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DEPARTMENT OF ECOLOGY
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April 29, 2014

14-NWP-079

Mr. Matthew McCormick, Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: A7-50
Richland, Washington 99352

Mr. John Fulton, President & CEO
CH2M HILL Plateau Remediation Company
PO Box 1600, MSIN: H7-30
Richland, Washington 99352

RECEIVED
MAY 01 2014
ERMC

Re: Department of Ecology's Response to the Transmittal of Proposed Class 2 Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Modifications to Permit Conditions, Permit Attachments 8 and 10, and Groundwater Monitoring at the Hanford Facility Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF/ETF)

References: See page 2

Dear Mr. McCormick and Mr. Fulton:

The Department of Ecology (Ecology) is approving, with changes, a portion of the Class 2 Modification (Reference 1 and Reference 2). We are extending the time period for a final decision on a portion of the modification (Reference 3).

In accordance with Washington Administrative Code (WAC) 173-303-830(4)(b)(vi)(B)(I), the following portions are approved with changes (Ecology's changes are identified in the Enclosures):

- Revisions to Permit Condition II-F, *Ground Water and Vadose Zone Monitoring.*
- Revisions to Permit Attachment 8, *Hanford Well Maintenance and Inspection Plan.*
- Revisions to Operating Unit Group 3 Permit Conditions, LERF/ETF.

Ecology approves the revisions for the Groundwater Addendum to Operating Unit Group 3, LERF/ETF as received in Reference 1.

In accordance with WAC 173-303-830(4)(b)(vi)(G), the United States Department of Energy (USDOE) – Richland Operations Office and CH2M HILL Plateau Remediation Company (Permittees) provided written consent to extend the time period for a final decision on deletion of Permit Attachment 10, *Strategy for Handling and Disposing of Purgewater July 1990* until May 29, 2014 (Reference 3).

USDOE held a public comment period for this permit modification between January 6 and March 7, 2014. Changes were made in response to the public comments received, and based on Ecology's review. These changes were discussed with the Permittees. The Response to Comments document prepared by Ecology is enclosed.

Ecology requires the Permittees to provide Ecology two hard copies of the approved portions of the Hanford Facility RCRA Permit, with changes incorporated, by letter within 30 calendar days. These copies will be incorporated into the Hanford Facility RCRA Permit. We also request an electronic copy be submitted within 30 calendar days to Andrea Prignano, Ecology.

This permit modification approval applies only to the Hanford Facility RCRA Permit Revision 8. It does not apply to the draft Revision 9 Permit. If there are any questions regarding this permit modification, please contact Andrea Prignano, Site-wide Dangerous Waste Permit Coordinator, at Andrea.Prignano@ecy.wa.gov or (509) 372-7911.

Sincerely,

Suzanne Dahl
Tank Waste Treatment Section Manager
Nuclear Waste Program

ap/jc
Enclosures (4)

Reference 1: Letter 14-ESQ-0018, dated December 26, 2013, from M. McCormick, USDOE-RL, to J.A. Hedges, Ecology, "Transmittal of Proposed Class 2 Resource Conservation and Recovery Act (RCRA) Permit Modifications to Permit Conditions, Permit Attachment 8 and 10, and Groundwater Monitoring at the Hanford Facility Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF/ETF)"

Reference 2: Letter 14-NWP-044, dated March 26, 2014, from S. Dahl, Ecology, to M. McCormick, USDOE-RL, and J. Fulton, CHPRC, regarding Letter 14-ESQ-0018 (Reference 1)

Reference 3: Letter 14-ESQ-0072, dated April 16, 2014, from M. McCormick, USDOE-RL, to J.A. Hedges, Ecology, "Letter 14-NWP-044 and Extension of Decision of Class 2 Resource Conservation and Recovery Act Permit Modification to Permit Attachment 10"

cc electronic w/enc:
- Dave Bartus EPA
- Dennis Faulk, EPA
- Mary Beth Burandt, USDOE
- Lori Huffman, USDOE
- Ron Koll, USDOE
- Jennie Seaver, CHPRC
- Ken Niles, ODOE
- Jon Perry, MSA
- Dwayne Crumpler, Ecology
- Andrea Prignano, Ecology
- USDOE-RL Correspondence Control

cc w/enc:
- Steve Hudson, HAB
- Russell Jim, YN
- Administrative Record: 242-A Evaporator, T-2-6
- CHPRC Correspondence Control
- Environmental Portal
- Hanford Operating Record General File

cc w/o enc:
- Gabriel Bohnee, NPT
- Stuart Harris, CTUIR

Permit Condition II-F
Ground Water and Vadose Zone Monitoring

(Changes to retain condition II.F.1, Attachment 10, *Strategy for Handling and Disposing of Purgewater July 1990*, add text to proposed II.F.2.b, correct typo in II.F.2.c)

II.F GROUND WATER AND VADOSE ZONE MONITORING

The Permittees will comply with the ground water monitoring requirements of WAC 173-303-645. This Condition will apply only to those wells the Permittees use for the ground water monitoring programs applicable to the TSD units incorporated into Parts III, V, and/or VI of this Permit. Where releases from TSD units subject to this Permit have been documented or confirmed by investigation, or where vadose zone monitoring is proposed for integration with ground water monitoring, the Permittees will evaluate the applicability of vadose zone monitoring. The Permittees will consult with Ecology regarding the implementation of these requirements. If agreed to by Ecology, integration of ground water and vadose zone monitoring, for reasons other than this Permit, may be accommodated by this Permit. Results from other investigation activities will be used whenever possible to supplement and/or replace sampling required by this Permit.

II.F.1 ~~RESERVED~~ Purgewater Management
Purgewater will be handled in accordance with the requirements set forth in Permit Attachment 10, *Purgewater Management Plan.*

II.F.2 Well Inspection and Maintenance

II.F.2.a The Permittees will inspect the integrity of active resource protection wells as defined by WAC 173-160-030, subject to this Permit, at least once every five (5) years as specified in the *Hanford Well Maintenance Inspection Plan* (Permit Attachment 8). These inspections will be recorded in the Operating Record.

II.F.2.b The Permittees will evaluate resource protection wells subject to this Permit according to the *Hanford Well Maintenance Inspection Plan* (Permit Attachment 8) and the *Policy on Remediation of Existing Wells and Acceptance Criteria for RCRA and CERCLA*, June 1990 (Permit Attachment 7). The Permittees will ~~decommission or rehabilitate. abandon or remediate unusable wells according to the requirements of Chapter 18.104 RCW, Chapter 173-160 WAC, and Chapter 173-162 WAC to ensure that the integrity of wells subject to this Permit is maintained. The time for this rehabilitation remediation will be specified in Parts III, V, and/or VI of this Permit~~ submit a permit modification request to Ecology to decommission or maintain wells as necessary to ensure compliance with WAC 173-303-645(8)(c). This permit modification request will include a schedule of compliance, which may incorporate by reference applicable schedule(s) in HFFACO Milestone M-24. For wells to be decommissioned, this permit modification must also include a request for installation of replacement wells, if necessary, to ensure compliance with WAC 173-303-645 requirements.

II.F.2.c Ecology will receive a notice of intent (NOI) in writing at least seventy-two (72) hours before the Permittees decommission (excluding maintenance activities), any well subject to this Permit.

Permit Condition II-F
Ground Water and Vadose Zone Monitoring

(Changes to retain condition II.F.1, Attachment 10, *Strategy for Handling and Disposing of Purgewater July 1990*, add text to proposed II.F.2.b, correct typo in II.F.2.c)

II.F.2.d For wells subject to this Permit, the Permittees will achieve full compliance with Chapter 173-160 WAC and Chapter 18.104 RCW by replacing non-compliant wells subject to the permit with new wells under the schedule in HFFACO Milestone M-24, as amended, incorporated by reference into this Permit.

II.F.3 Well Construction

All wells constructed pursuant to this Permit will be constructed in compliance with Chapter 173-160 WAC.

Revisions to Permit Attachment 8
Hanford Well Maintenance and Inspection Plan

(Changes to correct references and delete unused reference and bibliography information)

- In the section paragraph of Section 2.0 REQUIREMENTS:

  The provisions of the dangerous waste section of the Resource Conservation and Recovery Act of 1976 Permit for the Treatment, Storage, and Disposal of Dangerous Waste at the Hanford Site Permit are controlled by the "State of Washington Hazardous Waste Management Act of 1976" (RCW 70.105). Part II.F.2.a of ~~Ecology 1994~~ (WA7890008967) states that "…the Permittees shall inspect the integrity of active resource protection wells as defined by WAC 173-160-030 subject to this Permit at least once every five (5) years." Wells subject to the RCRA Permit requirements are defined as wells actively monitoring treatment, storage, and disposal (TSD) unit closures (in Part V of the Permit); TSD operating units (in Part III of the Permit); and TSD units undergoing postclosure/modified closure (Part VI of the Permit).

- In Section 6.0 REFERENCES

  WA7890008967, 2007, *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste*, as amended, Washington State Department of Ecology, Richland, Washington *Resource Conservation and Recovery Act of 1976*, 42 U.S.C. 6901, et seq.

  ~~RCW 18.104, "Well Construction" Revised Code of Washington, as amended.~~

  RCW 70.105, "State of Washington Hazardous Waste Management Act of 1976, "*Revised Code of Washington*, as amended.

  WAC 173-160, "Minimum Standards for Construction and Maintenance of Wells," *Washington Administrative Code*, as amended.

  ~~WAC 173-162, "Regulations and Licensing of Well Contractors and Operators," Washington Administrative Code, as amended.~~

  ~~WACH 173-303-645, "Releases from regulated units," Washington Administrative Code, as amended.~~

- Delete the entire of Section 7.0 BIBLIOGRAPHY

Operating Unit Group 3 Permit Conditions, LERF/ETF

(Changes to correct typo in III.3.R.1, add text to III.3.R.3.c, and add "e.g." to III.3.R.3.c.2.a)

III.3.Q.9 The Permittees will close any LERF basin removed from service in accordance with the requirements of Permit Condition III.3.Q.7 or a basin that cannot be repaired or that the Permittees will not to return to service. [WAC 173-303-650(5)(e)]

II.3.Q.10 The Permittees will comply with the requirements of Addendum C, Section C.5.10 with respect to management of ignitable or reactive wastes in the LERF basins. [WAC 173-303-650(7)]

III.3.Q.11 The Permittees can place incompatible wastes and materials in the same LERF basin only if in compliance with the requirements of WAC 173-303-395(1)(b), (c). [WAC 173-303-650(8)]

III.3.Q.12 The Permittees will use the action leakage rate in Addendum C, Section C.5.8, for operation of LERF basins, and comply with the requirements of WAC 173-303-650(10)(b). [WAC 173-303-650(10)]

III.3.Q.13 The Permittees will comply with the requirements of WAC 173-303-650(11), incorporated by reference.

III.3.Q.14 The Permittees will comply with the requirements of 40 CFR 264, Subpart CC, incorporated by reference by WAC 173-303-692.

III.3.R GROUNDWATER

III.3.R.1 The Permittees will comply with the requirements of Addendum D, Groundwater Monitoring Plan. [WAC 173-303-645}]

III.3.R.2 All wells constructed pursuant to this Permit will be constructed in compliance with Chapter 173-160 WAC incorporated by reference through WAC 173-303-645 (8)(c).

III.3.R.3 Update the Groundwater Monitoring Network

III.3.R.3.a The Permittees will install an additional downgradient monitoring well E-26-15 as identified in Addendum D, Groundwater Monitoring Plan by December, 2016.

III.3.R.3.b Within 60-days of the well installation, the Permittees will submit a Class 2 Permit modification [WAC 173-303-830 Appendix I, C.1.a] to update Addendum D and include the additional monitoring well into the groundwater monitoring network.

III.3.R.3.c Concurrently with the permit modification request, the Permittees will submit a revised "Liquid Effluent Retention Facility Characterization Report" for the additional monitoring well that includes:

1) Well construction in accordance with WAC 173-303-645(8)(c).
2) Well screen placement in the upper aquifer in accordance with WAC 173-303-645((8)(a)
3) Hydrogeologic conditions, stratigraphy and hydraulic conductivity, derived from geologist observations of borehole archive samples, down hole gamma logging, and aquifer slug tests in accordance with WAC 173-303-645(8)(a)(i)(A)(I)

Operating Unit Group 3 Permit Conditions, LERF/ETF

(Changes to correct typo in III.3.R.1, add text to III.3.R.3.c, and add "e.g." to III.3.R.3.c.2.a)

4) Drilling and sampling details in accordance with WAC 173-303-645(8)(d)
5) Borehole corrections (e.g., precision surveys, gyroscopic corrections, and barometric response corrections) to ensure adequate hydraulic understanding considering the very small gradient in accordance with WAC 173-303-645(8)(f)
6) Geochemical comparison of the water quality with other existing wells to ensure anticipated representative conditions in accordance with WAC 173-303-645(8)(a)(ii)
7) Document surface location as required by WAC 173-303-645(6).

III.3.R.3.c.1 Groundwater sample results from the new well (E-26-15) and the existing wells for all constituents in the Addendum D, Groundwater Monitoring Plan for the Liquid Effluent Retention Facility,

III.3.R.3.c.2 Results of evaluating final well development data and drilling logs,

III.3.R.3.c.2.a A well use designation (e.g., upgradient or downgradient).

DEPARTMENT OF
ECOLOGY
State of Washington

Response to Comments

Proposed Class 2 Permit Updates to the Groundwater Monitoring and Well Management Sections of the Hanford Facility Dangerous Waste Permit

January 6, 2014 – March 7, 2014

Summary of a public comment period and responses to comments

April 2014
Publication no. 14-05-013

PUBLICATION AND CONTACT INFORMATION

This publication is available on the Department of Ecology's website at
https://fortress.wa.gov/ecy/publications/SummaryPages/14050013.html

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Response to Public Comments

Proposed Class 2 Permit Updates to the Groundwater Monitoring and Well Management Sections of the Hanford Facility Dangerous Waste Permit

January 6, 2014 – March 7, 2014

Department of Ecology
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, Washington 99354

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INTRODUCTION

The Washington State Department of Ecology's Nuclear Waste Program (NWP) manages dangerous waste within the state by writing permits to regulate its treatment, storage, and disposal.

When a new permit or a significant modification to an existing permit is proposed, a public comment period must be held to allow the public to review the change and provide formal feedback. (See Washington Administrative Code [WAC] 173-303-830 for types of permit changes.)

The Response to Comments is the last step before issuing the final permit, and its purpose is to:

- Specify which provisions, if any, of a permit will become effective upon issuance of the final permit, providing reasons for those changes.
- Describe and document public involvement actions.
- List and respond to all significant comments received during the public comment period and any related public hearings.

This Response to Comments is prepared for:

Comment period:	Proposed Class 2 Permit Updates to the Groundwater Monitoring and Well Management sections of the Hanford Facility Dangerous Waste Permit, January 6, 2014 – March 7, 2014
Permit:	*Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit for the Treatment, Storage, and Disposal of Dangerous Waste*, (WA 7980008967)
Original issuance date:	January 28, 1998
Draft effective date:	April 29, 2014

To see more information related to the Hanford Site and nuclear waste in Washington, please visit our website: www.ecy.wa.gov/programs/nwp.

REASONS FOR ISSUING THE PERMIT

The type of permit change in this request is termed a "Class 2 modification." These modifications are more significant than "Class 1" modifications, and less significant than "Class 3" modifications. A table in WAC 173-303-830 describes changes and what class they are.

This update to Hanford's dangerous waste permit addresses groundwater monitoring and well management sections of the permit.

Key changes in this modification are to:

- Update general permit conditions that address groundwater monitoring (Permit Conditions II.F).
- Revise Permit Attachment 8 (Well Maintenance and Inspection Plan).

- Update groundwater monitoring at the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF-ETF).

The United States Department of Energy (USDOE) also proposed deleting Permit Attachment 10, the *Purgewater Management Plan*, as part of this permit modification. The decision on that action will be made separately, and will not be included in this modification.

PUBLIC INVOLVEMENT ACTIONS

Ecology's NWP encouraged public comment on this Class 2 permit during a 60-day public comment period held January 6 through March 7, 2014.

Under WAC 173-303-830, the Permittee must hold a comment period and public meeting for Class 2 permit changes. USDOE is the Permittee for the Hanford Facility Dangerous Waste Permit.

To meet the Permittee requirements, USDOE:

- Mailed a notice announcing the comment period to the 2,015 interested members of the public on the postal list.
- Emailed a notice announcing the start of the comment period to the Hanford-Info email list, which then had 1251 recipients.
- Placed an advertisement in the *Tri-City Herald* on January 6, 2014.
- Featured the comment period on its website.
- Held a public meeting on February 11, 2014. Members of the public attended, but did not submit any comments.

The Nuclear Waste Program also provided a clean version and a redline-strikeout version of the proposed permit modification on our comment period website.

The Hanford information repositories located in Richland, Spokane, and Seattle, Washington, and Portland, Oregon, received the following documents for public review:

- Public notice
- Transmittal letter

The following public notices for this comment period are in Appendix A of this document:

1. Public notice (focus sheet)
2. Advertisement in the *Tri-City Herald*
3. Notices sent to the Hanford-Info email list

NWP's letter to USDOE documenting the final permit modification decision is in Appendix C of this document.

LIST OF COMMENTERS

The table below lists the names of organizations or individuals who submitted a comment on the permit modification and where you can find Ecology's response to the comment(s).

Commenter	Organization	Comment Number	Page Number
A Stakeholder	Citizen	1	3
Russell Jim	Yakama Nation	2-25	3-11

RESPONSE TO COMMENTS

Ecology accepted comments from January 6 until March 7, 2014. We received two sets of comments. This section provides summary of comments that we received during the public comment period and our responses, as required by RCW 34.05.325(6)(a)(iii). Comments are grouped by individual and each comment is addressed separately. NWP's responses directly follow each comment in italic font. Verbatim copies of all written comments are attached in Appendix B.

Comment #1 from A. Stakeholder
I think Ecology does a really good job managing the Hanford Facility Dangerous Waste Permit. I like that Ecology is doing more permit modifications, more public comment periods and more public meetings. I think Ecology makes groundwater protection a priority. If Ecology agrees with the proposed Class 2 modifications, then I agree too. Ecology, keep up the great work!

Ecology Response: *Thank you.*

Comment #2 from the Yakama Nation
YN ERWM finds some edits acceptable; however, we are concerned over the appropriateness of any modifications to the II.F. Condition outside of the permit renewal process. The proposed modification will affect all RCRA units, not solely ETF/LERF. As there are multiple underlying issues which will not be resolved, edits to this condition are unwarranted at this time. YN requests Ecology deny proposed modifications to II.F

Ecology Response: *Changes to Condition II.F are needed because a majority of the II.F permit conditions address well decommissioning at Hanford. The well decommissioning process is now complete, and the wells are compliant with permit conditions and WAC 173-160 construction standards.*

The updated II.F conditions address regulatory compliant monitoring, maintenance, and inspection of groundwater wells that meet both WAC 173-160 and WAC 173-303-645, which includes WAC 173-303-645(8)(c).

Comment #3 from the Yakama Nation
As stated, the general facility conditions (e.g., II.F), where appropriate, address dangerous waste management activities which may not be directly associated with distinct TSD units, or which

may be associated with many TSD units (including corrective actions at solid waste management units and areas of concern). Deletion of Permit Condition II.F.l undermines the authority of Ecology to enforce groundwater protection and monitoring in accordance with WAC 173-303-610 and WAC 173-303-645 requirements. Furthermore, reference to proposed changes within a unit-specific chapter does not suffice, meet compliance requirements, or support elimination of WAC 173-303 groundwater requirements for the RCRA permit.

Ecology Response: *Permit condition II.F states, "The permittee will comply with the ground water monitoring requirements of WAC 173-303-645." Deletion of Permit Condition II.F.1 does not undermine any authority.*

Comment #4 from the Yakama Nation
YN ERWM program opposes deletion of Permit Condition II.F.1 and its replacement to be 'marked as reserved.' YN requests the condition be retained with update reference to purgewater management as in accordance with the Hanford Site Strategy for Management of Investigation Derives Waste (DOE/RL-2011-41, Revision 0).

Ecology Response: *Ecology and USDOE have agreed to extend the time for a final decision on deleting Permit Attachment 10, Purgewater Management Plan. This allows for further evaluation on the use of the Hanford Site Strategy for Management of Investigation Derives Waste in the permit.*

Comment #5 from the Yakama Nation
Bullet 2 (II.F.2):

Hanford Facility wells will continue to require remediation/abandonment needs. This text of II. F.2 should be retained.

Ecology Response: *The terms remediation/abandonment do not apply. Remediation is not defined in WAC 173-160 to wells, and abandonment means a well that is unmaintained. The reason for the II.F change is that the program that decommissioned these "abandoned wells" is complete.*

Now, the RCRA groundwater monitoring program requires continued inspection and maintenance of compliant RCRA wells with WAC 173-160. The correct term is maintenance/decommission instead of remediation/abandonment. These are the terms that will be applied to the permit conditions.

Comment #6 from the Yakama Nation
Deletion of II.F.2.a is supported.

Ecology Response: *Thank you.*

Comment #7 from the Yakama Nation
Modifications to II.F.2.b are supported in part. YN ERMW program supports the additional clarification text to require well inspections and maintenances. WAC 173-160- 381states Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public

health hazard shall be decommissioned. It is clear that a well must first be deemed abandoned, etc. YN requests the term abandoned be retained. Additionally, YN request Ecology clarify within Permit Condition II.F.2.b that DOE will be required to demonstrate whether a well has potential use as a RCRA monitoring well prior to abandonment/decommissioning. YN requests that Condition II.F.2.b be applied to Part IV units of the RCRA Permit for consistency across the Hanford site groundwater monitoring programs and in compliance with WAC 173-303-645/646 requirements.

Ecology Response: *An abandoned well means "a well that is unmaintained or is in such disrepair that it is unusable or is a risk to public health and welfare." We no longer have any wells that meet this definition as a result of completion of the program that decommissioned these wells. "Abandoned" will not be retained. Abandonment is not a process of decommissioning. Decommission is the appropriate word according to WAC 173-160.*

Based on WAC 173-303-645(8)(c), WAC 173-160 is incorporated. Based on Permit Condition II.F, the permittee is required to comply with the groundwater monitoring requirements of WAC 173-303-645, so this permit condition already incorporates the comment.

No permit changes occurred for II.F; therefore, compliance with WAC 173-303-645 was required before the permit modification and is still required.

Comment #8 from the Yakama Nation
YN does not support Modifications to II.F.2.c as it undermines Ecology's authority to require a determination of the need for abandonment and lessens Ecology's knowledge regarding the well activities/issues.

Ecology Response: *As previously stated, abandoned wells have all been decommissioned at the Hanford Site. Therefore, all wells monitoring dangerous waste management units that require groundwater monitoring under WAC 173-303-645 are RCRA-compliant groundwater wells or have approved variance by Ecology.*

This permit condition does not undermine Ecology's authority and continues to support the effort of having compliant wells that meet WAC 173-160. Ecology is kept informed of well activities/issues through its RCRA quarterly reporting requirements and the HFFACO Milestone M-24-00.

Comment #9 from the Yakama Nation
YN requests the definition of rehabilitate unusable wells. The term rehabilitate/rehabilitation is not defined in WAC 173-160 and as such should not be used to define actions for Hanford site wells.

Ecology Response: *We agree. The term rehabilitate is incorrect. Wells are "maintained." Maintenance is done on wells that are not functioning properly.*

Comment #10 from the Yakama Nation
YN program does not fully support II.F.2.d modifications. Inclusions of citations for WAC 173-160 and Chapter 18.104 RCW are supported. Deletion of completion of the process by 2012 is acceptable as this year has passed. The rest of the proposed modification is not acceptable. This modification lessens Ecology's authority to enforce WAC 173-303-645/646 requirements through

Permit conditions/Closure Plans/Contingency Plans. Replacing non-compliant wells requires changes to the groundwater monitoring plan would, in itself, require a permit modification. Necessarily, this would require analysis of the groundwater monitoring network and the identification of any needs changes to the number of wells, groundwater flow, etc. These wells would then need to be identified in the permit. To simply say the schedule is under the milestone does not suffice compliance requirements under RCRA. Furthermore, is the proposed modification is structured such that the schedule is outside of the RCRA Permit and WAC 173-303-830 process (and outside of the public involvement process).

Ecology Response: *This condition incorporates Hanford Federal Facility Agreement and Consent Order Milestone M-24 compliance schedule for new well installation in the various TSD units. This milestone will ensure YN concerns that wells are installed that will meet changes in the number of wells, groundwater flow, and direction will be met in a timely and compliant manner.*

Ecology agrees that a permit modification will be needed for wells in the current permit if well locations or similar changes occur in accordance with WAC 173-303-830.

Comment #11 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0: YN ERWM notes this plan lacks details and requests changes listed in comments below. The document does not have line numbers.

Ecology Response: *No line numbers were provided because technically the document consists of short sections and is only 2 pages long. The permit has no requirements to have line numbers. Please see comment responses for the other comments to see how changes will be incorporated.*

Comment #12 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID- 01265, Revision 0:

Edited to add and reflect 6.0: Management Control
Recommends adding a new section "6.0 MANAGEMENT CONTROL" and renumbering the original 6.0 and subsequent sections.

Ecology Response: *This section was outdated in its content. In addition, the permit conditions in II.F. provide the QA/QC that is supported with Attachments 7 and 8 of the HFFACO along with WAC 173-303-645 and WAC 173-160 requirements.*

Comment #13 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 1.0, Introduction:

This document's title indicates it covers only well maintenance and an inspection yet decommissioning (i.e. abandonment) is discussed. YN suggest you retain 'abandonment' in title as well as decommissioning.

Ecology Response: *No mention of the words "abandonment" or "decommissioning" is in the cited document. The document title will not be changed because this is the attachment in the*

permit that addresses well maintenance and well inspections for all RCRA groundwater monitoring wells. The term "abandon" is not a process for decommissioning a well.

Comment #14 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 1.0, Introduction:

YN ERWM requests edits to text to include the requirements of 173-160-101/400/406/410/420/430/440/442/450/451/456/457/458/460.

Ecology Response: *Section 2.0 "Requirements" does state that WAC 173-160 is a requirement.*

Comment #15 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 2.0, Requirements:

Part IV wells should be subject to WAC 173-160 regulations and identified in II.F conditions of the Permit. YN requests text edits to include also Part IV wells as subject to these requirements.

Ecology Response: *All wells completed as resource protection wells are required to meet WAC 173-160, irrespective of the program that uses them. As stated in WAC 173-160-010(1), "These regulations (WAC 173-160) are adopted under chapter 18.104 RCW, to establish minimum standards for the construction and decommissioning of all wells in the state of Washington."*

Comment #16 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 2.0, Requirements:

Delete term "postclosure/modified closure". Modified closure is not authorized under RCRA. Replace with "postclosure".

Ecology Response: *The term "postclosure/modified closure" will not be deleted. Modified closure is still defined and used in the Rev. 8C permit. This change will be evaluated in the draft Rev. 9 Permit, if appropriate.*

Comment #17 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 2.0, Requirements:

YN requests the following deleted text from the current Attachment 8 be included as it supports a comprehensive and consistent Hanford site groundwater monitoring program: "Additionally, the "Second Responsiveness Summary" section (Ecology 1994), which discusses interpretation of the RCRA Permit (found in Part ILF.2.a, page 99), states that Ecology requires maintenance inspections because of the likelihood that monitoring wells can act as preferential pathways for the migration of contaminants. Although the inspections are only required for the wells subject to the Permit, Ecology further states that" ... the Department will pursue enforcement action outside of this Permit to assess and remediate and/or abandon, where applicable, those wells not being addressed by this Permit. " Groundwater monitoring wells included in the maintenance/inspection plan are determined by the RCRA permit and various programs such as

the Hanford Site Groundwater Vadose Zone Integration Project. Maintenance of wells supporting other programs or projects across the Hanford Site may be included in the maintenance schedule at the request of the program manager."

Ecology Response: *This deleted text will not be included in the current Attachment 8. The Hanford Site Groundwater/Vadose Zone Integration Project no longer exists. This document only applies to the TSD units on the Hanford Site.*

Comment #18 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 3.0, Schedule:

YN requests text edits to state the schedule shall be developed on a **yearly** schedule approved by Ecology and any changes to the inspection schedule shall require a Permit modification in accordance with the WAC 173-303-830/840 process.

YN suggests the schedule be performed on a 3-5 year schedule or as needed to repair problems identified during sampling. Additionally, YN suggests if a ground water monitoring well becomes unsuitable for use, the status be documented and reported to Ecology within fifteen (15) days of identifying the well as unsuitable for use. In addition, the "unsuitable-for-use" well should be evaluated within thirty (30) days of the designation to determine if a new well should be constructed. A copy of the evaluation should be provided to Ecology. If applicable; the "unsuitable-for-use" well shall be placed on a well decommissioning list for Ecology's approval. YN suggests this text be incorporated into this document and reflected in the II.F conditions.

Ecology Response: *All active groundwater wells are maintained and inspected upon each sampling event, including the barrier posts and surface seal. When a well is found not to be functioning properly, maintenance of this well is conducted in a timely manner. This process is done for both wells used in the RCRA and CERCLA program.*

Permit Condition II.F.2.a establishes a 5-year inspection schedule of the wells integrity. Ecology is kept informed of well activities/issues through its RCRA quarterly reporting requirements. Ecology will be informed through the maintenance and inspection process of any wells that need decommissioning and replacement in the RCRA quarterly reporting.

Comment #19 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 3.0, Schedule:

YN ERWM requests edits to text to include the specific requirements of 173-160-460 for the decommissioning process for resource protection wells. YN requests that the Permittees must obtain Ecology's written approval to remediate or decommission the well and this text stated within this document.

Ecology Response: *There is no requirement for the permittee to obtain Ecology written approval to remediate (maintain) or decommission a well provided that decommissioning is compliant with WAC 173-160. If the proposed decommissioning is not compliant with the regulation, then a variance (WAC 173-160-106 or 173-160-406) is required. A Notice of Intent (NOI) is filed with Ecology prior to constructing or decommissioning a well.*

Comment #20 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 4.0 Well Inspections:

YN requests these reports also be placed in the Administrative File for the specific Unit.

Ecology Response: *The reports are placed in the operating record that is part of the permit. Please see permit condition II.F.2.a, which states this fact. The operating record is part of the administrative record.*

Comment #21 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 4.0 Well Inspections:

As Inspections are discussed and remain the basis of maintenance, and there does not appear to be an Inspection Plan for Groundwater Resource Wells in place for any Permitted Units, YN requests details for inspections are included similar to those for performing maintenance/restoration. YN requests the following be included within this document as inspection requirements:

- Security control devices: well caps, and locks
- Surface inspections (as necessary to identify and correct the effects of settling, subsidence, erosion or other events.
- Location, integrity, and inspections of benchmarks, if appropriate
- Location, integrity, and inspection of groundwater wells (to include inspection of the cap and casing of each well to ensure that it is locked, pulling and inspecting the pump, brushing the inner walls of the casing and screen, and conducting a down-hole television survey
- Vegetative cover condition
- Procedures regarding emergency and monitoring equipment (to include procedures for using, inspecting, repairing, and replacing emergency and monitoring equipment.

Ecology Response: *Section 4 states, "Inspections include visual examination of the well site, surface components of the well structure (e.g., barrier posts, concrete surface pad and seal, protective well casing, well cap), identification of equipment installed in the well, and where possible measurements of the depths to water and/or bottom of the well. Inspections are documented in field reports."*

This is the inspection plan that covers items listed above that YN has expressed. In addition WAC 173-160 requires a protective metal casing with a watertight cap and lock.

Comment #22 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 5.0 Well Maintenance:

Change 5 year inspections to 3 – 5 year inspections.

Ecology Response: *Please see Permit Condition II.F.2.a that states "at least once every five (5) years..."*

Comment #23 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 5.0 Well Maintenance:

YN requests clarification: What actions are to be done to ensure all wells are constructed to meet RCRA requirements?

Ecology Response: *WAC 173-303-645(8)(c) requires that wells meet the construction standards of WAC 173-160. Construction of wells is completely different from the RCRA required placement, number, location, etc. of wells. WAC 173-160 does not specify any RCRA requirements; it is strictly for construction standards.*

Comment #24 from the Yakama Nation
Re Hanford Well Maintenance and Inspection Plan, HNF -56398, Revision 0, Previously BID-_ 01265, Revision 0, 5.0 Well Maintenance:

YN request text be included which deals with actions taken to deepen "dry" wells. YN suggests the Permittee be required to submit a well deepening plan for Ecology approval that satisfies the groundwater protection standards of Chapter 173-160 WAC, and that the well deepening plan shall not be implemented until after the Permittee receives Ecology's approval of the plan.

Ecology Response: *No change to text. Most wells cannot be deepened and still maintain compliance with WAC 173-160. Most of the wells installed on site cannot be effectively deepened and are replaced. Factors affecting this deepening of wells include variation in aquifers and sealing between aquifers, well diameters and depths, and how the screens were installed and if the screens are removable. Deepening most wells may damage the existing seal between the well and the formation creating a noncompliant well which would have to be decommissioned.*

Any well replacement requires a permit modification request and approval per WAC 173-303-830.

Comment #25 from the Yakama Nation
Add new section 6.0 Management Control:
YN requested deleted text from current Attachment 8 be included to ensure QA/QC plans, etc are in place.

Well maintenance activities will be performed by subcontract using approved subcontractor procedures, quality assurance and quality control plans, health and safety plan, and other appropriate and/or required documentation. The following will control environmental compliance, quality assurance, and reporting:

- BHI-EE-02, Environmental Requirements, establishes the overall environmental compliance requirements for BHI. YN recognizes that this citation is no longer the appropriate document and requests the appropriate document be cited.
- Program implementation and procedural compliance will be monitored periodically through surveillance and self-assessments.
- Well maintenance activities will be documented and transmitted for entry into the Hanford Well Information System Database. Inspections are to be recorded in the RCRA operating

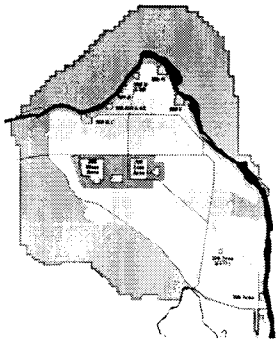
records, where necessary. All documentation shall be submitted to Document and Information Services.

Ecology Response: *The permit conditions in II.F. provide the QA/QC with Attachments 7 and 8 and WAC 173-303-645 and WAC 173-160 requirements.*

APPENDIX A: COPIES OF ALL PUBLIC NOTICES

Public notices for this comment period:

1. Public notice ("Fact Sheet")
2. Advertisement in the *Tri-City Herald*
3. Notices sent to the Hanford-Info email list



Fact Sheet

Public comment period on updates to permit for groundwater monitoring and well management at central Hanford facilities

The U.S. Department of Energy Richland Operations Office (DOE-RL) is holding a 60-day comment period on proposed Class 2 modifications to the Hanford Facility Dangerous Waste Permit. The proposed changes are to general permit conditions for groundwater monitoring, revisions to permit plans, and revisions to the Groundwater Monitoring Plan at the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF/ETF).

January 2014 U.S. Department of Energy

Background

Proposed Class 2 modifications include:

- Changes to the general permit conditions addressing groundwater monitoring (Permit Conditions II.F)
- Deletion of Permit Attachment 10 (*Purgewater Management Plan*)
- Revisions to Permit Attachment 8 (*Well Maintenance and Inspection Plan*)
- Updates to groundwater monitoring at the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF/ETF)

The proposed modifications include updating the unit-specific conditions and an addendum of the LERF/ETF permit.

A complete revision to the LERF/ETF groundwater monitoring plan is proposed, which would include the identification of a new groundwater monitoring well.

Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

Class 2 Permit Modifications: *Updates to the Hanford Facility Dangerous Waste Permit, such as response to new regulations, technological advancements, and variations in waste types or quantities. All Class 2 modifications require approval from the Washington Department of Ecology.*

DOE-RL wants your feedback on these proposed modifications. The public comment period will run from **January 6 through March 7, 2014.** A public meeting will be held February 11, 2014, at the Richland Public Library from 5:30-6:30 p.m.

General Permit Conditions (II.F)

Changes are proposed to the general permit conditions to address groundwater monitoring. The changes are proposed to update groundwater monitoring practices on the Hanford Site. The majority of the current II.F permit conditions address well decommissioning at Hanford. The well decommissioning process is now complete, and the wells are compliant with permit conditions. The permittees, DOE-RL and CH2M HILL Plateau Remediation Company (CH2M HILL), have worked with the Washington Department of Ecology (Ecology) to develop conditions that address the inspection, maintenance, and remediation of the Resource Conservation and Recovery Act (RCRA) compliant monitoring wells that exist on site, as well as addressing new wells that will be installed as required by unit-specific permits.

Purgewater Management Plan

DOE-RL and the CH2M HILL are requesting a Class 2 modification to delete the *Purgewater Management Plan*. The plan has been superseded by the *Hanford Site Strategy for Management of Investigation Derived Waste* (DOE/RL-2011-41, Revision 0), signed by the U.S. Environmental Protection Agency and Ecology in April 2011. Purgewater at Hanford is now being managed under that plan; therefore, this attachment is no longer needed to manage any waste.

Hanford Well Inspection Maintenance Plan

DOE-RL and CH2M HILL are proposing a complete modification of Permit Attachment 8 of the *Hanford Well Maintenance and Inspection Plan*. These changes focus the Maintenance and Inspection Plan on current Hanford Site well maintenance practices, propose an updated schedule for well inspections, and outline well inspection criteria. DOE-RL and CH2M HILL are proposing an entire replacement of the document, not specific section changes.

LERF/ETF Groundwater Monitoring Plan

DOE-RL and CH2M HILL are proposing groundwater monitoring changes to LERF/ETF, a waste water storage and treatment system in the 200 East Area (in the center of the Hanford Site). The system receives process waste water from the 242-A Evaporator, contaminated Hanford Site groundwater, and waste water from other Hanford remediation and waste management activities. The LERF consists of lined surface basins. Water from LERF is pumped to ETF for treatment to remove contaminants.

DOE-RL and CH2M HILL are requesting a Class 2 modification to replace the current LERF/ETF Groundwater Monitoring Plan with an updated version. The new plan updates the monitoring network to align with current groundwater flow direction there, changes the monitoring indicating parameters, and changes sampling frequency. The plan also identifies the need for a new monitoring well downgradient of one of the LERF basins.

In addition to the groundwater monitoring plan updates at LERF/ETF, DOE-RL and CH2M HILL have worked with Ecology to propose groundwater monitoring conditions that are consistent with recently proposed conditions by Ecology during the comment period for Rev. 9 of the RCRA permit. These conditions require an additional monitoring well to be installed by 2015 and a future permit revision once the new monitoring well is installed.

The DOE-RL contact for this permit change is Kim Ballinger, (509) 376-6332. The Ecology contact is Andrea L. Prignano, (509) 372-7950.

The permittees' compliance history during the life of the permit being modified is available from the Ecology contact.

Copies of the proposed permit modification and supporting documentation are available at the Administrative Record, 2440 Stevens Drive, Richland.

How you can become involved

A 60-day public comment period on *proposed Class 2 modifications to Part III of Hanford's Dangerous Waste Permit will run from* ***January 6 through March 7, 2014.*** A public meeting will be held February 11, 2014, at the Richland Public Library from 5:30-6:30 p.m. **Please submit comments by March 7, 2014, to:**

Andrea L. Prignano
Washington Department of Ecology
3100 Port of Benton Boulevard
Richland, WA 99354
Email: Hanford@ecy.wa.gov

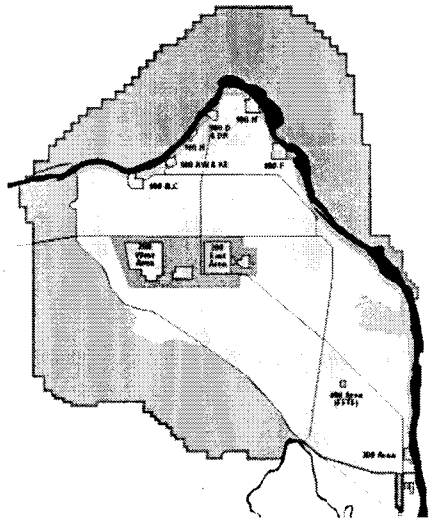
The documents are available for review at the Public Information Repositories listed below.

Portland State University Government Information Branford Price Millar Library 1875 SW Park Avenue Portland, OR 97207-1151 Attn: Claudia Weston (503) 725-4542 Map:http://www.pdx.edu/map.html	University of Washington Suzzallo Library Government Publications Dept. Box 352900 Seattle, WA 98195-2900 Attn: Hilary Reinert (206) 543-5597 Map: http://tinyurl.com/m8ebj	US. Department of Energy Public Reading Room Washington State University, Tri Cities Consolidated Information Ctr., Rm. 101-L 2770 Crimson Way Richland, WA 99352 Attn: Janice Parthree (509) 372-7443 Map:http://www.tricity.wsu.edu/campusmaps/campusmap.pdf	Gonzaga University Foley Center Library East 502 Boone Avenue Spokane, WA 99258 Attn: John Spencer (509) 313-6110 Map:http://tinyurl.com/2c6bpm	Ecology Nuclear Waste Program Resource Center 3100 Port of Benton Blvd. Richland, WA 93354 Attn: Valarie Peery 509-372-7950 Online: http://www.ecy.wa.gov/programs/nwp/commentperiods.htm

Administrative Record and Public Information Repository:
Address: 2440 Stevens Center Place, Room 1101, Richland, WA
Phone: (509) 376-2530 **Web site address**: http://pdw.hanford.gov/arpir/

Fact Sheet

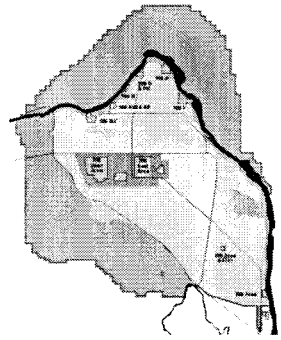
Hanford Public Involvement Opportunity



We want to hear from you on the proposed permit modifications for the Hanford Site!

Class 2 Permit Modification Fact Sheet
U.S. Department of Energy
Richland Operations Office
P.O. Box 550, A7-75
Richland, WA 99352

Public comment period on updates to permit for groundwater monitoring and well management at central Hanford facilities



The U.S. Department of Energy Richland Operations Office (DOE-RL) is holding a 60-day comment period on proposed Class 2 modifications to the Hanford Facility Dangerous Waste Permit. The proposed changes are to general permit conditions for groundwater monitoring, revisions to permit plans, and revisions to the Groundwater Monitoring Plan at the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF/ETF)

The public comment period will run from January 6, 2014 through March 7, 2014.

DOE-RL and the Washington Department of Ecology want your input to these proposed modifications! Submit comments by March 7, 2014, in writing, by mail, or electronically to:

Andrea L. Prignano
Washington State Department of Ecology
3100 Port of Benton Blvd
Richland, WA 99354
Email: Hanford@ecy.wa.gov

The DOE-RL contact person for this permit change is Kim Ballinger, 509-376-6332. The Washington State Department of Ecology contact person is Andrea Prignano, (509) 372-7950.

Copies of the proposed permit modification and supporting documentation are available at the Administrative Record, 2440 Stevens Drive, Richland, WA.

The permittees' compliance history during the life of the permit being modified is available from the Washington State Department of Ecology contact person.

You are invited to attend a meeting to discuss the proposed permit modification and provide comments. The meeting is scheduled for:

When: **February 11, 2014, 5:30-6:30pm**
Where: **Richland Public Library**
955 Northgate Dr.
Richland, WA 99352

Please e-mail us at CLASSPRMTM@rl.gov if you require special accommodations to participate in the meetings.

Tri-City Herald AD: 3 Column (5.3w x 8h)

From: ^TPA [mailto:TPA@RL.GOV]
Sent: Monday, December 09, 2013 1:20 PM
To: HANFORD-INFO@LISTSERV.WA.GOV
Subject: A message from the U.S. Department of Energy - Upcoming Public Comment Opportunity

Upcoming Public Comment Period on proposed Permit Modifications for Hanford Facility Dangerous Waste Permit Conditions, Permit Attachments 8 and 10, and Groundwater Monitoring at the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

The U.S. Department of Energy plans to hold a 60-day public comment period on proposed modifications to the Hanford Facility Dangerous Waste Permit. These Class 2 modifications involve updates to the groundwater monitoring conditions applicable to the Hanford Site (Conditions II.F), proposed deletion of the *Purgewater Management Plan* (Permit Attachment 10), updates to the *Well Maintenance and Inspection Plan* (Permit Attachment 8), and groundwater monitoring plan updates for an operating Treatment, Storage, and Disposal unit (TSD unit) – the Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (ETF). LERF/ETF is a waste water storage and treatment system located in the 200 East Area (in the center of the Hanford site).

Class 2 modifications apply to periodic updates to the permit, such as response to new regulations, technological advancements, and variations in waste types/quantities. All Class 2 Hanford permit changes require Ecology approval.

The comment period for these modifications is expected to begin in January.

From:	^TPA
To:	HANFORD-INFO@LISTSERV.WA.GOV
Subject:	Public Comment Opportunity: Department of Energy Proposing Class 2 Changes to the Hanford Facility Dangerous Waste Permit
Date:	Monday, January 06, 2014 1:42:55 PM

This is a message from the U.S. Department of Energy – Richland Operations Office

The U.S. Department of Energy Richland Operations Office (DOE-RL) is holding a 60-day comment period from **January 6 through March 7, 2014** on proposed Class 2 modifications to the Hanford Facility Dangerous Waste Permit. The proposed changes are to general permit conditions for groundwater monitoring, revisions to permit plans, and revisions to the Groundwater Monitoring Plan at the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF/ETF).

Proposed Class 2 modifications include:

- Changes to the general permit conditions addressing groundwater monitoring (Permit Conditions II.F)
- Deletion of Permit Attachment 10 (*Purgewater Management Plan)*
- Revisions to Permit Attachment 8 (*Well Maintenance and Inspection Plan*)
- Updates to groundwater monitoring at the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF/ETF)

The proposed modifications include updating the unit-specific conditions and an addendum of the LERF/ETF permit.

A complete revision to the LERF/ETF groundwater monitoring plan is proposed, which would include the identification of a new groundwater monitoring well.

The DOE-RL contact for this permit change is Kim Ballinger, (509) 376-6332. The Washington State Department of Ecology contact is Andrea L. Prignano, (509) 372-7950.

The permittees' compliance history during the life of the permit being modified is available from the Ecology contact.

The Administrative Record for the Class II modification can be found at the following link: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0086878

How can the public provide input?

A public meeting will be held **February 11, 2014 from 5:30-6:30 pm**, at the Richland Public Library, 955 Northgate Dr. Richland, WA 99352.

Comments should be submitted by March 7, 2014, to:

Andrea L. Prignano
Washington Department of Ecology
3100 Port of Benton Boulevard
Richland, WA 99354
Email: Hanford@ecy.wa.gov

APPENDIX B: COPIES OF ALL WRITTEN COMMENTS

RECEIVED

JAN 10 2014

DEPARTMENT OF ECOLOGY
NWP - RICHLAND

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Andrea L. Prigano
Dept. of Ecology
3100 Port of Benton Blvd
Richland, WA 99354

SUBJECT: Jan. 6 through March 7, 2014 public comment on proposed Class 2 modifications to the Hanford Facility Dangerous Waste Permit, for Groundwater Monitoring Plan at the Liquid Effluent Retention Facility and the 200 Area Effluent Treatment Facility (LERF/ETF)

Dear Sir/Madam,

I think Ecology does a really good job managing the Hanford Facility Dangerous Waste Permit. I like that Ecology is doing more permit modifications, more public comment periods and more public meetings. I think Ecology makes groundwater protection a priority. If Ecology agrees with the proposed Class 2 modifications, then I agree too. Ecology, keep up the ~~good~~ great work!

Sincerely, A. Stakeholder

Copy
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Confederated Tribes and Bands
of the Yakama Nation ERWM

Established by the
Treaty of June 9, 1855

February 26, 2014

Andrea L. Prignano
Washington State Department of Ecology
Port of Benton Blvd.
Richland, WA 99354

Subject: Review of the Proposed Class 2 Resource Conservation and Recovery Act (RCRA) Permit modifications to Permit Conditions (including II.F), Permit Attachments 8 & 10, and Groundwater Monitoring at the Hanford Facility Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF-ETF) and Addendums C, F, I for LERF/ETF, and temporary authorization request.

Dear Ms. Prignano:

The Confederated Tribes and Bands of the Yakama Nation appreciate the opportunity to review and provide comments on these documents.

The Confederated Tribes and Bands of the Yakama Nation is a federally recognized sovereign pursuant of the Treaty of June 9, 1855 made with the United States of America (12 Stat. 951). The U.S. Department of Energy Hanford site was developed on land ceded by the Yakama Nation under the 1855 Treaty with the United States. The Yakama Nation retains reserved rights to this land under the Treaty.

As these modifications are running concurrently, we have included our responses to both Class II mod requests within this response. We apologize for any confusion, but please note, Attachment #2has both text edits and comments embedded within the document as there were no line identifiers.

We look forward to discussing our concerns regarding these proposed modifications to the Hanford RCRA permit with you.

Sincerely,

Russell Jim
Yakama Nation ERWM Program Manager

cc:
Jane Hedges, Washington Department of Ecology
Matt McCormick, U.S. Department of Energy
Ken Niles, Oregon Department of Energy
Stuart Harris, CTUIR
Gabe Bohnee, Nez Perce

Marlene George, YN ERWM
Administrative Record
Attachments:

Attachment # 1: YN ERWM program comments on Proposed Class 2 Resource Conservation and Recovery Act (RCRA) Permit modifications to Permit Conditions, Permit Attachments 8 & 10, and Groundwater Monitoring at the Hanford Facility Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF-ETF):

General Comment:

- YN ERWM finds some edits acceptable; however, we are concerned over the appropriateness of any modifications to the II.F. Condition outside of the permit renewal process. The proposed modification will affect all RCRA units, not solely ETF/LERF. As there are multiple underlying issues which will not be resolved, edits to this condition are unwarranted at this time. **YN requests Ecology deny proposed modifications to II.F.**

Below are our specific concerns/comments.

Request 1):
Bullet 1 (II.F.1): As stated, the general facility conditions (e.g., II.F), where appropriate, address dangerous waste management activities which may not be directly associated with distinct TSD units, or which may be associated with many TSD units (including corrective actions at solid waste management units and areas of concern). Deletion of Permit Condition II.F.1 undermines the authority of Ecology to enforce groundwater protection and monitoring in accordance with WAC 173-303-610 and WAC 173-303-645 requirements. Furthermore, reference to proposed changes within a unit-specific chapter does not suffice, meet compliance requirements, or support elimination of WAC 173-303 groundwater requirements for the RCRA permit.

YN ERWM program opposes deletion of Permit Condition II.F.1 and its replacement to be 'marked as reserved.' YN requests the condition be retained with update reference to purgewater management as in accordance with the Hanford Site Strategy for Management of Investigation Derives Waste (DOE/RL-2011-41, Revision 0).

Bullet 2 (II.F.2):

- Hanford Facility wells will continue to require *remediation/abandonment* needs. This text of II. F.2 should be retained.
- Deletion of II.F.2.a is supported.
- Modifications to II.F.2.b are supported in part. YN ERMW program supports the additional clarification text to require well inspections and maintenances. WAC 173-160-381states *Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned.* It is clear that a well must first be deemed abandoned, etc. YN requests the term abandoned be retained.

  Additionally, YN request Ecology clarify within Permit Condition II.F.2.b that DOE will be required to demonstrate whether a well has potential use as a RCRA monitoring well prior to abandonment/decommissioning. YN requests that Condition II.F.2.b be applied to Part IV units of the RCRA Permit for consistency across the Hanford site groundwater monitoring programs and in compliance with WAC 173-303-645/646 requirements.

- YN does not support Modification s to II.F.2.c as it undermines Ecology's authority to require a determination of the need for abandonment and lessens Ecology's knowledge regarding the well activities/issues.

- YN requests the definition of *rehabilitate unusable wells*. The term rehabilitate/rehabilitation is not defined in WAC 173-160 and as such should not be used to define actions for Hanford site wells.
- YN program does not fully support II.F.2.d modifications. Inclusions of citations for WAC 173-160 and Chapter 18.104 RCW are supported. Deletion of completion of the process by 2012 is acceptable as this year has passed. The rest of the proposed modification is not acceptable. This modification lessens Ecology's authority to enforce WAC 173-303-645/646 requirements through Permit conditions/Closure Plans/Contingency Plans. Replacing non-compliant wells requires changes to the groundwater monitoring plan would, in itself, require a permit modification. Necessarily, this would require analysis of the groundwater monitoring network and the identification of any needs changes to the number of wells, groundwater flow, etc. These wells would then need to be identified in the permit. To simply say the schedule is under the milestone does not suffice compliance requirements under RCRA. Furthermore, is the proposed modification is structured such that the schedule is outside of the RCRA Permit and WAC 173-303-830 process (and outside of the public involvement process).

Attachment #2: YN comments and suggested edits to the proposed Hanford Well Maintenance and Inspection Plan HNF-56398, Revision 0.

Hanford Well Maintenance and Inspection Plan
HNF-56398, Revision 0
Previously BHI-_01265, Revision 0

- YN ERWM notes this plan lacks details and requests changes listed in comments below. The document does not have line numbers. Comments are attached to paragraphs to help identify concerns and requests. Pages breaks were eliminated. YN comments, text changes, etc are highlighted.

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2.0 REQUIREMENTS..... 3
3.0 SCHEDULE..... 3
4.0 WELL INSPECTIONS..... 4
5.0 WELL MAINTENANCE.....4
6.0 MANAGEMENT CONTROL
- YN : Edited to add and reflect 6.0: Management Control

REFERENCES..... 5
7.0 REFERENCES
8.0 BIBLIOGRAPHY..... 5

1.0_Introduction

This document presents the well maintenance and inspection plan for use in supporting groundwater activities at the Hanford Site. Wells located across the Hanford Site are used by Site contractors for a variety of groundwater programs. As such, these wells require various types of inspections and/or maintenance during their lifecycles. The wells that must be maintained are defined in Section 2.0, "Requirements."

- This document's title indicates it covers only well maintenance and an inspection yet decommissioning (i.e. abandonment) is discussed. YN suggest you retain 'abandonment' in title as well as decommissioning.
- YN ERWM requests edits to text to include the requirements of 173-160-101/400/406/410/420/430/440/442/450/451/456/457/458/460.

2.0 Requirements

Washington Administrative Code (WAC) 173-160, "Minimum Standards for Construction and Maintenance of Wells," states "It is the responsibility of the resource protection well operator, resource protection well contractor and the property owner to take whatever measures are necessary to guard against waste and contamination of the groundwater resource." The provisions

of the dangerous waste section of the *Resource Conservation and Recovery Act of 1976 Permit for the Treatment, Storage, and Disposal of Dangerous Waste at the Hanford Site* Permit are controlled by the "State of Washington Hazardous Waste Management Act of 1976" (RCW 70.105). Part II.F.2.a of Ecology 1994 states that "...the Permittees shall inspect the integrity of active resource protection wells as defined by WAC 173-160-030 subject to this Permit at least once every five (5) years."

Wells subject to the RCRA Permit requirements are defined as wells actively monitoring treatment, storage, and disposal (TSD) unit closures (in Part V of the Permit); TSD operating units (in Part III of the Permit); and TSD units undergoing postclosure/modified closure (Part VI of the Permit).

- YN: Part IV wells should be subject to WAC 173-160 regulations and identified in II.F conditions of the Permit. YN requests text edits to include also **Part IV** wells as subject to these requirements.
- Additional comment: Delete term "postclosure/modified closure". Modified closure is not authorized under RCRA. Replace with "postclosure".
- YN requests the following deleted text from the current Attachment 8 be included as it supports a comprehensive and consistent Hanford site groundwater monitoring program: "Additionally, the "Second Responsiveness Summary" section (Ecology 1994), which discusses interpretation of the RCRA Permit (found in Part ILF.2.a, page 99), states that Ecology requires maintenance inspections because of the likelihood that monitoring wells can act as preferential pathways for the migration of contaminants. Although the inspections are only required for the wells subject to the Permit, Ecology further states that" ... the Department will pursue enforcement action outside of this Permit to assess and remediate and/or abandon, where applicable, those wells not being addressed by this Permit. " Groundwater monitoring wells included in the maintenance/inspection plan are determined by the RCRA permit and various programs such as the Hanford Site Groundwater Vadose Zone Integration Project. Maintenance of wells supporting other programs or projects across the Hanford Site may be included in the maintenance schedule at the request of the program manager."

3.0 Schedule

The list of RCRA wells to be considered for maintenance or inspection will be based on a review of information on the current wells. This review shall include field sampling notations and history, previous inspection results, or other data collected during sampling of the wells. In addition, the installation date and/or location of a well will also be considered as well as the elapsed time since last routine maintenance

Well inspections, consistent with the requirements in permit condition II.F.2.a, will occur in 2015, and continue every 5 years after that. The schedule will accommodate changes that will occur with the addition of new wells, adjustments in the TSD unit closures, and wells that are no longer needed for monitoring. The schedule will also accommodate wells used by other programs.

- YN requests text edits to state the schedule shall be developed on a **yearly** schedule approved by Ecology and any changes to the inspection schedule shall require a Permit modification in accordance with the WAC 173-303-830/840 process.

YN suggests the schedule be performed on a 3-5 year schedule or as needed to repair problems identified during sampling. Additionally, YN suggests if a ground water monitoring well becomes unsuitable for use, the status be documented and reported to Ecology within fifteen (15) days of identifying the well as unsuitable for use. In addition, the "unsuitable-for-use" well should be evaluated within thirty (30) days of the designation to determine if a new well should be constructed. A copy of the evaluation should be provided to Ecology. If applicable, the "unsuitable-for-use" well shall be placed on a well decommissioning list for Ecology's approval. YN suggests this text be incorporated into this document and reflected in the II.F conditions.

- YN ERWM requests edits to text to include the specific requirements of 173-160-460 for the decommissioning process for resource protection wells. YN requests that the Permittees must obtain Ecology's written approval to remediate or decommission the well and this text stated within this document.

4.0 Well Inspections

Well inspections are conducted as an integral part of field maintenance activities. Inspections include visual examination of the well site, surface components of the well structure (e.g., barrier posts, concrete surface pad and seal, protective well casing, well cap), identification of equipment installed in the well, and where possible measurements of the depths to water and/or bottom of the well. Inspections are documented on field reports.

- YN requests these reports also be placed in the Administrative File for the specific Unit.
- As Inspections are discussed and remain the basis of maintenance, and there does not appear to be an Inspection Plan for Groundwater Resource Wells in place for any Permitted Units, YN requests details for inspections are included similar to those for performing maintenance/restoration. YN requests the following be included within this document as inspection requirements:
    - Security control devices: well caps, and locks
    - Surface inspections (as necessary to identify and correct the effects of settling, subsidence, erosion or other events.
    - Location, integrity, and inspections of benchmarks, if appropriate
    - Location, integrity, and inspection of groundwater wells (to include inspection of the cap and casing of each well to ensure that it is locked, pulling and inspecting the pump, brushing the inner walls of the casing and screen, and conducting a down-hole television survey
    - Vegetative cover condition
    - Procedures regarding emergency and monitoring equipment (to include procedures for using, inspecting, repairing, and replacing emergency and monitoring equipment

5.0 Well Maintenance

- YN requested text edits in yellow:

Based on review of the 3-5 year inspection results, or other evaluations such as field sampling notations, well sampling issues, etc., well maintenance for groundwater monitoring wells will be performed as needed. Well maintenance will include the following tasks, as necessary, to restore the well to its intended use:

1. Removing groundwater sampling pump system and/or aquifer testing instrumentation/equipment.
2. Inspecting and repairing (or replacing, as necessary) the sampling pump system and/or aquifer testing instrumentation/equipment
3. Cleaning the well casing perforations

- YN requests clarification: What actions are to be done to ensure all wells are constructed to meet RCRA requirements?

4. Inspecting and cleaning well screen or repair of well screen (if possible)
5. Removing debris and fill material.

- YN requests adding: *and accumulated sediment*

6. Performing borehole video camera surveillance
7. Re-installing sampling and/or aquifer testing instrumentation/equipment
8. Redeveloping the well after performing maintenance
9. Inspecting final conditions after well maintenance (e.g. cap is replaced, concrete surface pad integrity, lock is secure, etc.)
10. Documenting well conditions and maintenance activities

- YN request text be included which deals with actions taken to deepen "dry" wells. YN suggests the Permittee be required to submit a well deepening plan for Ecology approval that satisfies the groundwater protection standards of Chapter 173-160 WAC, and that the well deepening plan shall not be implemented until after the Permittee receives Ecology's approval of the plan.

6.0 Management Control

- YN requested deleted text from current Attachment 8 be included to ensure QA/QC plans, etc are in place.

Well maintenance activities will be performed by subcontract using approved subcontractor procedures, quality assurance and quality control plans, health and safety plan, and other appropriate and/or required documentation. The following will control environmental compliance, quality assurance, and reporting:

- BHI-EE-02, *Environmental Requirements,* establishes the overall environmental compliance requirements for BHI. YN recognizes that this citation is no longer the appropriate document and requests the appropriate document be cited.
- Program implementation and procedural compliance will be monitored periodically through surveillance and self-assessments.
- Well maintenance activities will be documented and transmitted for entry into the Hanford Well Information System Database. Inspections are to be recorded in the RCRA operating records, where necessary. All documentation shall be submitted to Document and Information Services.

_7.0 References_____

WA7890008967, 2007, *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous*
Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste, as amended,
Washington State Department of Ecology, Richland, Washington *Resource Conservation and Recovery Act of 1976*, 42 U.S.C. 6901, et seq.
RCW 18.104, "Well Construction," *Revised Code of Washington*, as amended.
RCW 70.105, "State of Washington Hazardous Waste Management Act of 1976, "*Revised Code of Washington*, as amended.
WAC 173-160, "Minimum Standards for Construction and Maintenance of Wells," *Washington Administrative Code*, as amended.
WAC 173-162, "Regulation and Licensing of Well Contractors and Operators," *Washington Administrative Code*, as amended.
WAC 173-303-645, "Releases from regulated units," *Washington Administrative Code*, as amended.

8.0 BIBLIOGRAPHY

DOE-RL, 1994, *Hanford Site Groundwater Management Program*, DOE/RL-89-12, as amended, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Attachment #3: YN ERWM Program questions regarding text changes in Addendum C page C-36 (see Addendum C text below):

- It is unclear how fluid levels in each leachate sump can be manually maintained if the system is currently designed to operate under automated controls. YN request clarification.
- It's the YN ERWM program's understanding is that currently other instrumentation provided is real-time continuous level monitoring and this information is sent to the 242-A Evaporator control room. YN understood this information would continue to be recorded and monitored daily rather than continuously. YN requests clarification and editing to ensure such real-time data continues to be provided and recorded in the Control Room.
- YN suggest additional text to clarify how both methods/types of equipment calculate leak rates through the primary liner.

~~Automated controls maintain t~~The fluid level in each leachate sump is maintained below 33 centimeters to prevent significant liquid backup into the drainage layer. The leachate pump is activated when the liquid level in the sump reaches about 28 centimeters, and is shut off when the sump liquid level reaches about 18 centimeters. This operation may be done either manually or automatically.~~prevents the leachate pump from cycling with no fluid, which could damage the pump.~~ Liquid level control is accomplished with conductivity probes that trigger relays selected specifically for application to submersible pumps and leachate fluids. A flow meter/totalizer on the leachate return pipe measures fluid volumes pumped and pumping rate from the leachate collection sumps, and indicates volume and flow rate on local readouts. In addition, a timer on the leachate pump tracks the cumulative pump operating hours. Other instrumentation provided is real-time continuous level monitoring with readout at the catch basin~~ and the 242-A Evaporator control room~~. Leachate levels are monitored at least weekly. A sampling port is provided in the leachate piping system at the catch basin. ~~Leak detection is provided through inspections of~~The leak rate through the primary liner is calculated using the leachate flow meter/totalizer readings or pump operating hours readings along with the pump flow rate. Calculations using either method are sufficient for compliance. For more information on inspections, refer to Addendum I.

- . See Attachment #3.

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Attachment 1:

APPENDIX C: ECOLOGY LETTER DOCUMENTING FINAL PERMIT DECISION

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

April 29, 2014 14-NWP-079

Mr. Matthew McCormick, Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: A7-50
Richland, Washington 99352

Mr. John Fulton, President & CEO
CH2M HILL Plateau Remediation Company
PO Box 1600, MSIN: H7-30
Richland, Washington 99352

Re: Department of Ecology's Response to the Transmittal of Proposed Class 2 Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Modifications to Permit Conditions, Permit Attachments 8 and 10, and Groundwater Monitoring at the Hanford Facility Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF/ETF)

References: See page 2

Dear Mr. McCormick and Mr. Fulton:

The Department of Ecology (Ecology) is approving, with changes, a portion of the Class 2 Modification (Reference 1 and Reference 2). We are extending the time period for a final decision on a portion of the modification (Reference 3).

In accordance with Washington Administrative Code (WAC) 173-303-830(4)(b)(vi)(B)(I), the following portions are approved with changes (Ecology's changes are identified in the Enclosures):

- Revisions to Permit Condition II-F, *Ground Water and Vadose Zone Monitoring.*
- Revisions to Permit Attachment 8, *Hanford Well Maintenance and Inspection Plan.*
- Revisions to Operating Unit Group 3 Permit Conditions, LERF/ETF.

Ecology approves the revisions for the Groundwater Addendum to Operating Unit Group 3, LERF/ETF as received in Reference 1.

In accordance with WAC 173-303-830(4)(b)(vi)(G), the United States Department of Energy (USDOE) – Richland Operations Office and CH2M HILL Plateau Remediation Company (Permittees) provided written consent to extend the time period for a final decision on deletion of Permit Attachment 10, *Strategy for Handling and Disposing of Purgewater July 1990* until May 29, 2014 (Reference 3).

USDOE held a public comment period for this permit modification between January 6 and March 7, 2014. Changes were made in response to the public comments received, and based on Ecology's review. These changes were discussed with the Permittees. The Response to Comments document prepared by Ecology is enclosed.

Ecology requires the Permittees to provide Ecology two hard copies of the approved portions of the Hanford Facility RCRA Permit, with changes incorporated, by letter within 30 calendar days. These copies will be incorporated into the Hanford Facility RCRA Permit. We also request an electronic copy be submitted within 30 calendar days to Andrea Prignano, Ecology.

This permit modification approval applies only to the Hanford Facility RCRA Permit Revision 8. It does not apply to the draft Revision 9 Permit. If there are any questions regarding this permit modification, please contact Andrea Prignano, Site-wide Dangerous Waste Permit Coordinator, at Andrea.Prignano@ecy.wa.gov or (509) 372-7911.

Sincerely,

Suzanne Dahl
Tank Waste Treatment Section Manager
Nuclear Waste Program

ap/jc
Enclosures (4)

Reference 1: Letter 14-ESQ-0018, dated December 26, 2013, from M. McCormick, USDOE-RL, to J.A. Hedges, Ecology, "Transmittal of Proposed Class 2 Resource Conservation and Recovery Act (RCRA) Permit Modifications to Permit Conditions, Permit Attachment 8 and 10, and Groundwater Monitoring at the Hanford Facility Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility (LERF/ETF)"

Reference 2: Letter 14-NWP-044, dated March 26, 2014, from S. Dahl, Ecology, to M. McCormick, USDOE-RL, and J. Fulton, CHPRC, regarding Letter 14-ESQ-0018 (Reference 1)

Reference 3: Letter 14-ESQ-0072, dated April 16, 2014, from M. McCormick, USDOE-RL, to J.A. Hedges, Ecology, "Letter 14-NWP-044 and Extension of Decision of Class 2 Resource Conservation and Recovery Act Permit Modification to Permit Attachment 10"

cc electronic w/enc:
- Dave Bartus EPA
- Dennis Faulk, EPA
- Mary Beth Burandt, USDOE
- Lori Huffman, USDOE
- Ron Koll, USDOE
- Jennie Seaver, CHPRC
- Ken Niles, ODOE
- Jon Perry, MSA
- Dwayne Crumpler, Ecology
- Andrea Prignano, Ecology
- USDOE-RL Correspondence Control

cc w/enc:
- Steve Hudson, HAB
- Russell Jim, YN
- Administrative Record: 242-A Evaporator, T-2-6
- CHPRC Correspondence Control
- Environmental Portal
- Hanford Operating Record General File

cc w/o enc:
- Gabriel Bohnee, NPT
- Stuart Harris, CTUIR

Permit Condition II-F
Ground Water and Vadose Zone Monitoring

(Changes to retain condition II.F.1, Attachment 10, *Strategy for Handling and Disposing of Purgewater July 1990*, add text to proposed II.F.2.b, correct typo in II.F.2.c)

II.F GROUND WATER AND VADOSE ZONE MONITORING

The Permittees will comply with the ground water monitoring requirements of WAC 173-303-645. This Condition will apply only to those wells the Permittees use for the ground water monitoring programs applicable to the TSD units incorporated into Parts III, V, and/or VI of this Permit. Where releases from TSD units subject to this Permit have been documented or confirmed by investigation, or where vadose zone monitoring is proposed for integration with ground water monitoring, the Permittees will evaluate the applicability of vadose zone monitoring. The Permittees will consult with Ecology regarding the implementation of these requirements. If agreed to by Ecology, integration of ground water and vadose zone monitoring, for reasons other than this Permit, may be accommodated by this Permit. Results from other investigation activities will be used whenever possible to supplement and/or replace sampling required by this Permit.

II.F.1 ~~RESERVED~~ Purgewater Management
Purgewater will be handled in accordance with the requirements set forth in Permit Attachment 10, *Purgewater Management Plan*.

II.F.2 Well Inspection and Maintenance

II.F.2.a The Permittees will inspect the integrity of active resource protection wells as defined by WAC 173-160-030, subject to this Permit, at least once every five (5) years as specified in the *Hanford Well Maintenance Inspection Plan* (Permit Attachment 8). These inspections will be recorded in the Operating Record.

II.F.2.b The Permittees will evaluate resource protection wells subject to this Permit according to the *Hanford Well Maintenance Inspection Plan* (Permit Attachment 8) and the *Policy on Remediation of Existing Wells and Acceptance Criteria for RCRA and CERCLA*, June 1990 (Permit Attachment 7). The Permittees will ~~decommission or rehabilitate. abandon or remediate unusable wells according to the requirements of Chapter 18.104 RCW, Chapter 173-160 WAC, and Chapter 173-162 WAC to ensure that the integrity of wells subject to this Permit is maintained. The time for this rehabilitation remediation will be specified in Parts III, V, and/or VI of this Permit~~ submit a permit modification request to Ecology to decommission or maintain wells as necessary to ensure compliance with WAC 173-303-645(8)(c). This permit modification request will include a schedule of compliance, which may incorporate by reference applicable schedule(s) in HFFACO Milestone M-24. For wells to be decommissioned, this permit modification must also include a request for installation of replacement wells, if necessary, to ensure compliance with WAC 173-303-645 requirements.

II.F.2.c Ecology will receive a notice of intent (NOI) in writing at least seventy-two (72) hours before the Permittees decommission (excluding maintenance activities), any well subject to this Permit.

Permit Condition II-F
Ground Water and Vadose Zone Monitoring

(Changes to retain condition II.F.1, Attachment 10, *Strategy for Handling and Disposing of Purgewater July 1990*, add text to proposed II.F.2.b, correct typo in II.F.2.c)

II.F.2.d For wells subject to this Permit, the Permittees will achieve full compliance with Chapter 173-160 WAC and Chapter 18.104 RCW by replacing non-compliant wells subject to the permit with new wells under the schedule in HFFACO Milestone M-24, as amended, incorporated by reference into this Permit.

II.F.3 Well Construction

All wells constructed pursuant to this Permit will be constructed in compliance with Chapter 173-160 WAC.

Revisions to Permit Attachment 8
Hanford Well Maintenance and Inspection Plan

(Changes to correct references and delete unused reference and bibliography information)

- In the section paragraph of Section 2.0 REQUIREMENTS:

  The provisions of the dangerous waste section of the Resource Conservation and Recovery Act of 1976 Permit for the Treatment, Storage, and Disposal of Dangerous Waste at the Hanford Site Permit are controlled by the "State of Washington Hazardous Waste Management Act of 1976" (RCW 70.105). Part II.F.2.a of ~~Ecology 1994~~ (WA7890008967) states that "...the Permittees shall inspect the integrity of active resource protection wells as defined by WAC 173-160-030 subject to this Permit at least once every five (5) years." Wells subject to the RCRA Permit requirements are defined as wells actively monitoring treatment, storage, and disposal (TSD) unit closures (in Part V of the Permit); TSD operating units (in Part III of the Permit); and TSD units undergoing postclosure/modified closure (Part VI of the Permit).

- In Section 6.0 REFERENCES

  WA7890008967, 2007, *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste*, as amended, Washington State Department of Ecology, Richland, Washington *Resource Conservation and Recovery Act of 1976*, 42 U.S.C. 6901, et seq.

  ~~RCW 18.104, "Well Construction" Revised Code of Washington, as amended.~~

  RCW 70.105, "State of Washington Hazardous Waste Management Act of 1976, "*Revised Code of Washington*, as amended.

  WAC 173-160, "Minimum Standards for Construction and Maintenance of Wells," *Washington Administrative Code*, as amended.

  ~~WAC 173-162, "Regulations and Licensing of Well Contractors and Operators," Washington Administrative Code, as amended.~~

  ~~WACH 173-303-645, "Releases from regulated units," Washington Administrative Code, as amended.~~

- Delete the entire of Section 7.0 BIBLIOGRAPHY

Operating Unit Group 3 Permit Conditions, LERF/ETF

(Changes to correct typo in III.3.R.1, add text to III.3.R.3.c, and add "e.g." to III.3.R.3.c.2.a)

III.3.Q.9 The Permittees will close any LERF basin removed from service in accordance with the requirements of Permit Condition III.3.Q.7 or a basin that cannot be repaired or that the Permittees will not to return to service. [WAC 173-303-650(5)(e)]

II.3.Q.10 The Permittees will comply with the requirements of Addendum C, Section C.5.10 with respect to management of ignitable or reactive wastes in the LERF basins. [WAC 173-303-650(7)]

III.3.Q.11 The Permittees can place incompatible wastes and materials in the same LERF basin only if in compliance with the requirements of WAC 173-303-395(1)(b), (c). [WAC 173-303-650(8)]

III.3.Q.12 The Permittees will use the action leakage rate in Addendum C, Section C.5.8, for operation of LERF basins, and comply with the requirements of WAC 173-303-650(10)(b). [WAC 173-303-650(10)]

III.3.Q.13 The Permittees will comply with the requirements of WAC 173-303-650(11), incorporated by reference.

III.3.Q.14 The Permittees will comply with the requirements of 40 CFR 264, Subpart CC, incorporated by reference by WAC 173-303-692.

III.3.R GROUNDWATER

III.3.R.1 The Permittees will comply with the requirements of Addendum D, Groundwater Monitoring Plan. [WAC 173-303-645}]

III.3.R.2 All wells constructed pursuant to this Permit will be constructed in compliance with Chapter 173-160 WAC incorporated by reference through WAC 173-303-645 (8)(c).

III.3.R.3 Update the Groundwater Monitoring Network

III.3.R.3.a The Permittees will install an additional downgradient monitoring well E-26-15 as identified in Addendum D, Groundwater Monitoring Plan by December, 2016.

III.3.R.3.b Within 60-days of the well installation, the Permittees will submit a Class 2 Permit modification [WAC 173-303-830 Appendix I, C.1.a] to update Addendum D and include the additional monitoring well into the groundwater monitoring network.

III.3.R.3.c Concurrently with the permit modification request, the Permittees will submit a revised "Liquid Effluent Retention Facility Characterization Report" for the additional monitoring well that includes:

1) Well construction in accordance with WAC 173-303-645(8)(c).
2) Well screen placement in the upper aquifer in accordance with WAC 173-303-645((8)(a)
3) Hydrogeologic conditions, stratigraphy and hydraulic conductivity, derived from geologist observations of borehole archive samples, down hole gamma logging, and aquifer slug tests in accordance with WAC 173-303-645(8)(a)(i)(A)(I)

Operating Unit Group 3 Permit Conditions, LERF/ETF

(Changes to correct typo in III.3.R.1, add text to III.3.R.3.c, and add "e.g." to III.3.R.3.c.2.a)

4) Drilling and sampling details in accordance with WAC 173-303-645(8)(d)
5) Borehole corrections (e.g., precision surveys, gyroscopic corrections, and barometric response corrections) to ensure adequate hydraulic understanding considering the very small gradient in accordance with WAC 173-303-645(8)(f)
6) Geochemical comparison of the water quality with other existing wells to ensure anticipated representative conditions in accordance with WAC 173-303-645(8)(a)(ii)
7) Document surface location as required by WAC 173-303-645(6).

III.3.R.3.c.1 Groundwater sample results from the new well (E-26-15) and the existing wells for all constituents in the Addendum D, Groundwater Monitoring Plan for the Liquid Effluent Retention Facility,

III.3.R.3.c.2 Results of evaluating final well development data and drilling logs,

III.3.R.3.c.2.a A well use designation (e.g., upgradient or downgradient).