

**Final Environmental Report**Period Ending: 9<sup>th</sup> July 2008

Compiled By: Siobhan Quinn, Aoife Reynolds &amp; Thomas McGlynn

Approved By: Tony Doyle

# 1 Monitoring Data

## 1.1 Monitoring Equipment

Axonics	– Axonics plant operated as required for the majority of the reporting period.
PO <sub>4</sub>	<ul style="list-style-type: none"> <li>– The composite sampler is in place to cover any shortfalls in the PO<sub>4</sub> analyser.</li> <li>– To facilitate the SP1 drain re-lining works, this equipment was disconnected on the 19<sup>th</sup> of June, the instrument was re-installed in the afternoon of the 2<sup>nd</sup> of July.</li> </ul>
TSS	<ul style="list-style-type: none"> <li>– The composite sampler is in place to cover any shortfalls in the TSS analyser.</li> <li>– To facilitate the SP1 drain re-lining works, this equipment was disconnected on the 19<sup>th</sup> of June, the instrument was re-installed in the afternoon of the 26<sup>th</sup> of June.</li> </ul>
Composite	– The composite sampler was operational during the reporting period.
Noise	<ul style="list-style-type: none"> <li>– There is a single noise monitoring location currently being used – N1.</li> <li>– The other location is visible from off-site and because of current protestor action it cannot be guaranteed that the equipment remains undisturbed.</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>– There is a single vibration monitoring location currently being used – V1.</li> <li>– The other location is visible from off-site and because of current protestor action it cannot be guaranteed that the equipment remains undisturbed.</li> </ul>
Sondes	<ul style="list-style-type: none"> <li>– The results are displayed graphically. <ul style="list-style-type: none"> <li>○ Any unusual values are explained on the relevant graph.</li> <li>○ SP1 sonde was re-installed on the 26<sup>th</sup> of June.</li> </ul> </li> </ul>
Weather Station	– The data used for this reporting period was taken from the on-site meteorological station.
Weirs	– SP1 weir was re-installed on the 27 <sup>th</sup> of June. Access to the weir is currently being configured, flow results to be submitted in the final report.

## 1.2 Rainfall Data

26/06/2008	2.15	03/07/2008	6.05
27/06/2008	5.66	04/07/2008	0.39
28/06/2008	0.78	05/07/2008	0.78
29/06/2008	0.20	06/07/2008	0.39
30/06/2008	12.48	07/07/2008	0.59
01/07/2008	15.02	08/07/2008	1.56
02/07/2008	3.12	09/07/2008	0.39
Total Rainfall 49.53mm			

**Final Environmental Report**Period Ending: 9<sup>th</sup> July 2008

Compiled By: Siobhan Quinn, Aoife Reynolds &amp; Thomas McGlynn

Approved By: Tony Doyle

**1.3 Summary**

Environment	Comments
Surface Water	There was no exceedance during the reporting period.
Groundwater	The groundwater data (Sonde) is within anticipated ranges.
Dust	The dust monitoring results during the reporting period (26/05/2008-26/06/2008) were all lower than the 350mg/m <sup>2</sup> /day with the exception of D3. A value of 1046mg/m <sup>2</sup> /day was recorded. The report issued by the laboratory describes the material as a very heavy peat like material. D3 is located in the south western area of the site. There was no construction activity undertaken in this area during the reporting period. The material was described as heavy peaty material; this is not conducive to becoming airborne dust due to its physical properties. Furthermore, there was 103.5mm of rain during the reporting period. Therefore it must be determined that this value is not representative of dust conditions onsite.
Weather	There was a total of 49.53mm of rainfall during the reporting period, with a temperature range of 4.2°C to 20.3°C
Noise	All noise levels were within the limit.
Vibration	No vibration exceedances were recorded during the reporting period, based on the available results

**Note:** All laboratory data generated on site should be considered indicative only.

**2 Environmental Exceedences / Incidents / Complaints**

There was no exceedance during the reporting period.



Groundwater Monitoring Record Sheet

Location	Date	DO	Temp	Cond.	pH	TDS	BOD	TSS	Total Hardness	Nitrite as NO <sub>2</sub>	Nitrate as NO <sub>3</sub>	Phosphate as PO <sub>4</sub>	Arsenic	Mercury	Lead	Aluminium (total)	Zinc	Chromium	Copper	Cadmium	Iron	Tin	Ammonia	Aluminium, dissolved	Manganese, total
		% Sat	°C	uS/cm		mg l <sup>-1</sup>	mg l <sup>-1</sup>	mg l <sup>-1</sup>	mg/l CaCO <sub>3</sub>	mg l <sup>-1</sup>	mg l <sup>-1</sup>	mg l <sup>-1</sup>	ug l <sup>-1</sup>	ug l <sup>-1</sup>	ug l <sup>-1</sup>	ug l <sup>-1</sup>	ug l <sup>-1</sup>	ug l <sup>-1</sup>	ug l <sup>-1</sup>	ug l <sup>-1</sup>	ug l <sup>-1</sup>	ug l <sup>-1</sup>	mg l <sup>-1</sup>		
MP 1	09/07/2008	15	11.4	336	5.5	155	15	5	67.7	<0.017	<0.44	1.88	5.0	<0.05	<0.5	32	14	0.5	<1	<0.5	8200	0.5	2.048	<20	723
MP 2	09/07/2008	20	10.6	282	5.5	131	<1	16	72.4	<0.017	<0.44	0.75	2.0	<0.05	<0.5	299	16	0.7	<1	<0.5	11740	0.5	2.633	92	299
MP 3	09/07/2008	19	10.8	406	5.3	189	14	55	72.3	<0.017	<0.44	1.50	3.0	<0.05	<0.5	393	15	1.0	<1	<0.5	9418	<0.5	2.559	199	205
MP 4	09/07/2008	20	10.7	460	5.7	213	1	164	74.9	<0.017	<0.44	0.25	2.0	<0.05	1.0	559	30	2.0	3.0	<0.5	22000	<0.5	0.401	<20	1655
MP 5	09/07/2008	20	10.5	295	5.3	137	16	37	68.6	<0.017	<0.44	0.50	0.7	<0.05	0.6	440	15	3.0	<1	<0.5	13540	0.5	2.122	153	390
MP 6	09/07/2008	18	10.7	483	5.9	223	23	14	109.5	<0.017	<0.44	1.02	10.0	<0.05	0.6	48	13	<0.5	<1	<0.5	45980	0.7	0.998	<20	1395
MP 7	09/07/2008	19	10.7	379	5.4	175	14	14	47.2	<0.017	<0.44	0.71	<0.5	<0.05	<0.5	42	14	0.9	<1	<0.5	37670	<0.5	2.806	<20	615
MP 8	09/07/2008	20	10.5	324	5.5	151	1	228	98.2	<0.017	<0.44	<0.03	2.0	<0.05	9.0	1317	51	4.0	6.0	<0.5	4727	<0.5	0.462	119	336
MP 10a	09/07/2008	27	11.0	361	5.4	167	2	74	116.9	<0.017	0.46	<0.03	1.0	<0.05	25.0	272	32	1.0	5.0	<0.5	6583	<0.5	0.468	<20	3522
MP 11	09/07/2008	22	10.8	217	5.1	102	1	6	35.9	<0.017	<0.44	0.08	<0.5	<0.05	<0.5	48	25	0.7	<1	<0.5	533	<0.5	0.020	<20	1322

Graphs provided for MP1, MP2,MP4, MP6 and MP7 for: Temperature, Conductivity, and pH.

### Determinant Results

NDP = No Determination Possible

Monitoring Results will be presented monthly

## Noise Monitoring Record Sheet

Determinant Results
---------------------

Location	Air Temp. (Max)	Air Temp. (Min)	Start Date	Time	Duration	Serial No.	Wind		Results dB			*Comments
							Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Amin</sub>	
Action Limit									60			
Target Limit									65			
N1	16.6	10.8	26/06/2008	07:00:00	11:00:00	2539533	4.3	64.0	53.1	96.3	32.9	
N1	16.5	10.6	27/06/2008	07:00:00	11:00:00	2539533	4.0	90.6	50.5	83.4	33.6	
N1	16.6	12.9	30/06/2008	07:00:00	11:00:00	2539533	6.4	254.3	53.6	77.1	31.7	
N1	16.3	13.8	01/07/2008	07:00:00	11:00:00	2539533	5.2	70.0	54.0	82.0	40.8	
N1	13.5	11.7	02/07/2008	07:00:00	11:00:00	2539533	3.7	116.4	42.9	58.1	33.0	
N1	18.1	8.1	03/07/2008	07:00:00	11:00:00	2539533	1.6	190.2	51.7	65.0	37.5	
N1	20.3	4.2	04/07/2008	08:00:00	10:00:00	2539533	2.0	218.5	50.6	65.9	37.9	
N1	16.1	11.1	07/07/2008	07:00:00	11:00:00	2539533	4.4	161.4	48.7	72.1	34.6	
N1	15.3	9.2	08/07/2008	07:00:00	11:00:00	2539533	3.3	113.6	47.0	77.4	31.9	
N1	13.1	9.1	09/07/2008	07:00:00	11:00:00	2539533	1.7	262.9	51.1	76.4	35.4	

\* Wind speeds in excess of 5 m/s negatively impact noise readings (as per EPA Guidance Note on Noise Measurement)

**Flow Weir Record Sheet****Determinant Results**

Date	SP1			SP3		
	Max (l/s)	Min (l/s)	Avg (l/s)	Max (l/s)	Min (l/s)	Avg (l/s)
26/06/2008				2.21	-0.23	0.79
27/06/2008				3.28	-0.23	1.60
28/06/2008				3.28	-0.18	2.36
29/06/2008				3.10	1.16	2.08
30/06/2008				2.21	1.44	1.93
01/07/2008	0.35	0.18	0.26	9.02	1.30	2.91
02/07/2008	0.17	0.14	0.15	19.75	5.35	10.51
03/07/2008	0.18	0.10	0.15	8.23	2.21	4.65
04/07/2008	0.16	0.08	0.18	6.50	2.56	4.08
05/07/2008	0.14	0.13	0.14	5.35	3.28	4.77
06/07/2008	0.14	0.11	0.13	4.91	1.30	3.67
07/07/2008	0.13	0.08	0.12	4.07	2.91	3.44
08/07/2008	0.13	0.07	0.12	4.07	2.56	3.48
09/07/2008	0.12	0.07	0.11	3.47	2.73	3.22

SP1 weir temporarily removed from 26/06/2008 to 30/06/08 inclusive to accomadate re-lining works on drain.

**Note:** Negative values indicate low flow conditions.

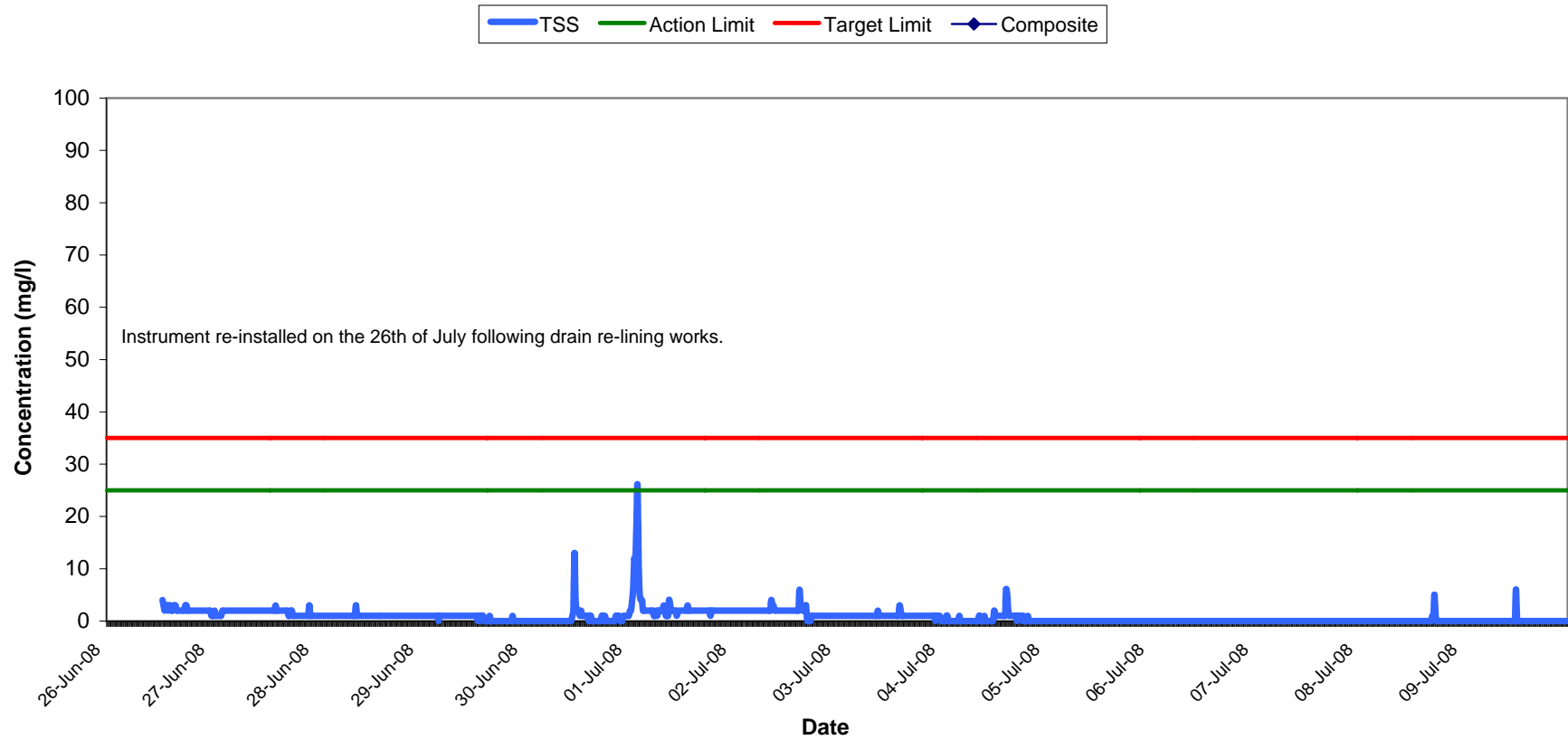
## Vibration Monitoring Record Sheet

[illegible]

Vibration meter was located at V1 only.

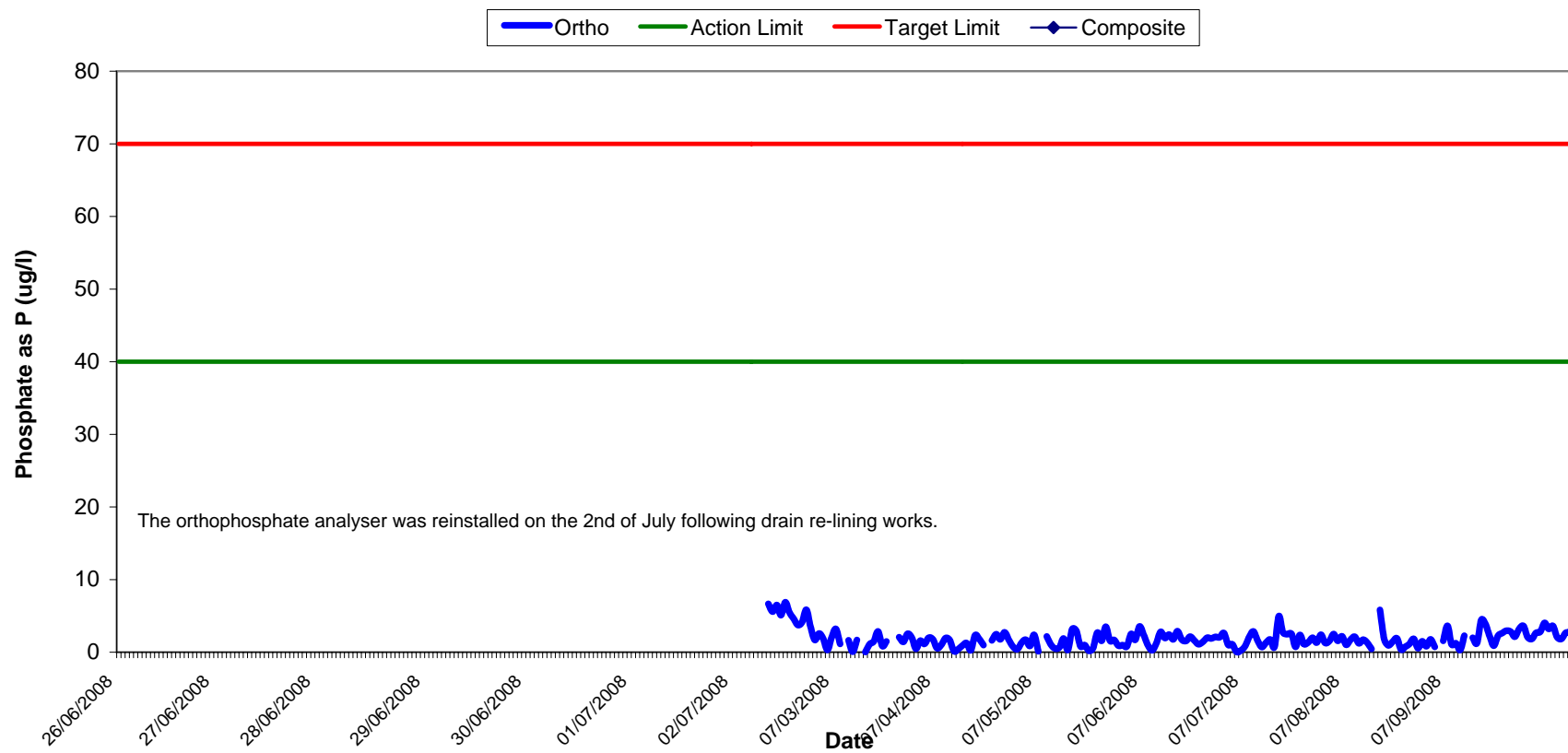


# Total Suspended Solids Results at SP1 Wk 27-28

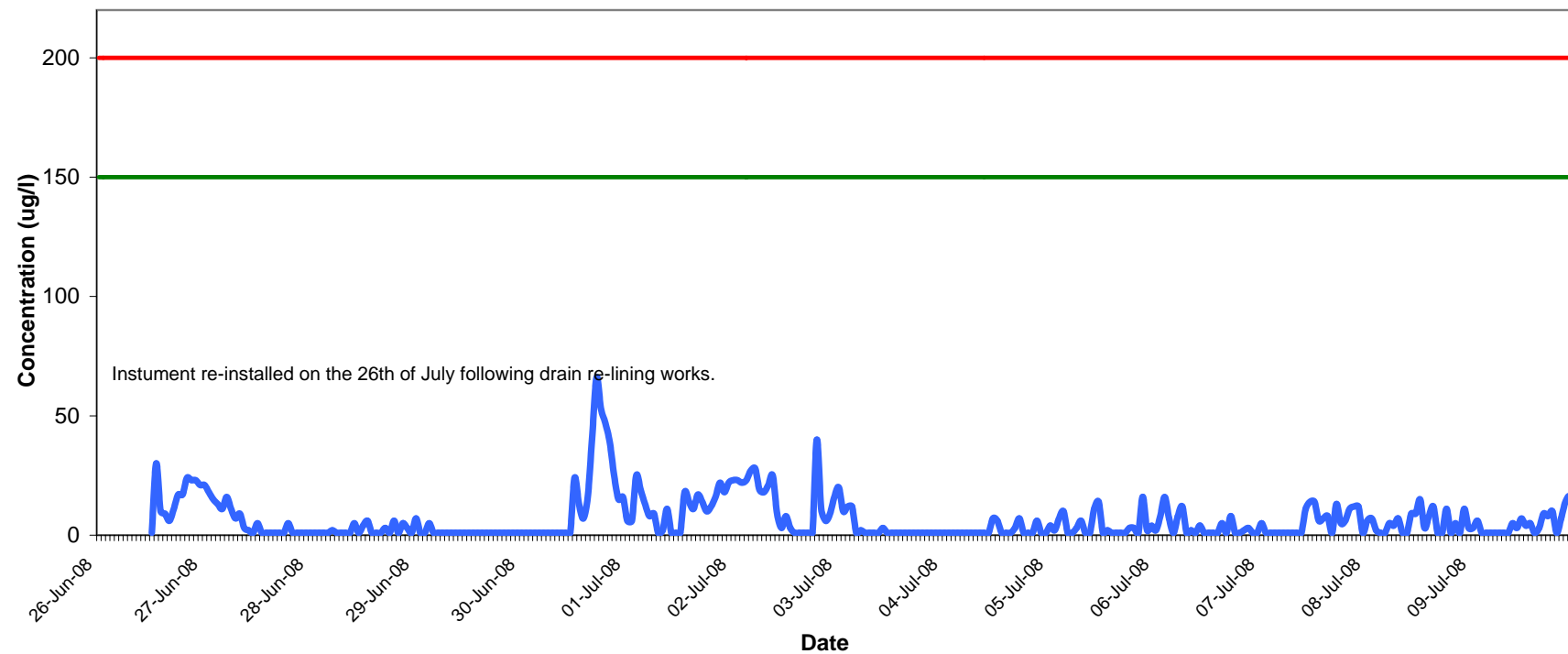


## Orthophosphate Results at SP1

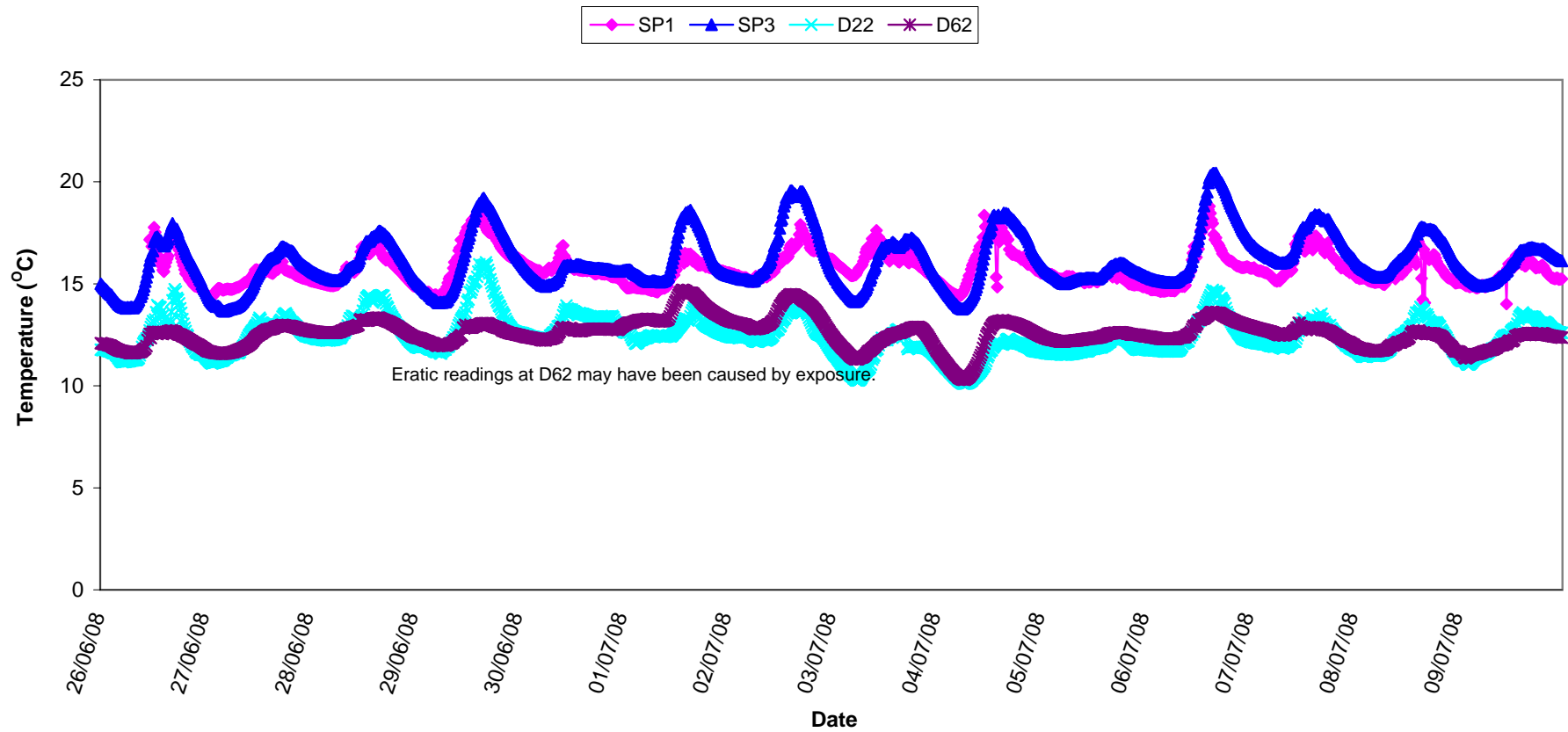
Wk 27-28



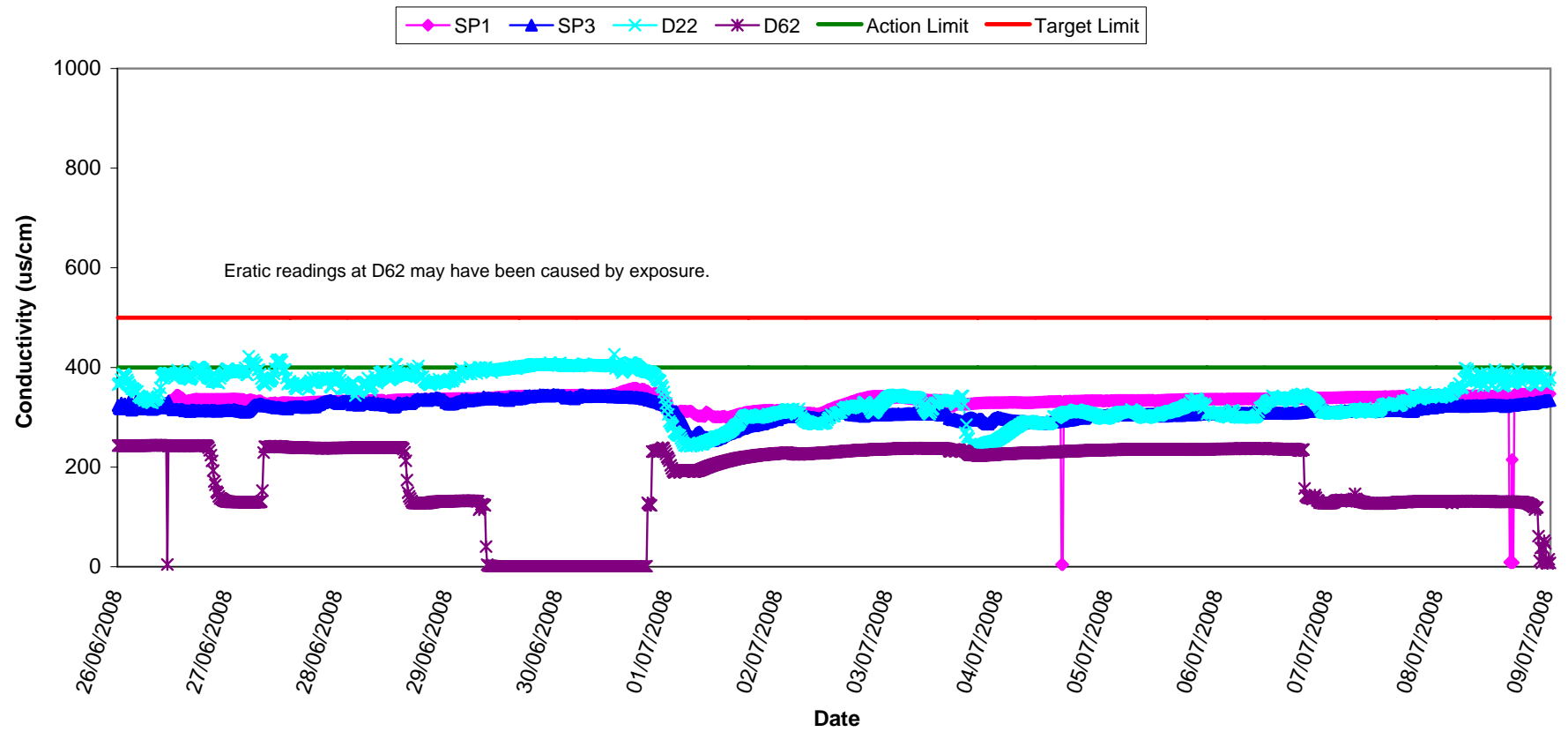
# Aluminium Concentration at SP1 Wk 27-28



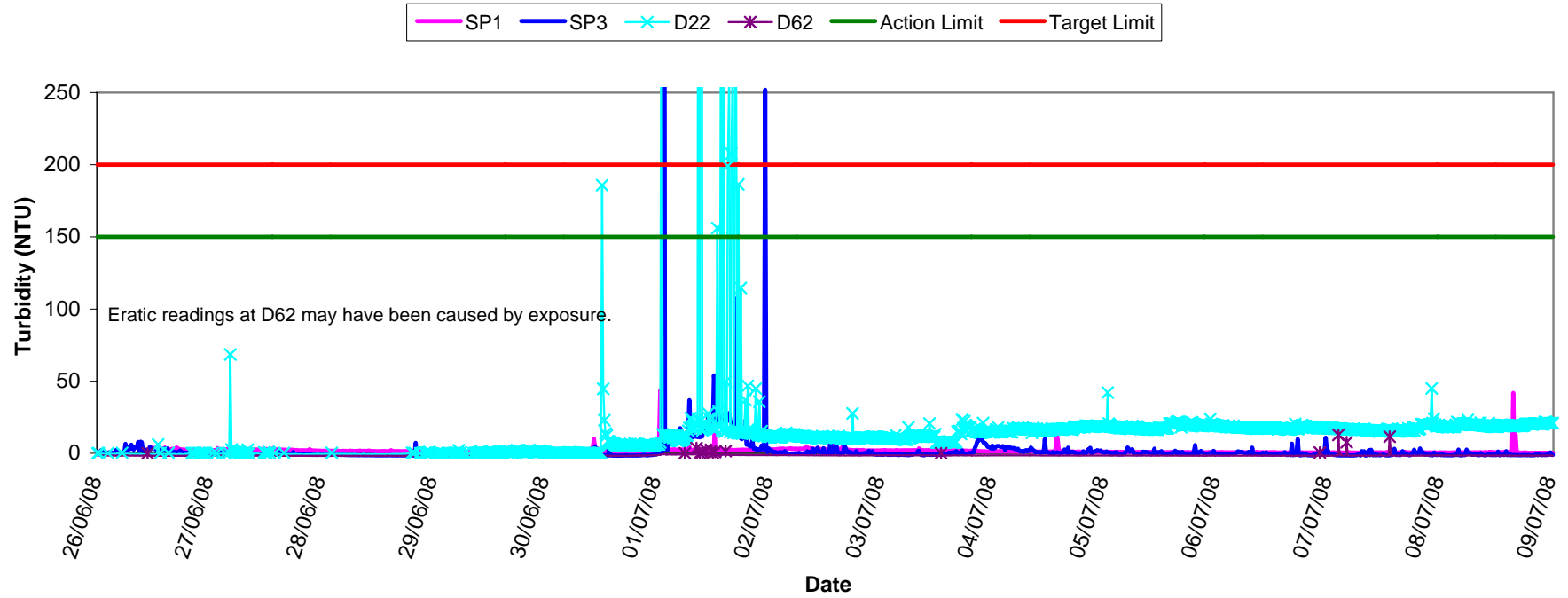
# Temperature - Surface Waters Wk 27-28



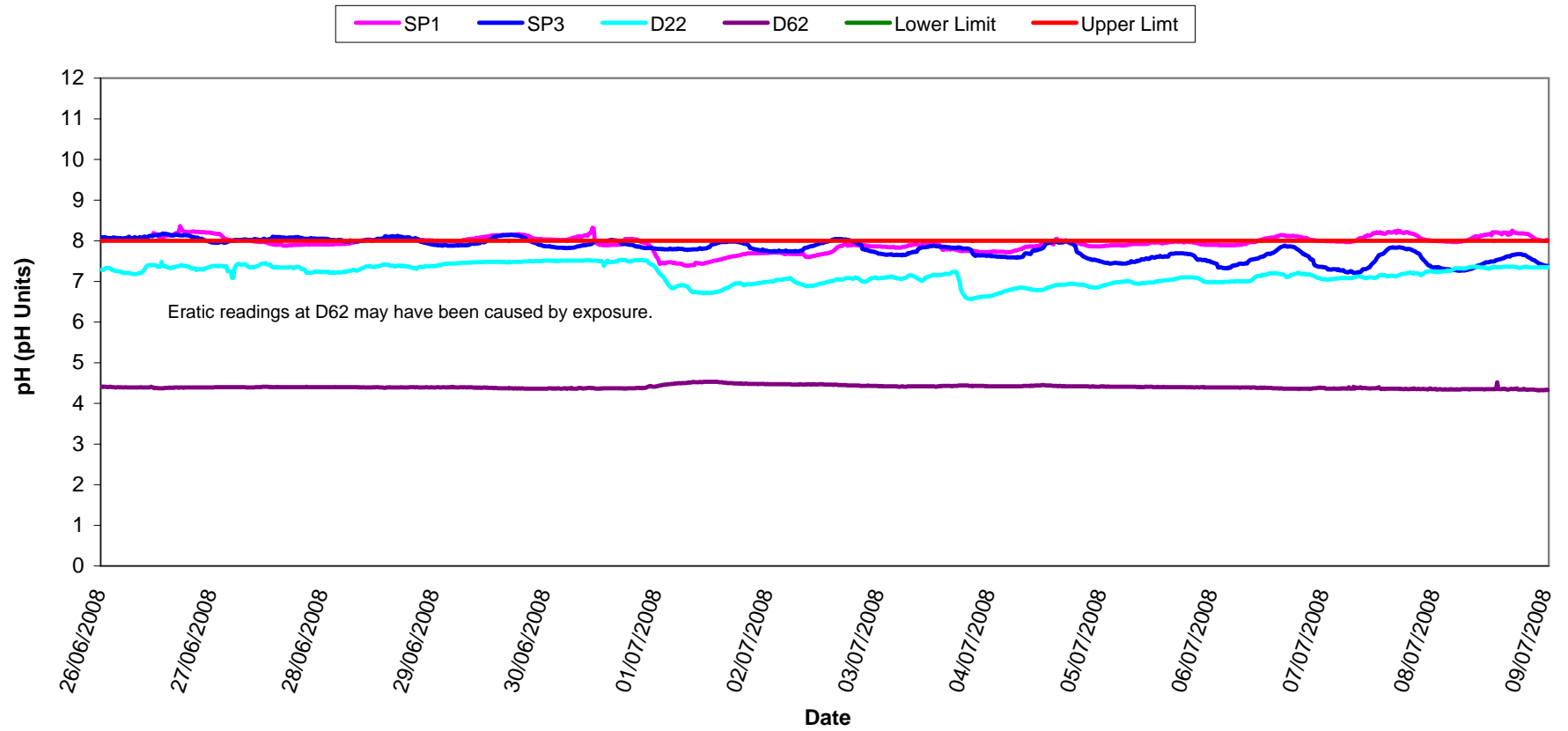
# Conductivity - Surface Waters, Wk 27-28



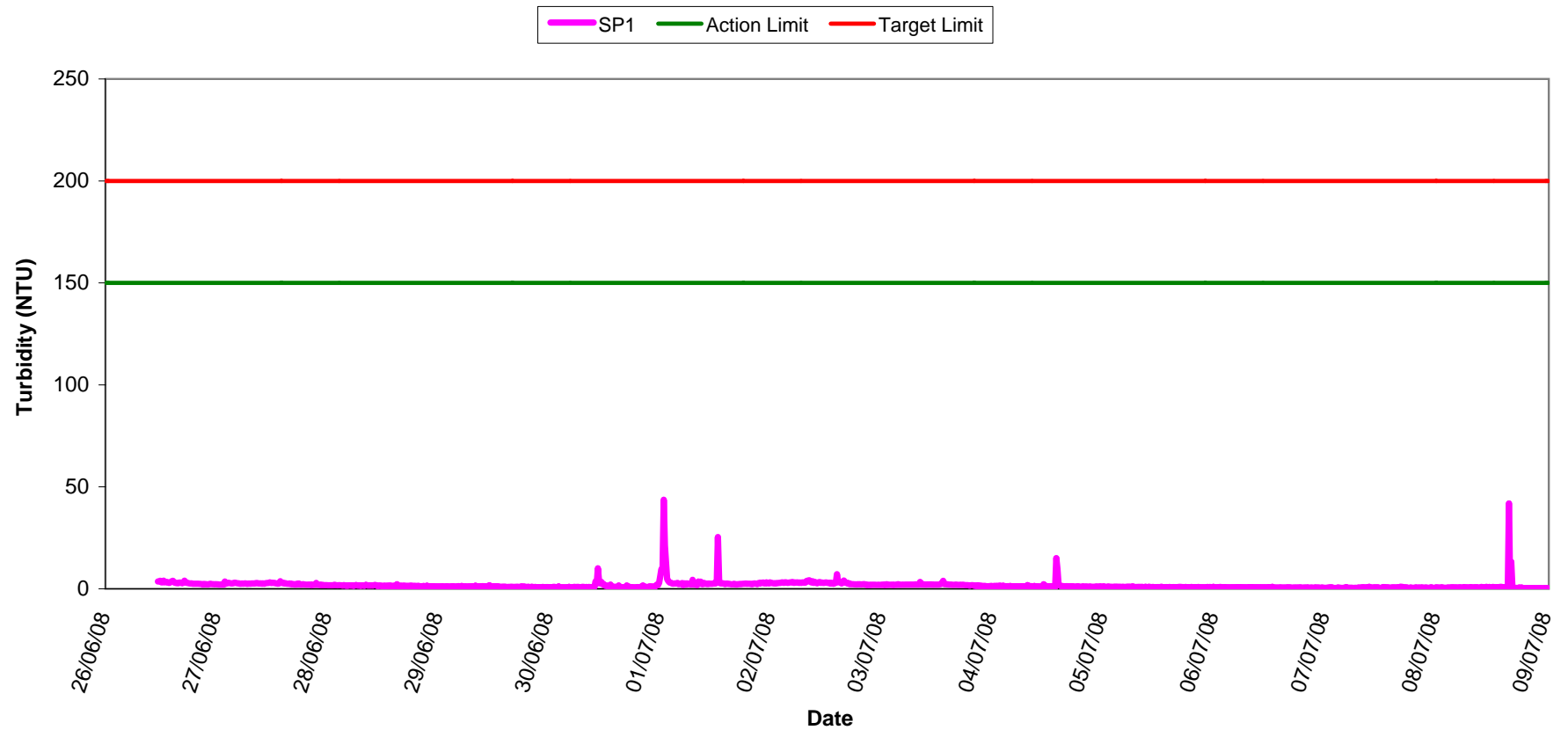
# Turbidity - Surface Waters Wk 27-28



# pH - Surface Waters Wk 27-28

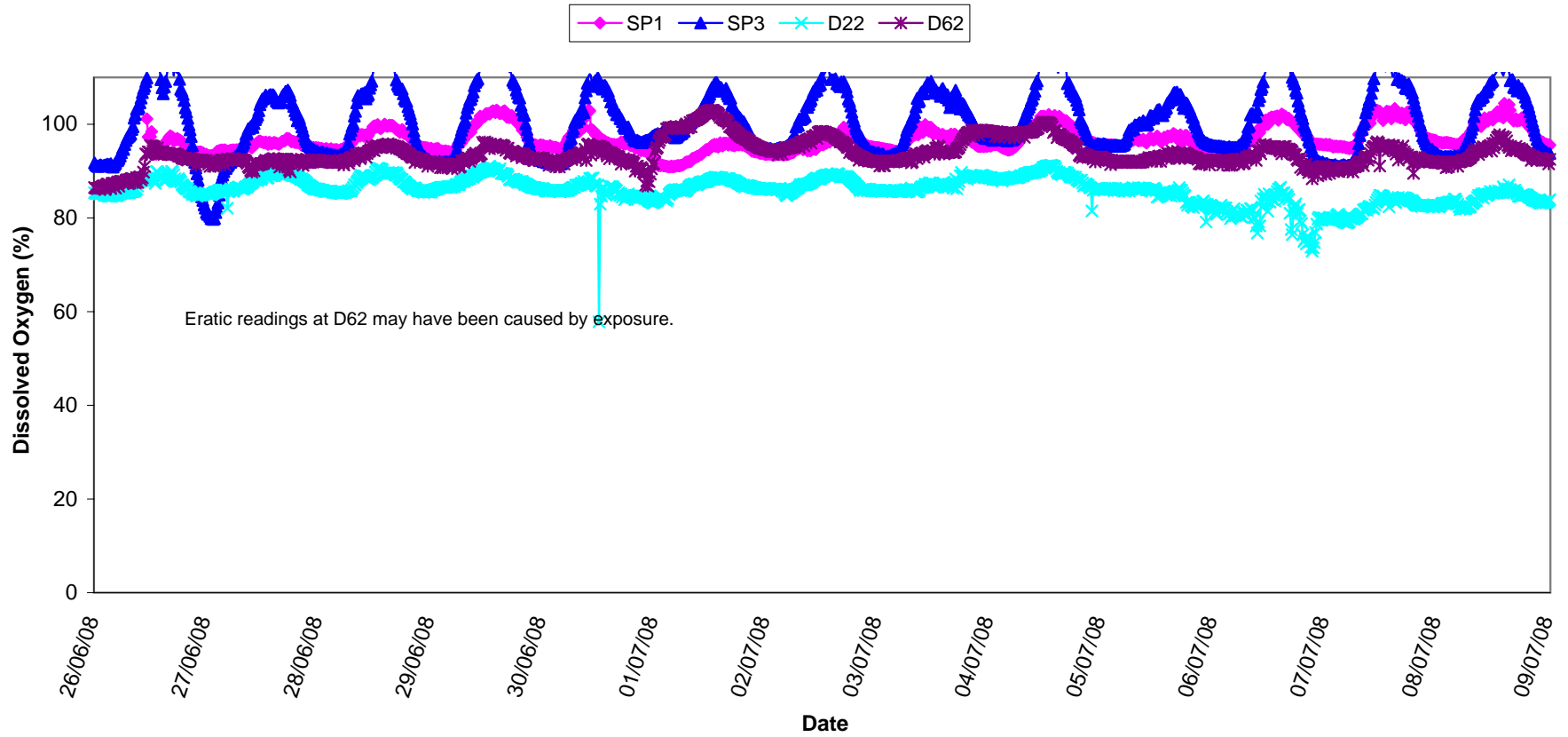


**Turbidity - Surface Waters @ SP1,  
Wk 27-28**

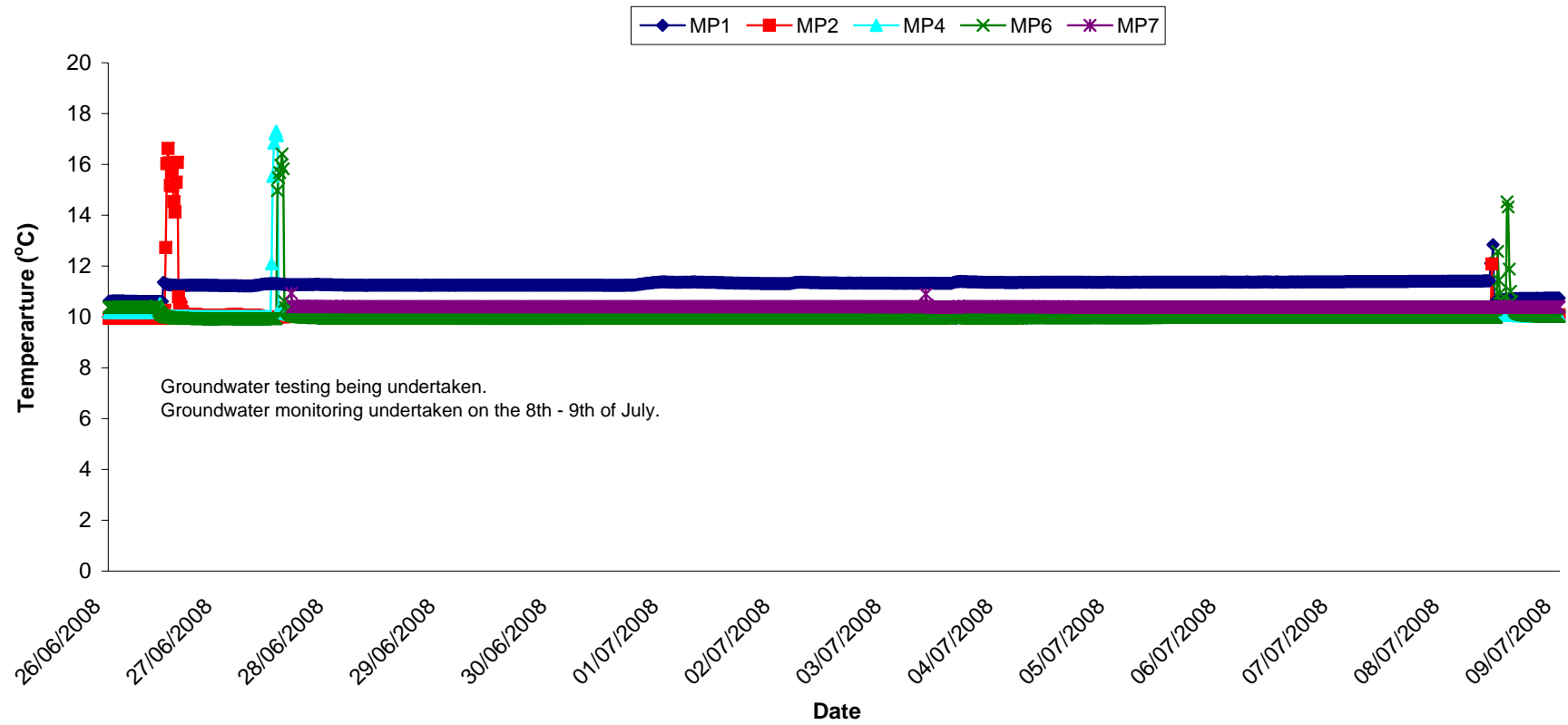




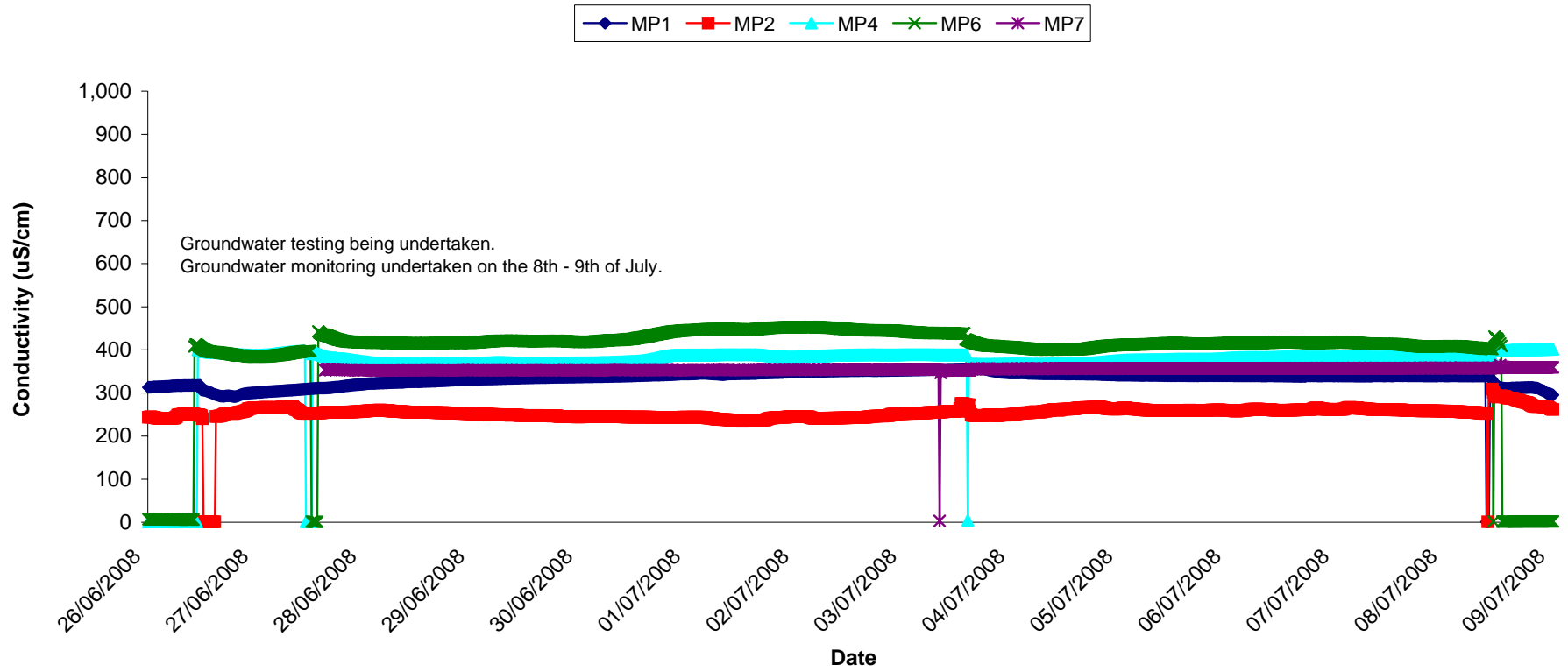
# Dissolved Oxygen - Surface Waters, Wk 27-28



# Temperature - Groundwaters Wk 27-28

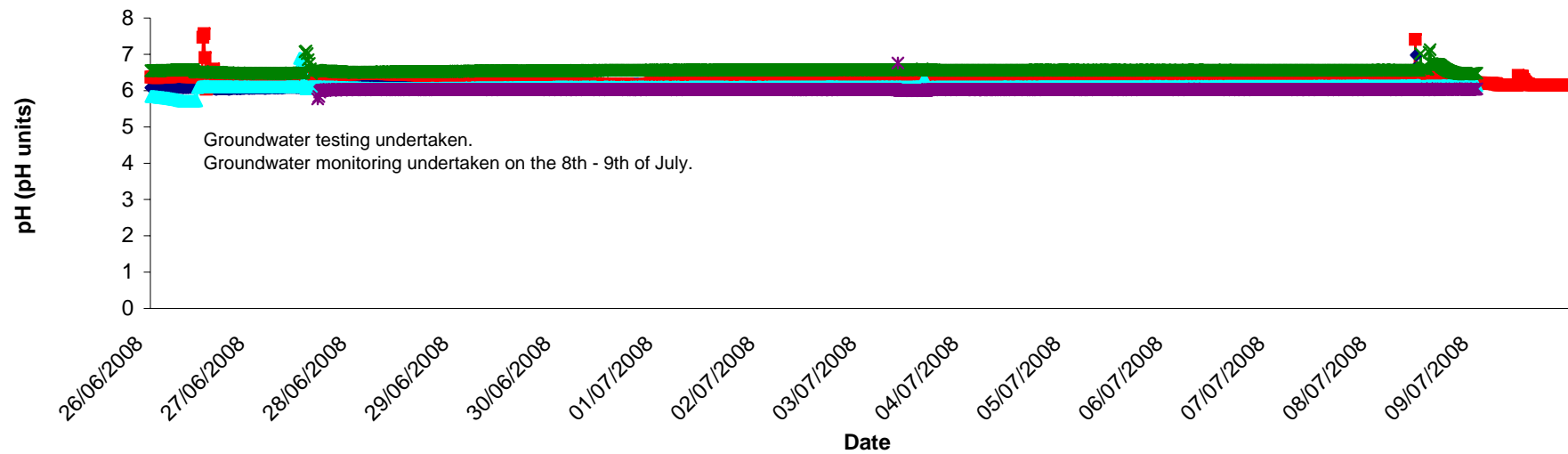


# Conductivity - Groundwaters Wk 27-28



# pH - Groundwaters Wk 27-28

MP1 MP2 MP4 MP6 MP7



## **Appendix 1**

