



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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August 6, 2020

20-NWP-131

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 March 5, 2020, at Integrated Disposal Facility, RCRA Site ID: WA7890008967, Nuclear Waste Program (NWP) Compliance Index No.: 20.695

Dear Brian T. Vance and Ty Blackford:

Thank you for your staff's time during the Integrated Disposal Facility inspection on March 5, 2020. The Department of Ecology's (Ecology) compliance report of this inspection is enclosed. The report cites no area(s) of non-compliance and no concern(s).

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) 492-1610 or [kathy.conaway@ecy.wa.gov](mailto:kathy.conaway@ecy.wa.gov).

Sincerely,

*Kathleen Conaway*

Kathy Conaway  
Dangerous Waste Compliance Inspector  
Nuclear Waste Program

kc/tla  
Enclosure

cc: See page 2

Brian T. Vance and Ty Blackford  
August 6, 2020  
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20-NWP-131  
Integrated Disposal Facility  
RCRA Site ID: WA7890008967  
NWP Compliance Index No.: 20.695  
Inspection Date: March 5, 2020

cc electronic w/enc:

Dave Bartus, EPA  
Dave Einan, EPA  
Cheryl Williams, EPA  
Ben Harp, USDOE ORP  
Duane Carter, USDOE-RL  
Kathy Higgins, USDOE-RL  
Tony McKarns, USDOE-RL  
Brian Stetter, USDOE-RL  
Allison Wright, USDOE-RL  
Danielle Collins, CHPRC  
Bill Faught, CHPRC  
Barry Lawrence, CHPRC  
Linda Petersen, CHPRC  
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Compliance Index File: 20.695  
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Oliver Wang, Ecology  
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NWP RIM Coordinators, Ecology  
Environmental Portal  
Hanford Facility Operating Record  
CHPRC Correspondence Control  
MSA Correspondence Control  
TPA Administrative Record  
USDOE-ORP Correspondence  
Control  
USDOE-RL Correspondence Control  
USEPA Region 10 Hanford Field  
Office Correspondence Control

cc w/o enc:

Mason Murphy, CTUIR  
Jack Bell, NPT  
Laurene Contreras, YN

**Washington Department of Ecology  
Nuclear Waste Program  
Compliance Report**

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**Site:** Integrated Disposal Facility  
**RCRA Site ID:** WA789008967  
Inspection Date: March 5, 2020  
Site Contacts: Linda Petersen, Danielle Collins, CH2M HILL Plateau Remediation Company (CHPRC)  
Site Location: Hanford Site, 200 East Area  
At This Site Since: 2006  
Current Site Status: Treatment Storage, and Disposal Facility/ Large Quantity Generator

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**Ecology**

Lead Contact: Kathy Conaway

Phone: (509) 492-1610

Representatives: Jonathan Rogers, Oliver Wang

Report Date: August 6, 2020

NAICS #: 56221

Index #: 20.695

Report By: Kathy Conaway

*Kathleen Conaway*  
\_\_\_\_\_  
(Signed)

August 6, 2020  
(Date)

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**Site Location**

The Hanford Site was assigned a single United States Environmental Protection Agency (EPA) identification number, and is considered a single Resource Conservation and Recovery Act (RCRA) of 1976, as amended, facility even though the Hanford Site contains numerous processing areas spread over a large geographic area. The Hanford Site is a tract of land approximately 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**

The owner of the facility is United States Department of Energy, Office of River Protection (USDOE-ORP). The operator is CH2M HILL Hanford Group Inc.

**Facility Background**

In 2020, Integrated Disposal Facility (IDF) reported as a Large Quantity Generator of hazardous waste on their Dangerous Waste Annual Report.

The IDF location is within the Hanford Central Plateau, in the 200 East Area within the Hanford Site boundary. The site identified for the IDF is 68 hectares (168 acres) of vacant and uncontaminated land, located southwest of the Plutonium Uranium Extraction Plant in the 200 East Area. It is bounded on the south by 1<sup>st</sup> Street and on the north by 4<sup>th</sup> Street.

The IDF is an expandable, lined landfill located in the 200 East Area of the Hanford facility. The landfill design process includes a landfill liner system, Leachate Collection and Removal System (LCRS), and a leak detection system. The landfill divided lengthwise into distinct east and west cells. Both cells have a dangerous waste C-complaint liner system that consists of a composite geomembrane liner and geosynthetic clay liner system on the bottom area, and a single geomembrane on the side slope. The secondary liner consists of a composite geomembrane overlying a 3-foot-thick soil admix liner. The east cell is purposed for disposal of low-level radioactive waste outside the scope of the Resource Conservation and Recovery Act Permit (RCRA Permit). The west cell is purposed for disposal of Mixed Waste (MW). The west cell is approximately 223 meters wide, 555 meters long, and up to 14 meters deep. The cell has a disposal capacity of 450,000 m<sup>3</sup> for MW. Capacity includes layering four levels of vitrified low activity waste containers separated by 0.9 meters of soil.

The IDF also includes a less than 90-day accumulation area for storage of leachate in two tanks, one per landfill cell. The leachate storage tanks are located at the north end, in close proximity to the lined landfill. Each tank is protected by secondary containment (double lined tanks). Leak detection is provided by monitoring of the secondary containment. The collected leachate will be stored and sampled before transfer to an onsite Treatment Storage and Disposal (TSD) unit or approved offsite TSD facility. The less than 90-day storage leachate collection tank operates in accordance with the generator provisions of WAC 173-303-200 and WAC 173-303-640, as referenced by WAC 173-303-200.

The purpose of the IDF is to develop the capability for near surface disposal of Immobilized Low-Activity Waste (ILAW) packages from the River Protection Project Waste Treatment and Immobilization Plant (RPP-WTP). The IDF is essential in meeting the overall USDOE-ORP mission to retrieve, treat, and dispose of the highly radioactive Hanford tank waste in an environmentally sound, safe, and cost-efficient manner. The IDF will always provide capacity for disposal of mixed low-level waste (MLLW) and low-level waste (LLW). IDF operational activities (including decontamination, cleanup, and maintenance) will generate a small amount of waste. Waste that can meet IDF waste acceptance without treatment will be buried at IDF. All other IDF operational waste will be managed pursuant to WAC 173-303-200 and either sent to a 90-day accumulation area or directly to another permitted TSD for treatment. Treated IDF operational waste will either be buried at IDF or sent to another permitted Hanford TSD for final disposition.

### **Compliance Background**

Ecology compliance performed an inspection of IDF on January 7, 2015, Index # 14.508. The inspection report had no findings or concerns. This facility has been in a state of “pre-active life” and has not actively stored or managed waste. There is a class 3 permit modification submitted for public comment to allow the IDF to accept waste and actively manage waste.

Ecology performed a compliance inspection of IDF on November 18, 2014, index number 14.510. The inspection report produced no findings stating that the facility defined according to its permit as “pre-active life” status, recommending a five-year frequency for inspecting the facility. The report explained that until the Waste Treatment Plant (WTP) facility begins operation and treats high level radioactive tank waste, the IDF could remain in “pre-active life.

## **Inspection Summary**

On March 2, 2020, I sent an email to Linda Petersen and Danielle Collins (CHPRC Environmental Contacts), Dwayne Carter (USDOE-ORP Environmental Compliance), and Steve Szendre (Mission Support Alliance Inspection Coordinator), announcing a scheduled compliance evaluation inspection of the IDF. On March 5, 2020, Jonathan Rogers and I arrived at location 2750E/A-229 at 9:00 a.m. We began the inspection with introductions and signing an attendance roster. Twelve people, some with WRPS and some with USDOE, attended throughout the day's inspection. For a complete list of attendees, refer to the attendance roster below. Duane Carter and Brian Stetter represented USDOE. Mr. Carter and Mr. Stetter accompanied us on the inspection. Linda Petersen and Danielle Collins, the contacts for CHPRC environmental, the contractor managing the IDF, also accompanied us on the inspection.

- Carolyn Ervin, Engineer, Freestone.
- Barry Lawrence, Environmental Compliance Officer, CHPRC.
- Lorna Dittmer, Environmental Manager, CHPRC.
- Megan Manson, Engineer, CHPRC.
- Travis Creach, Field Work Supervisor Construction, CHPRC.
- Rex Flaucher, RM/CM, CHPRC.
- Danielle Collins, Inspection Coordinator, CHPRC.
- Linda Petersen, Inspection Coordinator, CHPRC.
- Chris Dehner, FWS, CHPRC.
- R. Havenor, Project Manager, CHPRC.
- Brian Stetter, Project Engineer, CHPRC.
- Bill Borlaug, ERDF/IDF Engineer Manager, CHPRC.
- Kathy Higgins, USDOE.
- Sean Sexton, Environmental Compliance Officer, CHPRC.
- Bill Faught, CAM, CHPRC.
- Duane Carter, Environmental, USDOE.
- Oliver Wang, Engineer, Ecology.
- Kym Tarter, Record Specialist, CHPRC.
- Tamara, Kerrone, Operations Support, CHPRC.

After introductions and settling into an overcrowded mobile building, Mr. Creach provided a thorough safety orientation for IDF, the construction site. He explained the Personal Protection Equipment (PPE) requirements, staging area location, and explained that the site was not a radiation area.

Next, the in-briefing began with the purpose of discussing the day's inspection and asking about the current process and status of IDF. I asked about the current Class 3 permit modification along with the leachate tanks and their collection system. Mr. Stetter and Mr. Carter explained that October 2022 ILAW was the target date for the WTP ILAW facility to make glass of low-level waste and mixed Low-Level Waste (LLW). Part of the permit modification is to allow both cells to accept mixed low-level waste. Currently, there are two cells, 24-acre in size, where one cell was designated LLW and other designated MW. Currently there is no waste stored in either cell. I asked about the two leachate tanks. Mr. Carter said there was non-regulated water present and was being used for dust suppression. Mr. Creach explained some of the activity area around the leachate tanks location were a pallet inspection area and a storage and treatment pad. These areas are soon to be constructed in the June-September 2020 period.

We decided to begin the outside field walk down. I said that we would like photos and Ms. Dittmer said photos are allowed and asked that we let them know when photos were taken so that they could take the same photo. After discussion, Ecology agreed to let CHPRC take all the photos. Our field portion required driving and walking. Because of the ongoing construction for sewer and water in areas, we followed the escorts of CHPRC and USDOE carefully.

We arrived at the leachate collection tanks around 9:45a.m. We parked near the Crest Pad Building, a structure that contains instrument systems. We walked up a level of steps that provided us a clear view of the east and west cells. The west cell is currently the mixed waste storage. CHPRC took photos of the two cells and the surrounding road opposite our viewing side. I asked about the operation of the East and West cells. Mr. Faught provided an explanation. He said the leachate pumps for the cells are under soil and they go to the sumps and then to the leachate transfer building. The leachate detection equipment is also located under the cell structure. I asked about sediments in the leachate and its criteria going to ETF for treatment and disposal. He explained the IDF filtration system removes solids, assuring the wastewater meets the Effluent Treatment Facility (ETF) criteria and requirements. We observed activity in an open flat area near the beginning of the surrounding road. Mr. Faught explained that there was construction beginning for a waste storage pad, located in the northeast corner of the disposal cells. The pad's construction is for treated waste material coming from WTP, which will be off loaded from trucks to the pad area prior from waste placed in the permitted cells.



Pic#1 – Facing East IDF Cell 2



Pic #2 – Facing West IDF Cell 1



We walked down the stairs and along the Crest Building. Mr. Faught opened the building and showed us the different automated computers for leachate pumping and monitoring, as part of the leachate collection and removal system. Next to the Crest Building, was the location of the two leachate collection tanks. CHPRC took a photo of the Transfer Building located in front of the leachate tanks with their above ground piping.



Pic#3 – Facing West, Leachate Tank & Transfer Building Cell 1

The field portion of the inspection was brief and we traveled to the 200 West ERDF Building 607, Conference Room 52 for the question interview part of the inspection. The time was 10:45a.m. After a short break, we resumed. Kym Tarter, CHPRC records specialist, joined us. Tamara Kerrone assisted her.

I began with IDF permit condition questions. Have the Permittees documented in the IDF operating record the appropriate QA/QC requirements for selection and operation of the flow meter based on the required verification. Mr. Faught said yes. Ms. Tarter provided documents on screen verifying this. She explained that the Integrated Data Management System (IDMS) is organized by procedure and year for operation records. We observed the ECN-724624, Rev 12.0, and Procedure- and the IDF 18005-calibration of the flow meter (IDF cell 2, 18005, dated April 9, 2019) shown. Additionally, the Leachate Collection removal System (LCRS) design report includes flow meter monitoring and specifications found on their website. Next, I asked if the Permittees documented the methods and criteria used for the purposes of the leachate transfer lines freeze and thaw damage when ambient evaluation, along with an appropriate evaluation. Mr. Faught said yes. Again, the LCRS design report provides the methods and

criteria and the report is found on the IDF website. Procedure for inspections provided in the document RFP-1986.

Continuing with questions from IDF permit conditions, I asked if monitoring gauges and instruments are verified in current calibration. This is usually yearly and part of the operating record. Mr. Chris Dehner, CHPRC, joined us and provided the following information. He said there are multiple monitoring gauges and nine procedures. Ms. Tarter provided IDF-PRO-MN-54395, Rev. 0, Chg.0, December 4, 2019 on screen. Mr. Dehner pointed to the flow transmitter loop calibration by Foxburrow. The procedure states annual, however, there is no need for calibration. Procedures used differential pressure gauges, transducers, level transmitters, flow meter gauge, etc., (process for each of the nine procedures). I asked if records of ECNs are retrievable from the IDF operating record. Mr. Faught said yes and explained that the ECN controlled reports can be run to see a variety of data. A final document via the Documented Management Change System transfers to IDMS. This process can show the As-built drawings. When asked about the non-conformance records, Mr. Faught these are retrievable from the IDF operating record and within the permitted requirement of 12 months of completing construction. Ecology can request procedure 06-TPD-53, Entry Control, to confirm equipment used for construction and operations. Next, I asked if the Permittees submitted to Ecology a final grading topographical map on a scale sufficient to identify berms and ditches used to control run-on and run-off been submitted to Ecology. Mr. Carter said the design drawing and As-Built. A topographical map will be at the end of construction to become part of the Permit. When asked about a performance assessment to provide assurance each glass formation once disposed at IDF, will be protective of human health and the environment, Mr. Carter said it has been provided to Ecology and out for the public comment period in April 2020.

IDF Part A Application. The question was asked about the process at IDF and any changes or proposed changes. I provided my notes to Mr. Carter. He pointed out that the information was from 2006. The changes are expanded waste streams, and now both IDF cells will allow low level and mixed waste. Characteristic dangerous waste codes D002 and D004 are no longer in the Part A. We asked about the "S01-container storage if needed." Mr. Havenor showed on a map the location, southwest corner of facility, where the new container storage pad would be (during our field portion, construction activity was observed and discussed).

For the Waste Analysis Plan and LDR, no discussion occurred because the current Class 3 permit modification is in either revision or submittal of a new plan.

We moved to the Process Addendum. I asked about container labels once placed in landfill. Mr. Faught said container labels weld unique container numbers. This will be similar to welded numbers on the WESF capsules; CINs onto the ILAW containers. We moved on to leachate collection tanks and why use the generator requirements with the need to empty every 90 days, not the Permit. Mr. Carter said the tanks are larger and emptied to the maximum extent practical. Mr. Faught said that document IDF-RPP-30148, Operations Management, is currently in review alongside the Permit whereby CHPRC plans to create a new procedure. I asked about secondary containment for the tanks. Mr. Carter said that WAC-173-640(4)(d) is the requirement used explaining Ecology approved this equivalent. He said the sump is included with leak detection. I asked if there were written procedures for leachate management with WAC 173-303-200. Mr. Faught said yes. Ms. Tarter provided RPP 30148, IDF Operations Disposal Instructions. Mr.



Faught and Ms. Petersen explained the leachate detection in the two stilling wells. They said the LCRS plus sump pumping designed for lateral extension. The leachate detection is located inside the tanks and includes level transducer with a level sensor. This combination measures depth of the leachate continuously. The system can operate auto or manual and will primarily operate automatic in the active life. It can switch to manual when testing the pumps. In pre active life, primarily auto. Mr. Faught said RPP-30342 is a procedure for this. I said I might request the procedure.

We took a lunch break at this time, 10:55 a.m., and resumed our questions at 11:30 a.m.

I returned to the Process Addendum asking for an explanation of the text “the 25-year, 24-hour storm as required by the WAC and then the EPA reference”. I pointed out that the WAC is the authority, not EPA. Mr. Carter said the text and reference removed for the new permit. Next, I asked a series of questions on the Maintenance Procedures for the LCRS. Testing intervals for all pumps and motors, instruments calibrated annually, and annual calibration for LCRS sump level indicator and the LCS sump level indicator were verified in the operating record. We reviewed IDMS for February 2020. We briefly reviewed Procedure IDF-PRO-MN-54372, Monthly Testing, and the June 6, 2019 paperwork. I decided to add these in the document request for more review. I looked at IDF-PRO-MN-54377, a procedure for annual inspection of ditches or berms. Inspection occurred on September 16, 2019. Quarterly inspections performed in addition to annual. I said I would include these documents in my request. I wanted to learn about any 25-year storm events and what was recorded at IDF. I said I would include this in the document request.

I asked where the Contingency Plan is located and was told and hard copies kept at MO607 and MO518. I asked for the name of today’s Building Warden. It was Chris Dehner.

For Preparedness and Prevention, I asked about the Permit Table 6.2., Landfill Inspections. I decided to include in the document request inspections listed in the Table.

I asked about the Groundwater Well network and the placement of wells, now and future. There are to be seven total wells; three installed in 2019. Wells 56, 164, and 57 installed later in 2019.

Response Action Plan was not included in this inspection.

Lastly, I asked about the IWTRD document and when will it be available. Mr. Carter said Ecology provided a copy June 29, 2015. We reviewed a physical copy with a transmittal letter while onsite. Mr. Carter said an updated version will be available May 2020, 15-AMRP-0235. I said that there should be permit discussions on the IWTRD in the future.

This completed our onsite inspection. Thanking the men and women that helped and participated in the day’s events, we left the facility around 1:30 p.m.

### **Document Review**

I began my review with Procedure IDF-PRO-MN-54372, Rev. 0, *Bump Leachate Pump Motors*. This procedure provides instruction to bump each of the leachate handling system pump motors at the IDF to demonstrate that the pumps and motors are functional and to move the bearings to prevent a seize up or become distorted. The procedure performed **monthly** at cell 1 and 2, Crest Pad Buildings, and Leachate Transfer Buildings during Pre-Active Life Care.

Facility staff records information on data sheet, including the printed name, signature, date and time. Ensures any noted deficiencies explained in the comment section. Ensures the noted deficiencies are entered onto IDF corrective action tracking log and schedule. Data sheets with procedure are part of the RCRA operating record.

There are 12 pumps associated with this Procedure.

- Cell 1 Low Flow Leachate Pump.
- Cell 1 High Flow Leachate Pump.
- Cell 1 Leak Detection Sump Pump.
- Cell 1 Crest Pad Building Sump Pump.
- Cell 1 Combined Sump Pump.
- Cell 1 Leachate Transfer Pump.
- Cell 2 Low Flow Leachate Pump.
- Cell 2 High Flow Leachate Pump.
- Cell 2 Leak Detection Sump Pump.
- Cell 2 Crest Pad Building Sump Pump.
- Cell 2 Combined Sump Pump.
- Cell 2 Leachate Transfer Pump.

Next, I reviewed the Monthly Inspection for January 2020 for verifying pumps operational (12 total pumps). All 12 pump inspections were listed and a combination data sheet.

Cell 1 Low Flow Leachate Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was 12/03/2019. Last Pump Operation with gallons pumped was zero. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. YES was circled. There were no comments associated with this inspection.

Cell 1 High Flow Leachate Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. Last Pump Operation with gallons pumped was zero. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. YES was circled. There were no comments associated with this inspection.

Cell 1 Leak Detection Sump Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. YES was circled. There were no comments associated with this inspection.

Cell 1 Crest Pad Building Sump Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. YES was circled. There were no comments associated with this inspection.

Cell 1 Combined Sump Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. YES was circled. There were no comments associated with this inspection.

Cell 1 Leachate Transfer Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. Last Pump Operation with gallons pumped was zero. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. The circle was a NO and a comment found (section 4.6) associated with this inspection. The comment read “ *Unable to perform pump test due to insufficient water level in Cell 1 tank.* ”

Cell 2 Low Flow Leachate Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. Last Pump Operation with gallons pumped was zero. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. The circle was a NO and a comment found (section 4.7) associated with this inspection. The comment read “ *Cell 2 Low Flow Leachate Pump is inoperable. Waiting on new hand switch to be installed to operate pump. Hand switch determined bad by electrician and awaiting for parts to arrive for replacement.* ”

Cell 2 High Flow Leachate Pump: I observed the month January 2020. JC were the initials. The inspection date was January 9, 2020. Previous inspection check was December 3, 2019. Last Pump Operation with gallons pumped was zero. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. YES was circled. There were no comments associated with this inspection.

Cell 2 Leak Detection Sump Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. YES was circled. There were no comments associated with this inspection.

Cell 2 Crest Pad Building Sump Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. YES was circled. There were no comments associated with this inspection.

Cell 2 Combined Sump Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. NO was circled and a comment found (section 4.8) associated with this inspection. The comment read “ *Cell 2 Combined Sump Pump is inoperable. Electrician determined there is a fuse that needs to be replaced in order to operate pump and are waiting for parts to arrive.* ”

Cell 2 Leachate Transfer Pump: I observed the month January 2020. JC were the initials. The inspection date was January 1, 2020. Previous inspection check was December 3, 2019. Last Pump Operation with gallons pumped was zero. If Run Light is illuminated, circle Yes and no comment needed. If circle NO, leave comment. YES was circled.

I observed at the end of the inspection data sheet, the inspector printed name, signature, date, and time.

For all of the inspections above, I observed the inspection records contained the date and time of the inspection, the printed name and hand written signatures of the inspectors, and notations of observations made.

I reviewed Procedure IDF-PRO-MN-54377, Rev. 0, September 16, 2019, *Inspection Operating Instructions*. This procedure applies to inspections performed on a routine basis and after significant storm events. This procedure is applicable to the IDF during the Pre-Active Life Care.

Definitions: Significant Storm Event means any atmospheric disturbance with either wind gusts greater than 35 mph or precipitation greater than 0.5 inch within a 24-hour period. Inspections are performed (1) periodically (e.g., monthly, quarterly) or next business day after a significant storm event.

Quarterly IDF Complex Inspection – A full IDF Complex facility inspection for significant storm events, run-on, run-off, wind dispersal, security devices, LCRS, LDS, and Secondary Leak Detection System Sump (SLDS).

Data Sheets associated with these type inspections are RCRA operating records documents.

I reviewed the Quarterly Inspection Checklist, Appendix A for the IDF Complex Inspection. I observed the inspector printed name, signature, date, and time and outside temperature on the checklist. The date of the inspection was June 3, 2019 and time was 0900. I observed the following areas inspected.

- **Truck Loading Station:** Truck loading pad clear of debris, dirt, and water was marked No. Epoxy coating on concrete in good condition was marked NO with comment “some chipping.” All others marked YES or NA.
- **Leachate Transfer Building:** All marked good (YES) except one No for interior lighting fixtures. Note read needs bulbs or ballast.
- **Combined Sump:** All marked good (YES) except a NO on outer sump area free of water collecting on floor. Note said water in outer sump.
- **Leachate Storage Tank:** All marked YES or NA except one NO for weed growth on floating cover.
- **Crest Pad Building:** All marked Yes for satisfactory except for Valve 219 closed so NO for open. Epoxy coating on concrete marked No with comment cracking and chipping.
- **Secondary Leak Detection System:** All marked YES for satisfactory except two marked Out Of Service; DC voltage Switch and level recorder.
- **IDF Landfill:** All marked YES for satisfactory.

Next, I reviewed the IDF Inspection Checklist, Appendix B for 3/4/2019. I observed the inspector printed name, signature, date, and time of inspection and outside temperature (20 degrees). The following areas evaluated.

- **Truck Loading Station:** All were marked YES except NO for Cell 1 and 2 that were “snow covered”; truck loading pad, manhole covers, and concrete coating condition.
- **Leachate Transfer Building:** All marked YES except one NO for interior lighting cell 2. Note said “lights do not come on”.

- **Combined Sump: Cell 2:** Outer Sump area not free of water on the floor so marked NO. Cell 2 marked NO for water below the float.
- **Leachate Storage Tank:** Cell 1 and 2 “snow covered” on the covers so unable to check condition. All other areas marked YES.
- **Crest Pad Building:** All marked YES except one NO on Cell 1 for an open valve and one NO on Cell 2 for peeling/cracking seen on the epoxy coating on concrete.
- **Secondary Leak Detection System:** Cell 2 marked a NO for DC voltage switch in On position. It was off position.
- **IDF Landfill:** All marked YES on the checklist for Cell 1 and 2.

The Permit IDF Inspection Plan, Table 6.1, used for during the Pre-Active Life, requires inspections after a storm event for the Landfill (LF), Leachate and Collection Removal System (LCRS), Leachate Detection System Pump (LDSP). These include the Truck Loading Station (TLS), Leachate Transfer Building (LTB), Leachate Storage Tank (LST), the Crest Pad Building (CPB), and wind dispersal control systems. The Permit defines a storm as any atmospheric disturbance with either wind gust of 35 mph or greater, or precipitation of 0.5 inch or greater within a 24-hour period.

Ecology asked IDF for their Storm Event Inspections from February 2019 to February 2020. I reviewed 32 separate storm event inspection checklists, Appendix B. All the checklists had the inspector name, initials, and signatures along with the date and time of the inspection. Checklists were completed for all areas. Each checklist identified areas for the Truck Loading Station (TLS), Leachate Transfer Building (LTB), Leachate Storage Tank (LST), Crest Pad Building (CPB), and IDF Landfill (LF). Each area included cell 1 and cell 2. Each checklist provided a comment section. Reviewing each of the inspection checklist, a common theme occurred on comments in an area. TLS was dirt or water on the loading pad and minor holes in the pipe insulation. The LST area recorded weeds in Cell 2 or water on the covers. Landfill comments primarily tumbleweeds debris in the berms and ditches or green erosion control matting separating from the berm. Almost all storm events reported were because of wind gusts greater than 35 mph.

| Weather Event Date | Inspection Date                        | Precipitation (inches) | Wind Gust Greater than 35 mph | Significant Comment or Finding outside summary above.   |
|--------------------|--|------------------------|-------------------------------|---|
| 02/12/2019         | 02/13/2019<br>No Inspection performed. | NA                     | NA                            | DOE Site Closure due to hazardous road conditions. 02/14/19 Heavy Snow drifts. Site inaccessible. |
| 02/12/19           | 02/19/19                               | NA                     | NA                            | Most areas covered in snow.   |
| 04/03/19           | 04/04/19                               | NA                     | Yes                           | none  |
| 04/05/19           | 04/08/19                               | NA                     | Yes                           | none  |



| <b>Weather Event Date</b> | <b>Inspection Date</b> | <b>Precipitation (inches)</b> | <b>Wind Gust Greater than 35 mph</b> | <b>Significant Comment or Finding outside summary above.</b>                   |
|---------------------------|------------------------|-------------------------------|--------------------------------------|--|
| 04/09/19 & 4/10/19        | 04/10/19               | NA                            | Yes                                  | none   |
| 4/26/19 & 4/27/19         | 4/29/19                | NA                            | Yes                                  | none   |
| 5/5/19                    | 5/16/19                | NA                            | Yes                                  | none   |
| 5/17/19                   | 5/20/19                | NA                            | Yes                                  | none   |
| 5/23/19                   | 5/28/19                | NA                            | Yes                                  | none   |
| 6/2/19                    | 6/3/19                 | NA                            | Yes                                  | none   |
| 6/5/19                    | 6/6/19                 | NA                            | Yes                                  | LST- entire covers filled with water.  |
| 6/13/19                   | 6/17/19                | NA                            | Yes                                  | none   |
| 6/17/19                   | 6/18/19                | NA                            | Yes                                  | none   |
| 6/18/19                   | 6/19/19                | NA                            | Yes                                  | none   |
| 6/20-22-23/19             | 6/24/19                | NA                            | Yes                                  | none   |
| 6/26/19                   | 6/27/19                | NA                            | Yes                                  | LF-Green wind dispersal matting showing separation at the north and west berm. |
| 7/6/19                    | 7/8/19                 | NA                            | Yes                                  | none   |
| 7/23/19                   | 7/24/19                | ?                             | ?                                    | Event type not marked. CPB-door seals need replaced.                           |
| 7/27/19                   | 7/29/19                | NA                            | Yes                                  | none   |
| 8/11/19                   | 8/12/19                | Yes                           | NA                                   | none   |
| 8/15/19                   | 8/19/19                | NA                            | Yes                                  | none   |
| 8/21/19                   | 8/22/19                | NA                            | Yes                                  | none   |
| 8/24/19                   | 8/26/19                | NA                            | Yes                                  | none   |
| 9/7/19 & 9/8              | 9/9/19                 | NA                            | Yes                                  | none   |
| 11/25/19                  | 11/26/19               | NA                            | Yes                                  | none   |
| 11/27/19                  | 12/2/19                | NA                            | Yes                                  | Ice on TLS   |
| 12/20/19                  | 12/23/19               | NA                            | Yes                                  | none   |
| 12/31/19                  | 01/2/2020              | NA                            | Yes                                  | none   |
| 1/4/2020                  | 1/6/2020               | NA                            | Yes                                  | none   |
| 1/6/2020                  | 1/7/2020               | NA                            | Yes                                  | none   |

| <b>Weather Event Date</b> | <b>Inspection Date</b> | <b>Precipitation (inches)</b> | <b>Wind Gust Greater than 35 mph</b> | <b>Significant Comment or Finding outside summary above.</b> |
|---------------------------|------------------------|-------------------------------|--------------------------------------|--|
| 1/11/2020                 | 1/12/2020              | NA                            | Yes                                  | LF- Green matting missing                                    |
| 1/24/2020                 | 1/27/2020              | NA                            | Yes                                  | LF-Green matting separation                                  |

IDF provided an updated document PRC-STD-TQ-40226, Revision 2, Change 2, Dangerous Waste Training Plan (DWTP). CHPRC said this DWTP was the plan currently used.

I reviewed this DWTP dated July 20, 2017. I observed that IDF training plan contained the written description of the type and amount of both introductory and continuing training required in the description of the Training Program however, I could not discern the type and amount of introductory and continuing training in the Table 3-2., IDF Training Course Matrix. The DWTP appears to be incomplete per WAC 173-303-330(1)(2) as with many Hanford DWTP inspected the past two years. An example of this shown in the training matrix where position titles are more general, not specific; Non-IDF Personnel or Visitor, Field Work Supervisor (FWS), Operations Specialist, Environmental Compliance Officer, and Building Warden. Another example is the training for position Field Work Supervisor. Matrix identifies its training as CHPRC General Employee Training, IDF Emergency and Information Checklist, two trainings required of all positions/employees, and IDF Leachate Handling System. A Field Work Supervisor is required to have training on courses of the staff he/she supervises. This does not appear in the Course Matrix.

I reviewed training records for Mr. Christopher Dehner, CHPRC and with a job title of Craft Supervisor at ERDF. Mr. Dehner was also the designated Building Warden at IDF, the day of our inspection. Training for the position of Building Warden was absent one course; 600026 IDF Emergency and Information Checklist. If this position of Craft Supervisor is equivalent to FWS, training was absent of course 600026 and 183015, IDF Leachate Handling System Training. The training record for this position did include extensive training courses that appeared to be current and up to date.

## Compliance Problems

This inspection report determined no non-compliance and no concerns.

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