



NPDES Compliance Inspection Report

Midnite Mine Wellpinit, Washington

Permit #: WA0025721 & WA0026841

Inspection Date: August 4, 2021

Prepared by:

Raymond Andrews
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Enforcement & Compliance Assurance Division
Water Enforcement & Field Branch
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Signature/Date:

RAYMOND ANDREWS	Digitally signed by RAYMOND ANDREWS Date: 2021.10.12 10:33:32 -07'00'
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Supervisor Signature/Date:

Contreras, Peter	Digitally signed by Contreras, Peter Date: 2021.10.12 11:12:22 -07'00'
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(All details in this report were obtained through conversations with Mr. Robert Nelson, Operations Manager, Mr. Bill Lyle, Director of Legacy Management, and Ms. Linda Meyer, EPA Superfund Remedial Project Manager, or from observations made during the inspection.)

I. Facility Information

Facility Name: Midnite Mine

Facility Owner/Operator: Dawn Mining Company, LLC

Physical Address: 6834 Ford-Wellpinit Road
Wellpinit, Washington 99040
Stevens County

Mailing Address: P.O. Box 420
Wellpinit, Washington 99040

Lat/Long: 47.931295, -118.066770

NAICS Code: 212291 (Uranium-Radium-Vanadium Ore Mining)

SIC Code: 1094 (Uranium-radium-vanadium ore mining)

Facility Contacts: Robert Nelson
Operations Manager
Newmont Mining Corporation
Cell Phone: [REDACTED]
Email: robert.nelson@newmont.com

William (Bill) Lyle
Director Legacy Management
Newmont Mining Corporation
Cell Phone: [REDACTED]
Email: william.lyle@newmont.com

Permit Number: WA0025721 & WA0026841

Receiving Water: Blue Creek which is a tributary of Franklin D. Roosevelt Reservoir

Tribal Land: Spokane Tribe of Indians

II. Inspection Information

Inspection Date: August 4, 2021

Inspector: Raymond Andrews, Inspector
EPA Region 10, ECAD /FDDWES
Phone: 206-553-4252

Arrival Time: 12:15 AM

Departure Time: 4:30 PM

Weather: Sunny, 90°F

Purpose: To determine facility compliance with the National Pollutant Discharge Elimination System (NPDES) permit and the Clean Water Act.

III. Permit Information

Midnite Mine (“Facility”) is in Wellpinit, Washington, on land that is part of the Spokane Tribe of Indians Reservation. Due to the facility being on tribal land, the Environmental Protection Agency (EPA) retains primacy at this Facility in administration of the National Pollutant Discharge Elimination System (NPDES) program.

The facility has two active permits. NPDES permit # WA0025721 was issued September 28, 1995, became effective October 30, 1995, and expired October 30, 2000. An NPDES application for permit renewal was submitted by the facility on May 1, 2000. The EPA determined the application was timely and complete. Therefore, the permit has been administratively extended.

NPDES permit # WA0026841, was issued November 15, 2017, became effective January 1, 2019, and will expire December 31, 2023. The wastewater treatment plant (WWTP) for which this permit was issued has not yet been built. Since the new WWTP does not yet exist, there was nothing to inspect under permit #WA0026841.

IV. Background

Uranium ore deposits were discovered at the mine site in 1954. Open pit mining began in 1955 after Dawn Mining Company (DMC) was organized. This company is jointly owned by Newton Mining Company (51%) and Midnite Mines Inc. (49%). Since 1955, the Midnite Mine produced approximately 3 million tons of ore at 0.20% U308, 2.4 million tons of protore, and 32.9 million tons of waste rock.

Six pits were developed over the period of operations. Pits 1 and 2 were backfilled with waste rock and the remaining pits were incorporated into the active pits. Presently there are two large open pit areas, Pit 3 and Pit 4. Water removed during excavation of active pits was discharged into the abandoned pits which placed substantial amounts of water in contact with waste rock and incidental ores.

In 1987, DMC and EPA entered into a Compliance Order under the CWA that required the elimination of discharges of pollutants to waters of the United States. DMC constructed a seep collection and pump back system to collect water from the Western and Central drainages and pump it to the pollution control pond and Pit 3. In 1988, DMC constructed a Water Treatment Plant (WWTP) to treat growing quantities of water in the pits. The WTP also used barium chloride and hydrated lime to precipitate radium, heavy metals, and uranium with a final clarification step to reduce suspended solids.

In May 2000, the Midnite Mine was included on the National Priorities List (NPL). The Midnite Mine Superfund Site Record of Decision (ROD) was signed by EPA on September 29, 2006, and required the facility to construct a new WWTP and obtain an NPDES permit. The new WTP is described above.

The site was last inspected by EPA on June 1, 2016. The facility received an informal enforcement action, i.e., a Warning Letter, for failing to include chemical oxygen demand (COD) on the July 2015 discharge monitoring report (DMR).

V. Inspection Chronology

This was an announced inspection. I contacted Mr. Robert Nelson, Site Operations Manager, through email. We decided to meet at the site at noon on August 24, 2021.

I conducted an opening conference, which included an interview with Mr. Nelson, Mr. Bill Lyle, Director of Legacy Management, and Ms. Linda Meyer, EPA Superfund Remedial Project Manager., a site inspection, and a closing conference. A records review was conducted in the office post-inspection.

Mr. Nelson accompanied me during the entire inspection. I was not denied access to the facility and could inspect all areas I requested to inspect.

VI. Opening Conference

I arrived at the facility at 12:15pm. Once I signed into the site, I was greeted by Mr. Nelson. We then walked to his office. Once at his office, Mr. Nelson initiated a teleconference with Mr. Lyle and Ms. Meyer. I presented my credentials to Mr. Nelson, and held them up to the computer camera so Mr. Lyle and Ms. Meyer could also see them. I provided a copy of the EPA Small Business Resource Information Sheet to Mr. Nelson.

I explained the purpose of the inspection was to determine the facility's compliance with its NPDES permits and the Clean Water Act (CWA).

The facility site operates Monday through Friday from 7:00am until 3:00pm with a staff of approximately 80 employees. The wastewater treatment plant operates Monday through Friday from 7:00am until 7:00pm with a staff of eight employees.

The facility representatives gave me a brief history of the site as stated above in the "Background" section of this report.

I asked about the new WWTP the site plans to build. The facility representatives said the new WWTP will completely replace the original plant. The representatives also said the new permit contains more stringent water discharge standards and the new plant will be designed to meet the new standards. Other reasons for replacing the original WWTP include the need to treat wastewater year round, and the need to reclaim waste rock upon which the current WWTP was built. The final 100% WWTP design was completed in 2018, however, Newmont notified EPA that a re-evaluation of the design is being considered and the updated design was to be completed in 2020 with construction scheduled to begin in 2021.

Due to COVID-19, construction on the new WWTP had not begun at the time of the inspection.

VII. Site Inspection

Appendix A contains an aerial photo of the site, provided by Google Maps, and an annotated site map, provided by the facility. **Appendix B** contains the photographs used in this inspection report and a complete photo log.

After the Opening Conference, Mr. Nelson took me to the site's Health and Safety Office for a full body Nomex suit to protect against contamination, and a radiation dosimeter to track any radiologic exposure since we would be briefly entering the "hot zone".

We entered the "hot zone" so that I could observe the WWTP's discharge point, designated Discharge Point 004 (**Photos 1 & 2**). There was no discharge at the time of the inspection. When the plant is discharging, the water exits the pipe on the left in the photos and flows to Blue Creek, which is a tributary of the Spokane River.

After exiting the "hot zone" and scanning ourselves for radiation exposure, Mr. Nelson and I drove to the WWTP. The first thing I noticed was several labeled totes (**Photo 3**) of material sitting near the WWTP parking lot. I asked Mr. Nelson about the totes. Mr. Nelson said that the totes contained radioactive sludge, also known as "alternative feed". The sludge was awaiting transport to another location so the uranium could be processed out.

Contaminated water is brought into the WWTP building from Pit 3 through a 6-inch pipe where the water flows through a Blancett® flow meter (**Photo 4**). Per Mr. Nelson, the flow meter is taken off-line annually and sent to the manufacturer for calibration. The flow readings are obtained from a NuFlo® MC-III Flow Analyzer (**Photo 5**), which is attached to a wall in the treatment plant.

The water received from Pit 3 passes through a clarifier (**Photo 6 & 7**) which allows the sludge to settle out. The sludge is sent to a filter press (**Photo 8**) for de-watering. Once the de-watering in the filter press is complete, the sludge is prepared for transport to another location as the "alternate feed" shown in Photo 3.

Once the water has been separated from the sludge, the water flows to the effluent sampling point (**Photo 9**) where grab samples are collected. The sampling point is co-located with the pH probe (**Photo 10**). The pH is analyzed through a pH readout and control station (**Photo 11**) and recorded on a 24-hour daily log (**Photo 12**). While at the pH readout and control station, I requested to see the pH buffer solutions. All buffer solutions had expiration dates that extended into 2022.

After the WWTP inspection was complete, I returned with Mr. Nelson to his office to conduct the Closing Conference.

VIII. Laboratory Analysis

The facility is required to monitor for the following parameters:

- Flow
- Total suspended Solids (TSS)
- Chemical Oxygen Demand (COD)
- Radium 226 (Ra226) – dissolved and total
- Uranium (U)
- Zinc (Zn) – total
- Manganese (Mn) – total
- Copper (Cu) – total recoverable
- Cadmium (Cd) – total recoverable
- Hardness (as CaCO₃)
- pH

The facility conducts flow and pH monitoring in-house.

Hardness, TSS, COD, uranium, zinc, manganese, copper, and cadmium are analyzed by:

Anatek Labs, Inc.
504 East Sprague, Suite D
Spokane, Washington 99202
(509) 838-3999

Radium 226 is analyzed by:

Energy Laboratories
2393 Salt Creek Highway
Casper, Wyoming 82601
(307) 235-0515

IX. Records/Documentation Review

Part VII.F of the Permit requires “records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application...”

I reviewed the following records and documents:

- NPDES Permit #WA0025721
- EPA’s Integrated Computer Information System (ICIS) – September 2016 - August 2021
- Discharge Monitoring Report (DMR) data – September 2018 - August 2021
- Chain of Custody Documents - September 2018 – August 2021
- Energy Laboratories Report – June 2021
- Anatek Labs Report – July 2021
- Remedial Action Work Plan, Revision 7 – April 2020
- Quality Assurance Project Plan – March 2019
- Operation, Maintenance and Monitoring (OM&M) Plan Revision 6 – October 2020

All facility documents were complete and up-to-date. The Chain of Custody and lab reports were complete. There were two issues with the DMRs, which are discussed in more detail in the Areas of Concern, below.

X. Areas of Concern

I noted the following area of concern:

Discharge Monitoring Reports (DMR)

Part VIII.C of permit #WA0025721 states, in part, “Monitoring results shall be summarized each month on the Discharge Monitoring Report (DMR) form...The reports shall be submitted monthly and are to be postmarked by the 10th day of the following month. ”

Upon review of EPA’s ICIS violations report, I found the facility was late in submitting the DMR for the monitoring period ending November 30, 2016, which was due by December 10, 2016. The DMR was not received until June 9, 2017.

Further, the DMR for the monitoring period ending April 30, 2018, due May 10, 2018, was incomplete. It did not have data for total or dissolved Radium 226.

XI. Closing Conference

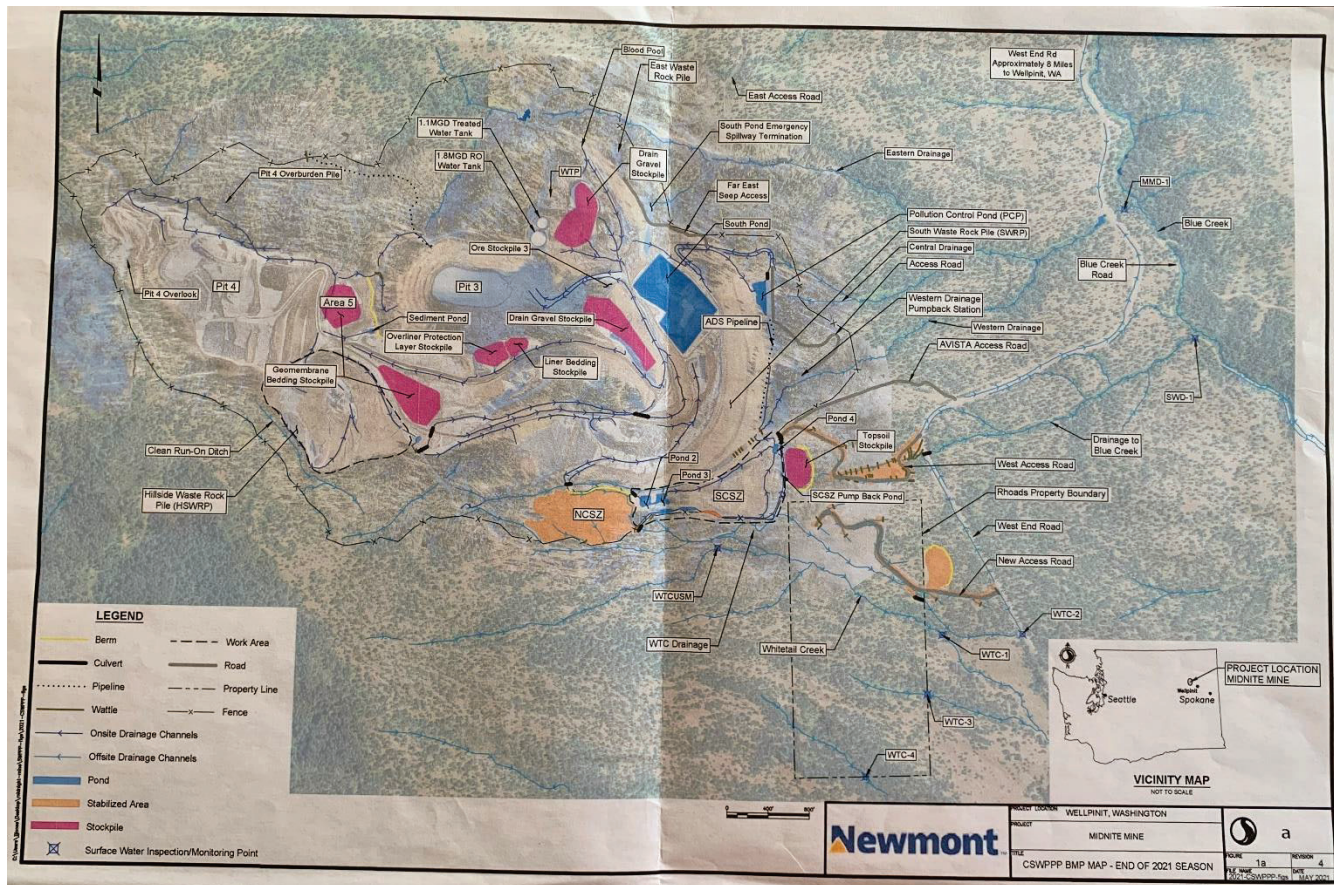
On August 4, 2021, I held a closing conference with Mr. Nelson. We discussed my initial observations, and I answered his questions. I gave a brief overview of the post-inspection process, thanked him for his time, and departed the facility.

APPENDIX A

Aerial Image of Site Provided by Google Maps



Annotated Site Map Provided by Facility



APPENDIX B

Inspection Photographs and Photograph Log

(Photographs taken by Ray Andrews on August 4, 2021 with a Panasonic DMC-FH25 camera)



Photo 1 / P1000997 – Discharge Point 004



Photo 2 / P1000998 – Discharge Point 004, close up



Photo 3 / P1000999 – Totes of Sludge, awaiting transport to processing facility



Photo 4 / P1010013 – Blancett® Flow Meter

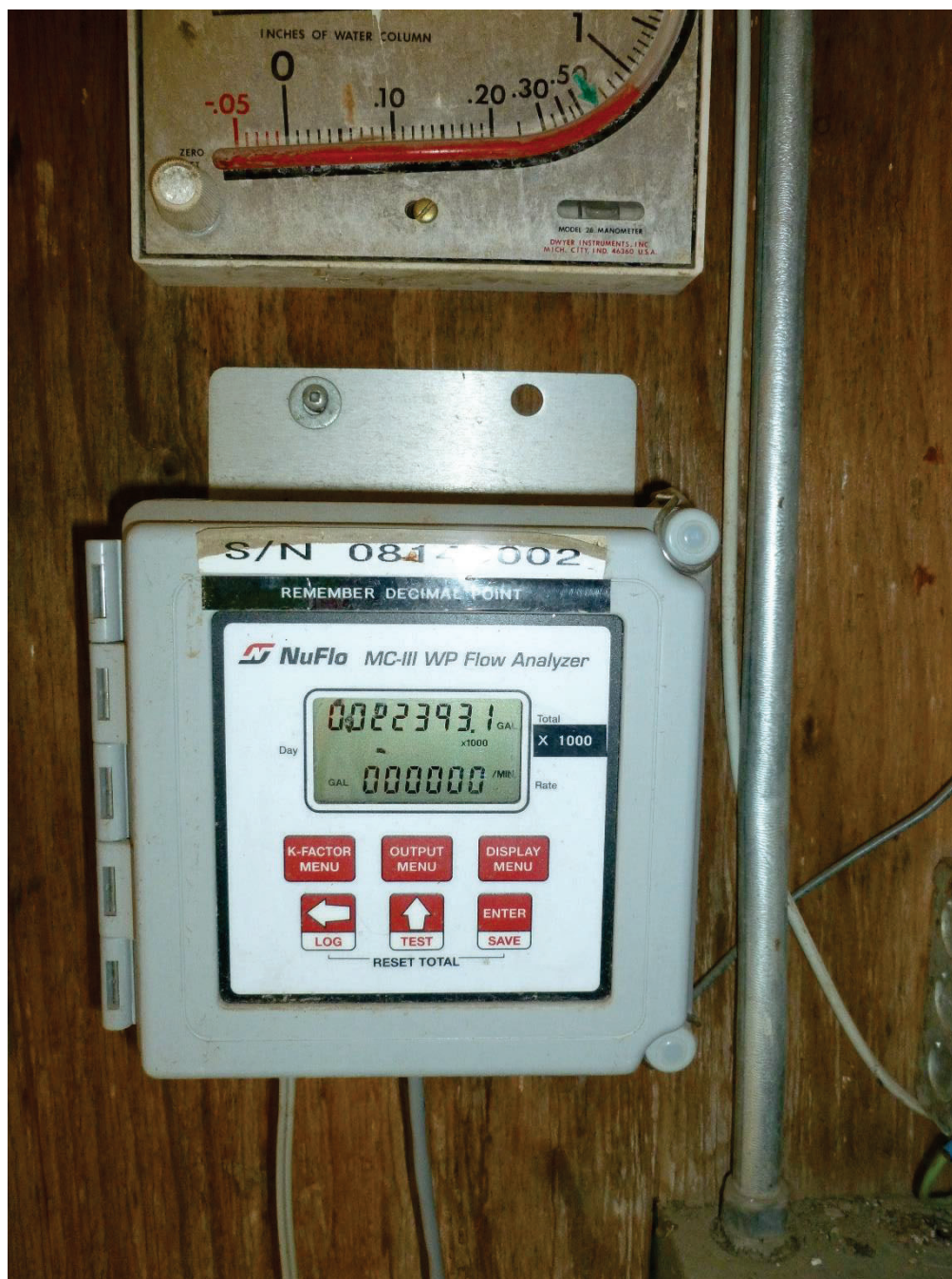


Photo 5 / P1010014 – NuFlo MC-III Flow Analyzer



Photo 6 / P1010009 – Wastewater Plant Clarifier



Photo 7 / P1010010 – Wastewater Plant Clarifier, close up



Photo 8 / P1010011 – Filter Press

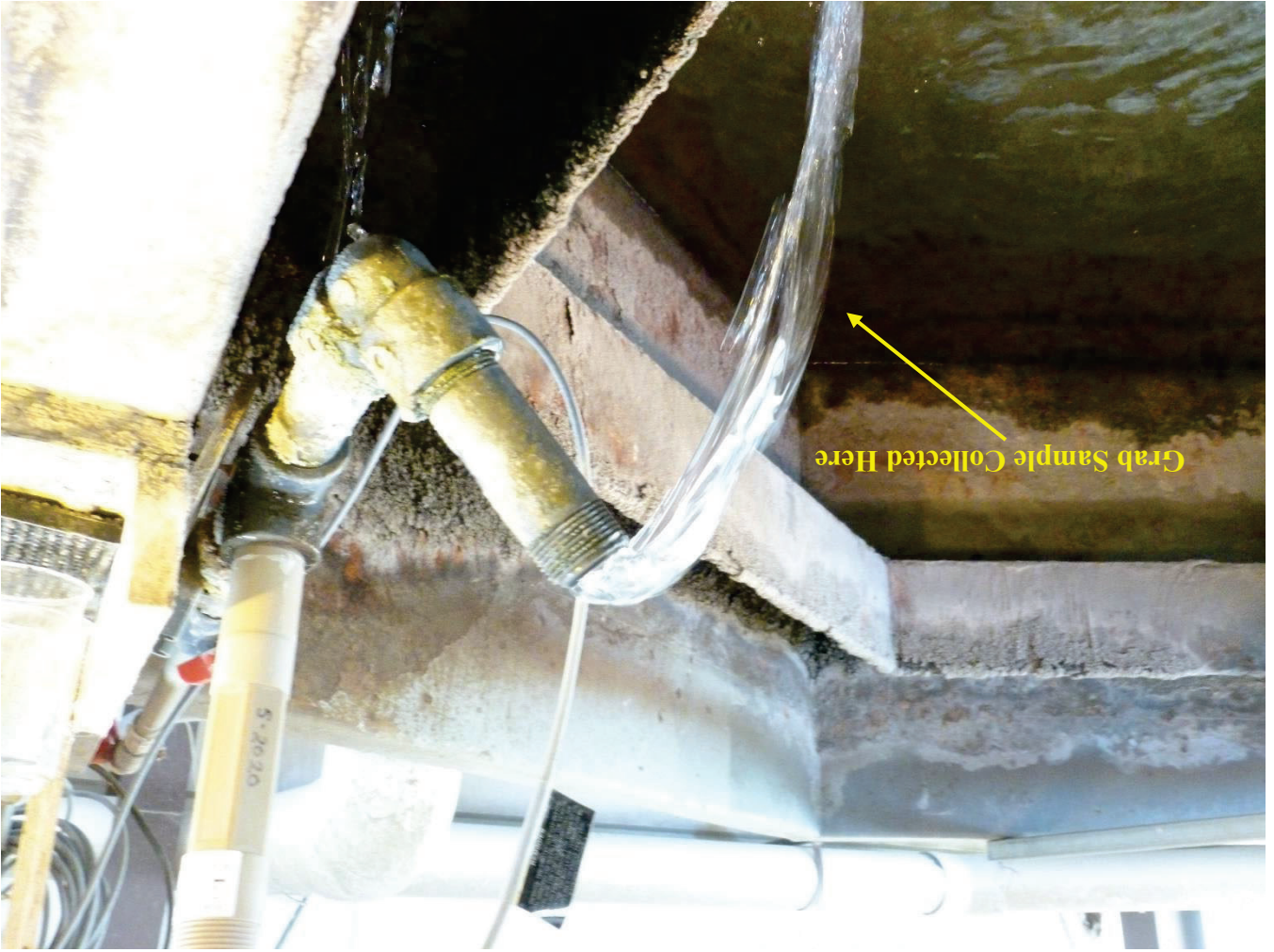


Photo 9 / P1010002 – Effluent Sampling Point



Photo 10 / P1010003 – Effluent pH Monitoring Probe



Photo 11 / P1010005 – pH Readout and Control Station

Water Treatment Plant 24hr Daily Report

Date: 08-04-2021

Day Shift Names: Rick, Chad

Night Shift Names: Dwight, Chazz

Time	7 a.m.	9 a.m.	11 a.m.	1 p.m.	3 p.m.	5 p.m.	7 p.m.	9 p.m.	11 p.m.	1 a.m.	3 a.m.	5 a.m.
Grab pH meter Cal. Check 7/10	7.04	7.04	7.06	7.04								
*Discharge pH-Inline/Grab	8.06	8.07	7.38	8.17								
pH Nuet. Tank #1	8.42	8.47	8.53	8.50								
*pH Nuet. Tank #2 Inline/Grab	10.22	10.28	10.25	10.24								
*pH-Nuet. Tank #3 Inline/Grab	10.21	10.31	10.29	10.24								
pH-Clarifier #1 Overflow	10.09	10.26	10.31	10.25								
pH-Sandfilter Inline/Grab	8.60	8.18	8.44	8.68								
Acid Controller Feed Rate	22	26	9	16								
Plant Feed Rate GPM	446	446	447	446								
Discharge Flow Rate GPM	458	432	453	478								
Discharge Location (D-P-T)	T	T	T	T								
BaCL/2 Tank Measure (inch)	4 7/8	5 1/4	5 3/4	6 1/4								
BaCL/2 Flow (ml/min)	250	250	250	250								
Antiscalant (ml/min)	4	4	4	4								
Floc Flow to Clarifier	4 1/2	4 1/2	4 1/2	4 1/2								
Dry Lime Transfer (minutes)				50/50								
Lime Transfer (inches)		14 1/2	8 1/2									
Floc Mixed (lbs./batch)												
Water Sample Collected												
Backwash Sandfilter												
Super Sack loaded (plates)												

*Inline pH meters-if the grab meter using fresh buffer measures a difference of 0.3 pH then an inline meter calibration is required
(D-P-T) Discharge Location: D-Outlet 004, P-Pit 3, T-1 on-site tank

Photo 12 / P1010007 – Water Treatment Plant 24-Hour Daily Report

Complete list of photographs taken during the inspection:

- P1000997 – Discharge Point 004
- P1000998 – Discharge Point 004, close up
- P1000999 – Totes of Sludge, awaiting transport to processing facility
- P1010001 – Influent line from Pit 3
- P1010002 – Effluent Sampling Point
- P1010003 – Effluent pH Monitoring Probe
- P1010004 – pH Readout and Control Station
- P1010005 – pH Readout and Control Station
- P1010006 – Water Treatment Plant 24-Hour Daily Report
- P1010007 – Water Treatment Plant 24-Hour Daily Report
- P1010008 – pH Buffer Solutions
- P1010009 – Wastewater Plant Clarifier
- P1010010 – Wastewater Plant Clarifier, close up
- P1010011 – Filter Press
- P1010012 – Influent from Pit 3 entering building
- P1010013 – Blancett® Flow Meter
- P1010014 – NuFlo® MC-III Flow Analyzer