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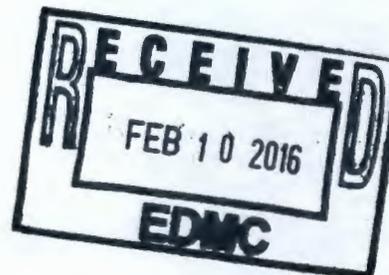


Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

16-ESQ-0034

FEB 08 2016

Ms. J. A. Hedges, Manager
Nuclear Waste Program
Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354



Dear Ms. Hedges:

RESPONSE TO THE DANGEROUS WASTE COMPLIANCE INSPECTION ON JUNE 3, 2015, AT THE 400 AREA WASTE MANAGEMENT UNIT (400 AREA WMU), RESOURCE CONSERVATION AND RECOVERY ACT SITE ID: WA7890008967, NUCLEAR WASTE PROGRAM COMPLIANCE INDEX NUMBER: 15.536

This is in response to your letter dated November 10, 2015, (15-NWP-200) regarding the 400 Area WMU compliance inspection that was performed on June 3, 2015. The 400 Area WMU is operated by CH2M HILL Plateau Remediation Company (CHPRC) for the U.S. Department of Energy Richland Operations Office (RL). RL and CHPRC have reviewed the alleged violations, concerns, and requested actions described in the referenced letter and are providing responses in the enclosed documents.

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As noted in the enclosures, the actions requested in your letter have been completed. Responses to the concerns identified in the inspection report are also provided.

If you have any questions, please contact me, or your staff may contact Jeffrey A. Frey, Assistant Manager for Safety and Environment, on (509) 376-7727.

Sincerely,

Stacy Charboneau
Stacy Charboneau
Manager

ESQ:ACM

Enclosures

cc: See page 2

Ms. J. A. Hedges
16-ESQ-0034

-2-

FEB 08 2016

cc w/encls:

D. B. Bartus, EPA
J. L. Boller, EPA
J. V. Borghese, CHPRC
J. W. Cammann, MSA
J. A. Ciucci, CHPRC
B. J. Dixon, CHPRC
E. Holbrook, Ecology
K. Niles, ODOE
C. P. Noonan, MSA
R. E. Piippo, MSA
J. B. Price, Ecology
R. R. Skinnarland, Ecology
R. T. Swenson, CHPRC
J. Temple, Ecology
M. J. Turner, MSA
J. F. Williams Jr., CHPRC
Administrative Record, S-4-2
Ecology Environmental Portal Hanford
Ecology NWP Library
Environmental Portal, LMSI, A3-95
HF Operating Record (J. K. Perry, MSA A3-01)

cc w/o encls:

G. Bohnee, NPT
S. Harris, CTUIR
R. Jim, YN

ENCLOSURE 1

**RESPONSE TO WASHINGTON STATE DEPARTMENT OF ECOLOGY
LETTER 15-NWP-200, DATED NOVEMBER 10, 2015**

Consisting of 5 pages including this coversheet

RESPONSE TO WASHINGTON STATE DEPARTMENT OF ECOLOGY
LETTER 15-NWP-200, DATED NOVEMBER 10, 2015

Requested Actions

Action Requested by Ecology: Within 60 days upon receipt of this compliance report, the U.S. Department of Energy Richland Operations Office (RL) and CH2M HILL Plateau Remediation Company (CHPRC) must request a permit modification, in accordance with Washington Administrative Code (WAC) 173-303-830 to revise the Permit Part III, Operating Unit Group 16, Addendum J, Contingency Plan, which must include the specific location of the emergency response kit, spill kit, and spill control equipment. In addition, the Fast Flux Test Facility (FFTF) Building Emergency Plan, HNF-IP-0263 should include the specific location of the emergency response kit, spill kit, and spill control equipment.

RL/CHPRC Response: RL/CHPRC are currently in compliance with the permit conditions. In accordance with Section I.E.2 of the permit, "...compliance with this Permit during its term constitutes compliance at those areas subject to this Permit for the purpose of enforcement with WAC 173-303-140, WAC 173-303-180, WAC 173-303-280 through -395, WAC 173-303-600 through -680, WAC 173-303-810, and WAC 173-303-830..." Nevertheless, the Class 1 permit modification process to provide additional information in the contingency plan was initiated on December 28, 2015, as permit change notice PCN-400WMU-2015-04, to be included in this quarter's Class 1 package (See Enclosure 2). The Building Emergency Plan is being revised to make the same changes.

Action Requested by Ecology: Within 30 days upon receipt of this compliance report, RL and CHPRC must submit a record to the 400 Area Waste Management Unit (400 Area WMU) operating record identifying the following deficiencies observed on inspection logs:

- Missing times of inspections.
- Missing printed names and handwritten signatures of the inspector.
- Notations of the observations documented and missing dates and nature of any repairs or remedial actions taken.

RL/CHPRC Response: A Note to the File was submitted to the operating record for the 400 Area WMU on December 14, 2015, noting the deficiencies cited by Ecology.

Action Requested by Ecology: Within 60 days upon receipt of this compliance report, RL and CHPRC must submit to Ecology a copy of the record (noted above), which was submitted to the operating record and revised inspection logs (e.g., space to record times of inspection and space for comments) in accordance with the Permit, Part III, Operating Unit Group 16, Addendum I and Permit Condition 11.0.

RL/CHPRC Response: A copy of the notice to the operating record was provided to Ecology on December 17, 2015, (See Enclosure 3). The monthly Emergency Equipment inspection checklists were revised to include a place to record the time of inspection and are provided in Enclosure 4.

Concerns

Ecology Concern 1: The training record is not clear on whether Mr. McFee is functioning as a Sampler, well maintenance personnel, or both.

RL/CHPRC Response: Mr. McFee performs well maintenance and has not been assigned sampling duties at the 400 Area Waste Management Unit. If sampling becomes necessary at the 400 Area WMU, a person qualified in accordance with the Dangerous Waste Training Plant (DWTP) will be assigned to conduct the sampling.

Ecology Concern 2: The requirements associated with a Waste Management Representative are not clearly identified in the DWTP. Clarification on job duties and titles should be addressed within the DWTP and Addendum G in the Permit for the 400 Area WMU, to ensure personnel are properly trained.

RL/CHPRC Response: Duties and associated training to perform those duties are identified in the DWTP. It is agreed that the Waste Service Provider category is somewhat confusing to those not closely affiliated with the various services included. The category includes duties of waste management representatives, treatment, storage, and disposal representatives, and waste shippers. While not all waste service providers perform all three duties, all personnel are trained to the duties they do perform. In conjunction with ongoing discussions with Ecology regarding dangerous waste training, consideration will be given to clarifying job titles, duties, and associated training in DWTPs.

Ecology Concern 3: The (Contingency and Building Emergency) plans did not provide a description of emergency circumstances associated with waste sodium and NaK (e.g., fires and explosions) or a response to facility operation emergencies associated with the pressure in the argon gas system.

RL/CHPRC Response: Section J.3.2.4 of the contingency plan provides protective action responses to fires and explosions. Section J.3.2.3 indicates that evaluation by professionals did not identify potential emergency situations associated with pressure containing systems. The basis for Ecology's concern is not clear. High or low pressure in the argon system has not been deemed to present a credible emergency situation in and of itself. Argon is an inert gas and is used to prevent reaction of sodium and NaK with moisture. A total failure of the argon system would increase the potential for fire (an emergency that is addressed in the contingency plan). Nevertheless, Ecology's concerns will be evaluated by emergency preparedness and other subject matter experts to determine if more specificity is needed in the contingency plan and/or Building Emergency Plan.

Ecology Concern 4: The annual inspection of the argon gas system as noted in this compliance report is not specifically described in the FFTF Surveillance and Maintenance (S&M) Plan. The criteria for reviewing and maintaining the argon gas system in the FFTF, other than what is checked weekly at the Dewar Pad and in Building 403 (FSF), is not clearly defined in the FFTF S&M Plan. Weekly inspections take place at the Dewar pad gauge and FSF containers, while

annual inspections are conducted for the rest of the argon gas system associated with FFTF does not meet the intent of WAC 173-303-320, General Inspections. The constant need to replace the argon gas supply and the inventory of 6,000 to 15,300 gallons of radioactively contaminated sodium residual in FFTF leads to concerns regarding the inspection frequency and maintenance procedures for the argon gas system.

RL/CHPRC Response: The objectives of the FFTF S&M phase are to “ensure adequate containment of any contaminants left in place, to provide physical safety and security controls, and to maintain and monitor the facility in a manner that will present no significant risk to human health or the environment until final disposition of the facility is completed.” The purpose of the S&M Plan is to identify what needs to be done to achieve the objective rather than to provide specific descriptions of surveillance and maintenance activities. A low pressure argon (2 inches to 27 inches wg) is supplied to most sodium and cover gas systems throughout the plant. The probability of a hazardous condition is minimized due to the very low pressure of the argon supply, the very high quality (nearly all welded) of the sodium and cover gas piping, and the natural diffusion of the argon into the atmosphere. Because of the density of argon gas, the potential of leaking argon to pockets exists in the lowest areas of the plant. High pressure may cause equipment damage. Low pressure may allow oxygen in-leakage to sodium wetted piping and components. Alarms provide early indication of problems with high or low argon pressure in the system. The weekly requirement for checking pressure in the Dewars at the FSF is sufficient to detect and prevent threats to human health and the environment associated with the WMU. It should be noted that the need to replace argon is related to boil off of argon due to heat transfer across the Dewar insulation and venting to maintain Dewar pressure normal. No actions are determined to be warranted at this time.

Ecology Concern 5: Details and concerns regarding the 400 Area WMU, Addendum H, Closure Plan are described in the Ecology compliance report No. 11.344. The 400 Area WMU closure plan was last revised in June 30, 2009. The Permit, Part III, Addendum H, Closure Plan, dated June 30, 2009, also does not mention or specifically describe elemental sodium or NaK.

RL/CHPRC Response: A tentative agreement for a Tri-Party Agreement (TPA) milestone for closure of the 400 Area WMU has been signed by Ecology and RL. Assuming that the agreement is ratified after public review, closure will be completed in accordance with that schedule. Planning for meeting the closure date will establish more specific closure approaches and details. It will be appropriate to develop a permit modification request to incorporate the changes suggested by Ecology at that time.

Ecology Concern 6: The 2013 Land Disposal Restrictions (LDR) Report states the current inventory of Mixed Waste (MW) at the 400 Area WMU is 1.9 cubic meters with no projected generation of MW from 2014-2018. The 2013 LDR report further identifies characterization of the MW as completed and the treatment process to be utilized is deactivation and conversion to sodium hydroxide. The report also identifies the TPA Milestone M-92-09 as related to the waste in the 400 Area WMU and states “Treatment is planned to begin after 2018.” The TPA Milestone M-92-09 states the following:

Establish milestones and/or target dates if needed for acquisition of new facilities, modifications of existing facilities, and I or modification of planned facilities necessary for storage, treatment, processing, and disposal of Hanford site sodium. Due Date: September 30, 2018.

RL and CHPRC have not addressed the differences between bulk sodium stored on the Hanford Site and the residual elemental sodium and NaK (debris sodium) that remains in core component pots (CCP), tubing, etc., being stored in the 400 Area WMU. The extraction of the elemental sodium and NaK from the CCPs, tubing, etc., were not completed before being placed in storage in the 400 Area WMU. How RL and CHPRC plan to extract the MW debris sodium and convert it to sodium hydroxide appears to have not been fully addressed. Furthermore, the treatment or transfer of the MW in the 400 Area WMU is directly related to the closure of the unit group. The DWMU FSF last receipt of MW was approximately 2006, while the Dangerous Waste Management Unit Interim Storage Area last receipt of MW was approximately 2009.

RL/CHPRC Response: Consideration will be given to revise the 2016 LDR report if the tentatively agreed closure milestone is finalized. Refer to RL/CHPRC Response to Ecology Concern 5.

Ecology Concern 7: The Permit, Part III, Operating Unit Group 16, Addendum G, Personnel Training, is a matrix of job titles, positions, and training categories that do not clearly indicate compliance with WAC 173-303- 330 or Permit Condition II.C for personnel training. The DWTP referred to in Addendum G is not the same title as the DWTP, PRC-STD-TQ-40236. RL and CHPRC should revise Addendum G and refer specifically to the DWTP, PRC-STD-TQ-40236.

RL-CHPRC Response: The permit simply says "Refer to the 400 Area WMU Dangerous Waste Training Plan (DWTP) for a complete description." That seems more like a generic description than a specific title. However, RL/CHPRC will consider changing the language in Addendum G via a Class 1 permit modification request to reflect the title of the DWTP. Alternatively the title of the DWTP could be changed to be consistent with the Permit language. Given the current discussions with Ecology over dangerous waste training, such changes may be deferred pending the outcome of those discussions.

ENCLOSURE 2

CLASS 1 PERMIT MODIFICATION REQUEST
PERMIT CHANGE NOTICE PCN-400WMU-2015-04

Consisting of 2 pages including this coversheet

From: Martin, Paul W - CHPRC
Sent: Monday, December 28, 2015 2:35 PM
To: 'sitewidemods@ecy.wa.gov'
Cc: Perry, Jon K; Long, Robert L Jr; Collins, Michael L; Kosjerina, Sasa; Engelmann, Richard H; Turlington, Daniel R
Subject: Request for Microsoft Word Copies of Permit Files for the 400 Area WMU

Jennifer,

- Permit Change Notice number

PCN-400WMU-2015-04

- Point of contact for the modification (provide names, emails, and phone numbers for both contractor and DOE).

Paul Martin, Paul W Martin@rl.gov, 376-6620
Jon Perry, Jon K Perry@rl.gov, 376-4791
Robert Long, Robert.Long@rl.doe.gov, 376-7754

- A list of the files to be modified

WA7890008967, Part III Operating Unit 16, 400 Area Waste Management Unit, Addendum J, Contingency Plan, Table J.1

- Proposed modification date

March 31, 2016

- Modification class

Class 1

Thanks!

Paul W. Martin
RCRA Subject Matter Expert
CHPRC Environmental Protection
Phone (509) 376-6620 / Cell 531-4489 / Fax 373-3891
Paul W Martin@RL.Gov

CH2MHill Plateau Remediation Company

ENCLOSURE 3

DOCUMENTATION OF NOTE TO 400 AREA WMU OPERATING RECORD

Consisting of 4 pages including this coversheet

RECEIPT OF REGULATORY REQUESTED DOCUMENTS

TITLE: RESPONSE TO THE STATE OF WASHINGTON DEPARTMENT OF ECOLOGY (ECOLOGY) LETTER 15-NWP-200, "DANGEROUS WASTE COMPLIANCE INSPECTION ON JUNE 3, 2015 AT THE HANFORD SITE 400 AREA WASTE MANAGEMENT UNIT, RESOURCES CONSERVATION AND RECOVERY ACT (RCRA) SITE ID: WA7890008967, NWP: 15.536, ECOLOGY ALLEGED VIOLATION ITEM NUMBER 2

REGULATORY AGENCY: WASHINGTON STATE DEPARTMENT OF ECOLOGY (ECOLOGY)

DOE/RL: Cliff Clark/Mike Collins/Tony McKarns

CH2M HILL PRC REPRESENTATIVE: Joel F. Williams Jr.

INSPECTION NUMBER: 2015-051

ECOLOGY NWP NUMBER: 15.536

Requested Information:

Copies of "Note to File" dated December 14, 2015, 400 Waste Management Unit (2 copies - 4 page)

Note: The Ecology Letter 15-NWP-200 was sent by Ecology November 10, 2015, but "officially" received by DOE-RL/CHPRC on November 17, 2015.

Note: Submittal of the attached "Note to File" dated December 14, 2015 meets the intent of letter 15-NWP-200 from Ms. Nancy Ware, Ecology to Ms. Stacy Charboneau, Manager, USDOE-RL, "Dangerous Waste Compliance Inspection on June 3, 2015 at the Hanford Site 400 Area Waste Management Unit, Resources Conservation and recovery act (RCRA) Site ID: WA7890008967, NWP: 15.536, Compliance Issue Item 2 requires of submittal to the 400 Area Waste Management Unit operating record identifying the deficiencies 1) missing times, 2) missing printed names and handwritten signatures of the inspector, and 3) Notations of observations documented and missing dates and nature of any repairs or remedial action "within 30 days of receipt of the letter."

DOE-RL will submit a formal response letter to Ecology with the attached corrected compliance issue.

REPRESENTATIVE NAME AND TITLE:

(PRINT): Nancy Ware/Ecology

SIGNATURE: Nancy Ware

DATE: 12/17/2015

CHPRC REPRESENTATIVE NAME AND TITLE:

(PRINT): Joel Williams Jr/CHPRC

SIGNATURE: Joel Williams Jr

DATE: 12-17-2015

Operating Record for Treatment, Storage, and Disposal Units

Published Date: 02/26/15

Effective Date: 02/26/15

Appendix B - TSD-Unit Specific Operating Record Information

Record Date:

12/14/2015

Record Title:

Note to the file

Document No. (if applicable):

DANGEROUS WASTE OPERATING RECORD FOR
400 AREA WASTE MANAGEMENT UNIT

TSD Unit:

Note: if this cover sheet applies to more than one TSD-Unit please check all appropriate boxes.

- Nonradioactive Dangerous Waste Landfill
- 216-B-3 main Pond
- 216-B-3-3 ditch
- 216-A-29 Ditch
- 216-A-36B Crib
- 216-A-37-1 Crib
- 216-B-63 Trench
- 216-S-10 Pond and Ditch
- 241-CX Tank System
- B Plant
- Central Waste Complex (CWC)
- Hexone Storage & Treatment Facility
- Integrated Disposal Facility (IDF)
- Liquid Effluent Retention Facility & 200 Area Effluent Treatment Facility (LERF/ETF)
- Low-Level Burial Grounds (Trenches 31-34-94)
- Low-Level Burial Grounds (Other Locations)
- PUREX Plant
- PUREX Storage Tunnels
- T-Plant Complex
- Waste Encapsulation and Storage Facility (WESF)
- Waste Receiving and Processing Facility (WRAP)
- 207-A South Retention Basin
- 400 Area Waste Management Unit
- 600 Area Purgewater Storage and Treatment Facility

Submitted By
(print/sign/date):Brian J DixonBJD12/14/2015

- Electronic submittal: Submit Completed Appendix B and attached Operating Record information electronically to ^WSS Records Management.
- Hard Copy submittal: Submit Completed Appendix B and attached Operating Record information to DWF&RS Records, MSIN T1-41, using Site Form A-6005-152, *CHPRC Active Records Transmittal*.

Note to the File

December 14, 2015

**DANGEROUS WASTE OPERATING RECORD FOR 400 AREA WASTE MANAGEMENT
UNIT**

This Note to the File is to document that the 400 Area Waste Management Area inspection records completed prior to this date may have the following deficiencies as identified in Ecology's compliance inspection report transmitted via letter 15-NWP-200:

- Missing times of inspections.
- Missing printed names and handwritten signatures of the inspector.
- Notations of the observations documented and missing dates and nature of any repairs or remedial actions taken.