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

MONTHLY REPORT
of the
Operations & Maintenance Activities
During
September 2012

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
LTRA	Long Term Response Action
MCC	motor control cabinet
MCP	master (main) control panel
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
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 and its groundwater treatment system (GWTS) for September 2012. This period is defined as 0600 hours, September 1, 2012, through 0600 hours, October 1, 2012. O&M conducted during this reporting period was performed in accordance with the site O&M Manual.

The system operated for 30 days in this reporting period with 150 minutes of process downtime. The downtime was due to a power shut off by the electric service provider, LIPA.

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

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

1.1 Daily Operations Summary Reports

The daily 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 – process meter readings (CPS-Form-008)
Daily Activities Summary Report - plant operator activities (CPS-Form-007)
Daily Site Safety Inspection – equipment 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.

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.

Significant maintenance activities completed during this reporting period included the following:

- Scheduled routine monthly tasks which included motor amp load readings, injection well (IW) depth soundings, IW falling head tests, valve function tests, comprehensive site inspections, and infiltration gallery readings.
- Outdoor site maintenance was performed as needed. This included various clean up tasks and grounds keeping.
- The process pumps were rotated (two on-line, one off) four times during this period as part of the preventive maintenance task however INJ P3 has run solo through several cycles.
- Personnel steps were installed in the slope adjacent to the floor drain sump.
- The eye wash stations were cleaned.
- Additional tests were conducted on the injection pump discharge. When INJ P3 is online, there is little additional flow gained when a second pump is put online.
- Slots were cut in the drain bowl at INJ P3 to facilitate drainage of the water leaking from INJ P2.
- The emergency light was replaced at the SW exit.
- The infiltration gallery valves were fully opened. Plant discharge flow was boosted 2-3 gpm.
- Grass was cut on the east side of the plant
- The PDBs were temporarily pulled from the MW-8 well cluster to facilitate the TOB sampling of the wells.
- PM tasks were completed on the AS blower.
- Dirt was filled in around the concrete pad of one of the drain pipe cleanouts at IG-1.
- PM tasks were completed on the air compressor system.

2.0 MAINTENANCE LOGS

The following operating logbooks are currently in use:

- Well Maintenance Field Log CL-28
- Sampling support Field Log CL-37
- Site Supervisor's Daily Log CL-41
- Plant Operator's Daily Log CL-42

15 of the 42 project log books have been scanned and both the scanned copy and the project logbook have been sent to the DEC PM. HRP-NY has the remaining 25 logbooks, except for the 4 listed above, which are on site. 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

There were no HRP personnel at the GWTP during this period.

3.2 NYSDEC Personnel, sub-contractors and other visitors

- TestAmerica-NYC was onsite to pick up the PD and extra GW samples for delivery to TA-Edison (9/19)
- Mike Flaherty (NCDPW) was on the grounds to take water level readings. (9/24)
- LIPA was on the grounds to make repairs to a utility pole. (9/24)

3.3 Deliveries

- Mail was delivered three times in September.
- Fed Ex delivered The EON PDB order.
- UPS delivered part of the MMC order and returned with the remainder.

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 daily and the reports are filed on-site. In addition to the daily safety inspections, comprehensive safety inspections were performed twice in September. These worksheets are also on file.

The site supervisor successfully completed CPR/AED training.

No safety incidents or accidents occurred during this September 2012 period.

5.0 PLANNED ACTIVITIES AND SCHEDULES

The status of project work and significant corrective maintenance activities is updated on a monthly basis. This Project Status Report was updated September 24 and is electronically filed. In addition to this report, Table 12-1 - Summary of Maintenance Issues has been updated. This is a table of action items and maintenance issues concerning the treatment system.

Separate tentative schedules for equipment maintenance events are shown in the O&M Manual and the Sampling and Analysis Plan (SAP).

The upcoming process water sampling task has been scheduled for October 17.

6.0 MONITORING WELL WATER ELEVATIONS

The water level elevations and water quality data for the well system was updated after the August quarterly groundwater sampling event. This database is available for review. The water level elevation data is included in the quarterly groundwater monitoring report.

Due to the stabilized nature of PDB samples, the water quality data will no longer be recorded. The next update of this database will take place after the quarterly groundwater event to be scheduled for November.

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 is provided in Table 7-1. The total volume of treated water discharged in September, as measured from 0600 hours on September 1, 2012, to 0600 hours on October 1, 2012, was 14,616,846 gallons. This volume is approximately 101 percent of the monthly targeted treatment goal. The cumulative volume of water discharged for this contract year (June 1, 2012 to present) was 62,309,009 and is ~6 % above target. A graphic representation of the daily system flows are provided in Figure 14-1. (Targeted goals are based on a treated water discharge rate of 335 gpm.)

In September, the plant discharge flow averaged 338 gallons per minute (gpm) and 487,228 gallons per day (gpd). These flows have been trending down since June as the flow to IW-2 is restricted due to the well's overflow condition.

Month	Flow Average (gpm)	Volume Discharged (gallons)
June	380	546,715
July	357	513,599
August	344	495,778
September	338	487,288
Goal	335	482,400

The flow monitoring units for the individual IW systems and infiltration galleries are fully functioning. This allows for reading the flow rate and volume discharged to each system. The relative flows for September are indicated below:

Injection Well System	Flow Average (gpm)	Volume Discharged to well (gallons)*
IW-1	19.8	853,920
IG-1	82.1	3,547,730
IW-2	46.8	2,062,100
IW-3	29.9	1,290,838
IG-3	87.8	3,791,202
IW-4	81.4	3,517,450
System	**348.7**	**15,063,240**

The discrepancy between the individual injection system meter readings and the total plant effluent meter readings (~10 gpm) is due in part to the type of flow meters utilized to measure the discharge (paddle wheel vs. magnetic vs. turbine), sludge build up in the piping at the flow elements, rounding factors in the meters, and the relative time the readings are taken.

The flow to IW-1 and IW-3 is maximized and the valves to the galleries are fully open. Both galleries are draining adequately.

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

8.0 CHEMICAL CONSUMPTION

The four chemical feed systems are offline, and their future use is not anticipated. The systems are periodically tested and are operational. With the exception of the permanganate feed tank, the chemical feed tanks and feed tubing contain water for testing and inspection purposes. Currently the KMnO4 tank needs a repair to a cracked drain nozzle.

There are no bulk chemicals onsite.

9.0 CARBON SYSTEMS

9.1 Aqueous-Phase Carbon

The presence of volatile or semi volatile organic compounds have not been detected in the effluent streams of the liquid-phase Carbon Adsorber (LCA) vessels. The influent and effluent streams of the vessels continue to be monitored on a quarterly basis.

Each vessel on initial charge (May 2008) contained ~600 cu. ft. (12,000 lbs.) of carbon.

As part of the daily monitoring task, the differential pressure across each vessel is recorded. Based on this data and the discharge pressure of the LCA feed pumps, the vessels were last backwashed in August. Currently the differential pressure across vessel #1 is 3.0 psi and across vessel #2 is 4.0 psi. While the vessels do not require backwashing at this time, their condition will continue to be monitored.

No carbon has been added to the vessels.

9.2 Vapor-Phase Carbon

Two vapor-phase Carbon Adsorber vessels (VCA) are available for the off gas treatment of the air stripping (AS) stream. Currently, VCA-1 is online. VCA-2 is offline and ready for service. Monitoring of VOCs in the influent and effluent air stream of the active vessel is normally

performed weekly with a photo-ionization detector (PID). Currently the PID is not able to be calibrated. Plans are underway to replace the instrument.

Occasionally VOCs are detected in the effluent stream of the online carbon bed. When detected, a follow up test is performed to see if a false reading has occurred. If volatiles are detected a second time, corrective action is taken. If not, more frequent monitoring is undertaken. No VOC emissions were recorded this period.

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

10.0 WASTE DISPOSAL

Currently, there are 6 drums of non-hazardous carbon waste stored inside the facility. There was no waste removed from the facility in September.

11.0 MONTHLY DISCHARGE MONITORING REPORT

The plant is currently operating under an equivalency permit from the New York State Department of Environmental Conservation (NYSDEC). While the permit requires periodic submittal of discharge monitoring results, monthly discharge monitoring reporting is not required. A review of the monthly discharge analytical results, which are included within Section 14.0, indicated all analyzed parameters were below noted permit limits.

The plant's water discharge permit expires December 31, 2013.

12.0 OTHER OPERATIONS, MAINTENANCE, OR MANAGEMENT ISSUES

- A third emergency exit light (SW exit) is not functioning correctly and will have to be replaced.
- A momentary power outage occurred 9/5 during an electrical storm. The ASF pumps required a manual restart.
- The facility PID unit is failing. Due to its age and model, the unit is not serviceable. Options are being discussed (purchase new/used unit, rental) to replace unit.
- The plant truck is due for its biennial emission inspection. This is required to be undertaken in CT. This task is being scheduled.
- The output of influent pump 1 continues to drift as the Variable Frequency Drive (VFD) keeps the pump in the ramping mode. The VFD for air stripper feed pump 2 continues to give earth fault errors.
- The transducers in IW-2, IW-3, and IW-4 are not functioning correctly.
- The level monitor at ASF Tank 1 is giving a temporary false low level signal and alarm. This causes the pumps to slow or shut off. In line cleaning has not helped. Next is to remove and inspect the units.

- Influent flow remains restricted to IW-2 (90+ gpm down to 50 gpm), lowering overall plant discharge from ~380 gpm to 345 gpm.
- A second thermostat for the outdoor heat trace wiring is to be assembled and installed.
- Other on-going plant maintenance issues are summarized on Table 12-1 and in the Project Status Report (filed on-site).

13.0 PLANT DOCUMENTS

Procedures and standard forms are written, reviewed, and revised as needed. No changes to plant documentation occurred in September.

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. Septembers' sampling activities included:

- The Plant Discharge was sampled 9/19. The samples were shipped to TA-Edison for organic analysis.
- Groundwater samples were collected from monitoring wells DW-1 and SW-1 on 9/19. The samples were shipped to TA-Edison for organic analysis.
- The next quarterly process water samples are scheduled 10/17.

On August 15, the plant discharge was sampled. The results for those samples follows:

Plant Discharge			
Parameters	**Discharge Limitations**	**Units**	**Results August 2012**
pH (range)	5.5 – 8.5	SU	6.20
Tetrachloroethylene	5	ug/l	U
Trichloroethylene	5	ug/l	0.17 J
1,2-(cis) Dichloroethylene	5	ug/l	U
1,2-(trans)Dichloroethylene	5	ug/l	U
Methylene Chloride	5	ug/l	U
1.1 Dichloroethylene	5	ug/l	U
1,1-Dichloroethane	5	ug/l	U
Chloroform	7	ug/l	U
1,1,1-Trichloroethane	5	ug/l	U

Benzene	0.7	ug/l	U
Toluene	5	ug/l	U
Chlorobenzene	5	ug/l	U
Ethylbenzene	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	NS
Arsenic, Total recoverable	50	ug/l	NS
Barium, Total recoverable	2000	ug/l	NS
Lead, Total recoverable	50	ug/l	NS
Selenium, Total recoverable	40	ug/l	NS
Iron, Total recoverable	500	ug/l	NS
Manganese, Total recoverable	500	ug/l	NS
Nitrogen, Total (as N)	10	mg/l	NS
Solids, Total Dissolved	1000	mg/l	NS
Chromium, Hexavalent	100	ug/l	NS
Chloride Ion	NL	mg/l	NS
Fluoride Ion	NL	mg/l	NS
Sulfate Ion	NL	mg/l	NS

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

14.2 Field Data

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 discharge samples taken from a controlled point with calibrated portable meters. A summary of these data is as follows:

Date	pH	Temperature (°C)
September 4	6.45	18
September 10	5.92	15
September 17	6.15	14
September 24	6.27	15
September Average	**6.20**	**15.5**

The NYSDEC discharge permit requires the plant discharge to have an average monthly pH greater than 5.50. The treatment plant effluent pH averaged 6.20 in September 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 14.1.

Weekly air monitoring readings are taken with a PID of the influent and effluent air streams to and from the active vapor phase carbon adsorber vessel following the air stripper. Currently vessel #1 is on-line. A summary of the results for September follows:

Date	Inlet (ppm)	Outlet (ppm)
September 5	0.0	0.0
September 10	0.0	0.0
September 17	NM	NM
September 24	NM	NM
*PID readings indicate that the VOCs in the air stream are lower than the part per million levels (ppm) of the instrument's capability. NM – not measured		

VOC measurements could not be made in the last half of September due to the failure of the PID meter.

Measurements to determine the well depth from the top of the injection well column to the bottom were taken on 9/20. A summary of the historical data is included in Table 14-2. Although there has been an accumulation of sediment in all four injection wells, the wells currently appear to be stable. IW-1 is the most severe case, with the influx of sand accounting for more than 100 feet of sediment in the bottom of the well. The total sediment accumulation in IW-2 is ~ 40 feet.

Water elevations in the IWs are normally recorded on a daily basis as is the daily total flow discharged to the well field. These are depicted in Figure 14-1. The IW levels were generally steady while the pumps are active. With the exception of IW-1, the transducers in IW-2, IW-3, and IW-4 are producing unreliable signals. The water levels are physically monitored more frequently.

The injection well falling head test was performed on September 24. Due to the questionable output of the level transducers, the only data recorded was for IW-1. A graphic representation of the time required to drop the water level to a static condition is presented in Figure 14-2. Comparisons of baseline data from March 2006 to that of recent tests (Figure 14-3) indicate that the performance of IW-1 is unchanged.

Other data collected during September included:

- The plant sound level readings were recorded twice (9/14, 9/28), (included with daily worksheets).
- The depth-to-water readings were recorded (9/20) for the injection wells. This was compared to the transducer readings (included with daily worksheets)
- The flow-meter readings and the depth of water in the infiltration galleries were recorded in site supervisor's notebook and included with the monthly filings. (9/25)
- The process motors amp load readings were recorded (9/28)

- Weekly utility meter readings were recorded.

15.0 PROCESS ANALYSIS, INTERPRETATIONS, AND CONCLUSIONS

15.1 Extraction and Influent Processes

- Currently, the three extraction well pumps are on-line. The pumps are controlled by water level set points in the wells and in the EQ tank. The transducer set points are adjusted as necessary.
- The 3 extraction well flow monitors are fully functional.
- Currently, the three influent pumps are operational with 2 pumps on-line at a time.
- There continues to be some drift in the flow control signal to influent pump-1.
- The influent pumps were rotated 4 times in September.
- The 2 influent flow controllers are fully functional.
- No other new issues arose with the extraction or influent systems. Routine maintenance continues.

15.2 Flow through Aeration Process

- Both treatment trains are on-line and the influent water is split relatively evenly to each train.
- 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 the discontinued use of the polymer and lack of solids generation.
- The reaction tanks and clarifier systems continue to operate as pass-through settling tanks.

15.3 Settling Filter Process

- Air sparging of the drain screens is performed as necessary. With lower flows through the plant, the frequency has diminished.
- The tanks are drained and cleaned as necessary.
- The system is fully functional.

15.4 Air Stripping Process

- The three ASF pumps are operational and are rotated into service two at a time. They were rotated four times in September.
- The VFD for ASF P2 continues to exhibit an earth ground fault. When on-line, Pump 2 operates through the off line pump's VFD.
- Pump #3 emits a high pitched whine, which will require future address.
- The vapor phase carbon beds are drained of condensate as necessary.
- The blower is checked daily and is fully functional.
- No other issues arose with the air stripping system. Routine maintenance continues.

15.5 Aqueous-Phase Carbon Treatment Process

- All three feed pumps are operational, with two pumps rotated into service at a time. The pumps were rotated 4 times in September.
- The pin-hole leak in the side wall of LCA-2 is stable and remains of low concern.
- Currently the differential pressure across the vessels is well within operating range and backwashing will not be required again at this time.
- Other routine maintenance tasks continued..

15.6 Treated Water Injection Process

The plant's total discharge flow rate and volume are measured by a magnetic flow meter on the injection pump discharge manifold. The paddle wheel flow sensors and flow transmitters installed in the discharge line to each injection well system are on-line and connected to the MCP and HMI. The turbine flow meters in the infiltration gallery valve boxes are fully functional.

- The plant discharge system is online and fully operational.
- All three INJ pumps are operational with 2 units generally on-line. The pumps were not rotated in September as pump 3 was run alone.
- There is a leak in the pump discharge manifold prior to the plant effluent flow sensor. This leak is minor and no action is required.
- Except for IW-1, the injection well transducers are all producing unreliable signals.
- The galleries are adequately draining.
- Flow to IW-2 was restricted to ~50 gpm due to high well water levels.
- When pump 3 is in rotation, it is solely run as it is more efficient in this mode.
- No other issues were encountered with the injection system in September. Routine maintenance tasks continue.

16.0 GROUNDS

Routine maintenance tasks continue outside the plant. This includes weather related clean up tasks and landscaping duties and well maintenance.

16.1 Plant Perimeter

- General outdoor clean up continues.
- The grass was cut as necessary.

16.2 Well Field

- The grass in the wellfield was cut by the SUNY Farmingdale crew.
- The frequency of DTW readings has increased due to the poor signals from the injection well transducers.
- Dirt and fill were added to the area around a clean-out pad at IG-1

16.3 Other

- The monthly inspection of the plant truck was completed.
- Miscellaneous trips for local purchases were made.
- LIPA replaced the utility pole in the driveway adjacent to the stables.

There were no other significant issues outside the plant. Routine maintenance continues.

FIGURES

Figure 14-1 Injection Well Elevations and Daily Flow

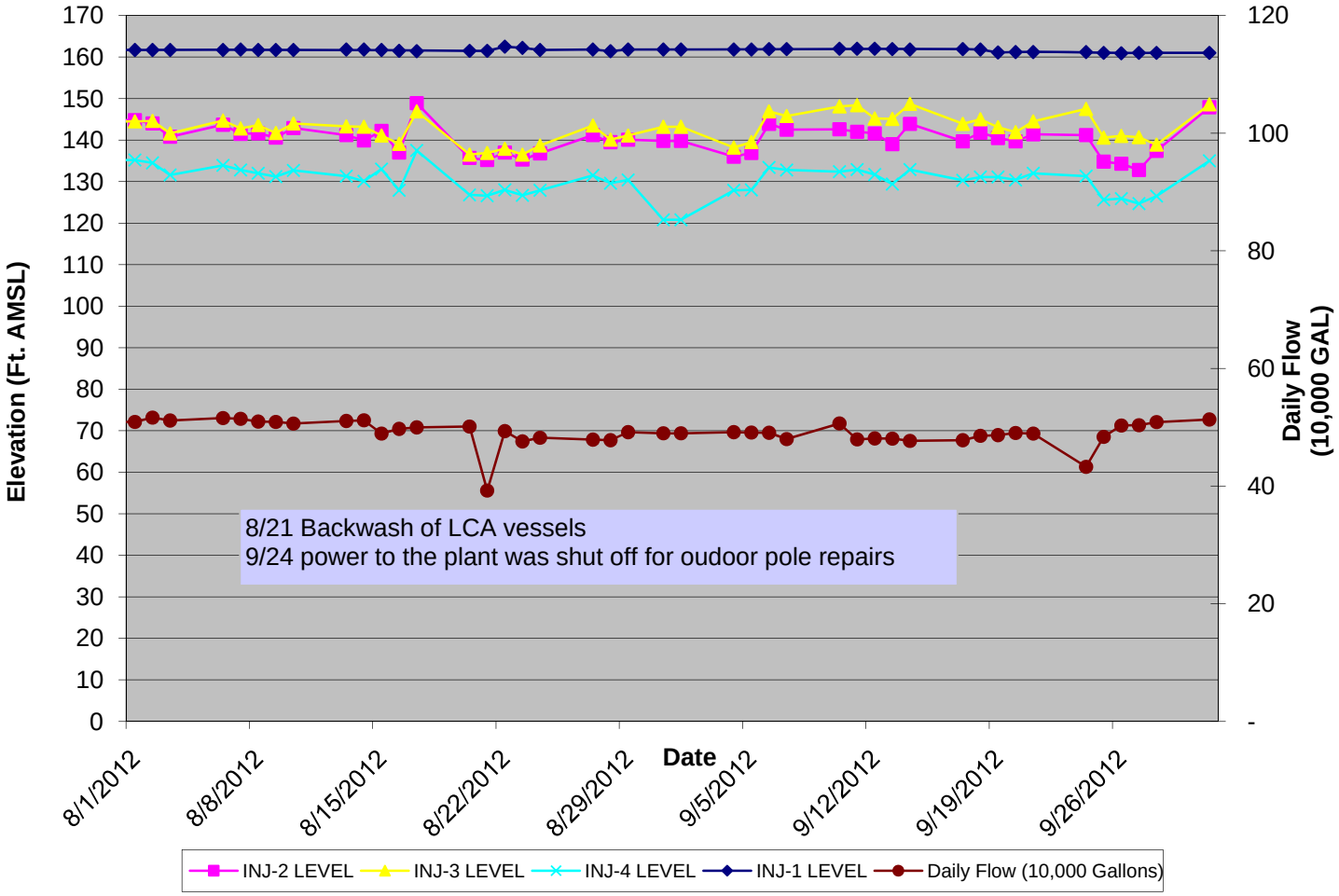


Figure 14-2 Injection Well Falling Head Test - September 24, 2012

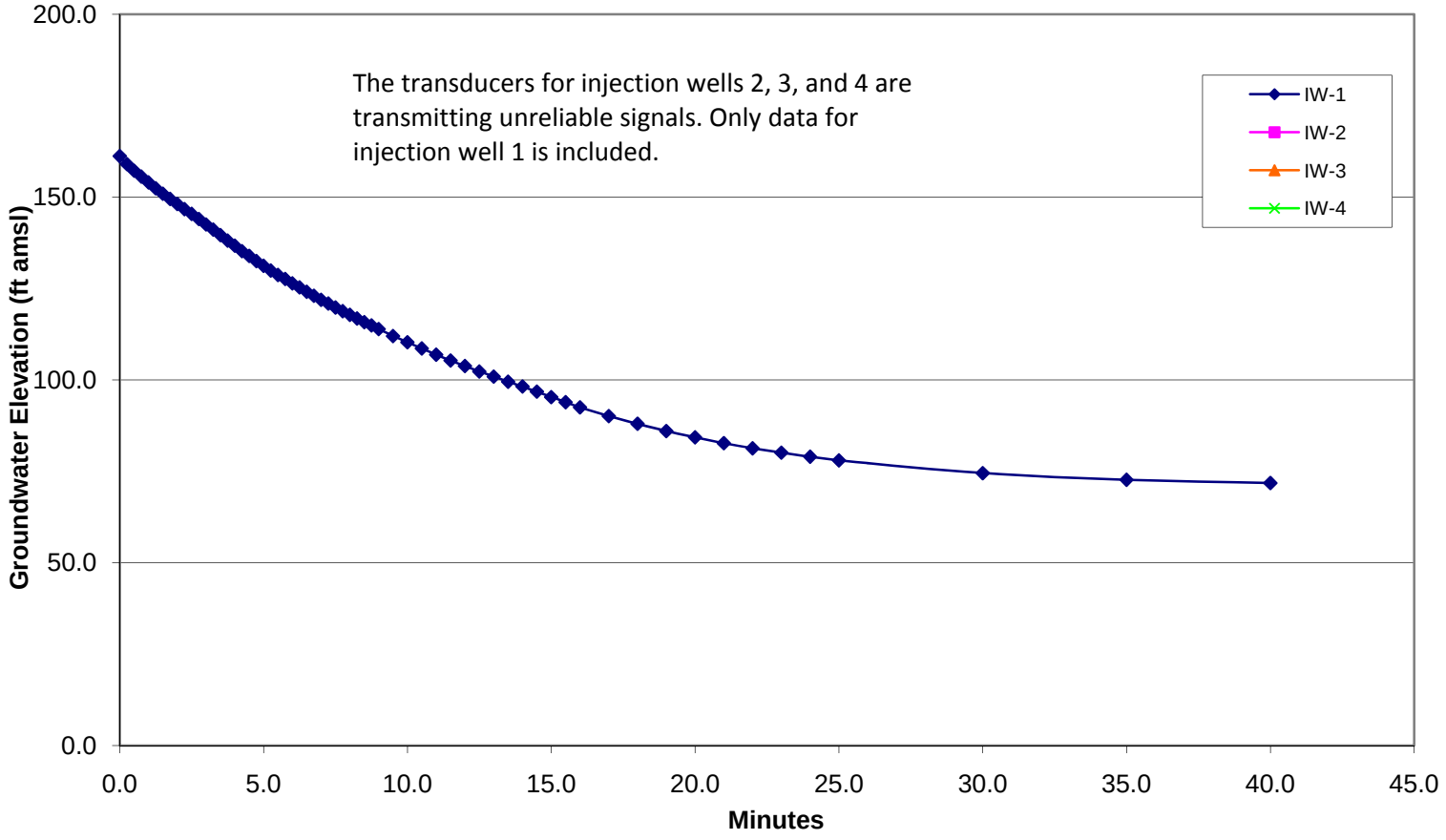
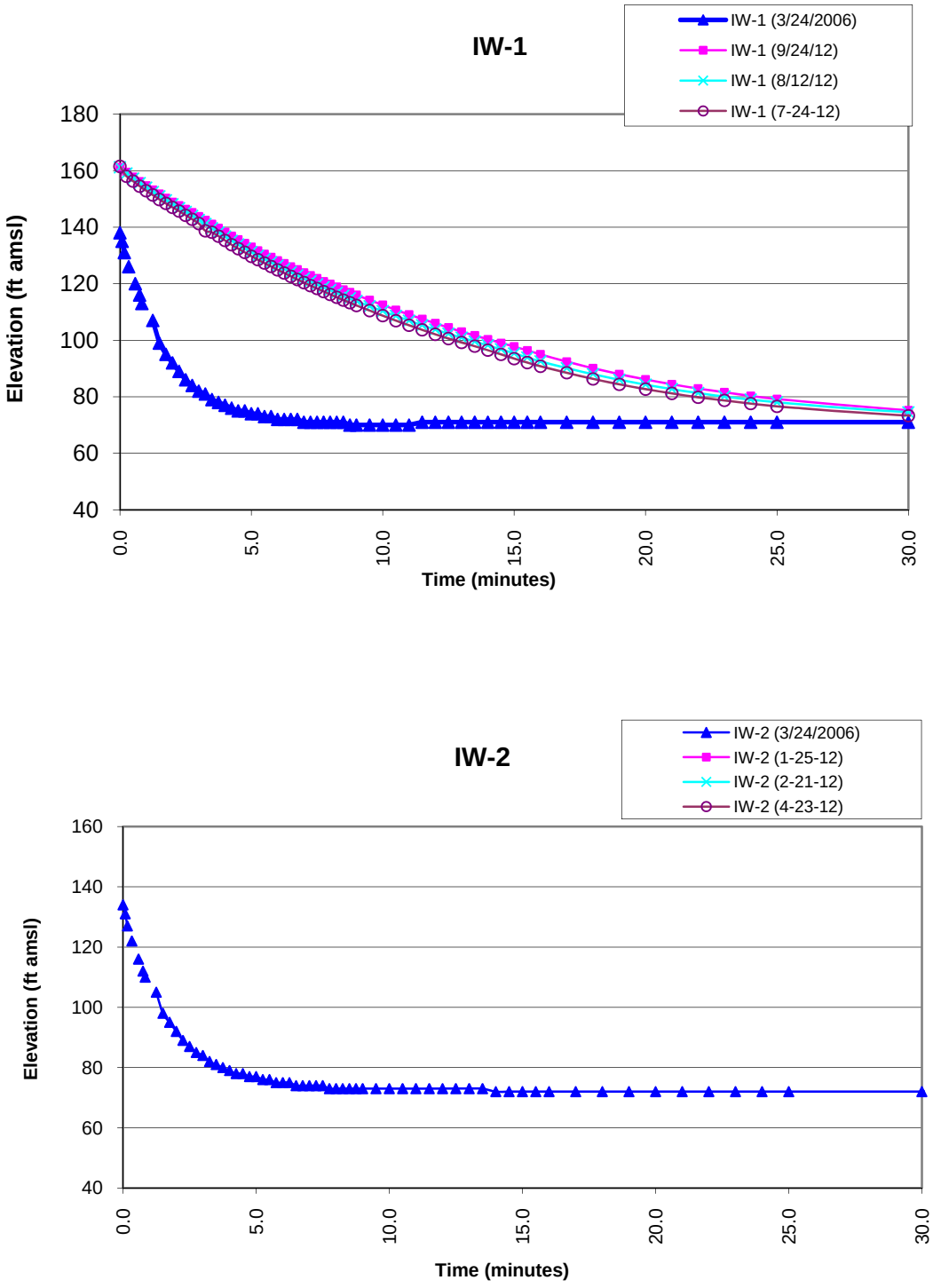
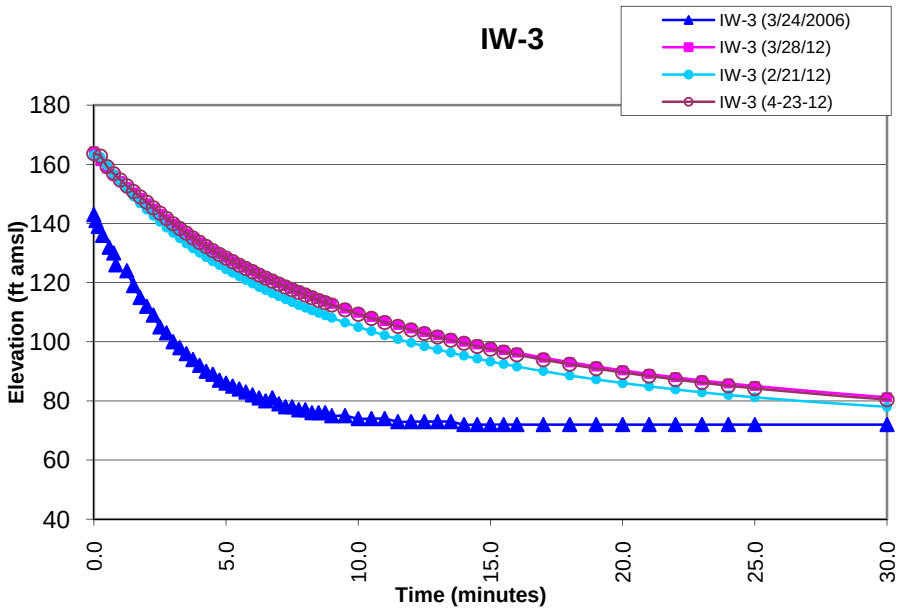
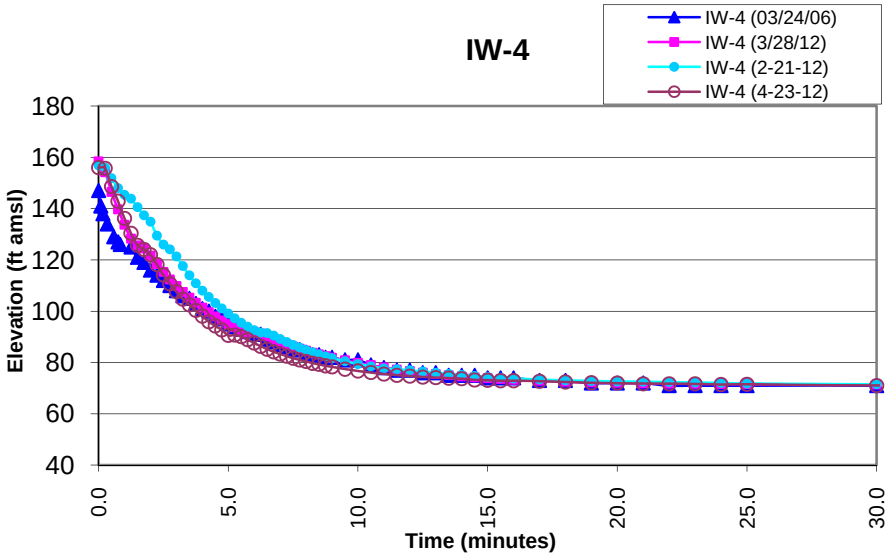


Figure 14-3 Comparison of Falling Head Tests




IW-3
IW-3 (3/24/2006)
IW-3 (3/28/12)
IW-3 (2/21/12)
IW-3 (4-23-12)
Elevation (ft amsl)
180
160
140
120
100
80
60
40
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Time (minutes)


IW-4
IW-4 (03/24/06)
IW-4 (3/28/12)
IW-4 (2-21-12)
IW-4 (4-23-12)
Elevation (ft amsl)
180
160
140
120
100
80
60
40
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Time (minutes)

TABLES

TABLE 7-1

MAGNETIC FLOWMETER DAILY TOTALIZER READINGS

SEPTEMBER 2012

DATE	TOTALIZER READING	GALLONS PER DAY	GALLONS PER MINUTE
9/1/2012	606596414	1503586	348
9/4/2012	608100000	490000	340
9/5/2012	608590000	490000	340
9/6/2012	609080000	490000	340
9/7/2012	609570000	1440000	333
9/10/2012	611010000	510000	354
9/11/2012	611520000	480000	333
9/12/2012	612000000	480000	333
9/13/2012	612480000	480000	333
9/14/2012	612960000	1430000	331
9/17/2012	614390000	480000	333
9/18/2012	614870000	480000	333
9/19/2012	615350000	490000	340
9/20/2012	615840000	490000	340
9/21/2012	616330000	1470000	340
9/24/2012	617800000	430000	299
9/25/2012	618230000	480000	333
9/26/2012	618710000	510000	354
9/27/2012	619220000	500000	347
9/28/2012	619720000	1493260	346
10/1/2012	621213260		
Sept. '12 Treated Water Volume		**14,616,846**	
Sept. '12 Avg. GPM Discharged			**338**

Table 12-1
Miscellaneous Outstanding Maintenance Issues at the Claremont Polychemical GWTP (updated 09-25-12)

Date Added	Problem or Condition	Action	Cost	Option	Option Cost	Priority level
June 2011	ASF Sys Pump #3 Motor motor bearings are making noise	Replace 10.0 hp motor when it fails	$800	none	n/a	2
June 2011	VFD ASF-P2	Replace/service	$?	Leave out of service	0	2
2008	INF Sys check valves (3) not operating correctly, must be manually opened and closed	Rebuild existing check valves in place (3)	$675 ea	a-replace CV with like kind cast iron swing check b-replace CV with pvc ball check (3) c-manually control valves	$X $400 0	2
2008	L-CA Sys. Check valves not operating correctly, must be manually opened and closed	Rebuild existing check valves in place (3)	$675 ea	a-replace *CV* with like kind cast iron swing check b-replace *CV* with pvc ball check c-manually control valves	$X $400 + 0	2
2008	INJ Pump shut off valves cannot isolate individual pumps	Replace valves (4) w/ 6" PVC valves	$400 ea	Leave valves in place	$0	2
2008	ASF Sys check valves not operating correctly, must be manually opened and closed	Rebuild check valves (3)	$675 ea	a-replace CV with like kind cast iron swing check b-replace CV with pvc ball check c-manually control valves	$X $400+ 0	2
Aug. 2009	EQ Tank Discharge Valve Cannot isolate tank	Replace valve w/8" PVC valve	$900	Leave valve in place (empty tank when it needs to be isolated)	$0	3
2008	RCY Sys. Check valves not operating correctly, must be manually opened and closed	Rebuild check valves (2)	$675 ea	a-replace *CV* with like kind cast iron swing check b-replace *CV* with pvc ball check c-manually control valves	$X $400+ 0	3
July 2011	VFD INF-P1 Ramping	Replace/service	$?	Leave in Place – Control flow by throttling valves	0	2
2008	INJ Pump check valves (2) not operating correctly, must be manually opened and closed	Rebuild existing check valves in place (2)	$800 ea	a-replace CV with like kind cast iron swing check b-replace CV with pvc swing check c-manually control valves	$1300 $1500+ 0	2

Date Added	Problem or Condition	Action	Cost	Option	Option Cost	Priority level
Dec. 2011	LCA -V2 (Pin Hole leak)	Drips –not a hazard cost $1000 to weld and need to shut down plant	$1000	Under enhanced inspection action taken as needed	0	3
Aug. 2010 April 2012	IW-2 Transducer IW-3, IW-4 Transducer	Replace transducer (may require tech support)	$1200/ ea	Manually monitor wells	0	3
2008	Discharge Manifold leak	Make repairs	$500	Leave as is	0	3
Aug. 2008	Air Compressor system is worn and leaking and in need of an overhaul	Have system serviced	12,000	a-replace both units with one sized for current duty b-run system on as-needed basis	$ 0	4
2009	Filter Press – control cabinet hydraulic leaks	Have system serviced	$?	Leave as is		4
2009	Sludge Transfer Pump is undersized for filter press feed	Replace pump with M-8	$2500	Use existing pump	$0	4
2009	Sludge transfer piping	Re-pipe press feed	$200	Leave piping as is use 2” hose to M-8 pump	$0	4
	INF Pump Seals (historically, pump 2 is due to fail)	Proactively replace seals	$300	Replace seals when needed	$0	Budget for
Jan. 2012	INF Pump-2 Motor (1) Motor bearings are starting to make noise	Proactively Replace 5.0 hp motor	$600	Replace motor when necessary		Budget for
April 2012	Seal leak at INJ P2	Replace seal	300	Pull pump and make repairs if possible Leave as is until repairs are required	0	3
April 2012	Drain nozzle leak on permanganate tank	Re-weld nozzle	500	-Replace nozzle with bulkhead fitting -Leave as is	100 0	4
May 2012	Tank LL alarm-pump control false signals	Have units serviced	?	Do nothing Keep flushing system	0	3
May 2012	Seasonal heat trace wiring on outdoor piping is not controlled	Install thermostats on each system	$450	Leave as is and manually actuate	0	1
Sept. 2012	Injection pump flow does not meet design specifications	Cut back on required discharge flows	$0	Leave as is Replace INJ pump impellers Return system flowmeter piping to 3” pvc Re-plumb discharge manifold to 4”	$0 ~$2500 ea $175 ea $250 ea	

Sept. 2012	Well IW-2 is not readily accepting re-injection water	Run as is	$0	Redevelop well Install, new injection well Install new infiltration gallery		
Course of action Taken - RED	Priority level – 1- Urgent and must be done 2- Not urgent but needs to be done 3 – Not urgent but should be done 4 – Would like done					

Month	Avg. pH
May '11	6.25
June '11	6.33
July '11	6.12
Aug '11	6.39
Sept '11	6.38
Oct '11	6.22
Nov '11	6.62
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 '12	6.54
Aug '12	6.32
Sept '12	6.20

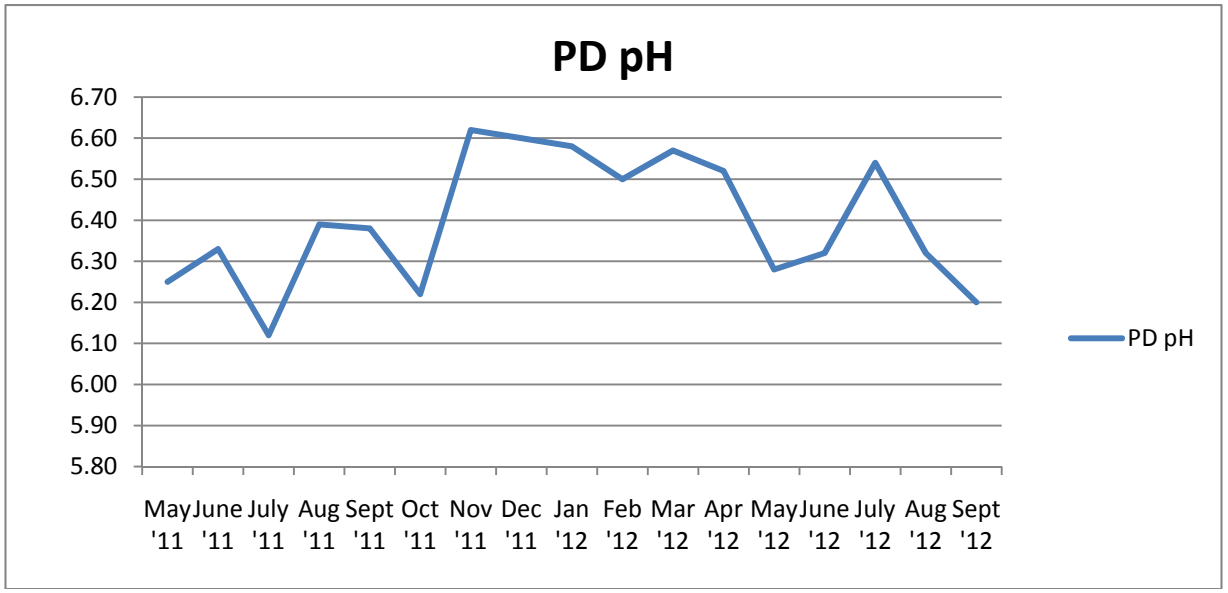


TABLE 14-2 Injection Well Soundings

Recent injection well depth readings

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	144.3	-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
8/16/2012	144.90	-0.95	205.70	0.15	248.10	0.10	197.20	-0.20
9/20/2012	145.84	0.96	205.70	0.00	248.09	-0.01	197.10	-0.10
Change From 6/17/04 to Present		**-102.64**		**-42.80**		**-5.11**		**-7.90**
Change From 6-04 thru 2-06		-1.00		-2.81		-4.01		-1.02
*Injection wells IW-2 and IW-3 redeveloped during week ending 3/17/2006								
Change from 3-06 thru 10/07		-2.90		-3.57		-0.87		-3.61
Injection wells IW-1 and IW-3 were redeveloped during week ending 11/9/07								
Change 11-07 thru 3/08		-21.70		-0.10		-0.10		-1.75
Injection wells IW-1 and IW-3 were redeveloped during week ending 4/25/08								
Change 4/08 to present		**-76.64**		**-36.32**		**-1.51**		**-1.88**

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: -with daily worksheets -with daily worksheets -with daily work sheets >operating data>Daily Plant Activity Notes>yr>month >Claremont Data>yr>mo>by date of inspection
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

Farmington Server Path: HRP CT Server: J drive/N/Newen…./Claremont Polychemical.../Operating Data (4-6-12)