

Countywide Recycling and Disposal Facility

Weekly Progress Report

04/11/08

This Weekly Progress Report is prepared by Countywide and submitted to the OEPA weekly by the close of business on each Friday. This meets the requirement of Order No. 5 of the December 31, 2007 Findings and Orders to provide updates on progress of field activities.

In addition, this report provides updated presentations of data being collected. All information presented in this report originates from the publicly-available data being gathered as part of the normal operational requirements of the facility or as part of the Director's Findings and Orders. **This report covers the period April 5, 2008 to April 11, 2008.**

PROGRESS ON FIELD ACTIVITIES TOWARD DECEMBER 31, 2007 ORDERS

See the attached Table 1.

DATA PRESENTATION

Bold font in comments column means updated version included with this report.

<u>Attachment</u>	<u>Attachment No.</u>	<u>Comments</u>
Wellhead Temperature Graph	1	Updated April 11, 2008
Downhole Temp. Graph	2	Updated April 11, 2008
FBMP Max. In-Situ Temp. Graph	3	Updated April 11, 2008
Inclinometer Max. In-Situ Temp. Graph	4	Updated April 11, 2008
Leachate Sump Temperature. Graph	5	Updated April 11, 2008
LCS Temperature Graph	6	Updated April 11, 2008
Weekly Cumulative Sett. Graph	7	Updated April 11, 2008
Quarterly Cumulative Sett. Graph	8	Updated April 11, 2008
CO Graph	9	Updated April 11, 2008
Leachate Volume Graph	10	Updated April 11, 2008
Leachate COD Graph	11	Updated April 11, 2008
Leachate TDS Graph	12	Updated April 11, 2008

<u>Appendices (transmitted separately)</u>	<u>Appendix No.</u>	<u>Comments</u>
Wellhead Temperature Zone Map	A	Updated April 11, 2008
4-Week Cumulative Sett. Front Map	B	Updated April 11, 2008
Carbon Monoxide Zone Map	C	Updated April 11, 2008

COMMENTARY ON DATA

Wellhead temperatures appear to be rebounding up slightly as expected due, primarily, to seasonal effects (see Attachment 1). Downhole temperatures taken specifically in the reaction area, which should not be affected as much by ambient temperature, decreased through much of 2007 and through February 2008, but appear to have increased slightly in March (see Attachment 2). We have noted that the dewatering effort is achieving liquid drawdown in gas wells and thereby exposing new perforations for enhanced gas collection in the reaction area. This may contribute to the apparent increase observed in downhole temperatures in March.

Updated Attachment 3 shows direct measurements of maximum waste temperature in the North part of the 88-acre area, near Cell 7. In the past four months one of these has increased by 2 deg. F, two have not changed, and two are trending down by about 10 deg. F each.

Updated Attachment 4 shows direct measurements of maximum waste temperature within the landfill. INC 3 and INC 5 are from part of the South Slope area and show that temperatures are declining there; this corresponds with other observations which suggest that the reaction ceased in that area several months ago,

and now residual heat is slowly attenuating. Also show on Attachment 4, INC 8 and INC 10 are from the West Slope area; these show about a 2-3 deg. F rise over the past 6 months.

Attachments 5 and 6 show temperatures in the leachate sumps (Att. 5) and at the bottom of the landfill (Att. 6); these vary from week-to-week, some are rising slowly and some are decreasing slowly.

We believe that the rate and location of settlement is the best direct evidence of the intensity and location of the reaction. All waste tends to compress, decompose, and settle, but the reaction of the aluminum dross generates heat, which in turn causes increased decomposition and volume reduction within the heated waste mass, which is then observed as higher-than-normal settlement. The updated Attachment 7 shows that the amount of settlement (as weekly volume reduction) continues to trend downward as indicated by the dashed trendline. This is supported by Attachment 8 which goes further back in time to the onset of the reaction and looks at settlement volume on a quarterly basis.

In addition, the settlement data suggests that the area overall affected by the rapid settlement is decreasing, while the area affected by the reaction is clearly becoming localized with some expansion to the western part of the 88-acres as indicated by the lines on Appendix B.

Updated Attachment 9 shows that the average and the maximum Carbon Monoxide concentration in the reaction area is essentially stable since May 2007.

Prior to adding 50 more gas well pumps in November and December, the volume of leachate collected in the 88-acre area was decreasing. Updated Attachment 12 shows increasing leachate volumes which is clearly the result of adding dewatering pumps to the gas wells. Attachments 11 (generally decreasing COD) and Attachment 12 (generally increasing TSS) may be showing that the capping has had the effect of allowing the leachate to concentrate and age during the past 9 months, likely resulting from the reduction of the rainfall infiltration contribution to the leachate volume.

Attachments A and C show the wellhead temperature and the concentration of carbon monoxide within the reaction area. Comparing these maps to previous versions confirms that the maximum values of both of these are steady or decreasing.

AMBIENT AIR SAMPLING ACTIVITIES LOG

See attached Table 2.

OUTSTANDING ISSUES

Significant documents pending OEPA review, comment, and/or approval:

- Fire Suppression Plan submitted May 25, 2007
- Permit-to-Install (PTI) "Needs Analysis" submitted May 29, 2007
- Data Reduction Request submitted September 6, 2007
- Dewatering and EGES Enhancement Work Plan submitted on Jan. 14, 2008
- West Slope Monitoring Reduction Request submitted on Jan. 16, 2008.
- Work Plan for Additional Ambient Air Testing, submitted Feb. 22, 2008
- Design for Cell 8A/C Separation Berm, submitted March 7, 2008
- Sampling Reduction Request, South Slope Gas Probes submitted March 24, 2008

TABLE 1

**WEEKLY PROGRESS REPORT FOR DECEMBER 31, 2007 F&Os
COUNTYWIDE LANDFILL
WEEK ENDING 04-11-08**

Work Item	Units of Measure	Estimated Required or Goal*	Previously Completed	Completed This Period	Total Completed to Date	Est. to be Completed Next Week	Comments
Install Vertical Relief Wells	ea.	4	3	1	4	0	All four RW wells were completed as of March 22, 2008. Focus of the upcoming weeks will be toward getting pumps operating as efficiently as possible and getting substantial drawdown in the wells.
Install Perm. Dewatering Pumps and Infrastructure	ea.	44	44	0	44	0	Have fully satisfied the requirement to have at least 37 pumps in by Feb. 15. and have installed pumps in all wells as identified in the Dewatering Work Plan (which was submitted on Jan. 14). Freezing has limited the uptime of the pumps to this date. However, with warmer weather on the way, emphasis will now be placed on increasing uptime of pumps and working toward a fully-operation field.
Install 4-inch HDPE Liquid Discharge Line	l.f.	3200	3000	0	3000	0	Have fully satisfied the requirement for a minimum 37 gas wells required by Feb. 15.
Install 2-inch HDPE Air Supply Line	l.f.	10500	10300	0	10300	0	Have fully satisfied the requirement for a minimum 37 gas wells required by Feb. 15.
Install and Test Compressors	ea.	3	2	1	3	0	Two new compressors are in place and in service, meeting the F&O required schedule of Jan. 31. In addition, a third new compressor was put into service on April 8 to provide additional, reliable air supply to the pneumatically-powered gas well pumps.
Relocate Flares from Top of Landfill	ea.	2	0	1	1	0	The committed schedule for relocating the flares is May 12. One flare was relocated from the top of the landfill to a new pad on the north side of the landfill on April 9.
Install New Gas Wells	ea.	34 (original goal was 10)	16	7	23	5	New gas well drilling began on, Monday, March 3. Countywide has elected to add many more gas wells in the Cell 7 and Cell 8 area. This will enhance odor control. At this time, it is estimated that it will take until late April to complete this work.
Replace Compromised Wells	ea.	23 (original goal was 12)	8	3	11	5	Replacement gas well drilling began on Tuesday, Feb. 26. One more replacement gas well has been added to the program since the last weekly update. See narrative for "Install New Gas Wells" above for more information.
Install Perm. Dewatering Pumps in New and Replacement Gas Wells	ea.	25	0	0	0	4	Water levels obtained in newly-installed gas wells indicates that several of the new wells require pumps per the objective of the Dewatering Plan. This process will begin next week.
Install 4-inch HDPE Liquid Discharge Line for new gas wells	l.f.	3000	0	0	0	400	An assessment will be made to determine if the new and replacement wells need a pump after the first liquid level monitoring event following installation. If a pump is needed, the air and liquid conveyance lines will be promptly installed.
Install 2-inch HDPE Air Supply Line for new gas wells	l.f.	5000	0	0	0	600	An assessment will be made to determine if the new and replacement wells need a pump after the first liquid level monitoring event following installation. If a pump is needed, the air and liquid conveyance lines will be promptly installed.
Measure Achievable Drawdown	ea.	124	0	0	0	0	This process is scheduled to start after new and replacement wells are in place and after the pumping system has been operating well. Currently, this task is scheduled to begin May 20.
Establish Baseline Flow	ea.	1	0	0	0	0	This will be performed after measuring achievable drawdown and is estimated to be completed July 28.

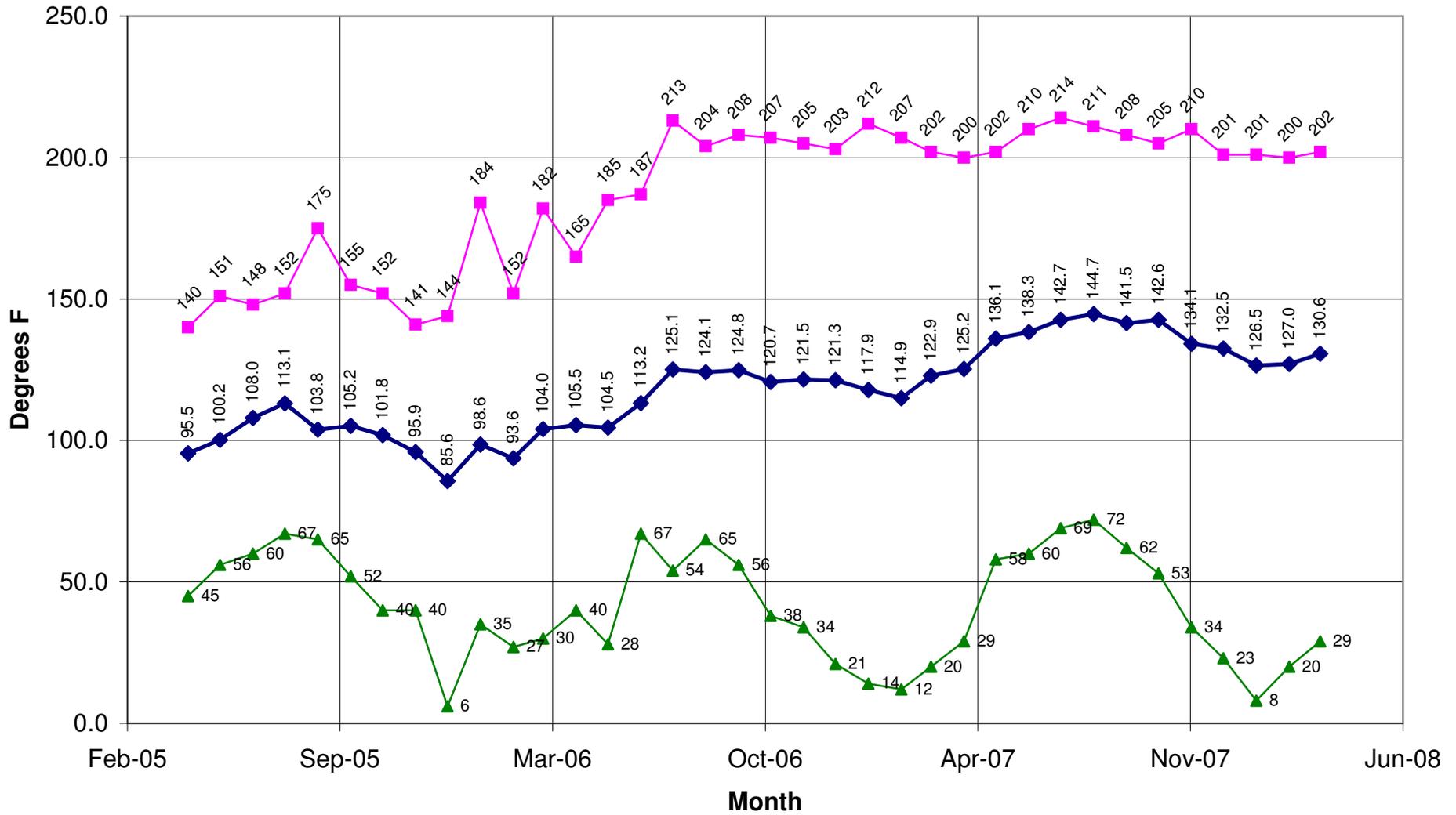
* The estimate of "required" or "goal" items may change as project progresses.

Note: This table presents one-time field activities and does not address recurring activities such as liquid level measurements, downhole temperature profiles, liquid sampling, etc.

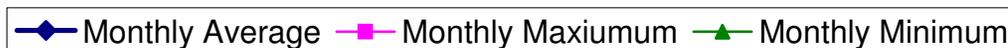
Table 2
Log of Field Activities and Conditions
Per Order No. 2.B of Feb. 7, 2008 Orders

Date	Approx. Time	Contractor	Field Activity or Potentially Odor-Causing Incident.
3/30/08	N/A	N/A	No significant activities or events
3/31/08	10:30-11:30	AEG	Crack repair near PW-127.
3/31/08	7:00- 17:30	Frontz	Drilling activities at SS-9 and SS-10.
3/31/08	10:30- 18:00	AEG	Well development activities at Relief Well #1.
3/31/08	8:00 - 18:00	AEG	Blackhawk pump maintenance
4/1/08	8:00 - 18:00	AEG	Blackhawk pump maintenance
4/1/08	12:30 - 15:30	AEG	Well development activities at Relief Well #3.
4/1/08	8:30 - 10:30	AEG	Well development activities at Relief Well #2.
4/1/08	7:30 - 17:00	Frontz	Drilling activities at SS-11,SS-12, and SS- 13.
4/2/08	9:30 - 18:00	Frontz	Drilling activities at SS-11,SS-15, and SS- 16.
4/2/08	8:00 - 16:00	AEG	Temporary Cap Repair activities at Relief Well #1.
4/2/08	15:30 - 17:00	AEG	Well development activities at Relief Well #2.
4/2/08	8:00 - 17:30	AEG	Blackhawk pump maintenance
4/2/08	7:30 - 19:00	AEG	Drilling activities at PW-352,PW-353,PW-354, and PW-355.
4/3/08	10:00 - 12:00	AEG	Well development activities at Relief Well #1.
4/3/08	8:00 - 16:15	LFG Spec.	Replaced Flare tip for Flare #1.
4/3/08	8:30 - 17:00	Frontz	Drilling activities at SS-6,SS-7, and SS- 8.
4/3/08	7:30 - 17:30	AEG	Blackhawk pump Maintenance
4/3/08	12:30 - 16:30	AEG	Temporary Cap Repair activities at PW-167 area and PW-151 area.
4/3/08	7:30 - 17:00	AEG	Drilling activities at PW-346,PW-347, and PW-348.
4/4/08	7:30 - 17:30	AEG	Blackhawk pump Maintenance
4/4/08	8:00 - 12:00	Frontz	Drilling activities at SS-8,and SS- 15.
4/4/08	10:00 - 12:45.	AEG	Flare maintenance at Flare #1, #4, and #7.
4/5/08	8:00 - 15:00	AEG	Blackhawk pump maintenance.
4/5/08	17:00	AEG	Flare #4 shutdown
4/5/08	10:30 - 20:00	AEG	Well development activities at Relief Well #13

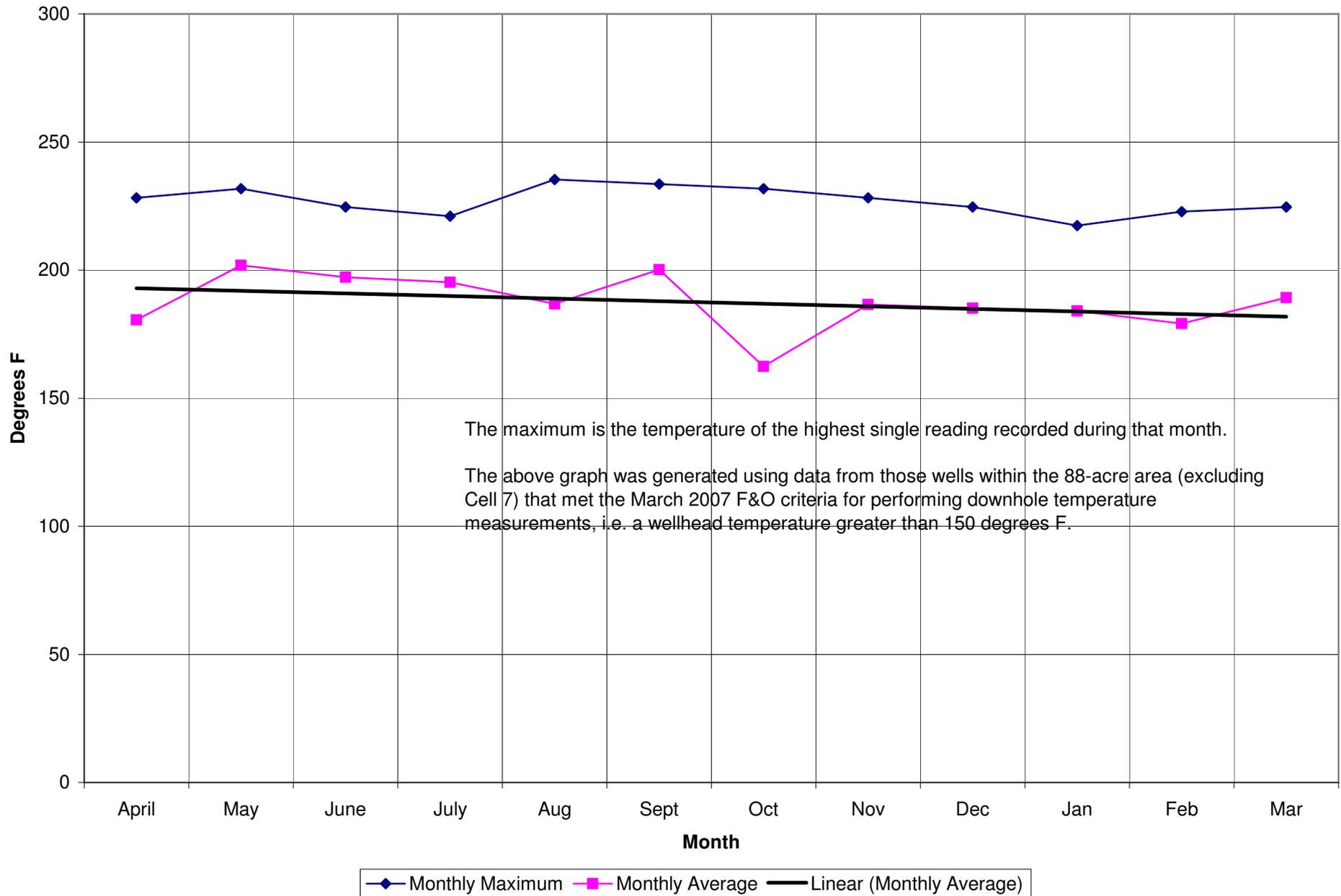
Initial Wellhead Temperatures in the 88-acre Area



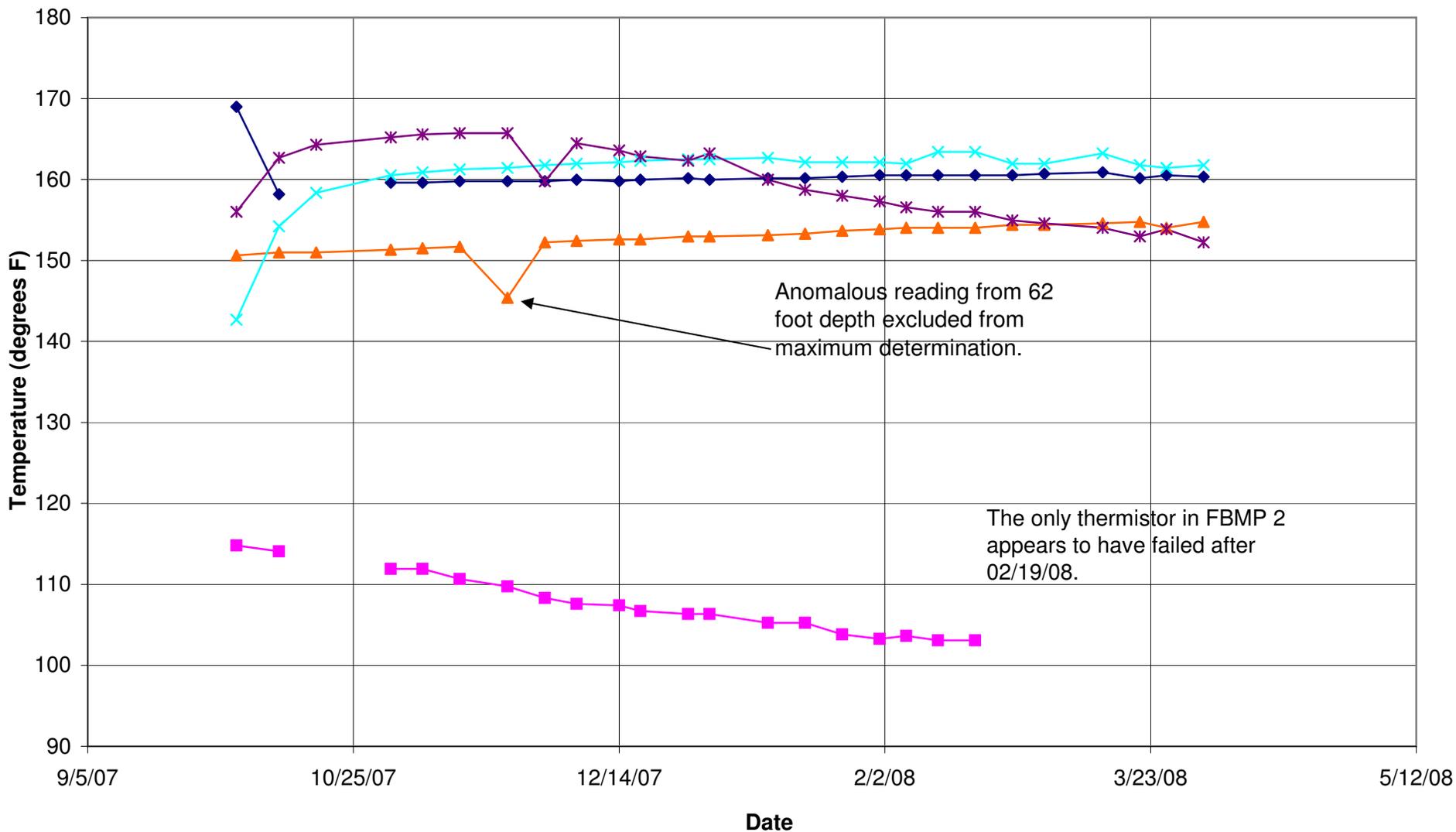
All Cell 7 wells excluded except PW-315.



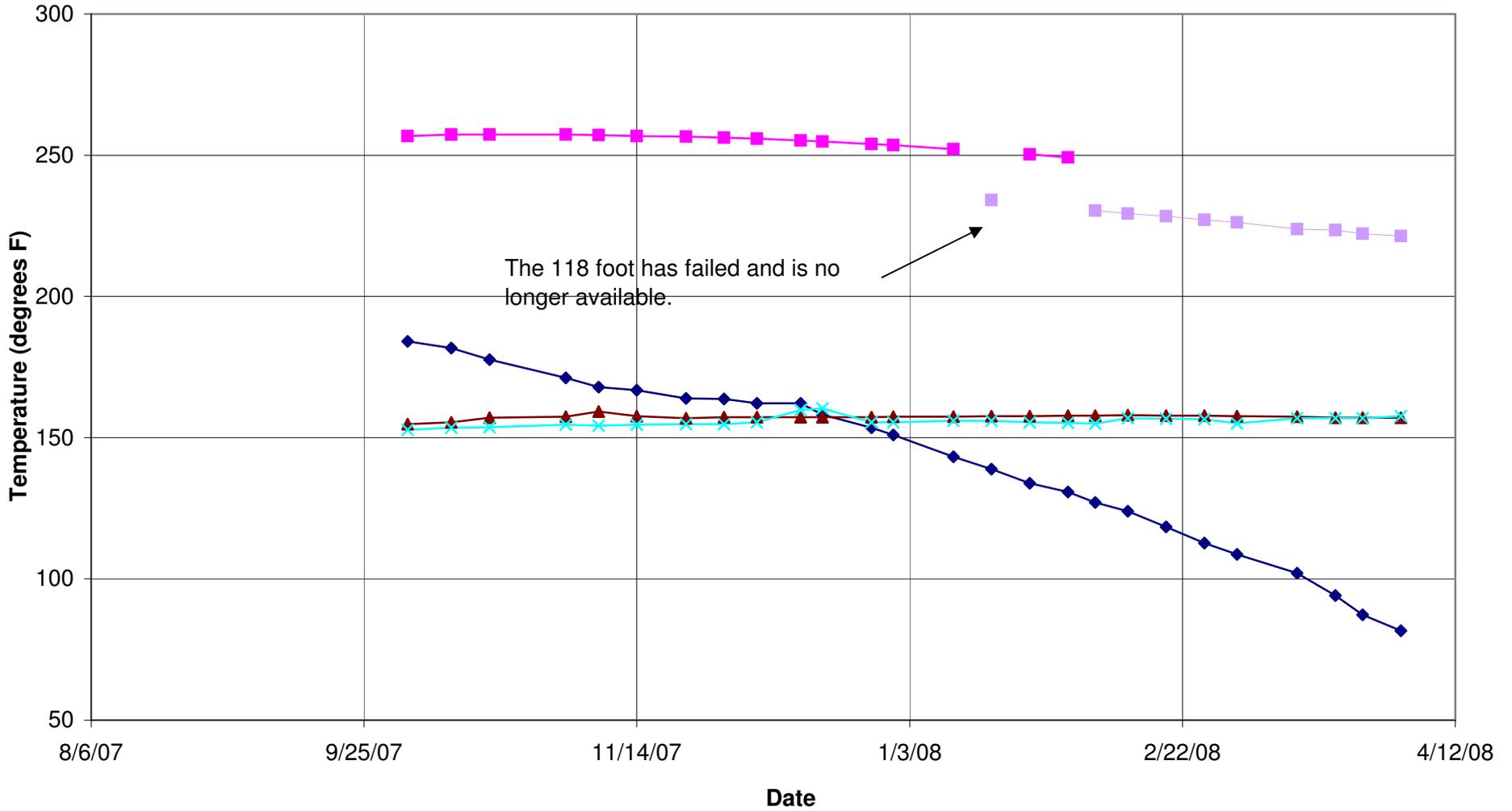
Downhole Temperatures Monthly Maximums and Averages



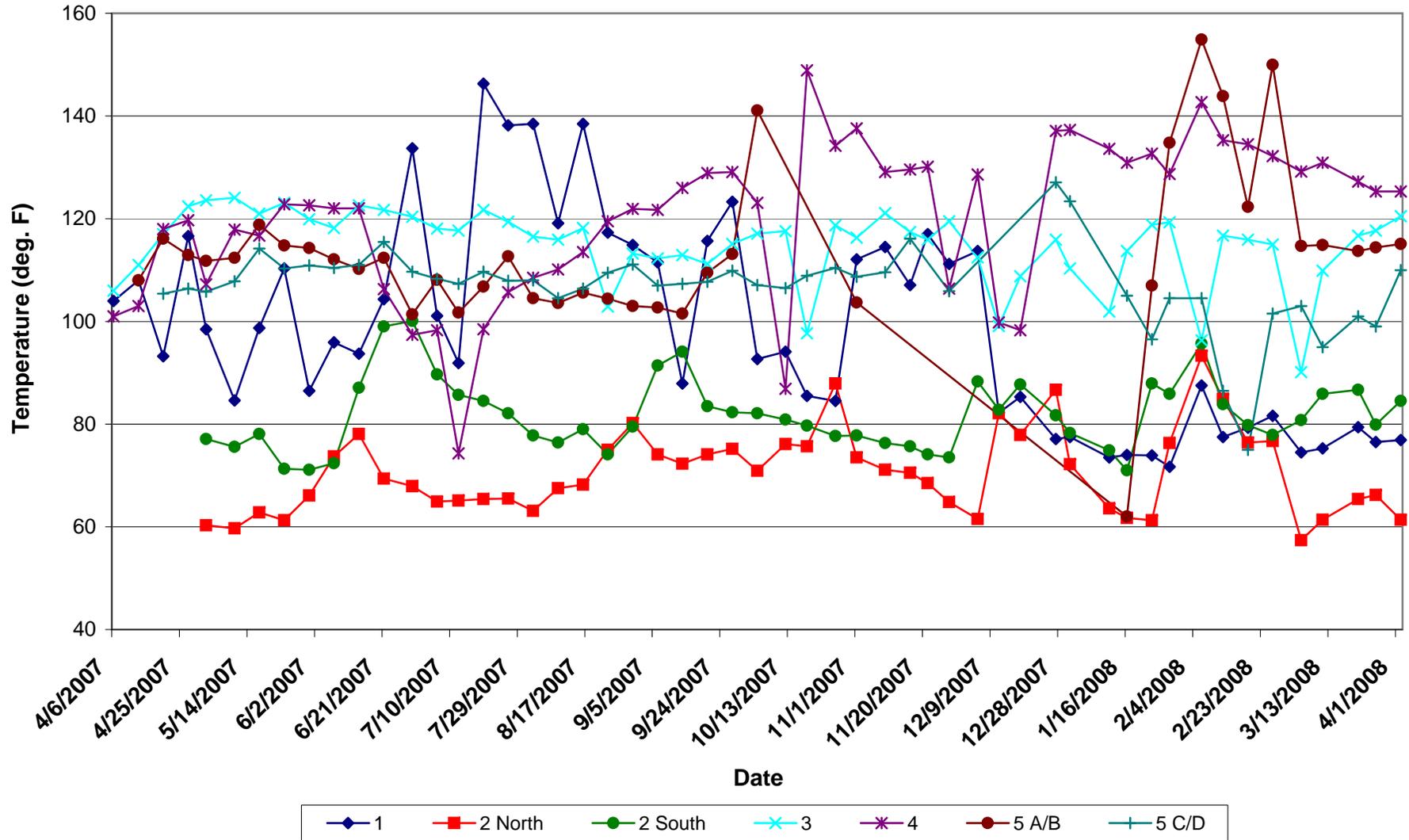
In-situ Temperatures Maximum Readings per Date per Boring



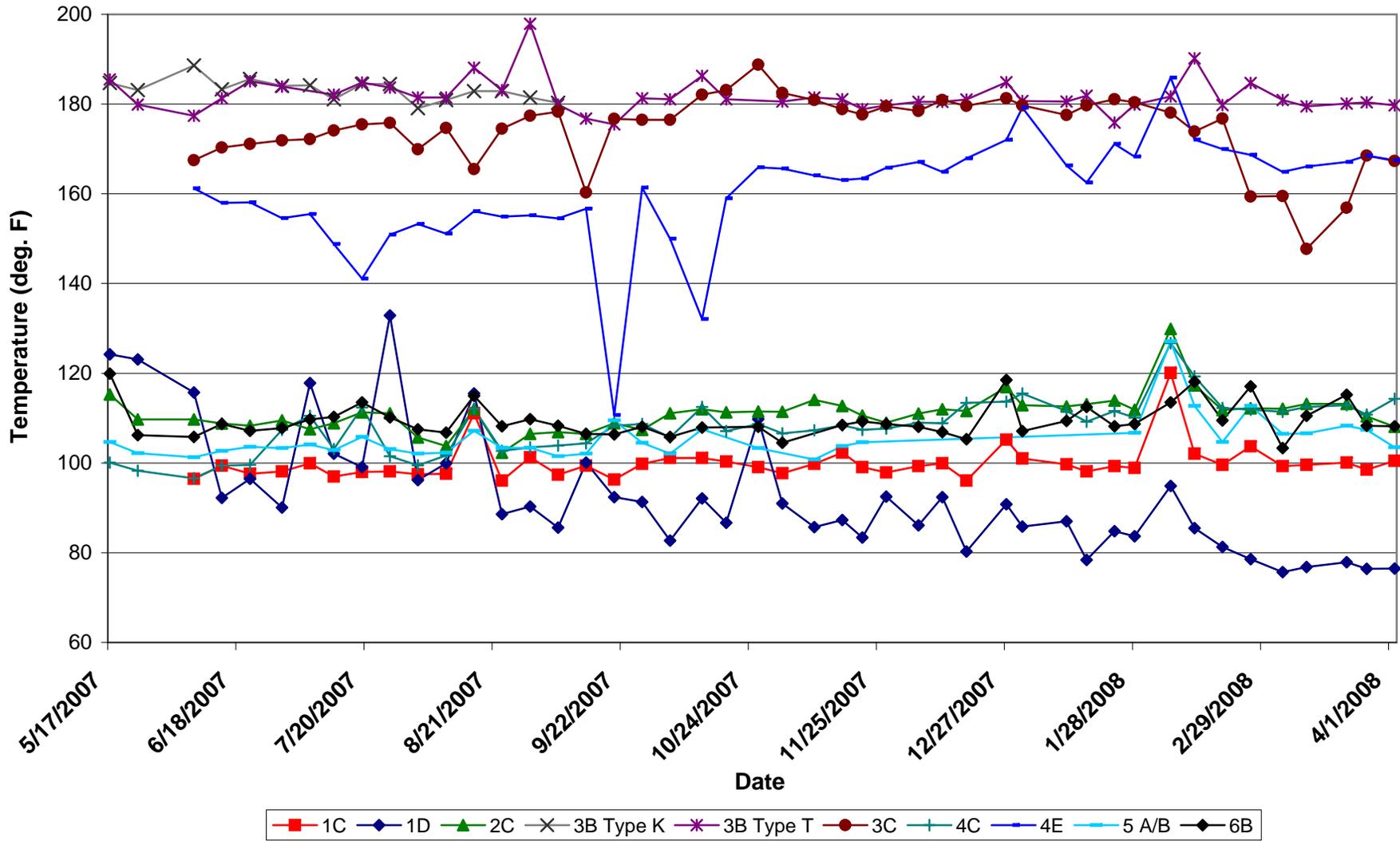
In-situ Temperatures Maximum Readings per Date per Inclinator



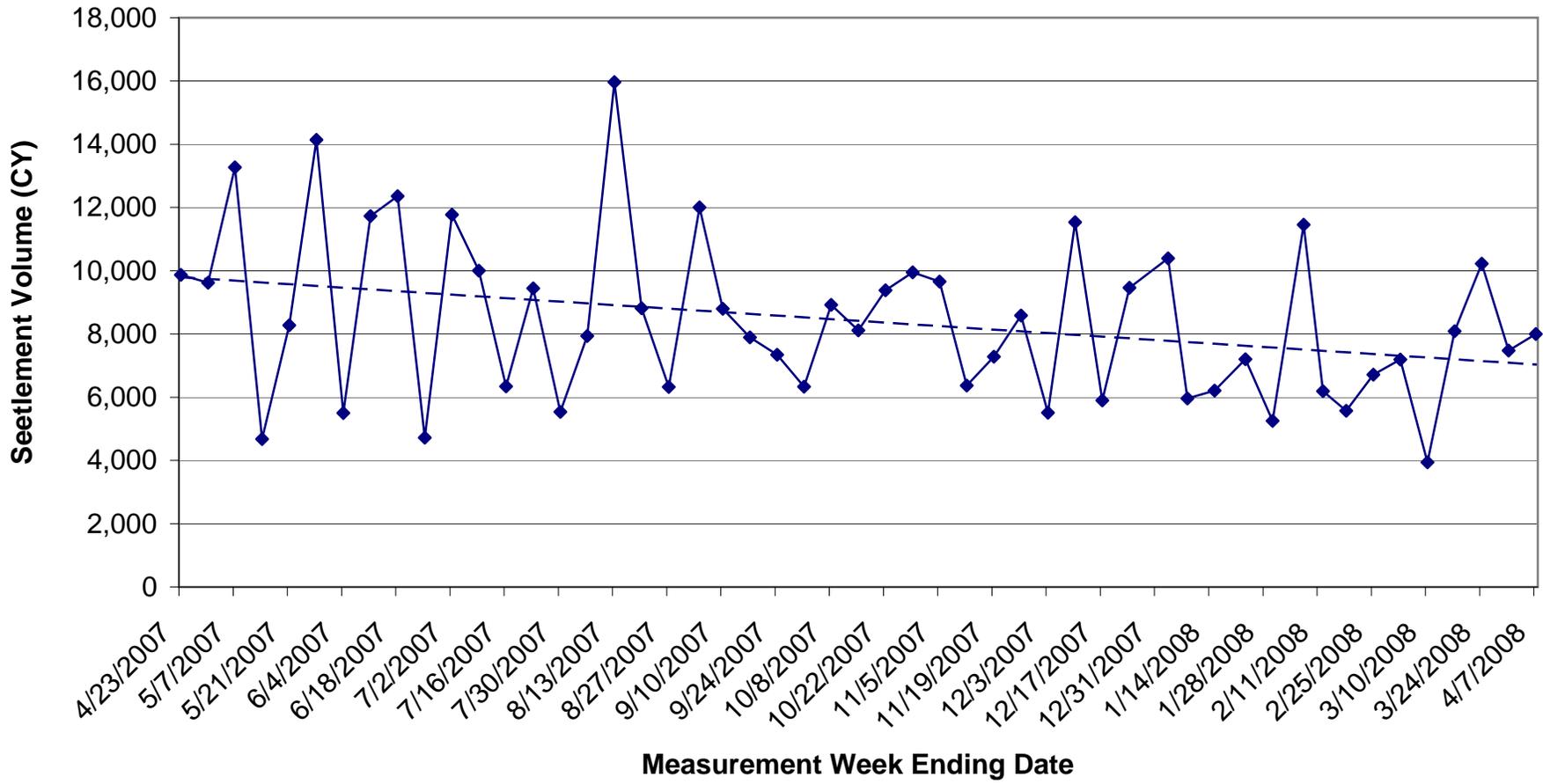
Weekly Leachate Temperatures in Cell Sump



Weekly Leachate Cleanout Riser Temperatures



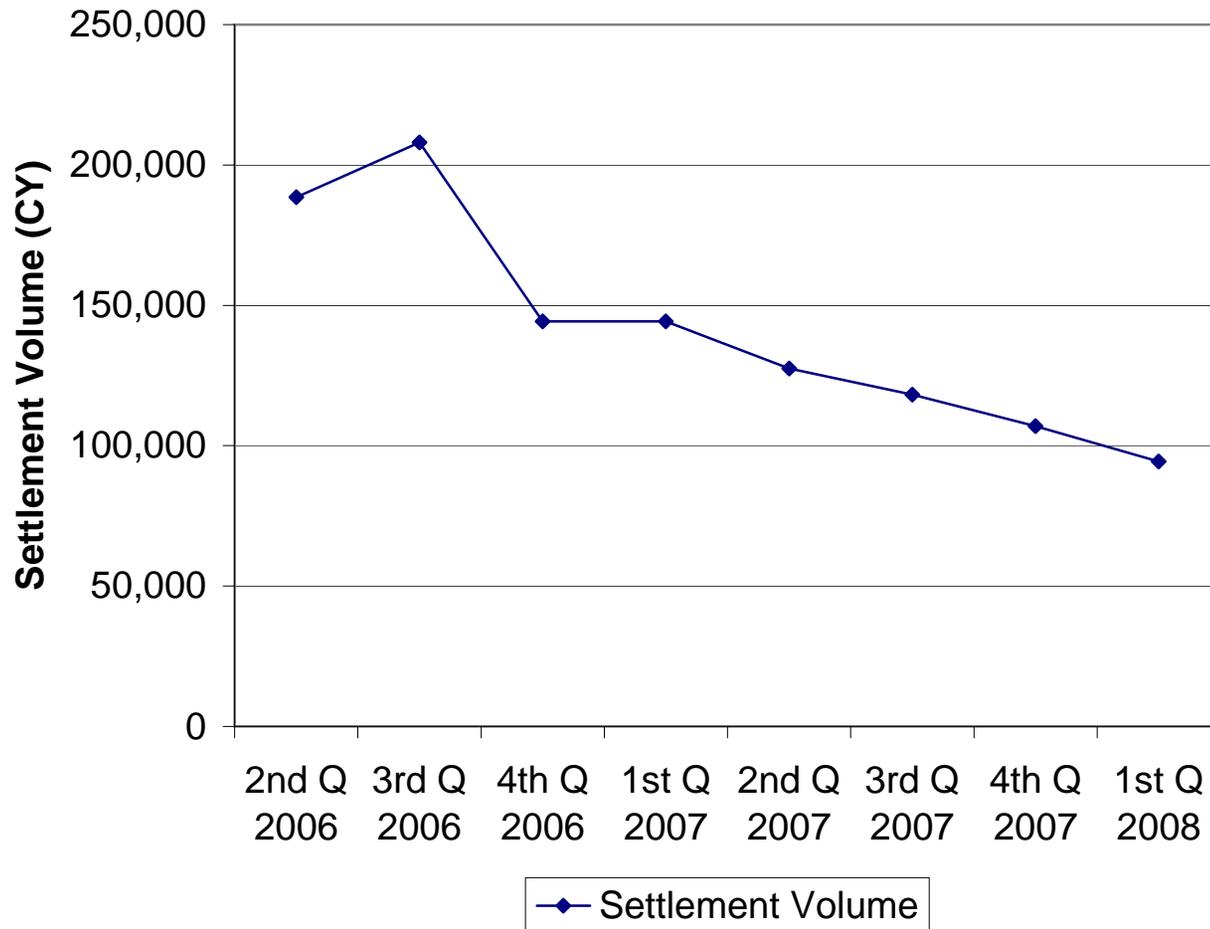
Weekly Settlement Survey in "Reaction Area" Countywide Landfill



Series1
Linear (Series1)

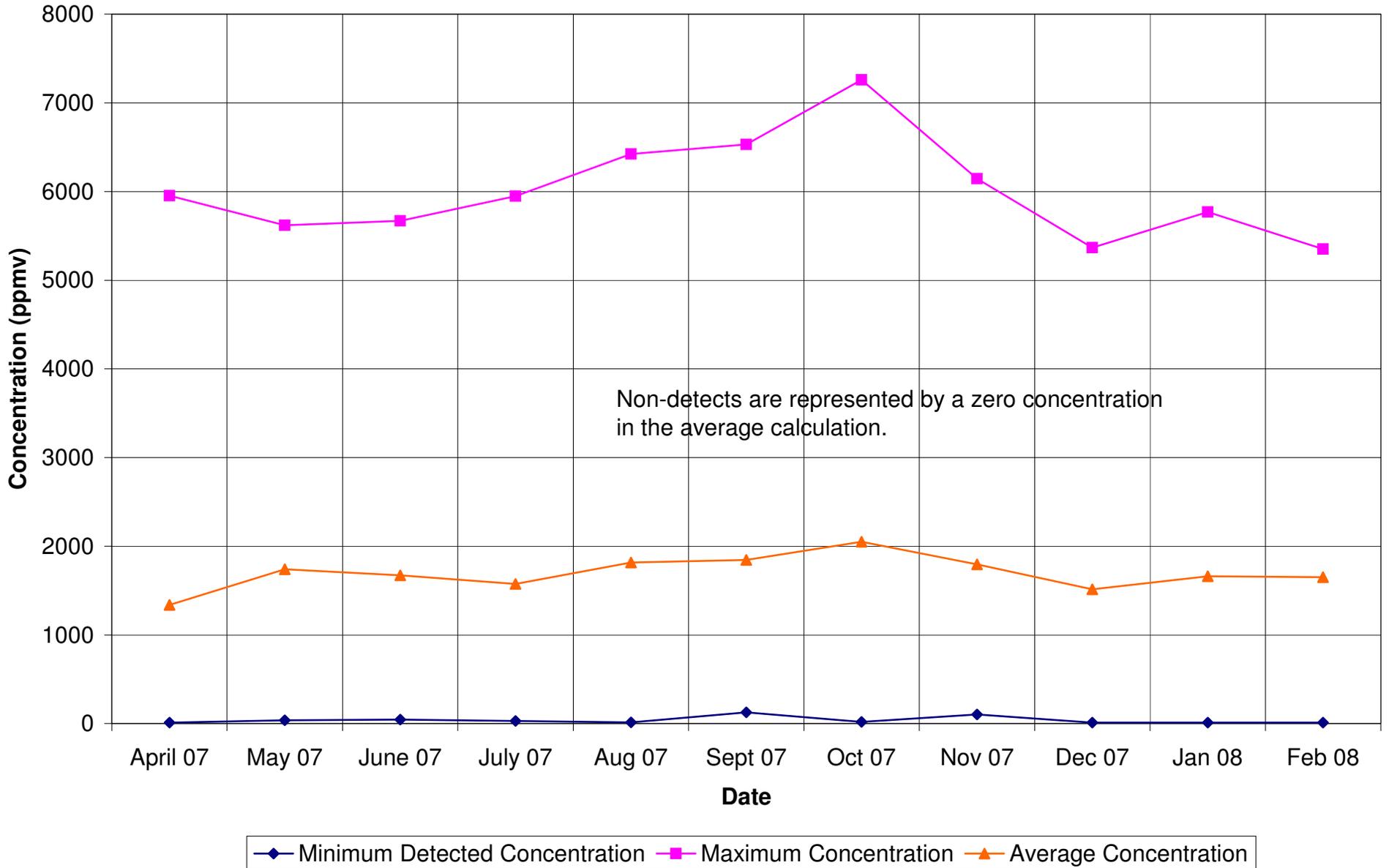
ATTACHMENT 7

Quarterly Volume of Settlement in "Reaction Area" Countywide Landfill

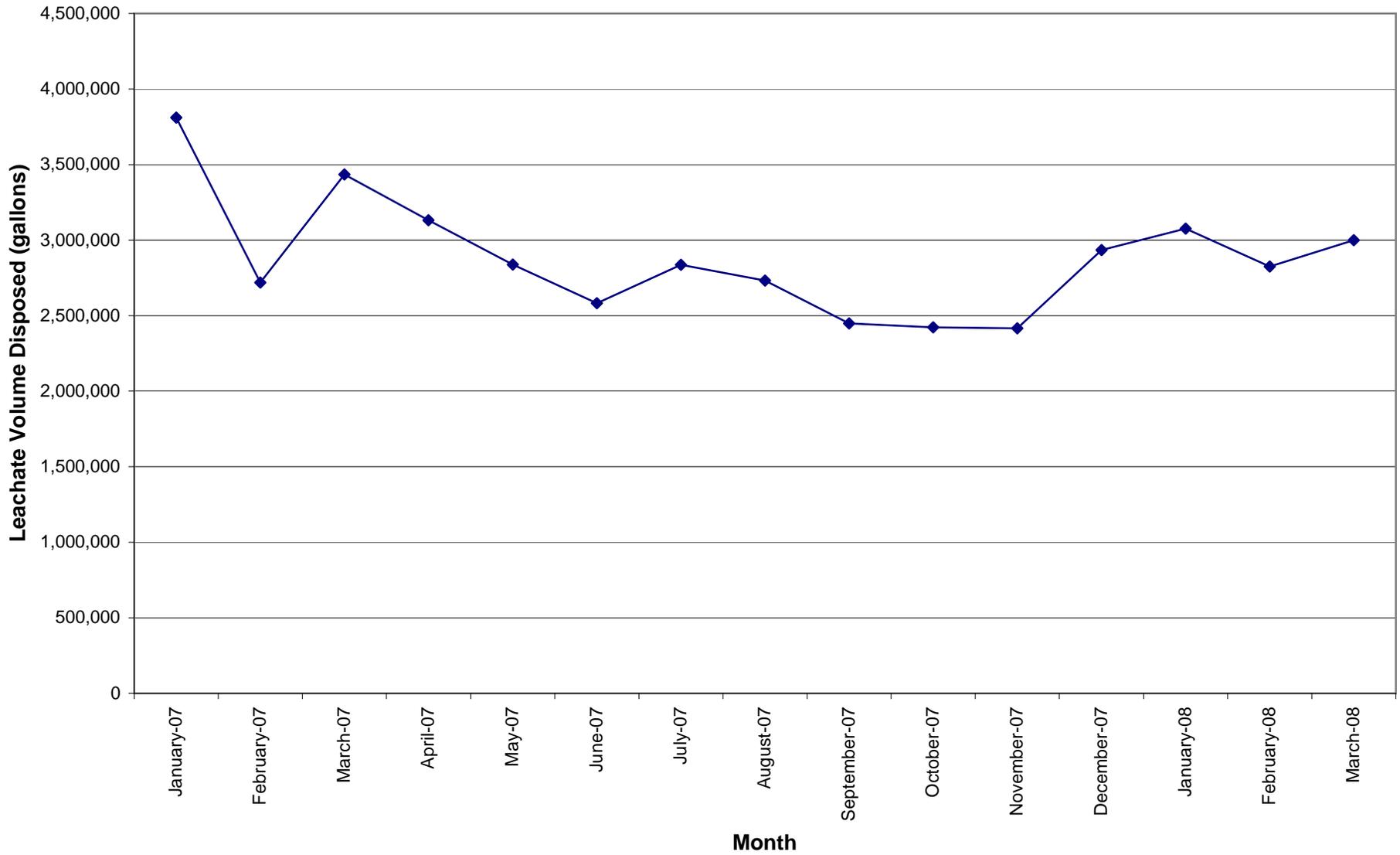


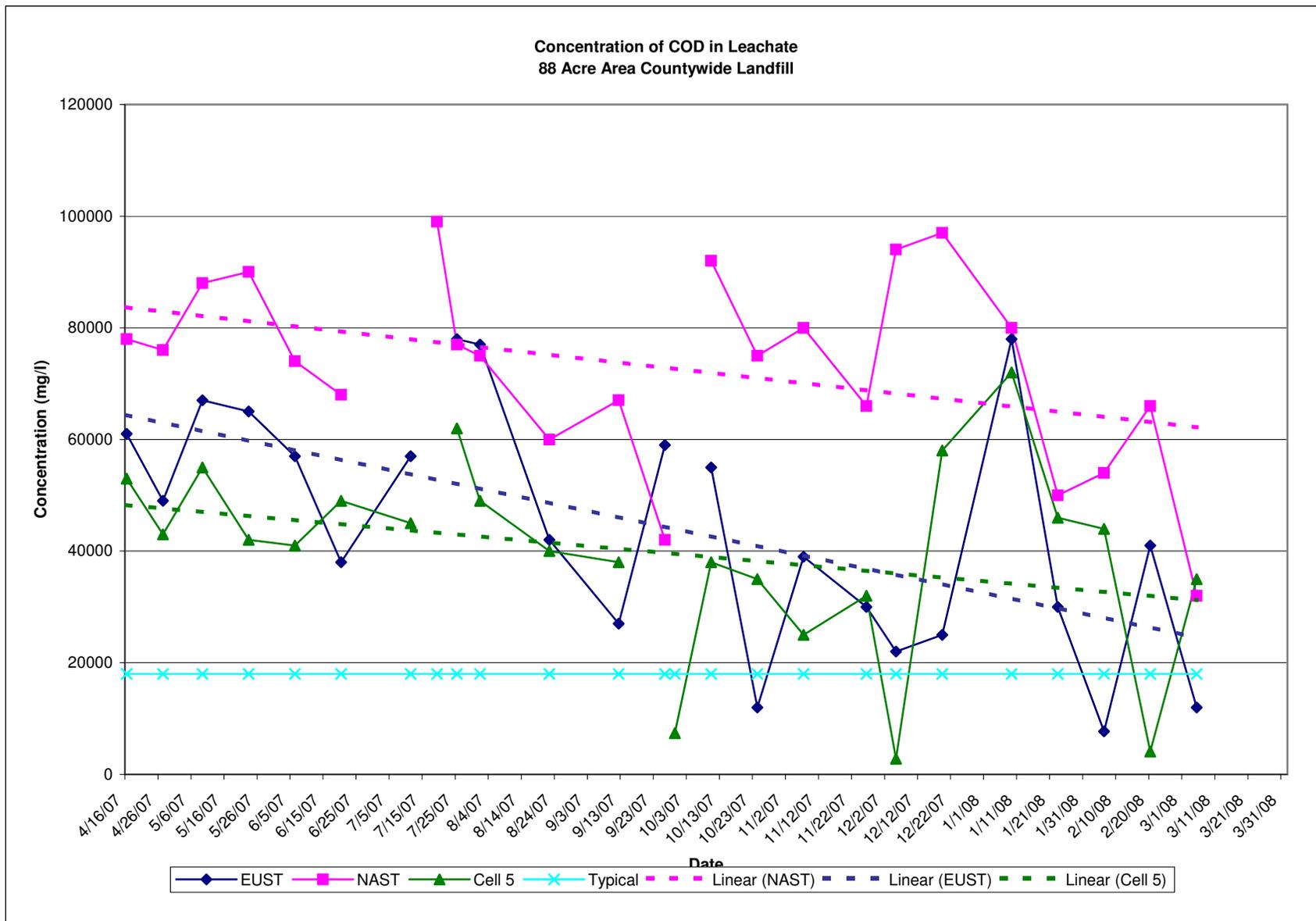
Carbon Monoxide Concentrations

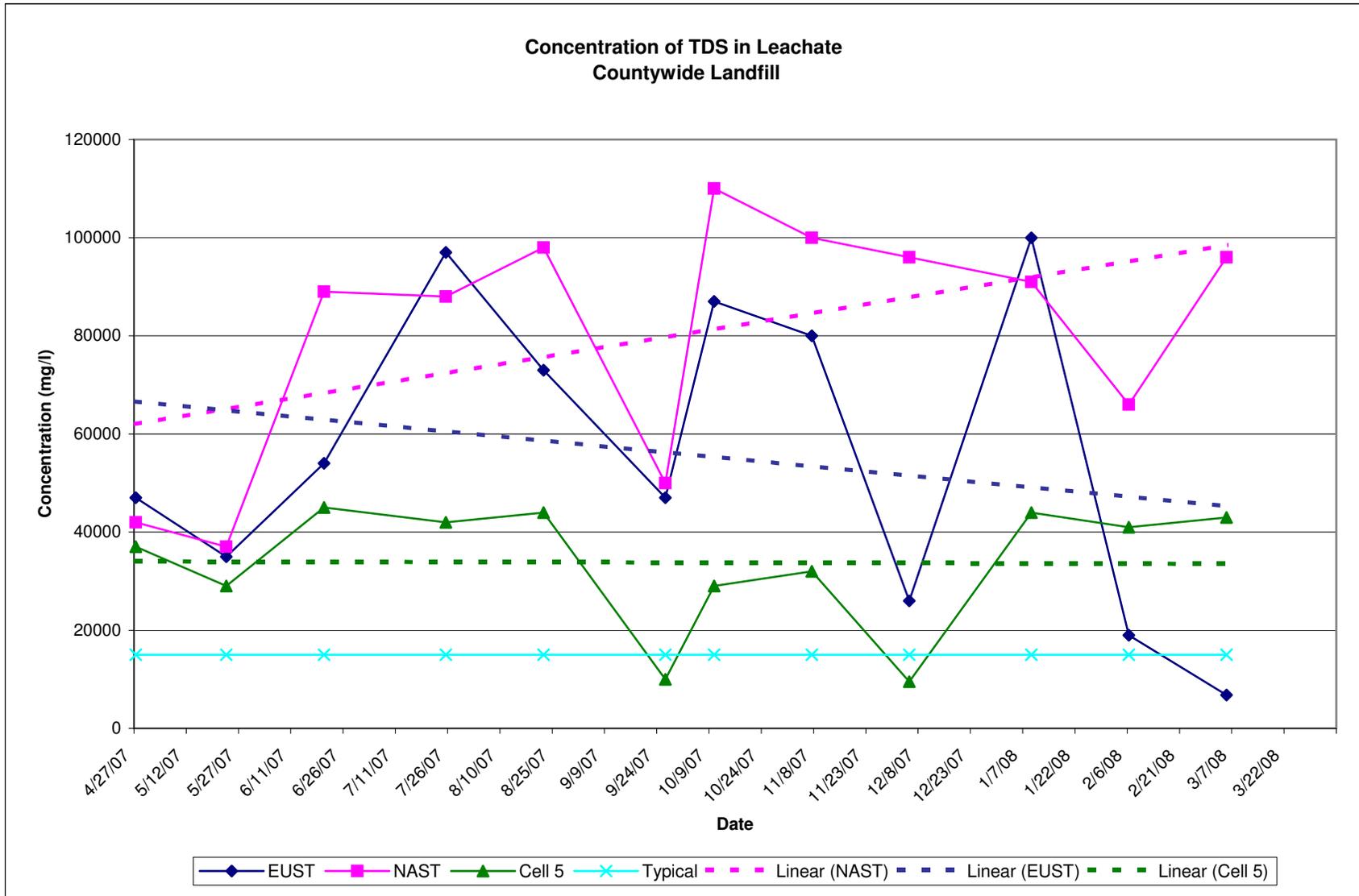
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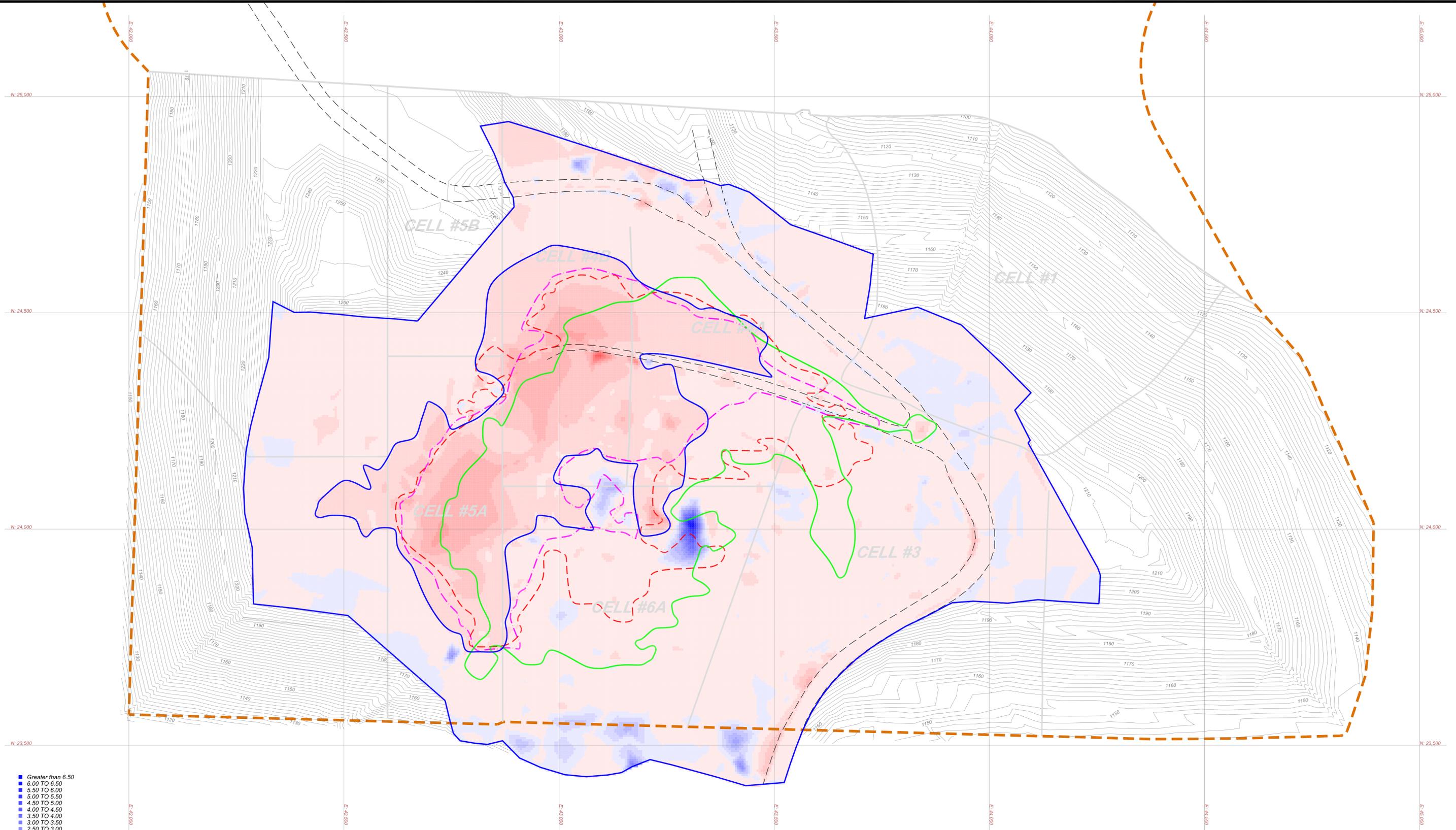


**Monthly Leachate Flow from 88-Acre Area
Countywide Landfill**





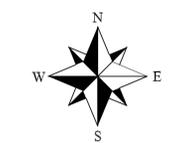




- Greater than 6.50
- 6.00 TO 6.50
- 5.50 TO 6.00
- 5.00 TO 5.50
- 4.50 TO 5.00
- 4.00 TO 4.50
- 3.50 TO 4.00
- 3.00 TO 3.50
- 2.50 TO 3.00
- 2.00 TO 2.50
- 1.50 TO 2.00
- 1.00 TO 1.50
- 0.50 TO 1.00
- 0.00 TO 0.50
- 0.00 TO 0.00
- 0.50 TO 0.00
- 1.00 TO -0.50
- 1.50 TO -1.00
- 2.00 TO -1.50
- 2.50 TO -2.00
- 3.00 TO -2.50
- 3.50 TO -3.00
- 4.00 TO -3.50
- 4.50 TO -4.00
- 5.00 TO -4.50
- 5.50 TO -5.00
- 6.00 TO -5.50
- 6.50 TO -6.00
- Less than -6.50

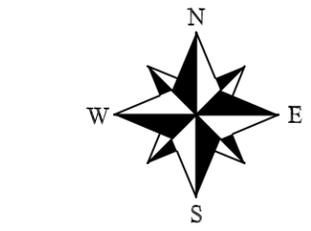
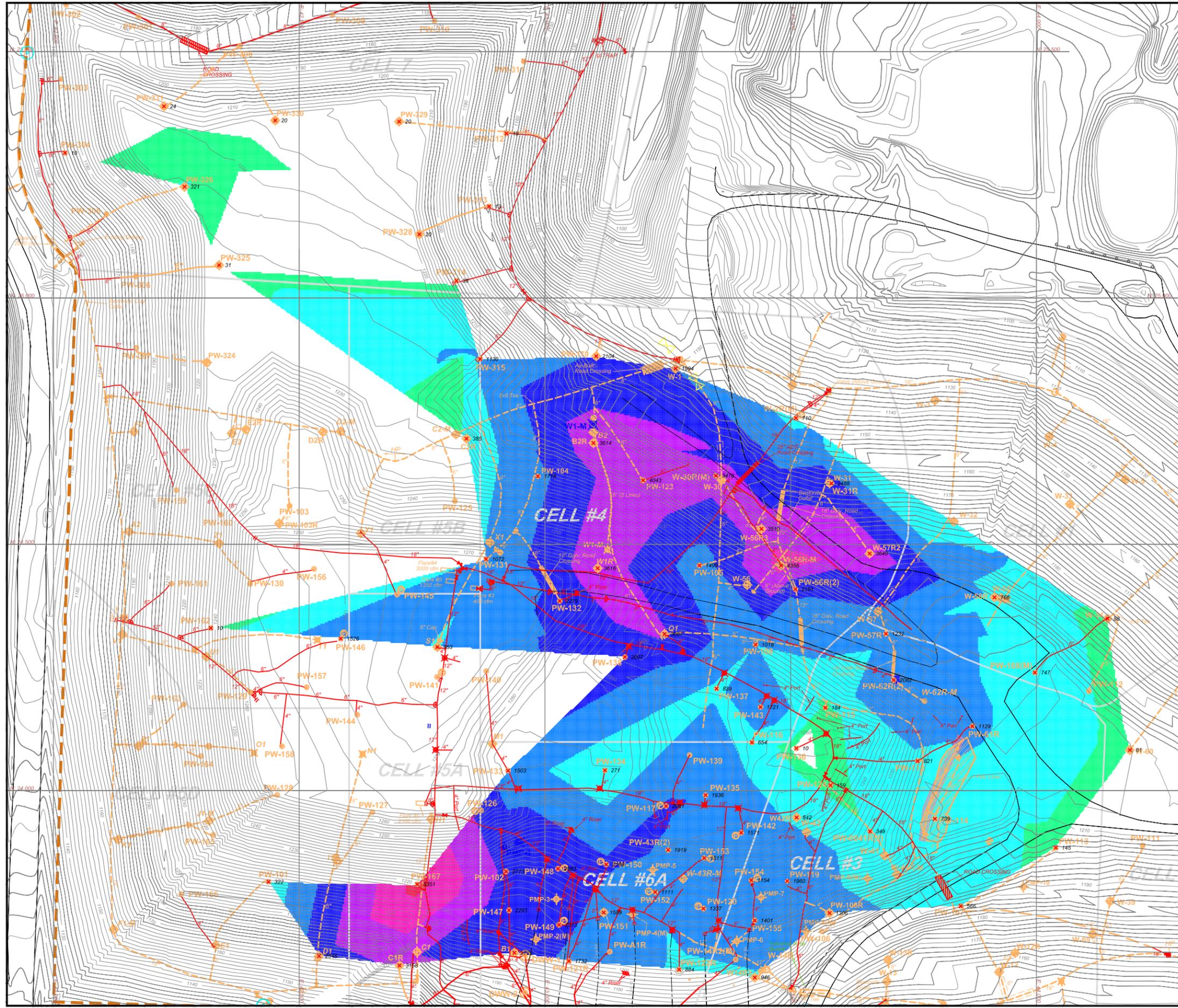
LEGEND

- 1120 TOP OF WASTE CONTOUR (3/12/07), CTR INT. = 2'
- EXISTING ROADS
- LIMIT OF TOPO/COMPARISON LIMIT
- EXTENT OF 0.5' SETTLEMENT BOUNDARY FOR 4-WEEK PERIOD (4/16/07 TO 3/14/07)
- EXTENT OF 0.5' SETTLEMENT BOUNDARY FOR 4-WEEK PERIOD (10/22/07 TO 11/19/07)
- EXTENT OF 0.5' SETTLEMENT BOUNDARY FOR 4-WEEK PERIOD (12/17/08 TO 01/14/09)
- EXTENT OF 0.5' SETTLEMENT BOUNDARY FOR 4-WEEK PERIOD (03/10/08 TO 04/07/08)

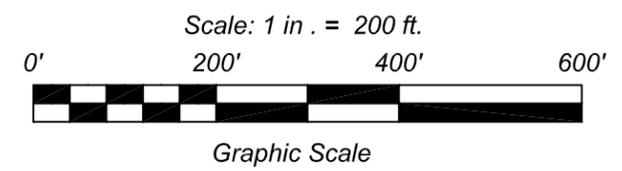


<h1>COUNTYWIDE RDF</h1>		PROJECT:	
SCALE: 1" = 100'; CTR=2'		88 Ac. & CELL 7 CUMULATIVE SETTLEMENT COMPARISON	
SURVEYED:		REVISIONS	
DRAWN: BWS 4/09/08		CHECKED: BWS 4/09/08	
REVISED DATE: 4/11/08		SHEET TITLE:	
		COMPARING 3/10/08 TOPO TO 04/07/08 TOPO (COLOR CUT/FILL MAP)	
Phone: (330) 364-1631 Fax: (330) 364-4031 e-mail: ds@div-eng.com 225 Fair Avenue, NE New Philadelphia, Ohio 44663		FILE ID: 4-Week From 03/10/08 to 04/07/08	
			APPENDIX B

\\hch\alpha\beta\data\landfills\Countywide Landfill\Gas Control System\2008 Well Temp. Data\Drawings\Well Carbon Monoxide (CO)\Well CO Map February 2008.dwg, 3/28/2008 2:07:49 PM



- < 100 (11.00 Acres) UNITS IN PPM
- 100 to 300 (6.46 Acres)
- 300 to 1000 (24.25 Acres)
- 1000 to 2000 (30.48 Acres)
- 2000 to 3000 (17.16 Acres)
- 3000 to 4000 (9.45 Acres)
- 4000 to 5000 (1.14 Acres)
- > 5000 (0.07 Acres)



COUNTYWIDE RDF		PROJECT: GAS CONTROL COLLECTION SYSTEM	
SCALE: 1" = 200'	REVISIONS	SHEET TITLE: WELL CARBON MONOXIDE FEBRUARY 2008	
SURVEYED:		FILE ID: WELL CO MAP February 2008	
DRAWN: LDB 3/28/08		APPENDIX C	
CHECKED: BWS 3/28/08			
REVISED DATE:			
Phone: (330) 364-1631 Fax: (330) 364-4031 e-mail: deinfo-eng.com 225 Fair Avenue, NE New Philadelphia, Ohio 44663			