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

MONTHLY REPORT
of the
Operations & Maintenance Activities
During
February 2014

WA D006130-19
SITE # 130015

Prepared for the:

New York State Department of Environmental Conservation

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Prepared: March 7, 2014

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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 groundwater treatment system (GWTS) for February 2014. This period is defined as 0600 hours, February 1, 2014, through 0600 hours, March 1, 2014. O&M conducted during this reporting period was performed in accordance with the site O&M Manual.

The plant, grounds, and well system were maintained for 28 days in this reporting period. During this period, the treatment system was generally stable with steady flows. In February, the groundwater treatment system was shut down for ~6:45 hours for maintenance activities.

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

1.1 Daily Operations Summary Reports

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

Daily Operating Log – 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.

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.

The significant maintenance activities completed during this reporting period included the following:

- General maintenance activities continued, including outdoor clean up and snow removal 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.
- The process pumps were rotated from 1&3 to 2&3 to 1&2
- The pressure gauge for INF P3 was replaced
- Plant fixtures were painted where necessary
- The LCA vessels were backwashed through several cycles each
- PM was completed on the air compressor unit
- PM was completed on the AS blower
- The discharge flange on the LCA-1 vessel developed a leak. The bolts were tightened to the lower end of the allowable range. The leak persists and will be addressed during the next plant downtime.
- The flow sensor for IW-4 failed. The element was removed, cleaned, reinstalled and returned to service. A carbon film prevented the proper operation.
- The mailbox was re-hanged after it was torn off the wall by falling snow.
- The paddle wheel flow monitor K-factors were rechecked. Flow associated with those elements will appear lower.
- The flow sensor for IW-2 failed. The element was removed, cleaned, reinstalled and returned to service. Again a carbon film prevented the proper operation.
- Well paths were cleared of snow where possible
- The battery was replaced in the NE exit emergency light
- The packer for EX-1 was recharged to 40 psi.

2.0 MAINTENANCE LOGS

The following operating logbooks are currently in use:

- Well Maintenance Field Log CL-28
- Sampling support Field Log CL-37
- Miscellaneous Field Notes CL-47
- Site Supervisor's Daily Log CL-48
- Plant Operator's Daily Log CL-49

Of the completed project logbooks, 40 are in the process of being scanned and delivered to the NYSDEC and 6 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

- Other than the plant operators, there were no HRP personnel at the site in February.
- Jennifer Kotch and Nancy Garry continue to oversee the project from HRP-NY.

3.2 NYSDEC Personnel, sub-contractors and other visitors

- Test America-NY picked up the PW samples for delivery to TA-Edison (2/29)
- Mike Flaherty (NCDPW) was in to go over recent municipal groundwater activities and concerns (2/24)
- Valerie Egan (NCDPW) was in to go over sampling schedule (2/24)

3.3 Deliveries

- UPS delivered an HP toner cartridge (12/18)
- Fed Ex delivered the EON order (2/19)
- Fed Ex delivered a project flash drive (2/25)

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 are periodically carried out. All work is completed as per standard operating procedures (SOPs). These worksheets are also on file.

- Comprehensive site safety inspections were completed (2/10, 2/21)
- Precautions are being taken with the drummed carbon waste which has indications of trace levels of radiation.

No safety incidents or accidents occurred during this February 2014 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 February 26 and is electronically filed. It can be found at the end of this report as Table 12-1 – Claremont Corrective Action Summary.

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

- The preparation and painting of the EQ tank shell continues when conditions permit
- When feasible, INJ P2 is to be pulled and the mechanical seal checked.
- The level control floats for the sump pump are to be reattached to the sump wall.
- The next PD samples are scheduled for March 13.
- The next quarterly GW samples are scheduled for March 17-20.
- Replacement of the AS blower bearings and belts is to be considered.
- The change out of the LCA carbon beds is to be planned
- Repairs are to be made to the leaking LCA discharge flange

6.0 MONITORING WELL WATER ELEVATIONS

The monitoring well system water level elevation data table was updated after the December 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 is no longer collected. The next water level recording event is tentatively scheduled for March 14.

7.0 TREATMENT SYSTEM FLOWS

The volume of treated water discharged by the treatment plant to the injection well field is determined daily from readings of the magnetic flow meter on the plant effluent line. A summary of these meter readings for this month is provided in Table 7-1. The total volume of treated water discharged in February, as measured from 0600 hours on February 1, to 0600 hours on March 1, was 12,803,259 gallons. The cumulative volume of water discharged for this contract year (June 1, 2013 to March 1, 2014) was 130,435,115 gallons. A graphic representation of the system's daily flows is provided in Figure 14-1. The plant experienced 406 minutes of downtime in February and has been offline ~191 hours this contract year.

In February, the plant discharge flow averaged 318 gallons per minute (gpm) and 457,259 gallons per day (gpd). These flow rates are significantly lower than January's. This is primarily due to restrictions in the influent flow to IW-2 and the falling output of the pumps.

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
June '13	333	480,205
July '13	282	406,545
August '13	356	512,480
September '13	342	493,022
October '13	338	486,258
November '13	344	494,895
December '13	338	486,913
January '14	334	481,617
February '14	318	457,259
Historic Target	**335**	**482,400**

The flow monitoring units for the individual IW systems and infiltration galleries are on-line. These units allow for reading the flow rate and volume discharged to each individual system. The relative flows for February are indicated below:

Injection Well System	Flow Average (gpm)	Volume Discharged to well (gallons)
IW-1	18.0	726,495
IG-1	79.2	3,194,145
IW-2	23.5	948,676
IW-3	42.8	1,726,877
IG-3	68.6	2,766,687
IW-4	82.4	3,321,821
System	**315**	**12,684,701**

Discrepancies between the individual injection system meter readings and the total plant effluent meter readings is due in part to the type of flow meters utilized to measure the discharge (paddle wheel vs. magnetic vs. turbine), the plumbing configurations, sludge build

up in the piping at the flow elements, rounding factors in the meters, and the relative time the readings are taken. The IW flow sensors were recalibrated.

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

There are no bulk chemicals onsite.

9.0 CARBON SYSTEMS

9.1 Aqueous-Phase Carbon

The influent water to and the effluent water from the liquid-phase Carbon Adsorber (LCA) vessels is monitored on a quarterly basis for volatile organic (VOA) and semi volatile organic (BNA) compounds. In previous sampling of these streams, minimal VOA or BNA compounds have been detected in the effluent. The vessels were sampled in February. Previous results indicate that the compounds of interest are below acceptable limits.

As part of the daily monitoring task, the differential pressure across each vessel is recorded. This data along with the discharge pressures of the LCA feed pumps are used to determine whether backwashing of the carbon beds is necessary. The vessels were backwashed through several cycles each this month. Currently the differential pressure across both vessels is in an acceptable range.

The spent carbon recovered from the backwashing operation is stored in drums on-site indoors. This carbon is generally listed as non-hazardous waste. A routine scan of the last drums transported for disposal indicated that trace levels of radioactivity was detected. The disposition of this carbon has yet to be determined.

No carbon was added to the vessels in February. There is currently 1 partial drum of carbon waste in storage.

9.2 Vapor-Phase Carbon

Two vapor-phase Carbon Adsorber vessels (VCA) are available for the off gas treatment of the air stripping (AS) air stream. Currently, VCA-1 is online. VCA-2 is offline 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 air stream were observed in February.

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

10.0 WASTE DISPOSAL

No waste was disposed of in February.

11.0 MONTHLY DISCHARGE MONITORING REPORT

The GWTS is currently operating under an equivalency permit from the New York State Department of Environmental Conservation (NYSDEC). While, this permit does not require monthly reporting, a review of the monthly plant discharge analytical results, (included within Section 14.0), indicated all analyzed parameters were below noted permit limits.

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

12.0 OTHER OPERATIONS, MAINTENANCE, OR MANAGEMENT ISSUES

Long Island and the Site were hit with several snow storms which limited access to the ground surface. The plant operations were generally not affected although momentary power interruptions were experienced. Due to roof pitch, the deposited snow and ice often cascades off the surface onto the exit door pads.

IW-2 has been problematic requiring constant tweaking of its influent flow. However, recently restrictions to the influent flow have been eased. (A prolonged period of no flow to the wells (backwashing LCA vessels) allows them to more fully recover.) However, the increase in flow to IW-2 is accompanied with a reduction of flow to the other wells.

The plant experienced the failure of LCA P2 over the 2/22 weekend. Although the pump was ultimately reset by remote access, the plant operator responded to ensure the plant was operating correctly and to clean up any water that might have overflowed the ASF tanks.

The discharge from extraction wells 1 and 2 remain restricted by the globe valves at the mixing manifold. In February, EX-1 averaged 69 gpm, EX-2 averaged 89 gpm, and EX-3 averaged 107 gpm. (These gpm readings are averages over 24-hrs, the pump's actual on-time is 16-19 hours per 24 hours).

Cycling of the pumps has been reduced as the water levels in the extraction wells have been stable.

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

13.0 PLANT DOCUMENTS

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

- Log-in procedure (-ADM-04) was revised to rev. B
- A list of maintenance items was generated for budgetary considerations

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. February's sampling activities included:

- The quarterly process water samples were collected 2/18, 19 and shipped to TA Edison for organic, inorganic and generic analysis.
- Problems were encountered with sampling hydrant for EX-1 (valve frozen?). The sample was subsequently taken from an isolated point inside the plant.
- The monthly PD sampling task is scheduled for 3/13
- The quarterly GW sampling task is scheduled for 3/17-20
- The January PD data was uploaded to EQuIS

The plant discharge was sampled February 19. The following are the analytical results for those samples:

Plant Discharge			
Parameters	**Discharge Limitations**	**Units**	**Results Feb. '14**
pH (range)	5.5 – 8.5	SU	6.35
1,1,1-Trichloroethane	5	ug/l	U
1,1-Dichloroethane	5	ug/l	U

1,1 Dichloroethylene	5	ug/l	U
Benzene	0.7	ug/l	U
Chlorobenzene	5	ug/l	U
Chloroform	7	ug/l	U
1,2-(cis) Dichloroethylene	5	ug/l	U
1,2-(trans)Dichloroethylene	5	ug/l	U
Ethylbenzene	5	ug/l	U
Methylene Chloride	5	ug/l	U
Tetrachloroethylene (PCE)	5	ug/l	U
Toluene	5	ug/l	U
Trichloroethylene (TCE)	5	ug/l	0.39
Bis(2-ethylhexyl)phthalate	4200	ug/l	U
Di-n-butyl phthalate	770	ug/l	U
Antimony, Total recoverable	3	ug/l	U
Arsenic, Total recoverable	50	ug/l	U
Barium, Total recoverable	2000	ug/l	72.4
Lead, Total recoverable	50	ug/l	U
Selenium, Total recoverable	40	ug/l	U
Iron, Total recoverable	500	ug/l	33.4
Manganese, Total recoverable	500	ug/l	29.7
Nitrogen, Total (as N)	10	mg/l	0.16
Solids, Total Dissolved	1000	mg/l	278
Chromium, Hexavalent	100	ug/l	U
Chloride Ion	NL	mg/l	119
Fluoride Ion	NL	mg/l	0.031
Sulfate Ion	NL	mg/l	32.2

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 the plant effluent taken from a controlled point with calibrated portable meters. A summary of this data is as follows:

Date	pH	Temp ^{o}C
Feb. 3	6.23	11
Feb. 10	6.35	9
Feb. 17	6.46	12
Feb. 24	6.34	11
February Average	**6.35**	**11**

The NYSDEC discharge permit requires the plant discharge to have an average monthly pH greater than 5.50. The treatment plant effluent pH averaged 6.35 in February 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.

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

Date	Inlet	Outlet
Feb. 3	0	0
Feb. 10	0	0
Feb. 17	0	0
Feb. 24	0	0
*PID readings indicate that the VOCs in the air stream are lower than the part per million levels (ppm) of the instrument's capability.		

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

Measurements to determine the well depth from the top of the injection well column to the bottom were taken on 2/25. 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 rate of infiltration appears to have stabilized. The flow of injected water into IW-2 remains restricted.

Water elevations in the IWs are recorded on a daily basis from the well's transducer output. Although depicted in Figure 14-1, these water levels are from faulty instruments and are questionable. However, the IW levels were generally steady and are physically monitored. On 2/25 the DTW readings for the injection wells were recorded.

	Sounding Depth (ft)	Transducer	Depth to Water
2/25	INJ pumps on		
IW-1	145.45	131.5	3.70
IW-2	153.80	122.4	60.35
IW-3	238.20	128.6	5.35
IW-4	190.40	128.1	16.80

Water level data from the injection well falling head test analysis was collected 2/21. Although the output of the level transducers is questionable, the data for all four wells was recorded. 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 the wells is unchanged. With the exception of IW-2, the wells appear to be draining adequately.

Other routine data collected during February included:

- The plant sound level readings were recorded twice (2/10, 2/25)
- Weekly utility meter readings were recorded.
- The extraction well packer pressures were recorded periodically, (see Sec. 15.1).
- The process motor amp loads were measured and recorded 2/28
- The infiltration gallery DTW and flow meter readings were recorded 2/25.

15.0 PROCESS ANALYSIS, INTERPRETATIONS, AND CONCLUSIONS

15.1 Extraction and Influent Processes

- Discharge flows from EX-1 and EX-2 remain restricted.
- The packer for EX-1 was recharged to 40 psi
- The pump motor amp load readings were recorded 2/28
- A fitting was replaced on the pressure gauge for the EX-1 packer
- The EX well flow monitors' K-Factors were checked. Previous adjustments resulted in lower flow readings.
- The three extraction well pumps are fully functional and are on-line.
- The three influent pumps are operational and 2 are on-line.
- The pressure gauge for INF P3 was replaced.
- There continues to be some drift in the VFD control of influent pump-1.
- The influent pumps were rotated twice in February.
- The 2 influent flow controllers are fully functional.
- The INF check valves need to be manually set.
- Routine maintenance continues.

Extraction Well packer pressure readings:

	EX-1	EX-2
Feb. 4	28	43
Feb. 12	25	42
Feb. 17	24	42
Feb. 24	21	42
Feb. 25	20 recharged to 40 psi	42
Feb.28	37	41

15.2 Flow through Aeration Process

- Both treatment trains are on-line and the process water is balanced between them.
- The polymer, potassium permanganate, caustic, and hydrochloric acid feed systems remain out of service as current water conditions make their use unnecessary.
- The flash and flocculation mixers at the clarifiers remain idle due to lack of solids generation.
- The pH control systems are offline as they are not required for operation.
- The reaction tanks and clarifier systems continue to operate as pass-through settling tanks.

15.3 Settling Filter Process

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

15.4 Air Stripping Process

- The three ASF pumps are operational and are rotated into service two at a time. They were rotated twice in February.
- The motor amp load readings were recorded 2/28
- The check valves are manually set.
- The VFD for ASF P2 exhibits an earth ground fault. When on-line, Pump 2 operates through the off line pump's VFD.
- The VCA gage tubing needs to be replaced.
- The blower is checked daily and is fully functional. The blower PM tasks were completed 2/28. The shaft bearings and belts will soon need replacement.
- 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 two times in February.
- The pump motor amp load readings were recorded 2/28.
- The check valves are manually set
- The vessels were backwashed through several cycles each which included air sparging.
- The differential pressure across each vessel is within acceptable limits.
- There is a leak in the discharge flange of LCA vessel 1. The flange continued to leak after tightening of the flange bolts.
- Other routine maintenance tasks continued.

15.6 Treated Water Injection Process

- The plant discharge system is online and operational.
- The injection pumps were rotated twice in February.
- The influent flow to IW-2 remains restricted, however, flow has been increased and the well is recovering.
- The paddle wheel flow sensors for IW-2 and 4 failed. The elements were removed, cleaned and returned to service.
- The flow monitors' K-Factors were re-checked. The flow readings will indicate lower.
- The pump motor amp load readings were recorded 2/28
- The check valves for P1 and P2 are manually set
- There appears to be a mechanical seal leak on pump 2.
- The discrepancy between the PD and IW flow sensor readings has been reduced with the paddle wheel calibration.
- The galleries are adequately draining.
- The well transducers are not functioning correctly.
- No other issues were encountered with the injection system in February. Routine maintenance tasks continue.

16.0 GROUNDS

16.1 Plant Perimeter

- General outdoor clean up continues. This includes snow removal tasks.
- The warning signs and fencing are in good shape and the gates are clear.
- The fire hydrant is clear and accessible.
- Snow removal was carried out as necessary.

16.2 Well Field

- Manual DTW readings of the IWs continued.
- EX well packer pressure readings continue.
- The paths to the monitoring wells were cleared of snow.

16.3 Other

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

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

FIGURES

Figure 14-1 Injection Well Elevations and Daily Flow

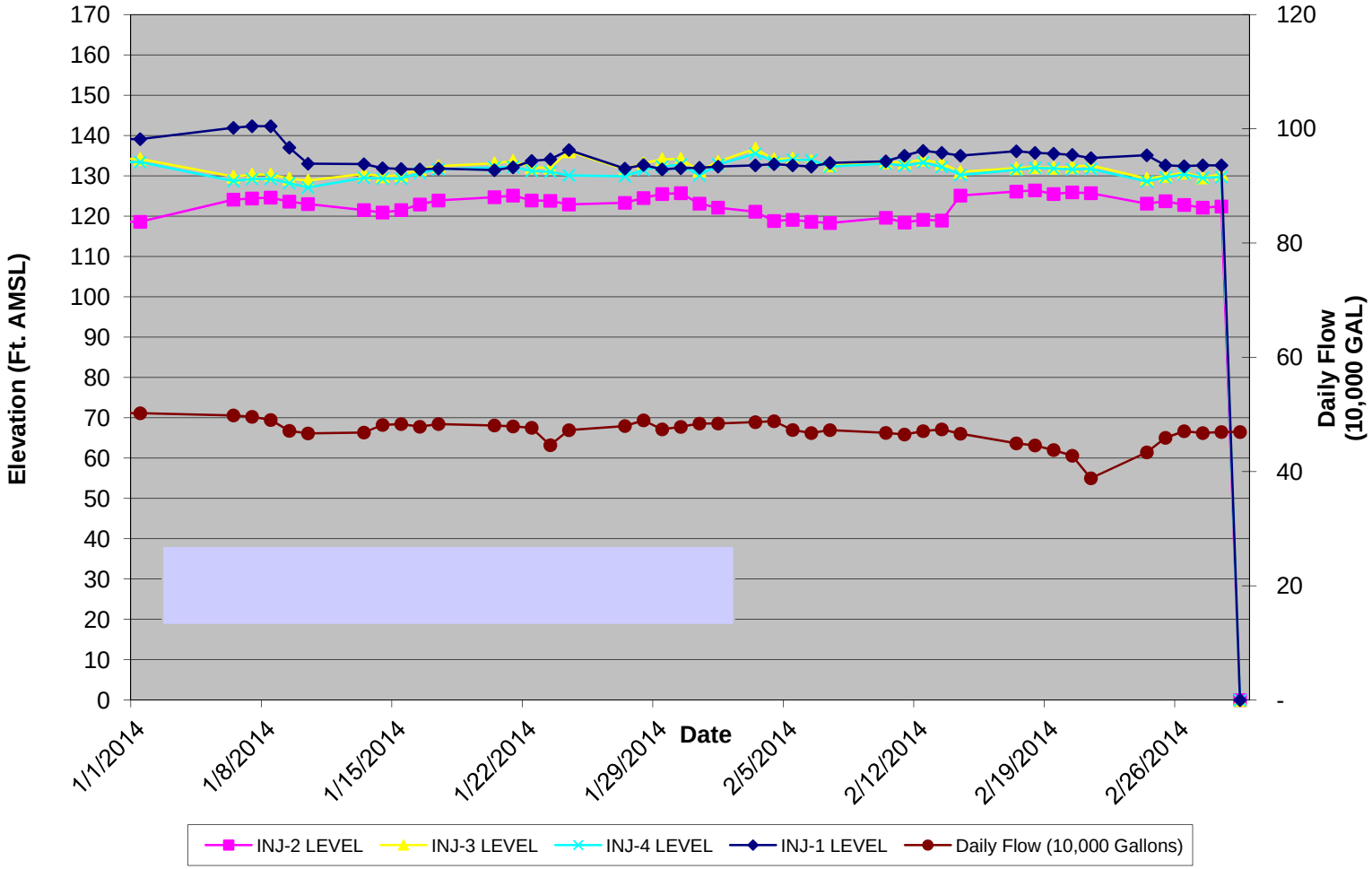


Figure 14-2 Injection Well Falling Head Test - February 21, 2014

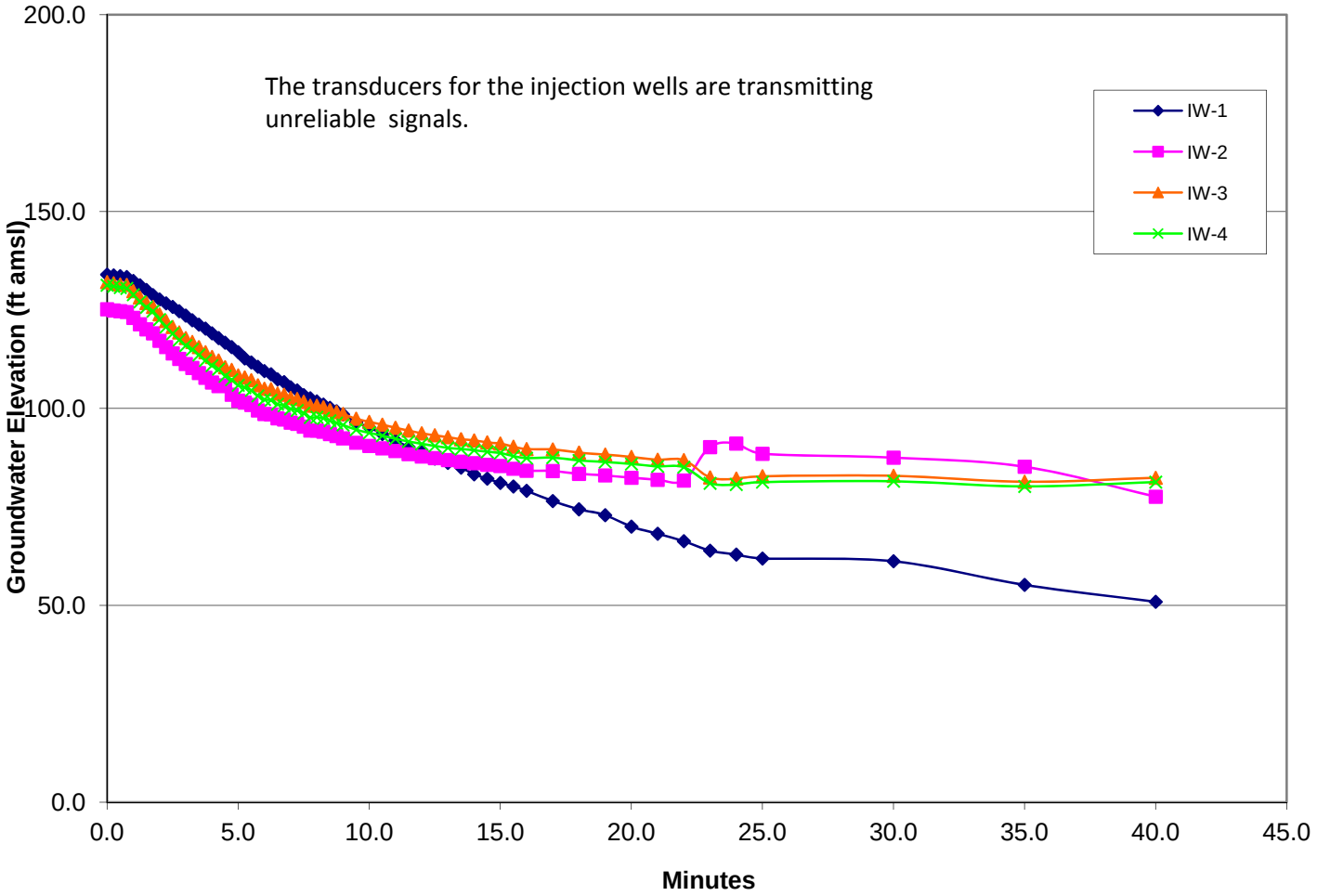
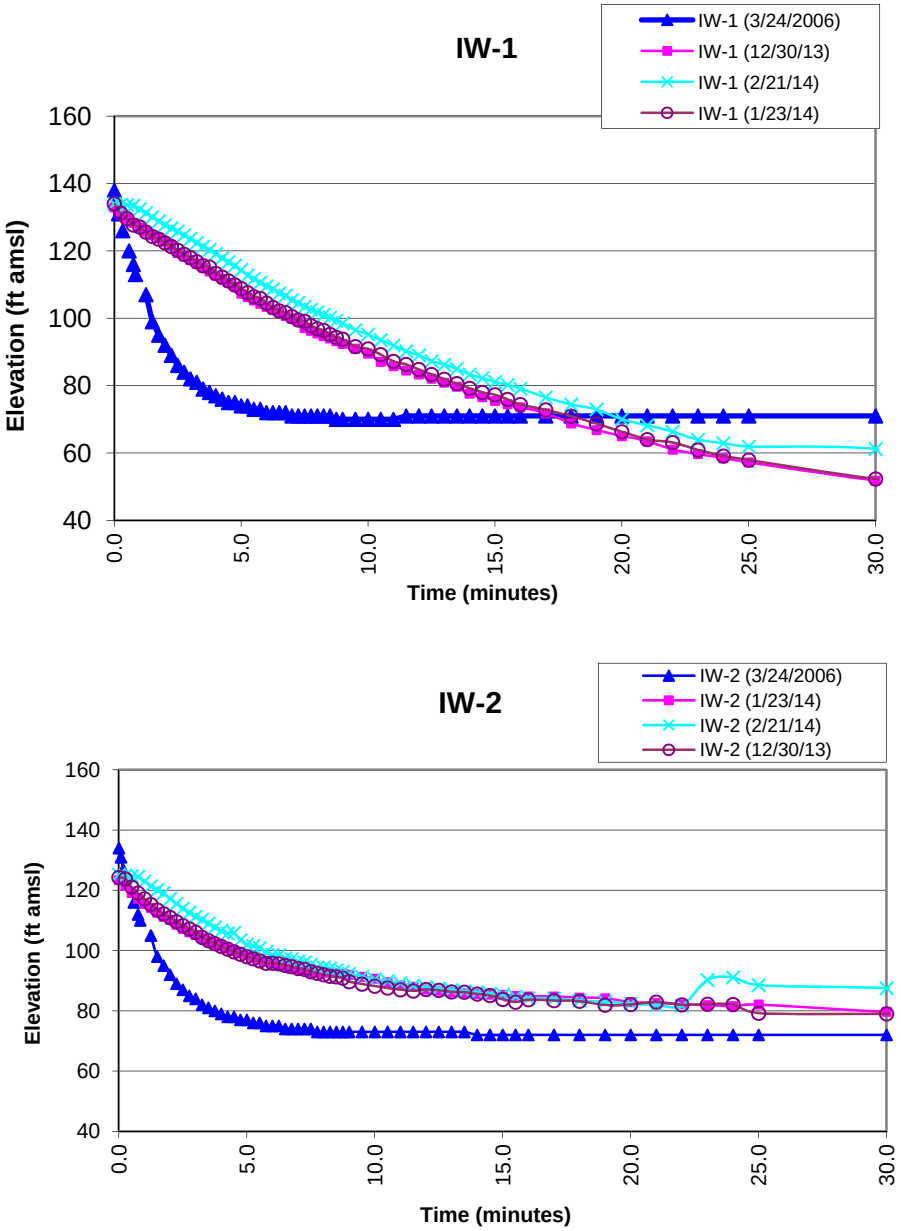
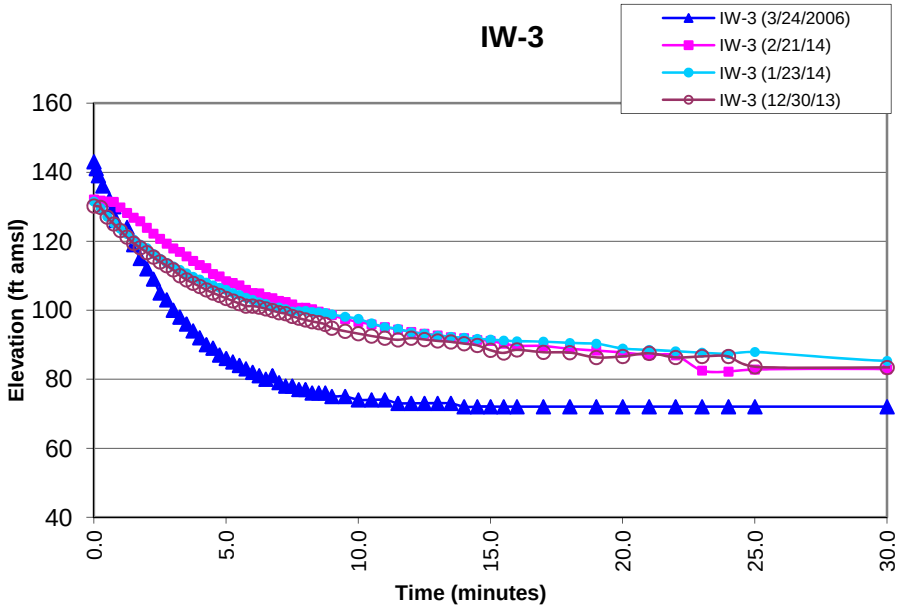
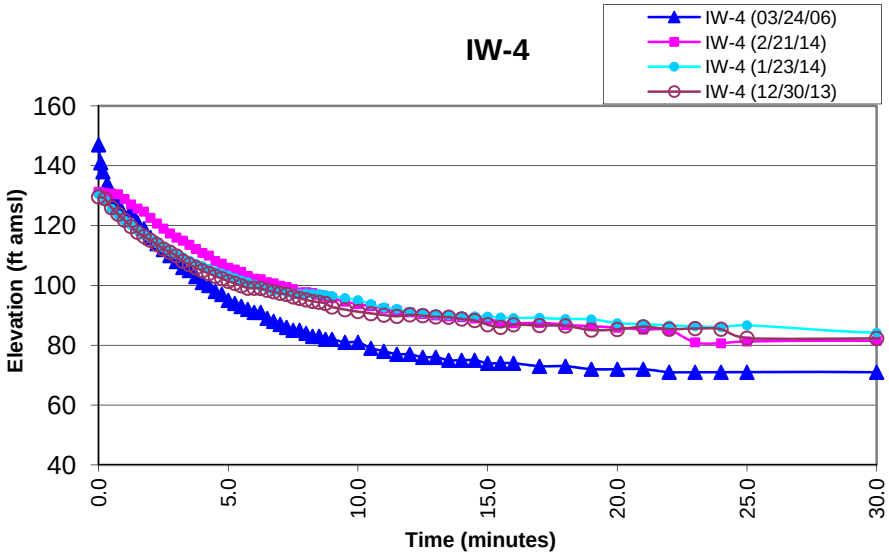


Figure 14-3 Comparison of Falling Head Tests




IW-3
IW-3 (3/24/2006)
IW-3 (2/21/14)
IW-3 (1/23/14)
IW-3 (12/30/13)
Elevation (ft amsl)
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 (2/21/14)
IW-4 (1/23/14)
IW-4 (12/30/13)
Elevation (ft amsl)
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

February 2014

DATE	TOTALIZER READING	GALLONS PER DAY	GALLONS PER MINUTE
2/1/2014	776861086	988914	343
2/3/2014	777850000	500000	347
2/4/2014	778350000	500000	347
2/5/2014	778850000	460000	319
2/6/2014	779310000	470000	326
2/7/2014	779780000	1420000	329
2/10/2014	781200000	470000	109
2/11/2014	781670000	460000	319
2/12/2014	782130000	490000	340
2/13/2014	782620000	460000	319
2/14/2014	783080000	1390000	322
2/17/2014	784470000	450000	313
2/18/2014	784920000	490000	340
2/19/2014	785410000	400000	278
2/20/2014	785810000	420000	292
2/21/2014	786230000	1170000	271
2/24/2014	787400000	430000	299
2/25/2014	787830000	460000	319
2/26/2014	788290000	470000	326
2/27/2014	788760000	470000	326
2/28/2014	789230000	434345	302
3/1/2014	789664345		
Feb '14 Treated Water Volume		**12,803,259**	
Feb '14 Avg. GPM Discharged			**318**

Table 12-1

Plant conditions and concerns (updated 2/26/14)

Date	Condition to be corrected	Status	Priority	Notes
2007	PD manifold leak	Leave as is and monitor	3	Leak is monitored and deemed to be not serious
2008	Check Valve failures	Valves are manually controlled	2	Plant wide – 13 units, this situation creates problems for any remote control of the processes.
2008	Injection Pump 1&2 shut off valve failures	Leave as is	2	Minimum 4 units. Pumps cannot be isolated
Aug '08	Air Compressor overhaul	Run system on an 'as needed' basis	4	This method has been working well. A failure may prevent some tasks.
2009	EQ tank isolation valve failure	Leave as is	2	The tank cannot be isolated
2009	Filter press hydraulic fluid leak	Add fluid as needed	4	The hydraulic pump system will require outside service.
Aug '10	IWs transducer replacement	Leave as is and manually measure water levels	3	all 4 units give unreliable signals
Aug '10	Access stairs from plant to wellfield	Leave as is	4	Need to generate a plan with costs
May '11	pH meter failures at RX1, 2, and ASF	Leave as is	4	pH control is no longer required
June '11	ASF P2 VFD failure	Leave out of service	2	P-2 is run on off-line pump's VFD
July '11	INF P1 VFD malfunction	Leave as is	2	Pump flow is controlled by throttling the P-1 discharge valve
Jan '12	INF P2 motor noise	Await failure	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	Operate as is	3	Monitor give false LL conditions which cycles the pump
Sept '12	Optimize PD flow	Leave as is	4	-change discharge & manifold plumbing -change out pump impellers -resize pumps - review plant flow requirements
Nov. '12	Clean Process tanks	Clean when possible EQ , TW, ASF	4	Plant shutdown items: See below for completed tanks
Ongoing	Non-Hazardous Waste Accumulation	8 metal drums shipped 12/11/13. Radioactivity detected at TSD facility. Disposition is to be determined.	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 prepped and spot primed	2	Rusted areas are to be abraded clean and spot painted
May '13	Sump pump level control mountings are loose	float is secured to a submersed pipe until a tank entry is made	3	
July '13	Well caps (drive-over) are missing or damaged at EW-6c and EW-2c	Cap for EW- 2C fabricated and installed Covers at EW-6 laid in	**2**	one well is on golf course and one at the paper processor fabricate or purchase caps
Aug '13	Sediment depositing in IW-2	Flow restricted to well. Continue to monitor well	3	Continue to restrict flow as necessary Monitor the well sounding for changes

		depth.		
Dec '13	LCA vessels due for a carbon change out	3 venders have been contacted regarding the carbon change out of both vessels. 3 have responded with proposals	3	carbon is ~6 years old and last 2 waste shipments have shown low levels of radioactivity. 12000 (2) lb change out with reactivated carbon
Jan '14	replacement of belts and bearings on the AS blower	**Belts are to be expensed, the bearings are a capital item**	2	bearings will run ~$1000 per pair, I pair needed
Feb '14	**leak thru discharge flange of LCA V-1**	**Flange does not appear cracked. This is a shut down item.**	**3**	**Flange was tightened to 35 ft-lbs, leak persists. Assembly will need to be removed to see what is causing the problem. Plant will need a shutdown and vessel emptied**
Feb '14	**Bushing to PG on EX-1 packer hose is cracked and leaking.**	**Fitting needs to be replaced**	**3**	**Fitting is isolated and should not affect the packer holding pressure while valve is closed.**
Recently completed Tasks	Condition	Remedy		
March '13	More EQ tank pin-hole leaks	Welder has been contacted to provide quote prior to NYSDEC approvals – Tank repaired(5/16)	1	5 leaks have been observed
May '13	EX well capacity testing	Pump tests completed 6/227	2	Equipment may not support the tests as designed
June '13	Flow control on EX discharge lines is not adequate.	Butterfly valves are shut off valves not control valves Globe valves were installed. Flanged connections replaced BF valve immediately downstream of flow element. BF shut off valve was moved as far down stream as possible.	1	Install globe upstream of flow elements. Re-plumb as possible to move disturbances away from flow element
July '13	Rotation of motors was reversed when repairs to broken power leads was made	Reverse wires in MCC Repairs made 7/17	1	possible damage to motors and impellers as well as low output
Aug '13	Cracked flange on EX-3 flow meter piping	parts have been received Repairs Completed 8/28	2	in-house repair when practicable
Sept '13	Leak in housing of INF P1	pump taken out of service 9/17 Pump housing welded, and reinstalled. Slight leak at shoulder facing - ok	3	requested prices on seal and housing
Nov. '13	HMI computer to monitor communication has broken down	Various aspects of the system checked. Computer sent to HRP-CT for testing Bad power supply replaced and unit returned to service 11/26	1	Upon restart of computer after an automatic software update, the monitor to computer link reads a power save mode and cannot readily re-establish communication (?)
Sept '13	INF P3 does not respond to control switches	Manually shut down and isolate pump. Replaced relay in MCP 1/8/14	2	pump continues to run after shut off, even with opened switches at both MCP and HMI

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	$pH_{AVG.}$
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
June '13	6.33
July '13	6.59
Aug '13	6.63
Sept '13	6.57
Oct '13	6.39
Nov `13	6.30
Dec '13	6.37
Jan '14	6.44
Feb '15	6.35

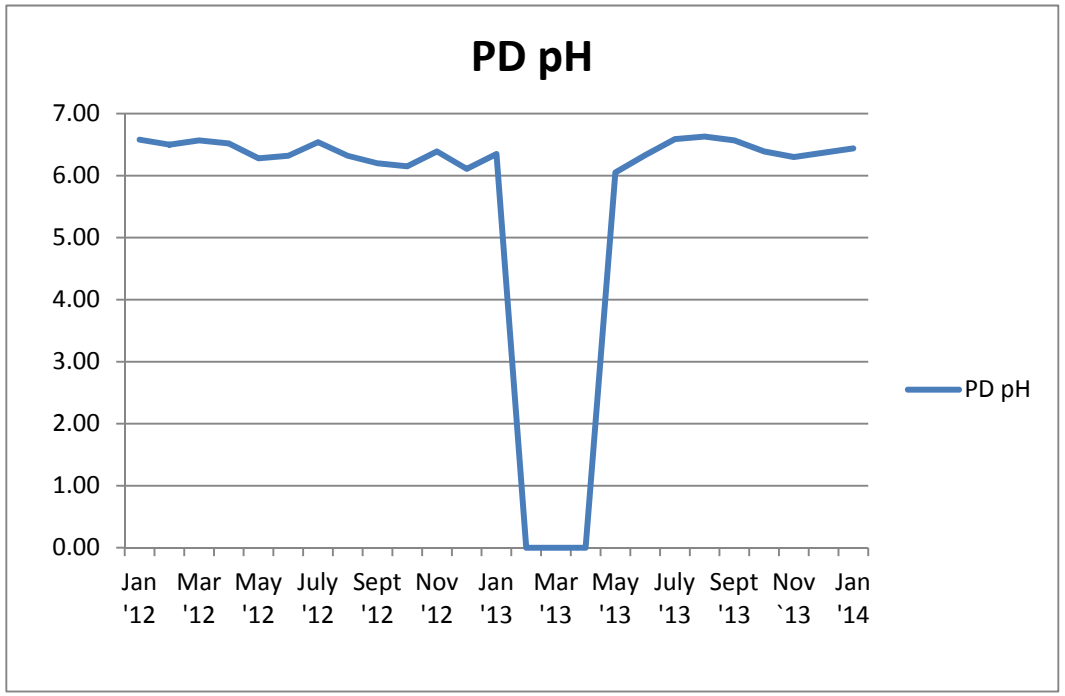
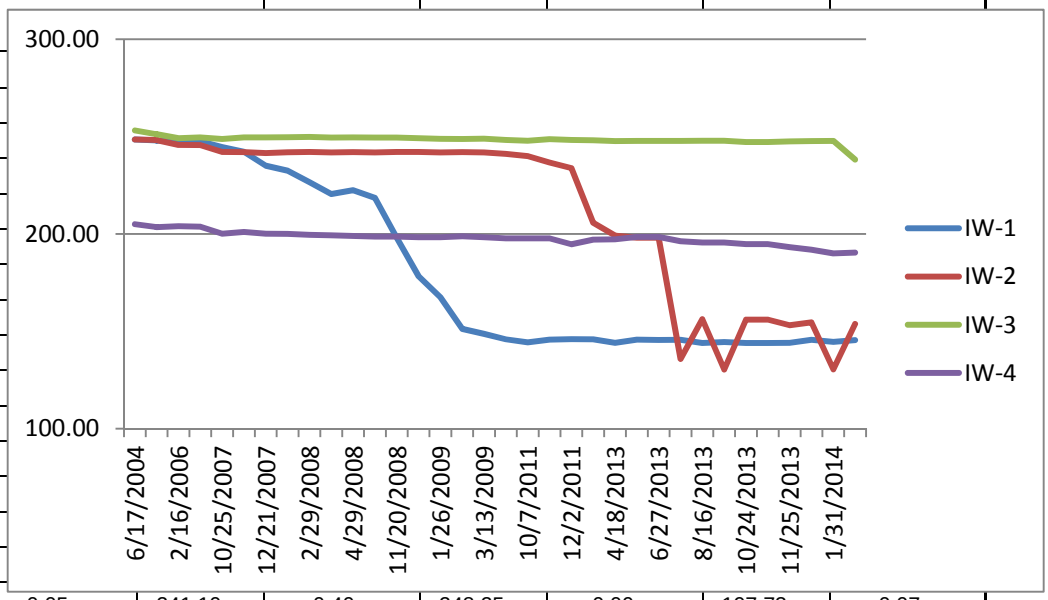


TABLE 14-2 Injection Well Soundings

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							
2/16/2006	247.50							
3/23/2006*	247.59							
10/25/2007	244.69							
11/19/2007	242.20							
12/21/2007	235.02							
1/29/2008	232.46							
2/29/2008	226.58							
3/27/2008	220.50							
4/29/2008	222.50							
5/30/2008	218.55							
11/20/2008	198.05							
12/29/2008	178.29							
1/26/2009	167.50							
2/25/2009	151.20							
3/13/2009	148.68							
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
9/20/2012	145.84	0.94	205.70	0.00	248.09	-0.01	197.10	-0.10
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
6/27/2013	145.55	-0.15	198.10	0.00	247.80	0.00	198.43	0.00
7/29/2013	145.60	0.05	135.80	-62.30	247.80	0.00	196.27	-2.16
8/16/2013	144.00	-1.60	156.20	20.40	247.84	0.04	195.60	-0.67
9/25/2013	144.50	0.50	130.34	-25.86	247.84	0.00	195.60	0.00
10/24/2013	144.00	-0.50	156.00	25.66	247.20	-0.64	194.80	-0.80
10/24/2013	144.00	0.00	156.00	0.00	247.20	0.00	194.80	0.00
11/25/2013	144.05	0.05	153.14	-2.86	247.50	0.30	193.20	-1.60
12/30/2013	145.65	1.60	154.60	1.46	247.70	0.20	191.90	-1.30
1/31/2014	144.60	-1.05	130.45	-24.15	247.75	0.05	190.01	-1.89
2/25/2014	145.45	0.85	153.80	23.35	238.20	-9.55	190.40	0.39



		DTB Well	Changes		
June ' 04 to	Present	**-103.05**	**-94.70**	**-15.00**	**-14.60**
Injection wells IW-1 and IW-3 were redeveloped during week ending 4/25/08					
Apr '08 to	Present	**-77.05**	**-88.22**	**-11.40**	**-8.58**

Associated and Referenced Documents

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

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