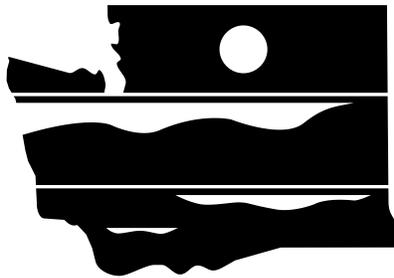


**Permit Modification
to the Hanford Facility Resource Conservation and Recovery
Act Permit, Dangerous Waste Portion, Revision 8C, for
the Treatment, Storage, and Disposal of Dangerous Waste,
Part III, Operating Unit Group 10
(Waste Treatment and Immobilization Plant)**

Responsiveness Summary



DEPARTMENT OF
ECOLOGY
State of Washington

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

July 31, 2009

Publication Number 09-05-009

RESPONSIVENESS SUMMARY

Prepared by:

Suzanne Dahl

Washington State Department of Ecology

Nuclear Waste Program

July 31, 2009

Publication Number 09-05-009

If you need this publication in an alternate format, please call the Nuclear Waste Program at 509-372-7950. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Introduction

The Washington State Department of Ecology (Ecology) prepared a draft permit modification that incorporates new and modified design information for the Waste Treatment and Immobilization Plant (WTP) into Part III, Operating Unit Group 10 of the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste.

This permit modification is important because it allows construction of the WTP to continue. The WTP is essential to cleaning up the 53 million gallons of highly-radioactive chemical waste currently being stored in underground storage tanks at the Hanford Site.

This permit modification is one of several to the original permit. Ecology encouraged the public to comment on the draft permit modification during a 45-day public comment period held April 20, 2009, through June 5, 2009.

The proposed modification included the following design information:

- Low Activity Waste (LAW) Design Package LAW-018 addresses ancillary equipment for the LAW melter process system such as piping and instrumentation for the melters.
- Pretreatment Facility (PTF) Design Package PTF-095 addresses the Pretreatment In-Cell Handling System decontamination soak tank and its jet pump and sparger. This allows failed equipment to be decontaminated for repair or replacement.
- The document, *Leak Detection Capability in the LAW Facility* describes how the leak detection system will 1) detect the failure of primary containment structures and subsequent release of dangerous or mixed waste within twenty-four hours, and 2) detect accumulated liquids within twenty-four hours.
- The document, *Waste Removal Capability for the LAW Vitrification Facility* describes how spilled or leaked waste and accumulated liquids will be removed from the secondary containment systems within twenty-four hours of detection.
- The document, *Pipe Stress Design Criteria Including "Pipe Stress Criteria" and "Span Method Criteria,"* provides design criteria for piping throughout the WTP.
- Diagrams and data sheets for seven overhead cranes in the High Level Waste (HLW) Facility and for two overhead cranes in the LAW Facility were added to the permit. The overhead cranes are used for lifting and transferring containers of HLW and LAW glass.
- Piping and instrumentation diagrams for the HLW melter system film cooler utilities and mechanical drawings for the HLW melter assemblies were added to the permit.
- Instruments identified in the document, *System Logic Description for Low Activity Waste Facility Melter Process (LMP) System,* were added to Permit Table III.10.H.C.

Technical and regulatory details are provided in the Statement of Basis.

This responsiveness summary addresses comments received prior to the start of the public comment period from five citizens. There were no comments received during the comment period.

Excerpt of the public comments and Ecology responses follow. No modifications have been made by Ecology to these comments. The complete comments are in Attachment 1 of this document.

Responsiveness Summary

Comment 1:

Jeanne Raymond
Corvallis, Oregon
raymondj@peak.org
Submitted via e-mail

Because I am concerned that the number one priority are the goals of closing Hanford as a nuclear repository, and of eliminating the contamination; I would like to have the following questions answered:

1. Could this proposed permit modification of an onsite facility allow nuclear waste to enter the ground water? If so, the permit should be denied.
2. Does this pre-treatment facility in anyway prolong or negate the goal of closing Hanford to all nuclear waste? If so, the permit should be denied.
3. Will this facility be used to decontaminate any new nuclear waste either generated on-site, or transported to the site? If so, the permit should be denied.
4. What will happen to the water, equipment etc. that will be used in decontamination?
5. Where would the decontaminated waste be removed to after the twenty four hours?
6. Where will the decontaminated waste be removed to since there still is no National Nuclear Waste Repository?

Denial of the permit would be necessary if any of the questions above were not answered in a way that assured the permanent cleanup and closure of Hanford as a nuclear waste facility, as per the original agreement.

Ecology's Response:

The Washington State Department of Ecology (Ecology) offers the following explanation. Ecology agrees with your concerns for cleaning up the Hanford site and shares the goal of cleanup and eventual closure.

We believe that this permit modification and other permit modifications associated with building the Waste Treatment and Immobilization Plant (WTP) are essential to the prevention of contamination and mitigation of hazards associated with tank waste. The WTP is the cornerstone of this cleanup effort.

The primary purpose of the WTP is to treat the liquid mixed waste (radioactive and dangerous) that will be removed from leaking, underground storage tanks in the central part of the Hanford site. The resulting treated waste will be an immobilized, glass waste form that is ready for disposal. Removing and immobilizing the liquid mixed waste from the leaking underground storage tanks is critical to preventing further soil and groundwater contamination. This facility will prevent further contamination of the groundwater, not add to the groundwater contamination problem.

Constructing and operating the entire WTP, including the Pretreatment Facility (PTF), will provide remediation for the waste associated with the 177 underground storage tanks at Hanford. Construction and operation of the WTP will not prolong the cleanup mission for Hanford.

Without the WTP, the mitigation and cleanup of the central part of Hanford would be significantly impaired. Current WTP design allows receipt of waste only through Hanford's Double-Shell Tank (DST) System. Waste is transferred from the DST System to the PTF, where it will be separated into High Level Waste (HLW) and Low Activity Waste (LAW) streams. After pretreatment, the separated waste streams are transferred to the HLW and LAW vitrification facilities for thermal treatment. There, the waste streams will be mixed with glass forming additives, heated to 950-1250° C in melters, poured into stainless steel containers, and then cooled. During the cooling process, the waste becomes immobilized in the glass matrix. After cooling, the containers are finished by welding on lids. The immobilized waste will then be transported from the WTP for storage or disposal. Immobilized LAW will be disposed of on-site in the Resource Conservation and Recovery Act (RCRA) permitted Integrated Disposal Facility (IDF). Immobilized HLW will be stored temporarily on site, then shipped to a yet to be identified national, deep geological repository for disposal.

The WTP is not being designed to receive waste from off the Hanford site or to treat any newly generated waste from other Hanford site dangerous waste management units. It is specifically being designed to treat waste currently existing in Hanford's 177 underground storage tanks.

Unfortunately, as with most treatment processes, additional waste is generated during treatment at the WTP. Water and other solutions used during treatment or decontamination (i.e. liquid secondary waste streams) will, as much as possible, be recycled back through the treatment process.

Liquid secondary waste streams not recycled back through the WTP treatment process will be sent to Hanford's RCRA permitted Effluent Treatment Facility for further treatment and disposal.

Solid secondary waste streams (e.g. failed pumps, filters, spent carbon, and other equipment) will be containerized and shipped to Hanford's RCRA permitted Central Waste Complex for storage.

The WTP is designed to prevent any waste from entering the groundwater. All waste handling equipment is designed to meet applicable engineering and Washington Administrative Code "Dangerous Waste Regulations" (WAC 173-303) standards.

Waste handling equipment that cannot be inspected daily is provided with secondary containment and leak detection designed to detect a leak within 24 hours and safely collect and hold any leaked or spilled waste until removed. Any spilled or leaked waste will be returned to the treatment process or sent to another Hanford site treatment, storage, or disposal facility for further treatment and disposal similar to liquid secondary waste streams discussed previously.

We are also concerned the national deep geologic repository needs to be located and constructed. However, Ecology has little influence on the establishment of a national repository. We are anticipating the federal government will eventually build a repository for the nation's HLW and spent fuel – this action is driven by federal law in the Nuclear Waste Policy Act. Until a repository is constructed, we are confident the immobilized HLW can be safely stored at the Hanford site.

We share your concern for permanent Hanford waste cleanup. One advantage of permitting the WTP under RCRA regulations is that RCRA adopts a cradle-to-grave approach. In other words, it promotes the use of treatment processes that result in disposable waste forms, including the treatment and disposal of secondary waste generated from treatment processes.

Comment 2:

marionmoos
marionmoos@icehouse
Submitted via e-mail

Not so fast! I demand public hearings. Spokane, Washington

Ecology's Response:

The Washington State Department of Ecology (Ecology) offers the following explanation. Ecology determined that no public hearing would be held for the subject draft permit modification. Chapter 173-303-840(5)(a), Washington Administrative Code states:

"The department will hold a public hearing whenever, on the basis of requests, there is a significant degree of public interest in a draft permit or there is written notice of opposition and the director receives a request for a hearing during the forty-five day comment period."

Ecology received a total of five comments on the permit modification, which it does not consider to be a significant degree of public interest. In addition, Ecology received Comment 2, which states in its entirety, "Not so fast! I demand public hearings. Spokane, Washington." Ecology does not read this comment as written notice of opposition.

Comment 3:

Martin Bensky
2121 Briarwood Court
Richland, Washington 99354
mbensky@msn.com
Submitted via e-mail

The announcement for public comment on tank waste retrieval states that retrieval and treatment of Hanford tank waste in the WTP will reduce the risk to human health and the environment. The only USDOE risk assessment I have seen does not say that at all, and I can legitimately conclude that retrieval and treatment poses greater risk than does sensible in-situ disposal of the tank waste. The only defensible argument for building the WTP is that it could become a valuable component in the Global Nuclear Energy Partnership (GNEP) system, a potentially important global system that is currently opposed by the United States on political, anti-nuclear anything grounds.

Risk is not supposed to be something that is determined intuitively. Billions have been spent on site characterization, model development and analysis. The models are undoubtedly imperfect, but they are credible and offer valuable insight into the actual risks of potential courses of action. I find it offensive that USDOE chooses to ignore the results of their own analysis and builds a \$12B vitrification plant that will have absolutely no effect on risk.

I hope my comment can become part of the public comment record for the tank waste retrieval and treatment plan. Thank you.

Ecology Response:

The Washington State Department of Ecology (Ecology) offers the following explanation. Several risk assessments have shown the impacts to future human health and the environment from leaving the 53 million gallons of highly radioactive mixed waste in the tanks are significant. These risk assessments have shown that 195 million curies of radioactive elements and 190,000 tons of chemicals are a threat to the groundwater, future groundwater users for many thousands of years, and eventually the Columbia River. Many of the constituents (like technetium-99 and iodine-129) are very pervasive, long-lived, and mobile in the environment.

One such risk assessment is the Tank Waste Remediation System Environmental Impact Statement (EIS), which was co authored by Ecology and was performed by an independent contractor.

This EIS indicated that the impacts from not remediating the tank waste would result in groundwater concentrations many times greater than the federal drinking water standards for thousands of years (DOE-EIS-0189, 1996, Pages 5-23 through 5-26 and Table 5.14.1 *Tank Waste Remediation System, Hanford Site, Richland, Washington, Final Environmental Impact Statement*, United States Department of Energy and Washington State Department of Ecology, Richland, Washington).

Other documents that indicate similar results include DOE/ORP-2005-01, 2006, *Initial Single Shell Tank Performance Assessment for the Hanford Site*, Revision 0, United States Department of Energy, Office of River Protection, Richland, Washington and DOE/ORP-2008-01, 2008, *RCRA Facility Investigation for Hanford Single Shell Tank Waste Management Areas*, Revision 0, United States Department of Energy, Office of River Protection, Richland, Washington.

See the following link and Appendix N for conclusions and results to future groundwater impacts: http://wrpstoc.com.s59537.gridserver.com/resources/rfi_report_tier_2.

Currently, the groundwater monitoring data demonstrates waste from past tank leaks has had significant groundwater impacts. The groundwater under the tank farms has already been contaminated with sulfate, cyanide, chromium, uranium, tritium, iodine-129, and technetium-99. All the tank farm waste management areas have groundwater concentrations of one or more constituents at levels many times the drinking water standards. All of the following examples are well above the drinking water standard of 900 pCi/liter for technetium-99 (DOE/RL-2006-01 *Hanford Site Groundwater Monitoring for Fiscal Year 2007*).

- The T-TX-TY tank farm area has groundwater concentrations as high as 25,000 pCi/L.
- SX tank farm has groundwater concentrations as high as 41,000 pCi/L.
- B-BX-BY tank farm area has groundwater concentrations as high as 46,000 pCi/L.
- C farm area has groundwater concentrations as high as 6,000 pCi/L.

Ecology has looked at the current groundwater concentrations, the modeling of future impacts, and the risk information. We also had outside experts review the material. We believe there is a substantial risk from the tank waste if it is left unmitigated in the tanks.

For technologies like in-situ vitrification, the science has not developed far enough to prove that the waste will be completely immobilized. In addition, there would be no pretreatment step which would remove most of the radionuclides from the Hanford site.

Federal Land Disposal Restrictions require that High Level Waste be vitrified to meet the treatment standards, and the Nuclear Waste Policy Act requires that the high level fraction be removed and disposed in a deep geologic repository.

An in-situ vitrification alternative would not meet the legal requirements for deep geologic disposal and could not be proved to be homogeneously vitrified (DOE-EIS-0189, 1996, Pages 6-22 and 6-25).

Comment 4:

Mike Fox, Ph.D.
mike@foxreport.org
Submitted via e-mail

I support these observations by Marty Bensky completely.

Ecology Response:

Comment noted. Please see Ecology's response to Mr. Bensky, Comment 3, pages 5-7.

Comment 5:

Gerald Woodcock, MBA
pilotmba@verizon.net
Submitted via e-mail

I have worked at Hanford for thirty years, recently retired. I am familiar with Hanford's problems and, more importantly, the public's perceptions of them. As a trained analyst, I can state with credibility that the public's perceptions of the threats posed by Hanford's inventories of wastes is vastly out of proportion to any science-based, objectively quantified assessment of them. Ask any competent scientist who has worked here for years -- raised his children, paid his mortgage, made friends, kept pets, boated on the Columbia River, etc. etc. etc. in this area. The idea that the wastes still remaining in the tanks at this point pose some sort of dire threat to the health of the surrounding population is nothing more than bloody-minded, fear-mongering, sensationalistic nonsense. Mr. Bensky's assessment of the matter is absolutely correct.

But there is no need to take his word for it, or Dr. Fox's, or mine. Conduct your own investigation, but with this caveat: It must be done by legitimate, competent scientists with no bias and no "hidden agenda." If you are not willing to conduct such a study or to accept the conclusions of the study cited by Mr. Bensky, then the WRONG DECISIONS will be made.

As has been pointed out, Real, true risk is not arrived at by intuition, or gut feel, or any political process. It is arrived at by solid science – “probabilistic risk assessment.” Any other approach is wrong, and will lead to wrong conclusions. And that, we can no longer afford.

Ecology’s Response:

The Washington State Department of Ecology (Ecology) offers the following explanation. Several risk assessments and current groundwater monitoring data show a real threat to human health and the environment from the wastes remaining in the tanks un-mitigated. Please see Ecology’s response to Mr. Bensky, Comment 3, pages 5-7.

Summary of Public Involvement Actions

A public notice announcing the comment period was mailed to approximately 900 interested members of the public. A public announcement legal classified advertisement was placed in the Tri-City Herald on April 19, 2009. A notice announcing the start of the public comment period was sent to the Hanford Information email list serv. The public information repositories located in Richland, Spokane, Seattle, and Portland received:

- Public notice.
 - Transmittal letter.
 - Statement of Basis for the proposed modification.
 - Draft Permit Modification.
-

Attachments

1. Comment letters.
2. Public notice.
3. Public announcement classified advertisement.
4. Hanford Information email list serve notice.
5. Ecology letter documenting permit decision.

From: Jeanne Raymond [mailto:raymondj@peak.org]
Sent: Thursday, February 05, 2009 1:40 PM
To: Carlson, Annette (ECY)
Subject: Re: THE DEPARTMENT OF ECOLOGY ANNOUNCES A 45-DAY PUBLIC COMMENT PERIOD FOR MODIFICATIONS TO THE WASTE TREATMENT AND IMMOBILIZATION PLANT PERMIT

To: Annette Carlson,

Comments on the modification to the waste treatment and immobilization permit.

Because I am concerned that the number one priority are the goals of closing Hanford as a nuclear repository, and of eliminating the contamination; I would like to have the following questions answered:

1. Could this proposed permit modification of an onsite facility allow nuclear waste to enter the ground water? If so, the permit should be denied.
2. Does this pre-treatment facility in anyway prolong or negate the goal of closing Hanford to all nuclear waste? If so, the permit should be denied.
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5. Where would the decontaminated waste be removed to after the twenty four hours?
6. Where will the decontaminated waste be removed to since there still is no National Nuclear Waste Repository?

Denial of the permit would be necessary if any of the questions above were not answered in a way that assured the permanent cleanup and closure of Hanford as a nuclear waste facility, as per the original agreement.

Thank you for the opportunity to comment.

Sincerely,
Jeanne Raymond
Corvallis, OR 97330

Responsiveness Summary
Permit Modification
July 2009
Permit Number: WA 7890008967
Attachment 1

From: marionmoos [mailto:marionmoos@icehouse]

Sent: Friday, February 06, 2009 4:33 PM

To: Carlson, Annette (ECY)

Subject: Re: THE DEPARTMENT OF ECOLOGY ANNOUNCES A 45-DAY PUBLIC COMMENT PERIOD FOR MODIFICATIONS TO THE WASTE TREATMENT AND IMMOBILIZATION PLANT PERMIT

Not so fast! I demand public hearings. Spokane, Wa.

From: Martin Bensky [mailto:mbensky@msn.com]
Sent: Friday, February 06, 2009 11:44 AM
To: McFadden, Daina (ECY)
Cc: ECY RE WEBMASTER; Annette Cary; Gary Troyer; Gerry Woodcock; Dave Ahrens; Mike Fox; Bill Farris; Skip Novakovich; Wanda Munn
Subject: Feedback via Ecology's Contact Us web page (NWP)

The announcement for public comment on tank waste retrieval states that retrieval and treatment of Hanford tank waste in the WTP will reduce the risk to human health and the environment. The only USDOE risk assessment I have seen does not say that at all, and I can legitimately conclude that retrieval and treatment poses greater risk than does sensible in-situ disposal of the tank waste. The only defensible argument for building the WTP is that it could become a valuable component in the Global Nuclear Energy Partnership (GNEP) system, a potentially important global system that is currently opposed by the United States on political, anti-nuclear anything grounds.

Risk is not supposed to be something that is determined intuitively. Billions have been spent on site characterization, model development and analysis. The models are undoubtedly imperfect, but they are credible and offer valuable insight into the actual risks of potential courses of action. I find it offensive that USDOE chooses to ignore the results of their own analysis and builds a \$12B vitrification plant that will have absolutely no effect on risk.

I hope my comment can become part of the public comment record for the tank waste retrieval and treatment plan. Thank you.

Martin Bensky
2121 Briarwood Ct.
Richland, WA 99354
(509)375-1704
mbensky@msn.com

Responsiveness Summary
Permit Modification
July 2009
Permit Number: WA 7890008967
Attachment 1

From: Mike Fox [mailto:mike@foxreport.org]

Sent: Friday, February 06, 2009 9:33 PM

To: Martin Bensky; McFadden, Daina (ECY)

Cc: ECY RE WEBMASTER; Annette Cary; Gary Troyer; Gerry Woodcock; Dave Ahrens; Bill Farris; Skip Novakovich; Wanda Munn

Subject: Re: Feedback via Ecology's Contact Us web page (NWP)

All:

I support these observations by Marty Bensky completely.

Michael R.Fox Ph.D.

From: Gerald Woodcock [mailto:pilotmba@verizon.net]
Sent: Sunday, February 08, 2009 5:27 PM
To: McFadden, Daina (ECY)
Cc: Martin Bensky; Mike Fox; ECY RE WEBMASTER; Annette Cary; Gary Troyer; Bill Farris; Skip Novakovich; Wanda Munn
Subject: Re: Feedback via Ecology's Contact Us web page (NWP)

I have worked at Hanford for thirty years, recently retired. I am familiar with Hanford's problems and, more importantly, the public's perceptions of them. As a trained analyst, I can state with credibility that the public's perceptions of the threats posed by Hanford's inventories of wastes is vastly out of proportion to any science-based, objectively quantified assessment of them. Ask any competent scientist who has worked here for years -- raised his children, paid his mortgage, made friends, kept pets, boated on the Columbia River, etc. etc. etc. in this area. The idea that the wastes still remaining in the tanks at this point pose some sort of dire threat to the health of the surrounding population is nothing more than bloody-minded, fear-mongering, sensationalistic nonsense. Mr. Bensky's assessment of the matter is absolutely correct.

But there is no need to take his word for it, or Dr. Fox's, or mine. Conduct your own investigation, but with this caveat: It must be done by legitimate, competent scientists with no bias and no "hidden agenda." If you are not willing to conduct such a study or to accept the conclusions of the study cited by Mr. Bensky, then the WRONG DECISIONS will be made. As has been pointed out, Real, true risk is not arrived at by intuition, or gut feel, or any political process. It is arrived at by solid science -- "probabilistic risk assessment." Any other approach is wrong, and will lead to wrong conclusions. And that, we can no longer afford.

Gerald Woodcock, MBA



Public Comment Period

Nuclear Waste Program

April 2009

Proposed Modification of the Waste Treatment and Immobilization Plant Permit

The Washington State Department of Ecology is proposing a permit modification to the *Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste for the Waste Treatment and Immobilization Plant (WTP)*. The proposed changes are located in Part III, Operating Unit 10 for the WTP.

Proposed Modification

The WTP is under construction. It is designed to treat dangerous and high-level radioactive waste in Hanford's aging underground tanks. Treating the waste will reduce risk to human health and the environment.

This proposal is one of several changes to the original permit. It allows the U.S. Department of Energy Office of River Protection to move ahead quickly and safely with WTP construction.

The proposed changes include the following:

- **Low-Activity Waste (LAW) Design Package LAW-018** addresses ancillary equipment for the LAW melter process system such as piping and instrumentation for the melters.
- **Pretreatment Facility (PTF) Design Package PTF-095** addresses the Pretreatment In-Cell Handling System decontamination soak tank and its jet pump and sparger. This allows failed equipment to be decontaminated for repair or replacement.
- **The document *Leak Detection Capability in the LAW Facility*** describes how the leak detection system will 1) detect the failure of primary containment structures and subsequent release of dangerous or mixed waste within twenty-four hours, and 2) detect accumulated liquids within twenty-four hours.
- **The document *Waste Removal Capability for the LAW Vitrification Facility*** describes how spilled or leaked waste and accumulated liquids will be removed from the secondary containment systems within twenty-four hours of detection.
- **The document, *Pipe Stress Design Criteria Including "Pipe Stress Criteria" and "Span Method Criteria"*** provides design criteria for piping throughout the WTP.
- Diagrams and data sheets for seven mechanical handling systems in the High-Level Waste (HLW) building and for two mechanical handling systems in the LAW building. The mechanical handling systems are used for securing, lifting, manipulating, transferring,

MORE INFORMATION

Public Comment Period

April 20 through June 5, 2009

Review of the Documents

Visit the Information Repositories listed on the back

or

Washington State Department of Ecology Nuclear Waste Program
3100 Port of Benton Blvd
Richland, WA 99354
(Call 509-372-7920 for an appointment.)

or

<http://www.ecy.wa.gov/program/s/nwp/commentperiods.htm>

To Submit Comments

Send comments by e-mail, U.S. mail, or hand-deliver them to:

Annette Carlson
3100 Port of Benton Blvd
Richland, WA 99354
anca461@ecy.wa.gov

Public Hearing

A public hearing is not scheduled, but if there is enough interest, we will consider holding one.

To request a hearing or for more information, contact

Annette Carlson
(509) 372-7897
anca461@ecy.wa.gov

Or call the Hanford Cleanup line at 800-321-2008

Nuclear Waste Program

April 2009

Proposed Modification (continued)

and in decontamination processes for containers of HLW and LAW glass.

- Piping and instrumentation diagrams for the HLW melter system film cooler utilities and mechanical drawings for the HLW melter assemblies.
- Instruments identified in the document System Logic Description for Low-Activity Waste Facility Melter Process (LMP) System were added to Permit Table III.10.H.C.

View the Full Proposal

This is a brief summary of the proposed changes. The full proposal is available beginning April 20, on Ecology's website at www.ecy.wa.gov/programs/nwp/index.html, or at one of the Hanford information repositories.

Hanford Information Repositories

Portland

Portland State University
Branford Price Millar Library
1875 SW Park Ave.
Attn: Don Frank 503-725-4709
Map: <http://www.pdx.edu/map.html>

Richland

U.S. Department of Energy Reading Room
Consolidated Information Center, Room 101-L
2770 University Dr.
Attn: Janice Parthree 509-372-7443
Map: <http://tinyurl.com/2axam2>

Spokane

Gonzaga University
Foley Center
502 E. Boone Ave.
Attn: Linda Pierce 509-313-3834
Map: <http://tinyurl.com/2c6bpm>

Seattle

University of Washington
Suzzallo Library
Government Publications Division
Attn: Eleanor Chase 206-543-4664
Map: <http://tinyurl.com/m8ebj>

Special accommodations: If you need this publication in an alternative format, call the Nuclear Waste Program at 509-372-7950. Persons with hearing loss, call 711 for Washington Relay Service. Persons with speech disability call 877-833-6341.



3100 Port of Benton Blvd
Richland WA 99354

Classified Legals

Public Comment Period for the Proposed Modification to the Waste Treatment and Immobilization Plant Permit-April 20 through June 5, 2009

The Washington State Department of Ecology invites you to comment on a proposed permit modification to the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste for the Waste Treatment and Immobilization Plant (WTP). The proposed changes are located in Part III, Operating Unit 10 for the WTP. The public comment period is from April 20 through June 5, 2009.

Proposed Modification

The WTP is under construction. It is designed to treat dangerous and high-level radioactive waste currently stored in Hanford's aging underground tanks. Treating the waste by putting it into a glass form will reduce risk to human health and the environment.

This proposal is one of several changes to the original permit. It allows the U.S. Department of Energy Office of River Protection to move ahead quickly and safely with WTP construction. The proposed changes include the following:

§ **Low-Activity Waste (LAW) Design Package LAW-018** addresses ancillary equipment for the LAW melter-process system such as piping and instrumentation for the melter.

§ **Pretreatment Facility (PTF) Design Package PTF-095** addresses the Pretreatment In-Cell Handling System decontamination soak tank and its jet pump and sparger. This allows failed equipment to be decontaminated for repair or replacement.

§ **The document, Leak Detection Capability in the LAW Facility** describes how the leak detection system will 1) detect the failure of primary containment structures and subsequent release of dangerous or mixed waste within twenty-four hours, and 2) detect accumulated liquids within twenty-four hours.

§ **The document, Waste Removal Capability for the LAW Vitrification Facility** describes how spilled or leaked waste and accumulated liquids will be removed from the secondary containment systems within twenty-four hours of detection.

§ **The document, Pipe Stress Design Criteria Including "Pipe Stress Criteria" and "Span Method Criteria"** provides design criteria for piping throughout the WTP.

◆ **§ Diagrams and data sheets for seven mechanical handling systems in the High-Level Waste (HLW) building and for two mechanical handling systems in the LAW building.** The mechanical handling systems are used for securing, lifting, manipulating, transferring, and in decontamination processes for containers of HLW and LAW glass.

◆ **§ Piping and instrumentation diagrams for the HLW melter system film cooler utilities and mechanical drawings for the HLW melter assemblies.**

◆ **§ Instruments identified in the document, System Logic Description for Low-Activity Waste Facility Melter Process (LMP) System** were added to Permit Table II.10.H.C.

View the Full Proposal This is a brief summary of the proposed changes. The full proposal is available beginning April 20, 2009, on Ecology's website at www.ecy.wa.gov/programs/nwp/index.html. You can also go to the Hanford information repositories in Richland:

Richland
U.S. Department of Energy Reading Room
Consolidated Information Center, Room 101-L
2770 University Dr.
Attn: Janice Parthree
509-372-7443
Map: <http://tinyurl.com/2axam2>

To Submit Comments:
Send comments by e-mail, U.S. mail, or hand-deliver them to:

Annette Carlson
3100 Port of Benton Blvd
Richland, WA 99354
anca461@ecy.wa.gov

A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact Annette Carlson at (509) 372-7897, or at anca461@ecy.wa.gov. Or call the Hanford Cleanup line at 800-321-2008.

000697 4-19-2009

Williams, Tanya (ECY)

From: Carlson, Annette (ECY) [anca461@ECY.WA.GOV]
Sent: Monday, April 13, 2009 2:03 PM
To: HANFORD-INFO@LISTSERV.WA.GOV
Subject: Proposed Modification of the Waste Treatment and Immobilization Plant Permit Public Comment Period: April 20 through June 5

Proposed Modification of the Waste Treatment and Immobilization Plant Permit Public Comment Period

April 20 through June 5

The Washington State Department of Ecology is proposing a permit modification to the *Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Dangerous Waste Portion for the Treatment, Storage, and Disposal of Dangerous Waste for the Waste Treatment and Immobilization Plant (WTP)*. The proposed changes are located in Part III, Operating Unit 10 for the WTP. The public comment period is from April 20 through June 5, 2009.

Proposed Modification

The WTP is under construction. It is designed to treat dangerous and high-level radioactive waste currently stored in Hanford's aging underground tanks. Treating the waste by putting it into a glass form will reduce risk to human health and the environment.

This proposal is one of several changes to the original permit. It allows the U.S. Department of Energy Office of River Protection to move ahead quickly and safely with WTP construction.

The proposed changes include the following:

- **Low-Activity Waste (LAW) Design Package LAW-018** addresses ancillary equipment for the LAW melter process system such as piping and instrumentation for the melters.
- **Pretreatment Facility (PTF) Design Package PTF-095** addresses the Pretreatment In-Cell Handling System decontamination soak tank and its jet pump and sparger. This allows failed equipment to be decontaminated for repair or replacement.
- **The document, *Leak Detection Capability in the LAW Facility*** describes how the leak detection system will 1) detect the failure of primary containment structures and subsequent release of dangerous or mixed waste within twenty-four hours, and 2) detect accumulated liquids within twenty-four hours.
- **The document, *Waste Removal Capability for the LAW Vitrification Facility*** describes how spilled or leaked waste and accumulated liquids will be removed from the secondary containment systems within twenty-four hours of detection.
- **The document, *Pipe Stress Design Criteria Including "Pipe Stress Criteria" and "Span Method Criteria"*** provides design criteria for piping throughout the WTP.
- Diagrams and data sheets for seven mechanical handling systems in the High-Level Waste (HLW) building and for two mechanical handling systems in the LAW building. The mechanical handling systems are used for securing, lifting, manipulating, transferring, and in decontamination processes for containers of HLW and LAW glass.
- Piping and instrumentation diagrams for the HLW melter system film cooler utilities and mechanical drawings for the HLW melter assemblies.
- Instruments identified in the document, ***System Logic Description for Low-Activity Waste Facility Melter Process (LMP) System*** were added to Permit Table III.10.H.C.

View the Full Proposal

This is a brief summary of the proposed changes. The full proposal is available beginning April 20, 2009, on Ecology's website at www.ecy.wa.gov/programs/nwp/index.html. You can also go to one of the Hanford information repositories:

Hanford Information Repositories

Portland

Portland State University
Branford Price Millar Library
1875 SW Park Ave.
Attn: Don Frank 503-725-4709
Map: <http://www.pdx.edu/map.html>

Richland

U.S. Department of Energy Reading Room
Consolidated Information Center, Room 101-L
2770 University Dr.
Attn: Janice Parthree 509-372-7443
Map: <http://tinyurl.com/2axam2>

Spokane

Gonzaga University
Foley Center
502 E. Boone Ave.
Attn: Linda Pierce 509-313-3834
Map: <http://tinyurl.com/2c6bpbm>

Seattle

University of Washington
Suzzallo Library
Government Publications Division
Attn: Eleanor Chase 206-543-4664
Map: <http://tinyurl.com/m8ebj>

To Submit Comments:

Send comments by e-mail, U.S. mail, or hand-deliver them to:
Annette Carlson
3100 Port of Benton Blvd
Richland, WA 99354
anca461@ecy.wa.gov

A public hearing is not scheduled, but if there is enough interest, we will consider holding one.

To request a hearing or for more information, contact Annette Carlson at (509) 372-7897, or at anca461@ecy.wa.gov. Or call the Hanford Cleanup line at 800-321-2008.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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July 31, 2009

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Mr. John G. Lehew, III, President
CH2M HILL Plateau Remediation Company
P.O. Box 1500, MSIN: H6-03
Richland, Washington 99352

Re: Final Permit Decision on the April 20 through June 5, 2009, comment period for the
Hanford Waste Treatment and Immobilization Plant Dangerous Waste Permit (WTP Permit)

Dear Ladies and Gentlemen:

The purpose of this letter is to notify you of the Department of Ecology's (Ecology) final permit decision to modify the WTP Permit in Part III, Operating Unit Group 10, of the *Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste (WA78900008967)*.

Ms. Shirley J. Olinger, et al.
July 31, 2009
Page 2

During the public comment period, comments were received from five citizens. Comments are addressed in the enclosed Responsiveness Summary (Ecology Publication # 09-05-009) as required by Washington Administrative Code (WAC) 173-303-840(9). The Responsiveness Summary is available on the Ecology website at www.ecy.wa.gov/biblio/nwp.html.

The final permit modification package consists of the Responsiveness Summary, the Statement of Basis, and the WTP Permit. If you are receiving a copy of the WTP Permit on DVD or CD-ROM (see cc w/CD ROM, page 5), the disk will be mailed in a couple of weeks. We apologize for the delay. Additional copies of the WTP Permit will be provided on DVD or CD-ROM if requested.

For a list of the modifications incorporated into the WTP Permit, please see the enclosed Responsiveness Summary.

While the draft WTP Permit was out for public comment, Ecology administratively incorporated additional, per WAC 173-303-830(4)(a)(i) and (ii), Class 1 and ¹1 permit modifications into this final WTP Permit. Those modifications are listed below.

- 24590-PTF-PCN-ENV-06-017 Class 1 Modification updates mechanical data sheets for the Pretreatment Facility (PTF) inter- and after-condensers 24590-PTF-ME-TLP-COND-00002 and 24590-PTF-ME-TLP-COND-00003 in appendix 8.6.
- 24590-PTF-PCN-ENV-08-007 Class ¹1 Modification replaces four integrity assessments for the PTF secondary containment rooms from elevation -45' to elevation 56' with one integrity assessment (CCN: 193196, IA-3001630-000, Revision 0) in appendix 8.11.
- 24590-PTF-PCN-ENV-08-018 Class ¹1 Modification updates two Process Flow Diagrams for the PTF Waste Feed Evaporation Process System (FEP) in Appendix 8.1 and replaces eight Piping and Instrumentation Diagrams (P&IDs) with 20 source P&IDs for the PTF FEP in Appendix 8.2.
- 24590-PTF-PCN-ENV-08-019 Class ¹1 Modification updates P&IDs for the PTF Plant Wash and Disposal System in Appendix 8.2 of the Dangerous Waste Permit (DWP). This modification replaces 17 P&IDs with 18 new ones.
- 24590-PTF-PCN-ENV-08-025 Class ¹1 Modification updates the P&IDs for the PTF High Level Waste Lag Storage and Feed Blending System Utility Services – PSA Rack and Plant Wash Rack, in Appendix 8.2 of the DWP. This modification replaces five P&IDs with 27 new ones.
- 24590-PTF-PCN-ENV-08-026 Class ¹1 Modification provides updated P&IDs for the PTF Plant Wash and Disposal System in Appendix 8.2.
- 24590-PTF-PCN-ENV-08-027 Class ¹1 Modification updates the P&IDs for the PTF Treated Low Activity Waste (LAW) Concentrate Storage Process System, Utility Rack, Utility Services, and Pulse Jet Mixer System in Appendix 8.2 of the DWP. This modification replaces two P&IDs with seven new ones.

Ms. Shirley J. Olinger, et al.
July 31, 2009
Page 3

- 24590-PTF-PCN-ENV-08-032 Class ¹ Modification updates the P&IDs for the PTF Radioactive Liquid Waste Disposal System and the Ultrafiltration Process System to replace the current permit versions in appendix 8.2.
- 24590-PTF-PCN-ENV-08-033 Class ¹ Modification updates the P&IDs for the PTF FEP, Pulse Jet Ventilation System, Pretreatment Vessel Vent Process System, and Treated LAW Evaporation Process System in Appendix 8.2.
- 24590-WTP-PCN-ENV-06-010 Class 1 Modification updates *Engineering Specification for the Wet Electrostatic Precipitators* in Appendix 7.7.
- 24590-WTP-PCN-ENV-08-003 Class 1 Modification updates permit document *Materials for Ancillary Equipment* in Appendix 7.9.
- 24590-WTP-PCN-ENV-08-007 Class 1 Modification submits *RPP-WTP Compliance with Uniform Building Code Seismic Design Requirements (24590-WTP-RPT-ST-01-001, Revision 2)* to replace Chapter 4, Supplement 1.

The following changes were made to the layout of the WTP Permit since the last issuance.

- The WTP Permit appendices are now “incorporated by reference.” Recipients who are not required to view appendix documents will no longer receive the appendix documents. Only the Drawings and Documents Lists are included. The purpose of this change is to decrease the size of the WTP Permit. Recipients who are required to have full copies of the WTP Permit will receive copies of every appendix document.
- Many individual P&IDs were replaced with multiple enhanced P&IDs. The enhanced P&IDs provide a higher level of system detail. Please use the Drawings and Documents Lists for guidance to insert the new drawings and delete the old drawings in the applicable appendices. If the document or drawing is not on the Drawings and Documents List it should be removed and recycled.
- Drawings are provided in half-size (34x22 inch) format. This change is to reduce the WTP Permit size, cost, and maintenance. Two full-size (44x34 inch) copies of the WTP Permit were produced. One copy will be provided to the permittee, Bechtel National, Inc., and one copy will be in Ecology’s Nuclear Waste Program Resource Center.

In accordance with WAC 173-303-840(8)(b), this WTP Permit is effective August 31, 2009.

You have a right to appeal this WTP Permit. To appeal you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the “date of receipt” of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). “Date of receipt” is defined at Revised Code of Washington 43.21B.001(2).
- Include a copy of (1) the permit you are appealing and (2) the application for the permit.
- Serve and file your appeal in paper form. Please note that electronic copies are not accepted.

Ms. Shirley J. Olinger, et al.
July 31, 2009
Page 4

1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:	OR	Deliver appeal in person to:
Pollution Control Hearings Board P.O. Box 40903 Olympia, Washington 98504-0903		Pollution Control Hearings Board 4224 6 th Avenue Southeast Rowe Six, Building 2 Lacey, Washington 98504

2. To serve your appeal on the Department of Ecology

Mail appeal to:	OR	Deliver appeal in person to:
Washington State Department of Ecology Appeals Coordinator P.O. Box 47608 Olympia, Washington 98504-7608		Washington State Department of Ecology Appeals Coordinator 300 Desmond Drive Southeast Lacey, Washington 98503

3. Send a copy of your appeal to:

Mr. Ed Fredenburg
Department of Ecology
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, Washington 99354

If there are any questions, contact Ed Fredenburg at 509-372-7899.

Sincerely,



Jane A. Hedges
Program Manager
Nuclear Waste Program

trw:je
Enclosures

cc: See page 5

Ms. Shirley J. Olinger, et al.
July 31, 2009
Page 5

cc electronic w/enc:

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John Eschenberg, USDOE
Peter Garcia, USDOE
Lori Huffman, USDOE
Tony McKarns, USDOE
Gae Neath, USDOE
Woody Russell, USDOE
Don Sommer, USDOE
William Taylor, USDOE
Wade Woolery, USDOE
Barry Curn, BNI
Brad Erlandson, BNI
Peggy Fisher, BNI
Dennis Klein, BNI
Sandi Murdock, BNI
Suzette Thompson, FH

cc w/enc, hard copy:

Administrative Record: Waste Treatment Plant (TSD #H-0-08)
BNI Correspondence Control
Environmental Portal
USDOE Reading Room
USDOE-RL Correspondence Control
USDOE-ORP Correspondence Control
USEPA Region X
WRPS Correspondence Control

cc w/CD ROM:

Dave Bartus, EPA
Richard Campbell, EPA
Brad Erlandson, BNI
Stuart Harris, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Susan Leckband, HAB
Ken Niles, ODOE
Hanford Operating Record