

Interim Environmental ReportPeriod Ending: 9th July 2008

Compiled By: Siobhan Quinn, Aoife Reynolds & 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 ₄	<ul style="list-style-type: none"> – The composite sampler is in place to cover any shortfalls in the PO₄ analyser. – To facilitate the SP1 drain re-lining works, this equipment was disconnected on the 19th of June, the instrument was re-installed in the afternoon of the 1st of July.
TSS	<ul style="list-style-type: none"> – The composite sampler is in place to cover any shortfalls in the TSS analyser. – To facilitate the SP1 drain re-lining works, this equipment was disconnected on the 19th of June, the instrument was re-installed in the afternoon of the 26th of June.
Composite	– The composite sampler was operational during the reporting period.
Noise	<ul style="list-style-type: none"> – There is a single noise monitoring location currently being used – N1. – The other location is visible from off-site and because of current protestor action it cannot be guaranteed that the equipment remains undisturbed.
Vibration	<ul style="list-style-type: none"> – There is a single vibration monitoring location currently being used – V1. – The other location is visible from off-site and because of current protestor action it cannot be guaranteed that the equipment remains undisturbed.
Sondes	<ul style="list-style-type: none"> – The results are displayed graphically. <ul style="list-style-type: none"> ○ Any unusual values are explained on the relevant graph. ○ SP1 sonde was re-installed on the 26th of June.
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 th 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	2.1	03/07/2008	6.0
27/06/2008	5.7	04/07/2008	0.4
28/06/2008	0.8	05/07/2008	0.8
29/06/2008	0.2	06/07/2008	0.4
30/06/2008	12.5	07/07/2008	0.6
01/07/2008	15.0	08/07/2008	1.6
02/07/2008	3.1	09/07/2008	0.4
Total Rainfall 49.5mm			

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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	Awaiting results
Weather	There was a total of 49.5mm 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

Determinant Results									
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Graphs provided for MP1, MP2,MP4, MP6 and MP7 for: Temperature, Conductivity, and pH.
NO ground water monitoring during the reporting period

Determinant Results

Contaminant Residue	Date Positioned	Date Removed	Ref. Number	Date Dispatched	Date Returned	Weight (mg/sq.m/day)	Comments
Target (Consent) Limit: 350 mg m ² d ⁻¹ on as a 30 day average							
D1	25/04/2008	26/05/2008	172506	28/05/2008	09/06/2008	134	
D2	25/04/2008	26/05/2008	172507	28/05/2008	09/06/2008	121	
D3	25/04/2008	26/05/2008	172508	28/05/2008	09/06/2008	209	
D4	25/04/2008	26/05/2008	172509	28/05/2008	09/06/2008	119	
D1	26/05/2008	26/06/2008	I.P.		I.P.	I.P.	
D2	26/05/2008	26/06/2008	I.P.		I.P.	I.P.	
D3	26/05/2008	26/06/2008	I.P.		I.P.	I.P.	
D4	26/05/2008	26/06/2008	I.P.		I.P.	I.P.	
NDP = No Determination Possible							
Monitoring Points are numbered clockwise through the Cardinal Marks (N, E, S, W) 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 _{Aeq}	L _{Amax}	L _{Amin}	
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	I.P.	I.P.	I.P.	2.21	-0.23	0.79
27/06/2008	I.P.	I.P.	I.P.	3.28	-0.23	1.60
28/06/2008	I.P.	I.P.	I.P.	3.28	-0.18	2.36
29/06/2008	I.P.	I.P.	I.P.	3.10	1.16	2.08
30/06/2008	I.P.	I.P.	I.P.	2.21	1.44	1.93
01/07/2008	I.P.	I.P.	I.P.	9.02	1.30	2.91
02/07/2008	I.P.	I.P.	I.P.	19.75	5.35	10.51
03/07/2008	I.P.	I.P.	I.P.	8.23	2.21	4.65
04/07/2008	I.P.	I.P.	I.P.	6.50	2.56	4.08
05/07/2008	I.P.	I.P.	I.P.	5.35	3.28	4.77
06/07/2008	I.P.	I.P.	I.P.	4.91	1.30	3.67
07/07/2008	I.P.	I.P.	I.P.	4.07	2.91	3.44
08/07/2008	I.P.	I.P.	I.P.	4.07	2.56	3.48
09/07/2008	I.P.	I.P.	I.P.	3.47	2.73	3.22

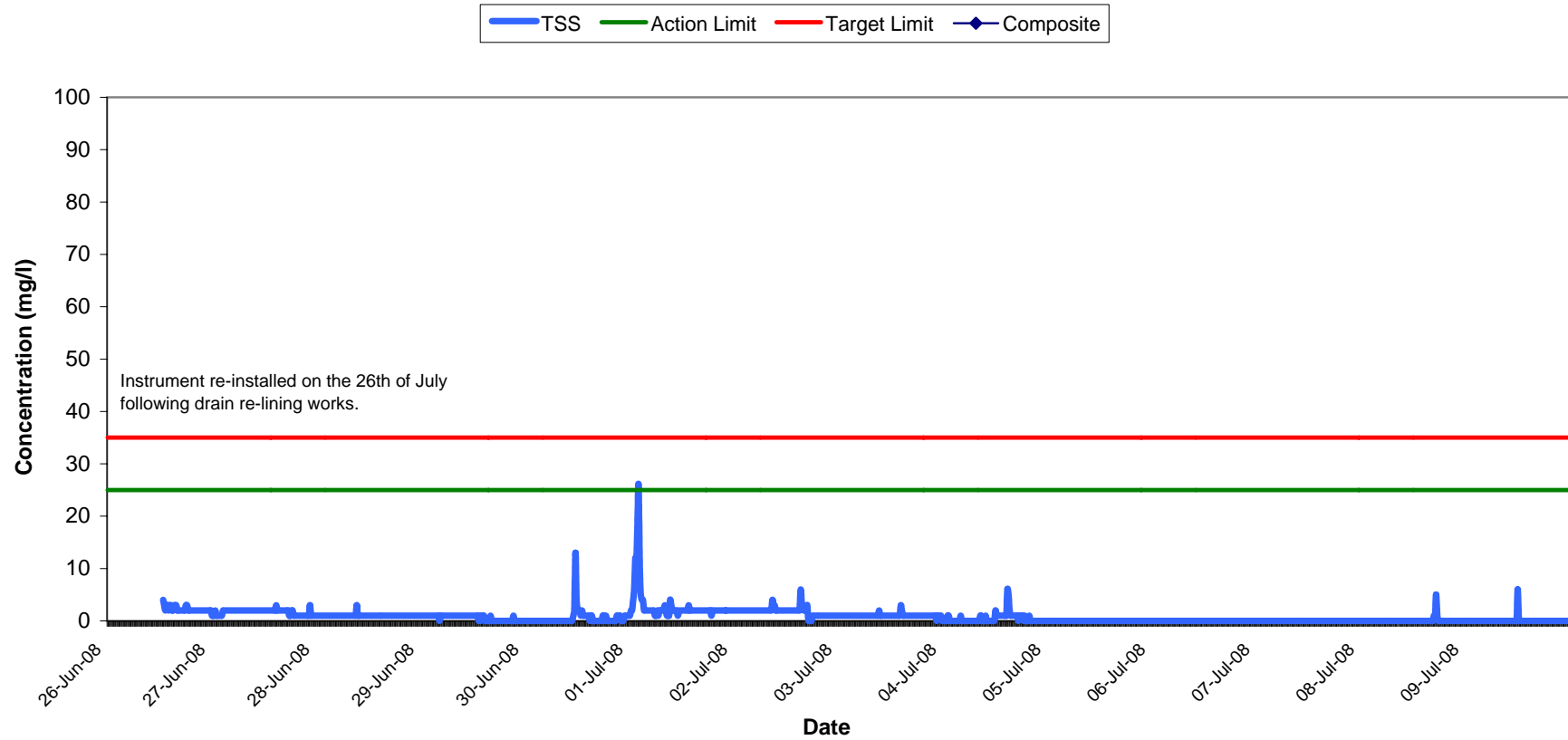
Note: Negative values indicate low flow conditions.

Vibration Monitoring Record Sheet

[illegible]

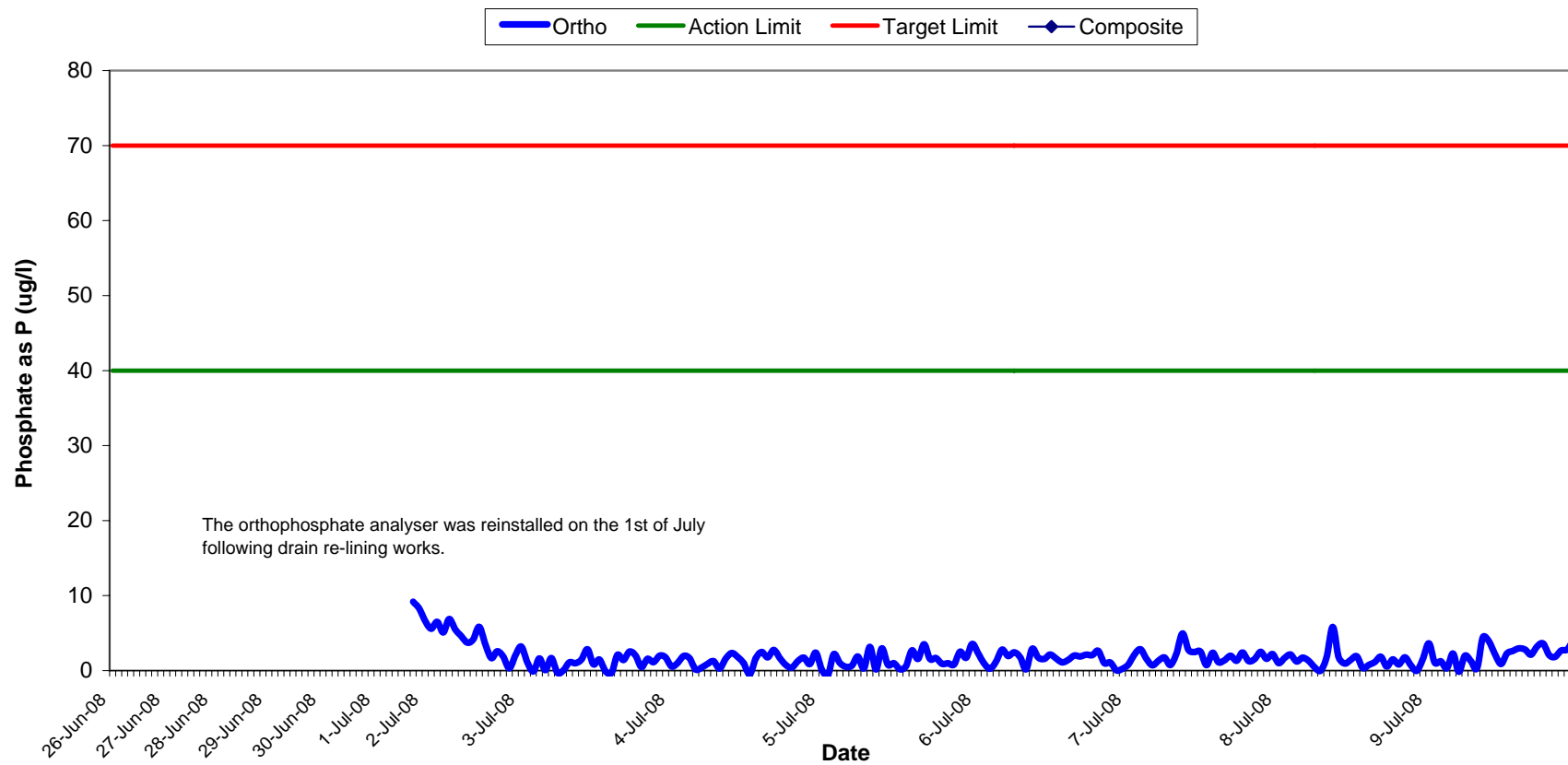
Vibration meter was located at V1 only.

Total Suspended Solids Results at SP1 Wk 27-28

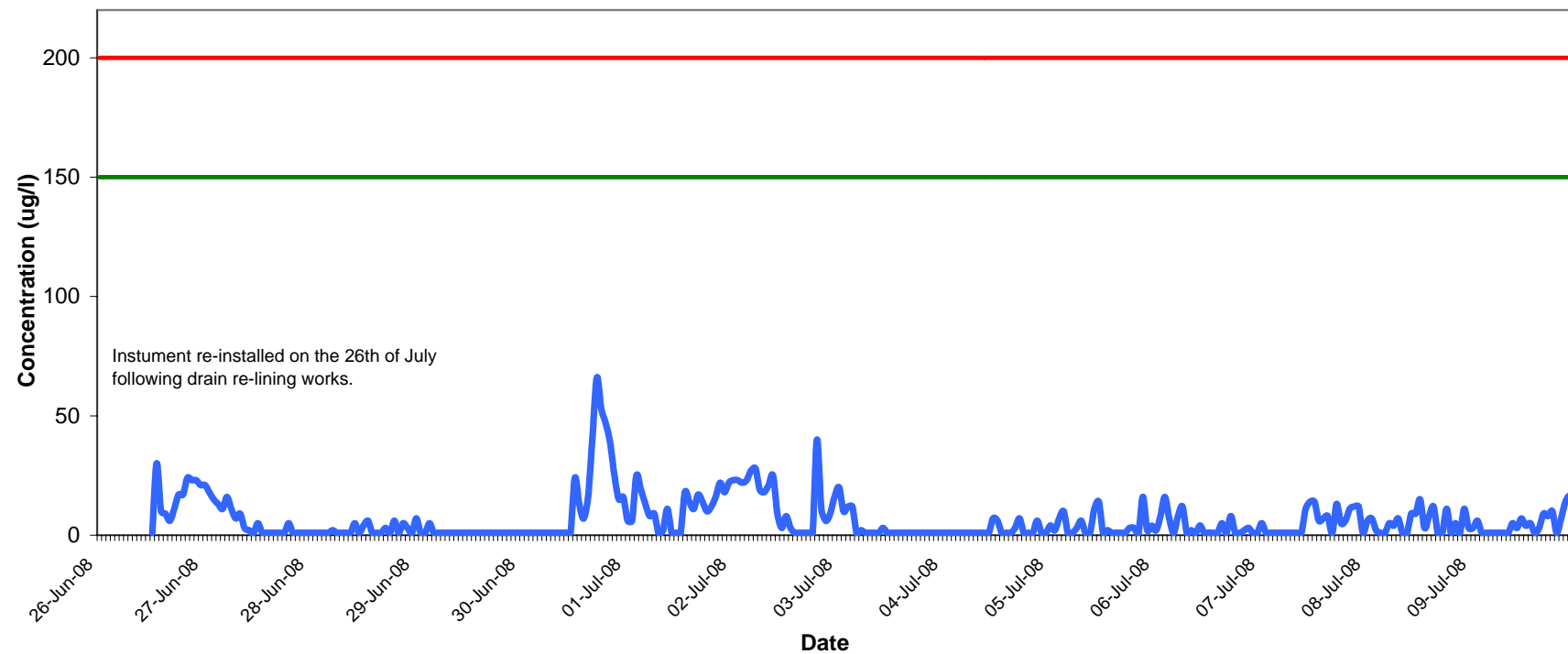


Orthophosphate Results at SP1

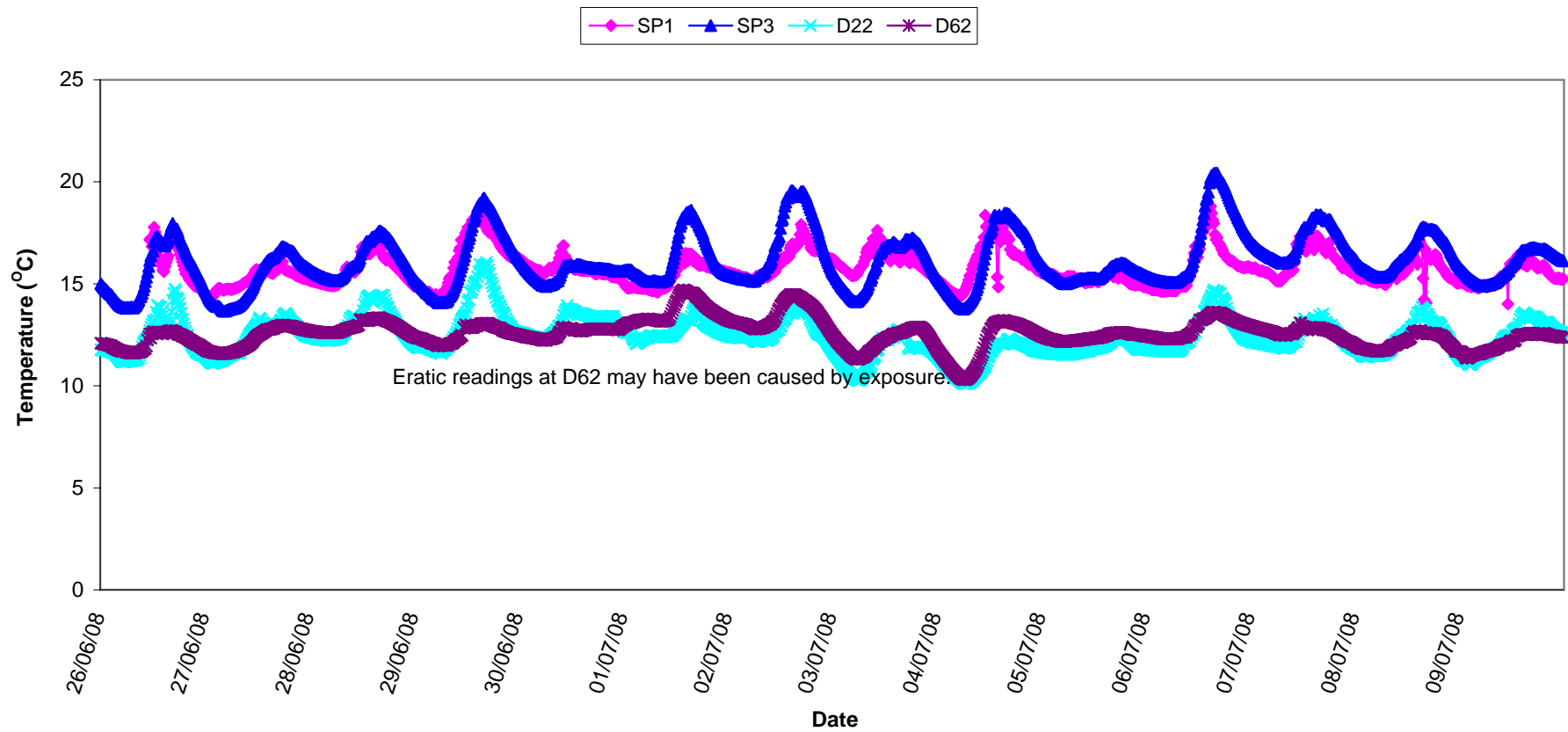
Wk 27-28



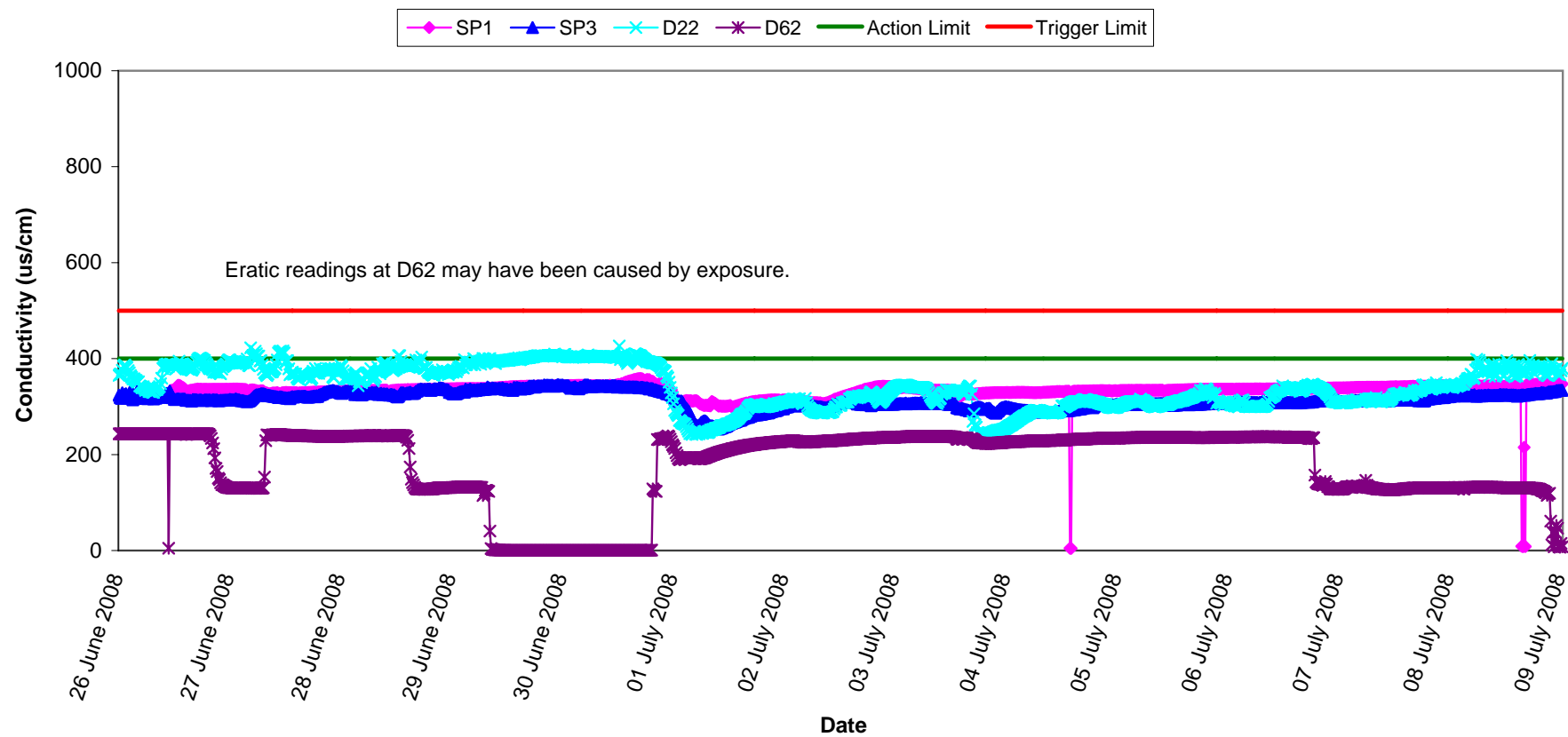
Aluminium Concentration at SP1 Wk 27-28



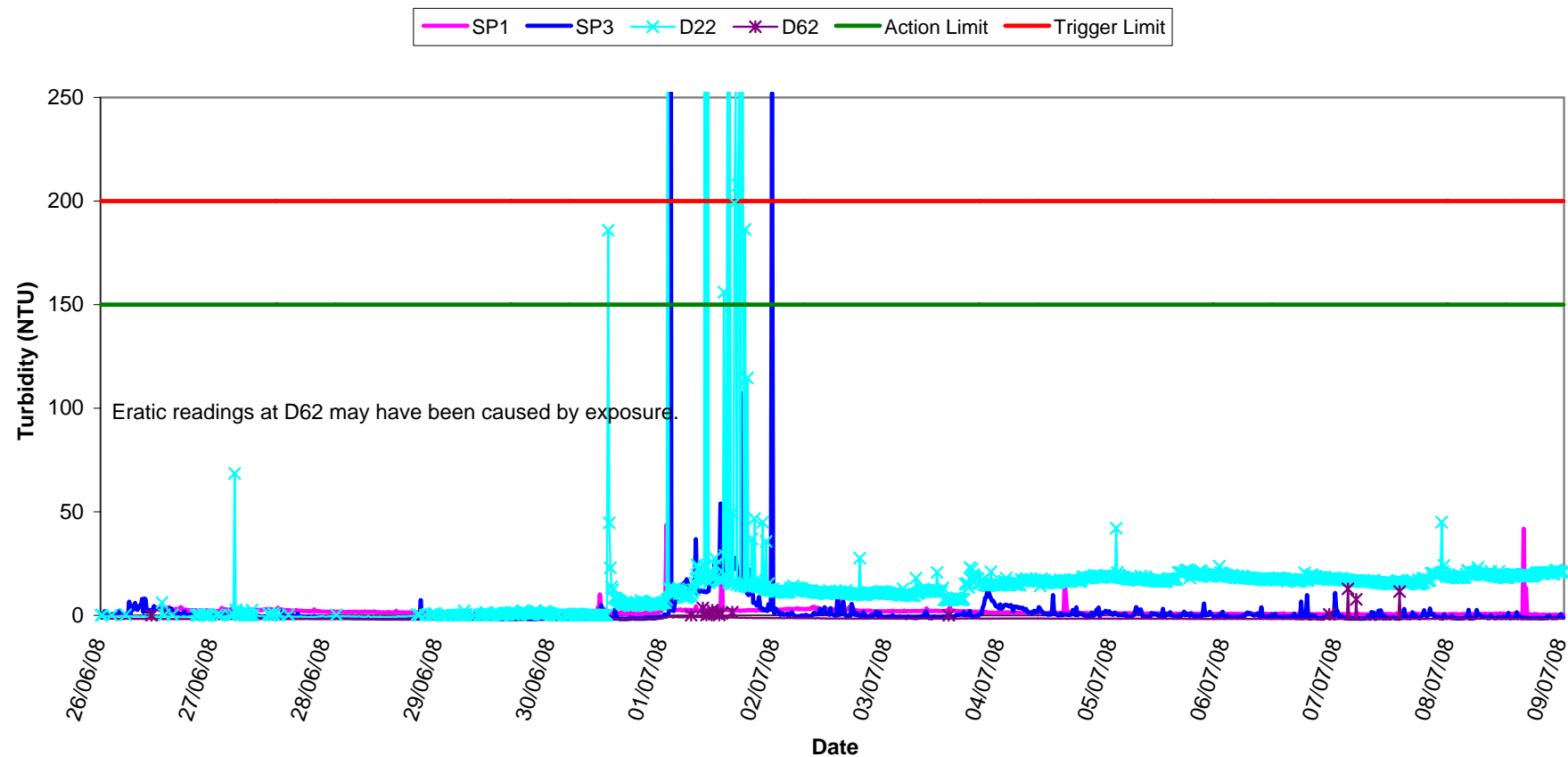
Temperature - Surface Waters
Wk 27-28



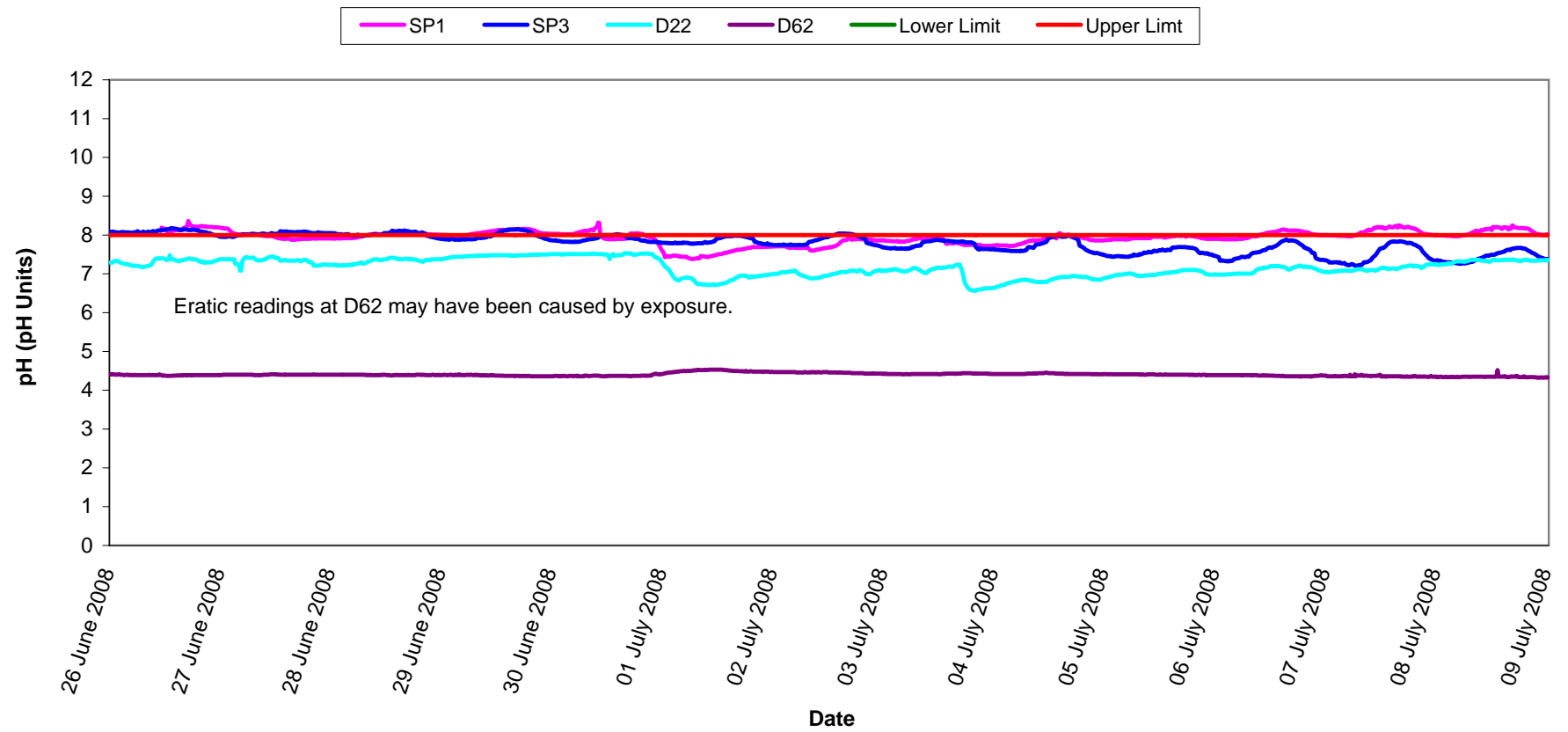
Conductivity - Surface Waters, Wk 27-28



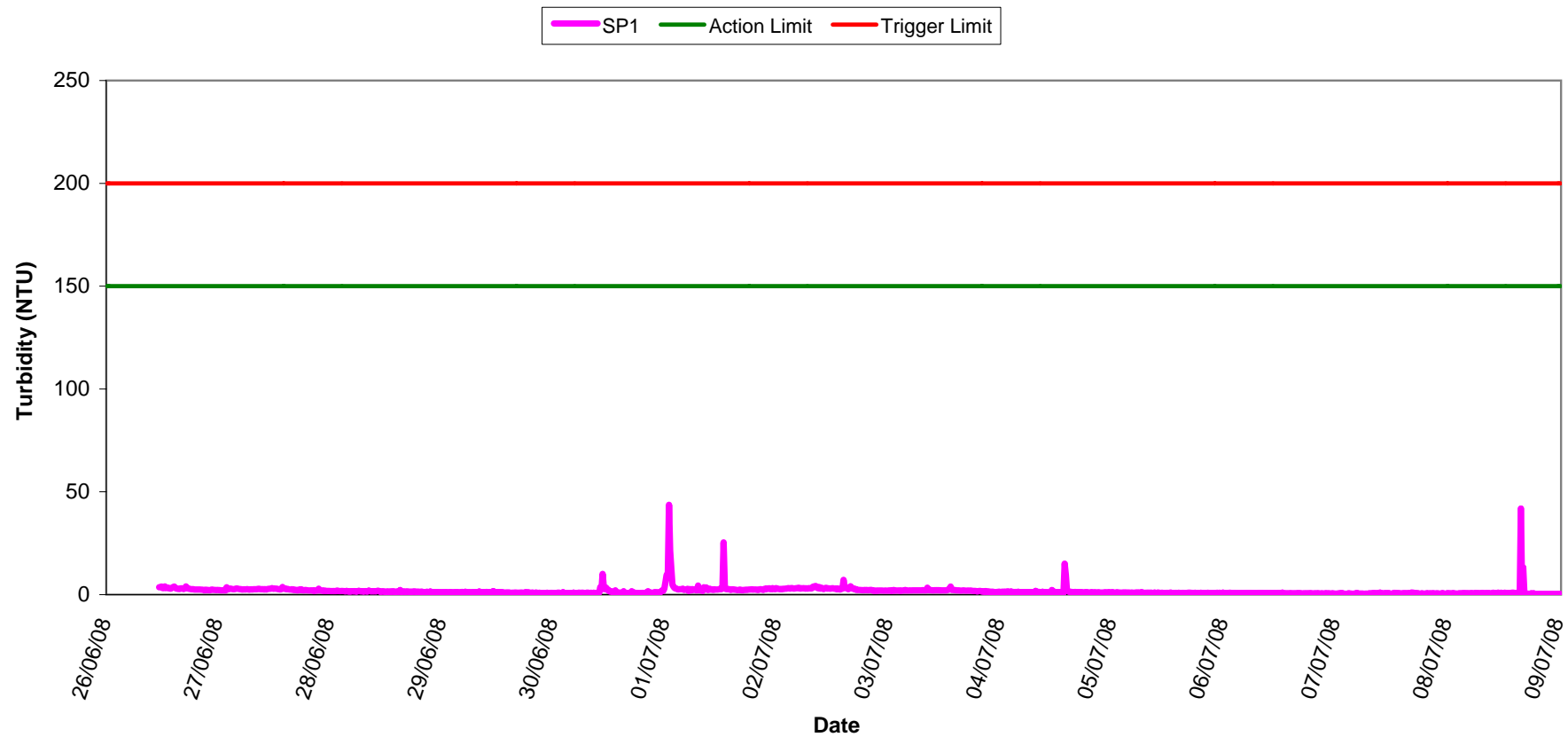
Turbidity - Surface Waters Wk 27-28



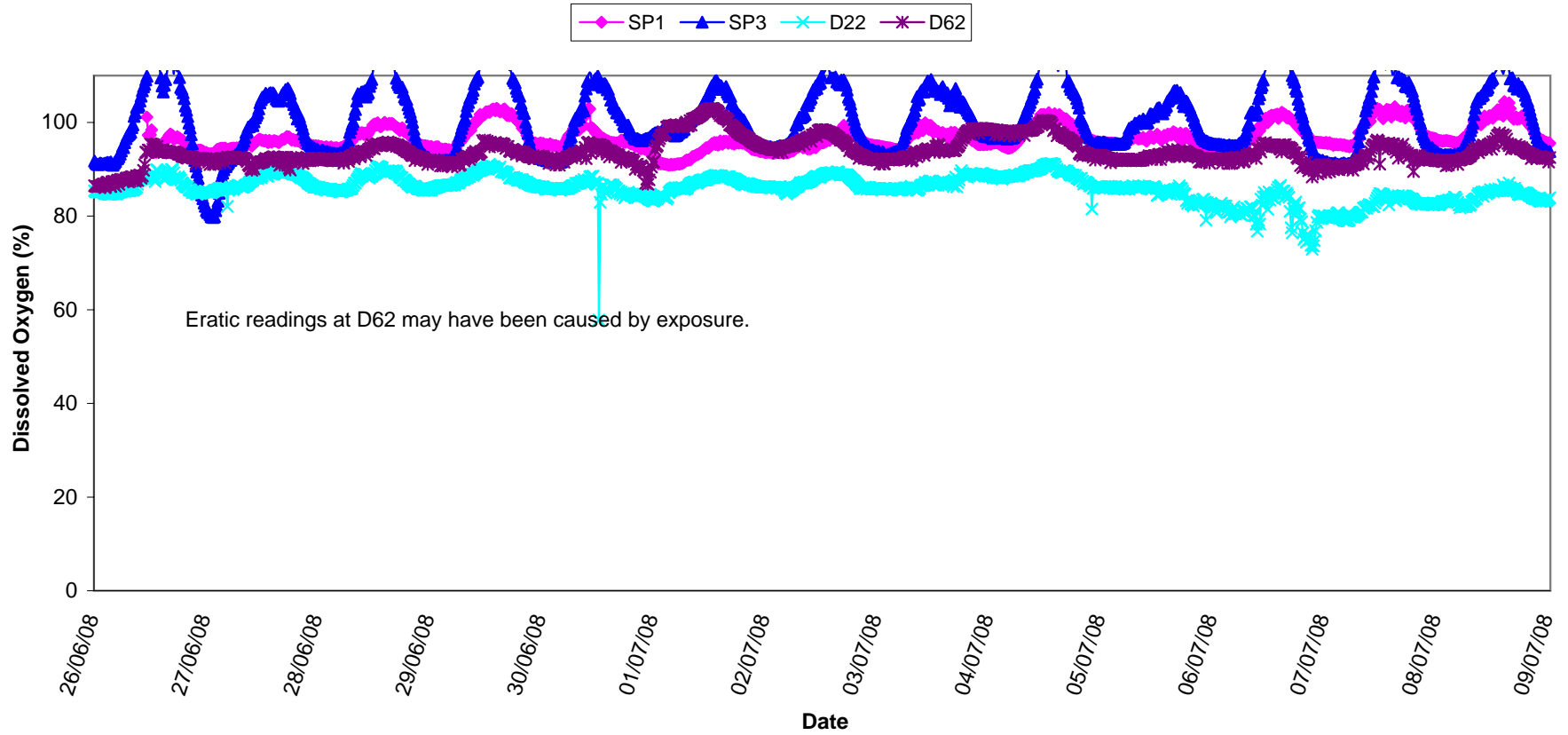
pH - Surface Waters Wk 27-28



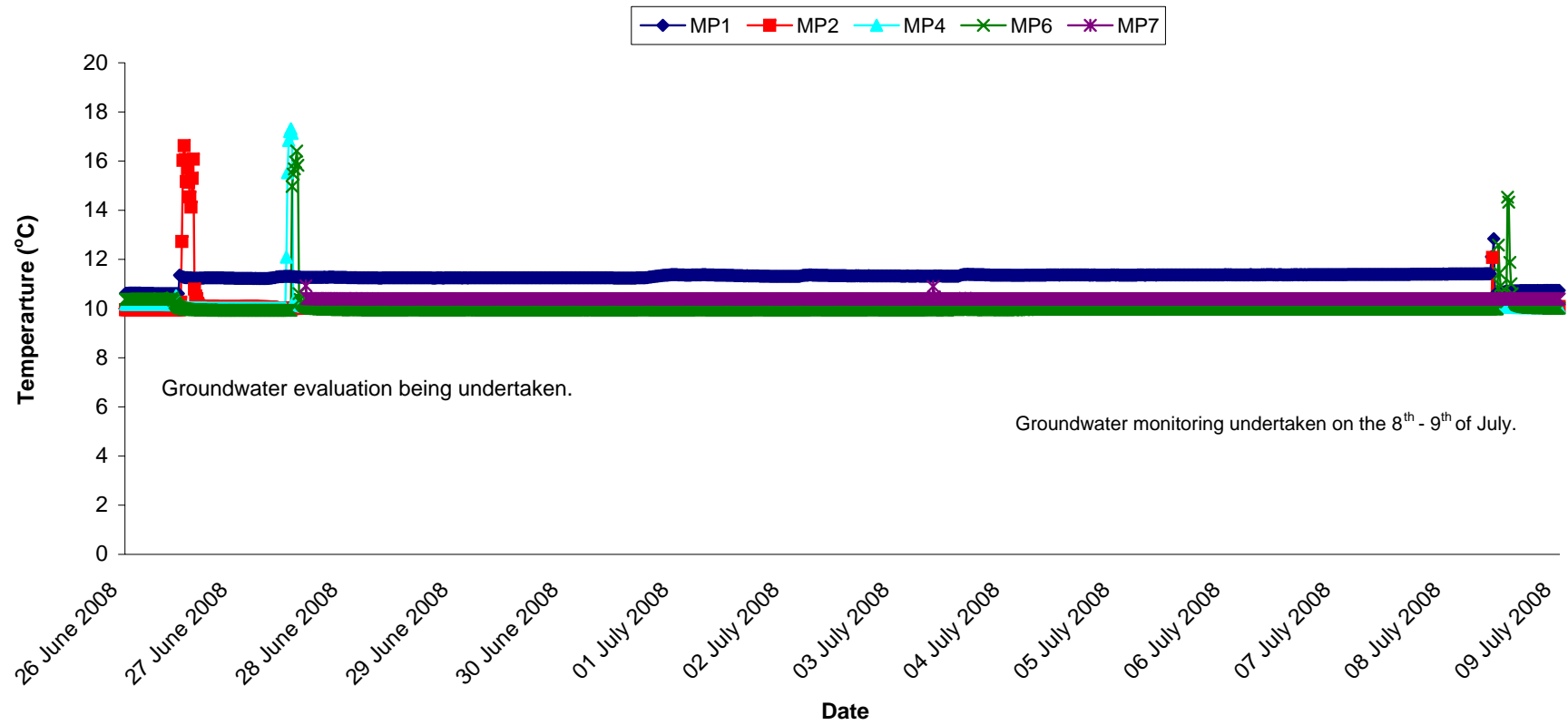
**Turbidity - Surface Waters @ SP1,
Wk 27-28**



Dissolved Oxygen - Surface Waters, Wk 27-28

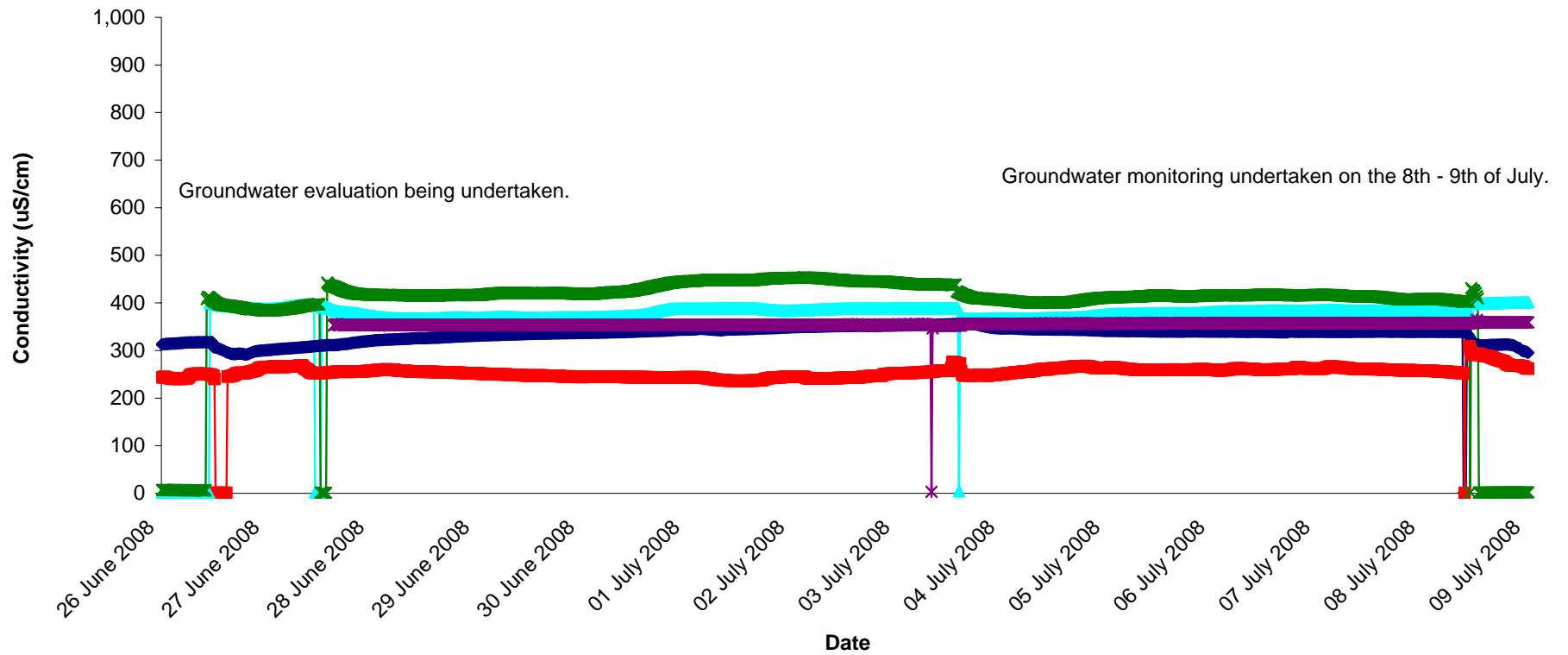


Temperature - Groundwaters Wk 27-28



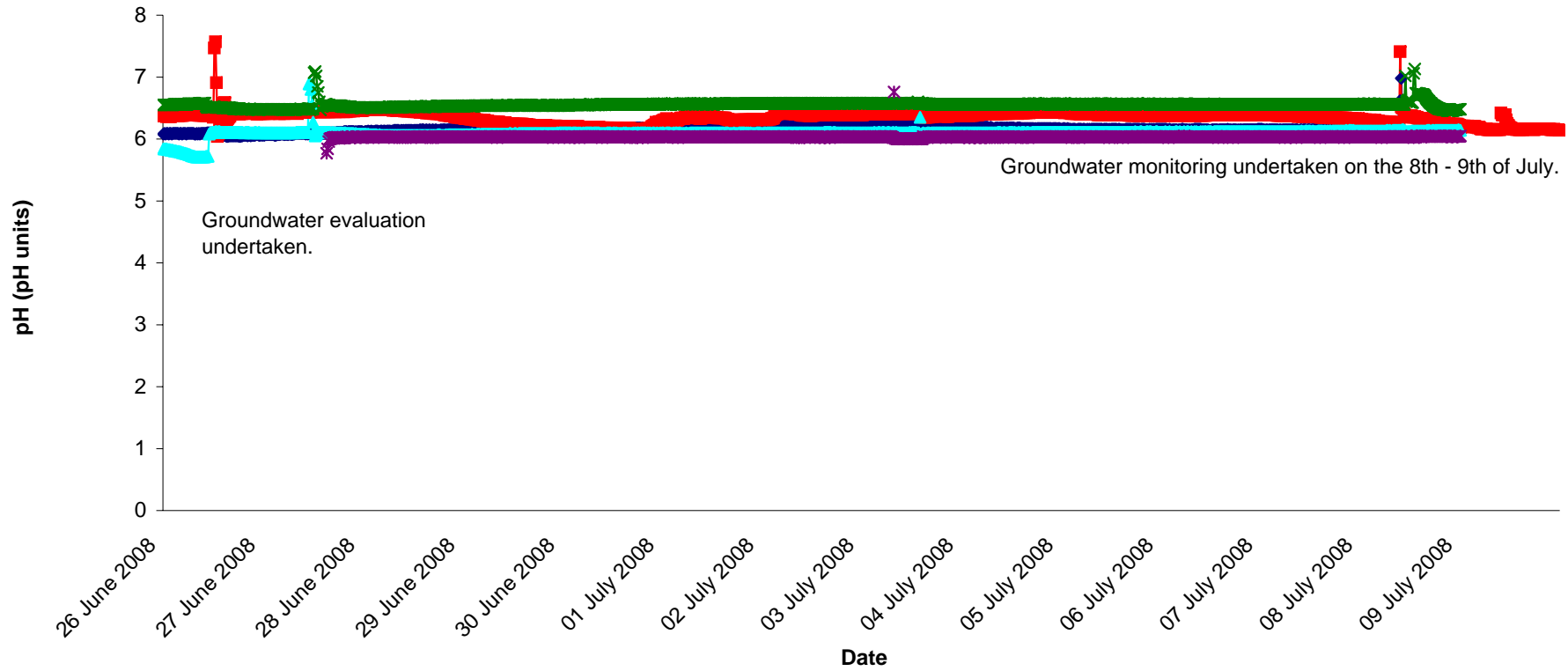
Conductivity - Groundwaters Wk 27-28

MP1 MP2 MP4 MP6 MP7



pH - Groundwaters Wk 27-28

MP1 MP2 MP4 MP6 MP7



Appendix 1

Appendix 1: Surface Water Monitoring Record Sheet- Onsite Monitoring

	Date	Cond. µS/cm	Temp °C	Turbidity NTU	DO % Sat	pH	TSS mg l ⁻¹	Ortho-phosphate as P µg l ⁻¹	Nitrate as N mg l ⁻¹	Nitrate as NO ₃ mg l ⁻¹	Total Phosphorus as P mg l ⁻¹	Ammonia as NH ₃ N mg l ⁻¹	Nitrite as NO ₂ mg/l	Aluminium (dissolved) ug/l	Aluminium (total) ug/l	Phosphate as PO ₄ mg/l	Total dissolved solids mg/l
Settlement Pond Monitoring																	
SP1	26/06/2008	342	16.5	14	90.2	7.3			0.1			<LOD		<LOD	101	0.07	262
SP1	27/06/2008	335	15.2	9	91.6	7.1			0.4			0.02		8	192	0.06	257
SP1	30/06/2008	339	15.2	3	89.2	6.7			<LOD			<LOD		9	161	0.02	228
SP1	01/07/2008	310	15.9	10	86.7	6.8			<LOD			0.18		<LOD	86	0.05	204
SP1	02/07/2008	316	15.4	8	90.5	7.2			<LOD			0.35		<LOD	82	0.19	207
SP1	03/07/2008	342	17.3	5	89.5	7.0			<LOD			<LOD		4	172	0.06	224
SP1	04/07/2008	311	15.3	4	90.1	7.2			<LOD			0.04		<LOD	323	0.09	275
SP1	07/07/2008	330	16.0	6	88.3	6.7			<LOD			<LOD		<LOD	121	0.03	229
SP1	08/07/2008	340	17.0	3	95.6	6.8			0.4			<LOD		<LOD	94	<LOD	230
SP1	09/07/2008	344	18.1	4	95.0	7.0			0.2			0.02		27	92	0.01	233
SP3	26/06/2008	360	17.6	6	100.9	7.3			<LOD			<LOD		<LOD		0.06	275
SP3	27/06/2008	373	14.3	5	89.1	7.1			0.5			0.46		11		0.12	287
SP3	30/06/2008	402	15.9	2	91.7	6.8			0.1			<LOD		3		0.06	261
SP3	01/07/2008	309	16.9	26	93.0	6.8			0.1			0.23		30		0.03	201
SP3	02/07/2008	345	15.5	5	87.5	7.3			0.3			<LOD		<LOD		0.03	227
SP3	03/07/2008	355	17.0	3	93.5	7.0			0.1			<LOD		7		0.04	233
SP3	04/07/2008	327	15.1	4	100.2	7.7			0.3			<LOD		<LOD		0.01	222
SP3	07/07/2008	352	15.7	2	91.9	6.8			0.2			0.48		<LOD		0.02	237
SP3	08/07/2008	365	16.8	3	97.3	6.8			0.6			<LOD		<LOD		0.01	247
SP3	09/07/2008	371	15.4	2	90.7	7.1			0.4			<LOD		<LOD		0.02	252
Additional Monitoring																	
D22	01/07/2008	276	13.3	7	79.6	6.9			0.1			<LOD		50		0.12	182
D62	01/07/2008	213	13.6	5	83.4	5.3			0.1			<LOD		10		0.06	133
Axonics Monitoring																	
Pre	26/06/2008	365		25		7.4			0.1			0.06		91		0.04	280
Post	26/06/2008	379		3		6.6			0.5			0.08		97	>LOD	0.01	290
Pre	27/06/2008	377		28		7.0			0.3			0.06		123		0.02	290
Post	27/06/2008	379		3		7.2			0.3			0.07		106	520	0.06	292
Pre	30/06/2008	384		27		6.9			<LOD			<LOD		64		0.03	250
Post	30/06/2008	407		2		6.8			0.5			<LOD		33	418	0.04	265</