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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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August 31, 2017

17-NWP-113

Mr. Doug S. Shoop, Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: H5-60
Richland, Washington 99352

Mr. Ty Blackford, President and CEO
CH2M HILL Plateau Remediation Company
PO Box 1600, MSIN: A7-01
Richland, Washington 99352

Re: Administrative Order

Order Docket #	15343
Site Location	United States Department of Energy – Hanford Site, PUREX Plant, Building 202-A
EPA/State ID #	WA7890008967

Dear Mr. Shoop and Mr. Blackford:

The Department of Ecology (Ecology) has issued the enclosed Administrative Order requiring United States Department of Energy – Richland Operations Office and CH2M HILL Plateau Remediation Company to comply with:

- Chapter 70.105 Revised Code of Washington (RCW), Hazardous Waste Management Act
- Chapter 173-303 Washington Administrative Code (WAC), Dangerous Waste Regulations

If you have questions, please contact Edward Holbrook at (509) 372-7909 or edward.holbrook@ecy.wa.gov

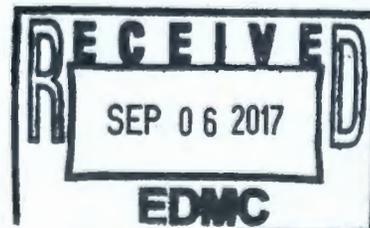
Sincerely,

John Price
Tri-Party Agreement Section Manager
Nuclear Waste Program
Richland Field office

Enclosures: (3)

By certified mail numbers: 70160750000007420052 – Shoop; 70160750000007420021 – Blackford

cc: See Page 2



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Mr. Shoop and Mr. Blackford

August 31, 2017

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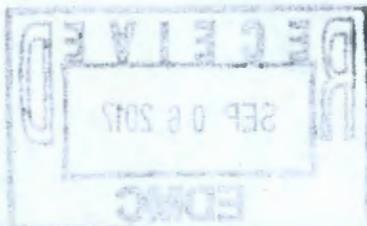
cc electronic w/enc:

Dave Bartus, EPA
Sheryl Bilbrey, EPA
Jack Boller, EPA
Lucy Edmondson, EPA
Dennis Faulk, EPA
Emy Laija, EPA
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Kevin Schanilec, EPA
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Edward Holbrook, Ecology
Jared Mathey, Ecology
John Price, Ecology
Darin Rice, Ecology
Ron Skinnarland, Ecology
Alexandra Smith, Ecology
Cheryl Whalen, Ecology
CHPRC Correspondence Control
Environmental Portal
Hanford Facility Operating Record
MSA Correspondence Control
USDOE-RL Correspondence Control

cc w/enc:

Matt Johnson, CTUIR
Jack Bell, NPT
Alyssa Buck, Wanapum
Rose Longoria, YN
Susan Leckband, HAB
Administrative Record
NWP Central File



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF AN) ADMINISTRATIVE ORDER
ADMINISTRATIVE ORDER) DOCKET # 15343
AGAINST)
UNITED STATES DEPARTMENT OF)
ENERGY AND CH2M HILL PLATEAU)
REMEDICATION COMPANY)

To: Mr. Doug S. Shoop, Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: H5-60
Richland, Washington 99352

Mr. Ty Blackford, President and CEO
CH2M HILL Plateau Remediation Company
PO Box 1600, MSIN: A7-01
Richland, Washington 99352

Order Docket #	15343
Site Location	United States Department of Energy – Hanford Site, PUREX Plant, Building 202-A
EPA/State ID #	WA7890008967

The Department of Ecology (Ecology) has issued this Administrative Order (Order) requiring Department of Energy – Richland Operations Office (USDOE-RL) and CH2M HILL Plateau Remediation Company (CHPRC) to comply with:

- Chapter 70.105 Revised Code of Washington (RCW), Hazardous Waste Management Act
- Chapter 173-303 Washington Administrative Code (WAC), Dangerous Waste Regulations

Chapter 70.105 RCW authorizes the Department of Ecology to issue Orders requiring compliance whenever it determines that a person has violated any provision of Chapter 70.105 RCW.

DETERMINATION OF VIOLATION(S) AND ORDER TO COMPLY

Ecology has determined that one or more violations have occurred based on the facts provided below.

For these reasons, and in accordance with RCW 70.105.095, it is ordered that USDOE-RL and CHPRC take the corrective actions listed after each violation. These corrective actions are required at the location known as Plutonium Uranium Extraction (PUREX) Plant, Building 202-A at the United States Department of Energy, Hanford Site.

Violations:

173-303-070(1) Purpose and applicability.

(a) This section describes the procedures for determining whether or not a solid waste is DW or EHW.

(b) The procedures in this section are applicable to any person who generates a solid waste, as defined in WAC 173-303-016, (including recyclable materials) that is not exempted or excluded by this chapter or by the department. Any person who generates a solid waste must determine if that waste is a dangerous waste by following the procedures set forth in subsection (3) of this section. Any person who determines by these procedures that their waste is designated DW or EHW is subject to all applicable requirements of this chapter.

(c) The requirements for the small quantity generator exemption are found in subsection (8) of this section.

173-303-070(3) Designation procedures.

(a) To determine whether or not a solid waste is designated as a dangerous waste a person must: (i) First, determine if the waste is a listed discarded chemical product, WAC 173-303-081; (ii) Second, determine if the waste is a listed dangerous waste source, WAC 173-303-082; (iii) Third, if the waste is not listed in WAC 173-303-081 or 173-303-082, or for the purposes of compliance with the federal land disposal restrictions as adopted by reference in WAC 173-303-140, determine if the waste exhibits any dangerous waste characteristics, WAC 173-303-090; and (iv) Fourth, if the waste is not listed in WAC 173-303-081 or 173-303-082, and does not exhibit a characteristic in WAC 173-303-090, determine if the waste meets any dangerous waste criteria, WAC 173-303-100.

(b) A person must check each section, in the order set forth, until they determine whether the waste is designated as a dangerous waste. Once the waste is determined to be a dangerous waste, further designation is not required except as required by subsection (4) or (5) of this section. If a person has checked the waste against each section and the waste is not designated, then the waste is not subject to the requirements of chapter 173-303 WAC. Any person who wishes to seek an exemption for a waste which has been designated DW or EHW must comply with the requirements of WAC 173-303-072.

(c) For the purpose of determining if a solid waste is a dangerous waste as identified in WAC 173-303-080 through 173-303-100, a person must either: (i) Test the waste according to the methods, or an approved equivalent method, set forth in WAC 173-303-110; or (ii) Apply knowledge of the waste in light of the materials or the process used, when: (A) Such knowledge can be demonstrated to be sufficient for determining whether or not it designated and/or designated properly; and (B) All data and records supporting this determination in accordance with WAC 173-303-210(3) are retained on-site.

Observations:

On April 28, 2016, the Washington State Department of Ecology conducted a Non-Financial Records Review inspection of the PUREX Plant and Storage Tunnels

(Compliance Index # 16.559). During this inspection, Ecology requested the following documents to review.

- Annual Scheduled Surveillance for 2015 Inspection Log
- Pressure Differential Monitoring (February 2016-April 2016) Inspection Log
- Data Sheet SM-20482 "CP S&M Monthly/Annual Emergency Equipment Inspections" (February 2016-April 2016) Inspection Log

Ecology received the requested documents and information on June 2, 2016.

The 2015 CHRPC inspection logs titled *Data Sheet 2 – PUREX Facility Surveillance Criteria* from the *Surveillance of PUREX Facility, CPSM-PRO-OP-50668 Revision 4, Change 0*, documented the existence of white powder at or near Tour Path 3 (May 7, 2015), Path 4 (May 7, 2015), and Path 7 (May 21, 2015), in the PUREX Plant Building 202-A. The notes made by the CHRPC inspector referred to photographs of white powder on the floor and on equipment at or near Tour Paths 3, 4, and 7.

On July 11, 2016, Ecology asked via email what repair or remedial actions were taken for the white powder documented at or near Tour Paths 3, 4, and Path 7. On August 18, 2016, Ecology received the following response from USDOE and CHRPC.

Additional investigation/data may be needed to determine if the white powder poses a hazard that requires additional action. Workspace air monitoring will be performed during the 2016 surveillance in the vicinity of the white powder to evaluate the need for additional controls to protect workers.

On September 19, 2016, Ecology met with USDOE and CHRPC to discuss details as to why no remedial actions were taken for the white powder discovered on PUREX Plant Tour Paths 3, 4, and 7. Information gathered during this meeting led to a subsequent request. Refer to Compliance Report Index # 16.559 for further details regarding the September 19, 2016 meeting.

On September 21, 2016, Ecology requested via email documentation and an explanation as to why the white powder at or near Tour Paths 3, 4, and 7 could not have been sampled and removed if sample results determined the white powder to be dangerous waste. On October 20, 2016, Ecology received the following response in part from USDOE and CHRPC.

...Hazardous materials and wastes were removed in accordance with the end point criteria and materials remaining in the P&O Gallery are identified in Appendix A of the PUREX S&M Plan. These sources do not provide any indication that the white powder (if determined to be a solid waste) would designate as a dangerous waste. The powder is in a safe and stable condition within the confines of the robust canyon structure of PUREX and does not constitute a threat to human health and the environment. In accordance with agreements established under the TPA, disposition of this material will be addressed during the CERCLA remedial action unless hazards to workers or the environment mandate an earlier removal action. The only sampling that will be

performed is industrial hygiene air sampling as identified in the Item 1 DOE-RL/CHPRC Response Attachment. Path 3 S&M annual inspection is not within a treatment, storage, or disposal (TSD) boundary as identified in the PUREX Part A Form, dated October 1, 2008...

...DOE-RL/CHPRC believes that the white powder is not a threat to the human health and the environment and removing the white powder could cause an ALARA issue by causing more contamination issues. Leaving the powder in place better protects the human health and the environment. This path and white powder is to be dealt with under CERCLA.

Complete responses for PUREX Plant Tour Paths 3, 4, and 7 are identified in the Ecology Compliance Report, Index # 16.559.

On November 16, 2016, Ecology sent Letter 16-NWP-198 and PUREX Plant and Storage Tunnels Compliance Report Index # 16.559 (Inspection Date April 28, 2016) to USDOE and CHPRC. The November 16, 2016 Compliance Report cited one violation that USDOE and CHPRC failed to determine whether or not a white powder found at or near Tour Paths 3, 4, and 7 in the PUREX Plant Building 202-A during the CHPRC 2015 annual surveillance, designated as a dangerous waste, in accordance with WAC 173-303-070(3). Ecology required the following action to return to compliance.

Action Required: *To determine if the white powder designates as a dangerous waste, within 60 days upon receipt of this compliance report, submit to Ecology a plan to sample the white powder discovered on Paths 3, 4, and 7 during the May 7, 2015 and May 21, 2015 inspections of the PUREX Plant. The plan must include requirements to sample the white powder discovered on Paths 3, 4, and 7 within 120 days of receipt of this compliance report and if the material designates as dangerous waste, follow the requirement established in the Dangerous Waste Regulations, Chapter 173-303 WAC.*

On February 8, 2017, Ecology received the USDOE response letter and enclosure, 17-ESQ-0028, *Response to Dangerous Waste Compliance Inspection on April 28, 2016, at The Plutonium Uranium Extraction (PUREX) Plant and Tunnels Resource Conservation and Recovery Act Site ID: WA7890008967, Nuclear Waste Program Compliance Index Number No.: 16.559.* The response letter stated the following.

In response to your letter dated November 16, 2016 letter (16-NWP-198), officially received in our office on November 28, 2016, the U.S. Department of Energy Richland Operations Office (RL) and CH2M HILL Plateau Remediation Company have reviewed the item identified as Noncompliant with Dangerous Waste Regulations cited by the Washington State Department of Ecology. The white powder (identified by Ecology as Non-compliant) has been determined by RL to be not within a Treatment, Storage, or Disposal Unit boundary as identified in the PUREX Resource Conservation and Recovery Act Part A application, dated October 1, 2008. The white powder identified is in a safe and stable condition within the confines of PUREX, has not been released to the environment, and

does not constitute a threat to human health and the environment. RL intends to leave the white powder in place until remediation of PUREX during the Comprehensive Environmental Response, Compensation, and Liability Act remedial action planned for the facility.

The *Enclosure: Response to Alleged Non-Compliances in 16-NWP-198* also states the following.

The white powder observed in Path 3 is in a safe and stable condition within the confines of the robust canyon structure of PUREX, has not been released to the environment, and does not constitute a threat to human health and the environment. Path 3 is located in a Radiological and Beryllium-Contaminated Controlled Area for As Low As Reasonably Achievable safety concerns. Path 3 is an area that is highly congested with equipment and piping, and difficult to maneuver through during inspections. The PUREX S&M Plan Procedure requires that the inspection teams stay within the designated path to minimize their exposure to radioactive and beryllium contamination. The only sampling that will be performed during annual surveillances is the industrial hygiene air sampling that is required in accordance with 10 CFR 851 and 10 CFR 820, 830, and 835, for protection of the workers who enter PUREX Facility to conduct the surveillance. Leaving the white powder in place until remediation of the PUREX structure better protects human health and the environment.

Although the response in the *Enclosure: Response to Alleged Non-Compliances in 16-NWP-198* was limited to Path 3, USDOE clarified on April 25, 2017, during the interview portion of Ecology's inspection, that there is no structural difference between Tour Path 3 and Tour Paths 4 and 7.

On April 19, 2017, Ecology sent response letter 17-NWP-045 to USDOE and CHPRC, stating "...The cited area of non-compliance has not returned to compliance."

On April 25, 2017, Ecology conducted a Focused Compliance Inspection – Closure Post Closure of the PUREX Plant and Storage Tunnels. During this inspection, Ecology requested the following documents to review.

- 2016 PUREX Annual Surveillance Package
- 2016 PUREX Annual Surveillance Package Photographs
- 2016 PUREX Annual Surveillance Open/Closed Items List
- Technical Procedure: Surveillance of PUREX Facility (Latest Revision) 2CP-SUR-A-04002 / CPSM-PRO-OP-50668

Ecology observed on the PUREX Tour Path 3 and Tour Path 4 inspection log (dated December 19, 2016) for occupational hazards criteria was marked "no" for not meeting the criteria. The "no" comment associated with the occupational hazards stated, "White Powder on floor in white room, coming from corrosion on pipes above Pic # 004, 006, 007, 009, 010, 011, 012, 013."

Ecology observed the PUREX Tour Path 7 inspection log (dated December 19, 2016) for occupational hazards criteria was marked "no" for not meeting the criteria. The "no" comment associated with the occupational hazards stated, "White powder build up Pic # 018, 051, L3 212, L3 215, L3 247."

The *PUREX Annual Surveillance 2016 SM-16-01124* issue table described actions taken or recommended for Tour Paths 3, 4, and 7 as follows.

Tour Path 3 and Tour Path 4: White powder on floor in white room coming from corrosion on pipes above. Sodium Nitrate – Plan to sample and dispose, develop package to implement repairs.

Tour Path 7: White Powder Buildup. BCA – IH needs to sample for lead.

On April 25, 2017, Ecology requested records of any documentation, schedules, work orders relating to the sampling and disposition of white powder on PUREX Tour Paths 3, 4, and 7. On May 31, 2017, Ecology received the following response related to this request from USDOE and CHPRC.

The only sampling that will be performed is the industrial hygiene air sampling required in accordance with 10 CFR 851 and 10 CFR 820, 830, and 835, for protection of workers who enter PUREX facility. Operations decided that leaving the white powder in place until remediation of the PUREX structure better protects human health and the environment.

Ecology did not receive documentation determining whether or not the white powder observed at or near PUREX Plant Tour Paths 3, 4, and 7 designated as a dangerous waste. Ecology also did not receive documentation identifying a plan or schedule to sample the white powder observed on PUREX Plant Tour Paths 3, 4, and 7 following the CHPRC 2015 and 2016 annual surveillance.

WAC 173-303-070(1), (3) – As identified in Ecology Compliance Report, Index # 16.559, Ecology observed inspection logs from the 2015 PUREX Plant and Storage Tunnels Annual Surveillance that documented the existence of white powder at or near Path 3 (May 7, 2015), Path 4 (May 7, 2015), and Path 7 (May 21, 2015). The notes made by the CHPRC inspector referred to photographs of white powder on the floor and on equipment at or near Tour Paths 3, 4, and 7. Ecology received no designation records for the white powder in responses received on August 18, 2016 or October 20, 2016 from USDOE and CHPRC, or during the September 19, 2016 meeting with USDOE and CHPRC.

USDOE and CHPRC failed to determine whether or not the white powder found at or near Tour Paths 3, 4, and 7 in the PUREX Plant during the 2015 annual surveillance, designated as a dangerous waste, in accordance with WAC 173-303-070(1), (3).

As identified in Ecology Compliance Report, Index # 17.589, Inspection Date April 25, 2017, USDOE and CHPRC failed to determine whether or not the white powder found at or near Tour Paths 3, 4, and 7 in the PUREX Plant, Building 202-A during the 2016 annual surveillance, designated as a dangerous waste, in accordance with WAC 173-303-070(1), (3). Ecology

requested and did not receive designation records for the white powder in the response received on May 31, 2017 from USDOE and CHPRC. Ecology also did not receive documentation identifying a plan or schedule to sample the white powder observed on PUREX Plant Tour Paths 3, 4, and 7 following the CHPRC 2015 and 2016 annual surveillance.

Corrective Action 1:

By October 31, 2017, submit to Ecology, designation results for the white powder identified at or near Tour Paths 3, 4, and 7 during the May 7, 2015, May 21, 2015 and December 19, 2016 CHPRC inspections of the PUREX Plant.

Corrective action 2:

For the white powder identified at or near Tour Paths 3, 4, and 7 during the May 7, 2015, May 21, 2015 and December 19, 2016 CHPRC inspections of the PUREX Plant; by November 15, 2017, submit to Ecology, for approval, a plan to recover and manage any solid waste that may be designated as dangerous waste in accordance with WAC 173-303.

Corrective Action 3:

If any of the white powder identified at or near Tour Paths 3, 4, and 7 during the May 7, 2015, May 21, 2015 and December 19, 2016 CHPRC inspections of the PUREX Plant designates as a dangerous waste, within 60-days of designation, recover and manage the dangerous waste in accordance with WAC 173-303. Within the 60-day period, if more time is needed to complete Corrective Action 3, a 30-day extension request may be submitted to Ecology for approval.

ELIGIBILITY FOR PAPERWORK VIOLATION WAIVER AND OPPORTUNITY TO CORRECT

Under RCW 34.05.110, small businesses are eligible for a waiver of a first-time paperwork violation and an opportunity to correct other violations.

Ecology has determined the requirements of RCW 34.05.110 do not apply to the violation(s) described in this Order because you are not a small business as defined in RCW 34.05.110 (9).

FAILURE TO COMPLY WITH THIS ORDER

Failure to comply with this Order may result in the issuance of civil penalties or other actions, administrative and/or judicial, to enforce the terms of this Order.

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do both of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel Road SW STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

CONTACT INFORMATION

Please direct all questions about this Order to:

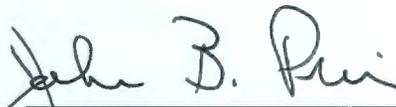
Edward Holbrook
Department of Ecology
Nuclear Waste Program – Richland Field Office
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Richland, WA 99354
(509) 372-7909
edward.holbrook@ecy.wa.gov

MORE INFORMATION

- **Pollution Control Hearings Board Website**
www.eho.wa.gov/Boards_PCHB.aspx

- **Chapter 43.21B RCW – Environmental and Land Use Hearings Office – Pollution Control Hearings Board**
<http://app.leg.wa.gov/RCW/default.aspx?cite=43.21B>
- **Chapter 371-08 WAC – Practice and Procedure**
<http://app.leg.wa.gov/WAC/default.aspx?cite=371-08>
- **Chapter 34.05 RCW - Administrative Procedure Act**
<http://app.leg.wa.gov/RCW/default.aspx?cite=34.05>
- **Chapter 70.105 RCW – Hazardous Waste Management**
<http://app.leg.wa.gov/RCW/default.aspx?cite=70.105>
- **Chapter 173-303 WAC – Dangerous Waste Regulations**
www.ecy.wa.gov/biblio/wac173303.html

SIGNATURE



John Price
Tri-Party Agreement Section Manager
Nuclear Waste Program
Richland Field Office

August 30, 2017
Date