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

MONTHLY REPORT
of the
Operations & Maintenance Activities
During
May 2015

WA D006130-19
SITE # 130015

Prepared for the:

New York State Department of Environmental Conservation

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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, Liquid side carbon Adsorbers
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
SAIC	Science Applications International Corporation
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, Vapor side carbon adsorber
VFD	variable frequency drive
VOCs	volatile organic compounds

1.0 OPERATION AND MAINTENANCE ACTIVITIES

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

The GWTS 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 May 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 system'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 daily operation of the GWTS is briefly described in the Daily Operations Summary Report (DOSR). The DOSR includes a summary of the daily O&M activities and are based on the daily operating logs and worksheets. These worksheets include:

Daily Operating Log – selected process readings (CPS-Form-008)
Daily Activities Summary Report - plant operator activities (CPS-Form-007)
Daily Site Safety Inspection – process condition checklist (CPS-Form-009)
Employee Sign-In Sheet – employee daily 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 and location of the manuals, logs, reports, and databases maintained for the treatment plant.

Maintenance activities completed during this reporting period included:

- General maintenance tasks - outdoor clean up, plant housekeeping, system inspections and system monitoring.
- Scheduled monthly tasks - motor amp load readings, injection well flow, DTB and DTW measurements, valve function tests, and comprehensive site inspections.
- Grounds and well maintenance tasks and inspections continued.
- The Influent pumps were rotated from 2&3 to 1&2 to 1&3. The other process pumps from 3 to 2 to 1. Only one LCA, ASF and INJ pump were required for the current flows.
- The LCA vessels continue to drain to the floor sump.
- Selected sprinkler drops were prepared and painted
- The grass on the plant perimeter and at the well system was mowed as necessary.
- The truck equipment ramps were modified to enhance their safe usage.
- The insulation was removed from the outdoor tank level monitors and the heat trace system was disconnected.
- The flow element for IW-1 was removed, cleaned and returned to service
- Weed killer was applied to the pebbled and graveled areas
- The monthly truck inspection was completed
- PM was completed on the Air Stripper system
- PM was completed on the air compressor system

2.0 MAINTENANCE LOGS

The following operating logbooks are currently in use:

- Well Maintenance Log CL-28
- Sampling and Field Support Log CL-37
- Field Support Log CL-43
- Miscellaneous Field Notes CL-47
- Plant Operator's Daily Log CL-50
- Site Supervisor's Daily Log CL-51

The remaining project log books are stored at the plant.

All of the logbooks are identified on a master logbook inventory control file and those on-site 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.
- Jennifer Kotch was on-site 5/20 to review the project and the TOB piping layout.

3.2 NYSDEC Personnel, sub-contractors and other visitors

- Island Pump and Tank were onsite 5/5 to look at the LCA vessels for removal of the carbon and scrapping of the tanks
- TA-NY was in to pick up the PW samples for delivery to TA-Edison, 5/14
- Nassau County fire Inspectors were in 5/22 for the annual system inspection
- Arrow Autoglass was in to replace the truck windshield, 5/26
- Mike Flaherty (NCDPW) was onsite to share data, 5/26
- Mets emptied the trash dumpster, 5/29

3.3 Deliveries

- TA-NY delivered the sample bottle order, 5/1
- Carl of Dvirka & Bartellucci dropped off the new TOB well keys, 5/1
- Mail was delivered 6 x
- UPS delivered the Ryan Herco order, 5/11

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 were carried out 5/11 and 5/26. These worksheets are also on file.

There were no other safety issues or related incidents or accidents during this May 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 May 21 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 activities to be considered include:

- The monitoring well groundwater readings are scheduled for 6/12
- The next quarterly groundwater samples are scheduled for 6/18
- The next monthly PD samples are scheduled for 6/25
- The IG flow meters and valves are to be tested
- Selected equipment and fixtures are to be painted
- Tasks associated with the rerouting of the TOB recovery well discharge to the Claremont GWTP are being defined
- The preparation and painting of the EQ tank shell as conditions permit
- 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 scrapped.
- The main 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.

6.0 MONITORING WELL WATER ELEVATIONS

The monitoring well system - groundwater level elevation data table was updated after the March groundwater sampling task. This database is available for review.

The next water level recording event is scheduled for June 12, prior to collecting the June GW samples.

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 May is provided in Table 7-1. The total volume of treated water discharged, as measured from 0600 hours on May 1, to 0600 hours on June 1, was 10,771,283 gallons. The cumulative volume of water discharged for this contract year (June 1, 2014 to present) was 137,702,496 gallons. A graphic representation of the system's daily flows is provided in Figure 7-1. The plant experienced no downtime in May, but has been offline ~61 hours this contract year.

In May, the plant discharge flow averaged 241 gallons per minute (gpm) and 347,461 gallons per day (gpd). The plant discharge flow rate is stable with minimal pump cycling, but is dependent on which injection pump is online.

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
February '15	256	368,601
March '15	254	365,363
April '15	244	350,913
May '15	241	347,461
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 problems experienced in April continued into May. Influent flow is restricted into IW-1, -2, and -3. The IG meter readings are suspect. The velocity of water influent to IW-2 is too low for the flow element to pick up (the values indicated are estimates). In May, the flows to each well system are indicated below:

Injection Well System	Flow Average (gpm)	Volume Discharged to well (gallons)
IW-1	82	3,661,171
IW-2	4	193,384
IW-3	99	4,428,234
IW-4	75	3,350,556

System	**261**	**11.633,345**

Discrepancies between the treatment 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 but slowing. The flow into IW-1 has been fluctuating. 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 (4) chemical feed systems are not currently in-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 were no bulk chemicals present onsite in May 2015.

9.0 CARBON SYSTEMS

9.1 Aqueous-Phase Carbon

The LCA vessels have been removed from the treatment process. The carbon is to be removed and properly disposed of offsite. The vessels are to be scrapped.

The spent carbon previously recovered from the backwashing operation is stored in labeled 55-gallon steel 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, including proper PPE, have been taken when handling this material.

Currently, there are almost 3 full drums of carbon waste in storage.

9.2 Vapor-Phase Carbon

One of two vapor-phase Carbon Adsorber vessels (VCA) is on-line for the off gas treatment of the air stripping (AS) air stream. Currently, VCA-1 is online. VCA-2 is offline and is 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) calibrated per

manufacturer's recommendations. No emissions from the vessel effluent air stream were observed in May.

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 May 2015.

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. Most recent results can be seen in Table 14-1.

The plant's water discharge permit has been extended through December 31, 2025.

12.0 OTHER OPERATIONS, MAINTENANCE, OR MANAGEMENT ISSUES

Several pumps are making noise when activated (INJ P-2, LCAF P-2 and INF P-2)

___

A review of the new SPDES permit revealed the call out of 1, 2-dichloroethane discharge limit of 0.6 ug/l (new species to permit)

___

The pH of the plant discharge remains below the 6.5 standard units. The trend of the recent average plant discharge pH can be seen in Table 14-3.

___

The physical performance of the injection pumps and injection well system appears to be deteriorating. IW-1 and IW-2 appear to be accepting little water. The discharge pressure of the pumps is higher than their operating range.

___

A plan is being made for the possible re-routing of the discharge from several TOB recovery wells to the Claremont GWTP.

___

The volume of extracted water processed through the plant has been reduced. Only one injection pump has been needed to handle the flow. Also, only one LCA pump and one ASF pump are on-line at a time.

___

The flow into IW-1, -2, and -3 has been restricted.

____

Other on-going plant maintenance issues are summarized on Table 12-1. Following the table is a comment on the impact to plant operations if more water was to be treated by the GWTS.

13.0 PLANT DOCUMENTS

Procedures and standard forms are written, reviewed, and revised as needed. In May:

- The 'As-Built' Visio drawings were updated and placed in the plant drawings binder.
- The 2015 revision of the O&M Manual has commenced.
- The PW COC document was revised to reflect a separate entry for PD-09 chrome samples

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. May's sampling activities included:

- The quarterly PW samples were collected May 13 and 14 and shipped to TA-Edison for organic, generic and inorganic analysis.
- HDR was on-site to sample the EW-7 wells
- The data for the May PW samples was uploaded to EQuIS

14.2 Field Data

Injection Well Soundings and DTW

Measurements to determine the well depth from the top of the injection well column to the bottom were taken May 26. A summary of the historical data can be reviewed in Table 14-2. Currently, the infiltration of sediment has slowed although the depth of IW-2 continues 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 5/26.

	Sounding Depth (ft)	Depth to Water (ft)
	5-26-15	injection pumps on
IW-1	145.40	1.0
IW-2	105.65	10.5
IW-3	246.75	0.50
IW-4	185.00	13.75

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 (su)	Temp ^{0}C
May 4	6.38	14
May 11	6.29	16
May 18	6.30	17
May 25	6.28	16
Average	**6.31**	**16**

su – standard unit

The previous NYSDEC discharge permit required the plant discharge to have an average monthly pH greater than 5.50 su. The treatment plant effluent pH averaged 6.31 su in May and met this monthly average pH discharge requirement. A graph of the plant discharge monthly pH average trend over several months is provided in Table 14-3.

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 May.

Date	Inlet	Outlet
May 4	0	0
May 11	0	0
May 18	0	0
May 19	0	nm
May 25	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 May.

Other routine data collected during May 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

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 5/27
- Both active EX pumps are running ~22 hours per day
- 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 May
- 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)
May 4	39	44
May 11	38	44
May 14	37	44
May 19	35	44
May 22	34	44
May 27	35	44

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. All 4 systems were last tested in April. All systems work adequately.
- 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. Only one is required with current flows. They were rotated twice in May
- The motor amp load readings were recorded 5/27.
- 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 pH control system is not in service.
- The carbon beds are drained of water as necessary.
- The blower was lubricated.
- Paint is peeling form the tower. This will need to be addressed as algae formation on the media could result.
- No other issues arose with the air stripping system. Routine maintenance continues.

15.5 Treated Water Tanks Feed Pumps (Former LCA feed pumps)

- The LCA vessels are isolated, out of service, and continues to dewater via an open valve located at the bottom of the vessel.
- All three pumps are operational and were rotated twice in May. 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 5/27
- 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.
- The pumps were rotated twice in May. Only one pump is necessary for the current plant flows.
- The gallery flow meters do not appear to be operating correctly. Further investigation is required.
- The influent flow to IW-2 remains severely restricted, flow to IW-1 and -3 is slightly restricted.
- The transducer in IW-2 appears stuck on something. (Possibly buried in sediment.)
- The pump motor amp load readings were recorded 5/27
- The check valves 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 and landscaping tasks continue.
- The access gates are clear.
- The fire hydrant is clear and accessible.

16.2 Well Field

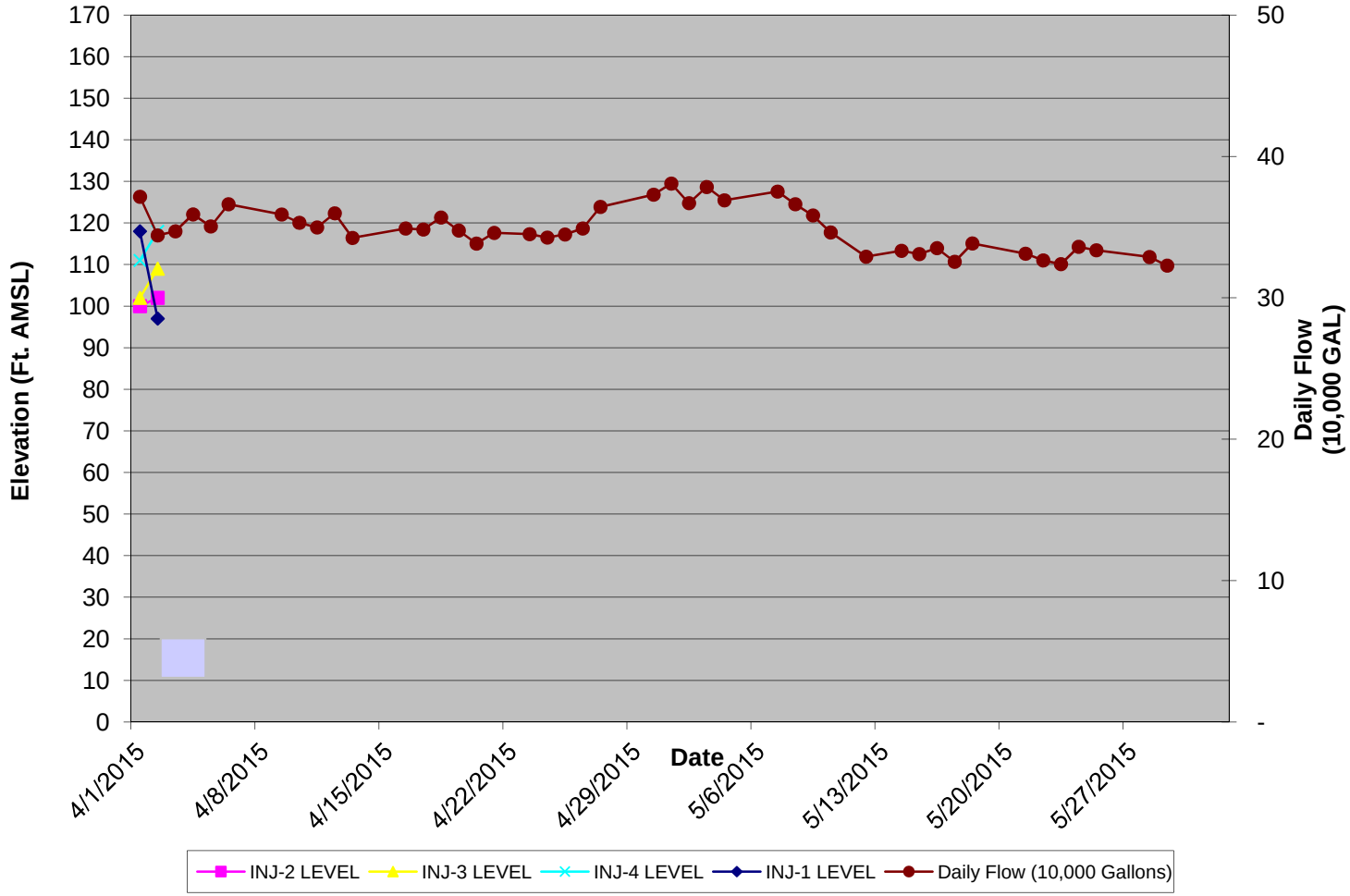
- Manual DTW readings of the IWs continued as possible.
- Extraction Well packer pressure readings continue.

16.3 Other

- The monthly in-house inspection of the plant truck was completed.
- The windshield of the plant truck was replaced.
- Miscellaneous trips for local purchases were made.
- A survey was made of the TOB recovery well pump houses and probable pipe pathways

FIGURES

Figure 14-1 Injection Well Elevations and Daily Flow



TABLES

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

DATE	TOTALIZER READING	GALLONS PER DAY	GALLONS PER MINUTE
5/1/2015	959324196	1145804	265
5/4/2015	960470000	380000	264
5/5/2015	960850000	370000	257
5/6/2015	961220000	350000	243
5/7/2015	961570000	350000	243
5/8/2015	961920000	1170000	271
5/11/2015	963090000	370000	257
5/12/2015	963460000	360000	250
5/13/2015	963820000	340000	236
5/14/2015	964160000	330000	229
5/15/2015	964490000	1010000	234
5/18/2015	965500000	330000	229
5/19/2015	965830000	330000	229
5/20/2015	966160000	330000	229
5/21/2015	966490000	330000	229
5/22/2015	966820000	960000	222
5/25/2015	967780000	370000	257
5/26/2015	968150000	320000	222
5/27/2015	968470000	330000	229
5/28/2015	968800000	310000	215
5/29/2015	969110000	985479	228
6/1/2015	970095479		
May '15 Treated Water Volume		**10,771,283**	
May '15 Avg. GPM Discharged			**241**

TABLE 12-1 Plant conditions and concerns (updated May 21, 2015)

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
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	**3**	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.	**2**	Continue to restrict flow as necessary Monitor the well sounding for changes
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
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 draining to sump**	1	• test plant for radiation exposure levels • replace carbon in LCA vessels • process bypass of LCA vessels

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 cleaned with no improvement	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.
Sept '14	Paint is peeling from the AS tower	venders have been contacted	3	sunlight exposure to the media may result in algae growth and less effective air stripping transfer
Jan '15	truck windshield is cracked	get repaired off-site when possible	2	
March '15	Flow to IW-1 has been falling	Access valve vaults and test valve positions	3	schedule as possible
March '15	the IW-2 transducer is stuck in the well	remove when possible	4	schedule
April '15	Several fire sprinkler drops are severely rusted	prep and paint pipe when possible. **Pipes cleaned and painted**	3	schedule as possible
April '15	The flow meter for IG-1 reads more water than the IW-1 totalizer	Open vault and check meter and valves. Check IW-1 flow element	3	schedule as possible
April '15	The flowmeter for IG-3 stopped measuring flow	open vault and check meter and valves	3	schedule as possible
May '15	**Paint is peeling on the exterior side of the plant exit doors**	**prep and paint when possible**	**3**	**schedule as possible**

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 14-1 Recent Plant Discharge Analytical Results

The plant discharge was last sampled on 5-14-15. The following are the analytical results for these samples:

Plant Discharge			
Parameters	**Discharge Limitations**	**Units**	**Results May 15**
pH (range)	6.5 – 8.5	SU	6.31
1,1,1-Trichloroethane	5	ug/l	U
1,1-Dichloroethane	5	ug/l	U
1,1 Dichloroethylene	5	ug/l	U
Benzene	0.7	ug/l	U
Chlorobenzene	5	ug/l	U
Chloroform	7	ug/l	U
1,2-Dichloroethane	0.6	ug/l	u
1,2-(cis) Dichloroethylene	5	ug/l	U
1,2-(trans)Dichloroethylene	5	ug/l	U
Ethylbenzene	5	ug/l	U
Methylene Chloride	5	ug/l	U
nitrobenzene	0.04	ug/l	U
tert-Butyl-Methyl ether	5	ug/l	U
Tetrachloroethylene(PCE)	5	ug/l	U
Toluene	5	ug/l	U
Trichloroethylene(TCE)	5	ug/l	U
Bis(2-ethylhexyl)phthalate	4200	ug/l	U
Di-n-butyl phthalate	770	ug/l	U
Antimony, Total recoverable	3	ug/l	U
Arsenic, Total recoverable	50	ug/l	U
Barium, Total recoverable	2000	ug/l	84.3
Lead, Total recoverable	50	ug/l	U
Selenium, Total recoverable	40	ug/l	U
Iron, Total recoverable	500	ug/l	U
Manganese, Total recoverable	500	ug/l	151
Nitrogen, Total (as N)	10	mg/l	0.21
Solids, Total Dissolved	1000	mg/l	373
Chromium, Hexavalent	100	ug/l	U
Chloride Ion	NL	mg/l	125
Fluoride Ion	NL	mg/l	U
Sulfate Ion	NL	mg/l	29.8

NS not sampled J estimated value
U analyzed for but not detected NL monitor only
Discharge limitations updates as per the water discharge permit (expires December 31, 2025).

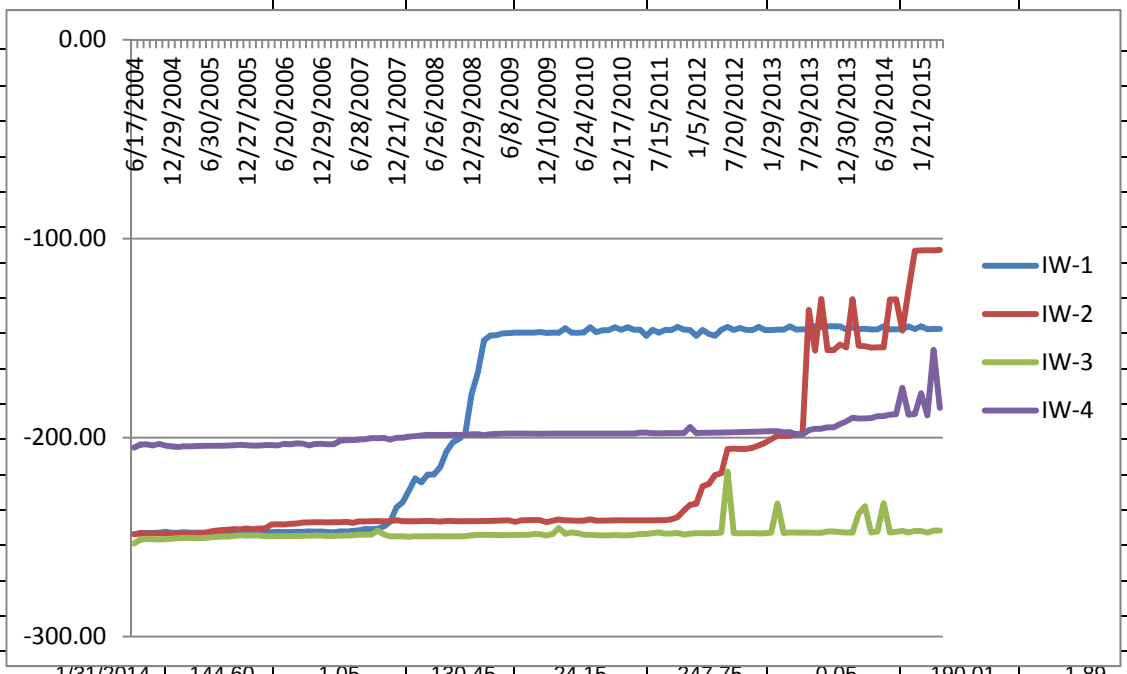
TABLE 14-2 Injection Well Soundings

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	--
7/23/2004	-247.97	0.53	-248.19	0.31	-251.20	2.00	-203.50	1.50
8/16/2004	-247.90	0.07	-248.18	0.01	-251.00	0.20	-203.40	0.10
9/14/2004	-247.95	-0.05	-248.15	0.03	-251.10	-0.10	-203.95	-0.55
10/28/2004	-247.79	0.16	-248.20	-0.05	-251.20	-0.10	-203.15	0.80
11/15/2004	-247.40	0.39	-248.26	-0.06	-251.03	0.17	-204.03	-0.88
12/29/2004	-247.87	-0.47	-248.33	-0.07	-250.82	0.21	-204.40	-0.37
1/10/2005	-247.83	0.04	-248.12	0.21	-250.54	0.28	-204.70	-0.30
2/16/2005	-247.50	0.33	-248.25	-0.13	-250.45	0.09	-204.36	0.34
3/18/2005	-247.82	-0.32	-248.10	0.15	-250.40	0.05	-204.43	-0.07
4/5/2005	-247.78	0.04	-248.13	-0.03	-250.47	-0.07	-204.20	0.23
5/10/2005	-247.81	-0.03	-248.14	-0.01	-250.45	0.02	-204.22	-0.02
6/30/2005	-247.62	0.19	-247.25	0.89	-250.36	0.09	-204.04	0.18
7/26/2005	-247.67	-0.05	-246.82	0.43	-249.93	0.43	-204.11	-0.07
8/29/2005	-247.71	-0.04	-246.50	0.32	-249.78	0.15	-204.17	-0.06
9/27/2005	-247.77	-0.06	-246.29	0.21	-249.77	0.01	-203.90	0.27
10/24/2005	-247.78	-0.01	-246.00	0.29	-249.44	0.33	-203.84	0.06
11/14/2005	-247.51	0.27	-246.19	-0.19	-249.10	0.34	-203.57	0.27
12/27/2005	-247.60	-0.09	-245.70	0.49	-249.32	-0.22	-203.83	-0.26
1/27/2006	-247.51	0.09	-246.09	-0.39	-249.21	0.11	-203.98	-0.15
2/16/2006	-247.50	0.01	-245.69	0.40	-249.19	0.02	-203.98	0.00
3/23/2006*	-247.59	-0.09	-245.65	0.04	-249.60	-0.41	-203.75	0.23
4/28/2006	-247.54	0.05	-243.68	1.97	-249.50	0.10	-203.78	-0.03
5/24/2006	-247.38	0.16	-243.61	0.07	-249.57	-0.07	-203.90	-0.12
6/20/2006	-247.47	-0.09	-243.70	-0.09	-249.46	0.11	-203.14	0.76
7/28/2006	-247.44	0.03	-243.37	0.33	-249.52	-0.06	-203.33	-0.19
8/21/2006	-247.34	0.10	-243.19	0.18	-249.42	0.10	-202.88	0.45
9/22/2006	-247.36	-0.02	-242.70	0.49	-249.27	0.15	-203.05	-0.17
10/30/2006	-247.16	0.20	-242.64	0.06	-249.48	-0.21	-203.92	-0.87
11/29/2006	-247.32	-0.16	-242.50	0.14	-249.22	0.26	-203.19	0.73
12/29/2006	-247.22	0.10	-242.52	-0.02	-249.29	-0.07	-203.15	0.04
1/30/2007	-247.44	-0.22	-242.60	-0.08	-249.47	-0.18	-203.35	-0.20
2/21/2007	-247.63	-0.19	-242.56	0.04	-249.42	0.05	-203.32	0.03
3/29/2007	-247.11	0.52	-242.54	0.02	-249.22	0.20	-201.55	1.77
4/20/2007	-247.17	-0.06	-242.29	0.25	-249.19	0.03	-201.24	0.31
5/25/2007	-246.85	0.32	-242.86	-0.57	-249.11	0.08	-201.24	0.00
6/28/2007	-246.63	0.22	-242.15	0.71	-248.80	0.31	-200.96	0.28
7/26/2007	-245.88	0.75	-242.13	0.02	-248.78	0.02	-200.80	0.16
8/23/2007	-245.96	-0.08	-242.03	0.10	-248.73	0.05	-200.22	0.58
9/27/2007	-245.79	0.17	-241.96	0.07	-246.80	1.93	-200.29	-0.07
10/25/2007	-244.69	1.10	-242.08	-0.12	-248.73	-1.93	-200.14	0.15
11/19/2007	-242.20	2.49	-242.00	0.08	-249.60	-0.87	-201.05	-0.91
12/21/2007	-235.02	7.18	-241.56	0.44	-249.62	-0.02	-200.08	0.97
1/29/2008	-232.46	2.56	-241.98	-0.42	-249.63	-0.01	-200.03	0.05

2/29/2008	-226.58	5.88	-242.12	-0.14	-249.82	-0.19	-199.52	0.51
3/27/2008	-220.50	6.08	-241.90	0.22	-249.50	0.32	-199.30	0.22
4/29/2008	-222.50	-2.00	-242.02	-0.12	-249.60	-0.10	-198.98	0.32
5/30/2008	-218.55	3.95	-241.90	0.12	-249.47	0.13	-198.65	0.33
6/26/2008	-218.60	-0.05	-241.95	-0.05	-249.50	-0.03	-198.65	0.00
7/29/2008	-214.98	3.62	-242.20	-0.25	-249.68	-0.18	-198.68	-0.03
8/26/2008	-207.03	7.95	-241.90	0.30	-249.72	-0.04	-198.65	0.03
9/26/2008	-202.40	4.63	-241.93	-0.03	-249.52	0.20	-198.60	0.05
10/27/2008	-200.68	1.72	-241.88	0.05	-249.50	0.02	-198.59	0.01
11/20/2008	-198.05	2.63	-242.12	-0.24	-249.54	-0.04	-198.64	-0.05
12/29/2008	-178.29	19.76	-242.10	0.02	-249.15	0.39	-198.30	0.34
1/26/2009	-167.50	10.79	-241.90	0.20	-248.87	0.28	-198.28	0.02
2/25/2009	-151.20	16.30	-242.00	-0.10	-248.80	0.07	-198.80	-0.52
3/13/2009	-148.68	2.52	-241.87	0.13	-248.94	-0.14	-198.28	0.52
4/17/2009	-148.52	0.16	-241.67	0.20	-249.00	-0.06	-198.10	0.18
5/15/2009	-147.60	0.92	-241.64	0.03	-249.05	-0.05	-198.10	0.00
6/8/2009	-147.50	0.10	-241.60	0.04	-248.95	0.10	-197.92	0.18
7/27/2009	-147.20	0.30	-242.40	-0.80	-249.00	-0.05	-197.90	0.02
8/13/2009	-147.20	0.00	-241.55	0.85	-248.90	0.10	-198.00	-0.10
9/16/2009	-147.20	0.00	-241.50	0.05	-248.90	0.00	-198.00	0.00
10/28/2009	-147.20	0.00	-241.44	0.06	-248.50	0.40	-197.95	0.05
11/19/2009	-146.90	0.30	-241.50	-0.06	-248.53	-0.03	-198.00	-0.05
12/10/2009	-147.40	-0.50	-242.50	-1.00	-249.20	-0.67	-198.10	-0.10
1/22/2010	-147.20	0.20	-241.80	0.70	-248.50	0.70	-198.00	0.10
3/4/2010	-147.28	-0.08	-241.20	0.60	-245.45	3.05	-198.00	0.00
3/24/2010	-144.95	2.33	-241.60	-0.40	-248.30	-2.85	-198.00	0.00
4/19/2010	-147.25	-2.30	-241.65	-0.05	-247.70	0.60	-198.00	0.00
5/26/2010	-147.28	-0.03	-241.80	-0.15	-248.00	-0.30	-198.00	0.00
6/24/2010	-147.18	0.10	-241.72	0.08	-248.80	-0.80	-198.00	0.00
7/27/2010	-144.50	2.68	-241.10	0.62	-248.90	-0.10	-198.00	0.00
8/19/2010	-146.95	-2.45	-241.70	-0.60	-249.05	-0.15	-198.00	0.00
9/14/2010	-146.00	0.95	-241.70	0.00	-249.10	-0.05	-198.00	0.00
10/14/2010	-145.90	0.10	-241.65	0.05	-249.10	0.00	-198.00	0.00
11/8/2010	-144.46	1.44	-241.60	0.05	-249.00	0.10	-198.00	0.00
12/17/2010	-145.83	-1.37	-241.60	0.00	-249.10	-0.10	-198.00	0.00
2/24/2011	-144.50	1.33	-241.60	0.00	-249.10	0.00	-197.98	0.02
3/22/2011	-145.80	-1.30	-241.60	0.00	-248.90	0.20	-198.00	-0.02
4/12/2011	-145.80	0.00	-241.60	0.00	-248.50	0.40	-197.50	0.50
5/23/2011	-148.80	-3.00	-241.60	0.00	-248.40	0.10	-197.50	0.00
6/22/2011	-145.80	3.00	-241.60	0.00	-248.00	0.40	-197.83	-0.33
7/15/2011	-147.28	-1.48	-241.60	0.00	-247.70	0.30	-197.80	0.03
8/12/2011	-145.85	1.43	-241.50	0.10	-248.25	-0.55	-197.80	0.00
9/21/2011	-145.90	-0.05	-241.10	0.40	-248.25	0.00	-197.73	0.07
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
1/5/2012	-148.80	-2.85	-233.20	0.60	-247.98	0.32	-197.70	-3.05
2/2/2012	-145.85	2.95	-224.45	8.75	-248.10	-0.12	-197.60	0.10
3/7/2012	-147.85	-2.00	-223.30	1.15	-248.10	0.00	-197.50	0.10
4/2/2012	-148.80	-0.95	-218.80	4.50	-247.97	0.13	-197.50	0.00

5/18/2012	-145.80	3.00	-217.95	0.85	-247.78	0.19	-197.49	0.01
6/26/2012	-144.30	1.50	-205.70	12.25	-217.00	30.78	-197.40	0.09
7/20/2012	-145.85	-1.55	-205.55	0.15	-248.00	-31.00	-197.40	0.00



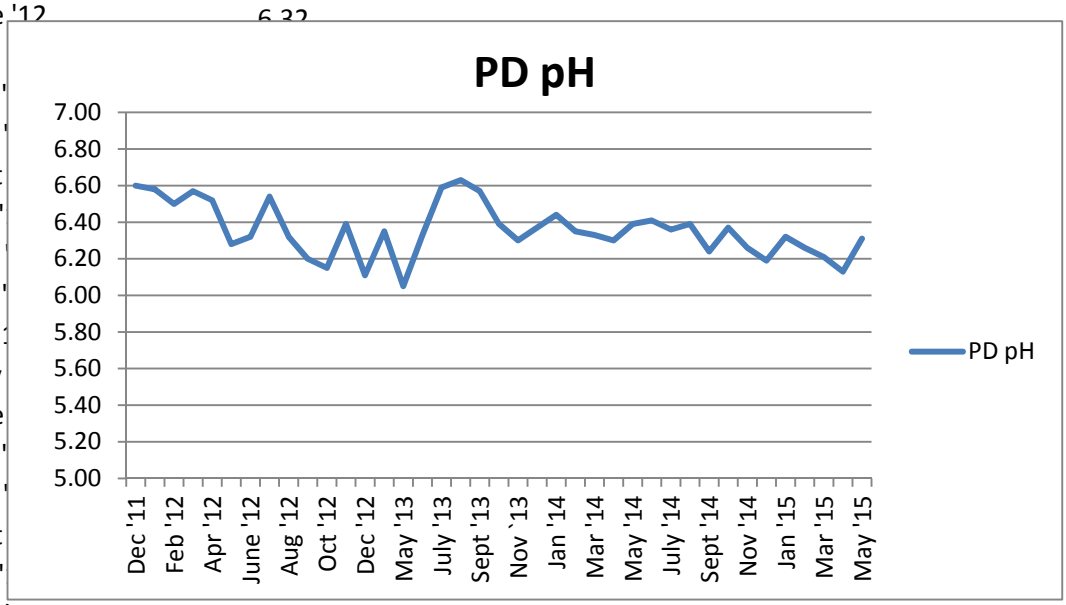
1/31/2014	-144.60	1.05	-130.45	24.15	-247.75	-0.05	-190.01	1.89
2/25/2014	-145.45	-0.85	-153.80	-23.35	-238.20	9.55	-190.40	-0.39
3/27/2014	-145.30	0.15	-154.04	-0.24	**-234.50**	3.70	-190.30	0.10
4/28/2014	-145.60	-0.30	-154.80	-0.76	**-247.70**	-13.20	-190.20	0.10
5/20/2014	-145.60	0.00	-154.60	0.20	**-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
3/27/2015	-145.55	-1.52	**-105.79**	0.11	**-247.75**	-0.80	**-188.80**	-11.10
4/15/2015	-145.40	-1.37	**-105.85**	0.05	**-246.75**	0.20	**-155.90**	21.80
5/26/2015	-145.40	0.00	**-105.65**	0.20	**-246.75**	0.00	**-185.00**	-29.10

DTB Well Changes

June ' 04 to	Present	**103.10**	**142.85**	**6.45**	**20.00**

TABLE 14-3 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	6.32
July '	
Aug '	
Sept	
Oct '	
Nov	
Dec '	
Jan '	
May	
June	
July '	
Aug '	
Sept	
Oct '	
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
Feb '15	6.26
Mar '15	6.21
Apr '15	6.13
May '15	6.31



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'