Monthly Report of the Operations & Maintenance Activities

Claremont Polychemical Operable Unit 5

Groundwater Treatment System

Old Bethpage, New York

May, 2021

NYSDEC Standby Engineering Contract
Work Assignment #D0076025-28

Prepared for
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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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ACRONYMS AND ABBREVIATIONS

AS	Air Stripper
ASF	Air Stripper feed
BSP	Bethpage State Park (Black Golf Course)
CPC	Claremont Polychemical
CSE	Confined Space Entry
DOSR	Daily Operations Summary Report
DTB	Depth to Bottom
DTW	Depth to Water
EAR	Environmental Assessment and Remediation
EFF	Effluent
EON	EON Products, Inc.
Fed Ex	Federal Express
GPD	Gallons Per Day
GPM	Gallons Per Minute
GW	Groundwater
GWTS	Groundwater extraction, treatment, and reinjection system
HCl	Hydrochloric acid
HDR	Henningson, Durham & Richardson Architecture and Engineering, P.C.
HHLA	High-High Level Alarm
HMI	Human Machine Interface
INF	Influent
LOTO	Lock-out, Tag-Out
MW	Monitoring Well
NOV	Notice of Violation
NCDPW	Nassau County Department of Public Works
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
OBL	Old Bethpage Landfill
OFP&C	NYS Office of Fire Prevention & Control
OU4	Operable Unit 4
OU5	Operable Unit 5
PET	Peter Takach
PDB	Passive Diffusion Bags
PD	Plant Discharge
PFOA	Perfluorooctanoic Acid and related perfluorinated alkyl substances
PFOS	Perfluorooctanesulfonic Acid
PFF	Pressure Filter Feed
PID	Photo Ionization Detector
PM	Preventive Maintenance
PSEG	Public Service Enterprise Group, Electrical Power Supplier
PW	Process Water
RAP	Remedial Action Plan
RW	Recovery Well, Process Well
SOP	Standard Operating Procedure
SMP	Site Management Plan
SSHP	Site Safety and Health Plan
SU	Standard pH Units
TA	TestAmerica Laboratory
TOB	Town of Oyster Bay
UPS	United Parcel Service
VOCs	Volatile Organic Compounds
VPB	Vertical Profile Borings

1 OPERATION AND MAINTENANCE ACTIVITIES

Henningson, Durham & Richardson Architecture and Engineering, P.C. (HDR) continued the daily operation and maintenance (O&M) of the Claremont Polychemical Superfund Site Groundwater Treatment System (GWTS) Operable Unit 5 (OU5) during the month of May. This report covers the operation and maintenance activities for the system during the period defined as beginning at ~0830 hours, May 1, 2021 through ~0830 hours, June 1, 2021. O&M conducted during this reporting period was guided by the site O&M Manual.

The GWTS – treatment plant, grounds, and well systems - were maintained for the 31 days in this reporting period during which the treatment system operated without downtime.

Readings of the key plant process parameters are normally recorded each workday. These readings and the Human Machine Interface (HMI) flow trend lines are used to monitor the system's performance and condition. Selected readings are recorded in the daily database which is an electronic file maintained in the monthly operating documents folder. If the plant is not occupied, the system is monitored remotely.

The treatment process control and alarm systems are functional. The recovery well pumps, the process pumps, and the air stripper blower are operated in the automatic mode and are remotely controlled and monitored.

1.1 DAILY OPERATIONS SUMMARY REPORTS

The GWTS's daily operations and maintenance activities, project tasks, and observations during this period are briefly described in the Daily Operations Summary Report (DOSR). The DOSR is based in part on the treatment system's daily operating worksheets and logs which include:

Daily Operating Log – flow readings and calculations (Form-01)
Daily Site and Safety Inspection – plant condition checklist (Form-02)
Daily Plant Activity Notes – plant manager's daily summary (Form-03)
HDR Sign-In Sheet – HDR employee on-site hours (Form-15)
Daily Process Data Sheet – point process readings (Form-30)
Logbook CPC 5-7– plant operator's daily logbook
Daily Database – daily process readings (05 May 21 Database.xlsx)
NYSDEC Log-in Sheet – Entry/Exit Log with COVID-19 Acknowledgement

1.2 SUMMARY OF MAINTENANCE ACTIVITIES

The operation and maintenance of the treatment system, facility, and associated equipment is performed in accordance with the site O&M Manual. These tasks and inspections incorporate the equipment manufacturers' recommendations, operations experience, and good engineering and maintenance practices. A detailed accounting of the May activities is further provided in the plant operator's daily logbook.

Maintenance and project activities undertaken during the May period included:

- Routine and general maintenance tasks were conducted at the plant, on the grounds, and in the well fields.
- The HVAC system at OU4 was inspected and several filter elements were removed.
- A foreign lock was removed from the OU4 gate and the area secured.
- The AutoDialer was programed to indicate a loss of power condition.
- The fire alarm system was corrected to shut off HVAC operations in a fire alarm condition.
- The monthly electrical testing and inspections were completed.
- The monthly truck inspection was completed. The spare tire was dropped and cabling lubricated.
- The recovery well system was inspected.
- Landscaping tasks were conducted around the plant perimeter.
- The Basin-33 level gage was reseated and calibrated with Bethpage State Park gauge.
- The valve to B-33 was partially opened and flow was initiated to the basin.
- The tree limbs intruding into the MW-6 series path were cut back.
- The OU4 comprehensive site and safety inspections were completed.
- The SUNY wellfield was inspected.
- Pressure gauges were removed from the recycle pumps at OU4 for OU5 RW backup if necessary.
- The process equipment function tests were completed.
- The process pumps and motors were lubricated.
- Poison Ivy was removed from the front gate.
- The monthly fire alarm system inspection was completed.
- The OU5 comprehensive site and safety inspections were completed.
- Lamps were replaced in 2 lobby lights.
- A lamp in the east exit light door was replaced.
- The fence signs were cleared of vegetation and two were refurbished.

1.3 MAINTENANCE LOGS

The following operating logbooks are currently in use and maintained at OU5:

- CL-18 OU-4 Log (truck)
- CL-43 General Field Support Log (truck)
- CL-47 Misc. Projects Field Notebook (PET)
- CPC 5-4 Project Support Logbook (site)
- CPC 5-7 Site Supervisor's Daily Logbook (PET)

The completed logbooks associated with the project have been scanned, all are in storage at OU5, and are available for review.

2 TECHNICAL SUPPORT ACTIVITIES

2.1 HDR Personnel

- HDR maintained the system throughout the period.
- Technical expertise and guidance were provided from the HDR Mahwah, Newark, and NYC offices.
- 5/3, Jennifer Rhee was onsite to oversee operations and help with onsite tasks.
- 5/10, Ed Chappell onsite for monthly electrical testing.
- 5/10, Ian Denholm was in to make repairs to the fire alarm system wiring.

2.2 NYSDEC Personnel, sub-contractors, and other visitors

- 5/5, Pete, EAR onsite at OU4 to check HVAC unit.
- 5/5, Scot, All Weather at OU4 to check HVAC unit.
- 5/11, Hoarland Energy was onsite to check the property.
- 5/17, Valerie Egen, NCDPW was in to check on scheduling.
- 5/17, Mike Flaherty was in for an update.
- 5/20, TA-NY picked up the PW samples.

2.3 Deliveries

- 5/12, TA-NY dropped off sampling supplies.
- 5/13, Fed Ex, delivered the McMaster Carr order.
- 5/24, UPS delivered part of the EON order and returned 5/25 with the remainder.

3 HEALTH AND SAFETY

Work at the Claremont GWTS OU5 was conducted in accordance with the approved Site Safety and Health Plan (SSHP). Safety related activities during this period included:

- Daily site safety inspections were completed as part of the routine O&M activities.
- The working and common surfaces around the plant are frequently cleaned with 20% bleach solution.
- Access to the plant is restricted.

4 PLANNED ACTIVITIES AND SCHEDULES

The evaluation of the plant operating system and equipment is ongoing by HDR. A list in the form of corrective actions or maintenance tasks has been generated as is a monthly system status report. These reports are updated as needed and reviewed at least monthly. Both are electronically filed. The corrective action list is included at the end of this report as **Table 1** – Claremont Corrective Action Summary.

Upcoming tasks include:

- The quarterly GW elevation recording task is planned for 6/3.
- The quarterly GW sampling task is planned for the week of 6/14.
- The June PD samples are scheduled for a 6/24 pickup.

5 MONITORING WELL WATER ELEVATIONS

The monitoring well system's groundwater elevation data table was updated in March after the quarterly GW elevation recording task. This database is available for review. The next synoptic water level round is scheduled for June 3, after which the table will again be updated.

6 TREATMENT SYSTEM FLOWS

During the May period, the plant continued to operate in the auto control mode. The volume of treated water discharged by the treatment system to the selected recharge basins was calculated from the plant influent and effluent flow meter readings. These readings are taken at the HMI and recorded in the daily database. The treatment system experienced no downtime during this period.

The total volume of treated water discharged from ~0830 hours, May 1 to ~0830 hours June 1, was approximately 32,045,000 gallons. The plant discharge is currently directed to Recharge Basin No. 1 and partially to Recharge Basin 33. The data in **Table 2** is a summary of plant discharge flows.

A graphic representation of the system's daily plant discharge output is provided in **Figure 1** and the daily plant totalizer readings for May are provided in **Table 3**, both following the text of this report.

It should be noted that the negative discharge head, characteristic of the downhill piping influent to Basin 33, distorts the plant discharge flow meter function. Since flow to Basin 33 commenced on 5/14, the plant discharge has been calculated as ~99.8% of the system flow (based on historic ratios).

Table 2 – Plant Discharge Average Flow and Volume Discharged

Period	Average Flow (gpm)	Average Daily volume (gal)	Total Period Flow (gal)	Min off	Min on
Q4 2016	517	745,000	68,540,000	7,309	125,171
Q1 2017	520	748,244	67,342,000	655	128,945
Q2 2017	576	829,130	76,280,000	6,165	126,315
Q3 2017	634	913,576	84,049,000	1,110	131,370
Q4 2017	256	368,762	33,926,110	69,165	63,315
Q1 2018	53	75,989	6,839,000	118,180	11,420
Q2 2018	179	258,284	23,762,103	102,929	29,551
Q3 2018	504	725,280	66,725,717	57,416	75,064
Q4 2018	726	1,045,065	96,145,984	23,734	108,746
Q1 2019	527	758,467	68,262,000	735	128,865
Q2 2019	662	953,877	87,756,724	405	132,075
Q3 2019	685	985,802	90,693,740	108	132,372
Q4 2019	655	943,871	82,116,780	5039	129,326
Q1 2020	480	682,527	62,110,000	1824	129,326
Q2 2020	698	996,998	88,732,846	3838	127,185
Q3 2020	669	955,928	87,945,333	1099	131,401
Q4 2020	695	1,001,365	92,125,539	52	132,497
Q1 2021	708	1,019,733	91,776,000	0	129,603
Apr 2021	720	1,036,900	31,107,000	0	43,200
May 2021	**718**	**1,033,713**	**32,045,107**	**0**	**44,640**

Under current conditions, the Programmable Logic Controller (PLC) and the control system are stable and fully functional. Flows from the individual recovery wells are remotely read, transmitted, and totalized.

During the May reporting period, the treated water discharged was directed to both Recharge Basin No. 1 on the landfill property and Basin 33 on Winding Road.

The flow summary for the individual components of the system can be found in **Table 4** at the end of this report.

7 CHEMICAL CONSUMPTION

The hydrochloric acid feed system is currently off-line, and the system is empty of acid. There are four drums of virgin acid on site. No acid was consumed in May.

The sodium hydroxide storage system is currently not in use and the system is empty of caustic. There is no bulk sodium hydroxide on site and no caustic was consumed in May.

The sodium hypochlorite storage system is currently not in use and the system is empty of bleach. No bulk sodium hypochlorite is stored on site. No sodium hypochlorite was consumed in May.

8 WASTE DISPOSALS

The routine collection of waste materials continued. No waste was disposed of in May.

9 MONTHLY DISCHARGE MONITORING REPORT

The GWTS is operated under an equivalency permit from the NYSDEC. **Table 5** presents the Claremont OU5 O&M Sampling/Measurements requirements and their frequency. The analytical results for the May plant discharge samples have not been determined at the time of this report. The May results indicate that all analyzed parameters were compliant with permit limits (**Table 6**).

The plant's water discharge permit is in the process of being renewed by the NYSDEC.

10 PENDING ISSUES AND CONSIDERATIONS

The OU4 plant HVAC system was shut down when the blower drive flywheel shaft failed. It is currently off-line and will be required when the colder weather arrives.

The discrepancies/inaccuracies in the plant flow meter readings may be due to the inappropriate configuration of the local piping. However, calibration or adjustment of pulse reading may be required.

A damaged tree adjacent to the path to the MW-6 well cluster has shifted and continues to pose a threat. The situation will continue to be monitored.

The well path to the BP-3 cluster following rain events still poses issues for vehicle transport. Work and upkeep will continue as necessary.

The recovery well pump pressure switch assemblies will be replaced as the opportunity allows.

Plant Discharge Pump 1 failed and was taken out of service. An evaluation needs to be made to determine the problem and to bring it back online.

The alarm and monitoring systems for the OU4 fire sprinkler and fire safety systems fire are to be replaced.

The OU4 plant is offline and its disposition including that of the injection well system, and vapor carbon beds is pending.

The status of key aspects of OU4 are as follows:

- The plant heat is currently off.
- The fire alarm panels are off-line.
- The fire sprinkler system is online. It is frequently checked but not centrally monitored.
- The facility is secure, and its physical monitoring continues.
- The facility and grounds are not maintained except for the Facility entrance and plant egress points.
- There appears to be periodic activity at the Claremont Polychemical site.

11 PLANT DOCUMENTS

Procedures and standard forms are written, reviewed, and revised as needed. As-built drawings are generated and updated as necessary. This activity in May included:

- Drawing-35, Fireman's training center treatment process schematic was generated
- Drawing-36, Air handling units (OU5), was generated

12 MONITORING RESULTS

The Claremont Polychemical GWTS is monitored through the analysis of off-site laboratory analytical data and on-site field data.

12.1 Off-site Analytical Data Results

Monthly PD samples are taken for organic analysis in compliance with the NYSDEC discharge permit. Quarterly groundwater (GW) samples are taken for organic analysis, and quarterly process water (PW) samples are taken for organic, inorganic, and generic analysis. The May sampling activities included:

- PDBs were pulled from 11 selected wells on 5/12 to accommodate the TOB sampling task. The bags were redeployed on 5/24. The field notes were updated.
- The process water field samples were collected and processed 5/18. The process water plant samples were collected and processed 5/19. The effluent chromium samples were collected and processed 5/20. The samples were picked up by Test America on 5/20 for analysis.

12.2 Field Data

Plant Discharge pH and Temperature

The treatment plant effluent is monitored for pH and temperature on a weekly basis to obtain a monthly average in compliance with the NYSDEC discharge permit requirements. These readings are taken from the plant effluent at a controlled point with a calibrated portable meter.

The plant discharge readings for May can be found below in **Table 7.**

Table 7 – Effluent pH and Temperature Readings

Date	pH (su)	Temp °F
5/5	7.34	58
5/10	7.46	57
5/17	7.86	58
5/24	7.47	61
May's Average	**7.53 su**	**59°F**

The NYSDEC discharge permit requires the plant discharge to have an average monthly pH between 6.5 and 8.5 standard units (su). The results for this month meet this requirement. Data showing the plant discharge's monthly average pH trend over several months is provided in **Table 8** following the text of this report.

AS Tower Air Monitoring

Using a calibrated PID meter, weekly VOC air monitoring readings are taken from the effluent air stream of the AS Tower through Port B when the treatment system is online. The May readings from the AS tower are provided in **Table 9**.

Table 9 – AS Tower Air Monitoring Readings

Date	Port B
5/6	0
5/10	0
5/18	0
5/21	0

There were no emissions from the Air Stripping System observed this month. No emissions have been detected since HDR began operation of the plant in October of 2016.

Other routine data collected in May included:

- The electric and water meter readings at OU5 were recorded weekly.
- The plant vaults and selected areas were monitored for VOCs weekly.
- The plant sound levels were recorded bi-weekly.
- The electric and gas meter readings for OU4 were recorded monthly.
- The recharge basins were inspected, and the water levels noted.
- The differential pressure readings across the AS Tower were recorded bi-weekly.

13 PROCESS ANALYSIS and SYSTEM STATUS

The treatment system is currently operated 24/7 in the automatic mode. It is remotely monitored as necessary.

13.1 Extraction (RW) Processes

- The systems were inspected, and electrical baseline testing completed.
- The vault heat units remain off.
- The recovery well pump system is remotely controlled and monitored, it operates in the Auto mode. All the pumps are fully functional with pumps RW-3, RW-4, and RW-5 online.
- Pump flow readouts are transmitted to the plant and the totalizers for recovery pumps -3, -4, and -5 are fully functional.
- The A/V valve at station 16+57 remains isolated from the transmission line.
- The A/V valve at station 17+10 remains isolated from the transmission line.
- RW-1 and RW-2 are offline and periodically run for preventative maintenance purposes. Their flow meters are not transmitting to the HMI.

13.2 Air Stripping (AS) Process

- The three pumps are fully functional. The pumps are operated in the auto mode off the wet well level switches.
- Motors and seals were lubricated. The electrical baseline testing was completed.
- The AS tower main drain valve's manual actuator is not functional (fail open).
- The tower media appears clean as the pressure differential between the top and bottom ports remains relatively constant. The lower section of media has been visually inspected.
- The discharge valves for ASF P1 and P2 appear to be frozen in the open position.

13.3 Plant Discharge (PD) Process

- Partial plant discharge to Basin-33 has started
- Pump 1 has been taken out of service due to excessive noise and vibration. A full evaluation is required.
- The motors and seals were lubricated. The electrical baseline testing was completed.
- The plant discharge is currently directed to Recharge Basin No.1.
- The discharge valve for PFF P2 appears to be failing in the open position. The valve for Pump 3 has failed open.

13.4 Other

- The plant's first light bank is wired to the e-light recharging system; The circuit is kept on 24/7.
- The potential for leaks in the water supply line running through the plant will continue to be monitored.
- The fire alarm system is fully functional. Central monitoring is functional.
- The truck inspection was completed.

14 GROUNDS

14.1 Plant Perimeter

- General outdoor clean-up tasks are on-going.
- The Town of Oyster Bay (TOB) continues to maintain the grounds along the plant perimeter.
- Landscaping tasks have commenced, and egress cleared weekly.

14.2 Well Field

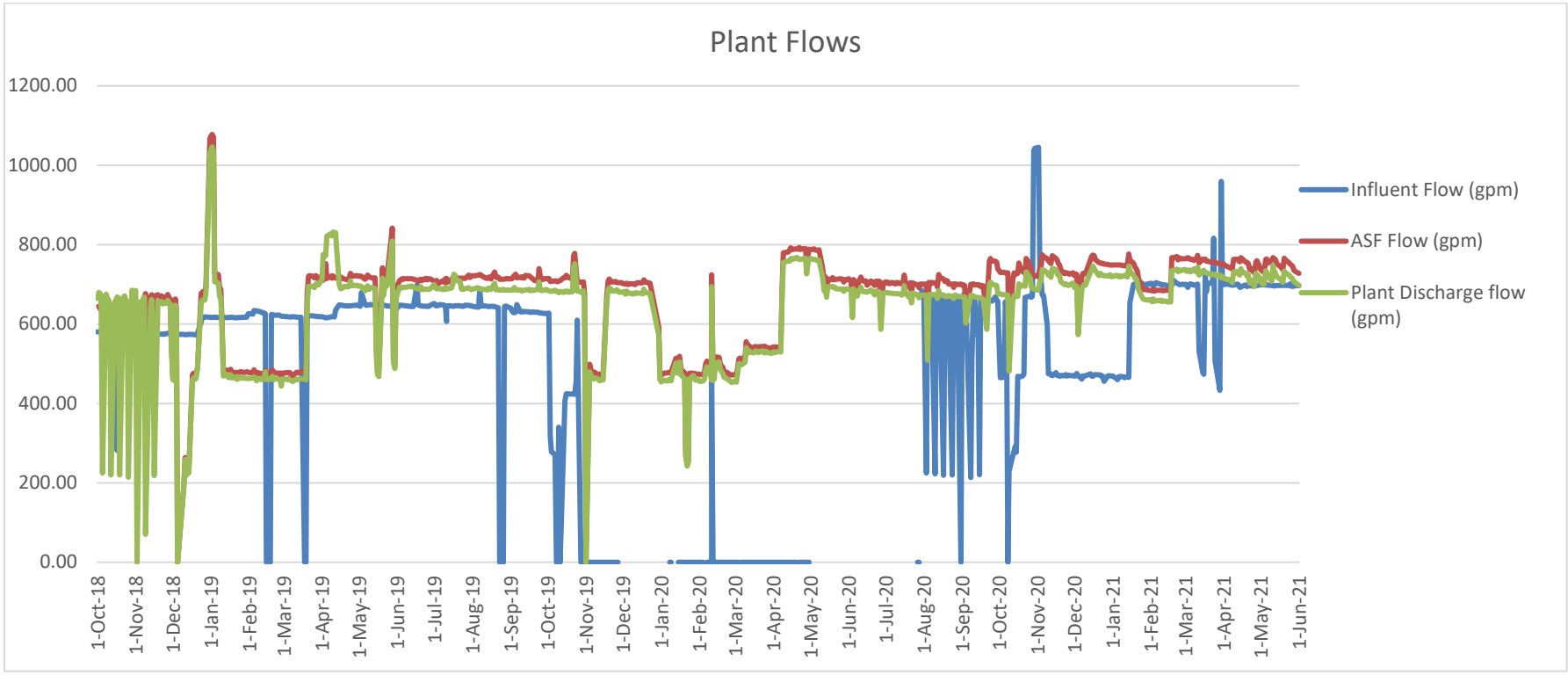
- Well, well field, and recharge basin inspections continue.
- The monitoring well access paths are maintained and cleared.

14.3 Other

- The grounds at OU4 continue to be inspected but not maintained with the exception of the Facility entrance and egress points.
- The Claremont Polychemical GWTF is secure. The Claremont Polychemical site currently has no tenant.

FIGURES

Figure 1 – Plant Discharge Daily Flow



TABLES

Table 1 – Claremont Corrective Actions Summary

Conditions of note and corrective actions planned 5/26/21

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
The RW Discharge Manifold integrity is suspect	The condition of the various devices on the RW discharge manifold are suspect. The Air Vent valve in the vault on the N-side of the 6th fairway is leaking from the influent nipple. **The shut-off valve was closed and the device isolated** The air-vent valve in the vault to the east of the 6th green is leaking. **The shut-off valve was closed and the device isolated.** **The manifold employs isolation, venting, and drain valves as well as other devices. Along the path of the manifold are vaults which house some of these devices. These vaults need to be accessed, pumped out, and the devices tested.**	Plant staff and outside contractors	Possible shutdown	May require a CSE
AS Tower main drain valve is not controlled	The valve does not respond to manipulation of its actuator ***This valve should be replaced*.** ***No further action is planned at this time***	Operator	Plant will need to be shut down to change out the valve	None

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
The RW pump discharge instrumentation and sampling configuration is unwieldy and subject to catastrophic failure	The copper piping assembly (1/2”) carries a fair amount of weight and torque (pressure switch, sample tubing, pressure gauge) and shows signs of corrosion. Various design options have been considered. The assemblies will be changed when circumstances permit.	Plant operator and spotter	Each well system will be shut down during the upgrade	Confined space entries will be required. These will generally not be permit required.
OU4 fire alarm system is not functioning Central monitoring of the fire alarm system or fire suppression system does not exist	The Nassau County Fire Code indicates that the sprinkler system must have central monitoring for flow and valve tampering. The fire alarm system needs to be replaced and centrally monitored. Several contractors have been at the site to propose options for the system ***The fire alarm system is to be replaced*** ***A central station monitoring system is to be installed.***	Plant operator, EE and outside vender	None at this time	Fire code violations. High altitude tasks
Fire safety Code violations at OU5	The violations have been addressed The central monitoring system communication panel has been installed and tested. It is online. The Plainview Fire Department has been informed. **Awaiting final approvals from NYS OFP&C. All fire code violations addressed.**	Plant operator, TOB personnel	none	Fire code

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
Several leaks were observed in the plant overhead water supply line.	Adjacent to the north door a clam-shell type clamp was applied. The second leak observed above the AS Blower is not readily accessible. It is not problematic ***Repair work may require evaluation and outside resources. Currently the situation is controlled.***	Outside plumbing contractor?	None	Sanitary water may be shut off during repairs
The float controls for the PFF pump system are intermittently shorting out causing the system to not properly control the pumping operation	• The wiring of the pump control system is connected below grade. The junction box in the wet well is thought to be filled with water creating a problem with the float switches to control relay wiring. • The box cannot be opened without damage to it and the conduit. This appears to have been a longstanding problem, as when switches have been replaced in the past, they were spliced outside the box. • The float switches have been replaced and spliced above the sump but there remains a problem with the L2 circuit. • The output from the W-2 relay was moved to the output for the W-1 relay. This has stopped the short cycling. ***The control wiring should be changed and moved above grade.***	Plant operator and HDR resources	Plant shut down is required	Possible Confined Space Entry work
PFF P1 has failed	The pump when activated immediately makes a lot of noise, and the pump drop tube shakes. Smoke/ fumes emanated at the Motor-shaft connection. The motor appears to be good. The pump was removed from service, 2/24/20 ***It is recommended that the motor be disconnected, lifted, and the mechanical connection be checked.***	Outside contractors	None anticipated	To be determined

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
As the ASF pumps cycle off/on, the check valves have started to slam closed. When reactivating, the motor starter contact is rather violent. Both actions tend to rattle the piping and fixtures	There is no available literature regarding the check valves, so the exact description of their functioning parts is to be determined. A softer start/stop control may fix this issue. ***This will need further investigation***	Plant operator and EE support	If replacement or repairs are necessary, a plant shutdown will be required as the units can-not be isolated	To be determined
The flowmeters for system flow, ASF flow and plant discharge are out of sync with the flow meters on the recovery wells.	While the ASF flow meter is the most out of line, it is plumbed correctly. The influent system flow meter and the plant discharge flow meters are piped incorrectly. The same style of relay is used to count pulses, but the meters have not been calibrated **The system needs further investigation to determine if any changes are warranted**	Electrical engineering	To be determined	none

Other Plant Conditions of Note (no action required at this time)

- The methane detection system is offline. **To function, it will need a technical inspection and technical maintenance**. However, methane does not currently appear to be a hazard and remains offline.
- It has been determined that intrinsically safe components are no longer required in the plant.

As previously noted, there are pieces of equipment that are out of service and require repairs. Currently there are no plans for addressing these conditions as the operation of this equipment is not necessary or needed for the operation of the treatment system.

Equipment	**Fault**
Plant electric heater UH-1	Needs transformer
Plant electric heater UH-2	Needs relay timer and wiring repairs
NaOH sump pump	Pump is not operating
RW-5 pump discharge isolation valve	Valve does not fully close
Plant lights are wire to the emergency light charging system	Un-segregated light cannot be shut off, several are intermittent
Plant exhaust fans are part of methane system	Fans cannot be manually operated
Plant discharge vent/drain	Leak in Victaulic fitting
ASF pump isolation valve	Valve P1 has failed open
PFF pump isolation valve	Valve P3 has vailed open
RW-1 flow meter	The meter is not operating
RW-2 flow meter	The meter is not transmitting
Air stripper flow meter	Non-functional and removed
AH-1 condenser	Air conditioner is non-functional
Plant outdoor lights	9/12 lights not functioning

Table 3 – Plant Daily Totalizer Readings

May 2021 flows	Plant Influent		Plant Discharge		RW Discharge	
Date	Volume	Avg. Flow	Volume	Avg. Flow	Volume	Avg. Flow
1-May-21	2062000	716	2060000	715	2106000	731
3-May-21	995000	691	994000	690	1017000	706
4-May-21	1010000	701	1009000	701	1033000	717
5-May-21	1053000	731	1053000	731	1077321	748
6-May-21	1056000	733	1055000	733	1080000	750
7-May-21	3131000	725	3131000	725	3200000	741
10-May-21	1042000	724	1014000	704	1064000	739
11-May-21	1055000	733	1073000	745	1075000	747
12-May-21	1054000	732	1055000	733	1076000	747
13-May-21	1065000	740	1066000	740	1086000	754
14-May-21	3089000	715	3088351	715	3160000	731
17-May-21	1029000	715	1028784	714	1039000	722
18-May-21	1014000	704	1013787	704	1034000	718
19-May-21	1015000	705	1014787	705	1035000	719
20-May-21	1056000	733	1055778	733	1077753	748
21-May-21	3159000	731	3158337	731	3224000	746
24-May-21	1030000	715	1029784	715	1050000	729
25-May-21	1038000	721	1037782	721	1060000	736
26-May-21	1047000	727	1046780	727	1066000	740
27-May-21	1015000	705	1014787	705	1035000	719
28-May-21	3044000	705	3043361	704	3105000	719
31-May-21	1003000	697	1002789	696	1024000	711
May Total Plant **Influent** (Gal)				32,062,000		
May Total Plant **Effluent** (Gal)				32,045,107		
May Total **RW Discharge** (Gal)				32,724,074		

Table 4 – May 2021 Pump System Flow Readings

May	On-Time Minutes (actual)	Avg. Flow (gpm)	Avg. Flow (gpd)	Total Flow (gal)
RW-1	18	214	-	3854
RW-2	5	244	-	1220
RW-3	44619	230	330,677	10,251,000
RW-4	44622	287	413,226	12,810,000
RW-5	44621	216	311,548	9,658,000
RW Totals	44640	733	1,055,615	32,724,074
Plant Influent	44640	718	1,034,258	32,062,000
Plant Effluent	44640	718	1,033,713	32,045,107

The treatment process was online 31 days in May with no downtime. Flows are taken from the HMI meter readings.

Table 5 - Claremont OU5 O&M Sampling/Measurement Program and Frequency

Measurement / Analyte	Sampling Location			
	System Influent	Plant Discharge	Recovery Wells	Monitoring Wells
Flow	Daily	Daily	Daily	NA
pH	Quarterly	Weekly	Quarterly	Quarterly
VOA, MTBE, TBA	Quarterly	Monthly	Quarterly	Quarterly
BNA	Quarterly	Monthly	NS	NS
TKN	NS	Quarterly	NS	NS
TSS	Quarterly	NS	Quarterly	NS
TOC	Quarterly	NS	NS	NS
TDS	NS	Quarterly	NS	NS
Cyanide	NS	Quarterly	NS	NS
Hexavalent Chromium	NS	Quarterly	NS	NS
Mercury	NS	Quarterly	NS	NS
Metals (AES/MS)	Quarterly	Quarterly	Quarterly	NS
Anions	NS	Quarterly	NS	NS

Notes: NA – Not applicable; NS – Not sampled.

Table 6 – Recent Plant Discharge Analytical Results

The plant discharge was last sampled 5/19. The results for the May samples are below:

Parameters	Discharge Limitations (SPDES)	Units	Results
pH (range)	*6.5 – 8.5*	*SU*	*7.53*
1,1,1-Trichloroethane	5	ug/l	U
1,1-Dichloroethane	5	ug/l	U
1,1-Dichloroethylene	5	ug/l	U
1,2- Dichloroethane	0.6	ug/l	U
Benzene	0.7	ug/l	U
Chlorobenzene	5	ug/l	U
Chloroform	7	ug/l	U
CIS 1,2-Dichloroethylene	5	ug/l	U
Ethylbenzene	5	ug/l	U
Methylene Chloride	5	ug/l	U
Tert-butyl alcohol (TBA)	Not indicated	ug/l	U
Tert-Butyl-Methyl ether (MTBA)	5	ug/l	U
Tetrachloroethylene(PCE)	5	ug/l	U
Toluene	5	ug/l	U
Trans 1,2-Dichloroethylene	5	ug/l	U
Trichloroethylene(TCE)	5	ug/l	U
Bis(2-ethylhexyl)phthalate	5	ug/l	U
Di-n-butyl phthalate	50	ug/l	U
Nitro Benzene	0.4	ug/l	U
Antimony, Total recoverable	3	ug/l	U
Arsenic, Total recoverable	50	ug/l	U
Barium, Total recoverable	2000	ug/l	81.4
Chromium, Hexavalent	100	ug/l	U
Lead, Total recoverable	50	ug/l	U
Iron, Total recoverable	600	ug/l	U
Manganese, Total recoverable	600	ug/l	136
Mercury	Not indicated	ug/l	U
Zinc	Not indicated	mg/l	U
Nitrogen, Total (as N)	10	mg/l	4.5
Selenium, Total recoverable	40	ug/l	U
Solids, Total Dissolved	1000	mg/l	304
Chloride Ion	NL	mg/l	115
Cyanide	Not indicated	ug/l	U
Fluoride Ion	NL	mg/l	0.029
Sulfate Ion	NL	mg/l	18.4
1, 4-Dioxane	NL	ug/l	NM

J – Estimated value **U** – Analyzed but not detected **NL** – Monitor only **NM**– Not sampled
Discharge limitations updates as per the water discharge permit.
Note: Parameters shaded in gray are sampled quarterly with results being provided March, June, October and December

Table 1 – Plant Discharge Monthly Average pH

Month	pH(su)
May ‘19	6.61
June ‘19	6.5
July ‘19	6.6
Aug ‘19	6.56
Sept ‘19	7.45
Oct ‘19	6.86
Nov ‘19	6.88
Dec ‘19	6.84
Jan ‘20	6.63
Feb ‘20	6.75
Mar’20	6.74
Apr ‘20	6.65
May ‘20	6.8
June ‘20	6.8
July ‘20	6.9
Aug ‘20	6.8
Sept. ‘20	6.8
Oct. ‘20	6.95
Nov. ‘20	6.8
Dec ‘20	6.64
Jan ‘21	6.8
Feb ‘21	6.75
Mar ‘21	6.76
Apr ‘21	7.28
May ‘21	7.53