
- Improved test methods will be used for total carbon and total inorganic carbon. The method numbers for coulometry that were awaiting approval have now been replaced with the approved method number.

WAC 173-303-830 Modification Class [1 2]	Class 1	Class [1]1	Class 2	Class 3
Please mark the Modification Class:			X	

Enter relevant WAC 173-303-830: WAC 173-303-830(4)(b), Class 2 Modifications
WAC 173-303-830, Appendix I, B.1.d, Other changes to waste sampling and analysis methods

Modification Approved: ☐ Yes ☐ No (state reason for denial) Reason for denial:	Reviewed by Ecology:
	S. L. Dahl-Crumpler Date

[1] Class 1 modifications requiring prior Agency approval.

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Unit:	Permit Part
242A Evaporator	**Part III Operating Unit 4**

Description of Modification:

Chapter 6, Procedures to Prevent Hazards

A new section was added, Section 6.2.2.4, "Alternative Leak Detection during Electrical/Ventilation Outages." This section is needed because daily inspections cannot be performed when electrical/ventilation outages occur. The new section describes how a camera is used in the condenser room and how inspections will be suspended in the pump room, loadout and hot equipment storage room. The section also requires documentation to be maintained of the events.

WAC 173-303-830 Modification Class [1] [2]	Class 1	Class [1]1	Class 2	Class 3
Please mark the Modification Class:			X	

Enter relevant WAC 173-303-830: WAC 173-303-830(4)(b), Class 2 Modifications
WAC 173-303-830(4)(d), Other modifications. Class 3 modification requesting downgrade to Class 2.

Modification Approved: ☐ Yes ☐ No (state reason for denial) Reason for denial:	Reviewed by Ecology:
	S. L. Dahl-Crumpler Date

[1] Class 1 modifications requiring prior Agency approval.

[2] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to a Class [1]1, if appropriate.

Remove and Replace the Following Sections:

Remove Chapter 3, Waste Analysis Plan, dated September 30, 2007, and replace it with the Chapter approved from the Class 2 Permit Modification Process.

Remove Chapter 6, Procedures to Prevent Hazards dated June 30, 2010, and replace it with the Chapter approved from the Class 2 Permit Modification Process.