CLAREMONT POLYCHEMICAL SUPERFUND SITE
Groundwater Treatment System
Old Bethpage, New York

MONTHLY REPORT
for the
Operations & Maintenance Activities
During
January 2015

WA D006130-19
SITE # 130015

Prepared for the:

New York State Department of Environmental Conservation

Prepared by:

HRP Associates, Inc
dba HRP Engineering, P.C.
1 Fairchild Square,
Clifton Park, New York 12065

Prepared: February 6, 2015

HRP Engineering, P.C.
Environmental/Civil Engineering & Hydrogeology
518-877-7101 888-823-6427

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ACRONYMS AND ABBREVIATIONS

AS	air stripping
ASF	air stripper feed
CA	carbon adsorber
CLP	contract laboratories program
DBA	doing business as
DOSR	daily operations summary report
DTW	depth to water
gpd	gallons per day
gpm	gallons per minute
GW	groundwater
GWTP	groundwater treatment plant
GWTS	groundwater extraction, treatment, and reinjection system
HCl	hydrochloric acid
HMI	human-machine interface
HRP	HRP Associates, Inc., dba HRP Engineering, P.C.
HVAC	heating, ventilation, and air conditioning
IG	infiltration gallery
IW	injection well
LGAC, LCA	Liquid phase granular activated carbon
LTRA	Long Term Response Action
MCC	motor control cabinet
MCP	master (main) control panel
NCDPW	Nassau County Department of Public Works
NYSDEC	New York State Department of Environmental Conservation
O&M	operation and maintenance
PDB	Passive Diffusion Bags
PD	plant discharge
PID	photo ionization detector
PLC	programmable logic controller
psi	pressure in pounds per square inch
PW	process water
SAP	sampling and analysis plan
SOP	standard operating procedure
SSHP	site safety and health plan
TA	Test America laboratory
TOB	Town of Oyster Bay
USACE	United States Army Corps of Engineers
VGAC, VCA	vapor-phase granular activated carbon
VFD	variable frequency drive
VOCs	volatile organic compounds

1.0 OPERATION AND MAINTENANCE ACTIVITIES

HRP Associates, Inc. dba HRP Engineering, P.C. (HRP) continued its daily operation and maintenance (O&M) of the Claremont Polychemical Superfund Site Groundwater Treatment System (GWTS) for January 2015. This period is defined as 0600 hours, January 1, 2015, through 0600 hours, February 1, 2015. O&M conducted during this reporting period was performed in accordance with the site O&M (Operations and Maintenance) Manual.

The plant, grounds, and well system were maintained for the 31 days in this reporting period. During which, the treatment system was generally stable while flows remained throttled back. During this January period, the plant experienced no downtime due to maintenance tasks or operational activities.

Readings of key process parameters are recorded each work day morning. These readings are used to monitor the plant's performance and condition, and as a basis for adjustments to the plant processes. These readings are recorded in the Daily Database which is an electronic file maintained in the monthly operating data folders.

1.1 Daily Operations Summary Reports

The operation of the GWTS is documented in the Daily Operations Summary Reports (DOSR). The DOSRs include a summary of the daily O&M activities and are based on the daily operating logs and worksheets. These worksheets include:

Daily Operating Log – Key process readings (CPS-Form-008)
Daily Activities Summary Report - plant operator activities (CPS-Form-007)
Daily Site Safety Inspection – Site checklist for unsafe conditions (CPS-Form-009)
Employee Sign-In Sheet – employee log in (CPS-Form-11)

1.2 Summary of Maintenance Activities

Maintenance of the treatment system and associated equipment is performed in accordance with the Claremont Groundwater Treatment System O&M Manual. Routine activities and equipment function tests completed during this reporting period are summarized in the Monthly Maintenance Log. This report is electronically filed and is available for review.

The plant and system maintenance incorporates the equipment manufacturers' recommendations, operations experience, and good engineering and maintenance practices. A detailed accounting of daily operation and maintenance activities is provided in the plant operator's daily logbook, the site supervisor's daily logbook, the operator's daily activities summary reports, and the site supervisor's daily plant activity notes.

At the end of this report is a list of the manuals, logs, reports, and databases maintained for the treatment plant. The locations of these documents are included.

Maintenance activities completed during this reporting period included:

- General maintenance activities - outdoor clean up tasks on the plant property and along the paths to the wells, plant housekeeping, system inspections and system monitoring.
- Scheduled monthly tasks - motor amp load readings, injection well (IW) depth measurements, valve function tests, and comprehensive site inspections.
- The process pumps were rotated from 2&3 to 1&2 to 1&3. Only one LCA pump and one INJ pump are required for the current flows.
- Injection pump 2 was disassembled and cleaned of sludge and corrosion and prepared for the replacement of the mechanical seal.
- The flow element of IW-1 stopped. It was removed, cleaned and returned to service.
- Blank flanges were installed on the influent and effluent ports of both LCA vessels. The vessels were filled with water and the hatch covers were closed.
- The LCA fixtures previously removed were disassembled and stowed.
- The flow element of IW-4 stopped. It was restarted by bumping the flow in the line.
- PM was completed on the power washer
- The hardware stock was cleaned up and inventoried
- PM was completed on the snow plow. There continues to be issues with its vertical operation.
- The plant truck inspection was completed
- Brackets were made for the sprinkler head drops at the LCA vessels
- PM was completed on the air compressor
- The flow element for IW-4 failed again. It was removed, cleaned, and returned to service.
- PM was completed on the AS blower
- The EX well packers were recharged.
- The flow element of IW-2 failed. It was removed, cleaned and returned to service.
- Snow was removed as necessary.

2.0 MAINTENANCE LOGS

The following operating logbooks are currently in use:

- Well Maintenance Log CL-28
- Sampling and Field Support Log CL-37
- Miscellaneous Field Notes CL-47
- Plant Operator's Daily Log CL-50
- Site Supervisor's Daily Log CL-51

Of the completed project logbooks, 40 are being scanned prior to delivery to the NYSDEC and 8 are on file at Claremont. All of the logbooks are identified on a master logbook inventory control file and are routinely checked as part of the site quality control program.

3.0 TECHNICAL SUPPORT ACTIVITIES

3.1 HRP Personnel

- Jennifer Kotch and Nancy Garry continue to oversee the project from HRP-NY.
- The plant operators maintained the system throughout the period.

3.2 NYSDEC Personnel, sub-contractors and other visitors

- TA-NY picked up the Jan. PD samples for delivery to TA –Edison for analysis, 1/22

3.3 Deliveries

- Mail was delivered 3 times.
- Fed Ex returned a sample cooler, 1/5
- Fed Ex delivered the operator's upgraded computer, 1/8
- TA-NY – delivered the sample bottle order, 1/21

4.0 HEALTH AND SAFETY

Work at the Claremont Polychemical groundwater treatment plant (GWTP) was conducted in accordance with the approved Site Safety and Health Plan (SSHP). Site safety inspections were performed every workday and the reports are filed on-site. In addition to the daily site safety inspections, comprehensive safety inspections are periodically carried out. These worksheets are also on file.

- Comprehensive site safety inspections were completed Jan. 12 and 23 with no new issues to report.
- INJ P2 was locked and tagged out and remains so.
- The quarterly plant safety review was completed with no new issues, 1/13

Heavy snow followed by an ice storm blanketed the plant's paved and concrete areas. These areas have been maintained as best as conditions allow, however there remains outdoor slip hazards.

There were no other safety related incidents or accidents during this January 2015 period.

5.0 PLANNED ACTIVITIES AND SCHEDULES

The status of project work and significant corrective maintenance activities is updated on a monthly basis. This status of plant conditions and concerns was updated January 28 and is electronically filed. It can be found at the end of this report as Table 12-1 – Claremont Corrective Action Summary.

Separate tentative schedules for equipment maintenance tasks are shown in the O&M Manual and the Sampling and Analysis Plan (SAP). Other future activities may include:

- The next quarterly process water samples are scheduled to be collected on 2/19
- The preparation and painting of the EQ tank shell as conditions permit
- The mechanical seal for INJ P2 is to be replaced.
- The level control floats for the sump pump are to be reattached to the sump wall.
- Replacement of the AS blower bearings is to be considered.
- The carbon is to be removed from the LCA carbon vessels
- The LCA vessels are to be scraped
- The impellers are to be cleaned on the INJ pumps
- The PD flow element is to be isolated and cleaned.
- The pump control in the RCY tank will be evaluated
- The sump will be cleaned of residual carbon.
- The mechanical seal on INF pump 2 is to be checked

6.0 MONITORING WELL WATER ELEVATIONS

The monitoring well system - groundwater level elevation data table was updated prior to this Decembers' quarterly groundwater sampling event. This database is available for review.

The next water level recording event is being planned for March.

7.0 TREATMENT SYSTEM FLOWS

The volume of treated water discharged by the treatment plant to the injection well field is determined daily from readings of the magnetic flow meter on the plant effluent line. A summary of these meter readings for January is provided in Table 7-1. The total volume of treated water discharged, as measured from 0600 hours on January 1, to 0600 hours on February 1, was 11,539,355 gallons. The cumulative volume of water discharged for this contract year (June 1, 2014 to present) was 94,756,757 gallons. A graphic representation of the system's daily flows is provided in Figure 7-1. The plant experienced no downtime in January, but has been offline ~61 hours this contract year.

In January, the plant discharge flow averaged 258 gallons per minute (gpm) and 372,237 gallons per day (gpd). The plant discharge flow rate has leveled and pump cycling has decreased.

Month	Flow Average (gpm)	Volume Discharged (gpd)
May '13	152	219,330
June '13	333	480,205
July '13	282	406,545
August '13	356	512,480
September '13	342	493,022
October '13	338	486,258
November '13	344	494,895
December '13	338	486,913
January '14	334	481,617
February '14	318	457,259
March '14	333	478,018
April '14	320	460,702
May '14	314	452,422
June '14	295	424,576
July '14	302	435,092
August '14	292	420,245
September '14	250	360,066
October '14	254	365,181
November '14	258	371,571
December '14	240	344,998
January '15	258	372,237
Historic Target	**335**	**482,400**

The flow monitoring units for the individual IW systems allow for reading the flow rate and volume discharged to each individual system. The relative flows for January are indicated below:

Injection Well System	Flow Average (gpm)	Volume Discharged to well (gallons)
IW-1	22	987,842
IG-1	56	2,495,382
IW-2	22	972,978
IW-3	77	3,425,186
IG-3	21	938,659
IW-4	73	3,272,726
System	**271**	**12,092,773**

Discrepancies between the system flow readings are due in part to the type of flow meters utilized to measure the streams (paddle wheel vs. magnetic vs. turbine), the plumbing configurations, sludge build up in the piping at the flow elements, and rounding factors in the meters.

The flow control valves influent to IW-1, IG-1, IW-3, and IG-3 are fully open. Both galleries are draining adequately. The flow into IW-1 has been increasing. The flow to IW-2 remains severely restricted. Currently only one injection pump is required online.

The plant's total effluent discharge is limited by plumbing constraints, the discharge capacity of the injection pumps, and the ability of the injection wells to accept water.

8.0 CHEMICAL CONSUMPTION

The four chemical feed systems are off line and out of service. The systems are periodically tested and could be made operational. The caustic, the acid and the polymer chemical feed tanks and feed tubing contain water for testing and inspection purposes. The KMnO4 tank is empty with a cracked tank drain flange.

There are no bulk chemicals onsite.

9.0 CARBON SYSTEMS

9.1 Aqueous-Phase Carbon

The LCA vessels have been removed from the treatment process. Multiple samples from each carbon bed were collected for characterization analysis. The carbon is to be disposed of and the vessels scrapped.

The spent carbon previously recovered from the backwashing operation is stored in drums on-site, indoors. This carbon is generally considered a non-hazardous waste but due to the length of time the carbon beds have been on-line, naturally occurring radioactive materials from the processed groundwater have accumulated in the beds. Precautions have been taken when handling this material.

Currently there are 3 properly labeled drums of carbon waste in storage.

9.2 Vapor-Phase Carbon

Two vapor-phase Carbon Adsorber vessels (VCA) are available for the off gas treatment of the air stripping (AS) air stream. Currently, VCA-1 is online. VCA-2 is offline, charged, and ready for service. Monitoring of VOCs in the influent and effluent air stream of the active vessel is performed weekly with a photo-ionization detector (PID). No emissions from the vessel effluent air stream were observed in January.

No spent vapor-phase carbon was generated during this period, and no carbon was added to the vessels.

10.0 WASTE DISPOSAL

No waste was disposed of in January.

11.0 MONTHLY DISCHARGE MONITORING REPORT

The GWTS is currently operating under an equivalency permit from the New York State Department of Environmental Conservation (NYSDEC). A review of the analytical results for the monthly plant discharge samples, (included within Section 14.0), indicated all analyzed parameters were below noted permit limits.

The plant's water discharge permit expired December 31, 2013 and the permit renewal/extension process is underway.

12.0 OTHER OPERATIONS, MAINTENANCE, OR MANAGEMENT ISSUES

INJ Pump-2 has been removed from service, disconnected and disassembled. The mechanical seal was cocked and components were seized. There is much corrosion on the motor shaft and on the adaptor housing but they both appear useable. Replacement of the mechanical seal is underway.

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The pump for extraction well 2 remains off and the flow from EX-1 remains restricted. The flow into the plant is currently at 200-220 gpm (paddle wheel flow elements). Adjustments to the plant influent flow have reduced the incidence of pump cycling.

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The physical performance of the injection pumps and/or injection well system appears to be deteriorating. This could be due to a combination of fouled or corroded injection pump impellers, failing injection wells, or the intrusion of carbon sludge clogging the system. Lower flow into the plant minimizes the degree and impact of these changes.

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As noted, processed water through the plant has been reduced. Only one injection pump has been needed to handle the flow. In addition, only one LCA pump is needed to handle the current flows.

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The flow restrictions to IW-2 have fluctuated as has the DTW and DTB levels.

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Other on-going plant maintenance issues are summarized on Table 12-1.

13.0 PLANT DOCUMENTS

Procedures and standard forms are written, reviewed, and revised as needed. In January the following changes were made:

- Form-033 (Quarterly Plant Review) was revised to rev. D
- Modifications were made to the PW sample sheet
- Form-009 (Daily Safety Inspection) was revised. It has yet to be determined if the changes are to be adopted.

14.0 TREATMENT PLANT AND WELL FIELD MONITORING RESULTS

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

14.1 Off-site Analytical Data Results

Monthly plant discharge (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. January's sampling activities included:

- The analytical data for December's PD samples was processed and uploaded to EQuIS
- The January PD samples were collected 1/22 and sent to TA-Edison for analysis
- The analytical data for January's PD samples was Processed and uploaded to EQuIS

The plant discharge was sampled on 12/30 and 1/22. The following are the analytical results for these samples:

Plant Discharge				
Parameters	**Discharge Limitations**	**Units**	**Results Dec '14**	**Results Jan '15**
pH (range)	5.5 – 8.5	SU	6.19	6.32
1,1,1-Trichloroethane	5	ug/l	U	U
1,1-Dichloroethane	5	ug/l	U	U
1,1 Dichloroethylene	5	ug/l	U	U
Benzene	0.7	ug/l	U	U
Chlorobenzene	5	ug/l	U	U
Chloroform	7	ug/l	U	U
1,2-(cis) Dichloroethylene	5	ug/l	U	U
1,2-(trans)Dichloroethylene	5	ug/l	U	U
Ethylbenzene	5	ug/l	U	U
Methylene Chloride	5	ug/l	U	U
Tetrachloroethylene(PCE)	5	ug/l	U	U

Toluene	5	ug/l	U	U
Trichloroethylene(TCE)	5	ug/l	U	0.14
Bis(2-ethylhexyl)phthalate	4200	ug/l	U	U
Di-n-butyl phthalate	770	ug/l	U	U
Antimony, Total recoverable	3	ug/l	NS	NS
Arsenic, Total recoverable	50	ug/l	NS	NS
Barium, Total recoverable	2000	ug/l	NS	NS
Lead, Total recoverable	50	ug/l	NS	NS
Selenium, Total recoverable	40	ug/l	NS	NS
Iron, Total recoverable	500	ug/l	NS	NS
Manganese, Total recoverable	500	ug/l	NS	NS
Nitrogen, Total (as N)	10	mg/l	NS	NS
Solids, Total Dissolved	1000	mg/l	NS	NS
Chromium, Hexavalent	100	ug/l	NS	NS
Chloride Ion	NL	mg/l	NS	NS
Fluoride Ion	NL	mg/l	NS	NS
Sulfate Ion	NL	mg/l	NS	NS

NS not sampled
U analyzed for but not detected
J estimated value
NL monitor only

14.2 Field Data

Plant Discharge pH and Temperature

Treatment plant effluent is monitored for pH and temperature on a weekly basis in order to obtain a monthly average in compliance with the NYSDEC discharge permit requirements. These readings are obtained from the plant effluent taken from a controlled point with calibrated portable meters. A summary of this data is as follows:

Date	pH	Temp ^{0}C
Jan 5	6.38	12
Jan 12	6.46	11
Jan 19	6.12	13
Jan 26	6.30	13
January Avg.	**6.32**	**12**

The NYSDEC discharge permit requires the plant discharge to have an average monthly pH greater than 5.50. The treatment plant effluent pH averaged 6.32 in January and met the monthly average pH discharge requirement. A graph of the plant discharge monthly pH average trend over several months is provided in Table 14-4.

AS Tower Carbon Bed Air Monitoring

Using a calibrated PID meter, weekly air monitoring readings are taken of the influent and effluent air streams of the active vapor phase carbon adsorber vessel following the air stripping tower. Currently vessel VCA-1 is on-line. Below are the readings for January.

Date	Inlet	Outlet
Jan 5	0	0
Jan 12	0	0
Jan 19	0	Not measured
Jan 26	0	0
*PID readings indicate that the VOCs in the air stream are lower than the part per million levels (ppm) of the instrument's capability.		

No emissions were detected in the discharge of the active vessel (VCA-1) in January.

Injection Well Soundings and DTW

Measurements to determine the well depth from the top of the injection well column to the bottom were taken January 21. A summary of the historical data is included in Table 14-2. Currently, the infiltration of sediment has slowed although the IW-2 levels continue to fluctuate.

The IW pressure transducers are no longer reliable indicators of the water level in the injection wells. The IW water levels are manually monitored and are generally steady. The DTW readings for the injection wells were also recorded 1/21.

	Sounding Depth (ft)	Depth to Water
	01-21-15	injection pumps on
IW-1	144.03	2.00
IW-2	105.90	3.79
IW-3	246.95	4.53
IW-4	177.70	12.43

IW-2 influent flow remains restricted and more material appears to have infiltrated the well. IW-1 has shown a recent trend of accepting more influent water.

Other routine data collected during January included:

- The plant sound level readings were recorded twice
- The utility meter readings were recorded weekly.
- The extraction well packer pressures were recorded periodically, (see Sec. 15.1).
- The process motor amp loads were measured and recorded
- Additional DTW readings were taken on IW-2

15.0 PROCESS ANALYSIS, INTERPRETATIONS, AND CONCLUSIONS

15.1 Extraction and Influent Processes

- The discharge flows from EX-1 remain restricted.
- The pump for EX-2 remains shut off
- The pump motor amp load readings were recorded 1/30
- Both active EX pumps are running 24 hours per day
- Both EX well packers were recharged in January
- The three influent pumps are operational and 2 are on-line.
- There continues to be a lack of VFD control of INF P-1.
- The influent pumps were rotated twice in January
- The 2 influent flow controllers are fully functional.
- The INF check valves need to be manually set.
- Routine maintenance continues.

Extraction Well packer pressure readings:

	EX-1 (>25 psi)	EX-2 (>35 psi)
Jan 6	26	43

Jan 13	25	42
Jan 16	24	43
Jan 20	23	0
Jan 20	recharged to 41 psi	recharged to 50 psi
Jan 23	40	50

15.2 Flow through Aeration Process

- Both treatment trains are on-line and the process water is balanced between them.
- The polymer, potassium permanganate, caustic, and hydrochloric acid feed systems remain out of service as current water conditions make their use unnecessary.
- The flash and flocculation mixers at the clarifiers remain idle due to lack of solids generation.
- The pH control systems are offline.
- The reaction tanks and clarifier systems continue to operate as pass-through settling tanks.

15.3 Settling Filter Process

- The system is fully functional and draining adequately.
- Maintenance is performed as required.

15.4 Air Stripping Process

- The three ASF pumps are operational and are rotated into service two at a time. They were rotated twice in January
- The motor amp load readings were recorded 1/30
- The check valves are manually set.
- The VFD for ASF P2 exhibits an earth ground fault. When on-line, Pump 2 operates through the off line pump's VFD.
- The VCA gauge tubing needs to be replaced.
- The carbon beds are drained of water
- The blower was lubricated and the drive belts were replaced
- The blower shaft bearings soon may require replacement.
- Paint is starting to peel form the tower. This will need to be addressed as algae formation on the media could result.
- The pH control system is not in service.
- No other issues arose with the air stripping system. Routine maintenance continues.

15.5 Aqueous-Phase Carbon Treatment Process

- The LCA vessels were removed from service and the pump discharge was plumbed directly to the TW tanks
- All three feed pumps are operational and were rotated twice in January. The pumps are operating at a much lower discharge pressure. Only one pump is necessary for the current flows
- The pump motor amp load readings were recorded 1/30
- The pump check valves are manually set
- Other routine maintenance tasks continued.

15.6 Treated Water Injection Process

- The plant discharge system is online and operational.
- INJ P2 has been taken off-line due to leaks and noise
- The pumps were rotated twice in January. Only one pump is necessary for the current plant flows
- The influent flow to IW-2 remains restricted.
- The transducer in IW-2 appears stuck on something. (Possibly buried in sediment.)
- The pump motor amp load readings were recorded 1/30
- The check valve for P1 and P2 are manually set
- The galleries are adequately draining.
- The well transducers are not functioning correctly.
- No other issues were encountered with the injection system.

16.0 GROUNDS

16.1 Plant Perimeter

- General outdoor clean up continues including snow removal when necessary.
- The warning signs and fencing are repaired as necessary. The access gates are clear.
- The fire hydrant is clear and accessible.

16.2 Well Field

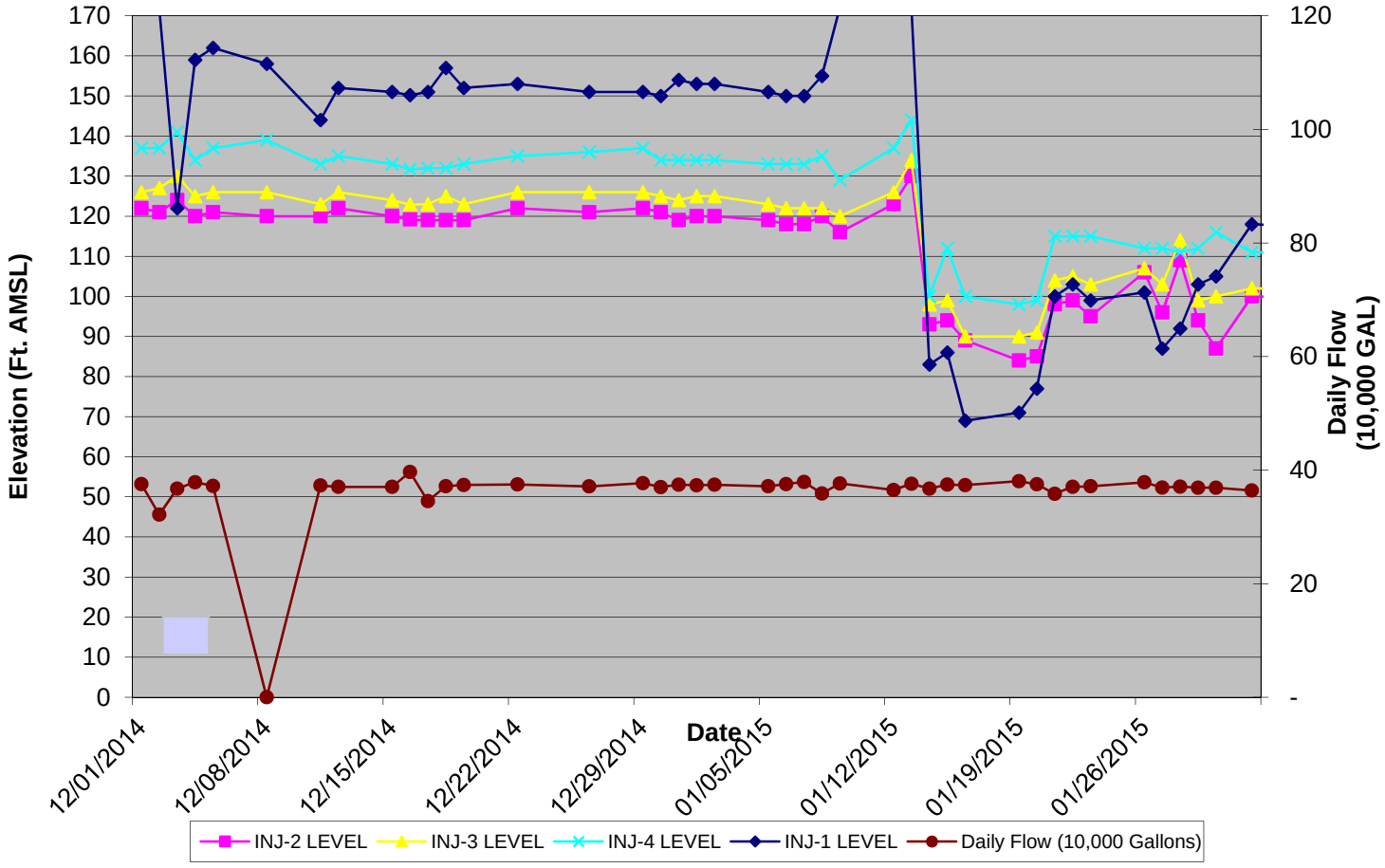
- Manual DTW readings of the IWs continued.
- EX well packer pressure readings continue. The packers were recharged in January
- The paths to the monitoring wells are kept clear and accessible, although currently high snow drifts are blocking the truck path.

16.3 Other

- The monthly in-house inspection of the plant truck was completed.
- Miscellaneous trips for local purchases were made.

FIGURES

Figure 14-1 Injection Well Elevations and Daily Flow



TABLES

TABLE 7-1 Magnetic Flowmeter Daily Totalizer Readings – January 2015

DATE	TOTALIZER READING	GALLONS PER DAY	GALLONS PER MINUTE
1/1/2015	915610380	369620	257
1/2/2015	915980000	1150000	266
1/5/2015	917130000	349590	243
1/6/2015	917479590	400410	278
1/7/2015	917880000	380000	264
1/8/2015	918260000	360000	250
1/9/2015	918620000	1130000	262
1/12/2015	919750000	370000	257
1/13/2015	920120000	370000	257
1/14/2015	920490000	370000	257
1/15/2015	920860000	370000	257
1/16/2015	921230000	1130000	262
1/19/2015	922360000	380000	264
1/20/2015	922740000	370000	257
1/21/2015	923110000	370000	257
1/22/2015	923480000	380000	264
1/23/2015	923860000	1090000	252
1/26/2015	924950000	440000	306
1/27/2015	925390000	320000	222
1/28/2015	925710000	360000	250
1/29/2015	926070000	370000	257
1/30/2015	926440000	709735	246
2/1/2015	927149735		
Jan. '15 Treated Water Volume		**11,539,355**	
Jan. '15 Avg. GPM Discharged			**258**

TABLE 12-1 Plant conditions and concerns (updated 01/28/15)

Date	Condition to be corrected	Status	Priority	Notes
2007	PD manifold leak	Leave as is and monitor	3	Leak is monitored and deemed to be not serious
2008	Check Valve failures	Valves are manually controlled	2	Plant wide – 13 units, this situation creates problems for any remote control of the processes.
2008	Injection Pump 1&2 shut off valve failures	Leave as is **The influent valve for P2 was replaced**	2	Minimum 4 units. Pumps cannot be isolated
Aug '08	Air Compressor overhaul	Run system on an 'as needed' basis	4	This method has been working well. A failure may prevent some tasks.
2009	EQ tank isolation valve failure	Leave as is	2	The tank cannot be isolated
2009	Filter press hydraulic fluid leak	Add fluid as needed	4	The hydraulic pump system will require outside service.
Aug '10	IW transducer replacement	Leave as is and manually measure water levels	3	all 4 units give unreliable signals
Aug '10	Access stairs from plant to wellfield	Leave as is	4	Need to generate a plan with costs
May '11	pH meter failures at RX1, 2, and ASF	Leave as is. Units have been removed from service	4	pH control is no longer required
June '11	ASF P2 VFD failure	Leave out of service	2	P-2 is run on off-line pump's VFD
July '11	INF P1 VFD malfunction	Leave as is	2	Pump flow is controlled by throttling the P-1 discharge valve
Jan '12	INF P2 motor noise	Await failure – continues to operate without problems	4	Replace motor at failure
Apr '12	Permanganate tank repair	Leave as is	4	Off line, tank is not needed
June '12	ASF Level Monitor	Operate as is	3	Monitor give false LL conditions which cycles the pump
Sept '12	Optimize PD flow	Leave as is	4	-change discharge & manifold plumbing -change out pump impellers -resize pumps - review plant flow requirements
Nov. '12	Clean Process tanks	Clean when possible EQ , TW, ASF	4	Plant shutdown items: See below for completed tanks
Jan '13	Rust spots on storage tank shells	Project has started, lower sections of the TW and EQ tanks have been prepped and spot primed	2	Rusted areas are to be abraded clean and spot painted
May '13	Sump pump level control mountings are loose	float is secured to a submersed pipe until a tank entry is made	3	
Aug '13	Sediment depositing in IW-2	Flow restricted to well. Continue to monitor well depth. Flow through the well has improved	3	Continue to restrict flow as necessary Monitor the well sounding for changes
Dec '13	LCA vessels due for a carbon change out	3 venders have been contacted regarding the carbon change out of both vessels. 3 have responded with proposals – the system has been disconnected**.** **Carbon samples have**	3	carbon is ~6 years old and last 2 waste shipments have shown low levels of radioactivity. 12000 (2) lb change out with reactivated carbon

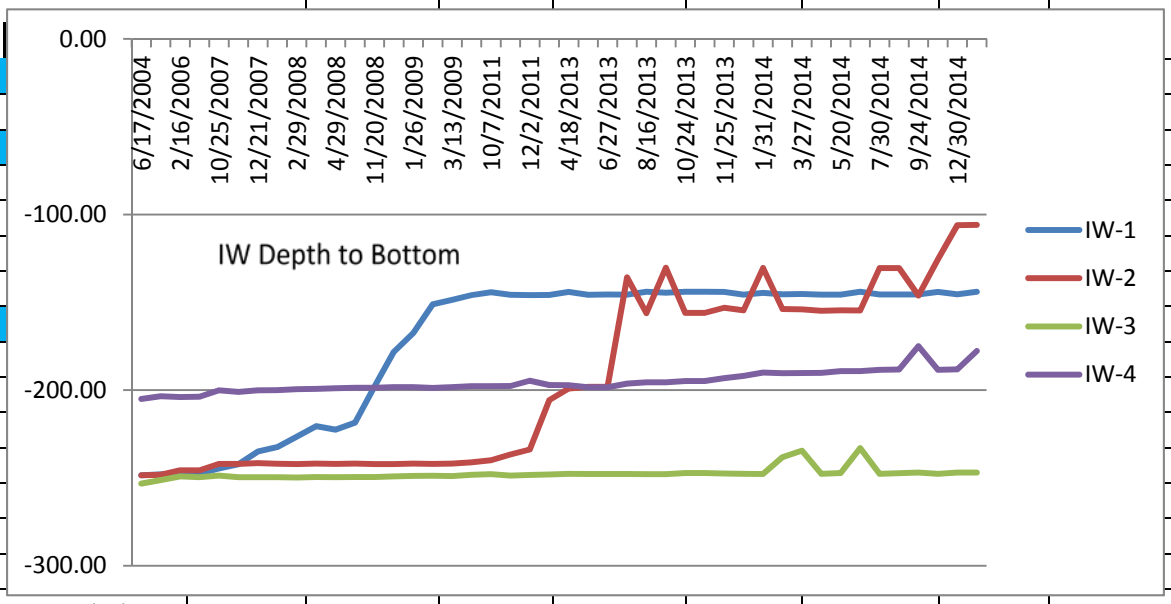
		been sent out for analysis		
Jan '14	Replacement of belts and bearings on the AS blower	The bearings are a capital item. Belts were replaced 10/4/14	2	bearings will run ~$1000 per pair, I pair needed
Jan '14	Filter press M-4 pump leaks through diaphragm	pump is operational but sprays water through the air exhaust M-8 is online	3	replace diaphragms
Feb '14	leak thru discharge flange of LCA V-1	Flange does not appear cracked. This is a shut down item. **The system was disconnected and is no longer in service.**	2	Flange was tightened to 35 ft-lbs, leak persists. Assembly will need to be removed to see what is causing the problem. Plant will need a shutdown and vessel drained of water
March '14	INF P2 has developed a leak at the mechanical seal.	The leak is not severe.	3	purchase seal and repair in-house
March '14	Radiation levels detected in carbon of LCA vessels is of growing concern	Limit personnel exposure to radiation sources**. The vessels are off line, closed and filled with water**	1	• test plant for radiation exposure levels • replace carbon in LCA vessels • process bypass of LCA vessels
March '14	Project – bypass LCA vessels	The discharge from the LCA feed pumps has been re-piped directly to the TW tanks 12/9	4	leave existing piping intact
April '14	Roof penetration Vent leaks	Need to re-set piping and seal roof surface. In process of contacting venders	3	Heavy snows have dislodged the vent s over HVAC mezzanine and at the N steps. Roof gap has opened
May '14	INJ P1 and P2 output is dropping.	remove and clean impellers INJ P2 has been taken out of service and disconnected. **The replacement mechanical seal kit has been ordered**	2	schedule as possible
June '14	A second leak has developed in the INJ pump discharge manifold	leave as is and monitor	3	the leak is currently a drip at a glue joint in the manifold.
July '14	INJ P2 is making noise while operating	taken off Line – see above	2	pump noise in addition to seal leak, May be related
October '14	Sounding probe is stuck in IW-4	temporarily leave as is for the probe was removed	3	obstruction at -59 ft. is preventing the removal of the probe
November '14	a leak has developed in the shell of LCA-1	Relatively minor and will be monitored. **Tank removed from service**	**3**	

Priority Level 1- urgent and must be done
2- not urgent but must be done
3- not urgent but should be done
4- not urgent but would like done

TABLE 14-2 Injection Well Soundings

This table contains selected dates and data

	Injection Well 1		Injection Well 2		Injection Well 3		Injection Well 4	
Date	DTB(ft)	Difference	DTB (ft)	Difference	DTB (ft)	Difference	DTB (ft)	Difference
6/17/2004	-248.50	--	-248.50	--	-253.20	--	-205.00	--



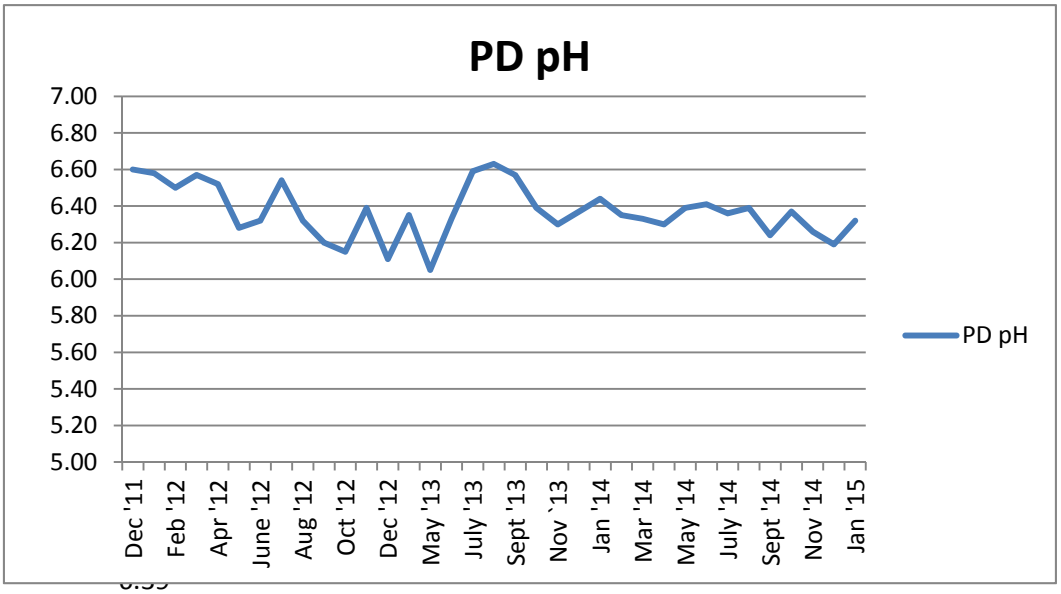
9/21/2011	-145.90	-291.75	-241.10	-482.60	-248.25	-496.50	-197.73	-395.53
10/7/2011	-144.30	1.60	-239.95	1.15	-247.90	0.35	-197.75	-0.02
11/17/2011	-145.70	-1.40	-236.70	3.25	-248.72	-0.82	-197.70	0.05
12/2/2011	-145.95	-0.25	-233.80	2.90	-248.30	0.42	-194.65	3.05
5/14/2013	-145.70	-1.65	-198.10	1.00	-247.80	-0.10	-198.43	-1.18
6/27/2013	-145.55	0.15	-198.10	0.00	-247.80	0.00	-198.43	0.00
7/29/2013	-145.60	-0.05	-135.80	62.30	-247.80	0.00	-196.27	2.16
8/16/2013	-144.00	1.60	-156.20	-20.40	-247.84	-0.04	-195.60	0.67
10/24/2013	-144.00	0.50	-156.00	-25.66	-247.20	0.64	-194.80	0.80
10/24/2013	-144.00	0.00	-156.00	0.00	-247.20	0.00	-194.80	0.00
11/25/2013	-144.05	-0.05	-153.14	2.86	-247.50	-0.30	-193.20	1.60
12/30/2013	-145.65	-1.60	-154.60	-1.46	-247.70	-0.20	-191.90	1.30
1/31/2014	-144.60	1.05	-130.45	24.15	-247.75	-0.05	-190.01	1.89
2/25/2014	-145.45	-0.85	-153.80	-23.35	-238.20	9.55	-190.40	-0.39
3/27/2014	-145.30	0.15	-154.04	-0.24	**-234.50**	3.70	-190.30	0.10
4/28/2014	-145.60	-0.30	-154.80	-0.76	**-247.70**	-13.20	-190.20	0.10
5/20/2014	-145.60	0.00	-154.60	0.20	**-247.20**	0.50	-189.20	1.00
6/30/2014	-144.02	1.58	-154.65	-0.05	-233.00	14.20	-189.20	0.00
7/30/2014	-145.58	-1.56	-130.55	24.10	**-247.70**	-14.70	-188.48	0.72
8/28/2014	-145.50	0.08	-130.50	0.05	**-247.35**	0.35	-188.28	0.20
9/24/2014	-145.50	0.00	**-146.16**	-15.66	**-246.96**	0.39	**-174.96**	13.32
10/20/2014	-144.05	1.45	**-125.50**	20.66	**-247.65**	-0.69	**-188.50**	-13.54
12/30/2014	-145.45	-1.40	**-106.05**	19.45	**-246.95**	0.70	**-188.20**	0.30
1/21/2015	-144.03	1.42	**-105.90**	0.15	**-246.95**	0.00	**-177.70**	10.50

DTB Well Changes

June ' 04 to Present	**104.47**	**142.60**	**6.25**	**27.30**

TABLE 14-4 Plant Discharge Monthly Average pH

Month	$pH_{AVG.}$
Dec '11	6.60
Jan '12	6.58
Feb '12	6.50
Mar '12	6.57
Apr '12	6.52
May '12	6.28
June '12	
July '12	
Aug '12	
Sept '12	
Oct '12	
Nov '12	
Dec '12	
Jan '13	
May '13	
June '13	
July '13	
Aug '13	
Sept '13	
Oct '13	
Nov `13	6.30
Dec '13	6.37
Jan '14	6.44
Feb '14	6.35
Mar '14	6.33
Apr '14	6.30
May '14	6.39
June '14	6.41
July '14	6.36
Aug '14	6.39
Sept '14	6.24
Oct '14	6.37
Nov '14	6.26
Dec '14	6.19
Jan '15	6.32



Associated and Referenced Documents

Document	Location
Daily Worksheets Daily Operating Log Daily activities Summary Report Daily Site Safety Inspection Employee Sign-in Sheet	Original paper copies in monthly file folders at plant. Electronic copies on Farmington Server: >Claremont Data>year>month>month daily worksheets
Supporting Worksheets Visitor/Subcontractor Sign-in Sheet Air Monitoring Log Sound Monitoring Worksheet Daily Plant Activity Notes Comprehensive Site Safety Inspections	Original paper copies in monthly file folders at plant. Electronic copies on Farmington Server
Plant Operator's Daily Log Book	Current book issued to operator, completed books on file in shop cabinet
Site Supervisor's Daily Log Book	Current book issued to supervisor, completed books on file in shop cabinet
Daily Database	Current database is an Electronic file on site, in Claremont Docs/Claremont Ops Data/ monthly folder. Past docs on server: > Claremont Data>yr>month>
Daily Operations Summary Report	Current report is an Electronic file on site, in Claremont Docs/Claremont Ops Data/ monthly folder. Past docs on server: > Claremont Data>yr>month>
Monthly O&M Report	Electronic file on server: >Claremont Data>yr>month>
Monthly Maintenance Log	Electronic file on server: > Claremont Data>yr>month>
Project Status Report formerly Activities Schedule	Electronic file on server: >Claremont Data>yr>month>
Groundwater Elevation and Water Quality Database	Electronic file on server: >Operating data
Monthly Plant Truck Inspection Worksheet	Electronic file on server: >Claremont Data>yr>month>
Stand Alone Documents Claremont O&M Manual Site Safety and Health Plan Standard Operating Procedures and Instruction manual Sampling and Analysis Plan Log of Operating System Drawings	Bindered copies in control room, electronic copies on server> Stand Alone Documents
Sampling forms	Electronic file on server: >Sampling> Sampling Forms
Chain of Custody Documents	Electronic File on server: >Sampling> yr>mo
Claremont Site Notebook	Electronic file on server : >Stand alone documents> Claremont notebook

Associated documents and worksheets used to generate this report can also be found on shared folder' CPC Monthly Logs from Plant'