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

MONTHLY REPORT
of the
Operations & Maintenance Activities
During
May 2013

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 May 2013. This period is defined as 0600 hours, May 1, 2013, through 0600 hours, June 1, 2013. O&M conducted during this reporting period was performed in accordance with the site O&M Manual.

The plant and grounds were maintained for 31 days in this reporting period. The treatment system was off line through May 16 as part of the extraction well project. The operation was restarted May 17. The total plant downtime for this period was 23,100 minutes.

During the period while the plant was offline, key process parameters were noted as necessary. After full operation was restored, readings of key process parameters are recorded each morning. 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 – Site checklist for unsafe conditions (CPS-Form-009)
Employee Sign-In Sheet – employee log in (CPS-Form-11)

1.2 Summary of Maintenance Activities

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

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:

- General maintenance activities continued, including outdoor clean up tasks, landscaping tasks, housekeeping, system inspections and system monitoring.
- Scheduled 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.
- Selected well heads and bollards were painted and lock shackles were adjusted.
- The EQ tank was emptied (for repairs) through both treatment trains and to the sump. Repairs were made and the tank leak tested.
- The portable generator was tested and used to run a compressor in the field.
- A stationary ladder was installed for access to the HVAC mezzanine.
- Oil was added to the filter press hydraulic fluid reservoir and the cabinet was cleaned.
- Well blockers and the well pumps were installed in the extraction wells. The bladders were charged and the pumps tested. They were recharged as necessary and monitored.
- The well blocker fill assemblies were leak-tested and adjusted as necessary. Valves were added (at the request of Miller Env.) to isolate the pressure gauges.
- The treatment system was restarted and adjustments were made.
- The sludge tank was emptied through the filter press.
- The process pumps were rotated from 1&3 to 2&3.
- Leak testing revealed that the well blocker systems were leaking. The pumps and blockers were pulled from the wells. Repairs were made for EX-1 and the blocker and pump were re-installed. The blocker for EX-2 was damaged and only the pump was re-installed in EX-2. Both pumps were started up and systems returned to service.
- The monthly in-house truck inspection was completed.

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-45
- Plant Operator's Daily Log CL-46

Of the completed project logbooks, 40 are in the process of being scanned and delivered to the NYSDEC and 4 are on file at Claremont. All of the logbooks are identified on a master

logbook inventory control file and are routinely checked as part of the site quality control program.

3.0 TECHNICAL SUPPORT ACTIVITIES

3.1 HRP Personnel

- Several engineers continue to work on various aspects of the extraction well system and the groundwater model.
- Jennifer Kotch (HRP-NY) was onsite 5/31 to assist in the removal and evaluation of the extraction well blockers.

3.2 NYSDEC Personnel, sub-contractors and other visitors

- Miller Environmental operators (2) were on site 5/8 to install the blockers and pumps in the extraction wells.
- B K Fire was onsite to inspect the sprinkler system.
- Premier Utility Services was on site 5/13 to mark out utilities for the USEPA drillers.
- USEPA drillers/samplers (5) were on the site of the old Claremont plant slab (5/13-5/16) to collect samples from under the slab.
- Superweld mechanics (2) were on site 5/16 to repair the EQ tank.
- Miller Environmental operators (2) were back onsite 5/31 to work on the extraction wells.

3.3 Deliveries

- Mail was delivered once in May

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 May. These worksheets are also on file.

The extraction well pump motor controllers and power supplies were locked out while Miller Environmental was working on the pumps.

Hot Work Permits were submitted for the EQ tank repairs and other maintenance work. (5/3, 5/16)

No safety incidents or accidents occurred during this May 2013 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 24 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 events are shown in the O&M Manual and the Sampling and Analysis Plan (SAP).

Well capacity and hydraulic conductivity testing on the extraction wells is being finalized.

6.0 MONITORING WELL WATER ELEVATIONS

The well system water level elevation data table was updated after the March 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 the water level data will take place after the quarterly groundwater event to be scheduled for June.

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 May, as measured from 0600 hours on May 1, 2013, to 0600 hours on June 1, 2013, was 6,799,230 gallons. This volume is approximately 45 percent of the monthly targeted treatment goal. The cumulative volume of water discharged for this contract year (June 1, 2012 to present) was 100,324,979 and is ~43 percent below 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.) The plant was offline for 16+ days in May.

In May, the plant discharge flow averaged 152 gallons per minute (gpm) and 219,330 gallons per day (gpd).

Month	Flow Average (gpm)	Volume Discharged (gpd)
June ‘12	380	546,715
July ‘12	357	513,599
August ‘12	344	495,778
September ‘12	338	487,288
October ‘12	320	460,217

November '12	343	493,409
December '12	47	68,314
January '13	0	0
February '13	0	0
March '13	0	0
April '13	0	0
May '13	152	219,330
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 May are indicated below:

Injection Well System	Flow Average (gpm)	Volume Discharged to well (gallons)*
IW-1	6.7	299,362
IG-1	29.9	1,335,604
IW-2	34.9	1,556,812
IW-3	15.3	684,804
IG-3	29.8	1,330,510
IW-4	40.9	1,826,884
System	**157.6**	**7,033,976**

The discrepancy between the individual injection system meter readings and the total plant effluent meter readings (~5 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 elements and local pipe were cleaned in February.

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 by 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.

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 December. Currently the differential pressure across vessel #1 is 2.0 psi and across vessel #2 is 2.0 psi. Backwashing of the vessels is not required at this time.

No carbon has been added to or removed from the vessels in May.

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). No emissions from the vessel 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

Currently, there are 8 metal drums of non-hazardous carbon waste stored inside the facility. There was no waste removed from the facility in May.

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. Efforts are currently underway for the permit renewal/extension.

12.0 OTHER OPERATIONS, MAINTENANCE, OR MANAGEMENT ISSUES

The GWTS was taken offline on 12/5/12 and remained off until 5/17/13. The treatment system was restarted with minor problems and is running well.

Miller Environmental was onsite to install well blockers in Extraction Wells 1&2. The well pumps for EX-1 and EX-2 were installed at new elevations. The pump for EX-3 was installed with its elevation unchanged. Miller Environmental returned to make repairs to leaking blockers. There continues to be concerns regarding the integrity of the blockers.

The plan to run well specific capacity tests as designed on the extraction wells may not be possible with the existing equipment.

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

13.0 PLANT DOCUMENTS

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

- IT drawing (-Dwg-037) was updated to rev. F
- New drawing for IT wiring (-Dwg-038) was created
- Air Monitoring Worksheet (-form-006) was revised to rev. C

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. Mays' sampling activities included:

- PID readings of selected SVE penetrations through the Claremont slab revealed low level voc emissions (1-6 ppm)
- Quarterly process water samples were collected and shipped to TA-Edison for organic, inorganic and generic analysis.
- The next quarterly ground water samples are scheduled for the week of June 17.

The plant discharge was last sampled on May 30. The analytical results for these samples have not been received. The analytical results for the December 12, 2012 plant discharge samples follow:

Plant Discharge			
Parameters	**Discharge Limitations**	**Units**	**Results Dec.'12**
pH (range)	5.5 – 8.5	SU	6.11
Tetrachloroethylene	5	ug/l	U
Trichloroethylene	5	ug/l	U
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)
May 20, 2013	5.57	15
May 28, 2013	6.52	14
May average	**6.05**	**14.5**

The NYSDEC discharge permit requires the plant discharge to have an average monthly pH greater than 5.50. While the sample size is small, the treatment plant effluent pH averaged 6.05 in May 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 of the active vapor phase carbon adsorber vessel following the air stripping tower. Currently vessel #1 is on-line.

Date	Inlet	Outlet
May 20, 2013	0.0	0.0
May 28, 2013	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.		

No emissions were observed in the discharge of the active vessel VCA-1.

Measurements to determine the well depth from the top of the injection well column to the bottom were taken on 5/14. 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.

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. On 5/14 the DTW readings for the injection wells were recorded.

	Sounding Depth (ft)	Transducer	Depth to Water (ft)
IW-1	145.70	72.2	99.88
IW-2	198.10	NM	100.67
IW-3	247.80	NM	101.40
IW-4	198.43	NM	101.40
	NM-not measured		

The injection well falling head test was performed on May 23. 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. All wells appear to be draining adequately.

Other routine data collected during May included:

- The plant sound level readings were recorded twice (5/3, 5/20)
- 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. (5/24)
- The process motors amp load readings were recorded (5/30)
- Weekly utility meter readings were recorded.

15.0 PROCESS ANALYSIS, INTERPRETATIONS, AND CONCLUSIONS

15.1 Extraction and Influent Processes

- The three extraction well pumps are fully functional and are on-line. EX-1 was set at 94 ft. (TOC) and EX-2 was set at 115 ft (TOC)
- Well blockers were installed in EX-1 (116 ft) and EX-2 (126 ft)
- The 3 extraction well flow monitors are fully functional.
- All current leaks in the EQ tank have been repaired.
- 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 once in May.
- The 2 influent flow controllers are fully functional.
- There remains some concerns with the integrity of the blocker in well 1
- 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

- The system is fully functional.
- Maintenance is performed as required.

15.4 Air Stripping Process

- The three ASF pumps are operational and are rotated into service two at a time. They were once in May.
- 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.
- The VFD for ASF P1 is starting to become problematic. It does not seem to control by tank level and has latched to the VFD for pump 3.
- 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 once in May.
- The leaks in the carbon vessels were repaired.
- Currently the differential pressure across the vessels is low and backwashing is not required 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. Only pump 3 was operated in May.
- 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 May. Routine maintenance tasks continue.

16.0 GROUNDS

Routine maintenance tasks continue outside the plant.

16.1 Plant Perimeter

- General outdoor clean up continues. This includes landscaping tasks.

16.2 Well Field

- The frequency of DTW readings has increased due to the poor signals from the injection well transducers.
- Well bollards and well columns were painted.
- Selected well lock shackles were modified for better access.

16.3 Other

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

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

FIGURES

Figure 14-1 Injection Well Elevations and Daily Flow

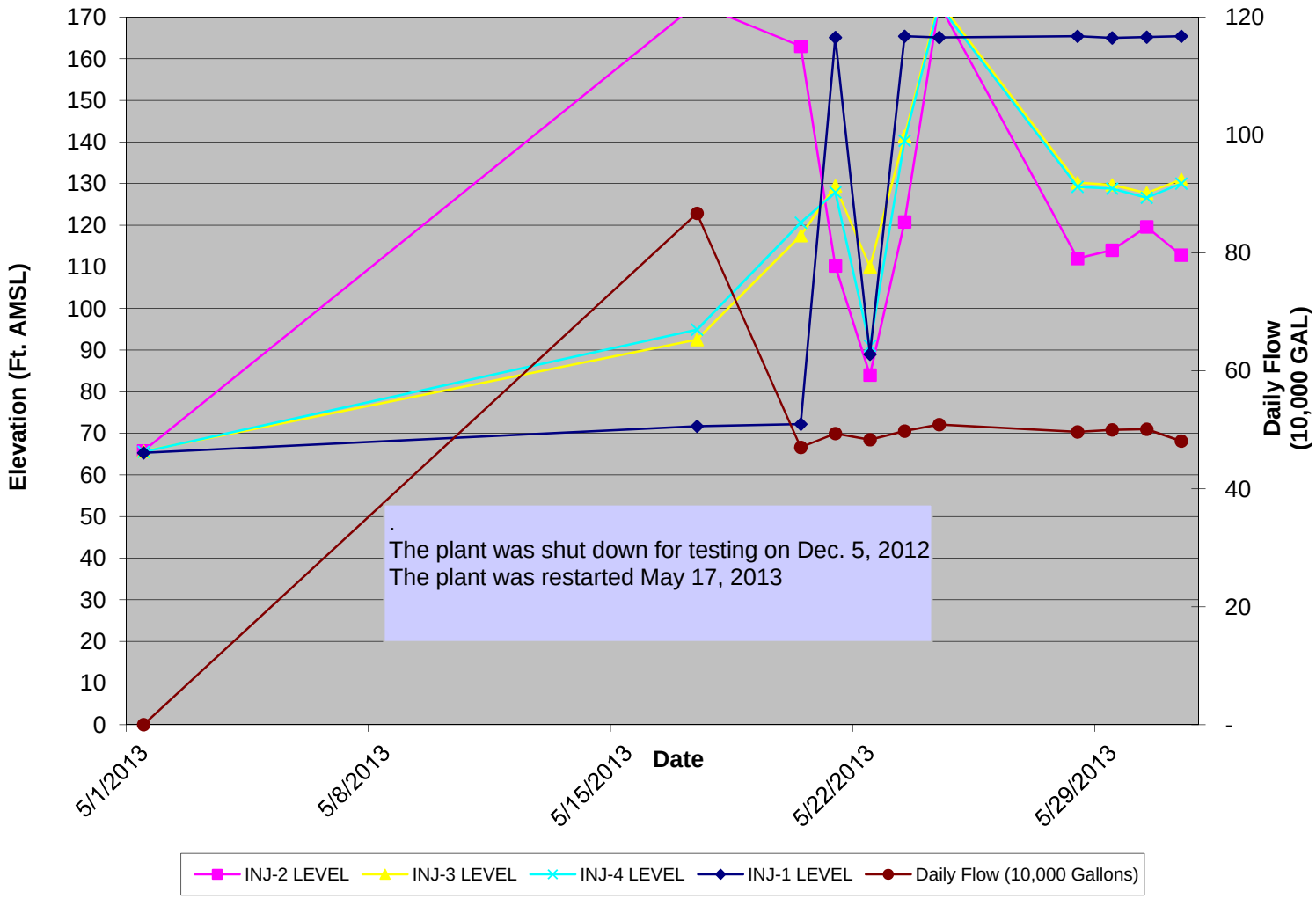


Figure 14-2 Injection Well Falling Head Test - May 23, 2013

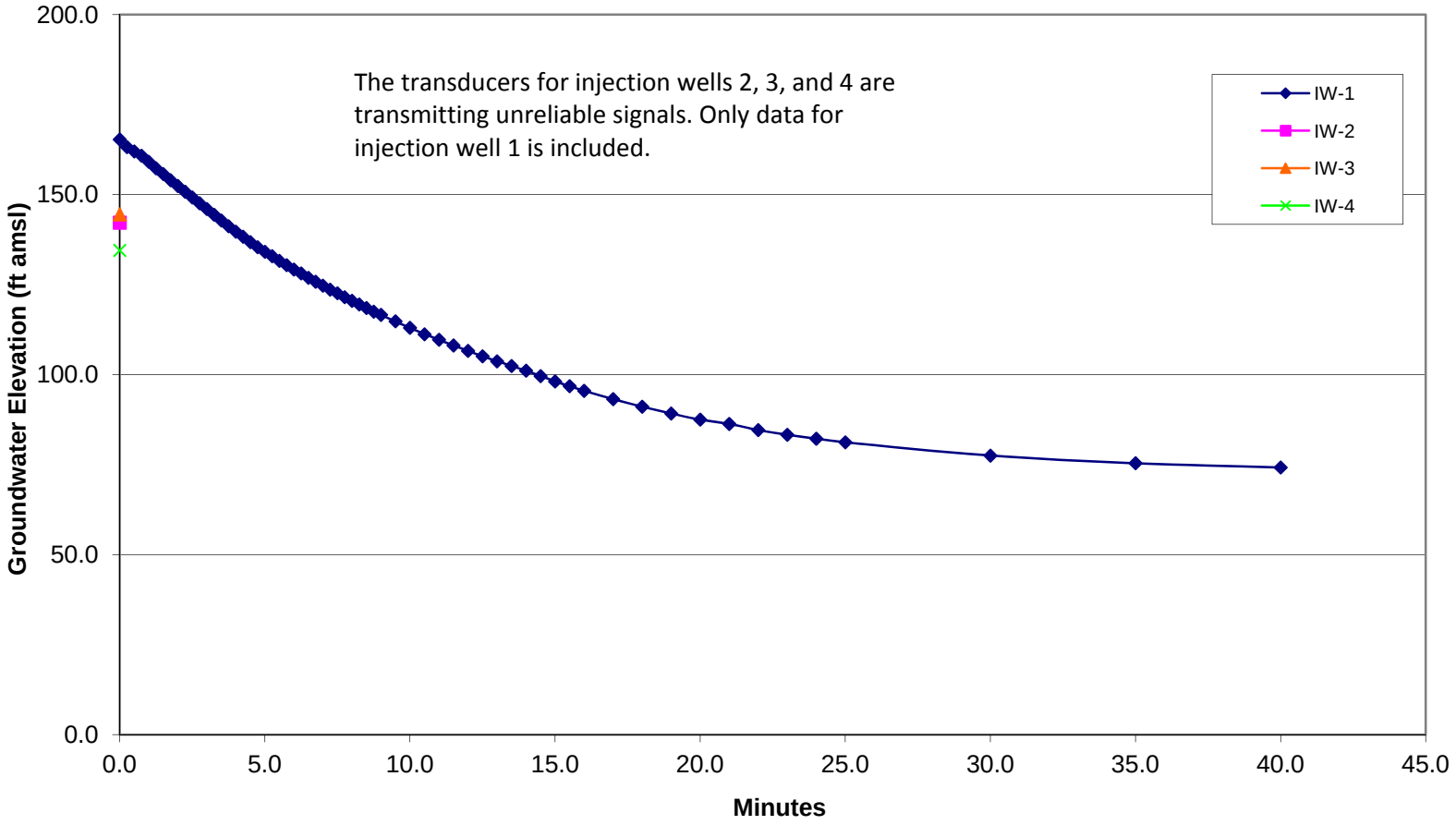
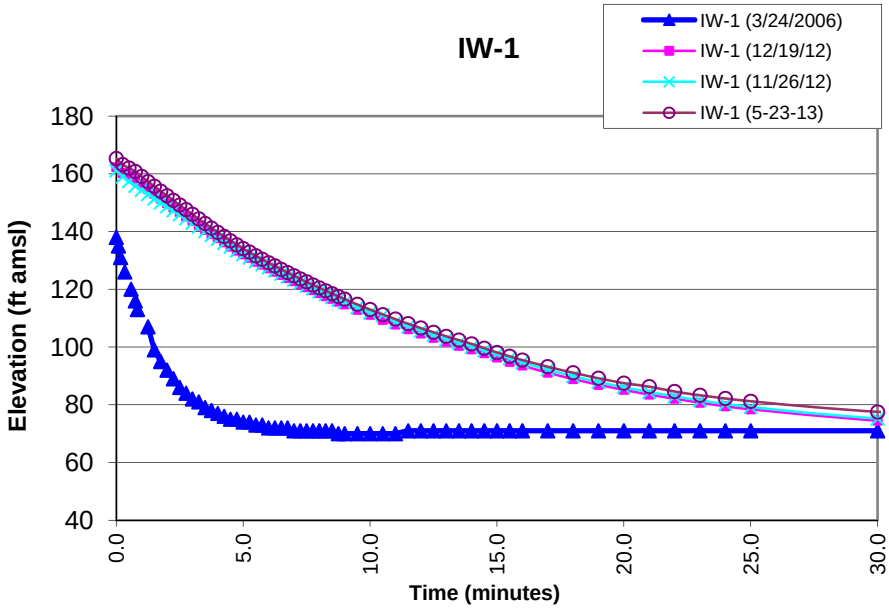
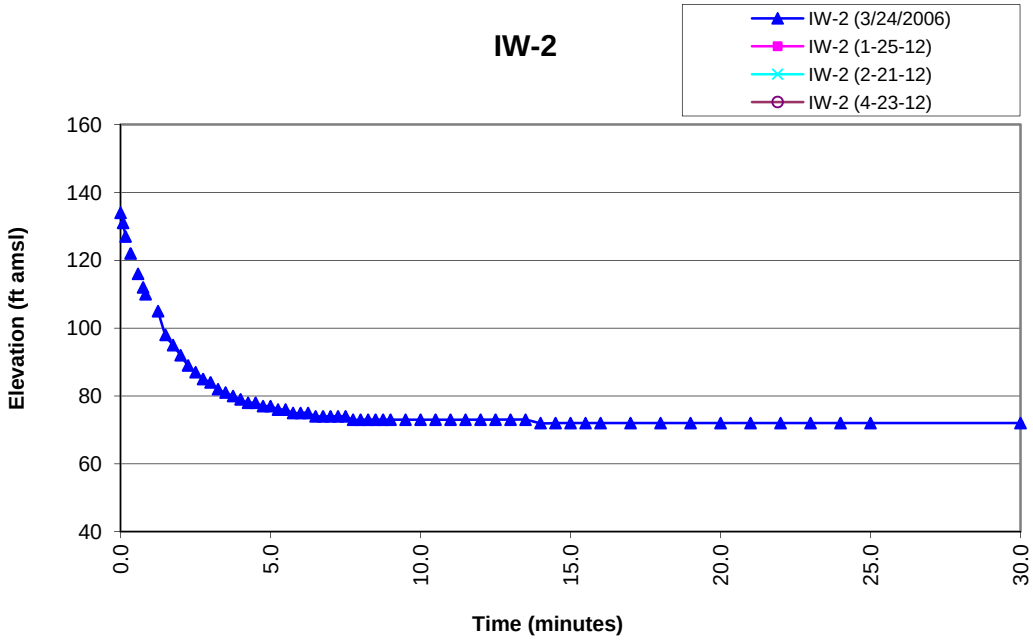
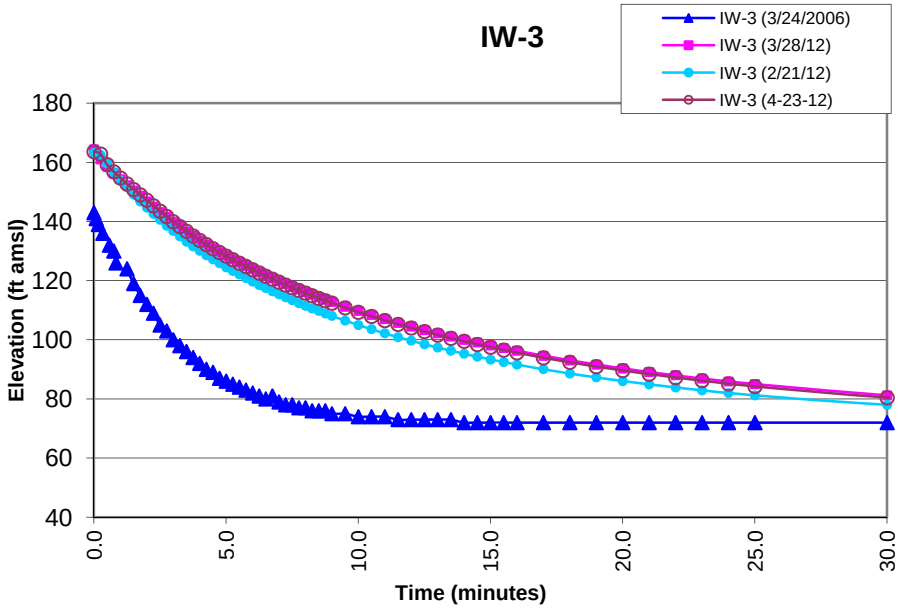
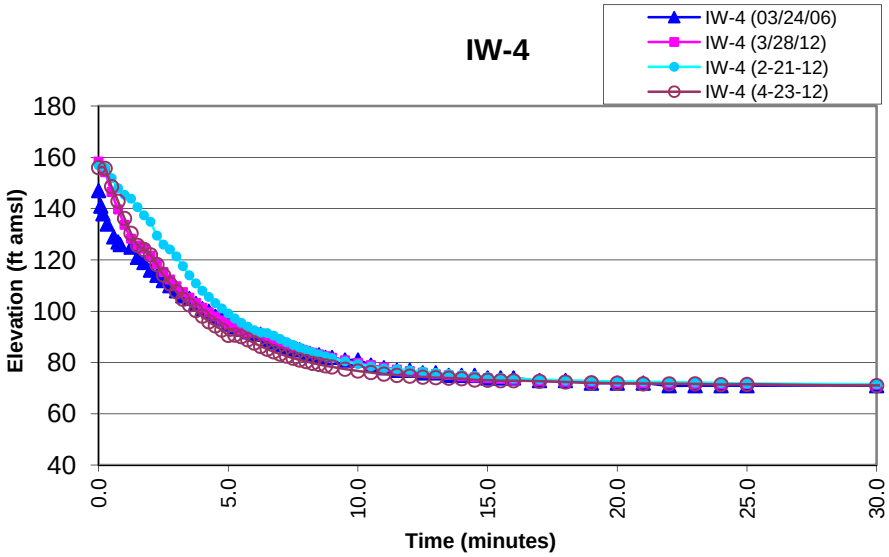


Figure 14-3 Comparison of Falling Head Tests






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

May 2013

DATE	TOTALIZER READING	GALLONS PER DAY	GALLONS PER MINUTE
5/1/2013	652430000	0	0
5/17/2013	652430000	870000	201
5/20/2013	653300000	470000	326
5/21/2013	653770000	490000	340
5/22/2013	654260000	490000	340
5/23/2013	654750000	490000	340
5/24/2013	655240000	2030000	352
5/28/2013	657270000	460000	319
5/29/2013	657730000	550000	382
5/30/2013	658280000	500000	347
5/31/2013	658780000	449230	312
6/1/2013	659229230		
May'13 Treated Water Volume		**6,799,230**	
May '13 Avg. GPM Discharged			**152**

Table 12-1

Plant conditions and concerns (updated 5/24/13)

Date	Condition to be corrected	Status	Priority	Notes
2007	PD manifold leak	In-place preparation of leaking joint and multiple layers of pvc glue – **did not help**	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	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.
2009	Sludge tank transfer piping replacement	Use M-8 pump and hoses The M-4 pump is available	4	Hoses and an M-8 are being used in place of the hard plumbed system.
Aug '10	IWs transducer replacement	Leave as is and manually measure water levels	3	3 units, only the transducer in IW-1 gives a reliable signal
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	3	pH control is no longer required
June '11	ASF P2 VFD repair	Leave out of service	2	P-2 is run on off-line pump's VFD
July '11	INF P1 VFD repair	Leave as is	2	Pump flow is controlled by throttling the P-1 discharge valve
Jan '12	INF P2 motor noise	Await failure	4	Replace motor at failure
Apr '12	INJ P2 leak	Leave as is	2	Shut down item – replace seal
Apr '12	Permanganate tank repair	Leave as is	4	Off line, tank is not needed
June '12	ASF Level Monitor	Operating as is	3	Monitor give false LL conditions which cycles the pump
Sept '12	Optimize PD flow	Leave as is	4	-Change extraction containment flow requirements -change discharge & manifold plumbing -change out pump impellers -resize pumps
Nov. '12	Clean Process tanks	Clean when possible EQ , TW, ASF	4	Plant shutdown items: See below for completed tanks
Ongoing	Non-Hazardous Waste Accumulation	Indoor storage	3	Waste removal will be scheduled when sufficient quantity is accumulated.
Jan '13	Rust spots on storage tank shells	Project has started, lower sections of the TW and EQ tanks have been spot primed	2	Rusted areas are to be abraded clean and spot painted
March '13	More EQ tank pin-hole leaks	Welder has been contacted to provide quote prior to NYSDEC approvals – **Tank repaired**	1	5 leaks have been observed
May '13	**VFD for ASF P1 – not tracking tank levels**	**P1 system is currently tracking VFD 3**	**2**	**Need electronics tech to look at control system**
May '13	**EX well Blockers – leaking air**	**Periodically charging bladders**	**1**	**Charged system affects the transducer activity.**
May '13	**EX well capacity testing**	**In planning**	**2**	**Equipment may not support the tests**

				as designed
Recently completed Tasks	Condition	Remedy		
12/14/12	ASF Tank Level alarm faults	Units cleaned and returned to service.		Plant is down so effectiveness of remedy has not been tested
11/15/12	Out Door Heat Trace controllers	Two units for the 3 tanks have been installed and actuated		
11/15/12	IW-2 high water level	Reduced plant flow and several shut down periods righted the problem		
11/14/12	Plant truck emission test	Truck passed		
12/6/12	PID failure	New unit purchased and in use		
12/11/12	INJ Flow meter errors	Cleaned flow elements and piping spool pieces		
12/12/12	EX flow meters	Cleaned flow elements and piping spool pieces		
12/4/12	Plow pump leaks	Unit was rebuilt		
12/20	Clean EQ strainer	Cleaned when tank was emptied		
Sept '12	Emergency light failure NE door	New unit installed 1/30/13	2	Fully functional
Nov. '12	Clean process flow monitoring systems	Ex cleaned 12/12 PD cleaned 1/3 IW cleaned12/11	3	Plant shutdown items: PD, INJ, INF, EX
Dec. '12	AST media evaluation	Tower opened and media inspected 1/14	4	Iron sludge coating, media open - OK
Dec. '12	Valve Actuators on Settling tanks are a potential hazard	Actuators removed 1/18	3	Controllers disconnected, actuators stowed
June '11	ASF P3 motor replacement	Replaced motor with one removed from P2 (1/18/11)	2	Has not been tested under load
Dec '11	LCA vessel 2 - pin hole leaks	Repaired 2/14	3	Fully functional Feb '13
Nov. '12	Clean Process tanks	Clean when possible EQ , RX-1, RX-2, ST-1	4	Tanks cleaned during shutdown: RX-1, RX2, CL1, CL2, ST1, ST2, GACF1 ASF1
Dec '12	Plant heater failure	The heater was adjusted and is now functional	3	Fully Functional Feb '13
Dec. '12	LCA vessel 1 pinhole leaks	Repaired 2/15	3	Fully functional
Dec. '12	EQ tank pin hole leaks	Repaired 2/19	2	Fully functional

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

Month	$pH_{AVG.}$
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	6.28
June '12	6.32
July '12	6.54
Aug '12	6.32
Sept '12	6.20
Oct '12	6.15
Nov '12	6.39
Dec '12	6.11
Jan '13	6.35
Feb '13	nr
Mar '13	nr
Apr '13	nr
May '13	6.05

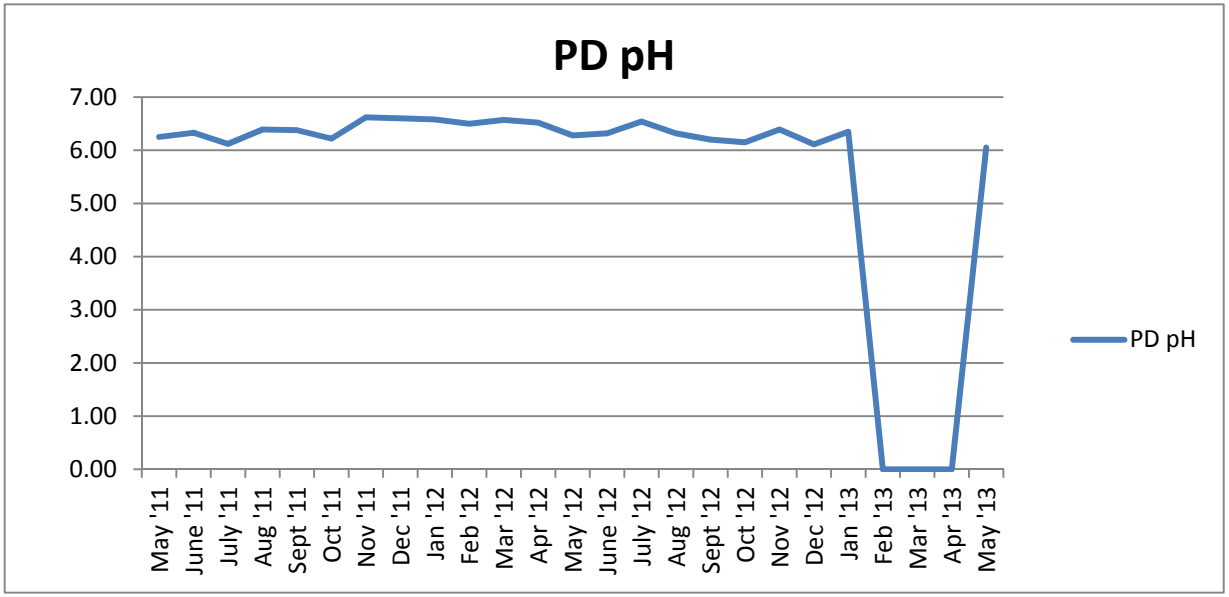
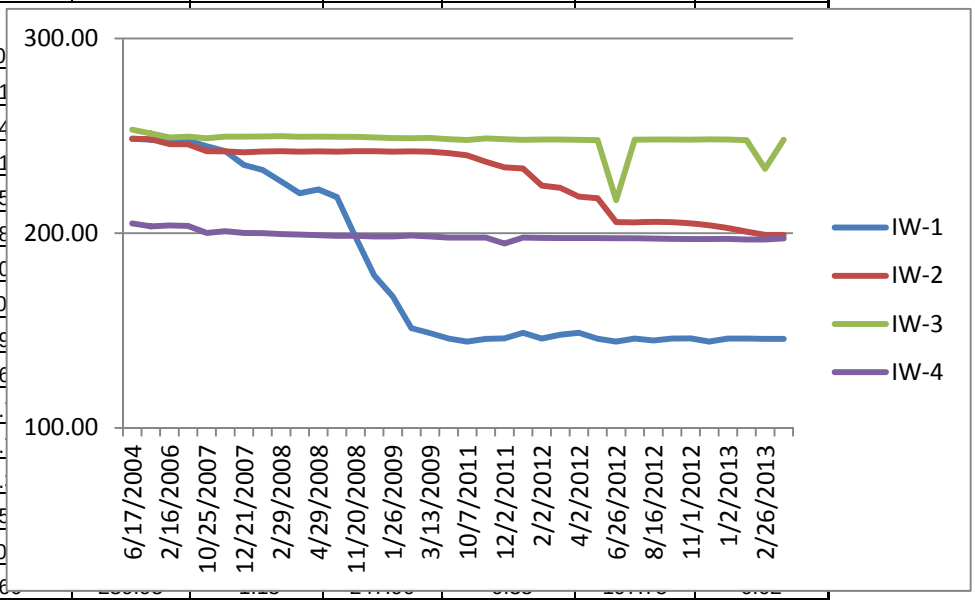


TABLE 14-2 Injection Well Soundings

This table contains selected dates and data

	Injection Well 1		Injection Well 2		Injection Well 3		Injection Well 4	
Date	Depth to Bottom (ft)	Difference	Depth to Bottom (ft)	Difference	Depth to Bottom (ft)	Difference	Depth to Bottom (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
2/16/2006	247.50	-0.01	245.69	-0.40	249.19	-0.02	203.98	0.00
3/23/2006*	247.59	0.0						
10/25/2007	244.69	-1.1						
11/19/2007	242.20	-2.4						
12/21/2007	235.02	-7.1						
1/29/2008	232.46	-2.5						
2/29/2008	226.58	-5.8						
3/27/2008	220.50	-6.0						
4/29/2008	222.50	2.0						
5/30/2008	218.55	-3.9						
11/20/2008	198.05	-2.6						
12/29/2008	178.29	-19.						
1/26/2009	167.50	-10.						
2/25/2009	151.20	-16.						
3/13/2009	148.68	-2.5						
9/21/2011	145.90	0.0						
10/7/2011	144.30	-1.6						
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
8/16/2012	144.90	-0.95	205.70	0.15	248.10	0.10	197.20	-0.20
9/20/2012	145.84	0.94	205.70	0.00	248.09	-0.01	197.10	-0.10
11/1/2012	145.95	0.11	205.15	-0.55	248.00	-0.09	197.00	-0.10
11/16/2012	144.30	-1.65	203.90	-1.25	248.15	0.15	197.00	0.00
1/2/2013	145.90	1.60	202.65	-1.25	248.10	-0.05	197.05	0.05
1/29/2013	145.90	0.00	200.80	-1.85	247.78	-0.32	196.78	-0.27
2/26/2013	145.70	-0.20	199.10	-1.70	233.10	-14.68	196.76	-0.02
3/18/2013	145.70	0.00	199.10	0.00	247.95	14.85	197.30	0.54
4/18/2013	144.05	-1.65	199.10	0.00	247.70	-0.25	197.25	-0.05
5/14/2013	145.70	1.65	198.10	-1.00	247.80	0.10	198.43	1.18



Groundwater Treatment System O&M Activities
Claremont Polychemical Superfund Site Site # 130015 May 2013

Depth to	Bottom	Well	Changes		
June ' 04 to	Present	**-102.80**	**-50.40**	**-5.40**	**-6.57**
June '04 to	Feb '06	-1.00	-2.81	-4.01	-1.02
*Injection wells IW-2 and IW-3 redeveloped during week ending 3/17/2006					
Mar '06 to	Oct '07	-2.90	-3.57	-0.87	-3.61
Injection wells IW-1 and IW-3 were redeveloped during week ending 11/9/07					
Nov '07 to	Mar '08	-21.70	-0.10	-0.10	-1.75
Injection wells IW-1 and IW-3 were redeveloped during week ending 4/25/08					
Apr '08 to	Present	**-76.80**	**-43.92**	**-1.80**	**-0.55**

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

ATTACHMENT 1 -Maintenance and project tasks proposed for the upcoming extended plant process shutdown:

Task	Equipment	Sub tasks
Clean Process Flow Sensors	Plant Discharge Injection well Influent Extraction well	Isolate units Remove flow sensor element Remove pipe section Clean pipe Reassemble Calibrate as necessary
Clean Process tanks	Train 1 Train 2 ASF if necessary GACF if necessary VCA	Empty tanks and Flush/vacuum to sump Clean clarifier baffles and pump out sludge Power wash screens on settling tank drains
Backwash LCA Vessels	LCA-1 LCA-2	Perform multiple cycles for each vessel over several days to allow for water volume disposition
Evaluate leak at INJ P2	Determine if gasket leak or mechanical seal issue (Seal will need to be purchased ~$300)	Remove motor Remove pump head Evaluate surfaces.
PM check valves	ASF GACF INF INJ	Remove covers Clean an lubricate surfaces Note what more extensive work is required.
Refurbish isolation valves on INJ Pumps	P1 and P2	Remove valve Evaluate Clean as possible
Clean EQ tank Strainer	EQ Tank	Isolate and remove strainer Clean unit reinstall
Evaluate ASF Tank level monitors	LAHH-2-1-1-1 LAHH-2-1-1-2	Remove units Clean as possible reinstall
Evaluate AS Tower Media	AS tower	Open tower man-ways Inspect media Determine further action
Weld repairs of LCA vessels	LCA Vessels	Determine points to repair Write PO Schedule welder Empty vessels Weld units – Hot work permit, etc.

<u>Items not requiring shutdown</u>:

- Install motor at ASF P-3 using motor taken from P2 in 2011
- Cut grass at monitoring wells
- Post storm – clean paths to monitoring wells
- Clean mold on metal surfaces
- General plant and equipment painting
- Remove actuators from discharge of settling tanks

ATTACHMENT 2 – Photos of Extraction Well packers

Extraction well 2 Blocker prior to initial installation

Extraction well 2 Blocker end connections

Extraction Well 1 Blocker prior to initial installation

Extraction Well 1 blocker connections

Blocker after it was pulled from EX-2