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

MONTHLY REPORT
of the
Operations & Maintenance Activities
During
April 2012

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.
197 Scott Swamp Road
Farmington, CT 06032

Prepared: May 4, 2012

TABLE OF CONTENTS

Page

TABLE OF CONTENTS (cont'd)

LIST OF FIGURES

LIST OF TABLES

ACRONYMS AND ABBREVIATIONS

AS	air stripping
ASF	air stripper feed
CA	carbon adsorber
CLP	contract laboratories program
DBA	doing business as
DOSRs	daily operations summary reports
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, L-CA	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, V-CA	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 April 2012. This period is defined as 0600 hours, April 1, 2012, through 0600 hours, May 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 the April reporting period. The plant experienced no downtime in April, however, the injection pumps were shut off for 53 minutes during the monthly injection well falling head tests.

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 sign 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 spring clean up tasks, mowing the grass at the site and at selected wells, and continuation of the weed project.
- The process pumps were rotated (two on-line, one off) four times during this period as part of the preventive maintenance task.
- The process pH probes were cleaned, inspected, calibrated, and adjusted, as necessary.
- The drain screens on the settling tanks were cleaned by backwashing with compressed air. The frequency of these cleaning activities remains steady as the influent flow is stable.
- Water was periodically drained from both V-CA vessels.
- Maintenance on the portable generator indicated that the carburetor needs a rebuild.
- The level monitors at the ASF tanks were flushed several times as a nuisance low level alarm re-occurs.
- The monthly truck inspection was completed.
- The bladder pumps pulled from the monitoring wells were decontaminated at the plant and then put into storage.
- Tags were installed on the TOB monitoring wells to indicate the presence of the PDBs.
- The plant truck was cleaned after the sampling tasks were completed.
- The clarifier baffles were cleaned.
- A storage rack for the bladder pumps was installed in the shed.
- The flange gasket on the permanganate was replaced. This revealed a crack in the flange weld – the actual source of the leak.

2.0 MAINTENANCE LOGS

The following operating logbooks are currently in use:

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

The project log books were returned by SAIC and shipped to HRP-NY to copy and archive. 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

No HRP personnel were on-site in April but support for ongoing activities continued.

- Nancy Garry worked on coordinating the next groundwater sampling event and arranged for control system contractors to visit the plant for discussion of a potential upgrade of the GWTS monitoring/control system.
- Tom Sicilia continued work on groundwater model and the plant discharge database.
- Jennifer Kotch arranged for the pick-up of the on-site drummed chemicals.

3.2 NYSDEC Personnel, sub-contractors and other visitors

- Mets was in to empty the dumpster (4/9)
- Din Weng (TOB lab) picked up GW sample bottles (4/24)
- Metro Environmental was in to inspect the chemical drums for transport (4/30)
- Valerie Egan (NCDPW) was in to pick up samples (4/30)
- Mike Flaherty (NCDPW) was in to discuss the NC treatment plant closure (4/30)

3.3 Deliveries

- UPS delivered the McMaster-Carr order (4/12)

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 April. These worksheets are also on file.

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

The plant supervisor completed the HAZWOPER 8-hr refresher training. The plant operator is due to complete HAZWOPER 8-hr refresher August 2012.

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 April 27 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 and sampling events are shown in the O&M Manual and the Sampling and Analysis Plan (SAP).

6.0 MONITORING WELL WATER ELEVATIONS

The water level elevations and water quality data for the well system was updated after the April quarterly groundwater sampling event. This database is available for review. The water level elevation data is included in the quarterly groundwater monitoring report. This data base will be next updated after the process water sampling event scheduled for May 16, and the groundwater event tentatively scheduled for June 1.

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 April, as measured from 0600 hours on April 1, 2012, to 0600 hours on May 1, 2012, was 16,513,328 gallons. This volume is approximately 114 percent of the monthly targeted treatment goal. The cumulative amount of treated water for this operating year (June 1, 2011 to present) is 174,505,255 gallons. This is approximately 8 percent above the targeted goal for water to be treated. 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 April, the plant discharge flow averaged 382 gallons per minute (gpm) or 550,440 gallons per day (gpd).

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 April are indicated below:

Injection Well System	Flow Average (gpm)	Volume Discharged (gallons)*
IW-1	21.0	907,574
IG-1	71.9	3,104,690
IW-2	95.5	4,125,418
IW-3	33.6	1,453,069
IG-3	80.9	3,494,392
IW-4	78.4	3,385,944
System	**381.3**	**16,471,087**

The discrepancy between the individual injection system meter readings and the total plant effluent meter readings (~0.7 gpm) is due in part to the type of flow meters utilized to measure the discharge (paddle wheel vs. magnetic vs. turbine). Also to be considered is the amount of sludge build up in the piping at the flow element. Thirdly, the plant effluent meter has a rounding factor of 10,000 gallons.

Flow to infiltration galleries IG-1 and IG-3 is restricted by ball valve so that flow to IW-1 and IW-3 is maximized. Currently the ball valves to each gallery are closed at 50%. By directing flow to the galleries, the total discharge to the well field is maximized without overflowing wells IW-1 and IW-3. Both galleries are draining adequately. The plant's effluent discharge is limited by injection pump system capacity.

8.0 CHEMICAL CONSUMPTION

Currently, the four chemical feed systems are offline, and their future use is not anticipated. All systems have been 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 flange.

Following is the inventory of the bulk chemicals at the plant:

Chemical	Inventory	
	No. of Containers	Container Type/Size
Caustic	7	55-gallon drum
Hydrochloric Acid (HCl)	1	55-gallon drum (<50 gal)
Citric Acid	1	55-gallon drum, (~200 lbs.)

Arrangements are being made to dispose of these drummed chemicals. The tentative schedule for transport is early May.

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.

As part of the daily monitoring, the differential pressure across the vessels is recorded. Currently the differential pressure across vessel #1 is 3.0 psi and across vessel #2 is 4.0 psi. Both of the carbon adsorber vessels changed out in May 2008, (600 cu. ft. each) were last backwashed in February 2012.

Approximately 4-5 cubic feet of carbon is discharged during backwash operations. The discharged carbon is collected and placed within 55 gallons drums for off-site treatment/disposal. 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 performed weekly with a photo-ionization detector (PID). VOCs have not been detected in the effluent air stream during these weekly monitoring events.

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

10.0 WASTE DISPOSAL

No hazardous or non-hazardous waste was generated or disposed of during this reporting period.

- Eleven full drums and one partially filled drum of nonhazardous carbon sludge cake, generated during aqueous phase carbon backwashing, are stored on-site.
- The eight previously shipped and returned suspect drums are awaiting disposition. SAIC continues to work on securing a suitable TSD (treatment-storage-disposal) facility.

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. Review of monthly discharge sample 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; therefore, a request for permit reauthorization must be submitted to the NYSDEC's DER and BWP by July 1, 2013.

12.0 OTHER OPERATIONS, MAINTENANCE, OR MANAGEMENT ISSUES

The output of influent pump 1 continues to drift as the VFD keeps the pump in the ramping mode. The Variable Frequency Drive (VFD) for air stripper feed pump 2 continues to give earth fault errors. These drives need to be serviced. A plan is being developed.

The disposition of 8 drums of 'non-hazardous' waste is pending SAIC procuring suitable TSD facility and transport.

The transducers in IW-3 and IW-4 are failing. It looks like in addition to the transducer in IW-2 these will have to be replaced.

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. In April:

- The Field Notes Log Sheet (CPS-Form-031) was revised to reflect the use of passive diffusion bags (PDB). (rev. G)
- The Table of Associated Reference Documents was updated to reflect new locations.
- The Well Specification Sheet was updated to reflect the PDB details.
- A new procedure (CPS-SI-007) was written for the start up of the HMI after a shut down.
- Changes were made to the sampling point nomenclature to facilitate data analysis.
- The sample chain of custody (COC) documents were revised to reflect a 10 day turn-around time and to consolidate the process water COCs.
- A new procedure (CPS-PSP-012) was generated for sampling with PDBs.

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. April's sampling activities included:

- The April PD samples were collected and shipped to TestAmerica-Edison on 4/10 for organic analysis.
- The April quarterly GW samples were shipped to TA-Edison 4/19 for organic analysis.
- The next quarterly PW samples are scheduled for collection May 15 and 16 with shipment to TA-Edison on 5/16 for generic, organic and inorganic analysis.
- PDBs for the next quarterly GW event have been ordered. It is expected to install them in the monitoring wells by 5/11.

The plant discharge was sampled on Feb. 14 as part of the PW event and on March 10 for the monthly sample. The following table indicates the analytical results for those samples:

Plant Discharge				
Parameters	**Discharge Limitations**	**Units**	**Results Feb '12**	**Results Mar '12**
pH (range)	5.5 – 8.5	SU	6.30	6.39
Tetrachloroethylene	5	ug/l	U	U
Trichloroethylene	5	ug/l	0.20 J	0.14
1,2-(cis) Dichloroethylene	5	ug/l	U	U

Plant Discharge				
Parameters	**Discharge Limitations**	**Units**	**Results Feb '12**	**Results Mar '12**
1,2-(trans)Dichloroethylene	5	ug/l	U	U
Methylene Chloride	5	ug/l	U	U
1.1 Dichloroethylene	5	ug/l	U	U
1,1-Dichloroethane	5	ug/l	U	U
Chloroform	7	ug/l	U	U
1,1,1-Trichloroethane	5	ug/l	U	U
Benzene	0.7	ug/l	U	U
Toluene	5	ug/l	U	U
Chlorobenzene	5	ug/l	U	U
Ethylbenzene	5	ug/l	U	U
Bis(2-ethylhexyl)phthalate	4200	ug/l	U	U
Di-n-butyl phthalate	770	ug/l	U	U
Antimony, Total recoverable	3	ug/l	U	NS
Arsenic, Total recoverable	50	ug/l	U	NS
Barium, Total recoverable	2000	ug/l	76.2	NS
Lead, Total recoverable	50	ug/l	U	NS
Selenium, Total recoverable	40	ug/l	U	NS
Iron, Total recoverable	500	ug/l	U	NS
Manganese, Total recoverable	500	ug/l	5.5	NS
Nitrogen, Total (as N)	10	mg/l	0.38	NS
Solids, Total Dissolved	1000	mg/l	258.0	NS
Chromium, Hexavalent	100	ug/l	U	NS
Chloride Ion	NL	mg/l	128.0	NS
Fluoride Ion	NL	mg/l	U	NS
Sulfate Ion	NL	mg/l	29.1	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)
April 2, 2012	6.56	13
April 9, 2012	6.51	14
April 16, 2012	6.28	14
April 23, 2012	6.64	15
April 30, 2012	6.61	13
Monthly Average	**6.52**	**14**

The NYSDEC discharge permit requires the PD to have an average monthly pH greater than 5.50. The treatment plant effluent pH averaged 6.52 in April and met the monthly average pH discharge requirement. A graph of the plant discharge monthly pH average 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 the active vapor phase carbon adsorber vessel following the air stripper. Currently vessel #1 is on-line. A summary of the results for April follows:

Air Stripper		
Date	**Inlet**	**Outlet**
April 2, 2012	0.0	0.0
April 9, 2012	0.0	0.0
April 16, 2012	2.1	0.0
April 23, 2012	0.0	0.0
April 30, 2012	0.0	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.		

Measurements to determine the depth from the top of column to the bottom of the IWs were taken on April 2. A summary of the historical data is included in Table 14-2. While the wells are stable, there has been an accumulation of sediment in the four injection wells. 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. Recent sediment accumulation has been noticed in IW-2. Since October 2011, the buildup of sediment is over 22 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. Over the last week, the transducer signals from IW-3 and IW-4 have started to deteriorate and along with the IW-2 transducer, the readings are now unreliable.

The injection well falling head test was performed on April 23. 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 three of four wells are stable. The stability of the 4th well, IW-2, is undetermined as the transducer signal remains problematic.

Other data collected during April included:

- The plant sound level readings were recorded twice (included with daily worksheets).
- The depth-to-water readings were recorded for the injection wells. This was compared to the soundings and the transducer readings (included with daily worksheets) (4/2)
- The flow-meter readings and the depth of water in the infiltration galleries were recorded in site supervisor's notebook. (4/24)

- The process motors amp load readings were recorded (4/2, 4/27)
- The DTW for the monitoring wells were recorded at the time the PDB were retrieved.
- The water quality parameters were recorded at the time the groundwater samples were taken.
- Weekly utility meter readings were recorded.

15.0 PROCESS ANALYSIS, INTERPRETATIONS, AND CONCLUSIONS

15.1 Influent Process

- 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.
- Currently, the three influent pumps are operational with 2 pumps on-line at a time.
- There continues to be some drift in the signal to influent pump-1.
- The motor for INF P2 is starting to show signs of wear. Its operation will continue to be monitored.
- The influent pumps were rotated 4 times in April

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 HCl 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. The baffles on the clarifiers were cleaned in April.

15.3 Settling Filter Process

The frequency of air sparging of the discharge drain screens increases with increased system flow. 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 April.
- 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 routinely drained of condensate.
- 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 April.
- A pin-hole leak has developed in the side wall of LCA vessel 2
- The differential pressure across the vessels is well within operating range and backwashing will not be required for some 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 on-line. The pumps were rotated 4 times in April.
- Except for IW-1, the injection well transducers are all producing unreliable signals.
- The galleries are adequately draining.

No other issues were encountered with the injection system in April. Routine maintenance tasks continue.

16.0 GROUNDS

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

16.1 Plant Perimeter

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

16.2 Well Field

- The grass at selected wells is mowed as necessary.
- Tags were placed on the TOB wells to indicate that installation of the PDBs
- The frequency of IW inspections and DTW readings has increased due to the poor signals from the well transducers

16.3 Other

- The monthly inspection of the plant truck was completed.
- Storage for the bladder pumps and PDB tether/reels was installed in the shed.

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

FIGURES

Figure 14-1 Injection Well Elevations and Daily Flow

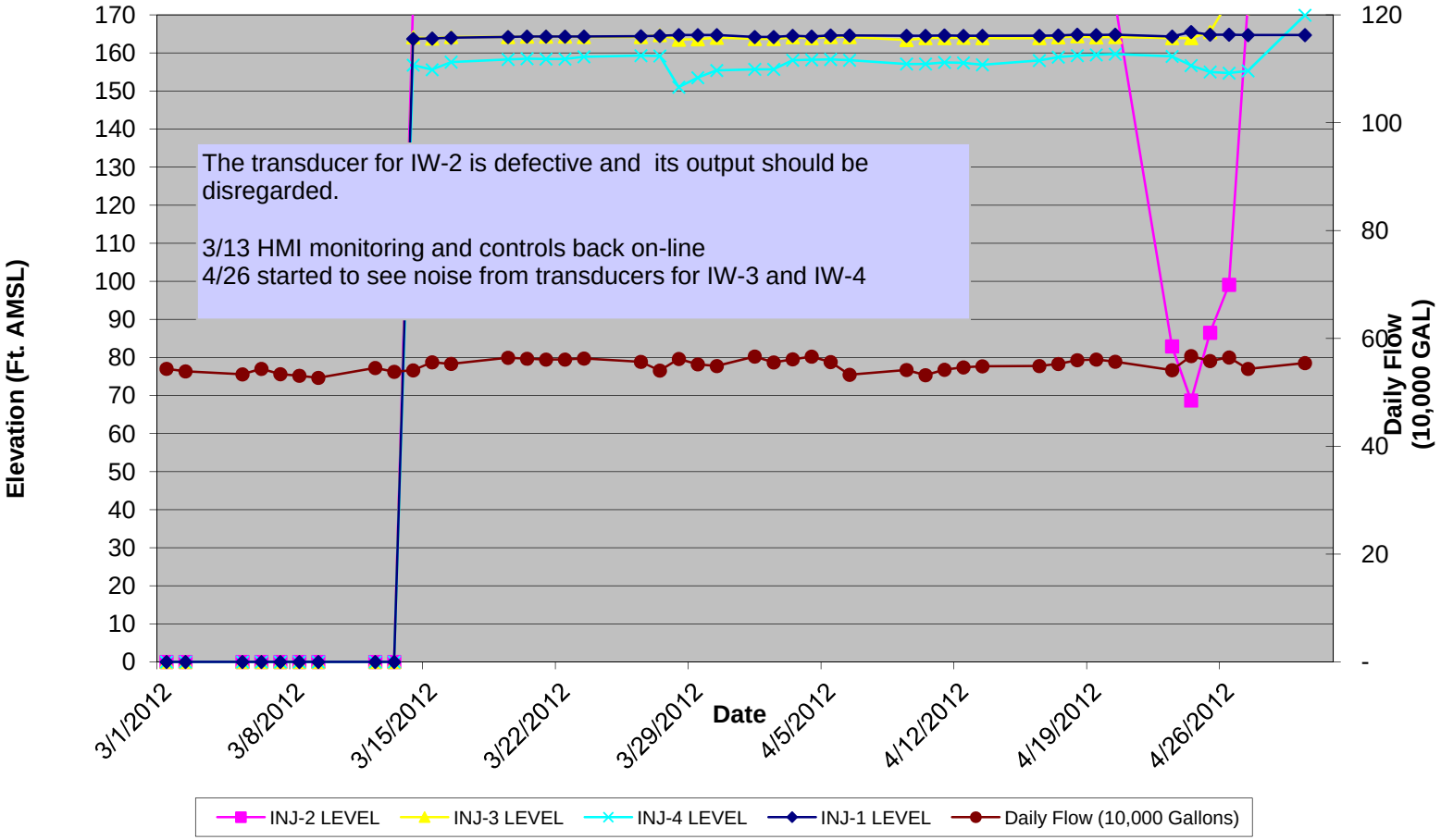


Figure 14-2 Injection Well Falling Head Test - April 23, 2012

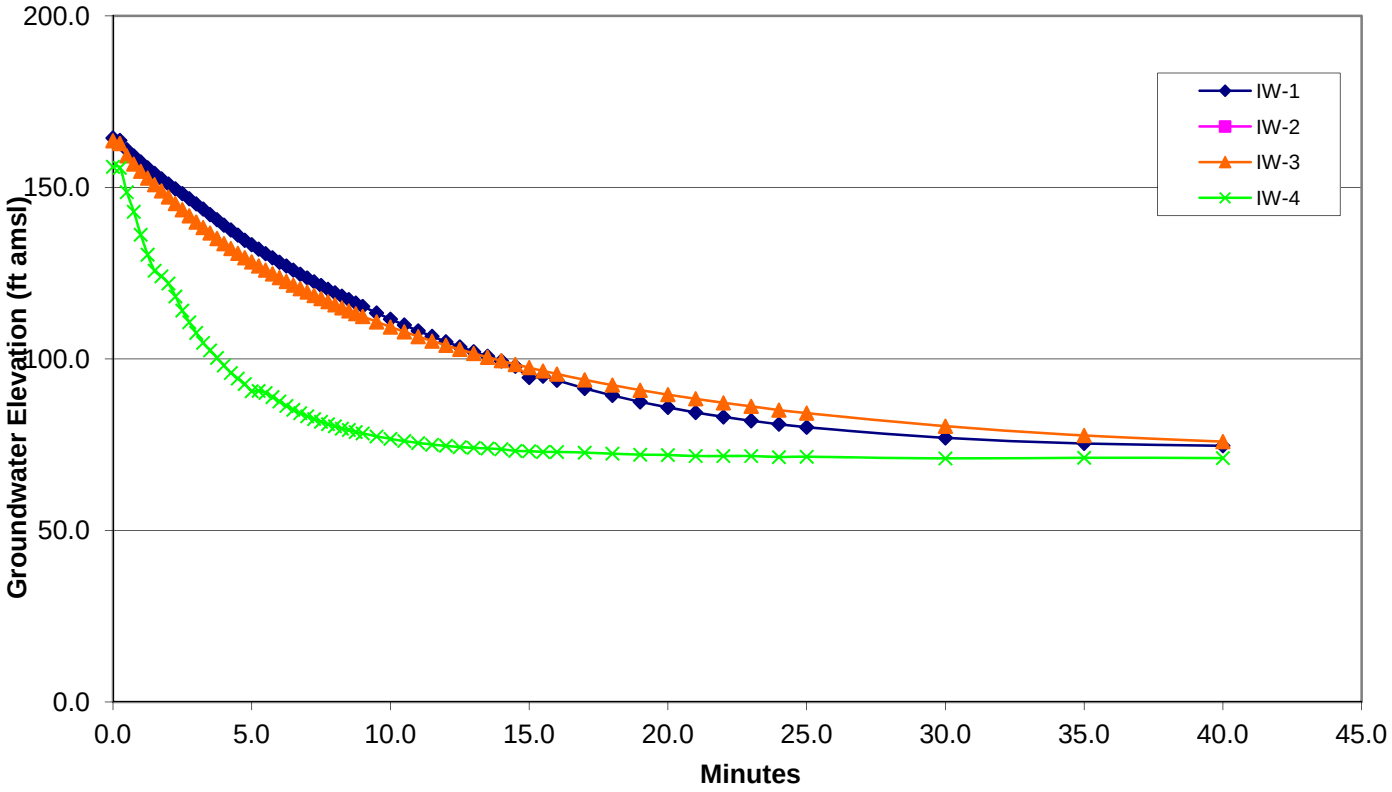
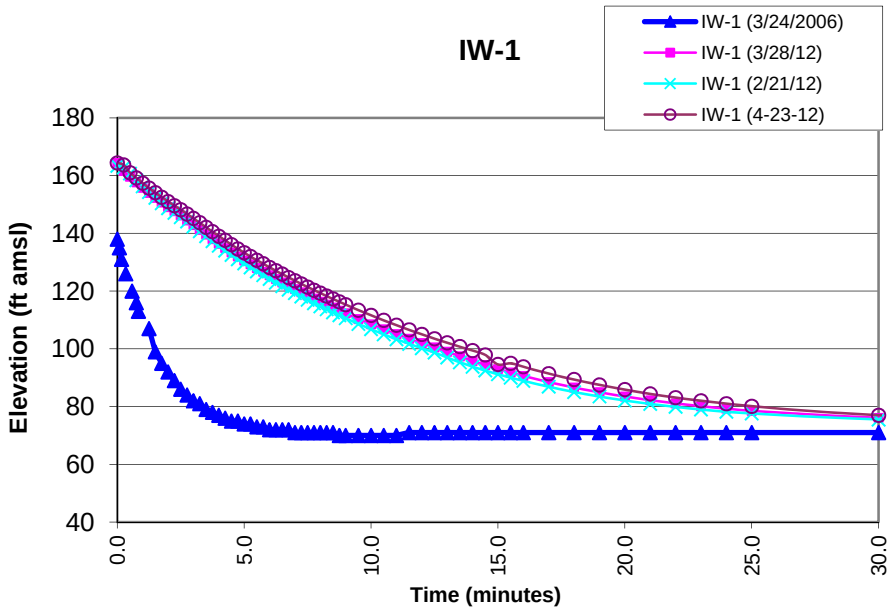
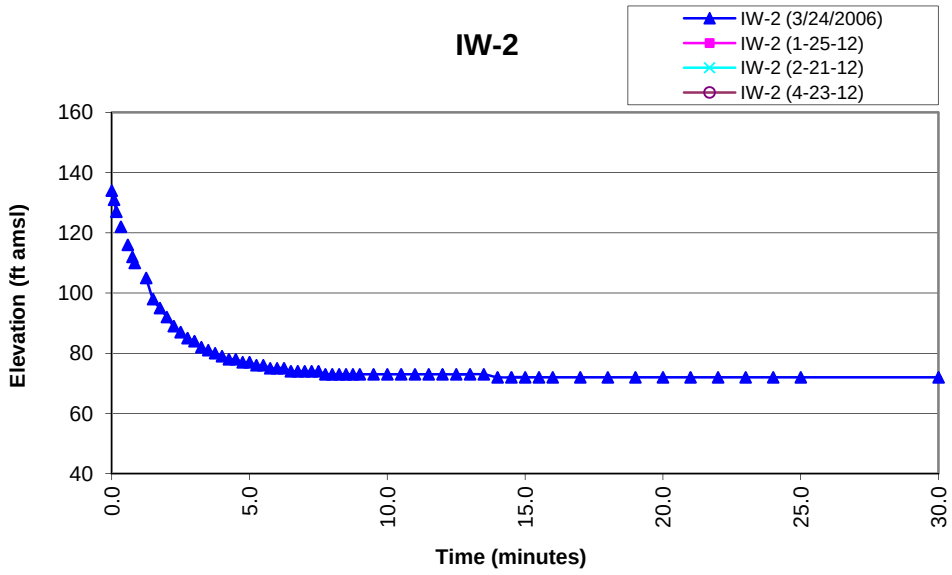
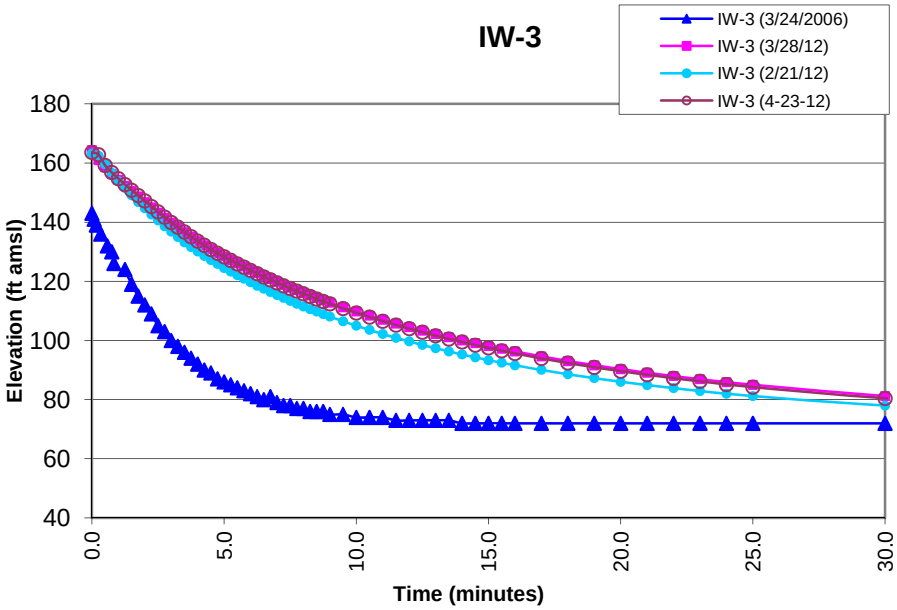


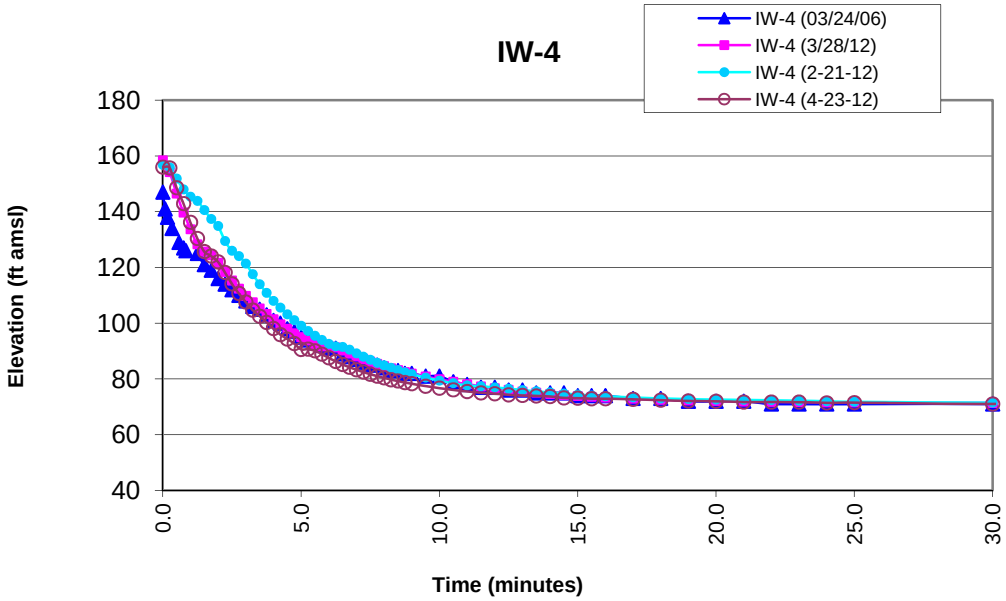
Figure 14-3 Comparison of Falling Head Tests



Due to the lack of reliable signal from the transducer in Injection Well #2, the comparison of current readings to historical data is not necessary.




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 FLOW METER DAILY TOTALIZER READINGS

April 2012

DATE	TOTALIZER READING	GALLONS PER DAY	GALLONS PER MINUTE
4/1/2012	525367407	602593	418
4/2/2012	525970000	510000	354
4/3/2012	526480000	610000	424
4/4/2012	527090000	580000	403
4/5/2012	527670000	540000	375
4/6/2012	528210000	1600000	370
4/9/2012	529810000	540000	375
4/10/2012	530350000	530000	368
4/11/2012	530880000	560000	389
4/12/2012	531440000	530000	368
4/13/2012	531970000	1660000	384
4/16/2012	533630000	540000	375
4/17/2012	534170000	550000	382
4/18/2012	534720000	560000	389
4/19/2012	535280000	560000	389
4/20/2012	535840000	1670000	387
4/23/2012	537510000	540000	375
4/24/2012	538050000	570000	396
4/25/2012	538620000	560000	389
4/26/2012	539180000	560000	389
4/27/2012	539740000	1630000	377
4/30/2012	541370000	510735	355
5/1/2012	541880735		
April 2012 TOTAL TREATED WATER		**16,513,328**	
April 2012 AVG. GPM DISCHARGED			**382**

Table 12-1

Miscellaneous Outstanding Maintenance Issues at the Claremont Polychemical GWTP (updated 4-27-12)

Date Added	Problem or Condition	Action	Cost	Option	Option Cost	Priority level
June 2011	ASF Sys Pump #3 motor bearings are making noise	Replace 10.0 hp motor when it fails	$800	none	n/a	1
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)	Included in Budget	a-replace CV with like kind cast iron swing check b-replace CV with pvc ball check (3)	$X $400	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	$X $400 +	2
2008	INJ Pump shut off valves cannot isolate individual pumps	Replace valves (4) w/ 6" PVC valves	Included in Budget	Leave valves in place	$0	2
2008	ASF Sys check valves not operating correctly, must be manually opened and closed	Rebuild check valves (3)	Included in Budget	a-replace CV with like kind cast iron swing check b-replace CV with pvc ball check	$X $400+	2
Aug. 2009	EQ Tank Discharge Valve Cannot isolate tank	Replace valve w/8" PVC valve	Included in Budget	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	$X $400+	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)	Included in Budget	a-replace CV with like kind cast iron swing check b-replace CV with pvc swing check	$1300	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 well	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	Leave pump as is	$0	Replace pump with M-8	$2500	4
2009	Sludge transfer piping	Leave plumbing as is	$0	Re-pipe press feed	$200	4
	INF Pump Seals (historically, pump 2 is due to fail)	Replace as needed (1)	$0	Proactively replace seals	$300	Budget for
Jan. 2012	INF Pump-2 Motor (1) Motor bearings are starting to make noise	Replace 5.0 hp motor when fails	$600	Rebuild motor?		Budget for
April 2012	Failing transducers for IW-3, IW-4	Replace failing transducers	$1200 ea	Manually monitor well		3
April 2012	Seal leak at INJ P2	Replace seal	$300	Pull pump and make repairs if possible	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
April 2011	Inoperative emergency lighting on SE plant door	Replace light fixture	$100			2

	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

Table 14-1 Plant Discharge pH

Month	PD $pH_{AVG.}$
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	

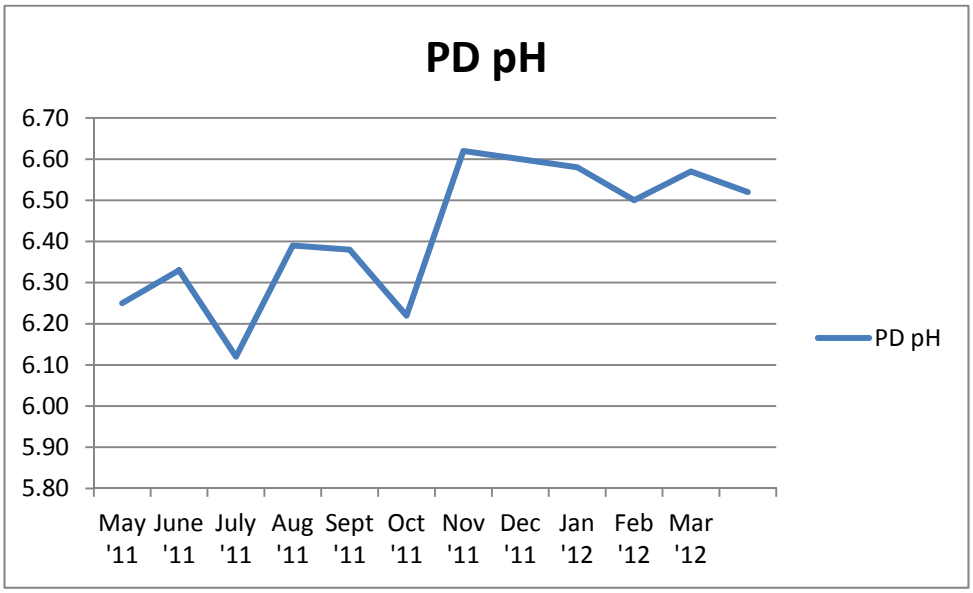


TABLE 14-2 Injection Well Soundings

Recent injection well depth readings

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

Change From 6/17/04 to Present	**-99.70**	**-29.70**	**-5.23**	**-7.50**
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	**-73.70**	**-23.22**	**-1.63**	**-1.48**

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)