



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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November 19, 2020

20-NWP-185

Brian T. Vance, Manager  
Richland Operations Office  
United States Department of Energy  
PO Box 550, MSIN: H5-30  
Richland, Washington 99352

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

Re: Dangerous Waste Compliance Inspection on June 24, 2020, at the 216-A-29 Ditch, 216-A-37-1 Crib, 216-A-36B Crib, 216-B-63 Trench, 216-S-10 Pond and Ditch, 216-B-3 Main Pond, 183-H Solar Evaporation Basin, 300 Area Process Trenches and Low Level Burial Grounds Green Islands – WMA 2, RCRA Site ID: WA7890008967, Nuclear Waste Program (NWP) Compliance Index No.: 20.704 through 20.712

Dear Brian T. Vance and Ty Blackford:

Thank you for your staff's time during the 216-A-29 Ditch, 216-A-37-1 Crib, 216-A-36B Crib, 216-B-63 Trench, 216-S-10 Pond and Ditch, 216-B-3 Main Pond, 183-H Solar Evaporation Basin, 300 Area Process Trenches and Low Level Burial Grounds Green Islands – WMA 2 inspection on June 24, 2020. The Department of Ecology's (Ecology) compliance report of this inspection is enclosed. The report cites no areas of non-compliance and no concerns.

Specific deficiencies or violations not listed in the enclosed compliance report do not relieve your facility from having to comply with all applicable regulations.

If you have questions or need further information, please contact me at (509) 492-1293  
jonathan.rogers@ecy.wa.gov.

Sincerely,

Jonathan Rogers  
Dangerous Waste Compliance Inspector  
Nuclear Waste Program

jr/tla  
Enclosure

cc: See page 2

Brian T. Vance and Ty Blackford  
November 19, 2020

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20-NWP-185  
200 Area Cribs, Ditches, Ponds and Trenches  
183-H, 300 APT, LLBG Green Islands WMA-2  
RCRA Site ID: WA7890008967  
NWP Compliance Index Nos.: 20.704-20.712  
Inspection Date: June 24, 2020

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Compliance Index File: 20.704  
through 20.712  
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Hanford Facility Operating Record  
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USDOE-ORP Correspondence  
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USDOE-RL Correspondence Control  
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580 square miles and is located in Benton County, Washington. This site is divided into distinct Dangerous Waste Management Units (DWMUs) which are administratively organized into “unit groups.” A unit group may contain only one DWMU or many; currently, there are 30 unit groups at the Hanford Site. Individual DWMUs make up a small portion of the Hanford Site. Additional descriptive information on the individual DWMUs is contained in unit group permit applications and in Parts III, V, and VI of the Hanford Facility RCRA Permit, Dangerous Waste Portion, WA7890008967, Revision 8C (hereafter referred to as the Permit).

### **Owner and Operator Information**

According to the respective Dangerous Waste Permit Application Part A Forms, 216-A-29 Ditch, 216-A-37-1 Crib, 216-A-36B Crib, 216-B-63 Trench, 216-B-3 Main Pond, 216-S-10 Pond and Ditch, and LLBG Green Islands are owned and operated by the United States Department of Energy (USDOE). CH2M Hill Plateau Remediation Company (CHPRC) is contracted by the USDOE to co-operate these units.

According to the respective Dangerous Waste Permit Application Part A Forms, the final status post-closure units 183-H Solar Evaporation Basins and 300 Area Process Trenches (300 APT) are owned and operated by the USDOE, and CHPRC is contracted by the USDOE to conduct groundwater monitoring for these units.

### **Facility Background**

In 2019, the United States Department of Energy Hanford Site reported as a Large Quantity Generator of hazardous waste on their Dangerous Waste Annual Report.

#### **216-A-29 Ditch**

The 216-A-29 Ditch is a man-made earthen percolation unit, regulated as an unlined (non-compliant) dangerous waste surface impoundment, located east of the 200 East Area. The ditch was used to manage chemical discharges from the separation and concentration processes at the Plutonium-Uranium Extraction (PUREX) Plant. Approximately 6,000,000 gallons of waste per day flowed to the ditch, which is estimated to be 6 ft. deep, 3,600 ft. long, and varies from 2-3 ft. depth in the south to approximately 16 ft. depth in the north. According to the *2019 Hanford Annual Groundwater Report*, the 216-A-29 Ditch is in Groundwater Quality and Assessment Monitoring.

#### **216-A-37-1 Crib**

The 216-A-37-1 Crib is an inactive, man-made earthen percolation unit, designated as an unlined (non-compliant) dangerous waste surface impoundment, located outside of the 200 East Area adjacent to the PUREX Plant. The crib was used for percolation of process condensate waste from the 242-A Evaporator. According to the *2019 Hanford Annual Groundwater Report*, the 216-A-37-1 Crib is in Indicator Evaluation and Detection Monitoring.

#### **216-A-36B Crib**

The 216-A-36B Crib is a man-made, subsurface liquid effluent disposal unit, designated as an unlined (non-compliant) surface impoundment, located south of the PUREX plant. The crib was used to manage process chemical waste from the PUREX plant. The design capacity of the

impoundment was 116,000 gallons per day. The nature and quantity of mixed waste (MW) is identified in the unit group's "Part A Form." According to the *2019 Hanford Annual Groundwater Report*, the 216-A-36B Crib is in Indicator Evaluation and Detection Monitoring.

### **216-B-63 Trench**

The 216-B-63 Trench is a non-operation, open, and man-made earthen percolation unit that is designated as an unlined (non-compliant) dangerous waste surface impoundment. The trench was used to receive emergency cooling water and chemical waste from the 221-B Canyon Building. According to the *2019 Hanford Annual Groundwater Report*, the 216-B-63 Trench is in Indicator Evaluation and Detection Monitoring.

### **216-S-10 Pond and Ditch**

The 216-S-10 Pond and Ditch are non-operation, open, and man-made earthen percolation units that are designated as unlined (non-compliant) dangerous waste surface impoundments. The pond and ditch was used to manage chemical discharges from separation and concentration processes at the Reduction Oxidation (REDOX) Facility. According to the *2019 Hanford Annual Groundwater Report*, the 216-S-10 Pond and Ditch is in Indicator Evaluation and Detection Monitoring.

### **216-B-3 Main Pond**

The 216-B-3 Main Pond treatment, storage, and disposal (TSD) unit is a non-operation, man-made earthen percolation unit that is designated as an unlined (non-compliant) dangerous waste surface impoundment. The 216-B-3 Main Pond consists of the 216-B-3 Pond and 216-B-3-3 Ditch. The Main Pond TSD was used to dispose of cooling water discharges from 200 East Area facilities (PUREX Plant and B Plant). Additional effluent sources included chemical discharges and steam condensates (PUREX, B Plant, 242-A Evaporator, 242-B Evaporator, 244-AR Vault, 244-BXR Vault, 244-CR Vault, BY Tank Farm, 241-A Waste Ventilation System Complex, 283-E Water Treatment Facility, and 284-E Powerhouse). According to the *2019 Hanford Annual Groundwater Report*, the 216-B-3 Main Pond is in Indicator Evaluation and Detection Monitoring.

### **183-H Solar Evaporative Basins**

The 183-H Solar Evaporation Basin consisted of four concrete basins used for waste treatment and disposal. The waste discharged to the basins originated in the 300 Area Fuel Fabrication Facility and included solutions of neutralized chromic, hydrofluoric, nitric, and sulfuric acid. Additional nonradioactive dangerous waste was discharged to the basins. The basin received mixed waste consisting primarily of liquid neutralized acid process waste designated as Extremely Hazardous Waste (EHW) (WT01), and also received nonradioactive dangerous waste of listed discarded chemical products of cyanide (P030), vanadium oxide (P120), and formic acid (U123). Approximately 2.6 million pounds of waste per year was treated. The deactivated water treatment basins received a maximum of approximately 400,000 gallons of wastewater per year and had a tank treatment design capacity of 700 gallons per day, treated by evaporation, and a tank treatment design capacity of 2,167,000 gallons across all four basins. Post-closure groundwater monitoring is being conducted as part of the interim remediation action for the 100-HR-3 Groundwater Operable Unit under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

### **300 Area Process Trenches**

The 300 Area Process Trenches received dangerous waste liquid discharges from research and developmental laboratories in the 300 Area and from the fuels fabrication process. Effluent from the process trenches did not have a discharge outlet and infiltrated the soil column or evaporated. The estimated annual quantity of both regulated and non-regulated wastewater discharged to the unit was 120 million gallons per year, and the process trenches were designed to percolate up to 3,000,000 gallons of wastewater per day. Waste in the trenches consisted of state-only toxic, dangerous waste (WT02), discarded chemical products (U210), corrosive waste (D002), chromium (D007), and spent halogenated solvent (F001, F002, F003). The trenches are under groundwater monitoring to meet corrective action requirements.

### **Low-Level Burial Grounds (LLBG) Green Islands WMA 2**

There are 24 radioactive solid waste burial grounds in the Central Plateau (200 Area). The burial grounds were constructed as individual trenches and there are a total of 333 trenches. Mixed waste was disposed at several locations within individual trenches. The name “Green Islands” is associated with these mixed waste locations because the areas of disposal are shown in the color of green on Hanford maps. It is not permissible to land dispose of dangerous or mixed waste without first treating to Land Disposal Restrictions (LDR). Additionally, dangerous waste must be placed in a landfill unit built specifically to contain dangerous waste. The LLBGs were not built to the standards of a dangerous waste landfill and fail to meet the technical standards of WAC 173-303-665 *Landfills, (2) Design and operating requirements*. According to the *2019 Hanford Annual Groundwater Report*, the LLBG Green Islands WMA-2 is in Indicator Evaluation and Detection Monitoring.

### **Compliance Background**

Deficiencies from inspections during the last two years are summarized below. A description of compliance background information prior to 2017 is located in the compliance background section in Compliance Index #18.636 through #18.644, dated June 27, 2018.

On June 5 and June 27, 2018, Ecology conducted an Operation and Maintenance (OAM) groundwater compliance inspection of the 183-H Solar Evaporation Basin. This compliance report cited the following area of non-compliance:

- Violation for failure to sample for total chromium and nitrate in CY2017 (Q1) and dissolved oxygen in CY2017 (Q3).

On June 20, 2019, Ecology conducted an OAM groundwater compliance inspection of the 216-A-29 Ditch unit group. This compliance report cited the following area of non-compliance:

- Violation for failure to sample for the parameter of ammonia in CY2018 (Q3).

### **Inspection Summary**

These OAM inspections include evaluation of groundwater monitoring requirements for unit groups operating to interim status standards and unit groups operating to final status standards. Due to the COVID-19 pandemic, no site visit was performed as part of this inspection. Documents

and records were requested to review and determine compliance, including well recovery notes, groundwater monitoring and sampling results, well maintenance records, well inspection records, and well reports.

### **Document Review**

As part of the document and information request, I asked if any new wells at the 200 Area Cribs, Ditches, Ponds, and Trenches, 183-H Solar Evaporation Basin, 300 APT, and LLBG Green Islands WMA-2 final status unit groups have been installed since CY2019 (Q4). I additionally asked if there are plans for the addition of new wells. In response, USDOE/CHPRC provided the following:

There have been no new wells added since Q4 CY2019. Well 699-43-43B is planned for the 216-B-3 Main Pond as a down-gradient well. This well is planned for the FY2020, but drilling has been delayed due to the Covid-19 pandemic.

### **Maintenance Records**

I requested and reviewed the following 2019 well maintenance records for wells at the 216-A-29 Ditch, 216-A-37-1 Crib, 216-A-36B Crib, 216-B-63 Trench, 216-S-10 Pond and Ditch, 216-B-3 Main Pond, 183-H Solar Evaporation Basin, 300 APT, and LLBG Green Islands WMA-2, including records of repair and service for all RCRA groundwater wells. I observed the following maintenance work was completed on the below list of wells and unit group locations:

#### **216-A-29 Ditch**

Work was completed on July 15, 2019 to test the well pump, bail the well, and tag the depth to bottom and depth to water of well 299-E25-35. Approximately 400 gallons of water was purged from the well and sediment removed from the well bottom.

#### **216-A-37-1 Crib**

Work was completed October 2, 2019 on well 299-E25-20 to relabel the well name/state ID.

#### **216-S-10 Pond and Ditch**

Work was completed to remove and modify the well cap with the lock still in place on well 299-W26-14. The work was completed on September 30, 2019. Additionally, work was completed to relabel well 299-W26-13 on June 10, 2019, and work was completed December 13, 2019 on well 299-W26-13 to repair the well sample port.

#### **300 APT**

Work was completed October 1, 2019 to repair a hole on the well casing of well 399-1-17A. Work was completed on well 399-1-16B on October 2, 2019, to repair cracks in the concrete well pad.

### **Groundwater Monitoring Records**

Groundwater monitoring is conducted and required at the 216-A-29 Ditch, 216-A-37-1 Crib, 216-A-36B Crib, 216-B-63 Trench, 216-S-10 Pond and Ditch, and 216-B-3 Main Pond in accordance with Permit Condition I.A and WAC 173-303 400(3) *Interim Status Standards*. I requested and reviewed 2019 RCRA groundwater monitoring requirements for each of these units.

### 216-A-29 Ditch

Interim status groundwater monitoring at the 216-A-29 Ditch is currently performed under the document DOE/RL-2016-23, Rev. 2, *Interim Status Groundwater Quality Assessment Monitoring Plan*, dated September 27, 2017, and includes monitoring objectives and sampling for the following: alkalinity, pH, temperature, specific conductivity, and turbidity. Routine sampling constituents include ammonia, calcium, chloride, chromium, iron, nitrate, magnesium, manganese, nickel, phenols, potassium, sodium, sulfate, total organic carbon, and total organic halogen, which are sampled quarterly.

I observed records of eight different groundwater monitoring wells: 299-E25-34, 299-E25-35, 299-E25-43, 299-E25-47, 299-E25-238, 299-E25-239, 299-E26-80, and 299-E26-13. These were all sampled at least quarterly for the required monitoring and sampling constituents. I also reviewed a random subsample of metals, semi-volatile organic compounds (SVOCs) and volatile organic compounds (VOCS) to verify quarterly sampling. I observed the eight wells listed above were all sampled at least quarterly for mercury, lead, chlorobenzene, phenacetin, and hexachlorobenzene.

### 216-A-37-1 Crib

I observed wells 299-E25-17, 299-E25-19, 299-E25-20, and 299-E25-47 were all sampled at least semi-annually for pH, specific conductance, total organic carbon, and total organic halogen. I did not observe any results above (and below for pH) the critical mean indicating an exceedance occurred in any wells. Wells 299-E25-17, 299-E25-19, 299-E25-20, and 299-E25-47 were sampled at least annually for iron, iron, manganese, chloride, phenols, sodium, and sulfate, and wells 299-E25-35 and 299-E25-95 were sampled quarterly for pH, specific conductance, total organic carbon, total organic halogen, iron, chloride, manganese, phenols, sodium, and sulfate.

### 216-A-36B Crib

I observed wells 299-E17-1, 299-E17-14, 299-E17-15, 299-E17-16, 299-E17-18, and 299-E17-19 were all sampled at least semi-annually for pH, specific conductance, total organic carbon, and total organic halogen. I did not observe any results above (and below for pH) the critical mean indicating an exceedance occurred. Wells 299-E17-1, 299-E17-14, 299-E17-15, 299-E17-16, 299-E17-18, and 299-E17-19 were sampled at least annually for iron, chloride, manganese, phenol, sodium, and sulfate.

### 216-B-63 Trench

I observed wells 299-E27-16, 299-E27-18, 299-E27-19, 299-E33-33, 299-E34-8, and 299-E34-12 were all sampled at least semi-annually for pH, specific conductance, total organic carbon, and total organic halogen. I did not observe any results above (and below for pH) the critical mean indicating an exceedance occurred. Wells 299-E27-16, 299-E27-18, 299-E27-19, 299-E33-33, 299-E34-8, and 299-E34-12 were sampled at least annually for iron, chloride, manganese, phenols, sodium, and sulfate.

### 216-S-10 Pond and Ditch

I observed wells 299-W26-13, 299-W26-14, 699-32-17, 699-33-75, and 699-33-76 were all sampled at least semi-annually for pH, specific conductance, total organic carbon, and total organic

halogen. I did not observe any results above (and below for pH) the critical mean indicating an exceedance occurred. Wells 299-W26-13, 299-W26-14, 699-32-17, 699-33-75, and 699-33-76 were sampled at least annually for iron, chloride, manganese, phenols, sodium, and sulfate.

### 216-B-3 Main Pond

I observed wells 699-42-42B, 699-43-45, and 699-44-39B were all sampled at least semi-annually for pH, specific conductance, total organic carbon, and total organic halogen. I did not observe any results below (or above for pH) the critical mean indicating an exceedance occurred. Wells 699-42-42B, 699-43-45, and 699-44-39B were sampled at least annually for iron, chloride, manganese, phenols, sodium, and sulfate, and well 699-44-43C was sampled quarterly for pH, specific conductance, total organic halogen, total organic carbon, chloride, iron, manganese, phenols, sodium, and sulfate.

### 183-H Solar Evaporation Basin

Groundwater monitoring is conducted at the 183-H Solar Evaporation Basin in accordance with Chapter 3.0 "Groundwater Monitoring" in the Hanford Facility RCRA Permit, Revision 8C. I observed wells 199-H4-8, 199-H4-84, and 199-H4-85 were sampled at least semi-annually for total chromium, nitrate, pH, specific conductance, temperature, dissolved oxygen, and turbidity. Wells 199-H4-88 and 199-H4-89 were sampled at least quarterly for total chromium, nitrate, pH, specific conductance, temperature, dissolved oxygen, and turbidity. I observed concentration results of total chromium were below the concentration limit of 48 µg/L in each sampling event at each well location. Nitrate sampling at well 199-H4-84 exceeded the concentration limit of 45 mg/L on March 7, 2019, May 1, 2019, and August 5, 2019. Additionally, nitrate sampling at well 199-H4-88 exceeded the concentration limit of 45 mg/L on March 7, 2019, May 1, 2019, August 5, 2019, November 8, 2019, and December 30, 2019.

### 300 APT

Groundwater monitoring is conducted at the 300 APT in accordance with Chapter 3.0 "Groundwater Monitoring" in the Hanford Facility RCRA Permit, Revision 8C. I observed down-gradient wells 399-1-10A, 399-1-10B, 399-1-16A, 399-1-16B, 399-1-17A, and 399-1-17B were sampled semi-annually for *cis*-1,2-Dichloroethene (DCE), trichloro-ethene, pH, specific conductance, temperature, and turbidity. Up-gradient wells 399-1-18A and 399-1-18B were sampled semi-annually for *cis*-1,2-DCE, trichloro-ethene, pH, specific conductance, temperature, and turbidity. At well 399-1-16B, I observed concentration results of *cis*-1,2-DCE exceeded the concentration limit of 16 µg/L during sampling on June 18, 2019, September 20, 2019, and December 12, 2019. Trichloro-ethene sampling results were below the concentration limit of 4 µg/L during each sampling event at each well location.

**Low-Level Burial Grounds (LLBG) Green Islands WMA 2**

I compared groundwater monitoring records for the LLBG Green Islands WMA-2 to the requirements in document ECF-Hanford-18-0079, Rev. 0, *Calculation of Critical Means for Calendar Year 2019 RCRA Groundwater Monitoring*, dated May 2019. I observed wells 299-E27-8, 299-E27-9, 299-E27-10, 299-E27-11, 299-E27-17, 299-E34-2, 299-E34-9, 299-E34-10, and 299-E34-12 were all sampled at least semi-annually for pH, specific conductance, total organic carbon, and total organic halides. Measurements taken for pH levels on May 8, 2019, June 23, 2019, and July 15, 2019 exceeded in well 299-E27-8. On May 8, 2019, pH measurement samples exceeded in wells 299-E27-9 and 299-E27-11. Additionally, pH measurements taken on June 21, 2019, exceeded in well 299-E34-12. Successive measurements for pH were obtained below the threshold during a second sampling at wells 299-E27-8, 299-E27-9, and 299-E27-11 on May 8, 2019, and July 15, 2019. Successive measurements for pH were obtained below the threshold during a second sampling at well 299-E34-12 on June 21, 2019.

**Well Inspection Records**

I requested and reviewed CY2019 groundwater monitoring well inspection records, including associated Well Concern Reports and Groundwater Sample Reports (GSRs). GSRs were completed for the below listed wells and unit groups on the following dates, and include inspection of well pumps (if installed) and depth to water measurements. The GSR completed on July 12, 2019 for well 299-E25-35 noted sediment collected at the bottom of the well, and a maintenance record was created to bail water from the well. The GSR completed on November 8, 2019 for well 299-W26-13 noted a damaged well sample port, and maintenance repair was completed on December 13, 2019. I observed each inspection record contained the date and time of the inspection, handwritten signature of the inspector, and notations of observations made.

**Table 1**  
**RCRA Well Pump Inspection and Water Depth Measurements**

<b>Unit Group</b>	<b>Well Number</b>	<b>Groundwater Well Pump Check Inspection and Depth to Water Measurement Dates</b>			
<b>216-A-29 Ditch</b>	299-E25-34	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-35	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-43	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-47	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-238	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-239	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E26-80	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E26-13	1/10/2019	4/11/2019	7/12/2019	10/7/2019

<b>216-A-37-1 Crib</b>	299-E25-17	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-19	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-20	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-47	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-35	1/10/2019	4/11/2019	7/12/2019	10/7/2019
	299-E25-95	1/10/2019	4/11/2019	7/12/2019	10/7/2019
<b>216-A-36B Crib</b>	299-E17-01	1/11/2019		7/16/2019	
	299-E17-14	1/11/2019		7/16/2019	
	299-E17-15	1/11/2019		7/16/2019	
	299-E17-16	1/11/2019		7/16/2019	
	299-E17-18	1/11/2019		7/16/2019	
	299-E17-19	1/11/2019		7/16/2019	
<b>216-B-63 Trench</b>	299-E27-16	1/10/2019		7/12/2019	
	299-E27-18	1/10/2019		7/12/2019	
	299-E27-19	1/10/2019		7/12/2019	
	299-E33-33	1/10/2019		7/12/2019	
	299-E34-08	1/10/2019		7/12/2019	
	299-E34-12	1/10/2019		7/12/2019	
<b>216-S-10 Pond and Ditch</b>	299-W26-13		5/6/2019		11/8/2019
	299-W26-14		5/6/2019		11/8/2019
	299-32-17		5/6/2019		11/8/2019
	299-33-75		5/6/2019		11/8/2019
	299-33-76		5/6/2019		11/8/2019
<b>216-B-3 Main Pond</b>	699-42-42B	1/7/2019	6/17/2019	9/19/2019	11/8/2019
	699-43-45	1/7/2019	6/17/2019	9/19/2019	11/8/2019
	699-44-39B	1/7/2019	6/17/2019	9/19/2019	11/8/2019
	699-44-43C	1/7/2019	6/17/2019	9/19/2019	11/8/2019
<b>183-H Solar Evap Basin</b>	199-H4-8	3/7/2019	5/2/2019	8/5/2019	11/8/2019
	199-H4-84	3/7/2019	5/2/2019	8/5/2019	11/8/2019
	199-H4-85	3/7/2019	5/2/2019	8/5/2019	11/8/2019
	199-H4-88	3/7/2019	5/2/2019	8/5/2019	11/8/2019
	199-H4-89	3/7/2019	5/2/2019	8/5/2019	11/8/2019

<b>300 APT</b>	399-1-10A		6/17/2019	9/19/2019	
	399-1-10B		6/17/2019	9/19/2019	
	399-1-16A		6/17/2019	9/19/2019	
	399-1-16B		6/18/2019	9/20/2019	
	399-1-17A		6/18/2019	9/20/2019	
	399-1-17B		6/18/2019	9/20/2019	
<b>LLBG Green Islands WMA 2</b>	299-E27-08		5/8/2019	11/5/2019	
	299-E27-09		5/8/2019	11/5/2019	
	299-E27-10		5/8/2019	11/5/2019	
	299-E27-11		5/8/2019	11/5/2019	
	299-E27-17		5/8/2019	11/5/2019	
	299-E34-02		5/31/2019	11/7/2019	
	299-E34-09		5/31/2019	11/7/2019	
	299-E34-10		5/31/2019	11/7/2019	
	299-E34-12		5/31/2019	11/7/2019	

I observed groundwater well pre-trip inspection records were completed for the below listed wells and unit groups on the following dates, and include well pump type (if installed). The groundwater well pre-trip inspection records performed did not note any deficiencies. I observed each inspection record contained the date and time of the inspection, the handwritten signature of the inspector, and notations of observations made.

**Table 2**  
**RCRA Well Pre-Trip Inspections**

<b>Unit Group</b>	<b>Well Number</b>	<b>Groundwater Well Pre-Trip Inspection Dates</b>			
<b>216-A-29 Ditch</b>	299-E25-34	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-35	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-43	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-47	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-238	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-239	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E26-80	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E26-13	1/8/2019	4/5/2019	7/1/2019	10/1/2019

<b>216-A-37-1 Crib</b>	299-E25-17	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-19	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-20	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-47	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-35	1/8/2019	4/5/2019	7/1/2019	10/1/2019
	299-E25-95	1/8/2019	4/5/2019	7/1/2019	10/1/2019
<b>216-A-36B Crib</b>	299-E17-01	1/5/2019		7/2/2019	
	299-E17-14	1/5/2019		7/2/2019	
	299-E17-15	1/5/2019		7/2/2019	
	299-E17-16	1/5/2019		7/2/2019	
	299-E17-18	1/5/2019		7/2/2019	
	299-E17-19	1/5/2019		7/2/2019	
<b>216-B-63 Trench</b>	299-E27-16	1/5/2019		7/2/2019	
	299-E27-18	1/5/2019		7/2/2019	
	299-E27-19	1/5/2019		7/2/2019	
	299-E33-33	1/5/2019		7/2/2019	
	299-E34-08	1/5/2019		7/2/2019	
	299-E34-12	1/5/2019		7/2/2019	
<b>216-S-10 Pond and Ditch</b>	299-W26-13		5/1/2019		11/5/2019
	299-W26-14		5/1/2019		11/5/2019
	299-32-17		5/1/2019		11/5/2019
	299-33-75		5/1/2019		11/5/2019
	299-33-76		5/1/2019		11/5/2019
<b>216-B-3 Main Pond</b>	699-42-42B	1/2/2019	6/8/2019	9/12/2019	11/5/2019
	699-43-45	1/2/2019	6/8/2019	9/12/2019	11/5/2019
	699-44-39B	1/2/2019	6/8/2019	9/12/2019	11/5/2019
	699-44-43C	1/2/2019	6/8/2019	9/12/2019	11/5/2019
<b>183-H Solar Evap Basin</b>	199-H4-8	2/28/2019	4/27/2019	8/1/2019	11/5/2019
	199-H4-84	2/28/2019	4/27/2019	8/1/2019	11/5/2019
	199-H4-85	2/28/2019	4/27/2019	8/1/2019	11/5/2019
	199-H4-88	2/28/2019	4/27/2019	8/1/2019	11/5/2019
	199-H4-89	2/28/2019	4/27/2019	8/1/2019	11/5/2019

<b>300 APT</b>	399-1-10A		6/10/2019	9/12/2019	
	399-1-10B		6/10/2019	9/12/2019	
	399-1-16A		6/10/2019	9/12/2019	
	399-1-16B		6/10/2019	9/12/2019	
	399-1-17A		6/10/2019	9/12/2019	
	399-1-17B		6/10/2019	9/12/2019	
<b>LLBG Green Islands WMA 2</b>	299-E27-08		5/1/2019	11/1/2019	
	299-E27-09		5/1/2019	11/1/2019	
	299-E27-10		5/1/2019	11/1/2019	
	299-E27-11		5/1/2019	11/1/2019	
	299-E27-17		5/1/2019	11/1/2019	
	299-E34-02		5/25/2019	11/1/2019	
	299-E34-09		5/25/2019	11/1/2019	
	299-E34-10		5/25/2019	11/1/2019	
	299-E34-12		5/25/2019	11/1/2019	

### Well 699-44-43C

As part of the document and information request, I asked if well 699-44-43C at the 216-B-3 Main Pond has been installed and certified. In response, USDOE/CHPRC provided the following:

This well was installed in August 2017 and first sampled in October 2017 as part of CY2017 Q4.

### Decommissioned Wells

I asked to be provided a list of decommissioned wells at the 200 Area Cribs, Ditches, Ponds, and Trenches, since CY2019 (Q1). USDOE/CHPRC provided the following response:

There have been no wells decommissioned since Q1 of CY2019.

### Interim Status Groundwater Monitoring Plans

I asked to be provided the final redlined versions of Interim Status Groundwater Monitoring Plans for the 216-A-37 Crib, 216-A-36B Crib, 216-B-63 Trench, 216-S-10 Pond, 216-B-3 Main Pond, and LLBG Green Islands WMA-2. These were requested to support review of applicable groundwater monitoring requirements of the interim status units. In response to this information request, USDOE/CHPRC provided the following response:

There were no redlined versions of the Interim Status Groundwater Monitoring Plans in 2019.

This concluded my review of information and documents for this Groundwater OAM inspection.

Compliance Problems
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<b>No areas of noncompliance were found during this inspection.</b>
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*To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 509-372-7950 or visit <https://ecology.wa.gov/accessibility>. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.*

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