



0055436

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

1315 W. 4th Avenue • Kennewick, Washington 99336-6018 • (509) 735-7581

September 11, 2001

Mr. Joel Hebdon, Director
Regulatory Compliance and Analysis Division
Department of Energy, Richland Operations Office
P.O. Box 550, MSIN: A5-58
Richland, Washington 99352

Mr. Roby D. Enge, Director
Environment, Safety, and Health
Pacific Northwest National Laboratory
P.O. Box 999, MSIN: P7-75
Richland, Washington 99352

Mr. Richard H. Gurske, Project Manager
Environmental Services
Fluor Hanford, Inc.
P.O. Box 1000, MSIN: H8-73
Richland, Washington 99352

RECEIVED
OCT 03 2001
EDMC

Dear Messrs. Hebdon, Enge, and Gurske:

Re: Quarterly Notification of Class 1 Modifications to the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Dangerous Waste Portion (Quarter ending June 30, 2001 – Condition I.C.3)

Re: 300 Area WATS: Class 1 Permit Modifications to the Hanford Facility RCRA Permit (Permit), Part V, Chapter 20.

Enclosed are the Modification Notification Forms indicating those modifications that the Washington State Department of Ecology (Ecology) has reviewed and approved for the referenced quarterly Class 1 Modifications.

The approved quarterly modifications include:

Part II, General Facility Conditions,
Page 2 of 6, Part II, Condition II.Y. through II.Y.1.g

01.10.01

Messrs. Hebdon, Enge, and Gurske
September 11, 2001
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Page 3 of 6, Part II, Condition II.Y.2. through II.Y.2a.

Page 4 of 6, Part II, Condition II.Y. 2b.

Page 5 of 6, Part II, Condition II.Y.2c. through II.Y.2d

Page 6 of 6, Part II, Condition II.Y.3. through II.Y.3.b.

Part III, Chapter 6 and Attachment 36, 325 Hazardous Waste Treatment Units,
Appendix 7A

Attachment 4, Hanford Emergency Management Plan,
Page 2 of 2, Section 9.0. Subsection 9.2.3

Part III, Chapter 2 and Attachment 18, 305-B Storage Facility, Page 2 of 6, Cover/Foreword
Page 3 of 6, Appendix 2A
Page 4 of 6, Chapter 7.0

Attachment 33, General Information Portion,

Page 5 of 26, Section 5.2.2.4

Page 6 of 26, Section 5.2.2.5

Page 7 of 26, Section 5.2.3.1

Page 9 of 26, Section 5.2.3.2.2

Page 10 of 26, Section 5.2.3.2.3

Page 11 of 26, Section 5.3.2

Page 12 of 26, Section 5.3.2.1

Page 13 of 26, Section 5.3.2.2

Page 14 of 26, Section 5.3.4.2

Page 15 of 26, Section 5.3.6

Page 16 of 26, Section 5.4.

Page 17 of 26, Section 5.4.1

Page 20 of 26, Section 5.5.4

Page 21 of 26, Section 5.5.4.2

Page 22 of 26, Section 5.5.4.3

Page 23 of 26, Section 5.5.4.5.1

Page 24 of 26, Section 5.5.4.6

Page 25 of 26, Section 5.6.7

Page 26 of 26, Figures F5-5, F5-6, and F5-7

Page 5 of 26, Section 5.2.2.4

Messrs. Hebdon, Enge, Gurske
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The following proposed Class 1 modifications related to changes in Attachment 33, General Information Portion, are not approved:

Page 2 of 26, Section 5.0
Page 3 of 26, Section 5.0 (continued)
Page 4 of 26, Section 5.2
Page 8 of 26, Section 5.2.3.2.1
Page 18 of 26, Section 5.4.2
Page 19 of 26, Section 5.5.2

Ecology requests the following comments be incorporated prior to approval:
Page 2 of 26, Section 5.0: Use "Hanford Site Groundwater Monitoring for Fiscal Year 2000," dated March 2001/PNNL-13404 in lieu of PNNL 13116.

Page 3 of 26, Section 5.0 (continued): Insert "RCRA" between wording "the Single-Shell Tanks (SST) TSD units are subject to the" and "closure work plan/closure plan process in accordance...". Also, change the word "detection" to "indicator parameter" for the A-AX and C farms monitoring program designation.

Page 3 of 26, Section 5.0 (continued): Use wording "Hanford Federal Facility Agreement and Consent Order" and the acronym "HFFACO" where applicable. (e.g. "The Single-Shell Tanks (SST) TSD units are subject to the RCRA closure work plan/closure plan process in accordance with Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestone M-45-06, and will not be closed under final status.").

Page 3 of 26, Section 5.0 (continued): Insert the following sentence between the third and fourth sentences of the first paragraph; "However, in accordance with HFFACO Milestone M-24-00, the SST groundwater monitoring networks are to meet WAC-173-303-645 requirements.

Page 4 of 26, Section 5.2: In first paragraph, drop the proposed date change and substitute the following wording; "...the status of this TSD unit is anticipated to change from interim to final."

Page 8 of 26, Section 5.2.3.2.1: Substitute the following wording; "Water level data are compiled into a groundwater monitoring project database (i.e., the Hanford Environmental Information System [HEIS]) and are available by access and/or on request."

Page 18 of 26, Section 5.4.2: Delete the last sentence ("It should...") in its entirety.

Page 19 of 26, Section 5.5.2: Add the following sentence after the second sentence of the second paragraph; "Groundwater monitoring requirements could also be imposed through Condition II.Y (corrective action)."

Messrs. Hebdon, Enge, Curske
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Page 19 of 26, Section 5.5.2: Insert the following sentence between the first and second sentences of the third paragraph; "However, the SST groundwater monitoring networks are required to meet final status standards in accordance with HFFACO Milestone M-24-00.

Additionally, Ecology recognizes previous approval for 300 Area WATS Class 1 permit modifications to the 300 Area WATS portion of the Hanford Facility RCRA Permit, Part V, Chapter 20, submitted April 16, 2001.

United States Department of Energy (DOE) and contractor staff are encouraged to discuss proposed Class 1 changes with Ecology's Unit Managers during the quarter to clarify any questions and/or concerns. If you have any questions or comments regarding this letter, please contact me at (509) 736-5715 or Jean Vanni at (509) 736-3046.

Sincerely,



Laura Ruud, Permitting Specialist
Nuclear Waste Program

LR:JV:nc
Enclosures

cc w/enclosure: Ellen M. Mattlin, DOE
Michael Royack, DOE
HF Operating Record, G1-27
Suzette A. Thompson, FHI
Roger J. Landon, BHI
J. H. Richards, CTUIR
William T. Dixon, CHG
Rick Raymond, CHG
Alice K. Ikenberry, PNNL
Jim Rasmussen, ORP
Environmental Portal, LMSI
Pat Sobotta, NPT
Russell Jim, YIN
Ken Niles, Oregon Energy
Administrative Record: H6-08

cc w/o enclosure: Doug R. Sherwood, EPA

Hanford Facility RCRA Permit Modification Notification Forms
Part III, Chapter 2 and Attachment 18
305-B Storage Facility

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Page 2 of 6: Cover/Foreword
Page 3 of 6: Appendix 2A
Page 4 of 6: Chapter 7.0

Hanford Facility RCRA Permit Modification Notification Form

Unit:
305-B Storage Facility

Permit Part & Chapter:
Part III, Chapter 2 and Attachment 18

Description of Modification:

Cover/Foreword: Remove the Cover/Foreword and replace with the attached Cover/Foreword.

The file was converted to Microsoft Word, no text was changed.

Modification Class: ¹²³

Please check one of the Classes:

Class 1

Class ¹

Class 2

Class 3

X

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and informational changes

Submitted by Co-Operator: <i>A.K. Ikenberry</i> <i>6/11/01</i>	Reviewed by RL Program Office: <i>R.F. Christensen</i> <i>6/29/01</i>	Reviewed by Ecology: <i>F. Jamison</i> <i>08/27/01</i>	Reviewed by Ecology: <i>L.E. Ruud</i> <i>9/4/01</i>
A.K. Ikenberry Date	R.F. Christensen Date	F. Jamison Date	L.E. Ruud Date

¹ Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

³ 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 ¹, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:
305-B Storage Facility

Permit Part & Chapter:
Part III, Chapter 2 and Attachment 18

Description of Modification:

Remove Chapter 7.0 and replace with attached the attached Chapter 7.0.

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and informational changes

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
<i>A.K. Ikenberry</i> 6/11/01	<i>R.F. Christensen</i> 4/29/01	<i>F.D.Z.</i> 6/4/01	<i>L.E. Ruud</i> 9/4/01
A.K. Ikenberry Date	R.F. Christensen Date	F. Jamison Date	L.E. Ruud Date

¹ Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

³ 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 ¹1, if appropriate.

**Hanford Facility RCRA Permit Modification Notification Form
for
325 Hazardous Waste Treatment Units
Part III, Chapter 6, Attachment 36**

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Appendix 7A

Hanford Facility RCRA Permit Modification Notification Form

Unit: 325 Hazardous Waste Treatment Units	Permit Part & Chapter: Part III, Chapter 6 and Attachment 36
-----------------------------------------------------	------------------------------------------------------------------------

Description of Modification:

Remove Appendix 7A and replace with attached the attached Appendix 7A.

Modification Class: ¹²³ Please check one of the Classes:	Class 1	Class ¹ 1	Class 2	Class 3
	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

- A. General Permit Provisions
 1. Administrative and Informational changes

Submitted by Co-Operator: <i>A. K. Ikenbery</i> 6/11/01 A. K. Ikenbery Date	Reviewed by RL Program Office: <i>R. F. Christensen</i> 6/29/01 R. F. Christensen Date	Reviewed by Ecology: <i>F. Jamison</i> 08/20/01 F. Jamison Date	Reviewed by Ecology: <i>L. E. Ruud</i> 9/4/01 L. E. Ruud Date
-----------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------	-----------------------------------------------------------------------	---------------------------------------------------------------------

¹ Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

³ 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 ¹1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Forms
Part II, General Facility Conditions

Page 1 of 6

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- Page 2 of 6: Hanford Facility RCRA Permit Condition II.Y. through II.Y.1.g.
- Page 3 of 6: Hanford Facility RCRA Permit Condition II.Y.2. through II.Y.2 a.
- Page 4 of 6: Hanford Facility RCRA Permit Condition II.Y.2 b.
- Page 5 of 6: Hanford Facility RCRA Permit Condition II.Y.2 c. through II.Y.2 d.
- Page 6 of 6: Hanford Facility RCRA Permit Condition II.Y.3. through II.Y.3.b.

Hanford Facility RCRA Permit Modification Notification Form

Unit: Hanford Facility RCRA Permit	Permit Part & Chapter: Part II General Facility Conditions
----------------------------------------------	----------------------------------------------------------------------

Description of Modification:

Hanford Facility RCRA Permit Condition II.Y.: Condition II.Y. modified per PCHB NO. 00-050, Stipulation and Agreed Order of Dismissal.

II.Y. CORRECTIVE ACTION

In accordance with WAC 173-303-646 and WAC 173-303-815(2)(b)(ii), the Permittee must conduct corrective action, as necessary to protect human health and the environment, for releases of dangerous waste and dangerous constituents from solid waste management units and areas of concern at the facility, including releases that have migrated beyond the facility boundary. The Permittee may be required to implement measures within the facility to address releases which have migrated beyond the facility's boundary.



II.Y.1. Compliance with Chapter 173-340 WAC

In accordance with WAC 173-303-646, the Permittee must conduct corrective action "as necessary to protect human health and the environment." To ensure that corrective action will be conducted as necessary to protect human health and the environment, except as provided in Condition II.Y.2, the Permittee must conduct corrective action in a manner that complies with the following requirements of Chapter 173-340 WAC:

- II.Y.1.a. As necessary to select a cleanup action in accordance with WAC 173-340-360 and WAC 173-340-350 State Remedial Investigation and Feasibility Study;
- II.Y.1.b. WAC 173-340-360 Selection of Cleanup Actions;
- II.Y.1.c. WAC 173-340-400 Cleanup Actions;
- II.Y.1.d. WAC 173-340-410 Compliance Monitoring Requirements;
- II.Y.1.e. WAC 173-340-420 Periodic Site Reviews;
- II.Y.1.f. WAC 173-340-440 Institutional Controls; and
- II.Y.1.g. WAC 173-340-700 through -760 Cleanup Standards;



Modification Class: 12 3	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

- A. General Permit Provisions
 - 1. Administrative and informational changes

Submitted by Co-Operator: R. H. Gurske	Reviewed by RL Program Office: J. Hebdon	Reviewed by Ecology: L.E. Ruud
Date 7/12/01	Date 3/27/01	Date 7/12/01

¹ Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

³ 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 ¹1, if appropriate

Hanford Facility RCRA Permit Modification Notification Form

Unit: Hanford Facility RCRA Permit	Permit Part & Chapter: Part II General Facility Conditions
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Description of Modification:

Hanford Facility RCRA Permit Condition II.Y.: Condition II.Y. modified per PCHB NO. 00-050, Stipulation and Agreed Order of Dismissal.

II.Y.2. Acceptance of Work Under Other Authorities or Programs and Integration with the FFAO

Corrective action is necessary to protect human health and the environment for all units identified in Appendix B and Appendix C of the FFAO. Notwithstanding Condition II.Y.1, work under other cleanup authorities or programs, including work under the FFAO, may be used to satisfy corrective action requirements, provided it protects human health and the environment.

II.Y.2 a. For units identified in Appendix C of the FFAOC, as amended, as CERCLA Past Practice (CPP) Units, Ecology accepts work under the FFAO, as amended, and under the CERCLA program, as satisfying corrective action requirements to the extent provided for in, and subject to the reservations and requirements of, Conditions II.Y.a.i through II.Y.a.iv.

- i. For any unit identified in Appendix C of the FFAO as a CPP unit, the Permittee must comply with the requirements and schedules related to investigation and cleanup of the of CPP unit(s) developed and approved under the FFAO, as amended. The requirements and schedules related to investigation and cleanup of CPP units currently in place under the FFAO, as amended, and in the future developed and approved under the FFAOC, as amended, are incorporated into this Permit by this reference and apply under this Permit as if they were fully set forth herein. If the Permittee is not in compliance with requirements of the FFAO, as amended, that relate to investigation or cleanup of CPP unit(s), Ecology may take action to independently enforce the requirements as corrective action requirements under this Permit.
- ii. For any unit identified in Appendix C of the FFAO as a CPP unit, in the case of an interim ROD, a final decision about satisfaction of corrective action requirements will be made in the context of issuance of a final ROD.
- iii. If EPA and Ecology, after exhausting the dispute resolution process under Section XXVI of the FFAO, cannot agree on requirements related to investigation or cleanup of CPP unit(s), Ecology will notify the Permittee, in writing, of the



Ecology's notice, or within some other reasonable period of time agreed to by Ecology and the Permittee, the Permittee must submit for Ecology review and approval, a plan to conduct corrective action in accordance with Condition II.Y.1. for the subject unit(s). The Permittee's plan may include a request that Ecology evaluate work under another authority or program. Approved corrective action plans under this condition will be incorporated into this Permit in accordance with the Permit Modification Procedures of WAC 173-303-830.

iv. The Permittee must maintain information on corrective action for CPP units covered by the FFAO in accordance with Sections 9.0 and 10.0 of the FFAO Action Plan. In addition, the Permittee must maintain all reports and other information developed in whole, or in part, to implement the requirements of Condition II.Y.2.a, including reports of investigations and all raw data, in the Facility Operating Record in accordance with Condition II.1. Information that is maintained in the Hanford Site Administrative Record may be incorporated by reference into the Facility Operating Record.

Modification Class: 12 3	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

- A. General Permit Provisions
 - 1. Administrative and informational changes

Submitted by Co-Operator: R. H. Gurske	Reviewed by RL Program Office: J. Hebdon	Reviewed by Ecology: L.E. Ruud
Date 7/12/01	Date 7/3/01	Date 7/12/01

¹ Class 1 modifications requiring prior Agency approval.

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³ 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 ¹1, if appropriate

Hanford Facility RCRA Permit Modification Notification Form

Unit:
Hanford Facility RCRA Permit

Permit Part & Chapter:
Part II General Facility Conditions

Description of Modification:

Hanford Facility RCRA Permit Condition II.Y.: Condition II.Y. modified per PCHB NO. 00-050, Stipulation and Agreed Order of Dismissal.

II.Y. 2.b. For units identified in Appendix C of the FFACO, as amended, as RPP units, Ecology accepts work under the FFACO, as amended, as satisfying corrective action requirements to the extent provided for, and subject to the reservations and requirements of, Conditions II.Y.2.b.i. through II.Y.2.b.iv.

- i. For any unit identified in Appendix C of the FFACO, as amended, as RPP unit, until a permit modification is complete under II.Y. 2.b.iii., the Permittee must comply with the requirements and schedules related to investigation and cleanup of RPP units developed and approved under the FFACO, as amended. The requirements and schedules related to investigation and cleanup of RPP units currently in place under the FFACO, as amended, and in the future developed and approved under the FFACO, as amended, are incorporated into this Permit by this reference and apply under this Permit as if they were fully set forth herein. Until a permit modification is complete under II.Y. 2.b.iii., if the Permittee is not in compliance with requirements and schedules related to investigation and cleanup of RPP units developed and approved under the FFACO, as amended, Ecology may take action to independently enforce the requirements as corrective action requirements under this Permit.
- ii. When the Permittee submits a corrective measures study for an individual RPP unit or a group of RPP units, the Permittee must, at the same time, recommend a remedy for the unit(s). The remedy recommendation must contain all the elements of a draft cleanup action plan under WAC 173-340-360(10).
- iii. After considering the Permittees' corrective measures study and remedy recommendation, Ecology will make a tentative remedy selection decision and publish the decision for public review and comment. Public review and comment may be accomplished by publishing the tentative decision as a draft Permit under WAC 173-303-840(10), or by a method that provides an equivalent opportunity for public review and participation. Following public review and comment, Ecology will make a final remedy selection decision. Final remedy decisions will be incorporated into the Permit using the Permit Modification Procedures of WAC 173-303-830.
- iv. The Permittee must maintain information on corrective action for RPP units covered by the FFACO, as amended, in accordance with Sections 9.0 and 10.0 of the FFACO Action Plan. In addition, the Permittee must maintain all reports and other information developed in whole, or in part, to implement the requirements of Condition II.Y.2.b., including reports of investigations and all raw data, in the Facility Operating Record in accordance with Condition II.I. Information that is maintained in the Hanford Site Administrative Record may be incorporated into the Facility Operating Record by reference.

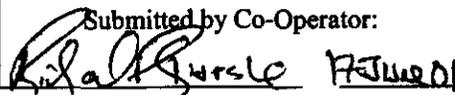
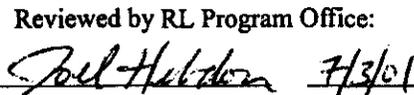
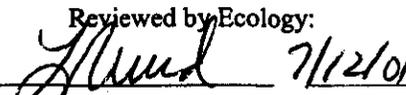
Modification Class: 12 3	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and informational changes

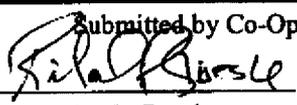
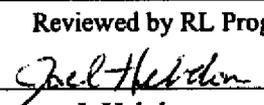
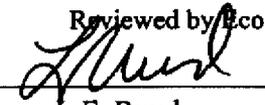
Submitted by Co-Operator:  R. H. Gurske	Reviewed by RL Program Office:  J. Hebdon	Reviewed by Ecology:  L.E. Ruud
Date	Date	Date

¹ Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

³ 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 ¹1, if appropriate

Hanford Facility RCRA Permit Modification Notification Form

Unit: Hanford Facility RCRA Permit	Permit Part & Chapter: Part II General Facility Conditions			
<p>Description of Modification: Hanford Facility RCRA Permit Condition II.Y.: Condition II.Y. modified per PCHB NO. 00-050, Stipulation and Agreed Order of Dismissal.</p> <p>No changes to sections II.Y.2.c. and II.Y.2.d.:</p> <p>II.Y.2.c. For each TSD unit or group of units, when the Permittee submits a certification of closure or a certification of completion of post-closure care, or at an earlier time agreed to by Ecology and the Permittee, the Permittee must, at the same time, either:</p> <ol style="list-style-type: none"> i. document that the activities completed under closure and/or post-closure satisfy the requirements for corrective action; or ii. if the activities completed under closure and/or post-closure care do not satisfy corrective action requirements, identify the remaining corrective action requirements and the schedule under which they will be satisfied, if remaining corrective action requirements will be satisfied by work developed and carried out under the FFACO provisions for RPP units or CPP units, a reference to the appropriate RPP or CPP process and schedule will suffice. iii. Ecology will make final decisions as to whether the work completed under closure and/or post-closure care satisfies corrective action, specify any unit-specific corrective action requirements, and incorporate the decision into this Permit in accordance with the Permit Modification Procedures of WAC 173-303-830. <p>II.Y.2.d. Notwithstanding any other condition in this Permit, Ecology may directly exercise any administrative or judicial remedy under the following circumstances:</p> <ol style="list-style-type: none"> i. Any discharge or release of dangerous waste, or dangerous constituents, which are not addressed by the FFACO, as amended; ii. Discovery of new information regarding dangerous constituents or dangerous waste management, including but not limited to, information about releases of dangerous waste or dangerous constituents which are not addressed under the FFACO, as amended; or iii. A determination that action beyond the terms of the FFACO, as amended, is necessary to abate an imminent and substantial endangerment to the public health, or welfare, or to the environment. 				
Modification Class: 12 3	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			
Relevant WAC 173-303-830, Appendix I Modification: A.1.				
Enter wording of the modification from WAC 173-303-830, Appendix I citation:				
A. General Permit Provisions				
1. Administrative and informational changes				
Submitted by Co-Operator:  R. H. Gurske	Reviewed by RL Program Office:  J. Hebdon	Reviewed by Ecology:  L.E. Ruud		
Date	Date	Date	Date	

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Hanford Facility RCRA Permit Modification Notification Form

Unit:
Hanford Facility RCRA Permit

Permit Part & Chapter:
Part II General Facility Conditions

Description of Modification:

Hanford Facility RCRA Permit Condition II.Y.: Condition II.Y. modified per PCHB NO. 00-050, Stipulation and Agreed Order of Dismissal.

II.Y.3. Releases of Dangerous Waste or Dangerous Constituents Not Covered By the FFAO

II.Y.3.a. US Ecology

- i. The following solid waste management units are not covered by the FFAO:
 - A. US Ecology, Inc., SWMU 1: Chemical Trench;
 - B. US Ecology, Inc., SWMU 2-13: Low-level radioactive waste trenches 1 through 11A; and
 - C. US Ecology, Inc., SWMU 17: Underground resin tank.
- ii. Selected solid waste management units identified in Condition II.Y.3.a.i are currently being investigated by US Ecology in accordance with the *Comprehensive Investigation US Ecology - Hanford Operations Workplan*. Following completion of this [redacted] investigation, [redacted] or within one (1) year of the effective date of this Permit Condition, whichever is earlier, Ecology will make a tentative decision as to whether additional investigation or cleanup is necessary to protect human health or the environment for the solid waste management units identified in Condition II.Y.3.a.i, and publish that decision as a draft permit in accordance with WAC 173-303-840(10). Following the associated public comment period, and consideration of any public comments received during the public comment period, Ecology will publish as final permit conditions under WAC 173-303-840(8) either:
 - A. a decision that corrective action is not necessary to protect human health or the environment;
 - B. an extension to the schedule established under II.Y.3.a.ii; or
 - C. a decision that corrective action [redacted] is necessary to protect human health or the environment.
- iii. If Ecology decides under Condition II.Y.3.a.ii that corrective action is necessary to protect human health or the environment, [redacted] one hundred and eighty (180) days of [redacted] the effective date of this decision, [redacted] the Permittee must submit, for Ecology review and approval, a plan to conduct corrective action in accordance with Condition II.Y.1. Approved corrective action plans under this condition will be incorporated into this Permit in accordance with the Permit Modification Procedures of WAC 173-303-830.

II.Y.3.b.

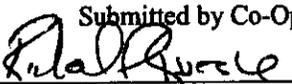
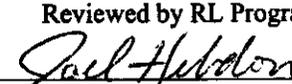
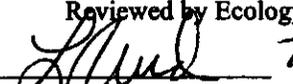
Newly Identified Solid Waste Management Units and Newly Identified Releases of Dangerous Waste or Dangerous Constituents
The Permittee must notify Ecology of all newly-identified solid waste management units and all newly-identified areas of concern at the Facility. For purposes of this condition, a 'newly-identified' solid waste management unit or a 'newly-identified' area of concern is a unit or area not identified in the FFAO, as amended, on the effective date of this condition and not identified by Condition II.Y.3.a. Notification to Ecology must be in writing and must include, for each newly-identified unit or area, the information required by WAC 173-303-806(4)(a)(xxiii) and WAC 173-303-806(4)(a)(xxiv). Notification to Ecology must occur at least once every calendar year, no later than December 31, and must include all units and areas newly identified since the last notification, except that if a newly identified unit or area may present an imminent and substantial endangerment to human health or the environment, notification must occur within five (5) days of identification of the unit or area. If information required by WAC 173-303-806(4)(a)(xxiii) or WAC 173-303-806(4)(a)(xxiv) is already included in the Waste Information Data System, it may be incorporated by reference into the required notification.

Modification Class: 12 3	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

- A. General Permit Provisions
 - 1. Administrative and informational changes

Submitted by Co-Operator:  R. H. Gurske	Reviewed by RL Program Office:  J. Hebdon	Reviewed by Ecology:  L.E. Ruud
Date	Date	Date

¹ Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

³ 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 ¹1, if appropriate

**Hanford Facility RCRA Permit Modification Notification Form
List of Attachments
Attachment 4, Hanford Emergency Management Plan**

Page 1 of 2

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Page 2 of 2: Section 9.0, Subsection 9.2.3

Hanford Facility RCRA Permit Modification Notification Form

Unit: Hanford Emergency Management Plan

Permit Part & Chapter: List of Attachments, Attachment 4

Description of Modification:

Section 9.0, Subsection 9.2.3.:

9.2.3 Incompatible Waste

After an event, the BED/BW and/or Onsite Recovery Manager and staff shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility. The BED/BW and/or Onsite Recovery Manager and staff shall further ensure that no waste that might be incompatible with the released material is treated, stored, and/or disposed of until cleanup is completed.

Cleanup activities shall be performed by trained site personnel. In order to meet 29 CFR 1910.120(q)(11) criteria, such personnel shall have completed the training requirements of 29 CFR 1910.38(a), 29 CFR 1910.134, 29 CFR 1910.1200, and other appropriate safety and health training made necessary by the tasks that they are expected to perform (e.g., personnel protective equipment, decontamination procedures). In addition, all equipment to be used in the performance of the clean-up work shall be in serviceable condition and shall have been inspected prior to use.

Activities may include, but are not limited to:

- neutralization of corrosive spills;
• chemical treatment of reactive materials to reduce hazards;
• overpacking or transfer of contents from leaking containers;
• use of sorbents to contain and/or absorb leaking liquids for containerization and disposal;
• decontamination of solid surfaces impacted by released material, e.g., intact containers, equipment, floors, containment systems, etc.;
• disposal of contaminated porous materials that cannot be decontaminated and any contaminated soil;
• containerization and sampling of recovered materials for classification and determination of proper disposal technique; and
• follow up sampling of decontaminated surfaces to determine adequacy of cleanup techniques as appropriate.

Waste from cleanup activities shall be designated and managed as newly generated waste. A field check for compatibility before storage shall be performed, as necessary, to ensure that incompatible wastes are not placed in the same container and containers of waste are placed in storage areas appropriate for their compatibility class.

If it is determined that incompatibility of waste was a factor in the incident, the BED/BW and/or Onsite Recovery Manager and staff ensures that the cause is corrected. Examples would be modification of an incompatibility chart or increased scrutiny of waste from a generating unit when incorrectly designated waste caused or contributed to an incident.

Table with 5 columns: Modification Class, Class 1, Class 1, Class 2, Class 3. Row 1: Modification Class: 123. Row 2: Please check one of the Classes: X

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

- A. General Permit Provisions
1. Administrative and informational changes

Table with 4 columns: Submitted by Co-Operator, Reviewed by RL Program Office, Reviewed by Ecology, Reviewed by Ecology. Includes signatures and dates for G. B. Griffin, J. L. Spracklen, Jr., S. Moore, and L.E. Ruud.

1 Class 1 modifications requiring prior Agency approval.

2 This is only an advanced notification of an intended Class 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

3 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 1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Forms

List of Attachments

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Hanford Facility RCRA Permit Modification Notification Form

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List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.2.2.4 Downgradient and Upgradient Interim Status Wells

At least one monitoring well is installed hydraulically upgradient from each TSD unit. Their number, location(s), and depth(s) must be sufficient to yield groundwater samples that are representative of the background groundwater quality in the uppermost aquifer beneath the TSD unit and not impacted by the TSD unit.

There must be at least three groundwater monitoring wells located hydraulically downgradient of the TSD boundary (e.g., point of compliance) (Figure 5-1). Their number, locations, and depths of the wells are designed for the detection of any statistically significant amount of dangerous waste or dangerous waste constituents that might migrate from the TSD unit to the uppermost aquifer.

The upgradient and downgradient well locations for each TSD unit are selected on the basis of water table elevations and any other applicable information available at the time of well installation. The well locations for TSD units are found in the interim status groundwater monitoring plans and in the Unit-Specific Portion of this permit application. Specific well location coordinates and elevations are found in the [redacted] well information system (WIS) database.

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

- A. General Permit Provisions
 - 1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> 7/13/01 R. H. Gurske Date	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/13/01 J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 L.E. Ruud Date
-------------------------------------------------------------------------------	------------------------------------------------------------------------------------	-----------------------------------------------------------	---------------------------------------------------------------------

¹Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

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Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

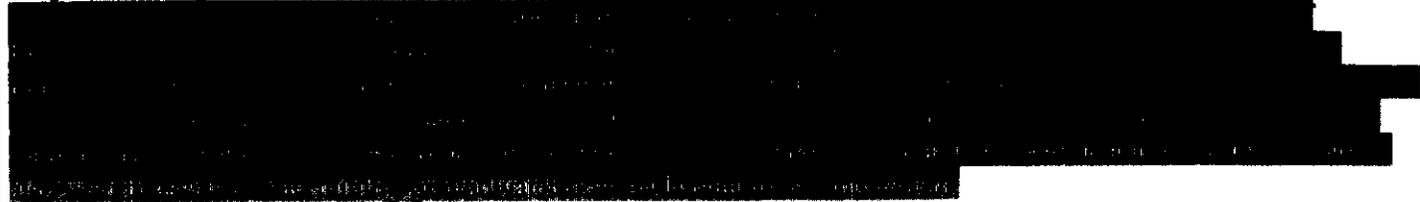
Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.2.2.5 General Hydrogeologic Investigative Techniques

Characterization of the hydrogeologic properties of land-based TSD units could be based on information gained from borehole sediment samples, geophysical logging, aquifer testing, water level measurements, and other pertinent sources of information (EPA 1986b). The unit-specific permit application documentation contains details regarding sample collection intervals and tests performed.

Limited hydraulic properties have been obtained from field determinations as well as permeameter testing in the laboratory. Aquifer testing (constant-discharge production and recovery phases) was performed primarily before 1989. Increased restrictions on purgewater disposal resulted in the use of alternative testing methods from 1989 through September 15, 1991. During this period, slug testing was the preferred method used to obtain field information on the aquifer properties. Descriptions of the test method used to obtain hydraulic property information are provided in groundwater monitoring plans and in unit-specific permit application documentation.



Modification Class: ¹²³	Class 1	Class ¹	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

- A. General Permit Provisions
 - 1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/13/01 J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 L.E. Ruud Date
-----------------------------------------------------------------------	------------------------------------------------------------------------------------	-----------------------------------------------------------	---------------------------------------------------------------------

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Hanford Facility RCRA Permit Modification Notification Form

Unit:
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Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.2.3.1 Sampling and Analysis Plan

Sampling and analysis plans are found in the unit-specific groundwater monitoring plans. The aspects of the groundwater sampling and analysis plans that have been used, and currently are being used for the interim status program monitoring wells, are described in this section. Representative groundwater samples from the uppermost aquifer beneath the Hanford Facility are obtained and analyzed for the purpose of detecting potential contaminant releases from TSD units. All interim status sampling activities on the Hanford Facility currently are performed in accordance with [REDACTED] SW-846 protocol or an equivalent EPA-approved method (EPA/230 [REDACTED]).

The following sections describe the general methods used in the acquisition of groundwater samples.

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

- A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>Joel Hebdon</i> J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> Date	Reviewed by Ecology: <i>[Signature]</i> L.E. Ruud Date
--------------------------------------------------------------------------	------------------------------------------------------------------------------	----------------------------------------------------	-----------------------------------------------------------------

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Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.2.3.2.2 Results of Water Quality Analyses

Quarterly samples are collected for the first year to establish background water quality. Constituents analyzed for are specified by 40 CFR 265.92 (b)(1)(2)(3). Specific analytical parameters are specified in unit-specific permit application documentation. After the first year, the wells are sampled for 40 CFR 265.92 (b)(2) groundwater quality parameters at least annually and are sampled for 40 CFR 265.92 (b)(3) indicator parameters and site-specific parameters semiannually. The TSD units in assessment-level monitoring require sampling quarterly or an agreed upon sampling frequency. The constituents analyzed for are detailed in the groundwater monitoring plans and in the unit-specific permit application documentation.

All groundwater quality data from the monitoring well network are entered into the [redacted] HEIS database for permanent storage and are available electronically. Data from the HEIS database may be downloaded to smaller databases, such as the Geosciences Data Analysis Toolkit (GeoDAT) for data validation, data reduction, and trend analysis. [redacted]

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

- A. General Permit Provisions
 - 1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/3/01 J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 L.E. Ruud Date
-----------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------	---------------------------------------------------------------------

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Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.2.3.2.3 Statistical Results

Statistical analyses of the sampling results for indicator parameters (including pH, specific conductance, total organic carbon, and total organic halogens) are discussed in unit-specific permit application documentation. Detailed statistical analysis methods have been documented (WHC-SA-1124-FF). Results of statistical analyses are presented in groundwater monitoring annual reports (e.g., DOE/RL-91-03 [REDACTED]).

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> 7/26/01 R. H. Gurske Date	Reviewed by RL Program Office: <i>Joel Hebdon</i> 7/3/01 J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 L.E. Ruud Date
-------------------------------------------------------------------------------	----------------------------------------------------------------------------------	-----------------------------------------------------------	---------------------------------------------------------------------

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² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

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Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.3.2 Climate and Meteorology

The Hanford Site is located in a semiarid desert area. The climate in the vicinity of the Hanford Site is largely influenced by the rain-shadow effect of the Cascade Range located in western Washington. This effect results in cold air drainage across the region that largely controls the wind regime of the Hanford Site.

Climatological data have been collected at the Hanford Meteorological Station, located between the 200 Areas, since 1945 (PNL-6415). Temperature and precipitation data also are available from nearby locations for the period 1912 through 1943. A summary of these data through 1980 has been published (PNL-11793 [REDACTED]). Data from the Hanford Meteorological Station are representative of the general climatic conditions for the region and describe the specific climate of the 200 Areas Plateau.

Modification Class: ¹²³

Please check one of the Classes:

Class 1

Class ¹1

Class 2

Class 3

X

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i>	Reviewed by RL Program Office: <i>Jacl Hebdon</i> 7/3/01	Reviewed by Ecology: <i>[Signature]</i>	Reviewed by Ecology: <i>[Signature]</i> 8/9/01
R. H. Gurske Date	J. B. Hebdon Date	Date	L.E. Ruud Date

¹Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

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Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.3.2.1 Wind

Prevailing wind directions on the 200 Areas Plateau are from the northwest in all months of the year (refer to Chapter 2.0, Figure 2-8). Secondary maxima occur for southwesterly winds.

Monthly average wind speeds are lowest during the winter months, averaging 10 to 11 kilometers per hour, and highest during the summer, averaging 15 to 16 kilometers per hour. Wind speeds that are well above average usually are associated with southwesterly winds. However, the summertime drainage winds generally are northwesterly and frequently reach 50 kilometers per hour. Estimates of wind extremes have been summarized [REDACTED] (PNL-4622). Information on the likelihood and frequency of strong winds and tornadoes in the region have been summarized in a final environmental impact statement (DOE/EIS-0113), the Hanford Meteorological Station climatological summary (PNL-4622), and by the National Severe Storms Forecast Center.

Modification Class:¹²³

Class 1

Class ¹1

Class 2

Class 3

Please check one of the Classes:

X

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>J. B. Hebdon</i> J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> Date	Reviewed by Ecology: <i>[Signature]</i> Date
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Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of AttachmentsPermit Part & Chapter:
Attachment 33, General Information PortionDescription of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.3.2.2 Temperature and Humidity

Ranges of daily temperatures vary of ~~1.6°~~ from normal maxima ~~15.1°C~~ in early January to 35°C in late July. The record maximum temperature is 46°C, and the record minimum temperature is -32.7°C.

The annual average relative humidity at the Hanford Meteorological Station is 54 percent. It is highest during the winter months, averaging approximately 75 percent, and lowest during the summer months, averaging approximately 35 percent.

Modification Class: ¹²³

Please check one of the Classes:

Class 1

Class ¹1

Class 2

Class 3

X

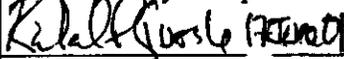
Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:



R. H. Gurske

Date

Reviewed by RL Program Office:



J. B. Hebdon

Date

Reviewed by Ecology:



8/9/01

Date

Reviewed by Ecology:



L.E. Ruud

Date

¹Class 1 modifications requiring prior Agency approval.² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.³ 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 ¹1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.3.4.2. Groundwater

Confined and semiconfined aquifer systems occur beneath the Hanford Site in the basalt flow tops, flow bottom zones, and sedimentary interbeds (DOE/RW-0164 [REDACTED]). These deeper aquifers are intercalated with aquitards consisting of basalt flow interiors. Vertical flow across the aquitards within the basalt aquifer system is inferred from water level or potentiometric surface data, but the leakage is not quantified and direct measurements are not available (DOE/RW-0164 [REDACTED]). The multiaquifer system within the Pasco Basin has been conceptualized as consisting of four primary hydrogeologic units: (1) Hanford and Ringold formation sediments, (2) Saddle Mountain Basalt, (3) Wanapum Basalt, and (4) Grande Ronde Basalt. The discussion in the following sections focuses on the uppermost aquifer systems within the Ringold and Hanford formations and within the Saddle Mountains Basalt, the aquifer comprised of the Rattlesnake Ridge interbed.

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

- A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> 12/20/01	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/3/01	Reviewed by Ecology: <i>[Signature]</i> 8/9/01	Reviewed by Ecology: <i>[Signature]</i> 8/9/01
R. H. Gurske Date	J. B. Hebdon Date	Date	L.E. Ruud Date

¹Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

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Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of AttachmentsPermit Part & Chapter:
Attachment 33, General Information PortionDescription of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.3.6 Uppermost Confined Aquifer

The Rattlesnake Ridge aquifer is the uppermost fully-confined aquifer system that occurs beneath the Hanford Site. As discussed previously, Ringold Formation sediments are semiconfined in some areas. The Rattlesnake Ridge aquifer consists of the flow bottom of the Elephant Mountain Basalt member, the flow top of the Pomona basalt, and the Rattlesnake Ridge interbed. The thickness of the Rattlesnake Ridge interbed, which is the principal transmissive zone within the aquifer, ranges from 15 to 25 meters beneath the 200 Areas and generally thickens toward the west (RHO-ST-42, RHO-RE-ST-12P). Erosional windows (gaps in the rock) in the Elephant Mountain basalt confining layer exist locally. This could allow hydraulic communication between the Rattlesnake Ridge aquifer and the overlying unconfined aquifer (RHO-RE-ST-12P).

Natural recharge to the Rattlesnake Ridge aquifer occurs in the higher elevations surrounding the Pasco Basin to the west, north, and northeast. The flow of groundwater generally is toward the northeast beneath the 200 West Area and possibly east to north beneath the 200 East Area. The aquifer is heterogeneous in composition because the aquifer consists of a basalt flow top and flow bottom, a clayey basalt conglomerate, an epiclastic fluvial-floodplain unit, an air-fall tuff, and a volcanoclastic unit derived from fluvial reworking of the tuff and detrital sediments (RHO-RE-ST-12P). This heterogeneity produces variability of groundwater flow through the aquifer (RHO-RE-ST-12P).

Modification Class: ¹²³

Please check one of the Classes:

Class 1

Class ¹1

Class 2

Class 3

X

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:

Reviewed by RL Program Office:

Reviewed by Ecology:

Reviewed by Ecology:

R. H. Gurske

Date

J. B. Hebdon

Date

Date

L.E. Ruud

Date

¹Class 1 modifications requiring prior Agency approval.²This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.³If 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 ¹1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.4 CONTAMINANT PLUME DESCRIPTION [D-10d]

Ecology regulations [WAC 173-303-806(4)(a)(xx)(D)] require "A description of any plume of contamination that has entered the groundwater from a regulated unit at the time that the application was submitted..." This section contains a description of contaminant plumes identified in the aquifers beneath the Hanford Site. Information provided in this section is relevant to SWMU discussions contained in Chapter 2.0, Section 2.5 and Appendix 2D.

Groundwater contamination currently is monitored under a comprehensive groundwater monitoring and long-term surveillance program. The results of the monitoring program along with isopleth maps are prepared and published annually (e.g., PNNL-14793-[REDACTED]). Contaminant plumes are primarily delineated using isopleth maps (i.e., maps with lines connecting points of equal concentration or values).

Modification Class: ¹²³ Please check one of the Classes:	Class 1	Class ¹ 1	Class 2	Class 3
	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> (R. H. Gurske)	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/3/01	Reviewed by Ecology: <i>[Signature]</i> 8/9/01	Reviewed by Ecology: <i>[Signature]</i> 8/9/01
R. H. Gurske Date	J. B. Hebdon Date	Date	L.E. Ruud Date

¹Class 1 modifications requiring prior Agency approval.

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Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.4.1 Radionuclide Contamination

Isopleth maps are prepared to track the movement of radiological contaminant plumes (e.g., tritium, gross beta) in the unconfined groundwater flow system beneath the Hanford Site. A study of these plumes can be used to provide an early indication of the rate and direction of contaminant movement. An example of an isopleth map delineating a contamination plume is shown in Figure 5-7 (PNNL-11793 [redacted]). This figure depicts the distribution of average tritium concentrations in the unconfined aquifer in 1996. Tritium and iodine-129 are the most widespread radionuclides in the unconfined aquifer (PNNL-11793 [redacted]).

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

- A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>J. B. Hebdon</i> J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> Date	Reviewed by Ecology: <i>[Signature]</i> Date
		8/9/01	8/9/01

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Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.5.4 Sampling, Analysis, and Statistical Procedures [D-10e(4)]

This section provides information on the groundwater sampling, analysis, and statistical evaluation procedures that are proposed for use with the monitoring well system. The choice of an appropriate statistical test depends on the type of monitoring (i.e., detection or compliance) and the nature of the data (e.g., the proportion of values in the data set that are below detection limit ~~and which are not reported as zero~~) (Figure 5-2). Statistical procedures under final detection or compliance monitoring program status are discussed in Section 5.5.4.7 and Section 5.6.7.4, respectively. As the postclosure monitoring program will be implemented at least 30 years in the future, actual protocols and procedures likely will be equivalent to those cited in this section.

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>Joel Hebdon</i> 7/13/01 J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> Date	Reviewed by Ecology: <i>[Signature]</i> 8/19/01 L.E. Ruud Date
--------------------------------------------------------------------------	--------------------------------------------------------------------------------------	----------------------------------------------------	-------------------------------------------------------------------------

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Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.5.4.2 Sample Preservation and Shipment [D-10e(4)(b)]

Sample container and preservation methods that will be used during the groundwater monitoring program are in accordance with EPA SW-846. Measurements of pH and specific conductance will be taken in the field on unpreserved samples [REDACTED].

Precleaned and prelabeled sample containers will be supplied for each monitoring well and will include the appropriate preservatives. To ensure zero head space, the containers for samples analyzed for volatile organic compounds will be filled to slightly more than full before being capped. Samples typically are collected in the following order:

- Bottles with septum caps (volatiles)
- Unfiltered samples (major-ions, cyanide, semivolatiles)
- Filtered samples (metals).

Immediately after collection, the sample containers will be placed in sealed, insulated coolers packed with ice to cool the ambient temperature to approximately 4°C. The samples will be transported to the laboratory for arrival within sufficient time to meet holding time requirements. Field parameter record forms and approved sample analysis request forms will be attached to the sealed containers.

Modification Class: ¹²³	Class 1	Class 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

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Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>J. B. Hebdon</i> J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> Date	Reviewed by Ecology: <i>[Signature]</i> I.E. Ruud Date
--------------------------------------------------------------------------	-------------------------------------------------------------------------------	----------------------------------------------------	-----------------------------------------------------------------

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Hanford Facility RCRA Permit Modification Notification Form

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Attachment 33, General Information Portion**

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.5.4.3 Analytical Procedures [D-10e(4)(c)]

The laboratory [redacted] approved for the groundwater monitoring program will use standard laboratory procedures as listed in EPA SW-846 or an alternate equivalent. Alternate procedures, when used, will meet the guidelines of EPA SW-846, Chapter 1.0.

Quality control samples, e.g., field duplicates, blanks, and spiked samples, will be collected and analyzed to assess the performance of the sampling program and the analytical laboratories.

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

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Submitted by Co-Operator: <i>R. H. Gurske</i> 1/17/01	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/13/01	Reviewed by Ecology: <i>[Signature]</i> 8/19/01	Reviewed by Ecology: <i>[Signature]</i> 8/19/01
R. H. Gurske Date	J. B. Hebdon Date	Date	L.E. Ruud Date

¹Class 1 modifications requiring prior Agency approval.

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Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.5.4.5.1 Sample Frequency [D-10e(4)(e)(i)]

In compliance with regulations, all wells (compliance and background) will be sampled at least semiannually during detection monitoring [WAC 173-303-645(9)(d) and 40 CFR 264.98(d)] and during the active and postclosure period of each land-based TSD unit. The default sampling requirement of taking a sequence of four samples from each well during each sampling interval will be followed, if it is appropriate for the proposed statistical evaluation method (e.g., analysis of variance procedures). In this case, these four samples will be taken at an interval that ensures, to the greatest extent technically feasible, that an independent sample is obtained. This requirement could be accomplished by reference to the uppermost aquifer's effective porosity, hydraulic conductivity, and hydraulic gradient, and the fate and transport characteristics of the potential contaminants. An alternate sampling procedure approved by Ecology will be used, if the owner/operator finds it to be protective of human health and the environment [EPA [REDACTED], page 2-8, WAC 173-303-656(8)(g)(ii) and 40 CFR 264.97(g)(2)]. Specific sampling requirements [REDACTED] will be presented in unit-specific permit application documentation.

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

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Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/5/01 J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> Date	Reviewed by Ecology: <i>[Signature]</i> 8/5/01 L.E. Ruud Date
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Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.5.4.6 Annual Determination [D-10e(4)(f)]

Groundwater flow rates and flow direction within the uppermost aquifer will be determined annually for those land-based TSD units being monitored. Average horizontal flow rates and directions could be determined in several ways, e.g.: (1) movement of groundwater plumes over time; (2) in situ measurement devices (e.g., downhole flow meter); or (3) calculated from the groundwater gradient and aquifer properties using the Darcian flow theory:

$$v_h = K_h i_h / n_e$$

where

- v_h = the horizontal groundwater velocity
- K_h = the horizontal hydraulic conductivity
- i_h = the horizontal hydraulic gradient
- n_e = the effective porosity.

The value of K_h will be determined from hydraulic property investigations performed on monitoring wells. The average value of i_h at the location of each monitoring well will be calculated from the water table elevations. Effective porosities range between 10 percent and 30 percent (RHO-ST-42 [REDACTED]). These data will enable the groundwater flow velocity to be determined in the vicinity of each monitoring well.

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

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Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/3/01 J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 Date	Reviewed by Ecology: <i>[Signature]</i> 8/9/01 L.E. Ruud Date
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Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.6.7 Sampling, Analysis, and Statistical Procedures [D-10f(8)]

A proposed sampling and analysis plan, including procedures for sample collection, sample preservation and shipment, analytical methods, and chain-of-custody controls, will be prepared if compliance-level monitoring becomes necessary. The basic information for sample collection, sample preservation and shipment, analytical methods, and chain-of-custody procedures will not likely change from the proposed plans submitted under the detection-level monitoring program (Section 5.5). To comply with WAC 173-303-645(10)(f), the compliance-level monitoring wells will be sampled at least semiannually for the specified groundwater parameters and waste constituents. If verified groundwater monitoring results indicate that appropriate groundwater protection standards (e.g., maximum concentration limit or alternate concentration limit; or applicable, relevant, and appropriate requirements) are exceeded at any monitoring well along the line of compliance, written notification will be made to Ecology within 7 days of the finding. An application for a permit modification to establish a corrective action program (Section 5.7) will be submitted within 90 days [WAC 173-303-645(10)(g)(i)(ii)] or time agreed to in writing by Ecology. In the case of a false positive claim, the owner/operator will notify Ecology within 7 days in accordance with WAC 173-303-645(10)(i)(I).

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

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1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske Date	Reviewed by RL Program Office: <i>J. B. Hebdon</i> J. B. Hebdon Date	Reviewed by Ecology: <i>[Signature]</i> Date	Reviewed by Ecology: <i>[Signature]</i> Date
	7/3/01	8/9/01	8/9/01

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Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.
Updated Figures F5-5, F5-6, and F5-7.

Modification Class: ¹²³	Class 1	Class ¹ 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

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Submitted by Co-Operator: <i>R. H. Gurske</i>	Reviewed by RL Program Office: <i>Joel Hebdon</i>	Reviewed by Ecology: <i>L.E. Ruud</i>	Reviewed by Ecology: <i>L.E. Ruud</i>
R. H. Gurske Date	J. B. Hebdon Date	<i>8/9/01</i> Date	L.E. Ruud Date

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Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.0 GROUNDWATER MONITORING FOR LAND-BASED UNITS [D-10]

This chapter describes the groundwater monitoring activities for land-based TSD units (dangerous waste surface impoundment, land treatment, or landfill units) by addressing the provisions identified in Section D-10 of Ecology's permit application guidance (Ecology 1987 and 1996). Furthermore, the chapter discusses groundwater monitoring provisions contained in Condition II.F. of the HF RCRA Permit (DW Portion). The general groundwater monitoring information contained in this chapter (e.g., Section 5.3, "Aquifer Identification") need not be duplicated in the Unit-Specific Portion of the *Hanford Facility Dangerous Waste Permit Application*, but can be cross-referenced as appropriate. Pertinent information also can be cross-referenced in preclosure work plan, closure work plan, closure plan, closure/postclosure plan, or postclosure permit application documentation (refer to Chapter 2.0, Section 2.5).

Currently, Hanford Facility RCRA groundwater monitoring activities are structured to provide groundwater monitoring information for individual land-based TSD units. This approach was outlined in the original Tri-Party Agreement and largely has been retained throughout subsequent amendments of the Tri-Party Agreement and throughout interactions with the regulators. This chapter primarily addresses this TSD unit-specific groundwater monitoring approach. However, a need to more fully integrate Hanford Site groundwater monitoring activities has become increasingly evident. Such integration also would support the *Cost and Management Efficiency Initiative* (Ecology et al. 1994). A collaborative effort to develop a groundwater monitoring strategy based on the data quality objective process (EPA/540-R-93-007 and EPA/600/R-96-055) currently is underway. This process is being used to justify why data are being collected, how the data are expected to be used to make decisions, and how much data are needed to meet criteria specified by the stakeholders. The results of this effort will be incorporated through the provision of a revised *Hanford Site Ground Water Protection Management Plan* (DOE/RL-89-12).

A summary of RCRA groundwater monitoring activities on the Hanford Facility is contained in the *Hanford Site Groundwater Monitoring for Fiscal Year 1997* (PNNL-11793). This report summarizes monitoring information for two land-based 'operating' TSD units, LERF and LLBG (refer to Chapter 4.0, Sections 4.1.2.4 and 4.1.2.8, respectively). A more detailed description of the groundwater programs for these units is contained in the Unit-Specific Portion of this permit application [i.e., DOE/RL-97-03 (LERF) and DOE/RL-88-20 (LLBG)]. The aforementioned *Hanford Site Groundwater Monitoring Report* also summarizes monitoring information for land-based TSD units 'undergoing closure' (refer to Chapter 2.0, Section 2.5). For certain of these TSD units, more detailed information is contained in closure plan/postclosure plan documentation. The content of this chapter focuses on groundwater monitoring for 'operating' TSD units. However, this information also is relevant to TSD units 'undergoing closure'.

Modification Class: ¹²³

Class 1

Class ¹1

Class 2

Class 3

Please check one of the Classes:

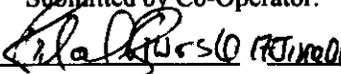
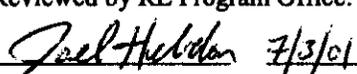
X

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Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
 R. H. Gurske	 J. B. Hebdon		
Date	Date	Date	Date

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Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

Section 5.0 modifications continued:



Unit-specific groundwater monitoring programs are designed to comply with applicable regulations and agreements for TSD units operating under both interim status (WAC 173-303-400 and WAC 173-303-805) and final status (WAC 173-303-645 and WAC 173-303-806). The following is a generalized discussion of the RCRA groundwater monitoring requirements for a TSD unit. This discussion provides background information relevant to subsequent, more specific groundwater monitoring discussions. In these discussions, the term 'RCRA' refers to both federal and state groundwater monitoring regulations as appropriate.

The RCRA groundwater monitoring programs are implemented under two types of groundwater monitoring regulations: interim status and final status. A land-based TSD unit operating under interim status must have implemented a monitoring program capable of determining the impact of the TSD unit on groundwater quality in the uppermost aquifer beneath the TSD unit. The interim status program can take the form of either detection monitoring or assessment monitoring. An interim status corrective action order, however, may be issued (by the regulators) when the facility releases hazardous waste to the environment. 'Detection-level' monitoring also is referred to as 'indicator evaluation' monitoring in the regulations for interim status facilities; 'detection-level' is used throughout this chapter to refer to this type of monitoring for both interim status and final status TSD units. At a minimum, an interim status detection monitoring system must include one upgradient and three downgradient groundwater monitoring wells. A generalized configuration for such a system is shown in Figure 5-1. The LLBG and LERF currently are monitored under interim status regulations. Final status groundwater requirements for the LERF, which has been incorporated into the HF RCRA Permit (DW Portion), will take effect when Ecology approves the final status groundwater monitoring plan. Final status groundwater requirements for the LLBG will take effect when this TSD unit is incorporated into the HF RCRA Permit (DW Portion). A groundwater monitoring plan for LLBG that meets final status requirements may be implemented before this time if approved by Ecology.

Before the installation of a detection monitoring system, a groundwater monitoring plan must be developed and followed. This plan details well locations, procedures, requirements for vadose zone and aquifer characterization, and well installation; sample collection, preservation, and transportation; and sample analysis. Chain-of-custody control must be developed and followed. Additionally, relevant components of the DQO process are to be incorporated in a site-specific groundwater monitoring plan and a quality assurance project plan (QAPjP). Methods to be used to interpret groundwater monitoring data also are specified.

Modification Class: ¹²³	Class 1	Class ¹	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

- A. General Permit Provisions
 - 1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> R. H. Gurske	Reviewed by RL Program Office: <i>J. B. Hebdon</i> J. B. Hebdon	Reviewed by Ecology: Date	Reviewed by Ecology: Date
17 June 01	7/3/01		
Date	Date	Date	Date

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Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.2 INTERIM STATUS PERIOD GROUNDWATER MONITORING DATA [D-10b]

In 1986, interim status groundwater monitoring for four Hanford Facility TSD units was implemented through a *Consent Agreement and Compliance Order* (Ecology DE-86-133). Three of these TSD units are undergoing closure and are currently in interim status or in final status. The fourth TSD unit, the LLBG, is an 'operating' unit. As specified in the Tri-Party Agreement, permit application documentation for the LLBG was submitted in 1989 (DOE/RL-88-20); in accordance with the Class 3 Permit Modification Schedule (refer to Chapter 2.0, Section 2.1.1.3.3), the status of this TSD unit is anticipated to change from interim to final in 1999. Final status is sought for at least one other 'operating' TSD unit requiring a groundwater monitoring system, the LERF (DOE/RL-97-03). The initial permit application documentation for the LERF was submitted in June 1991; in accordance with the Class 3 Permit Modification Schedule (refer to Chapter 2.0, Section 2.1.1.3.3), the status of this TSD unit change from interim to final in 1998. With the exception of the 183-H Solar Evaporation Basins and the 300 Area Process Trenches (refer to Chapter 2.0, Section 2.5.1.1.2), other land-based TSD units 'undergoing closure' (refer to Chapter 1.0, Table 1-1 and Chapter 2.0, Section 2.5) are not scheduled to be entered into the HF RCRA Permit (DW Portion) until 1998- later.

The interim status groundwater monitoring program implemented for a TSD unit is summarized in the following sections. The information presented includes a (1) summary of the existing hydrogeologic data, (2) description of the general well design, (3) discussion of the groundwater monitoring system design, (4) summary of the interim status groundwater sampling and analysis plan for monitoring wells, and (5) preliminary description of the statistical procedures used to assess water quality results. In addition, a summary is presented on the techniques and methods used to characterize the uppermost aquifer beneath the Hanford Site in support of the monitoring well system design.

Modification Class: ¹²³

Please check one of the Classes:

Class 1

Class ¹1

Class 2

Class 3

X

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i> 7/1/01	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/26/01	Reviewed by Ecology:	Reviewed by Ecology:
R. H. Gurske Date	J. B. Hebdon Date	Date	L.E. Ruud Date

¹Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

³ 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 ¹1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.2.3.2.1 Groundwater Elevations

Groundwater elevation data have been obtained since RCRA groundwater monitoring began. Water levels also are available for existing wells prior to the RCRA groundwater monitoring program. Water level data are compiled into the HEIS database. Hanford sitewide groundwater maps are produced at least annually.

Modification Class: ¹²³ Please check one of the Classes:	Class 1	Class ¹ 1	Class 2	Class 3
	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

- A. General Permit Provisions
 - 1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i>	Reviewed by RL Program Office: <i>J. B. Hebdon</i> 7/3/01	Reviewed by Ecology:	Reviewed by Ecology:
R. H. Gurske Date	J. B. Hebdon Date	Date	L.E. Ruud Date

¹Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

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Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.4.2 Nonradioactive Contamination

The most common nonradioactive inorganic contaminants that have been observed in groundwater are nitrate, cyanide, fluoride, and hexavalent chromium. Among the nonradioactive organic contaminants routinely observed in the groundwater samples are carbon tetrachloride, trichloroethylene, cis-1,2-dichloroethene, and chloroform (PNNL-11793 [REDACTED]).

Nitrate, like tritium, can be used to define the extent of contamination because nitrate is present in many waste streams at the Hanford Site and is mobile in the groundwater (PNNL-11793 [REDACTED]). Isopleth maps are prepared to show levels of nitrate concentrations in the groundwater. The configuration of the nitrate plumes can be found in PNNL-1997 [REDACTED], Figure S.2). Additional information on nonradioactive contamination is found in groundwater status reports (e.g., PNNL-11793 [REDACTED]).

It should be noted that the present extent of detectable contamination is primarily the result of past liquid waste discharges to the ground- [REDACTED]

Modification Class: ¹²³

Please check one of the Classes:

Class 1

Class ¹

Class 2

Class 3

X

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i>	Reviewed by RL Program Office: <i>J. B. Hebdon</i>	Reviewed by Ecology:	Reviewed by Ecology:
R. H. Gurske	J. B. Hebdon		L.E. Ruud
Date	Date	Date	Date

¹Class 1 modifications requiring prior Agency approval.

² This is only an advanced notification of an intended Class ¹, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

³ 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 ¹, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:
List of Attachments

Permit Part & Chapter:
Attachment 33, General Information Portion

Description of Modification:

Remove and replace Chapter 5.0 with the attached Chapter 5.0.

5.5.2 Groundwater Monitoring Program [D-10(e)(2)]

This section describes a comprehensive program to be used during the final status detection monitoring program. The final status detection monitoring system is designed to detect the migration of releases of dangerous waste or dangerous waste constituents within the uppermost unconfined aquifer at compliance points immediately downgradient from potential leak sources. The groundwater will be monitored as required during the active life of the regulated unit (including the closure/postclosure care period).

Groundwater monitoring requirements are contained in Condition II.F. of the HF RCRA Permit (DW Portion).

[REDACTED]

[REDACTED]

[REDACTED]

Modification Class: ¹²³ Please check one of the Classes:	Class 1	Class ¹ 1	Class 2	Class 3
	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator: <i>R. H. Gurske</i>	Reviewed by RL Program Office: <i>J. B. Hebdon</i>	Reviewed by Ecology:	Reviewed by Ecology:
R. H. Gurske	J. B. Hebdon		L.E. Ruud
Date	Date	Date	Date

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