Countywide Recycling & Disposal Facility

Remediation Unit

Monthly Progress Report
Of
Operations, Monitoring & Maintenance Activities

MARCH 2010

Prepared By:

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Introduction

This document provides a monthly report of monitoring and other activities conducted in March 2010. These activities are required by the Operations, Monitoring, and Maintenance (OM&M) Plan, developed for the facility and adopted by the Ohio Environmental Protection Agency (OEPA) on September 30, 2009. The primary objectives of the monitoring portion of this plan are as follows:

1. Monitor status/progression of the reaction.
2. Monitor characteristics of leachate and gas.
3. Track settlement and slope movement/stability of waste mass and perimeter berms.
4. Monitor exposure conditions for engineered components.
5. Determine when conditions are suitable for composite capping.
6. Assess conditions requiring notification, repair, further evaluation or corrective action.
7. Provide a summary of monitoring and data collection, relevant activities conducted since the prior report, trigger events, and conditions which may require additional non-routine activities or investigation.

It should be noted that the OM&M Plan requires inspections, routine maintenance, etc., which are activities that are not presented in this submission. These activities are documented as required, and records are retained in the OM&M Managers office.

1. Monthly Summary Narrative

During the month of March, all daily, weekly, and monthly tasks were completed. A significant number of cap repairs were completed as the facility "caught up" from inclement weather in February. Many of these areas in need of repair were not noted until snow melted from the cap surface.

In two localized areas of higher settlement on the south slope, abandoned pipes were cut and capped below grade to prevent future boot/cap damage. Bentomat was placed in the area prior to recapping for insulation from the higher surface temperatures observed in those areas. To prepare for the effects of the reaction as it migrates to the west-northwest, six wells were "hard-piped" in front of the leading edge of the reaction to prepare for higher temperatures and allow for pump installation if necessary. A permanent deodorizer system was installed at the leachate tanks, and a retrofit seal was installed to mitigate odor resulting from condensation. Additionally, VFD vacuum controls were installed on Flare #7 to facilitate constant, consistent control of vacuum. This will also prevent Flare #10, (which already had similar controls), from "starving" Flare #7 of gas. Finally, a few small minor leachate outbreaks were repaired on the east and south slopes of Cells 1 and 2. These outbreaks were not flowing, nor could be considered atypical. They generally coincided with GCCS transmission piping, and were repaired easily.

2. New Construction

No new construction is currently planned. Republic has postponed redrilling of six vertical gas extraction wells on the 88-acres. The wells are not immediate compliance, gas control, or odor concerns, and Republic prefers to avoid this type of intrusive work during nice weather if at all possible to limit the impact to the community. These activities have been rescheduled for late fall-winter 2010. During the February Team Countywide meeting, potential repair of the south toe drain

was discussed. This drain is being jetted weekly, which is allowing consistent function of this engineering control.

3. Major Non-Routine Maintenance, Repairs or Events

Routine maintenance and repairs of the temporary cap, leachate, and gas systems were completed during the month of March. No major non-routine maintenance or repairs were necessary.

4. New Trigger Events

One pin (IP S4) exceeded the trigger rate of 0.05 feet per day of horizontal movement once during the monitoring period. The table showing the movement rate and graphs of pin movement for this point are included in Attachment 4. The location represented by this pin has experienced significant "non-slope movement" settlement during the period. A review of the pin movement graphs indicate movement consistent with prior monitoring at this pin, with no drastic changes in northing, easting, or elevation, and no indications of instability.

Pins at two locations, IP F1 and MP5, exceeded the trigger value of 0.05 ft for elevation change relative to the original survey pin elevation. The table showing the movement rate and graphs of pin movement for this point are included in Attachment 4. These minor upward movements are consistent with monitoring reported in previous months. After 3/9/2010, only location IP F1 had upward movement exceeding the trigger. No trend of upward displacement has been established, and it remains Republic's opinion that the upward movements are slight and not indicative of any mass movement on the slopes. The upward movement surveyed can be related to frost heave, survey equipment changes and/or difficulty setting up over the exact pin locations. Based on the review of the data, no signs of instability are indicated.

Several areas exceeded the 2% annualized settlement trigger based upon the monthly settlement survey. The majority, if not all, of these areas have exceeded the trigger in prior months. During February and March, portions of the south and east uncapped slopes of Cells 1-3 were surveyed using total stationing, which provides a greater level of accuracy (0.04 feet accuracy). The total stationing data is presented in Figures 2 and 8 in this report. The additional accuracy provided by the total stationing data indicates that while some elevation changes are still shown on the south and east slopes of Cells 1-3, this change is not as widespread as depicted in prior months, and is more localized at the toe of the slope. A review of the actual settlement values in these areas, depicted on Figure 8, indicates that the amount of settlement observed is generally within the accuracy limitations of the total station method. The depths of waste in these areas at the toe are such that the error of the equipment will result in indication of a trigger. The areas depicting settlement on the benches at the east portion of this area are a result of disturbances from heavy equipment traffic during repair of minor outbreaks in the area.

The settlement observed on the north, south, and west toes of the western half of the Remediation Unit is generally within the accuracy tolerances of the GPS equipment (0.1 feet accuracy). Minimal change was observed between the February and March events. A review of pin and plate monitoring near the toe of these slopes does not indicate any significant slope movement or settlement. Figure 2A shows the average settlement since October annualized. This presentation more accurately shows the settlement trends, and eliminates much of the error observed due to weather, equipment error, etc. in single events.

In summary, the settlement observed on the Remediation Unit during the March 2010 monitoring period is as would be expected given the nature of the reaction. The data does not suggest that the

settlement observed should cause concern from a slope stability or engineering control integrity standpoint.

The March 2010 data reflects a greater than 25% increase of carbon monoxide (CO) levels at header sampling branch designated as HBS02 between the February and March sampling events. However, the total system CO in March was within 0.3% of that measured in February. This data is presented below:

ID	January (ppm)	Jan Total	February (ppm)	Feb Total	March (ppm)	Mar Total	End Result Feb to Mar
HBN01	583.8		811.1		851.1		5%
HBN02	487	1070.8	440.3	1251.4	244.1	1095.2	-45%
HBS01	150.4		225.3		270.1		20%
HBS02	594.4	744.8	448.7	674	566	836.1	26%

*-The location of HBN01 was moved between the January and February events, as was discussed during the February 24, 2010 Team Countywide Meeting. This sampling location was relocated to avoid influence from the 170-acre gas stream.

In accordance with Volume 1, Appendix F of the OM&M Plan, wellhead temperatures were reviewed to evaluate a potential SSO event. No significant temperature increase or gas quality change indicative of an SSO event was observed. Therefore, per the plan, the evaluation has been satisfied, and Republic does not believe that additional investigation is necessary. As has been discussed, day to day changes in vacuum distribution and adjustments in the wellfield can affect gas quality and flow at individual header branches. Certainly, the installation of VFD vacuum controls at Flare #7, as discussed in Section 1, would lead to redistribution of vacuum and flow within the extraction network. Republic believes that the total CO level measured in the system is a better indicator of production versus collection.

5. Investigation Results from Previous Trigger Events

Based upon discussions between Republic and federal, state, and local regulatory authorities, there was no additional investigation of previous trigger events required.

6. Trend Graphs and Drawings

The graphs, tables, and figures are included in the attachments to this report. Due to the vast number of these and the detail that they provide, a full written summary is not provided in this document. The data will be discussed in depth at the Team Countywide Meeting.

7. Review of Potential Need to Extend Temporary FML Cap

Currently, the Remediation Unit consists of approximately 18 acres which do not have a temporary cap. Volume 1, Section 7.1 of the OM&M Plan details conditions which would initiate an assessment which could require installation of temporary cap in this area. Such conditions include;

- Uncontrollable odor or fugitive emissions,
- Unusual settlement (Incremental settlement greater than 2% per year),
- Atypical or uncontrollable leachate outbreaks,
- Methane/carbon dioxide ratio less than 1.0,
- Maximum wellhead temperatures greater than 150°F,
- Maximum carbon monoxide greater than 100 ppmv.

At this time, the conditions observed in this area supplemented by the data collected during monitoring and inspections do not indicate the need for expansion of the temporary cap. As was discussed in Section 1, a few small minor leachate outbreaks were repaired on the east and south slopes of Cells 1 and 2. These outbreaks were not flowing, nor could be considered atypical. They generally coincided with GCCS transmission piping, and were repaired easily.

8. Petitions to Perform Work

The monitoring and inspections conducted during the operating period do not indicate the need for additional work which would require approval. As such, there are no petitions to perform such work at this time.

9. Proposed OM&M Plan Revisions

Revisions to the OM&M Plan were completed in February and distributed. There are no other proposed revisions at this time. However, Republic is in constant review of the OM&M Plan, and will be conducting and annual review for possible revisions/inclusions/exclusions as required by The OM&M Plan. This review is expected to be completed in August 2010.

10. Odor Summary/Complaints

During the month of March, there were 17 odor complaints in March. The following is an accounting of these complaints:

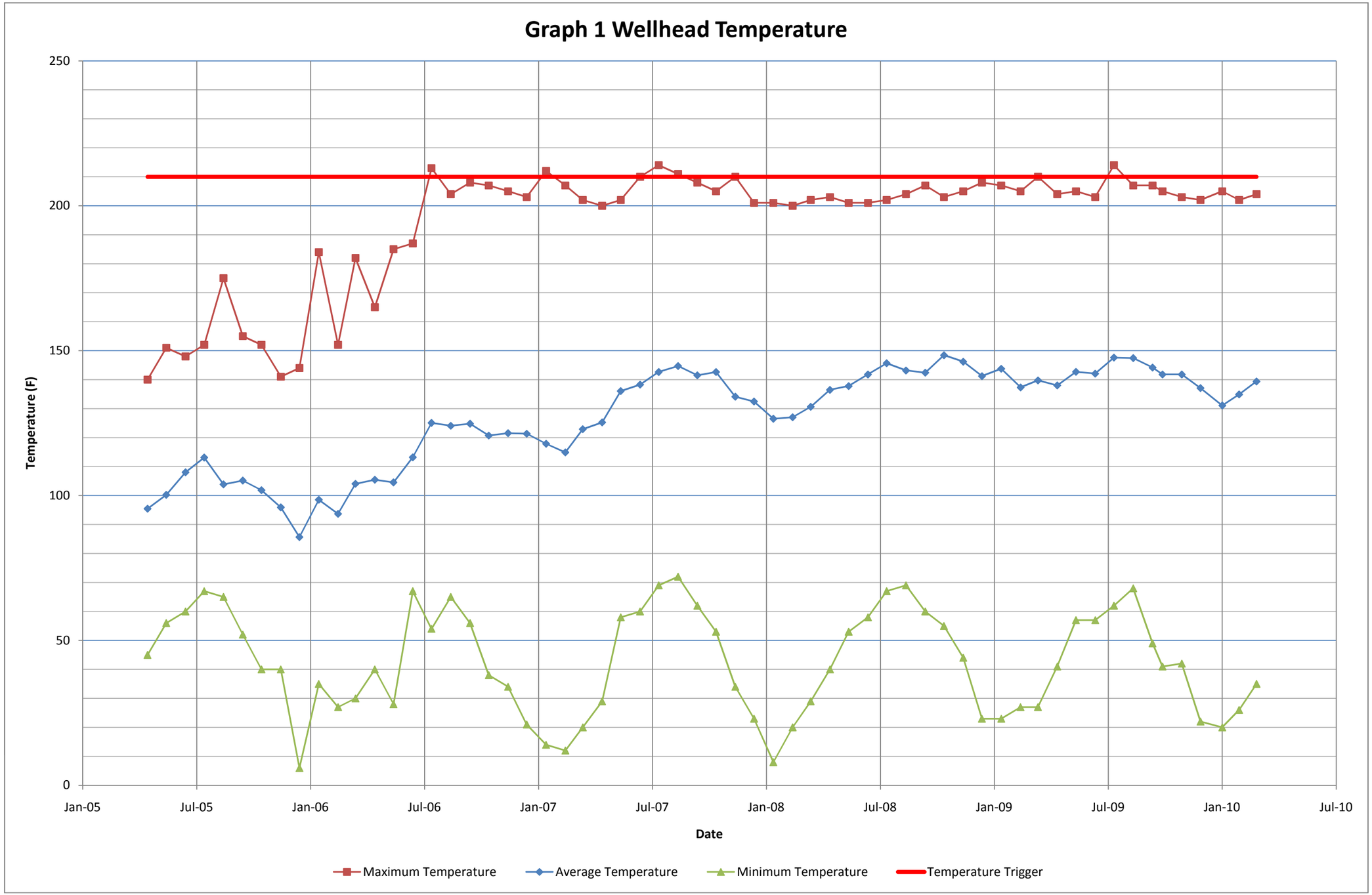
- Five were investigated and attributed to working face odor,
- Two were found to be unsubstantiated with real time investigation.
- The remaining complaints could not be investigated “real-time” due to delay in complainants reporting. They could not be associated with known odor events or activities, or substantiated with scheduled odor routes or other complaints. No odors have been detected offsite during odor routes which are conducted each morning and evening.

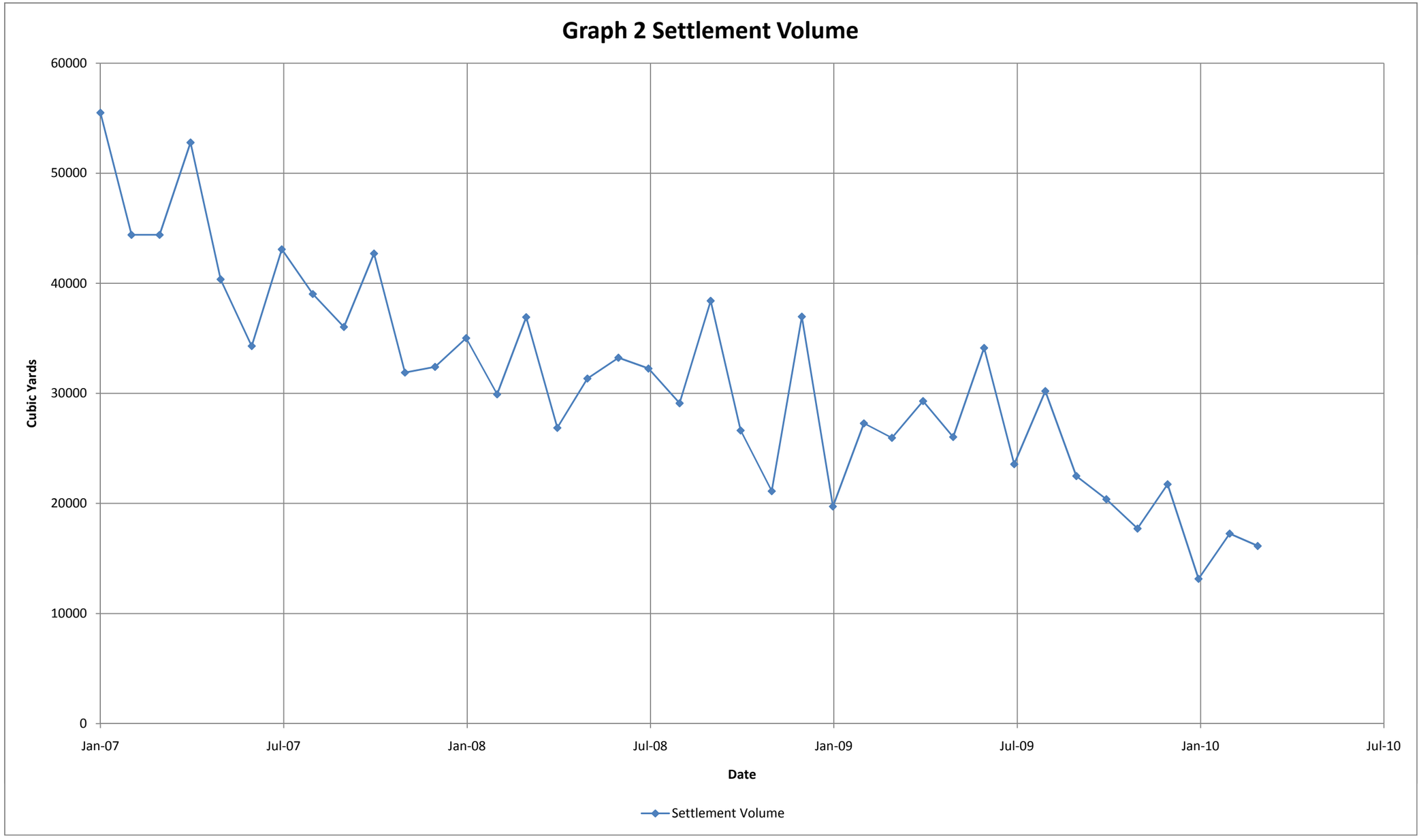
4/14/09

Michael Darnell Date
OM&M Manager

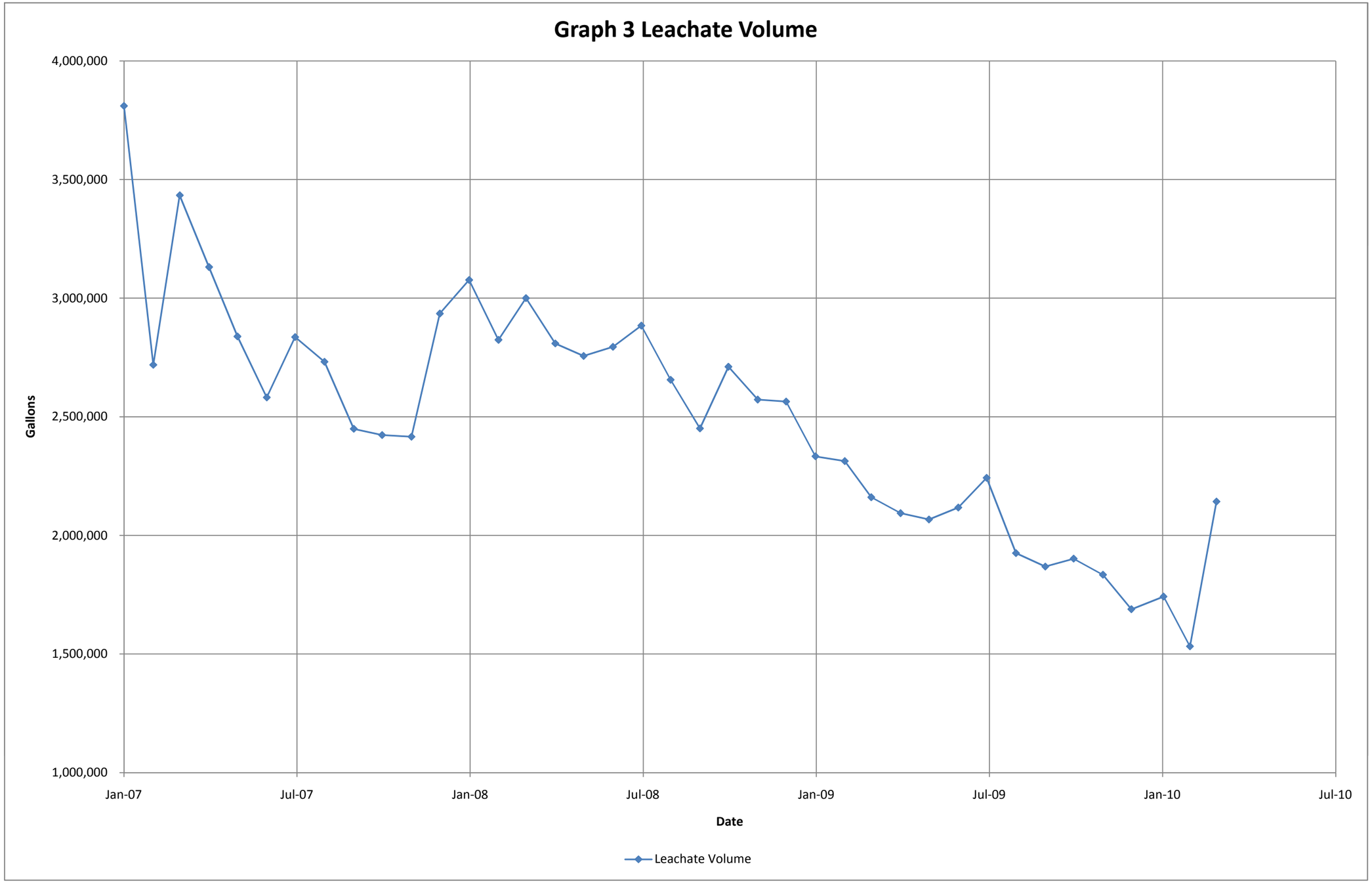
Attachment 1

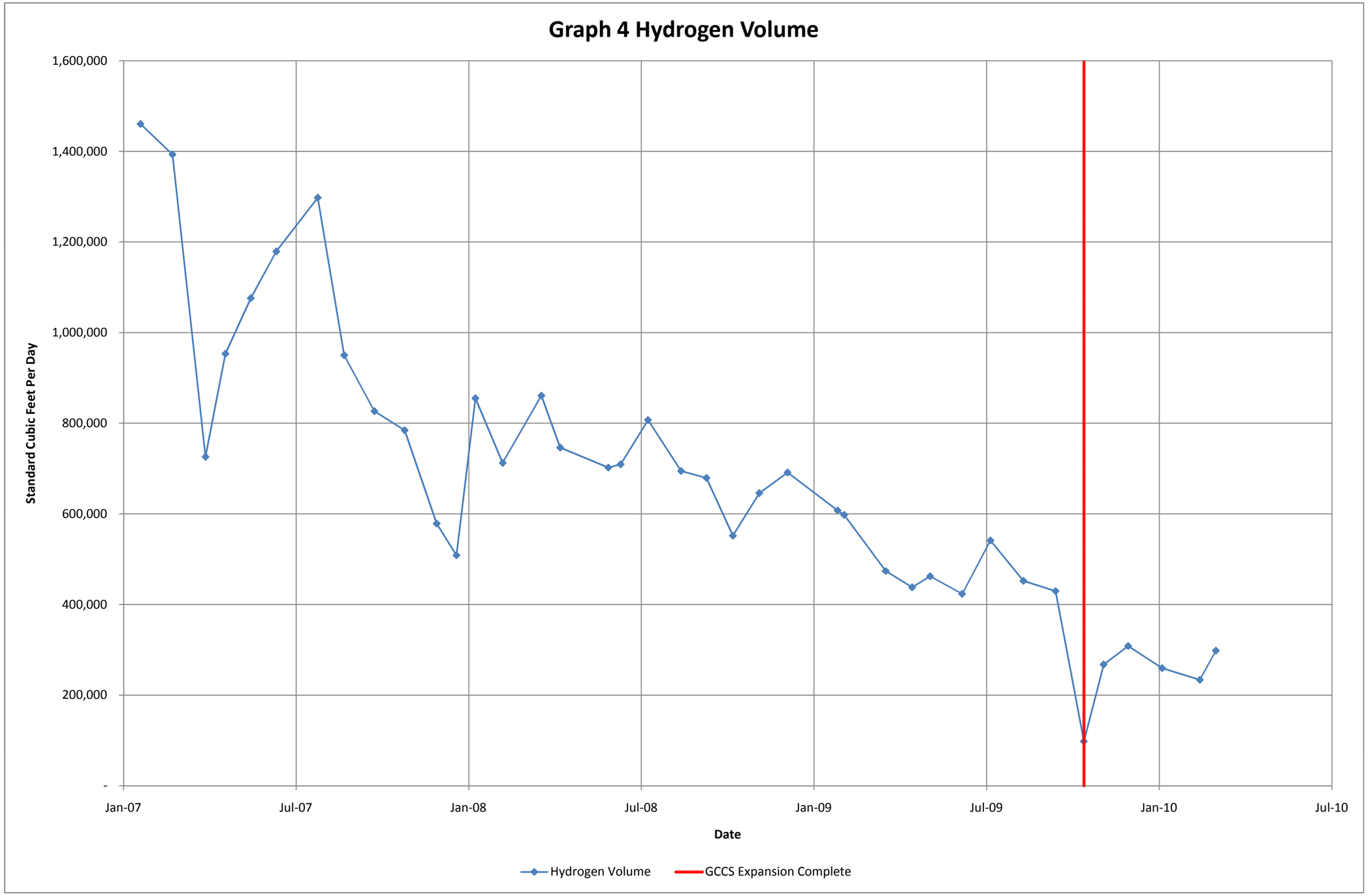
Graphs

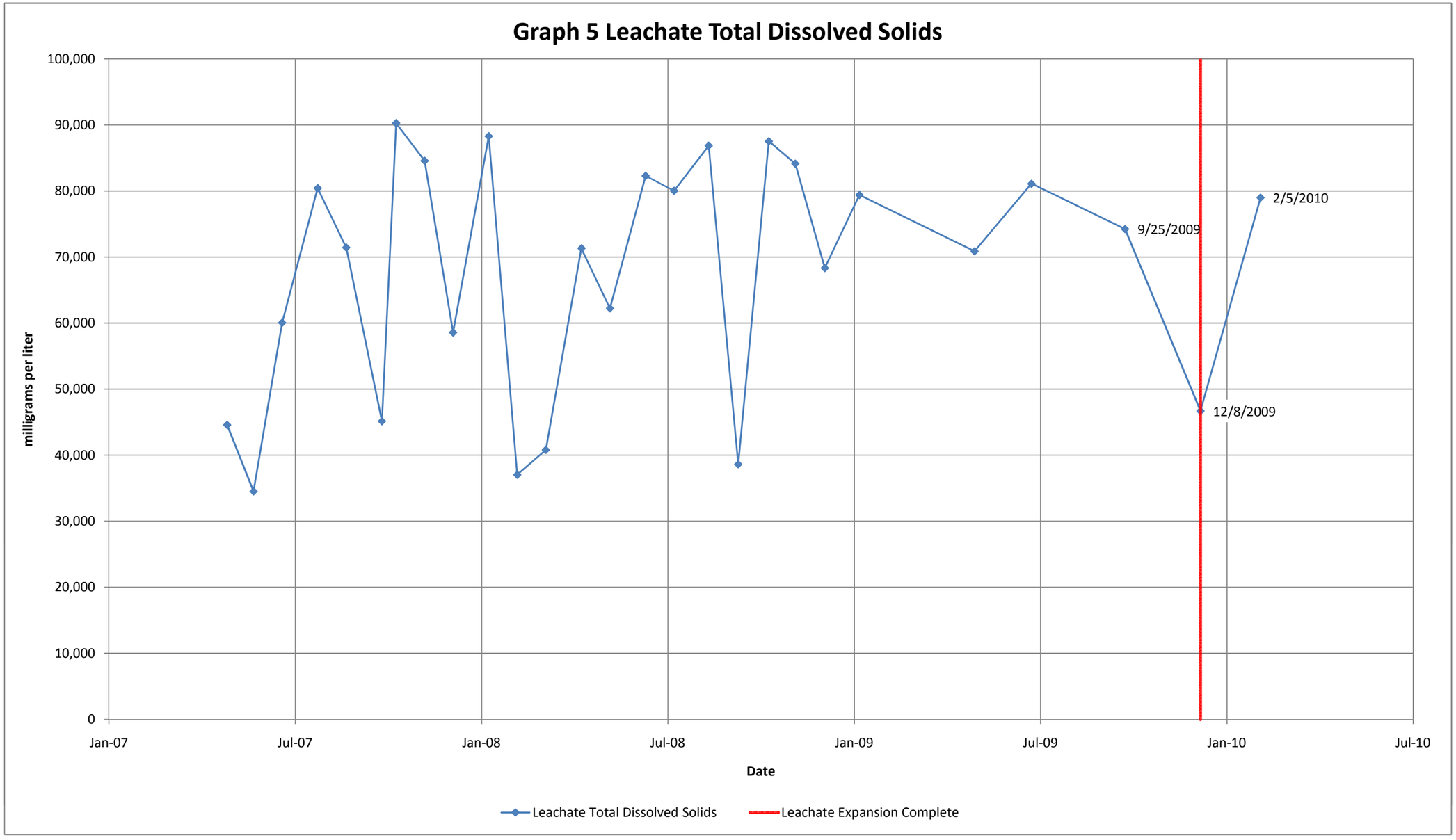

Graph 1 Wellhead Temperature
250
200
150
100
50
0
Temperature (F)
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Date
Maximum Temperature
Average Temperature
Minimum Temperature
Temperature Trigger



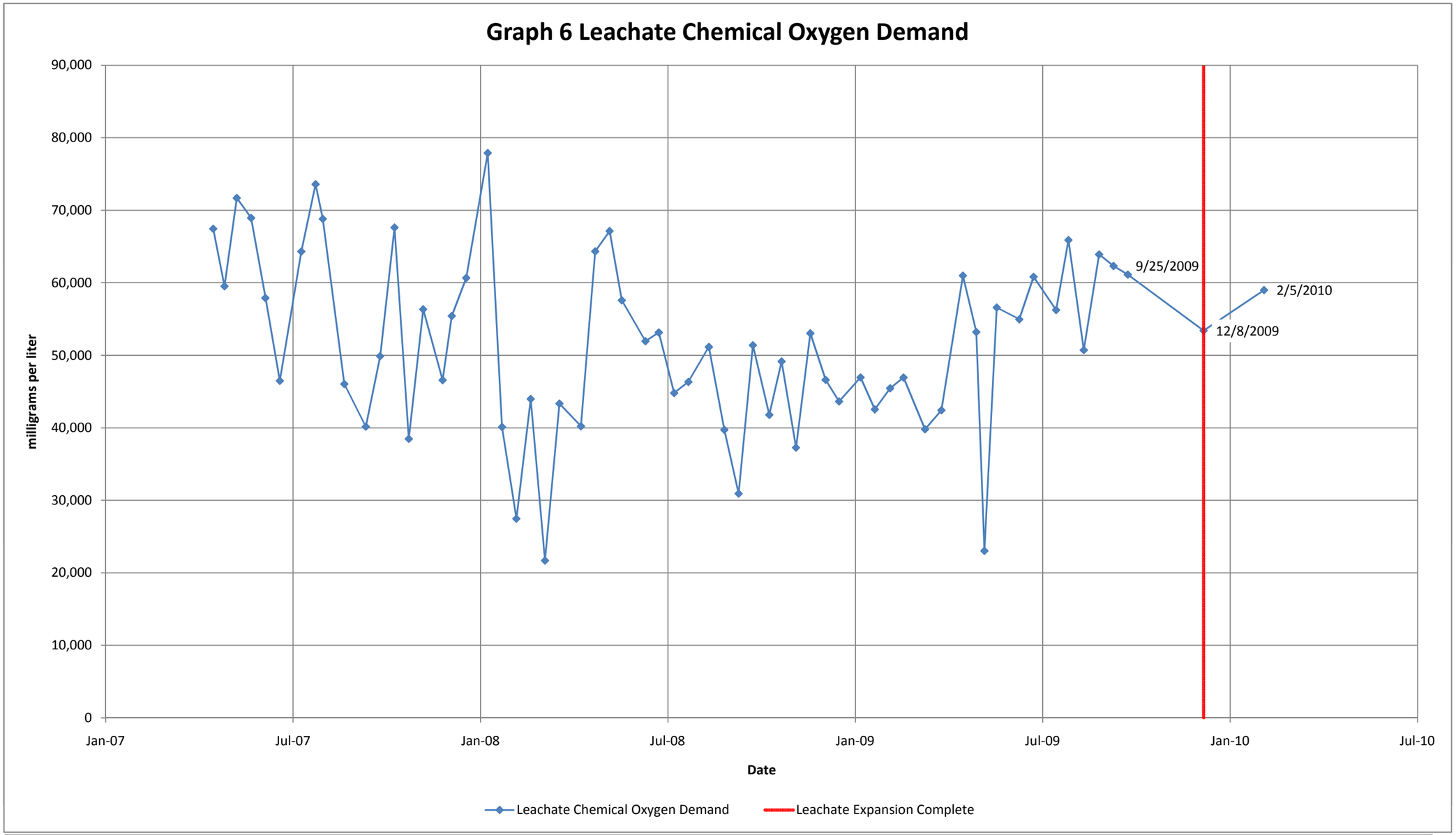
1. Information presented prior to October 2009 was compiled from data prepared and presented by SCS Engineers for Countywide Recycling and Disposal Facilty.
2. Data presented on monthly basis.
3. Settlement volume reported prior to the 4th quarter of 2009 is for a limited area of the 88-acre reaction area.


Graph 3 Leachate Volume
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
Gallons
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Date
Leachate Volume


Graph 4 Hydrogen Volume
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
Standard Cubic Feet Per Day
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Date
Hydrogen Volume
GCCS Expansion Complete



1. Information presented prior to October 2009 was compiled from data prepared and presented by AECOM for Countywide Recycling and Disposal Facilty.
2. Data shown prior to October 2009 are flow-weighted averages of data from the East, North and South leachate collection tanks. Data from December 2009 is from combined Tank East 500.
3. Data shown prior to October2009 comprises data from the leachate collection system only, and excludes certain leachate toe drains, sumps and gas collection wells.
4. Data labels beginning in October 2009 indicate date of quarterly analytical sampling.



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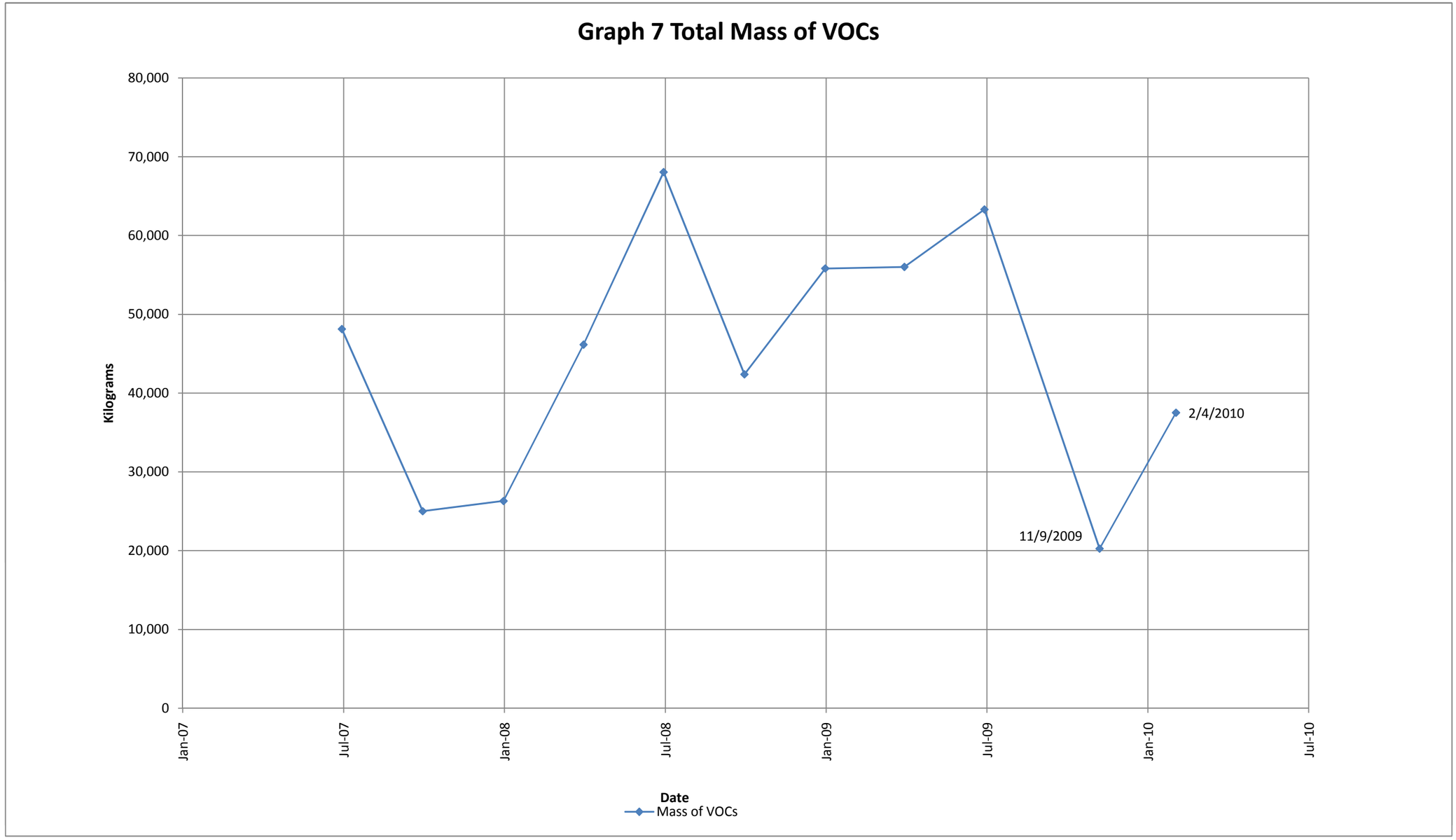
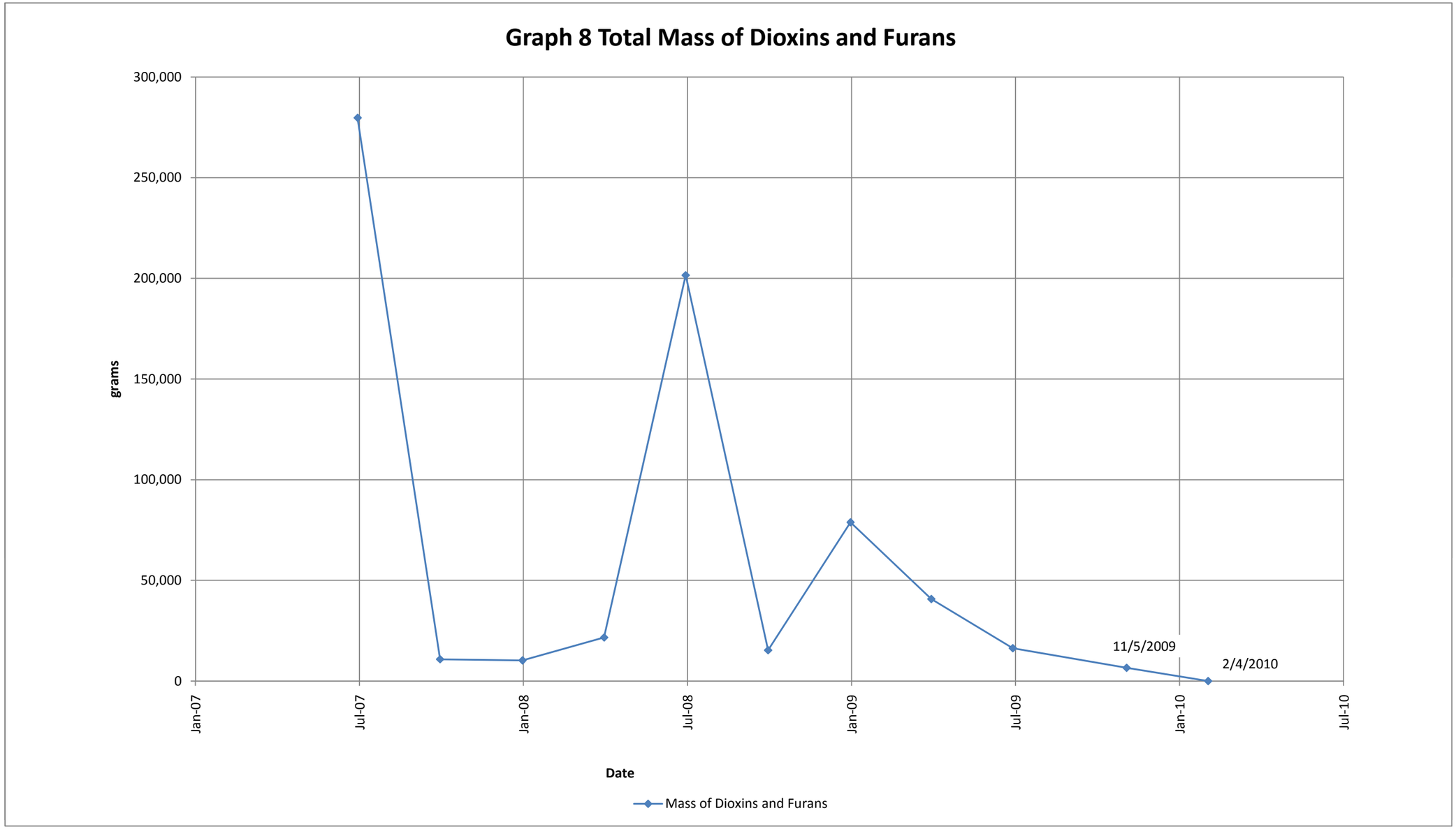


1. Information presented prior to October 2009 was compiled from data prepared and presented by SCS Engineers for Countywide Recycling and Disposal Facility.
2. Data presentation frequency is quarterly.
3. Flare 4 was not sampled for air quality beginning in September 2009.
4. Beginning in fourth quarter 2009, mass based on data collected only from Flares 7 and 10.
5. Data labels beginning in October 2009 indicate date of quarterly analytical sampling.



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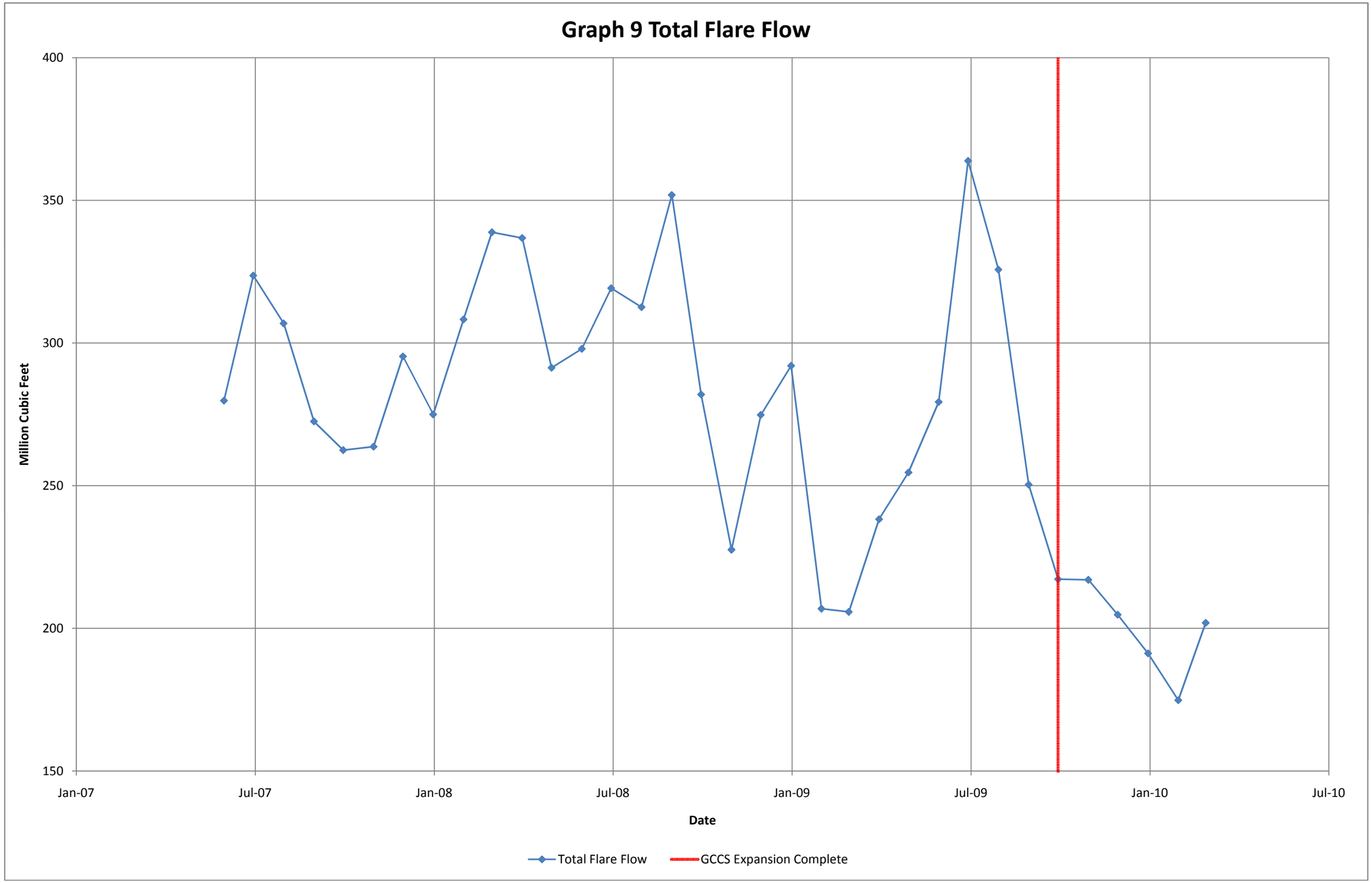
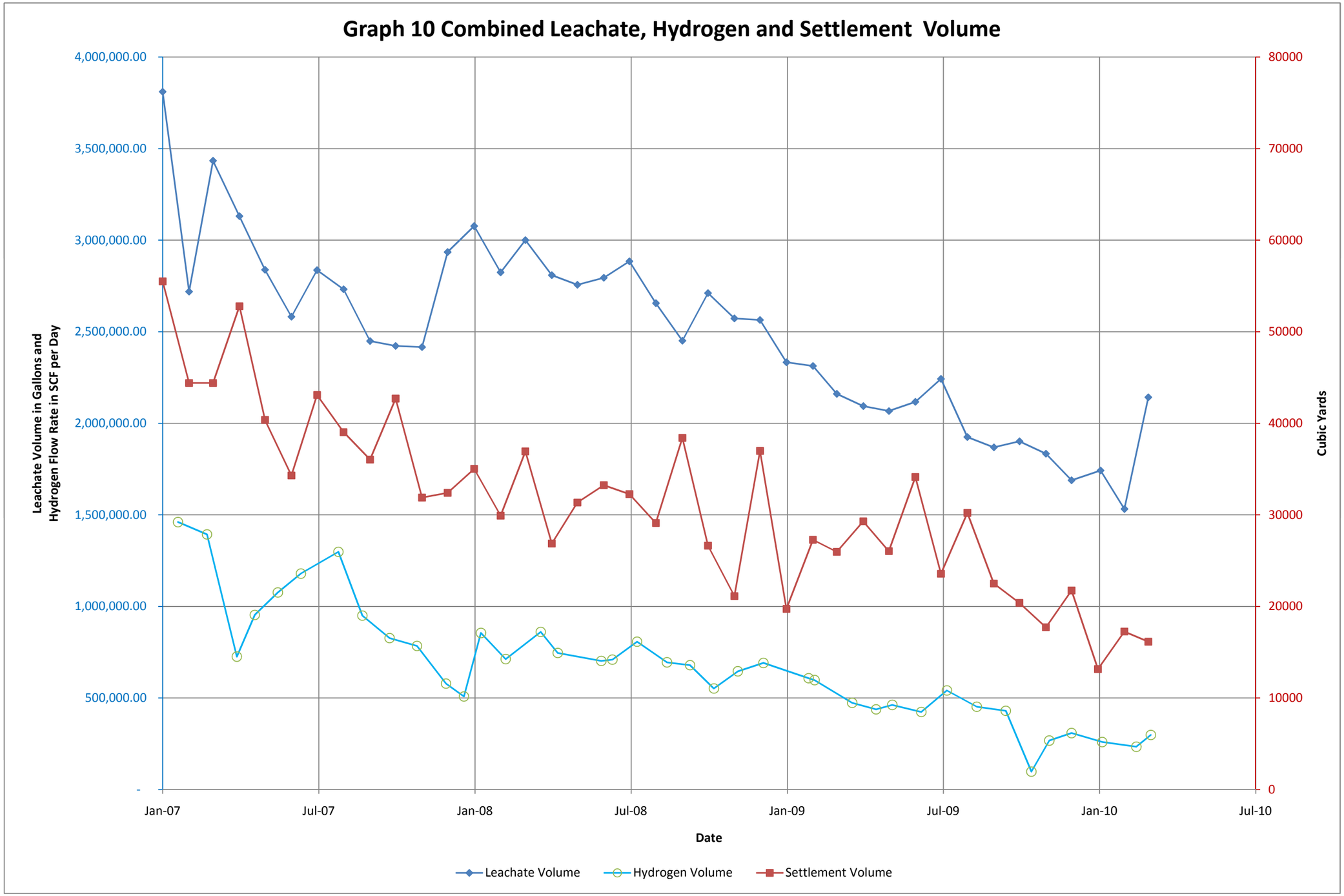
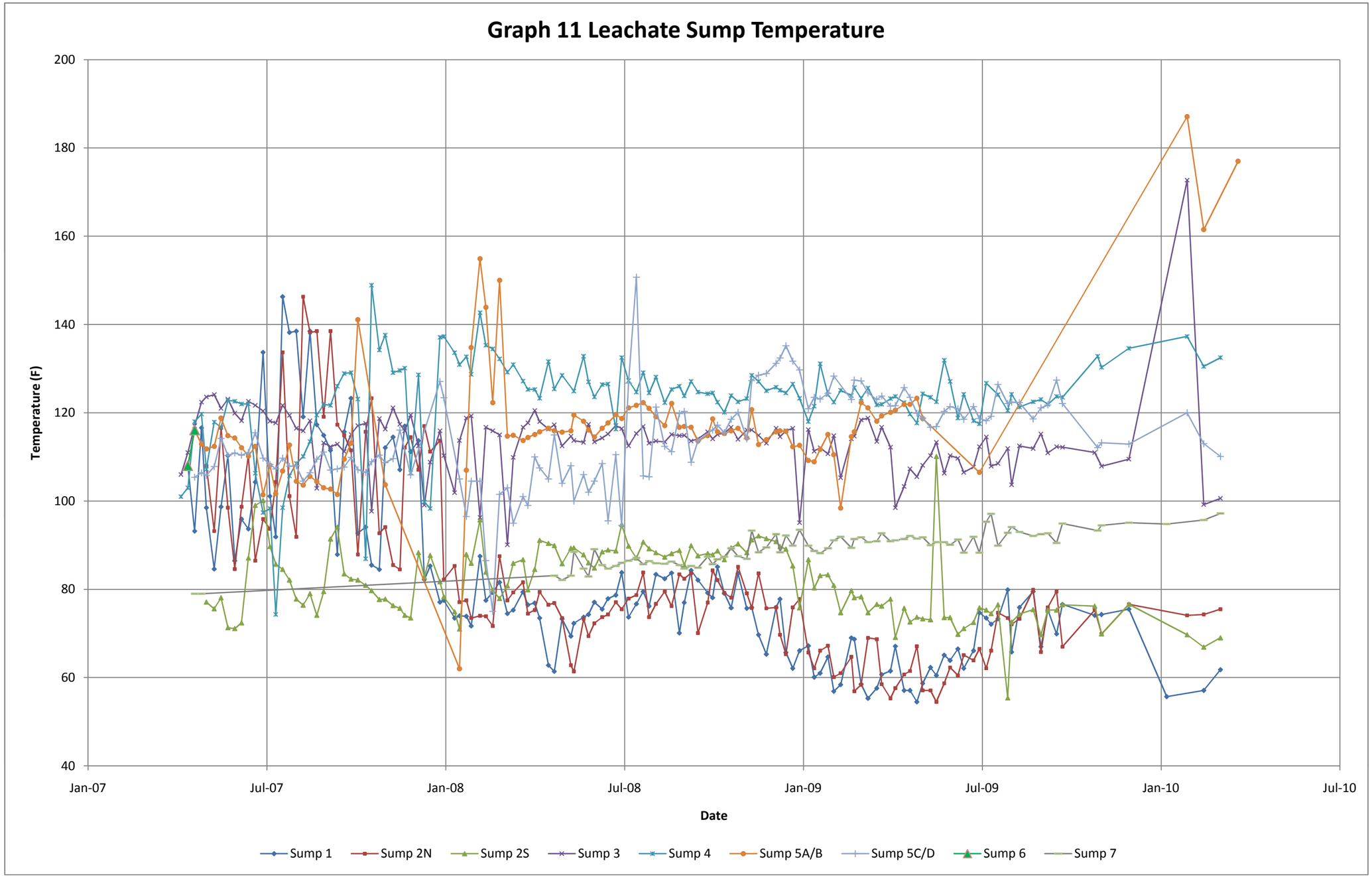
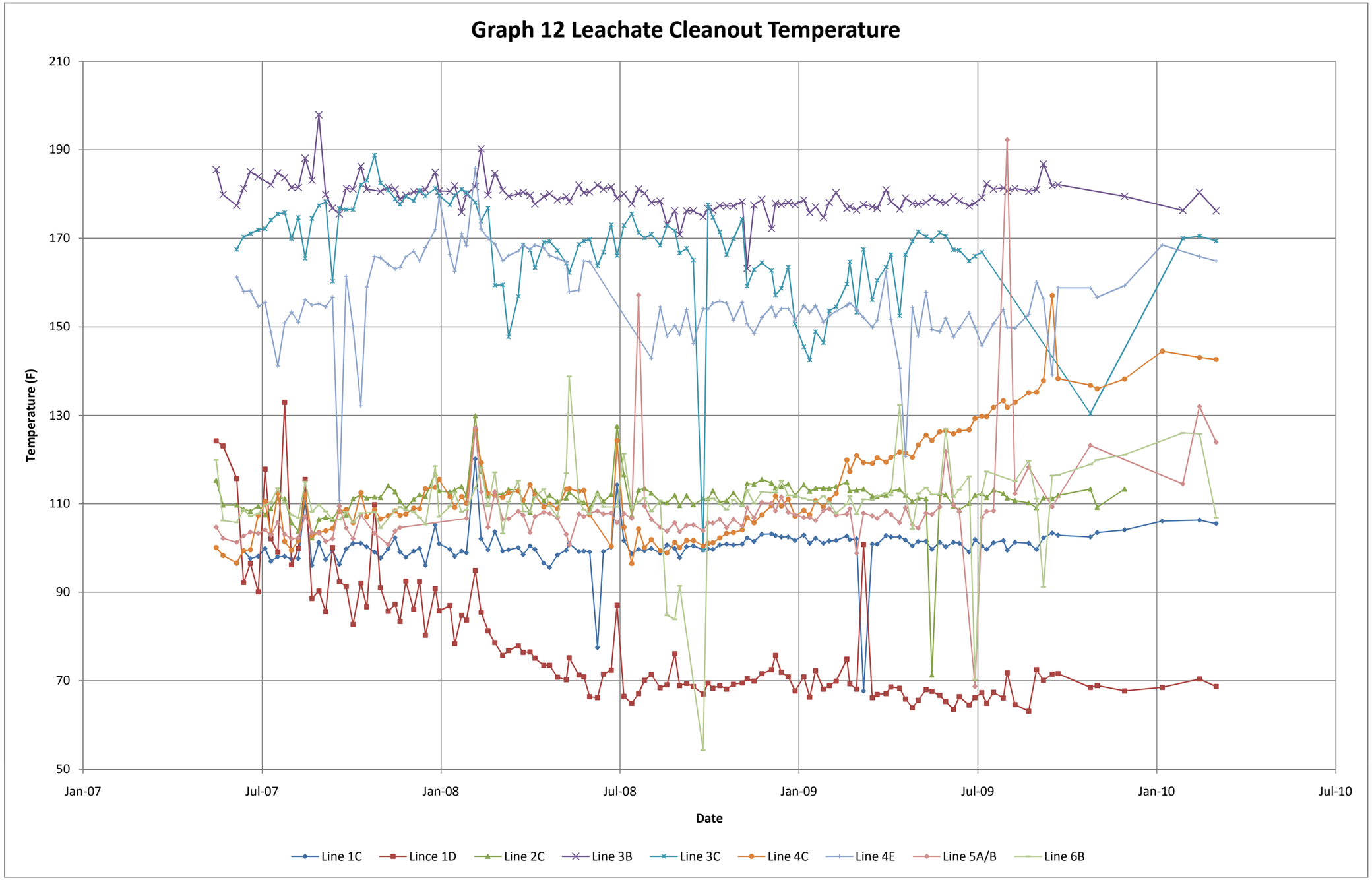

Graph 9 Total Flare Flow
400
350
300
250
200
150
Million Cubic Feet
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Date
Total Flare Flow
GCCS Expansion Complete


Graph 10 Combined Leachate, Hydrogen and Settlement Volume
Leachate Volume in Gallons and Hydrogen Flow Rate in SCF per Day
Cubic Yards
4,000,000.00
3,500,000.00
3,000,000.00
2,500,000.00
2,000,000.00
1,500,000.00
1,000,000.00
500,000.00
-
80000
70000
60000
50000
40000
30000
20000
10000
0
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Date
Leachate Volume
Hydrogen Volume
Settlement Volume


Graph 11 Leachate Sump Temperature
Temperature (F)
200
180
160
140
120
100
80
60
40
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Date
Sump 1
Sump 2N
Sump 2S
Sump 3
Sump 4
Sump 5A/B
Sump 5C/D
Sump 6
Sump 7


Graph 12 Leachate Cleanout Temperature
Temperature (F)
210
190
170
150
130
110
90
70
50
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Date
Line 1C
Lince 1D
Line 2C
Line 3B
Line 3C
Line 4C
Line 4E
Line 5A/B
Line 6B

Attachment 2

Tables

Table 1. Leachate Constituent Summary

Parameter Name		Value	Qualifier	Units	Detection Limit	Units
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	<	710	U	ug/L	710	ug/L
1,1,1-Trichloroethane	<	710	U	ug/L	710	ug/L
1,1,2,2-Tetrachloroethane	<	710	U	ug/L	710	ug/L
1,1,2-Trichloroethane	<	710	U	ug/L	710	ug/L
1,1-Dichloroethane	<	710	U	ug/L	710	ug/L
1,1-Dichloroethylene	<	710	U	ug/L	710	ug/L
1,2,3-Trichloropropane	<	710	U	ug/L	710	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	<	1400	U	ug/L	1400	ug/L
1,2-Dibromoethane (EDB)	<	710	U	ug/L	710	ug/L
1,2-Dichloroethane	<	710	U	ug/L	710	ug/L
1,2-Dichloropropane	<	710	U	ug/L	710	ug/L
2-Hexanone	<	7100	U	ug/L	7100	ug/L
4-Methyl-2-pentanone		1600	J	ug/L	7100	ug/L
Acetone		89000	E	ug/L	7100	ug/L
Acrylonitrile	<	14000	U	ug/L	14000	ug/L
Benzene		320	J	ug/L	710	ug/L
Bromochloromethane	<	710	U	ug/L	710	ug/L
Bromodichloromethane	<	710	U	ug/L	710	ug/L
Bromoform	<	710	U	ug/L	710	ug/L
Carbon disulfide	<	710	U	ug/L	710	ug/L
Carbon tetrachloride	<	710	U	ug/L	710	ug/L
Chlorobenzene	<	710	U	ug/L	710	ug/L
Chloroethane	<	710	U	ug/L	710	ug/L
Chloroform	<	710	U	ug/L	710	ug/L
cis-1,2-Dichloroethylene	<	710	U	ug/L	710	ug/L
cis-1,3-Dichloropropene	<	710	U	ug/L	710	ug/L
Dibromochloromethane	<	710	U	ug/L	710	ug/L
Ethylbenzene		300	J	ug/L	710	ug/L
Methyl bromide	<	710	U	ug/L	710	ug/L
Methyl chloride	<	710	U	ug/L	710	ug/L
Methyl ethyl ketone		46000		ug/L	7100	ug/L
Methyl iodide	<	710	U	ug/L	710	ug/L
Methylene bromide	<	710	U	ug/L	710	ug/L
Methylene chloride		250	J	ug/L	710	ug/L
o-Dichlorobenzene	<	710	U	ug/L	710	ug/L
p-Dichlorobenzene		500	J	ug/L	710	ug/L
Styrene	<	710	U	ug/L	710	ug/L
Tetrachloroethylene	<	710	U	ug/L	710	ug/L
Toluene		260	J	ug/L	710	ug/L
trans-1,2-Dichloroethylene	<	710	U	ug/L	710	ug/L
trans-1,3-Dichloropropene	<	710	U	ug/L	710	ug/L
trans-1,4-Dichloro-2-butene	<	710	U	ug/L	710	ug/L
Trichloroethylene	<	710	U	ug/L	710	ug/L
Trichlorofluoromethane	<	710	U	ug/L	710	ug/L
Vinyl acetate	<	1400	U	ug/L	1400	ug/L
Vinyl chloride	<	710	U	ug/L	710	ug/L
Xylenes (total)		1200	J	ug/L	1400	ug/L

Table 1. Leachate Constituent Summary

Dioxins/Furans						
1,2,3,4,6,7,8-HpCDD		260	QJ	pg/L	500	pg/L
1,2,3,4,6,7,8-HpCDF	<	500	U	pg/L	500	pg/L
1,2,3,4,7,8,9-HpCDF	<	500	U	pg/L	500	pg/L
1,2,3,4,7,8-HxCDD	<	500	U	pg/L	500	pg/L
1,2,3,4,7,8-HxCDF	<	500	U	pg/L	500	pg/L
1,2,3,6,7,8-HxCDD	<	500	U	pg/L	500	pg/L
1,2,3,6,7,8-HxCDF	<	500	U	pg/L	500	pg/L
1,2,3,7,8,9-HxCDD	<	500	U	pg/L	500	pg/L
1,2,3,7,8,9-HxCDF	<	500	U	pg/L	500	pg/L
1,2,3,7,8-PeCDD	<	500	U	pg/L	500	pg/L
1,2,3,7,8-PeCDF	<	500	U	pg/L	500	pg/L
2,3,4,6,7,8-HxCDF	<	500	U	pg/L	500	pg/L
2,3,4,7,8-PeCDF	<	500	U	pg/L	500	pg/L
2,3,7,8-TCDD	<	100	U	pg/L	100	pg/L
2,3,7,8-TCDF	<	100	U	pg/L	100	pg/L
OCDD		2100	B	pg/L	1000	pg/L
OCDF	<	1000	U	pg/L	1000	pg/L
Total HpCDD		460	QJ	pg/L	500	pg/L
Total HpCDF	<	500	U	pg/L	500	pg/L
Total HxCDD	<	500	U	pg/L	500	pg/L
Total HxCDF	<	500	U	pg/L	500	pg/L
Total PeCDD		110	QJ	pg/L	500	pg/L
Total PeCDF		43	QJ	pg/L	500	pg/L
Total TCDD	<	100	U	pg/L	100	pg/L
Total TCDF	<	100	U	pg/L	100	pg/L
Metals						
Aluminum	<	20000	UG	ug/L	20000	ug/L
Antimony	<	1000	UG	ug/L	1000	ug/L
Arsenic	<	500	UG	ug/L	500	ug/L
Barium		1620		ug/L	1000	ug/L
Beryllium	<	300	UG	ug/L	300	ug/L
Cadmium	<	200	UG	ug/L	200	ug/L
Calcium		2940000		ug/L	100000	ug/L
Chromium	<	500	UG	ug/L	500	ug/L
Cobalt	<	500	UG	ug/L	500	ug/L
Copper	<	500	UG	ug/L	500	ug/L
Iron		838000		ug/L	10000	ug/L
Lead	<	300	UG	ug/L	300	ug/L
Magnesium		848000		ug/L	100000	ug/L
Manganese		64200		ug/L	500	ug/L
Nickel	<	1000	UG	ug/L	1000	ug/L
Potassium		6240000		ug/L	100000	ug/L
Selenium	<	500	UG	ug/L	500	ug/L
Silver	<	300	UG	ug/L	300	ug/L
Sodium		13400000		ug/L	100000	ug/L
Thallium	<	1000	UG	ug/L	1000	ug/L
Vanadium	<	700	UG	ug/L	700	ug/L
Zinc		19800		ug/L	2000	ug/L

Table 1. Leachate Constituent Summary

Field Parameters						
Specific Conductance		120000		umhos/cm	100	umhos/cm
Field pH		6.4		s.u.		s.u.
Field Temperature		55.9		F		F
General Chemistry						
Ammonia		2020	mg/l	D	25	mg/l
Turbidity		230		NTU	50	NTU
Chloride		27500		mg/L	500	mg/L
Fluoride	<	500	UG	mg/L	500	mg/L
Sulfate		675		mg/L	500	mg/L
Nitrate-Nitrite	<	10	UG	mg/L	10	mg/L
Total Alkalinity		7870		mg/L	500	mg/L
Total Dissolved Solids		79000		mg/L	1000	mg/L
Chemical Oxygen Demand (COD)		59000		mg/L	2000	mg/L

Notes:

1. Results shown are reported for sample collected from the East 500 Leachate Tank on February 5, 2010 and were submitted to Test America Laboratories for analysis.

2. Laboratory Qualifiers:

G The reporting limit is elevated due to matrix interference.
J Amount reported is less than reportable limit
a Spike analyte recovery is outside control limits
D Dilution and reporting limit raised.
U Non detect
Q Estimated maximum concentration
B Method Blank Contamination
NC The recovery and/or RPD (relevant percent distance) were not calculated
MSB The recovery and RPD may be outside control limits because the sample amount was greater than 4X the spike amount.

Table 2. Liquid Levels and Percent Perforations Exposed

Well ID	A2	B1R	B2R	C1R(2)	C2R	D1	D2R	E1	E2R	F1-M	F2	I1R	J1R	K1R	N1R	PW-A1R(2)	PW-14R(3)	PW-0041R(2)
Total Casing Lngth (ft)	68	36	78	48	123	57	123	70	123	60	68	121	122	56	122	61.5	43	73
Total Perforated Pipe Length (ft)	45	16	54	23	99	36	99	45	99	39	44	96	97	31	97	38	21	55
October, 2009																		
Date	10/27	10/9	10/29	10/9	10/29	10/27	10/29	10/27	10/27	10/27	10/27	10/27	10/27	10/27	10/29	10/9	10/9	10/9
Depth To Fluid (ft)	36.1	17.9	10.1	18.8	44.1	5.8	59.4	15.9	61.4	18.6	38.2	32.9	55	25.3	22.5	36.6	22.9	51.8
% Perforations Exposed	29%	0%	0%	0%	20%	0%	36%	0%	38%	0%	32%	8%	31%	1%	0%	34%	4%	61%
November, 2009																		
Date	11/22	11/22	N/A	11/22	11/16	11/22	11/15	11/22	11/22	11/22	11/22	11/22	11/22	11/22	11/16	11/22	11/22	11/18
Depth To Fluid (ft)	35.7	20.0	N/A	19.7	24.1	9.0	59.2	22.0	61.0	30.4	38.6	30.0	54.8	25.0	21.3	36.0	26.9	51.9
% Perforations Exposed	28%	0%	N/A	0%	0%	0%	36%	0%	37%	24%	33%	5%	31%	0%	0%	33%	23%	62%
December, 2009																		
Date	12/23	12/23	N/A	12/23	12/24	12/23	12/24	12/23	12/24	12/23	12/23	12/23	12/23	12/23	12/18	12/24	12/24	12/23
Depth To Fluid (ft)	35.2	20.2	N/A	19.0	23.9	10.5	59.2	22.0	61.2	30.2	38.7	30.2	54.1	24.8	32.4	35.8	26.9	51.4
% Perforations Exposed	27%	1%	N/A	0%	0%	0%	36%	0%	38%	24%	33%	5%	30%	0%	8%	32%	23%	61%
January, 2010																		
Date	1/26	1/22	N/A	1/22	1/26	1/22	1/26	1/22	1/26	1/22	1/26	1/22	1/26	1/26	1/26	1/22	1/22	1/26
Depth To Fluid (ft)	23.2	19.9	N/A	7.4	40.8	6.2	61.0	22.9	59.0	15.7	35.6	27.9	50.3	22.6	18.2	36.4	27.7	51.9
% Perforations Exposed	0%	0%	N/A	0%	17%	0%	37%	0%	35%	0%	26%	3%	26%	0%	0%	34%	27%	62%
February, 2010																		
Date	2/24	2/23	N/A	2/23	2/18	2/23	2/24	2/23	2/24	2/23	2/24	2/23	2/23	2/23	2/18	2/23	2/23	2/23
Depth To Fluid (ft)	23.2	19.7	N/A	7.8	55.1	6.9	60.8	19.1	54.6	15.8	36.1	26.2	50.0	22.5	26.2	42.3	28.1	52.3
% Perforations Exposed	0%	0%	N/A	0%	31%	0%	37%	0%	31%	0%	28%	1%	26%	0%	1%	49%	29%	62%
March, 2010																		
Date	3/29	3/22	N/A	3/22	3/29	3/29	3/29	3/30	3/29	3/30	3/29	3/22	3/29	3/29	3/29	3/22	3/30	3/30
Depth To Fluid (ft)	23.8	21.0	N/A	20.4	43.5	26.7	59.4	25.2	57.9	18.3	35.1	19.5	53.5	23.4	22.9	41.7	27.1	55.5
% Perforations Exposed	2%	6%	N/A	0%	20%	16%	36%	0%	34%	0%	25%	0%	29%	0%	0%	48%	24%	68%

Well ID	PW-43R(2)	PW-56R(2)	PW-57R	PW-61R(2)	PW-62R(2)	PW-101	PW-102	PW-103R	PW-104	PW-105	PW-106R	PW-107	PW-108R	PW-109	PW-110	PW-111	PW-112	PW-113
Total Casing Lngth (ft)	102	102	85	74	91	78	78	105	78	78	69	66	50	37	31	62	77	78
Total Perforated Pipe Length (ft)	84	84	67	48	73	60	60	81	60	60	45	45	26	19	13	44	59	60
October, 2009																		
Date	11/22	11/22	N/A	11/22	11/16	11/22	11/15	11/22	11/22	11/22	11/22	11/22	11/22	11/22	11/16	11/22	11/22	11/18
Depth To Fluid (ft)	35.7	20.0	N/A	19.7	24.1	9.0	59.2	22.0	61.0	30.4	38.6	30.0	54.8	25.0	21.3	36.0	26.9	51.9
% Perforations Exposed	28%	0%	N/A	0%	0%	0%	36%	0%	37%	24%	33%	5%	31%	0%	0%	33%	23%	62%
November, 2009																		
Date	11/22	11/16	11/16	11/16	11/16	11/22	11/22	11/15	11/16	11/16	11/22	11/22	11/16	11/18	11/18	11/18	11/17	11/18
Depth To Fluid (ft)	50.5	45.4	57.0	67.3	62.0	40.4	22.1	63.6	29.8	32.4	50.4	43.4	41.9	31.1	23.3	63.7	73.7	72.3
% Perforations Exposed	39%	33%	58%	86%	60%	37%	7%	49%	20%	24%	59%	50%	69%	69%	41%	100%	94%	91%
December, 2009																		
Date	12/24	12/11	12/11	12/23	12/11	12/23	12/24	12/24	12/24	12/11	12/24	12/23	12/11	12/23	12/23	12/23	12/23	12/23
Depth To Fluid (ft)	64.5	46.6	58.4	67.4	62.0	40.0	19.2	63.6	29.8	34.2	50.6	43.3	43.0	31.1	23.3	63.7	73.7	72.1
% Perforations Exposed	55%	34%	60%	86%	60%	37%	2%	49%	20%	27%	59%	50%	73%	69%	41%	100%	94%	90%
January, 2010																		
Date	1/22	1/26	1/26	1/26	1/26	1/22	1/22	1/22	1/26	1/26	1/26	1/21	1/26	1/21	1/21	1/21	1/21	1/21
Depth To Fluid (ft)	55.5	42.2	59.3	60.1	61.1	39.6	16.2	61.3	27.5	33.6	50.4	43.2	38.5	31.3	25.6	63.2	73.5	65.1
% Perforations Exposed	45%	29%	62%	71%	59%	36%	0%	46%	16%	26%	59%	49%	56%	70%	58%	100%	94%	79%
February, 2010																		
Date	2/23	2/18	2/18	2/23	2/23	2/23	2/23	2/24	2/25	2/25	2/23	2/25	2/25	2/18	2/18	2/18	2/18	2/25
Depth To Fluid (ft)	56.0	56.7	72.8	60.0	61.8	38.9	16.0	61.0	26.9	33.2	50.4	43.0	38.2	31.2	25.3	63.1	73.3	68.1
% Perforations Exposed	45%	46%	82%	71%	60%	35%	0%	46%	15%	25%	59%	49%	55%	69%	56%	100%	94%	84%
March, 2010																		
Date	3/29	3/29	3/29	3/29	3/29	3/22	3/29	3/29	3/29	3/29	3/30	3/30	3/29	3/30	3/30	3/30	3/30	3/30
Depth To Fluid (ft)	57.0	47.8	58.4	68.1	46.2	38.2	17.9	59.9	26.7	34.0	53.0	55.0	43.8	30.6	21.1	63.6	74.3	72.1
% Perforations Exposed	46%	35%	60%	88%	39%	34%	0%	44%	15%	27%	64%	76%	76%	66%	24%	100%	95%	90%

Table 2. Liquid Levels and Percent Perforations Exposed

Well ID	PW-114	PW-115R	PW-117R	PW-118R	PW-119R	PW-120	PW-121R(2)	PW-122R	PW-123	PW-124	PW-125	PW-127	PW-128	PW-129	PW-130	PW-131R	PW-132R	PW-138R
Total Casing Lngth (ft)	78	84	105	89	72	78	46	43.5	78	63	75	75	119.7	121	121	81	62	70
Total Perforated Pipe Length (ft)	60	60	80	64	50	60	31	25	60	45	60	60	103	103	103	58	40	46
October, 2009																		
Date	10/9	10/29	10/9	10/9	10/9	10/9	10/9	10/9	10/29	10/9	10/29	10/29	10/29	10/29	10/29	10/29	10/29	10/29
Depth To Fluid (ft)	65.7	70.6	35.4	66.6	54.8	34.4	31.9	37.2	21.8	49.6	45	22.6	62.8	64.5	70.1	30.5	30.9	33.4
% Perforations Exposed	80%	78%	13%	65%	66%	27%	55%	75%	6%	70%	50%	13%	45%	45%	51%	13%	22%	20%
November, 2009																		
Date	11/18	11/16	11/22	11/16	11/22	11/22	11/22	11/22	N/A	11/22	11/16	11/16	11/16	11/16	11/16	N/A	11/16	11/16
Depth To Fluid (ft)	66.0	70.7	32.7	66.7	55.2	34.1	32.6	37.3	N/A	28.4	44.1	24.3	51.7	64.4	85.5	N/A	30.7	33.5
% Perforations Exposed	80%	78%	10%	65%	66%	27%	57%	75%	N/A	23%	49%	16%	34%	45%	66%	N/A	22%	21%
December, 2009																		
Date	12/23	12/23	12/23	12/23	12/23	12/24	12/24	12/24	N/A	12/23	12/24	12/23	12/23	12/23	12/23	N/A	12/23	12/23
Depth To Fluid (ft)	65.6	70.5	32.5	65.9	55.0	34.2	32.7	37.1	N/A	28.1	44.0	22.1	53.1	64.1	84.2	N/A	31.2	32.4
% Perforations Exposed	79%	78%	9%	64%	66%	27%	57%	74%	N/A	22%	48%	12%	35%	45%	64%	N/A	23%	18%
January, 2010																		
Date	1/26	1/26	1/26	1/26	1/22	1/20	1/22	1/22	N/A	1/26	1/26	1/26	1/26	1/26	1/26	N/A	1/26	1/26
Depth To Fluid (ft)	66.0	70.3	32.3	66.5	55.6	32.7	32.1	37.2	N/A	27.7	43.5	25.3	53.0	63.7	83.9	N/A	30.5	32.0
% Perforations Exposed	80%	77%	9%	65%	67%	25%	55%	75%	N/A	22%	48%	17%	35%	44%	64%	N/A	21%	17%
February, 2010																		
Date	2/23	2/23	2/23	2/23	2/23	2/23	2/23	2/23	N/A	2/23	2/24	2/25	2/25	2/25	2/25	N/A	2/23	2/23
Depth To Fluid (ft)	69.2	70.1	32.3	66.8	55.7	32.6	30.6	37.0	N/A	28.1	42.1	24.5	51.3	64.0	73.1	N/A	30.4	31.6
% Perforations Exposed	85%	77%	9%	65%	67%	24%	50%	74%	N/A	22%	45%	16%	34%	45%	53%	N/A	21%	17%
March, 2010																		
Date	3/29	3/29	3/29	3/29	3/29	3/29	3/22	3/30	N/A	3/29	3/29	3/29	3/29	3/29	3/29	N/A	3/29	3/29
Depth To Fluid (ft)	66.9	72.5	35.4	69.3	56.7	34.4	37.0	37.1	N/A	50.6	43.4	22.3	60.6	60.8	65.8	N/A	31.5	36.0
% Perforations Exposed	82%	81%	13%	69%	69%	27%	71%	74%	N/A	72%	47%	12%	43%	42%	46%	N/A	24%	26%

Well ID	PW-141R	PW-142R	PW-144	PW-145	PW-146	PW-147R	PW-148	PW-149	PW-150	PW-151	PW-152	PW-153	PW-154	PW-155	PW-156	PW-157	PW-158R	PW-159
Total Casing Lngth (ft)	104	80	102	120	120	80	53	51	50	43	42	52	42	42	112	112	104	117
Total Perforated Pipe Length (ft)	80	58	82	100	100	58	33	31	30	23	22	32	22	22	89	89	80	97
October, 2009																		
Date	10/29	10/9	10/29	10/26	10/29	10/9	10/9	10/9	10/9	10/30	10/9	10/9	10/9	10/9	10/29	10/29	10/29	10/27
Depth To Fluid (ft)	49.3	69	37.9	57.1	46.1	18	23.8	50.1	28.5	28.5	32.9	44.9	41.3	34.9	64.3	57	53.9	55.7
% Perforations Exposed	32%	81%	22%	37%	26%	0%	12%	97%	28%	37%	59%	78%	97%	68%	46%	38%	37%	37%
November, 2009																		
Date	11/16	11/22	11/16	11/16	11/16	11/22	11/22	11/22	11/22	11/22	11/22	11/22	11/22	11/22	11/16	11/16	11/16	11/22
Depth To Fluid (ft)	49.0	36.5	36.0	56.7	49.5	22.3	23.1	49.8	29.3	27.9	33.1	44.9	41.3	34.6	88.7	56.6	51.1	55.5
% Perforations Exposed	31%	25%	20%	37%	30%	1%	9%	96%	31%	34%	60%	78%	97%	66%	74%	38%	34%	37%
December, 2009																		
Date	12/23	12/23	12/18	12/18	12/18	12/24	12/24	12/24	12/24	12/24	12/24	12/24	12/24	12/24	12/23	12/18	12/18	12/23
Depth To Fluid (ft)	52.1	36.4	64.5	59.9	58.1	41.7	25.3	35.9	28.6	27.5	33.2	44.8	41.3	34.5	89.5	56.9	54.0	55.9
% Perforations Exposed	35%	25%	54%	40%	38%	34%	16%	51%	29%	33%	60%	78%	97%	66%	75%	38%	38%	37%
January, 2010																		
Date	1/26	1/22	1/26	1/26	1/26	1/22	1/22	1/22	1/22	1/22	1/22	1/22	1/22	1/22	1/26	1/26	1/26	1/26
Depth To Fluid (ft)	51.1	70.0	53.0	54.9	56.2	46.6	22.2	29.7	29.7	30.4	33.5	44.8	41.3	34.3	82.1	56.4	49.2	53.8
% Perforations Exposed	34%	83%	40%	35%	36%	42%	7%	31%	32%	45%	61%	78%	97%	65%	66%	38%	32%	35%
February, 2010																		
Date	2/18	2/23	2/18	2/18	2/18	2/18	2/23	2/18	2/23	2/23	2/23	2/23	2/23	2/26	2/18	2/25	2/25	2/24
Depth To Fluid (ft)	47.6	65.2	31.0	56.0	52.0	49.9	22.4	36.2	30.2	30.8	34.0	44.6	40.9	34.2	62.8	49.9	45.5	52.8
% Perforations Exposed	30%	74%	13%	36%	32%	48%	7%	52%	34%	47%	64%	77%	95%	65%	45%	30%	27%	34%
March, 2010																		
Date	3/29	3/29	3/29	3/29	3/30	3/29	3/29	3/29	3/29	3/29	3/30	3/29	3/29	3/30	3/29	3/29	3/30	3/29
Depth To Fluid (ft)	47.4	71.0	28.5	55.5	55.9	27.0	39.9	50.3	30.3	27.8	34.9	44.9	41.3	35.3	61.8	54.6	52.7	54.2
% Perforations Exposed	29%	84%	10%	36%	36%	9%	60%	98%	34%	34%	68%	78%	97%	70%	44%	36%	36%	35%

Table 2. Liquid Levels and Percent Perforations Exposed

Well ID	PW-160	PW-161	PW-162	PW-163R	PW-164	PW-165	PW-166	PW-167R	PW-168(M)	PW-169	PW-170	PW-171	PW-172	PW-173	PW-174	PW-175	PW-176	PW-177
Total Casing Lngth (ft)	119	117	102	100	117	117	122	80	93	61	40	47	117	114	105	80	77	44
Total Perforated Pipe Length (ft)	97	95	80	75	97	97	95	58	68	15	18	22	92	90	80	58	55	24
October, 2009																		
Date	10/27	10/27	10/27	10/27	10/27	10/27	10/27	10/9	10/30	10/27	10/29	10/27	10/27	10/29	10/29	10/29	10/29	10/30
Depth To Fluid (ft)	46.9	51.6	54.2	47.2	49.2	55.8	44.9	15.8	73	55	26.7	25.5	43.2	70.8	23.6	24.8	39.6	38.8
% Perforations Exposed	26%	31%	40%	30%	30%	37%	19%	0%	71%	60%	26%	2%	20%	52%	0%	5%	32%	78%
November, 2009																		
Date	11/22	11/22	11/22	11/22	11/22	11/22	11/22	11/22	11/17	11/18	11/15	11/22	11/22	11/15	11/16	11/16	11/16	11/17
Depth To Fluid (ft)	68.7	51.3	53.7	47.0	49.0	56.0	52.0	17.3	73.5	55.3	25.5	25.5	43.4	58.1	25.7	43.3	48.5	38.6
% Perforations Exposed	48%	31%	40%	29%	30%	37%	26%	0%	71%	62%	19%	2%	20%	38%	1%	37%	48%	78%
December, 2009																		
Date	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/11	12/11	12/11
Depth To Fluid (ft)	69.1	51.1	54.0	47.1	47.5	55.4	55.2	22.9	73.7	55.2	25.9	25.5	43.9	58.1	25.7	43.8	44.2	38.4
% Perforations Exposed	49%	31%	40%	29%	28%	36%	30%	2%	72%	61%	22%	2%	21%	38%	1%	38%	40%	77%
January, 2010																		
Date	1/26	1/26	1/26	1/26	1/26	1/26	1/22	1/22	1/21	1/21	1/26	1/26	1/26	1/26	1/26	1/26	1/26	1/21
Depth To Fluid (ft)	66.8	51.3	54.3	44.2	45.2	49.9	25.9	24.3	74.1	54.0	25.5	25.8	43.8	48.5	21.5	24.9	41.9	38.2
% Perforations Exposed	46%	31%	40%	26%	26%	31%	0%	4%	72%	53%	19%	4%	20%	27%	0%	5%	36%	76%
February, 2010																		
Date	2/24	2/23	2/23	2/23	2/23	2/23	2/23	2/23	2/18	2/18	2/24	2/23	2/26	2/24	2/18	2/18	2/18	2/25
Depth To Fluid (ft)	66.4	51.1	54.0	42.9	44.3	48.5	25.7	19.8	74.0	53.8	25.2	25.6	38.1	48.1	44.9	40.1	46.3	38.1
% Perforations Exposed	46%	31%	40%	24%	25%	29%	0%	0%	72%	52%	18%	3%	14%	27%	25%	31%	44%	75%
March, 2010																		
Date	3/29	3/29	3/29	3/29	3/29	3/29	3/22	3/29	3/30	3/30	3/29	3/29	3/29	3/29	3/29	3/29	3/29	3/30
Depth To Fluid (ft)	65.6	49.6	51.4	45.6	46.7	54.9	46.8	50.3	75.3	55.1	23.9	24.2	42.1	53.8	15.6	43.5	36.7	37.9
% Perforations Exposed	45%	29%	37%	27%	28%	36%	21%	49%	74%	61%	11%	0%	19%	33%	0%	37%	27%	75%

Well ID	PW-178	PW-179	PW-180	PW-181	PW-182	PW-307	PW-358	PW-361	PW-362B	PW-363	PW-364	PW-366	PW-367	PW-368	PW-369	Q1R	S1R	T1R
Total Casing Lngth (ft)	34	61	93	85	42	64	62	104	78	82	82	39	53	47	38	54	125	125
Total Perforated Pipe Length (ft)	14	36	68	60	17	42	38	80	53	58	58	25	39	33	24	30	100	100
October, 2009																		
Date	10/30	10/26	10/9	10/27	10/9	10/27	10/29	10/27	10/26	10/29	10/29	10/26	10/26	10/26	10/26	10/29	10/26	10/29
Depth To Fluid (ft)	32.4	38.7	77.4	26.6	7.2	35.2	29.9	65.8	34.7	47.5	36	22.4	22.6	26.4	30.6	40	47.5	63.1
% Perforations Exposed	89%	38%	77%	3%	0%	31%	16%	52%	18%	41%	21%	34%	22%	38%	69%	53%	23%	38%
November, 2009																		
Date	11/17	11/17	11/18	11/22	11/22	11/22	11/15	11/22	11/22	11/15	11/15	11/22	11/22	11/22	11/22	11/16	11/16	11/16
Depth To Fluid (ft)	32.0	38.6	77.9	32.0	6.8	34.9	29.0	65.4	34.3	46.6	35.5	22.2	22.4	25.6	30.3	40.0	47.0	98.0
% Perforations Exposed	86%	38%	78%	12%	0%	31%	13%	52%	18%	39%	20%	33%	22%	35%	68%	53%	22%	73%
December, 2009																		
Date	12/11	12/11	12/23	12/23	12/24	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/18
Depth To Fluid (ft)	32.4	38.8	78.0	33.1	7.0	34.7	28.6	65.1	34.0	46.0	35.6	22.3	22.3	25.5	30.2	39.8	50.3	61.3
% Perforations Exposed	89%	38%	78%	14%	0%	30%	12%	51%	17%	38%	20%	33%	21%	35%	68%	53%	25%	36%
January, 2010																		
Date	1/21	1/21	1/26	1/22	1/22	1/26	1/26	1/26	1/26	1/26	1/26	1/26	1/26	1/26	1/26	1/26	1/26	1/26
Depth To Fluid (ft)	32.0	38.5	77.7	23.6	11.2	33.4	28.0	64.2	32.8	43.1	33.7	21.9	21.1	24.0	28.8	37.7	49.8	59.9
% Perforations Exposed	86%	38%	78%	0%	0%	27%	11%	50%	15%	33%	17%	32%	18%	30%	62%	46%	25%	35%
February, 2010																		
Date	2/25	2/18	2/23	2/23	2/23	2/24	2/24	2/24	2/24	2/24	2/24	2/24	2/24	2/24	2/24	2/23	2/18	2/18
Depth To Fluid (ft)	32.1	38.4	77.8	26.9	10.6	33.7	27.6	61.1	30.9	42.9	33.9	21.5	21.5	23.8	28.9	36.4	47.7	59.9
% Perforations Exposed	86%	37%	78%	3%	0%	28%	9%	46%	11%	33%	17%	30%	19%	30%	62%	41%	23%	35%
March, 2010																		
Date	3/30	3/30	3/29	3/22	3/29	3/29	3/29	3/29	3/29	3/29	3/29	3/29	3/29	3/29	3/29	3/29	3/29	3/29
Depth To Fluid (ft)	32.4	38.1	78.7	28.1	13.7	32.8	27.6	62.3	32.0	43.6	32.7	21.6	20.2	23.1	28.2	41.7	45.2	60.4
% Perforations Exposed	89%	36%	79%	5%	0%	26%	9%	48%	13%	34%	15%	30%	16%	28%	59%	59%	20%	35%

Table 2. Liquid Levels and Percent Perforations Exposed

Well ID	U1R	W-1R	W1R(2)	W-2R(M)	W-3	W-4	W-5	W-7	W-8	W-9	W-10	W-11	W-12R	W-13R	W-31R	W-32R	W-33	W-34
Total Casing Lngth (ft)	113	46	72	85	33	37	35	38	34	36	103	119	43	43	92	54	52	81
Total Perforated Pipe Length (ft)	88	20	48	65	12	16	13	14	15	18	85	94	21	21	72	29	34	43
October, 2009																		
Date	10/27	10/29	10/29	10/30	10/30	10/26	10/26	10/26	10/26	10/26	10/26	10/26	10/30	10/30	10/30	10/30	10/26	10/26
Depth To Fluid (ft)	49.1	20	33.2	52.2	31	30.3	32.3	30.8	24.6	34.6	31.3	35.6	37.2	31.3	45	43.8	46.8	51.6
% Perforations Exposed	27%	0%	19%	50%	83%	58%	79%	49%	37%	92%	16%	11%	72%	44%	35%	65%	85%	32%
November, 2009																		
Date	11/22	11/16	11/16	11/17	11/17	11/17	11/17	11/18	11/18	11/18	11/18	11/18	11/22	11/22	11/17	11/17	11/17	11/17
Depth To Fluid (ft)	49.0	17.5	34.4	56.3	31.0	29.8	32.8	31.0	24.6	37.5	31.0	39.4	36.9	31.5	45.0	44.0	45.0	51.7
% Perforations Exposed	27%	0%	22%	56%	83%	55%	83%	50%	37%	100%	15%	15%	71%	45%	35%	66%	79%	32%
December, 2009																		
Date	12/23	12/23	12/24	12/11	12/11	12/11	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/23	12/11	12/11	12/11	12/23
Depth To Fluid (ft)	48.9	18.2	39.2	42.8	30.8	29.7	32.7	30.9	24.7	37.5	30.9	39.4	36.9	31.4	45.6	44.1	42.4	51.8
% Perforations Exposed	27%	0%	32%	35%	82%	54%	82%	49%	38%	100%	15%	15%	71%	45%	36%	66%	72%	32%
January, 2010																		
Date	1/26	1/26	1/26	1/21	1/21	1/21	1/21	1/21	1/21	1/21	1/21	1/21	1/21	1/21	1/21	1/21	1/21	1/21
Depth To Fluid (ft)	46.1	19.0	34.2	42.5	31.0	29.5	32.7	30.9	24.6	37.4	31.1	39.5	37.0	31.5	45.1	40.4	42.7	52.0
% Perforations Exposed	24%	0%	21%	35%	83%	53%	82%	49%	37%	100%	15%	15%	71%	45%	35%	53%	73%	33%
February, 2010																		
Date	2/23	2/24	2/18	2/25	2/25	2/25	2/18	2/18	2/18	2/18	2/18	2/18	2/25	2/25	2/25	2/25	2/18	2/18
Depth To Fluid (ft)	45.2	19.8	46.1	42.7	31.0	29.4	32.7	30.9	22.4	37.4	31.0	39.5	37.1	31.2	45.4	40.1	42.5	52.0
% Perforations Exposed	23%	0%	46%	35%	83%	53%	82%	49%	23%	100%	15%	15%	72%	44%	35%	52%	72%	33%
March, 2010																		
Date	3/29	3/29	3/29	3/30	3/30	3/30	3/30	3/30	3/30	3/30	3/30	3/30	3/30	3/30	3/29	3/30	3/30	3/30
Depth To Fluid (ft)	47.1	18.9	34.1	54.3	31.0	29.0	31.4	31.0	24.2	33.6	30.1	32.9	37.5	32.0	73.1	43.4	34.0	50.0
% Perforations Exposed	25%	0%	21%	53%	83%	50%	72%	50%	35%	87%	14%	8%	74%	48%	74%	63%	47%	28%

Well ID	W-35	W-36	W-37	W-38	W-39	W-42R(2)	W-56R(3)	W-58R	W-59	W-60	W-68	W-69R
Total Casing Lngth (ft)	64	70	79	79	81	100	88	82	108	110	79	47
Total Perforated Pipe Length (ft)	46	35	62	57	62	75	64	58	71	79	44	21
October, 2009												
Date	10/26	10/26	10/26	10/26	10/30	10/9	10/29	10/30	10/26	10/30	10/26	10/30
Depth To Fluid (ft)	63.1	47.3	44.2	42.4	54.8	77.8	39.4	64	74.4	75.6	50.7	40.3
% Perforations Exposed	98%	35%	44%	36%	58%	70%	24%	69%	53%	56%	36%	68%
November, 2009												
Date	11/18	11/18	11/18	11/18	11/18	11/22	11/16	11/17	11/18	11/18	11/18	11/18
Depth To Fluid (ft)	63.3	47.7	39.2	42.3	55.4	77.8	29.5	64.0	74.6	75.8	50.9	40.3
% Perforations Exposed	98%	36%	36%	36%	59%	70%	9%	69%	53%	57%	36%	68%
December, 2009												
Date	12/23	12/23	12/23	12/23	12/23	12/23	12/11	12/23	12/23	12/23	12/23	12/23
Depth To Fluid (ft)	63.3	47.7	39.1	42.3	55.3	77.8	30.3	64.1	74.5	76.3	50.5	40.5
% Perforations Exposed	98%	36%	36%	36%	59%	70%	10%	69%	53%	57%	35%	69%
December, 2009												
Date	1/21	1/21	1/21	1/21	1/21	1/22	1/26	1/21	1/21	1/21	1/21	1/21
Depth To Fluid (ft)	63.2	47.7	39.1	42.1	55.1	55.4	30.3	63.0	75.6	75.9	51.2	40.2
% Perforations Exposed	98%	36%	36%	35%	58%	41%	10%	67%	54%	57%	37%	68%
February, 2010												
Date	2/18	2/18	2/18	2/18	2/18	2/23	2/18	2/18	2/18	2/18	2/18	2/18
Depth To Fluid (ft)	63.2	47.7	39.0	42.1	55.1	52.3	34.9	63.0	75.4	75.7	51.2	40.0
% Perforations Exposed	98%	36%	35%	35%	58%	36%	17%	67%	54%	57%	37%	67%
March, 2010												
Date	3/30	3/30	3/30	3/30	3/30	3/29	3/29	3/29	3/30	3/30	3/30	3/30
Depth To Fluid (ft)	62.9	47.0	44.4	42.1	56.0	78.0	61.7	64.4	101.0	76.0	51.1	45.7
% Perforations Exposed	98%	34%	44%	35%	60%	71%	59%	70%	90%	57%	37%	94%

Notes: Wells with boxes around data indicate the placement of a pump in that well.
February liquid level data has been updated to correct a calculation error

Table 3. West Berm Piezometer Readings

Installation Information	Piezometer I.D.	WBPZ-1 upper		WBPZ-1 lower		WBPZ-2 upper		WBPZ-3 upper		WBPZ-3 lower	
	Ground Elevation	1124.3		1124.3		1135.8		1145.7		1145.7	
	Depth to Tranducer	74.5		102.0		85.5		59.5		84.5	
	Elevation of Tranducer	1049.8		1022.3		1050.3		1086.2		1061.2	
"Apparent" Piezometric Surface (see Note 1)		Total Head (ft)	Pore Pressure (ft H_2O)	Total Head (ft)	Pore Pressure (ft H_2O)	Total Head (ft)	Pore Pressure (ft H_2O)	Total Head (ft)	Pore Pressure (ft H_2O)	Total Head (ft)	Pore Pressure (ft H_2O)
	10/16/2009	1050.1	0.34	< 1022.3	-0.01	< 1050.3	-0.05	< 1086.2	-0.24	1062.7	1.50
	11/2/2009	1050.0	0.17	< 1022.3	-0.45	< 1050.3	-0.21	< 1086.2	-0.42	1061.4	0.17
	12/1/2009	1050.2	0.39	< 1022.3	-0.49	< 1050.3	-0.27	< 1086.2	-0.52	1061.3	0.08
	1/6/2010	1049.8	0.00	< 1022.3	-0.65	< 1050.3	-0.42	< 1086.2	-0.65	< 1061.2	-0.36
	2/1/2010	< 1049.8	-0.04	< 1022.3	-0.70	< 1050.3	-0.48	< 1086.2	-0.70	< 1061.2	-0.67
	3/4/2010	1049.9	0.14	< 1022.3	-0.51	< 1050.3	-0.31	< 1086.2	-0.54	< 1061.2	-0.49
	4/8/2010	1050.1	0.33	< 1022.3	-0.35	< 1050.3	-0.14	< 1086.2	-0.35	< 1061.2	-0.39
Trigger Elevations (see Note 2)	For F.S. < 1.5	Note 3		1048.0		1081.0		Note 3		1095.0	
	For F.S. < 1.2	Note 3		1102.0		1120.0		Note 3		1116.0	

Notes:

1. The piezometric surface is present at, or below, the elevation provided in ft.-MSL. The number in parentheses represents the water column pressure exerted on the transducer--a zero or negative pressure indicates non-saturated conditions causing soil suction.
2. If the apparent piezometric surface rises above this elevation, the trigger has occurred.
3. This is a redundant installation that can be used in event of failure of the corresponding lower transducer.

Table 4. South Slope Piezometer Readings

Installation Information	Boring I.D.	SS-7	SS-1	SS-7	SS-3	SS-3	SS-7	SS-1	SS-3	SS-3
	Ground Elevation (at install)	1178.3	1177.8	1178.3	1174.5	1174.5	1178.3	1177.8	1174.5	1179.6
	Depth to Tranducer (ft. at install)	12	18	17	25	22	22	28	17	24
	Elevation of Tranducer(at install)	1166.3	1159.8	1161.3	1149.5	1152.5	1156.3	1149.8	1157.5	1155.6
"Apparent" Piezometric Surface (see Note 1)		Pore Pressure (ft H_2O)	Pore Pressure (ft H_2O)	Pore Pressure (ft H_2O)	Pore Pressure (ft H_2O)	Pore Pressure (ft H_2O)	Pore Pressure (ft H_2O)	Pore Pressure (ft H_2O)	Pore Pressure (ft H_2O)	Pore Pressure (ft H_2O)
	10/26/2009	-0.86		-0.87			-0.74	-3.24		
	10/29/2009	-0.86	-9.53	-0.87	-0.17	0.49	-0.74		3.73	0.80
	11/9/2009	-0.79	-9.46	-0.80	-0.14	0.40	-0.65		3.54	0.73
	12/1/2009	-1.16	-9.95	-1.16	-0.52	0.12	-1.01		3.28	0.35
	1/6/2010	-1.21	-9.65	-1.24	-0.13	-0.61	-1.61		3.01	-0.38
	2/1/2010	-1.00	-9.41	-1.00	-0.56	-0.29	-1.82		2.71	-0.56
	3/4/2010	-1.36	-9.71	-1.37	-0.94	-0.81	-2.04		2.08	-1.40
	4/8/2010	-1.86	-10.19	-1.95	-1.86	-1.49	-2.51		1.14	-2.47

Notes:

1. The piezometric surface is present at, or below, the elevation provided in ft.-MSL. The number in parentheses represents the water column pressure exerted on the transducer--a zero or negative pressure indicates non-saturated conditions causing soil suction.

Attachment 4

Pin Movement Evaluation

P. J. Carey & Associates, P.C.

5878 Valine Way, Sugar Hill, Georgia 30518
Telephone (678) 482-5193
Fax (866) 845-3898
Email pjcarey@pjcarey.com

April 9, 2010

Mr. Michael Darnell
Division Manager
Republic Services
Countywide RDF
3619 Gracemont Street, SW
East Sparta, Ohio 44626

RE: Evaluation of Pin Movements
Countywide Slopes
March Period (2/23/10 – 3/30/10)

Dear Mike,

I have reviewed the pin survey data from the South, West and North Slopes at Countywide. The surveys were performed during the March monitoring period (2/23/10-3/30/10) by Diversified Engineering, Inc. (DEI) using optical survey methods. The survey data has been plotted in accordance with Section 6.5.4 of the Operation, Maintenance and Monitoring Plan creating Figures 11 through 16 only for those points exceeding the trigger levels, as requested by Jerry Parker of the OH EPA. In addition, we are providing two vector plot maps that depict the horizontal pin movements and two profile vector maps of a line along IP S pins for the monitoring period and since the onset of monitoring (October 6, 2009). Also included are tables showing the horizontal rate of movement for the monitoring period and elevation motion since the original monitoring survey (October 6, 2009). This additional information has been attached after the aforementioned figures. A review of the data shows:

- One pin (IP S4) exceeded the trigger rates of 0.05ft per day of horizontal movement once during the monitoring period. The table showing the movement rate based the weekly readings is attached. Graphs of pin movement for the above point are included. The location represented by this pin has experienced significant non-slope movement settlement during the period.

- Minor upward movements reported in previous months, resulting in an exceedence of the trigger value of 0.05 ft relative to the original survey pin elevation, at 2 locations (IP F1 and MP5) remained during the monitoring period. This is the same as the previous monitoring period of February and after 3/9/2010 only location IP F1 had upward movement exceeding the trigger. No trend of upward displacement has been established and it remains my opinion that the upward movements are slight and not indicative of any mass movement on the slopes. The upward movement surveyed can be

related to frost heave, survey equipment changes and/or difficulty setting up over the exact pin locations. These points have also been included in the graphs.

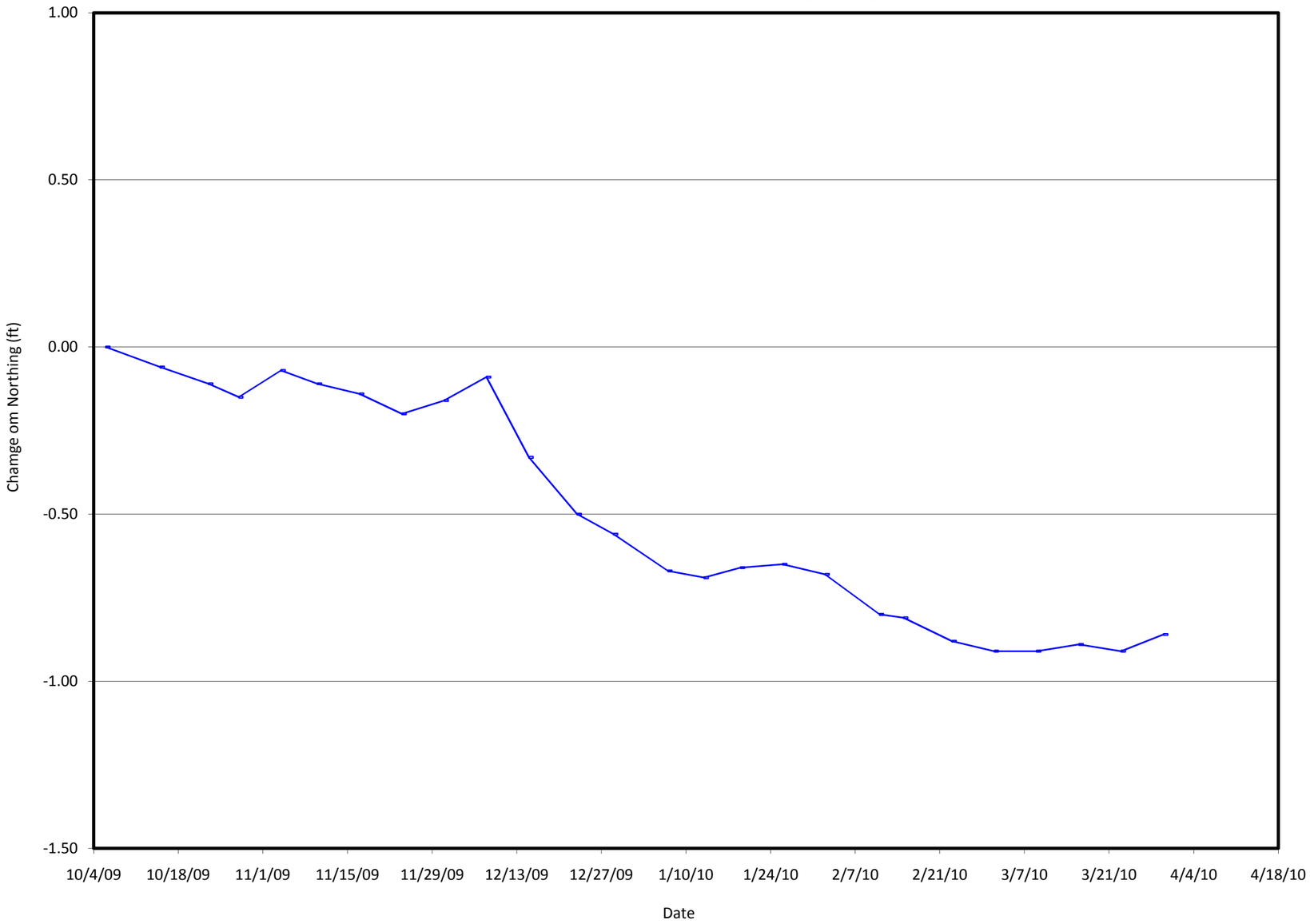
Based on the review of the data, no signs of instability are indicated.

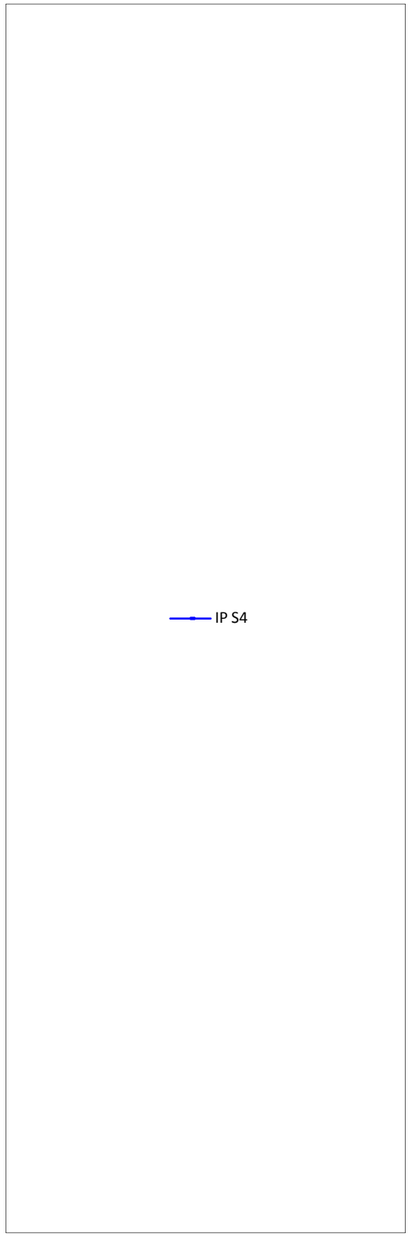
I hope this information is helpful to you. Please call if there are any questions.

Sincerely,

Peter J. Carey, PE
President

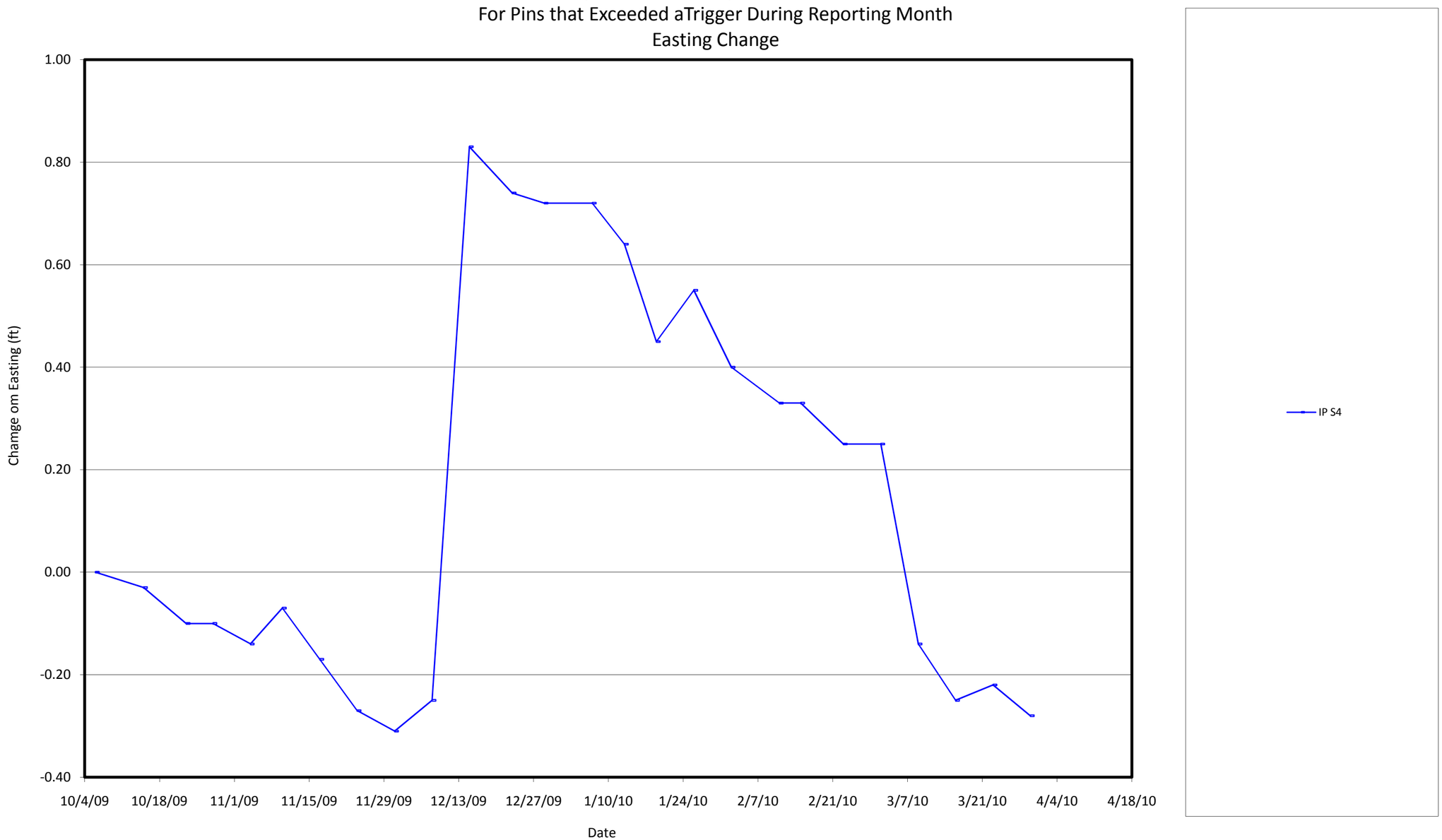
Graph 11 - South Slope Pin Movement
For Pins that Exceeded aTrigger During Reporting Month
Northing Change





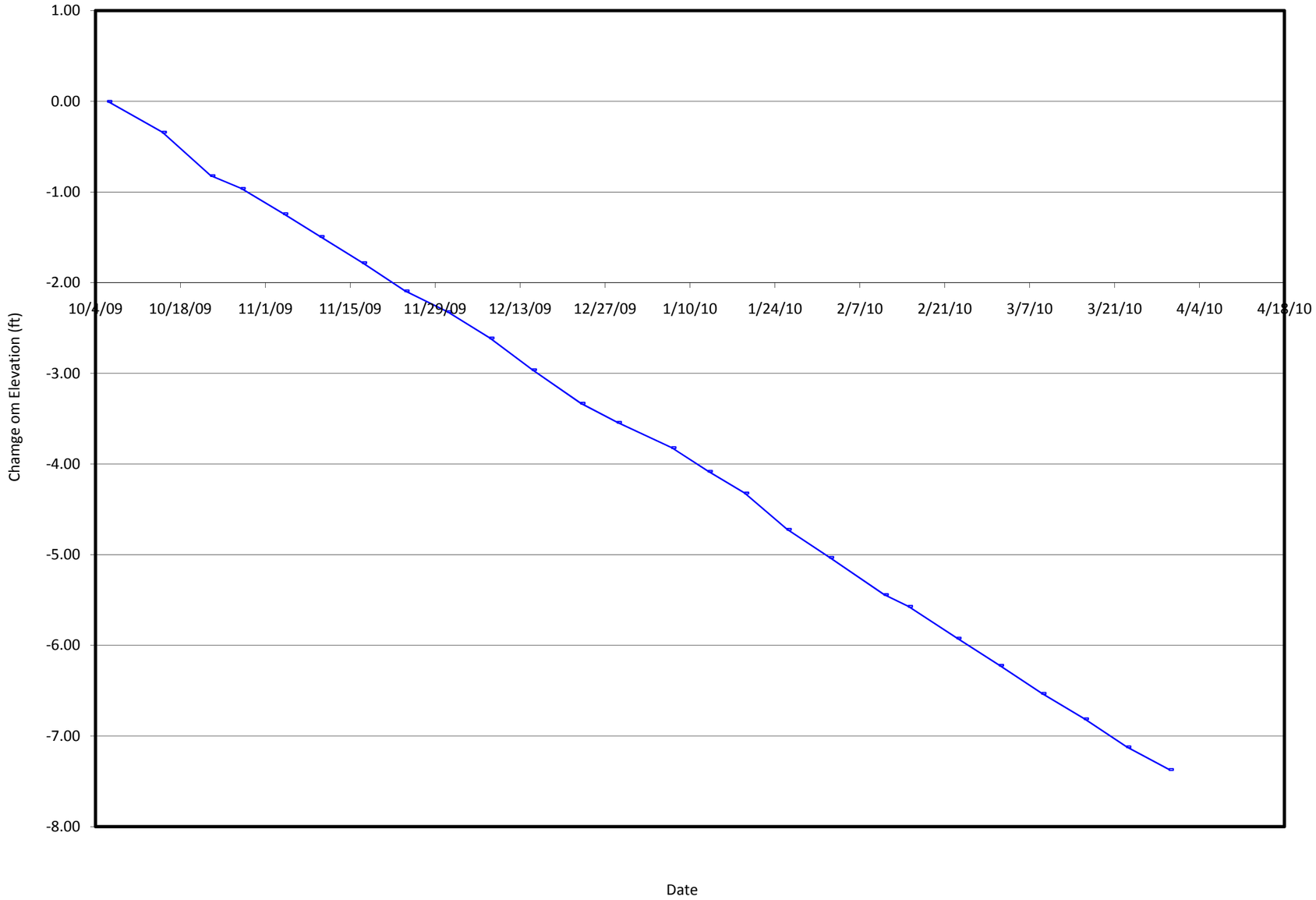
1. Data compiled by PJ Carey Associates, PC.
2. Survey provided by DEI beginning on October 5, 2009.

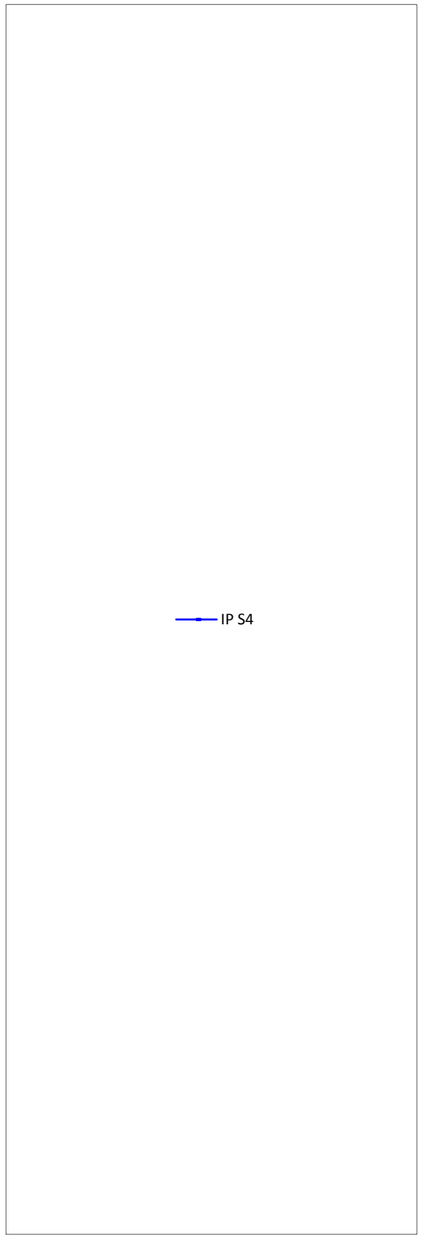
Graph 12 - South Slope Pin Movement
For Pins that Exceeded aTrigger During Reporting Month
Easting Change



1. Data compiled by PJ Carey Associates, PC.
2. Survey provided by DEI beginning on October 5, 2009.

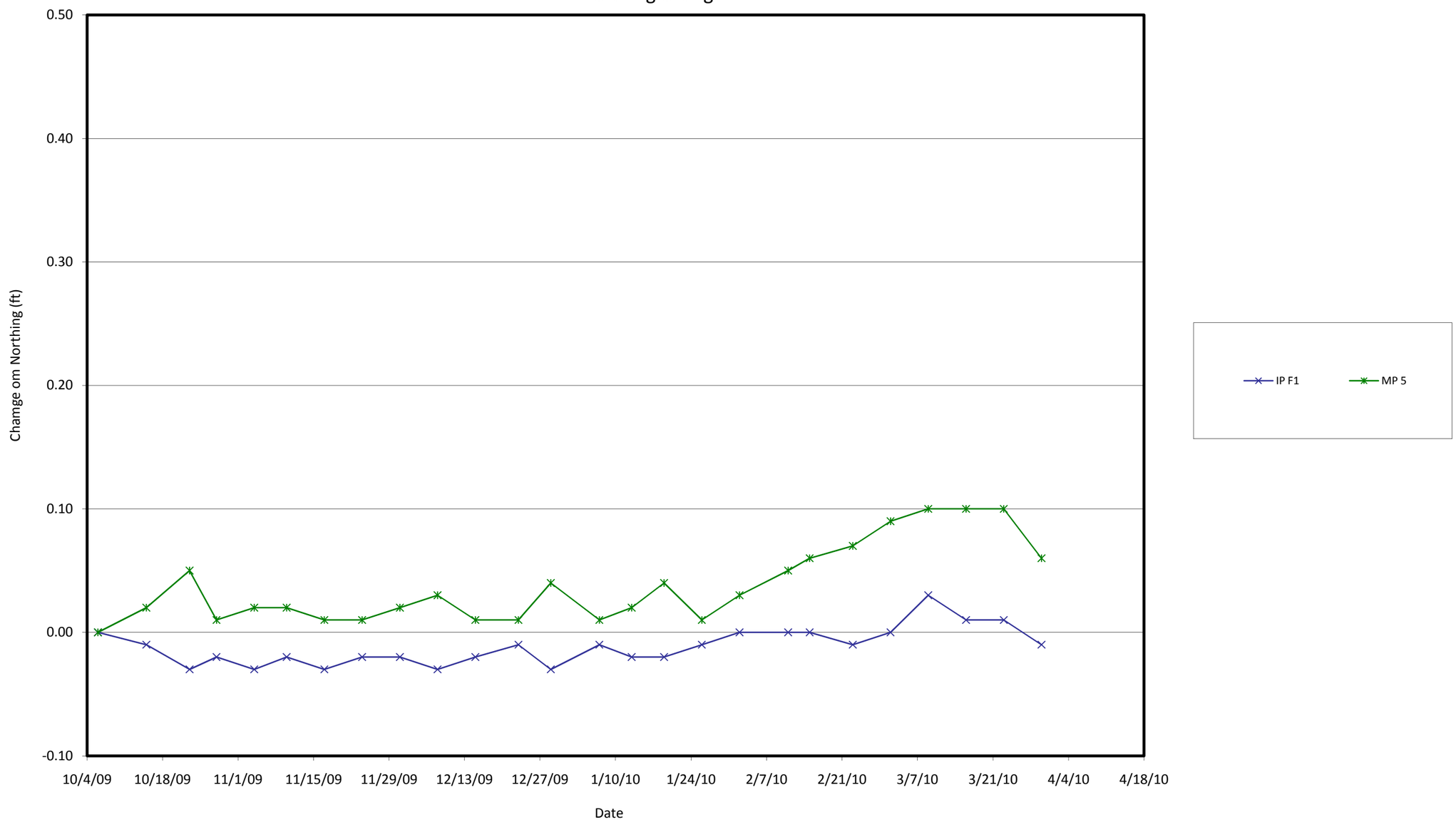
Graph 13 - South Slope Pin Movement
For Pins that Exceeded aTrigger During Reporting Month
Elevation Change





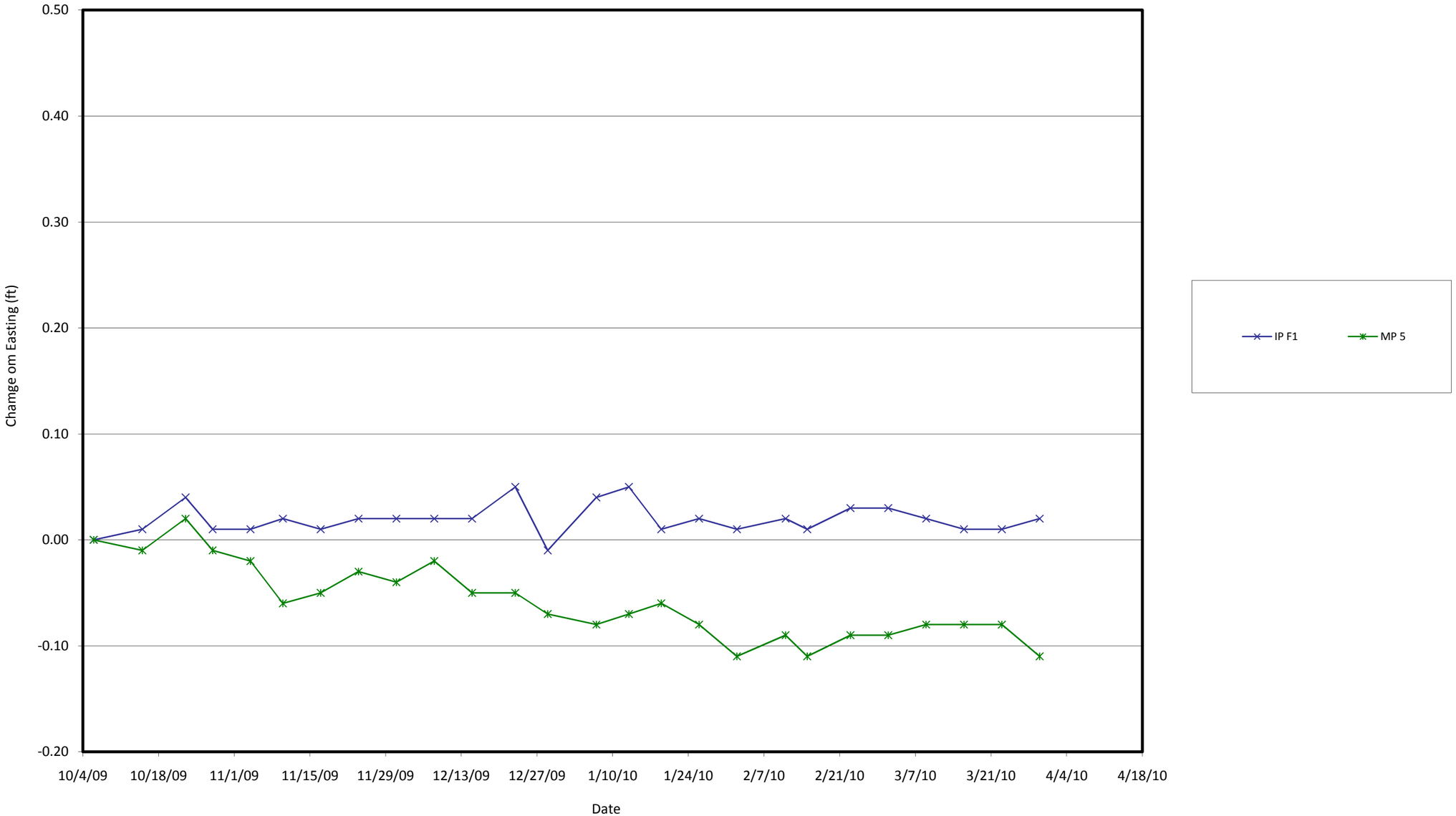
1. Data compiled by PJ Carey Associates, PC.
2. Survey provided by DEI beginning on October 5, 2009.

Graph 14 - West Slope Pin Movement
For Pins that Exceeded aTrigger During Reporting Month
Northing Change



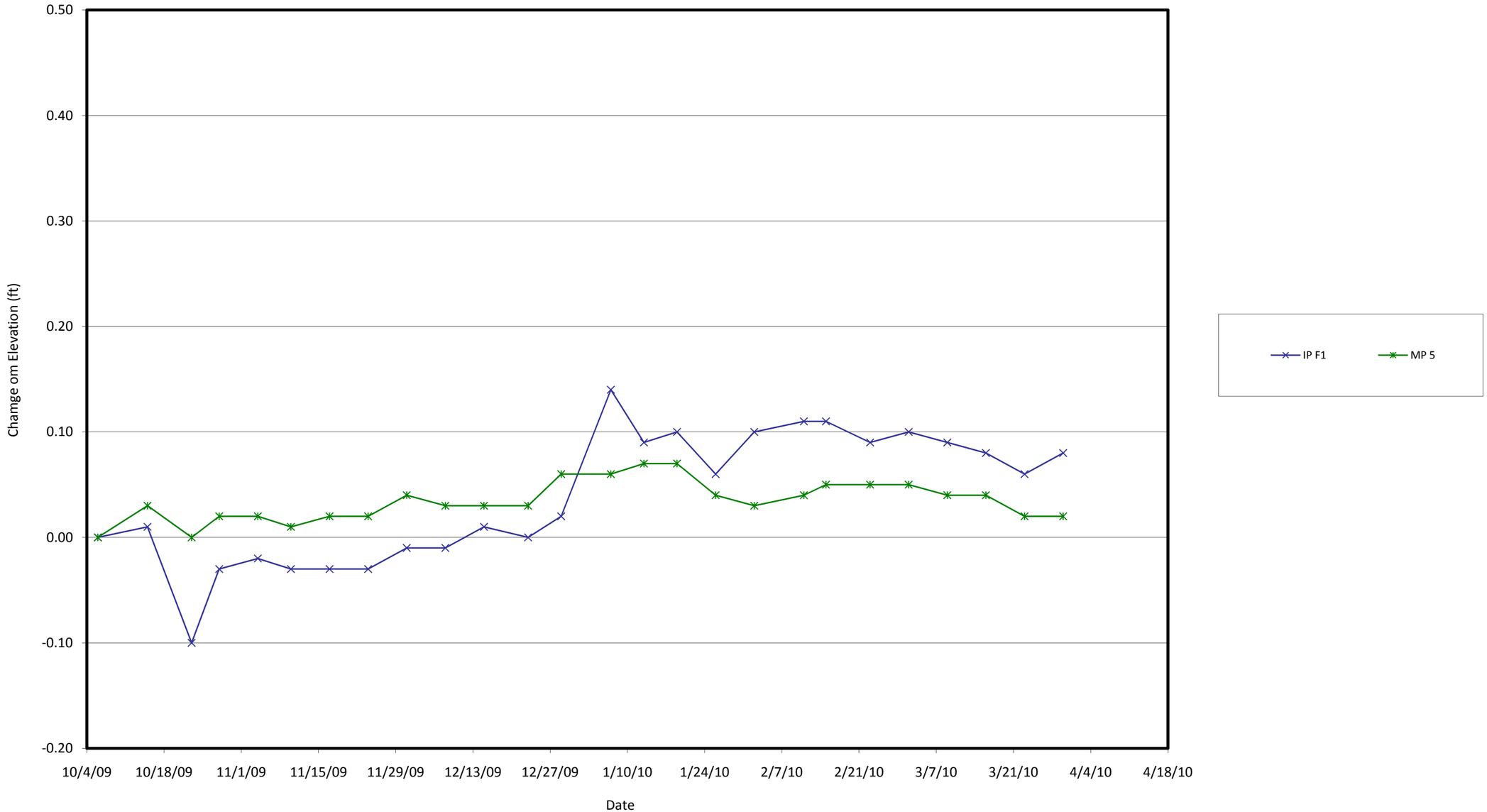
1. Data compiled by PJ Carey Associates, PC.
2. Survey provided by DEI beginning on October 5, 2009.

Graph 15 - West Slope Pin Movement
For Pins that Exceeded aTrigger During Reporting Month
Easting Change

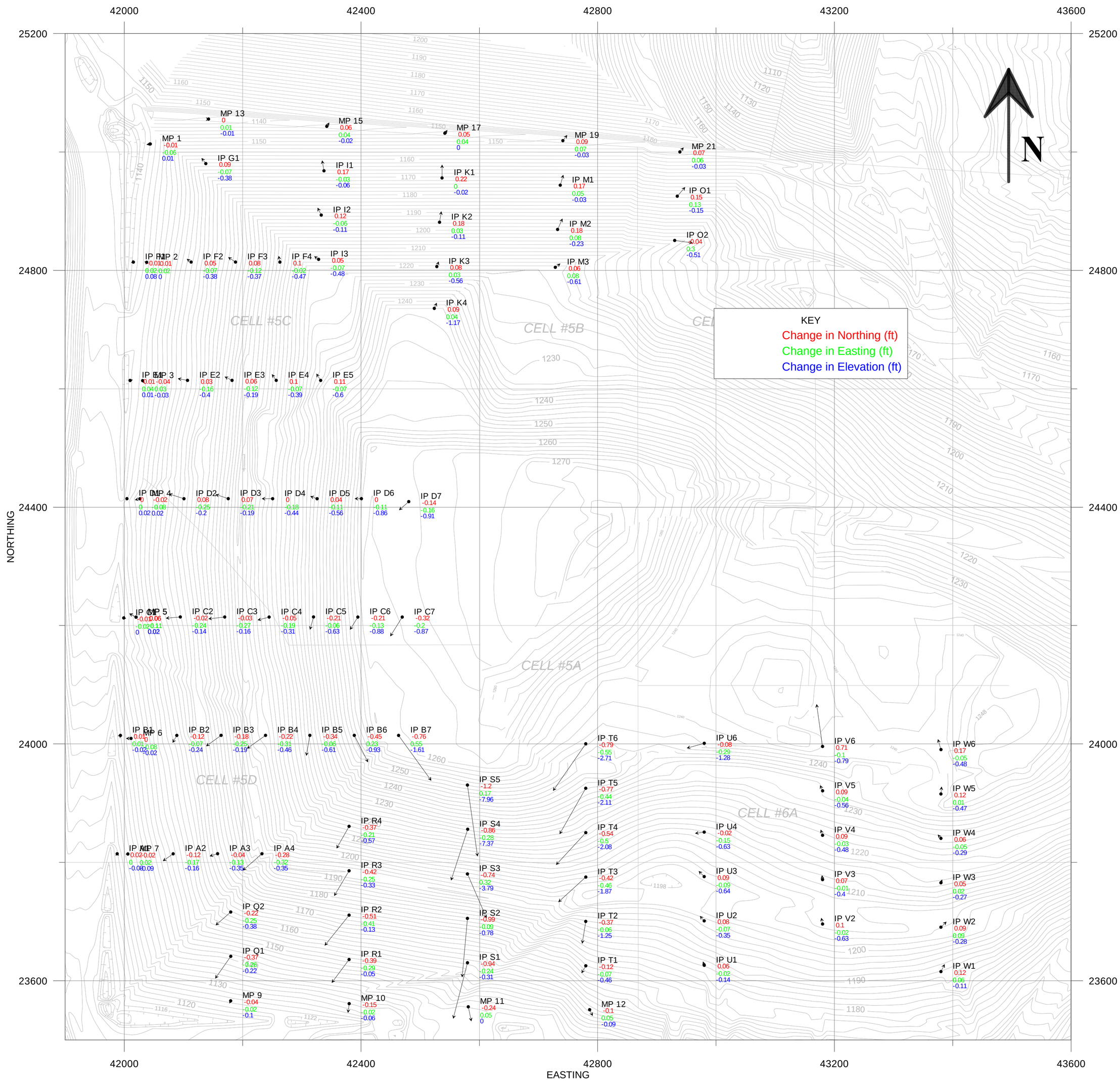


1. Data compiled by PJ Carey Associates, PC.
2. Survey provided by DEI beginning on October 5, 2009.

Graph 16 - West Slope Pin Movement
For Pins that Exceeded a Trigger During Reporting Month
Elevation Change



1. Data compiled by PJ Carey Associates, PC.
2. Survey provided by DEI beginning on October 5, 2009.



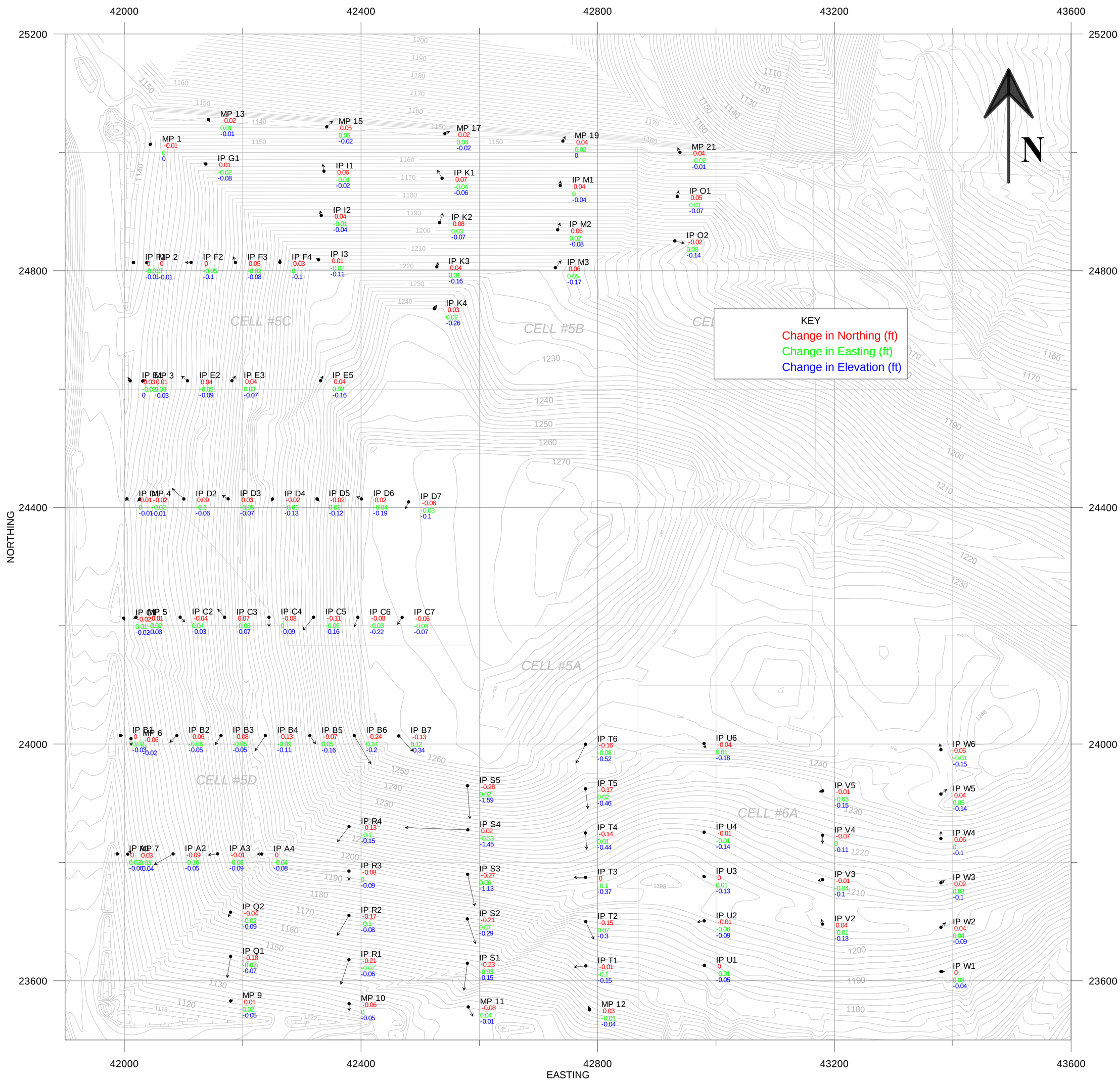
NOTE:

1. TOPOGRAPHY PROVIDED BY DIVERSIFIED ENGINEERING INC AS PART OF THE "88 REMEDIATION UNIT SLOPE PINS AND MONITORING PLATES LOCATION" PROJECT, DRAWING DATED 7/21/2009.

2. HORIZONTAL MOVEMENT VECTORS ARE PLOTTED TO A 1 INCH = 1 FOOT SCALE. → 1 FOOT

3. VERTICAL MOVEMENT TRIGGERS WERE EXCEEDED DURING MONITORING PERIOD AT POINTS IP F1 AND MP5.

HORIZONTAL MOVEMENTS
BETWEEN 10/06/2009 & 03/30/2010



NOTE:

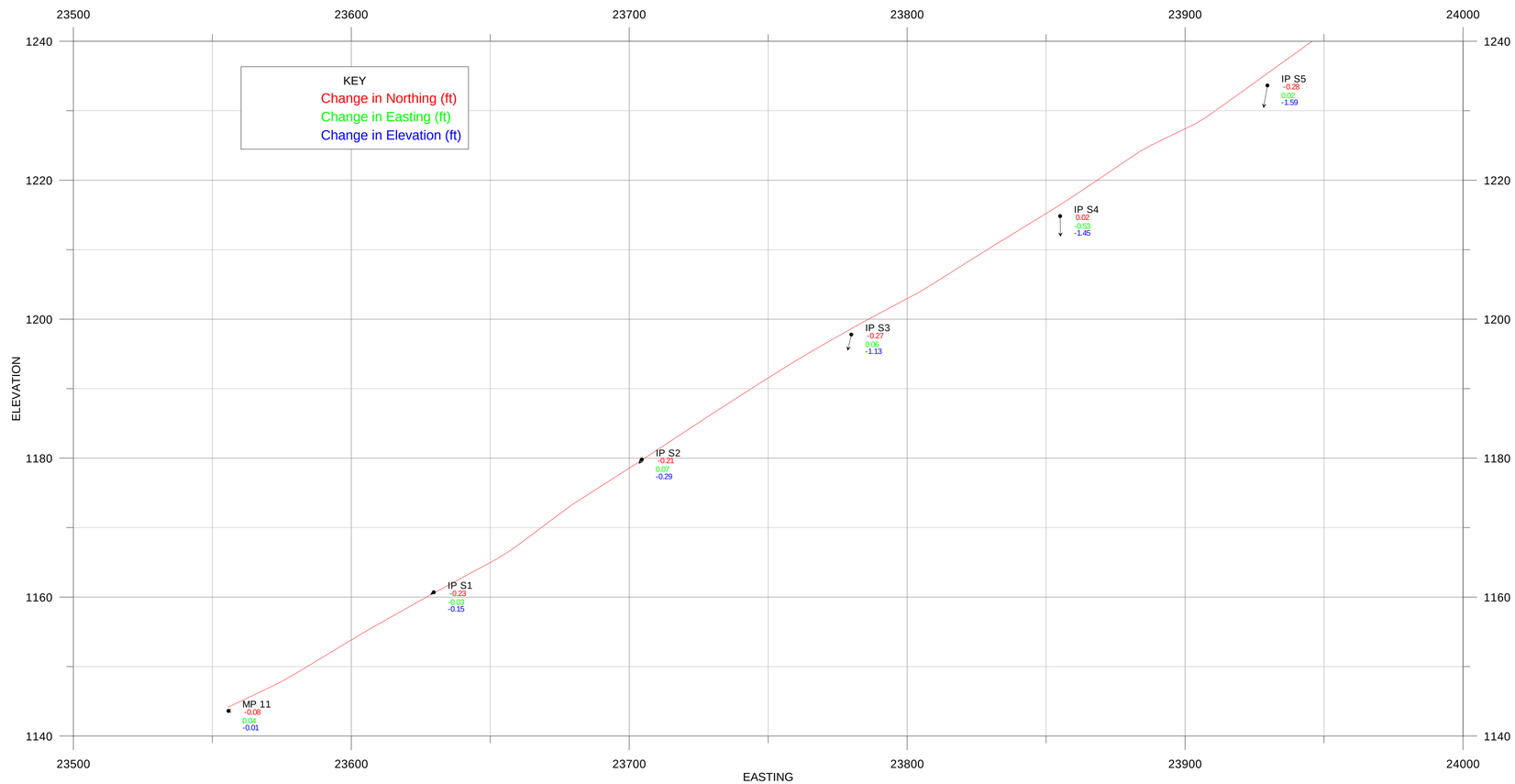
1. TOPOGRAPHY PROVIDED BY DIVERSIFIED ENGINEERING INC AS PART OF THE "88 REMEDIATION UNIT SLOPE PINS AND MONITORING PLATES LOCATION" PROJECT, DRAWING DATED 7/21/2009.

2. HORIZONTAL MOVEMENT VECTORS ARE PLOTTED TO A 1 INCH = 0.5 FEET SCALE. ——▶ 0.5 FEET

3. HORIZONTAL MOVEMENT TRIGGER WAS EXCEEDED DURING REPORTING PERIOD AT POINT IP S4. .

4. VERTICAL MOVEMENT TRIGGERS WERE EXCEEDED DURING REPORTING PERIOD AT POINTS IP F1 AND MP5.

HORIZONTAL MOVEMENTS
BETWEEN 02/23/2010 & 03/30/2010

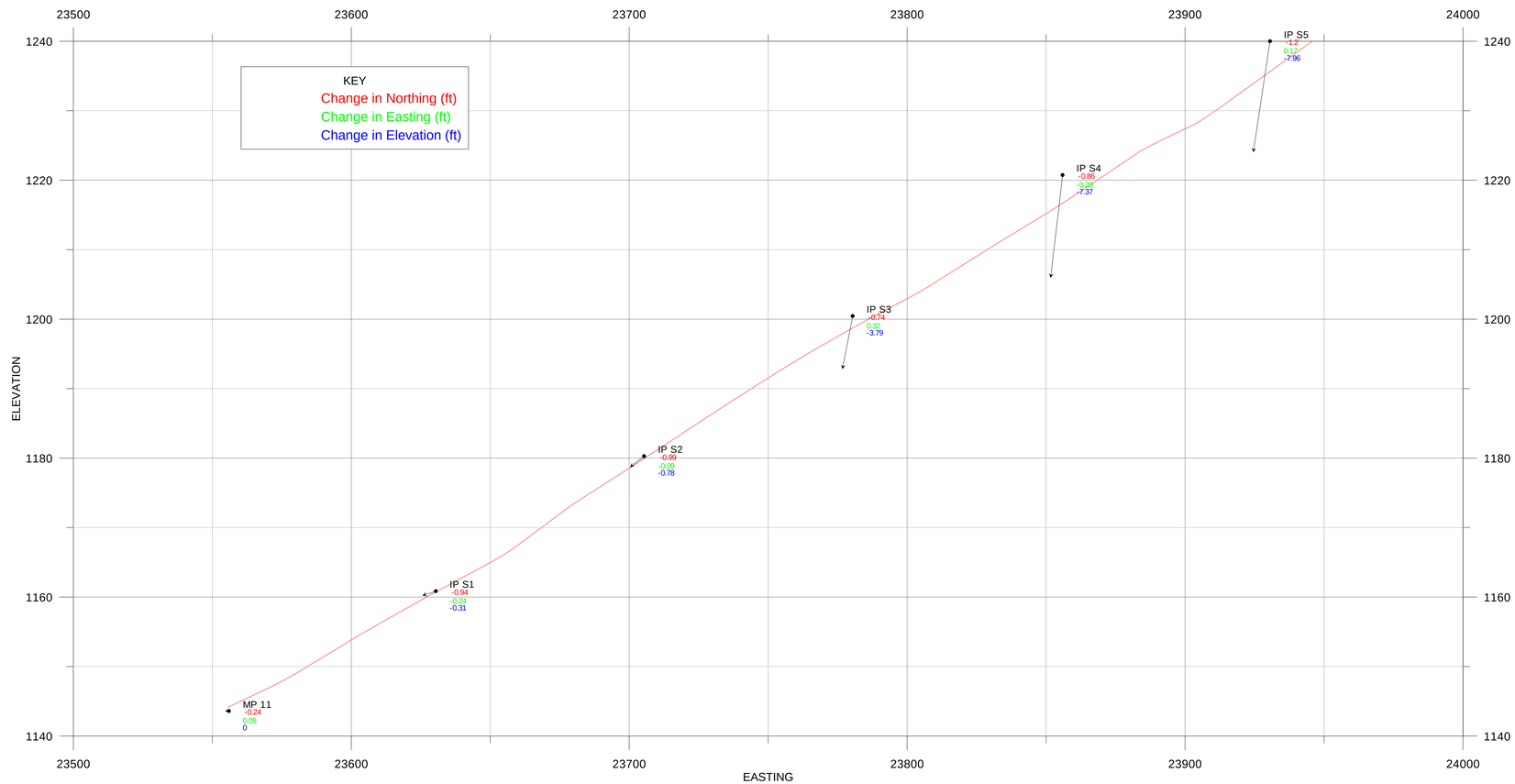


NOTE:

1. PROFILE PROVIDED BY DIVERSIFIED ENGINEERING INC FOR THE BEGINNING OF JANUARY.

2. HORIZONTAL MOVEMENT VECTORS ARE PLOTTED TO A 1 INCH = 5 FEET SCALE. → 5 FEET

PROFILE MOVEMENT FOR ROW 'S'
BETWEEN 02/23/10 & 03/30/10



NOTE:

1. PROFILE PROVIDED BY DIVERSIFIED ENGINEERING INC FOR THE BEGINNING OF JANUARY.

2. HORIZONTAL MOVEMENT VECTORS ARE PLOTTED TO A 1 INCH = 5 FEET SCALE. → 5 FEET

PROFILE MOVEMENT FOR ROW 'S'
BETWEEN 10/06/2009 & 03/30/2010

CHANGE IN ELEVATION (FT)
CALCULATED BASED ON ORIGINAL SURVEY DATE OF 10-06-09

ID	2/23/10	3/2/10	3/9/10	3/16/10	3/23/10	3/30/10
IP G1	-0.30	-0.31	-0.35	-0.36	-0.39	-0.38
IP I1	-0.04	-0.04	-0.06	-0.08	-0.11	-0.06
IP I2	-0.07	-0.07	-0.10	-0.12	-0.13	-0.11
IP I3	-0.37	-0.38	-0.44	-0.45	-0.48	-0.48
IP K1	0.04	0.03	0.01	-0.01	-0.03	-0.02
IP K2	-0.04	-0.04	-0.07	-0.09	-0.11	-0.11
IP K3	-0.40	-0.41	-0.48	-0.50	-0.55	-0.56
IP K4	-0.91	-0.95	-1.07	-1.12	-1.16	-1.17
IP M1	0.01	0.02	-0.03	-0.02	-0.06	-0.03
IP M2	-0.15	-0.16	-0.20	-0.23	-0.26	-0.23
IP M3	-0.44	-0.46	-0.54	-0.57	-0.60	-0.61
IP O1	-0.08	-0.09	-0.13	-0.16	-0.16	-0.15
IP O2	-0.37	-0.37	-0.45	-0.48	-0.52	-0.51
MP 13	0.00	0.00	-0.01	0.00	-0.01	-0.01
MP 15	0.00	0.01	-0.01	-0.02	-0.02	-0.02
MP 17	0.02	0.02	-0.02	-0.03	-0.01	0.00
MP 19	-0.03	-0.01	-0.05	-0.05	-0.03	-0.03
MP 21	-0.02	-0.03	-0.09	-0.10	-0.06	-0.03
IP R1	0.01	0.00	-0.02	-0.03	-0.08	-0.05
IP R2	-0.05	-0.05	-0.11	-0.11	-0.15	-0.13
IP R3	-0.24	-0.26	-0.29	-0.31	-0.34	-0.33
IP R4	-0.42	-0.45	-0.52	-0.53	-0.57	-0.57
IP S1	-0.16	-0.18	-0.20	-0.25	-0.30	-0.31
IP S2	-0.49	-0.54	-0.63	-0.67	-0.74	-0.78
IP S3	-2.66	-2.89	-3.15	-3.38	-3.60	-3.79
IP S4	-5.92	-6.22	-6.53	-6.81	-7.12	-7.37
IP S5	-6.37	-6.64	-7.04	-7.34	-7.65	-7.96
IP T1	-0.31	-0.32	-0.38	-0.41	-0.45	-0.46
IP T2	-0.95	-1.00	-1.08	-1.14	-1.20	-1.25
IP T3	-1.50	-1.55	-1.66	-1.73	-1.84	-1.87
IP T4	-1.64	-1.79	-1.88	-1.96	-2.03	-2.08
IP T5	-1.65	-1.74	-1.87	-1.97	-2.04	-2.11
IP T6	-2.19	-2.29	-2.39	-2.45	-2.60	-2.71
IP U1	-0.09	-0.09	-0.11	-0.13	-0.19	-0.14
IP U2	-0.26	-0.27	-0.30	-0.31	-0.37	-0.35
IP U3	-0.51	-0.52	-0.55	-0.59	-0.66	-0.64
IP U4	-0.49	-0.52	-0.55	-0.58	-0.64	-0.63
IP U5	-0.64	-0.66				
IP U6	-1.10	-1.09	-1.17	-1.24	-1.27	-1.28
IP V1						
IP V2	-0.50	-0.51	-0.61	-0.62	-0.66	-0.63
IP V3	-0.30	-0.31	-0.33	-0.39	-0.44	-0.40
IP V4	-0.37	-0.39	-0.41	-0.44	-0.51	-0.48
IP V5	-0.41	-0.45	-0.51	-0.53	-0.59	-0.56
IP V6						-0.79
IP W1	-0.07	-0.14	-0.13	-0.11	-0.20	-0.11
IP W2	-0.19	-0.21	-0.25	-0.24	-0.30	-0.28
IP W3	-0.17	-0.21	-0.24	-0.24	-0.29	-0.27
IP W4	-0.19	-0.22	-0.25	-0.28	-0.31	-0.29
IP W5	-0.33	-0.37	-0.43	-0.44	-0.50	-0.47
IP W6	-0.33	-0.38		-0.44	-0.49	-0.48

1. Data compiled by PJ Carey Associates, PC.
2. Survey provided by DEI beginning on October 6, 2009.
3. Highlighted regions indicate points which there was a positive change of 0.05 ft or greater in elevation since October 6, 2009.

CHANGE IN ELEVATION (FT)
CALCULATED BASED ON ORIGINAL SURVEY DATE OF 10-06-09

ID	2/23/10	3/2/10	3/9/10	3/16/10	3/23/10	3/30/10
MP 10	-0.01	0.00	-0.02	-0.04	-0.05	-0.06
MP 11	0.01	0.02	0.02	-0.01	0.00	0.00
MP 12	-0.05	-0.05	-0.05	-0.06	-0.08	-0.09
IP A1	-0.02	-0.03	-0.04	-0.08	-0.08	-0.08
IP A2	-0.11	-0.11	-0.10	-0.18	-0.17	-0.16
IP A3	-0.26	-0.29	-0.32	-0.36	-0.38	-0.35
IP A4	-0.27	-0.30	-0.32	-0.34	-0.36	-0.35
IP B1	0.01	-0.01	0.00	-0.03	-0.02	-0.02
IP B2	-0.19	-0.19	-0.21	-0.24	-0.25	-0.24
IP B3	-0.14	-0.13	-0.12	-0.17	-0.22	-0.19
IP B4	-0.35	-0.36	-0.39	-0.43	-0.46	-0.46
IP B5	-0.45	-0.46	-0.53	-0.57	-0.59	-0.61
IP B6	-0.73	-0.78	-0.79	-0.85	-0.91	-0.93
IP B7	-1.27	-1.31	-1.49	-1.56	-1.53	-1.61
IP C1	0.02	0.02	0.01	0.01	-0.05	0.00
IP C2	-0.11	-0.10	-0.11	-0.13	-0.17	-0.14
IP C3	-0.09	-0.12	-0.14	-0.14	-0.19	-0.16
IP C4	-0.22	-0.25	-0.26	-0.30	-0.34	-0.31
IP C5	-0.47	-0.49	-0.53	-0.56	-0.65	-0.63
IP C6	-0.66	-0.71	-0.75	-0.84	-0.89	-0.88
IP C7	-0.80	-0.79	-0.95	-0.95	-0.90	-0.87
IP D1	0.03	0.03	0.03	0.02	-0.02	0.02
IP D2	-0.14	-0.13	-0.16	-0.18	-0.23	-0.20
IP D3	-0.12	-0.13	-0.17	-0.18	-0.21	-0.19
IP D4	-0.31	-0.35	-0.38	-0.41	-0.44	-0.44
IP D5	-0.44	-0.46	-0.49	-0.53	-0.55	-0.56
IP D6	-0.67	-0.69	-0.77	-0.80	-0.85	-0.86
IP D7	-0.81	-0.81	-0.95	-1.01	-0.94	-0.91
IP E1	0.01	0.01	0.02	0.02	-0.03	0.01
IP E2	-0.31	-0.33	-0.37	-0.38	-0.42	-0.40
IP E3	-0.12	-0.13	-0.17	-0.19	-0.24	-0.19
IP E4				-0.37	-0.40	-0.39
IP E5	-0.44	-0.48	-0.52	-0.56	-0.58	-0.60
IP F1	0.09	0.10	0.09	0.08	0.06	0.08
IP F2	-0.28	-0.30	-0.33	-0.34	-0.38	-0.38
IP F3	-0.29	-0.29	-0.34	-0.34	-0.39	-0.37
IP F4	-0.37	-0.37	-0.42	-0.44	-0.47	-0.47
IP Q1	-0.15	-0.14	-0.19	-0.19	-0.27	-0.22
IP Q2	-0.29	-0.29	-0.33	-0.35	-0.40	-0.38
MP 1	0.01	0.01	0.01	0.01	0.01	0.01
MP 2	0.01	0.02	0.00	0.00	-0.02	0.00
MP 3	0.00	0.01	0.00	-0.02	-0.03	-0.03
MP 4	0.03	0.03	0.02	0.02	0.02	0.02
MP 5	0.05	0.05	0.04	0.04	0.02	0.02
MP 6	0.00	-0.01	-0.02	-0.01	-0.01	-0.02
MP 7	-0.05	-0.04	-0.05	-0.06	-0.05	-0.09
MP 8						
MP 9	-0.05	-0.06	-0.07	-0.08	-0.10	-0.10

1. Data compiled by PJ Carey Associates, PC.
2. Survey provided by DEI beginning on October 6, 2009.
3. Highlighted regions indicate points which there was a positive change of 0.05 ft or greater in elevation since October 6, 2009.

HORIZONTAL RATE OF MOVEMENT (FT/DAY)

CALCULATED BASED ON PREVIOUS READING AT EACH POINT

ID	2/23/10	3/2/10	3/9/10	3/16/10	3/23/10	3/30/10
IP G1	0.00	0.00	0.00	0.00	0.01	0.01
IP I1	0.00	0.00	0.01	0.00	0.01	0.01
IP I2	0.00	0.00	0.01	0.00	0.00	0.00
IP I3	0.00	0.01	0.00	0.00	0.00	0.00
IP K1	0.00	0.01	0.01	0.00	0.01	0.01
IP K2	0.00	0.00	0.01	0.01	0.00	0.01
IP K3	0.00	0.00	0.00	0.01	0.00	0.01
IP K4	0.00	0.00	0.00	0.01	0.00	0.00
IP M1	0.00	0.00	0.00	0.01	0.00	0.01
IP M2	0.00	0.00	0.00	0.01	0.01	0.01
IP M3	0.00	0.00	0.00	0.00	0.00	0.01
IP O1	0.01	0.01	0.00	0.01	0.00	0.00
IP O2	0.01	0.01	0.01	0.01	0.01	0.01
MP 13	0.00	0.00	0.00	0.00	0.01	0.01
MP 15	0.00	0.00	0.00	0.00	0.00	0.01
MP 17	0.01	0.00	0.00	0.00	0.00	0.00
MP 19	0.00	0.00	0.01	0.00	0.01	0.01
MP 21	0.01	0.01	0.01	0.01	0.00	0.00
IP R1	0.01	0.00	0.01	0.01	0.01	0.00
IP R2	0.00	0.02	0.01	0.02	0.00	0.01
IP R3	0.01	0.01	0.00	0.00	0.02	0.01
IP R4	0.04	0.01	0.01	0.01	0.02	0.01
IP S1	0.01	0.01	0.01	0.01	0.00	0.02
IP S2	0.01	0.00	0.02	0.01	0.02	0.02
IP S3	0.01	0.01	0.02	0.01	0.00	0.03
IP S4	0.01	0.00	0.06	0.02	0.01	0.01
IP S5	0.02	0.01	0.01	0.01	0.02	0.01
IP T1	0.00	0.01	0.01	0.01	0.01	0.00
IP T2	0.00	0.00	0.01	0.00	0.00	0.02
IP T3	0.01	0.01	0.01	0.01	0.01	0.00
IP T4	0.01	0.01	0.01	0.01	0.01	0.03
IP T5	0.02	0.01	0.01	0.01	0.00	0.02
IP T6	0.01	0.00	0.02	0.01	0.00	0.01
IP U1	0.00	0.01	0.00	0.01	0.00	0.01
IP U2	0.01	0.01	0.01	0.01	0.01	0.01
IP U3	0.01	0.01	0.01	0.01	0.01	0.02
IP U4	0.01	0.01	0.00	0.00	0.00	0.01
IP U5	0.01	0.00				
IP U6	0.01	0.00	0.00	0.00	0.00	0.00
IP V1						
IP V2	0.00	0.00	0.01	0.01	0.00	0.01
IP V3	0.00	0.01	0.01	0.01	0.01	0.01
IP V4	0.00	0.01	0.00	0.01	0.01	0.01
IP V5	0.01	0.01	0.01	0.02	0.02	0.01
IP V6						0.00
IP W1	0.00	0.00	0.00	0.01	0.00	0.00
IP W2	0.00	0.01	0.00	0.00	0.01	0.01
IP W3	0.00	0.00	0.00	0.00	0.00	0.01
IP W4	0.00	0.01	0.00	0.00	0.00	0.00
IP W5	0.02	0.00	0.01	0.01	0.00	0.01
IP W6	0.01	0.00		0.00	0.01	0.01

1. Data compiled by PJ Carey Associates, PC.
2. Survey provided by DEI beginning on October 6, 2009.
3. Highlighted regions indicate points which the horizontal rate of movement exceed the trigger value of 0.05 ft/day.

HORIZONTAL RATE OF MOVEMENT (FT/DAY)

CALCULATED BASED ON PREVIOUS READING AT EACH POINT

ID	2/23/10	3/2/10	3/9/10	3/16/10	3/23/10	3/30/10
MP 10	0.00	0.00	0.00	0.01	0.01	0.00
MP 11	0.00	0.00	0.00	0.00	0.00	0.01
MP 12	0.00	0.01	0.00	0.00	0.00	0.01
IP A1	0.00	0.00	0.00	0.00	0.00	0.00
IP A2	0.02	0.01	0.00	0.00	0.01	0.01
IP A3	0.01	0.00	0.01	0.00	0.01	0.01
IP A4	0.00	0.01	0.01	0.00	0.01	0.01
IP B1	0.01	0.00	0.00	0.00	0.00	0.00
IP B2	0.00	0.00	0.01	0.01	0.00	0.00
IP B3	0.00	0.01	0.00	0.01	0.02	0.00
IP B4	0.01	0.01	0.00	0.01	0.01	0.00
IP B5	0.00	0.01	0.01	0.01	0.01	0.02
IP B6	0.01	0.01	0.01	0.00	0.01	0.03
IP B7	0.01	0.02	0.02	0.03	0.01	0.02
IP C1	0.00	0.00	0.00	0.00	0.00	0.00
IP C2	0.01	0.01	0.00	0.01	0.01	0.01
IP C3	0.01	0.03	0.01	0.03	0.01	0.01
IP C4	0.02	0.01	0.00	0.01	0.02	0.01
IP C5	0.00	0.01	0.01	0.00	0.00	0.01
IP C6	0.00	0.00	0.00	0.00	0.01	0.00
IP C7	0.01	0.01	0.03	0.03	0.02	0.02
IP D1	0.00	0.00	0.00	0.00	0.01	0.00
IP D2	0.00	0.00	0.00	0.00	0.01	0.00
IP D3	0.00	0.00	0.01	0.00	0.00	0.00
IP D4	0.01	0.01	0.01	0.01	0.01	0.00
IP D5	0.01	0.01	0.00	0.00	0.00	0.01
IP D6	0.00	0.01	0.01	0.00	0.01	0.01
IP D7	0.01	0.02	0.01	0.03	0.01	0.02
IP E1	0.00	0.01	0.00	0.00	0.00	0.00
IP E2	0.00	0.00	0.00	0.01	0.00	0.00
IP E3	0.01	0.01	0.01	0.01	0.00	0.01
IP E4				0.00	0.01	0.01
IP E5	0.01	0.01	0.01	0.01	0.00	0.00
IP F1	0.00	0.00	0.00	0.00	0.00	0.00
IP F2	0.01	0.00	0.01	0.00	0.00	0.00
IP F3	0.00	0.00	0.01	0.00	0.00	0.00
IP F4	0.00	0.00	0.00	0.00	0.00	0.00
IP Q1	0.01	0.01	0.01	0.01	0.01	0.01
IP Q2	0.01	0.00	0.01	0.01	0.00	0.00
MP 1	0.00	0.00	0.00	0.00	0.00	0.00
MP 2	0.00	0.00	0.00	0.00	0.00	0.00
MP 3	0.00	0.00	0.00	0.00	0.00	0.01
MP 4	0.00	0.00	0.00	0.00	0.00	0.00
MP 5	0.00	0.00	0.00	0.00	0.00	0.01
MP 6	0.00	0.00	0.00	0.01	0.00	0.00
MP 7	0.00	0.00	0.00	0.00	0.00	0.00
MP 8						
MP 9	0.00	0.00	0.00	0.00	0.00	0.00

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