

Final Environmental Report	Period Ending: 3 rd September 2008
Compiled By:	Aoife Reynolds, Siobhán Quinn, Catriona King & 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	– The PO ₄ analyser was operational during the reporting period. – The composite sampler was in place to cover any shortfalls in the PO ₄ analyser.
TSS	– The TSS analyser was operational during the reporting period. – The composite sampler was in place to cover any shortfalls in the TSS analyser.
Composite	– The composite sampler was operational during the reporting period.
Noise	– 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	– 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	– The results are displayed graphically. o Any unusual values are explained on the relevant graph.
Weather Station	– The data used for this reporting period was taken from the on-site meteorological station.
Weirs	– Weirs were operational during the reporting period.

1.2 Rainfall Data

21/08/08	0.00	28/08/08	2.34
22/08/08	0.00	29/08/08	2.54
23/08/08	12.68	30/08/08	5.27
24/08/08	2.93	31/08/08	7.22
25/08/08	3.32	01/09/08	6.63
26/08/08	2.93	02/0908	2.73
27/08/08	1.56	03/0908	11.31
Total Rainfall 61.43mm			

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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	All dust results were lower than the limit.
Weather	There was a total of 61.43mm of rainfall during the reporting period, with a temperature range of 9.4°C to 18.7°C
Noise	All noise levels were within the set limits.
Vibration	Results were within limits.

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.

Grey shaded areas denote parameters that cannot or were not analysed on-site or the lab.

Groundwater Monitoring Record Sheet																									
Location	Date	DO	Temp	Cond.	pH	TDS	BOD	TSS	Total Hardness	Nitrite as NO ₂	Nitrate as NO ₃	Phosphate as PO ₄	Arsenic	Mercury	Lead	Aluminium (total)	Zinc	Chromium	Copper	Cadmium	Iron	Tin	Ammonia	Aluminium, dissolved	Manganese, total
		% Sat	°C	uS/cm		mg l ⁻¹	mg l ⁻¹	mg l ⁻¹	mg/l CaCO ₃	mg l ⁻¹	mg l ⁻¹	mg l ⁻¹	ug l ⁻¹	ug l ⁻¹	ug l ⁻¹	ug l ⁻¹	ug l ⁻¹	ug l ⁻¹	ug l ⁻¹	ug l ⁻¹	ug l ⁻¹	ug l ⁻¹	mg l ⁻¹		
MP 1																									
MP 2																									
MP 3																									
MP 4																									
MP 5																									
MP 6																									
MP 7																									
MP 8																									
MP 10a																									
MP 11																									

Graphs provided for MP1, MP2,MP4, MP6 and MP7 for: Temperature, Conductivity, and pH.
No Groundwater Monitoring Undertakend during The Reporting Period

Determinant Results							
	Date Positioned	Date Removed	Ref. Number	Date Dispatched	Date Returned	Weight (mg/m ² /day)	Comments
Target (Consent) Limit: 350 mg m² d⁻¹ on as a 30 day average							
D1	25/03/2008	25/04/2008	170574	28/03/2008	16/05/2008	186	
D2	25/03/2008	25/04/2008	170575	28/03/2008	16/05/2008	281	
D3	25/03/2008	25/04/2008	170576	28/03/2008	16/05/2008	373	
D4	25/03/2008	25/04/2008	170577	28/03/2008	16/05/2008	158	
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	177618	02/07/2008	11/07/2008	191	
D2	26/05/2008	26/06/2008	177619	02/07/2008	11/07/2008	159	
D3	26/05/2008	26/06/2008	177620	02/07/2008	11/07/2008	1046	Very heavy peat like substance in jar
D4	26/05/2008	26/06/2008	177621	02/07/2008	11/07/2008	151	
D1	26/06/2008	25/07/2008	179466	30/07/2008	20/08/2008	52	
D2	26/06/2008	25/07/2008	179467	30/07/2008	20/08/2008	34	
D3	26/06/2008	25/07/2008	179464	30/07/2008	20/08/2008	87	
D4	26/06/2008	25/07/2008	179465	30/07/2008	20/08/2008	33	
D1	25/07/2008	25/08/2008	182830	29/08/2008	04/09/2008	86	
D2	25/07/2008	25/08/2008	182831	29/08/2008	04/09/2008	166	
D3	25/07/2008	25/08/2008	182833	29/08/2008	04/09/2008	41	
D4	25/07/2008	25/08/2008	182834	29/08/2008	04/09/2008	76	
NDP = No Determination Possible							
Monitoring Points are numbered clockwise through the Cardinal Marks (N, E, S, W)							
Monitoring Results will be presented monthly							

Monitoring Points are numbered clockwise through the Cardinal Marks (N, E, S, W)

Monitoring Results will be presented monthly

Day Time 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	13.8	9.5	21/08/2008	08:00:00	14:00:00	2539533	3.1	158.3	47.5	86.5	33.6	
N1	14.6	12.6	22/08/2008	08:00:00	14:00:00	2539533	3.0	118.8	45.3	72.4	<LOD	
N1	15.4	13.7	25/08/2008	08:00:00	14:00:00	2539533	5.3	55.5	49.5	78.3	32.6	
N1	15.1	12.2	26/08/2008	08:00:00	14:00:00	2539533	4.7	40.1	50.2	81.3	35.0	
N1	15.2	14.8	27/08/2008	08:00:00	14:00:00	2539533	3.8	52.6	48.2	73.3	31.4	
N1	15.7	14.6	28/08/2008	08:00:00	14:00:00	2539533	3.6	56.2	47.9	81.5	<LOD	
N1	16.2	14.4	29/08/2008	08:00:00	14:00:00	2539533	4.1	42.9	49.1	72.7	<LOD	
N1	12.2	9.6	01/09/2008	08:00:00	14:00:00	2539533	3.2	94.8	50.3	85.7	36.4	
N1	12.3	10.4	02/09/2008	08:00:00	14:00:00	2539533	4.1	196.3	47.5	69.1	31.1	
N1	12.3	9.5	03/09/2008	08:00:00	14:00:00	2539533	4.8	119.5	45.8	70.1	34.7	

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

Night Time Noise Monitoring Record Sheet

Determinant Results	
1	0.0000
2	0.0000
3	0.0000
4	0.0000
5	0.0000
6	0.0000
7	0.0000
8	0.0000
9	0.0000
10	0.0000
11	0.0000
12	0.0000
13	0.0000
14	0.0000
15	0.0000
16	0.0000
17	0.0000
18	0.0000
19	0.0000
20	0.0000
21	0.0000
22	0.0000
23	0.0000
24	0.0000
25	0.0000
26	0.0000
27	0.0000
28	0.0000
29	0.0000
30	0.0000
31	0.0000
32	0.0000
33	0.0000
34	0.0000
35	0.0000
36	0.0000
37	0.0000
38	0.0000
39	0.0000
40	0.0000
41	0.0000
42	0.0000
43	0.0000
44	0.0000
45	0.0000
46	0.0000
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60	0.0000
61	0.0000
62	0.0000
63	0.0000
64	0.0000
65	0.0000
66	0.0000
67	0.0000
68	0.0000
69	0.0000
70	0.0000
71	0.0000
72	0.0000
73	0.0000
74	0.0000
75	0.0000
76	0.0000
77	0.0000
78	0.0000
79	0.0000
80	0.0000
81	0.0000
82	0.0000
83	0.0000
84	0.0000
85	0.0000
86	0.0000
87	0.0000
88	0.0000
89	0.0000
90	0.0000
91	0.0000
92	0.0000
93	0.0000
94	0.0000
95	0.0000
96	0.0000
97	0.0000
98	0.0000
99	0.0000
100	0.0000

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									50			
Target Limit									55			
N1	13.8	9.5	21/08/2008	22:00:00	10:00:00	2539533	3.1	158.3	40.5	67.4	32.5	
N1	14.6	12.6	22/08/2008	22:00:00	10:00:00	2539533	3.0	118.8	43.2	77.3	<LOD	
N1	15.4	13.7	25/08/2008	22:00:00	10:00:00	2539533	5.3	55.5	42.7	69.6	<LOD	
N1	15.1	12.2	26/08/2008	22:00:00	10:00:00	2539533	4.7	40.1	44.4	71.6	32.4	
N1	15.2	14.8	27/08/2008	22:00:00	10:00:00	2539533	3.8	52.6	43.6	75.7	31.7	
N1	15.7	14.6	28/08/2008	22:00:00	10:00:00	2539533	3.6	56.2	42.9	66.1	<LOD	
N1	16.2	14.4	29/08/2008	22:00:00	10:00:00	2539533	4.1	42.9	44.6	80.6	31.0	
N1	12.2	9.6	01/09/2008	22:00:00	10:00:00	2539533	3.2	94.8	46.5	73.3	36.7	
N1	12.3	10.4	02/09/2008	22:00:00	10:00:00	2539533	4.1	196.3	46.3	73.4	31.1	
N1	12.3	9.5	03/09/2008	22:00:00	10:00:00	2539533	4.8	119.5	41.4	67.6	33.1	

* 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)
21/08/2008	9.66	0.36	5.74	6.74	4.48	6.13
22/08/2008	9.48	3.32	8.08	6.26	4.69	5.33
23/08/2008	21.20	7.24	11.06	9.55	2.38	5.69
24/08/2008	19.03	11.70	13.84	7.47	4.48	6.35
25/08/2008	19.03	7.39	13.07	11.22	4.69	7.03
26/08/2008	13.76	3.80	8.26	5.57	1.89	4.45
27/08/2008	10.93	3.14	8.43	6.74	3.87	5.03
28/08/2008	11.90	3.23	7.71	7.98	1.03	3.83
29/08/2008	8.48	1.06	4.74	4.91	0.28	1.79
30/08/2008	15.33	8.00	9.50	6.26	3.87	4.97
31/08/2008	15.56	9.31	12.52	7.47	3.47	5.77
01/09/2008	41.39	12.30	18.80	9.55	3.28	5.90
02/09/2008	14.64	6.39	11.16	6.74	2.21	3.78
03/09/2008	66.17	7.85	24.13	15.76	2.56	6.86

Note: Negative values indicate low flow conditions.

Vibration Monitoring Record Sheet

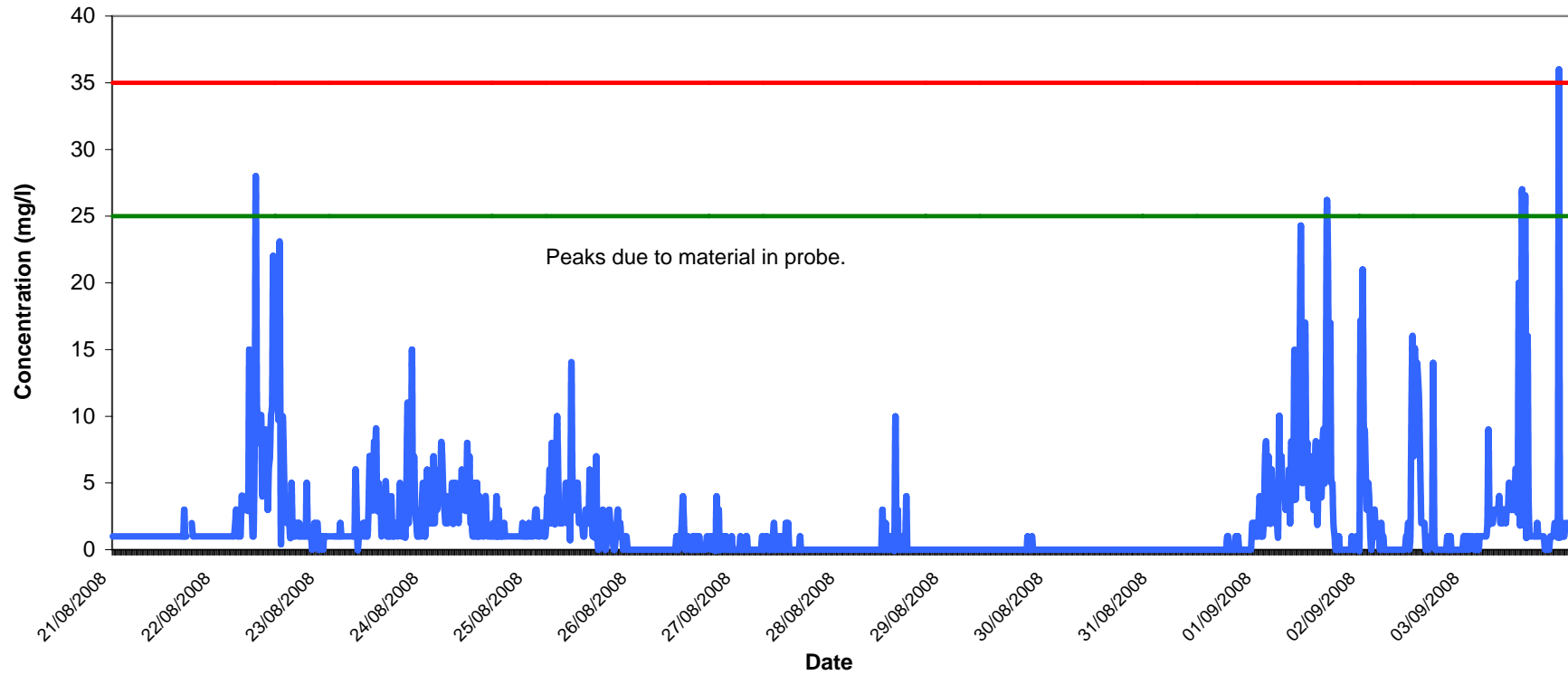
Determinant Results									
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[illegible]

Vibration meter was located at V1 only.

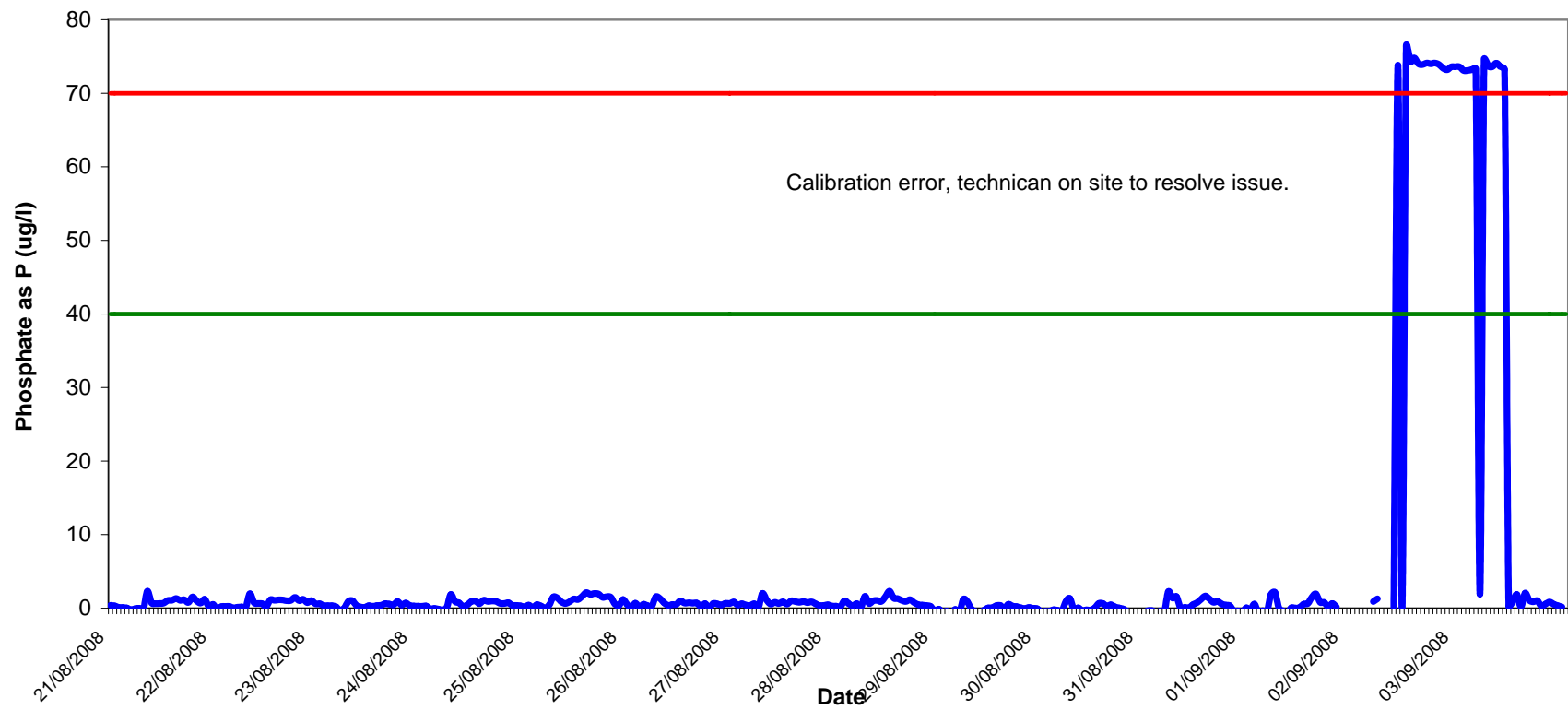
Total Suspended Solids Results at SP1
Wk 35-36

TSS Action Limit Target Limit Composite

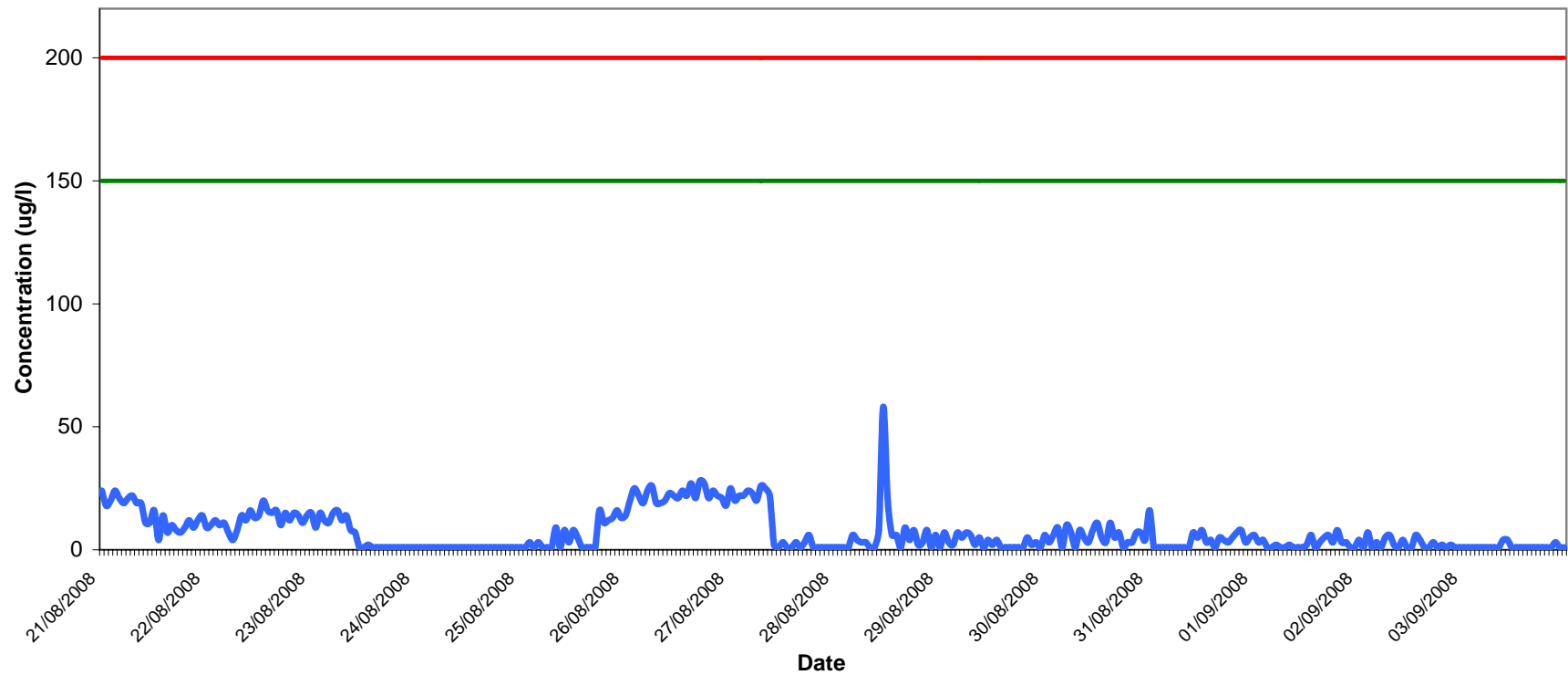


Orthophosphate Results at SP1

Wk 35-36

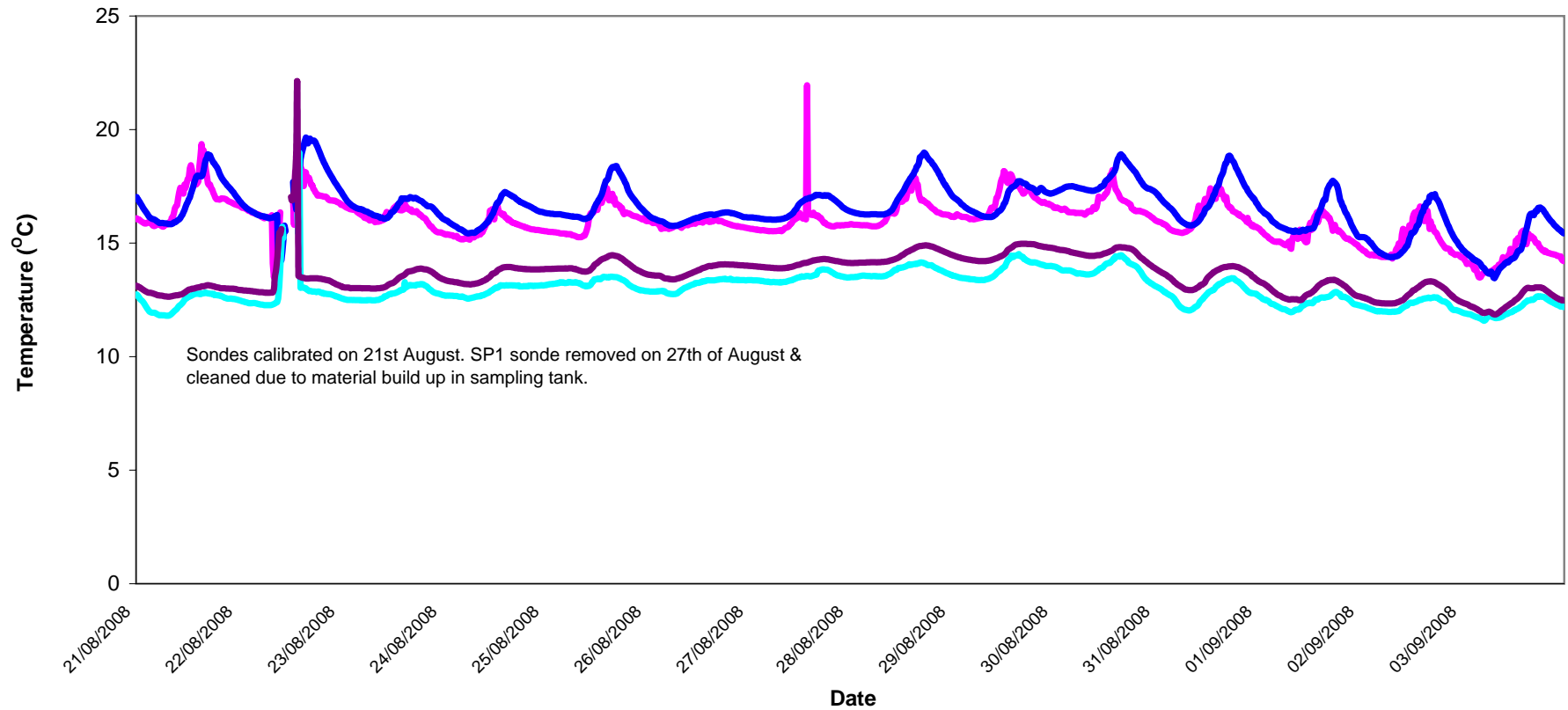
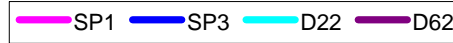


Aluminium Concentration at SP1
Wk 35-36

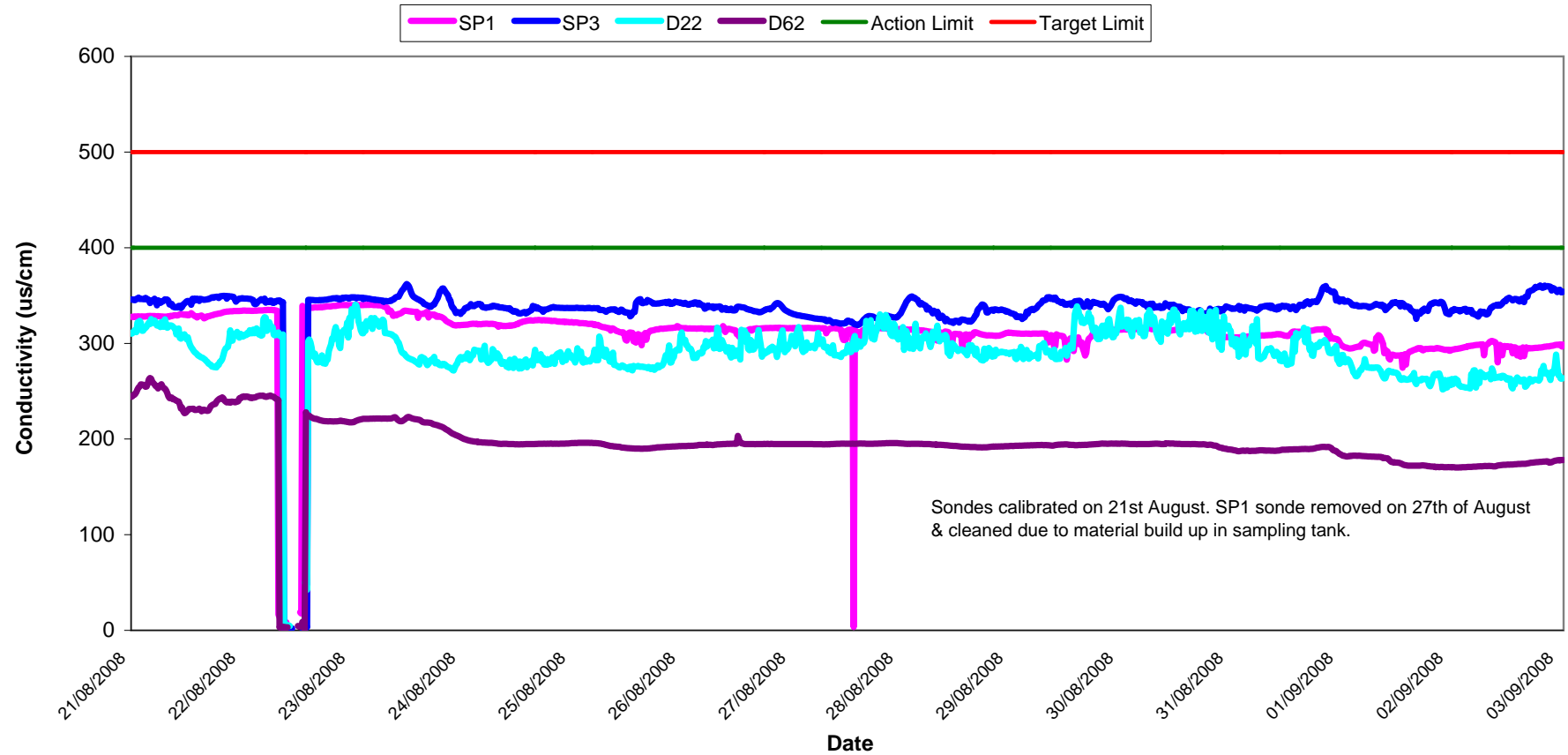


Temperature - Surface Waters

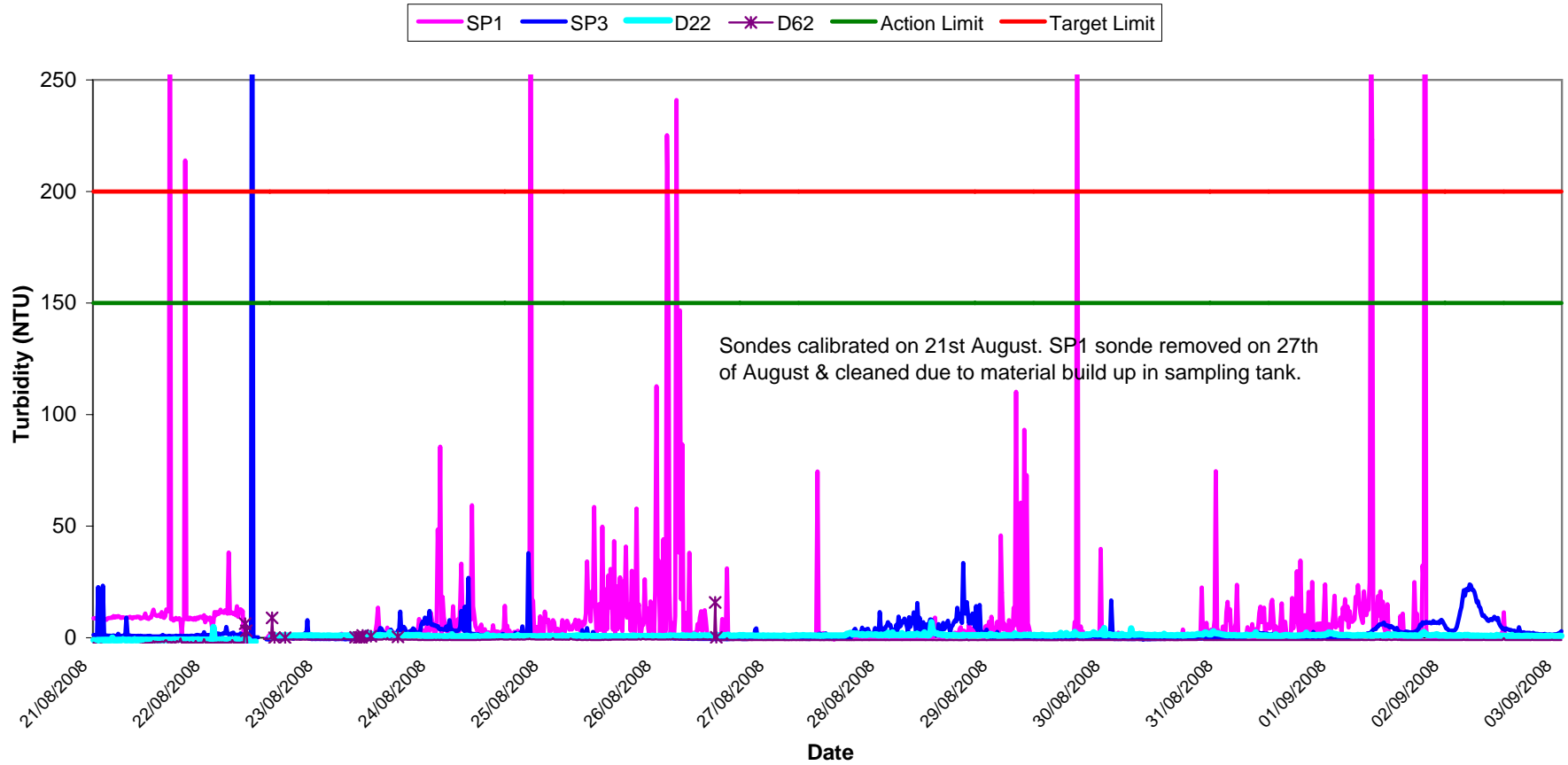
Wk 35-36



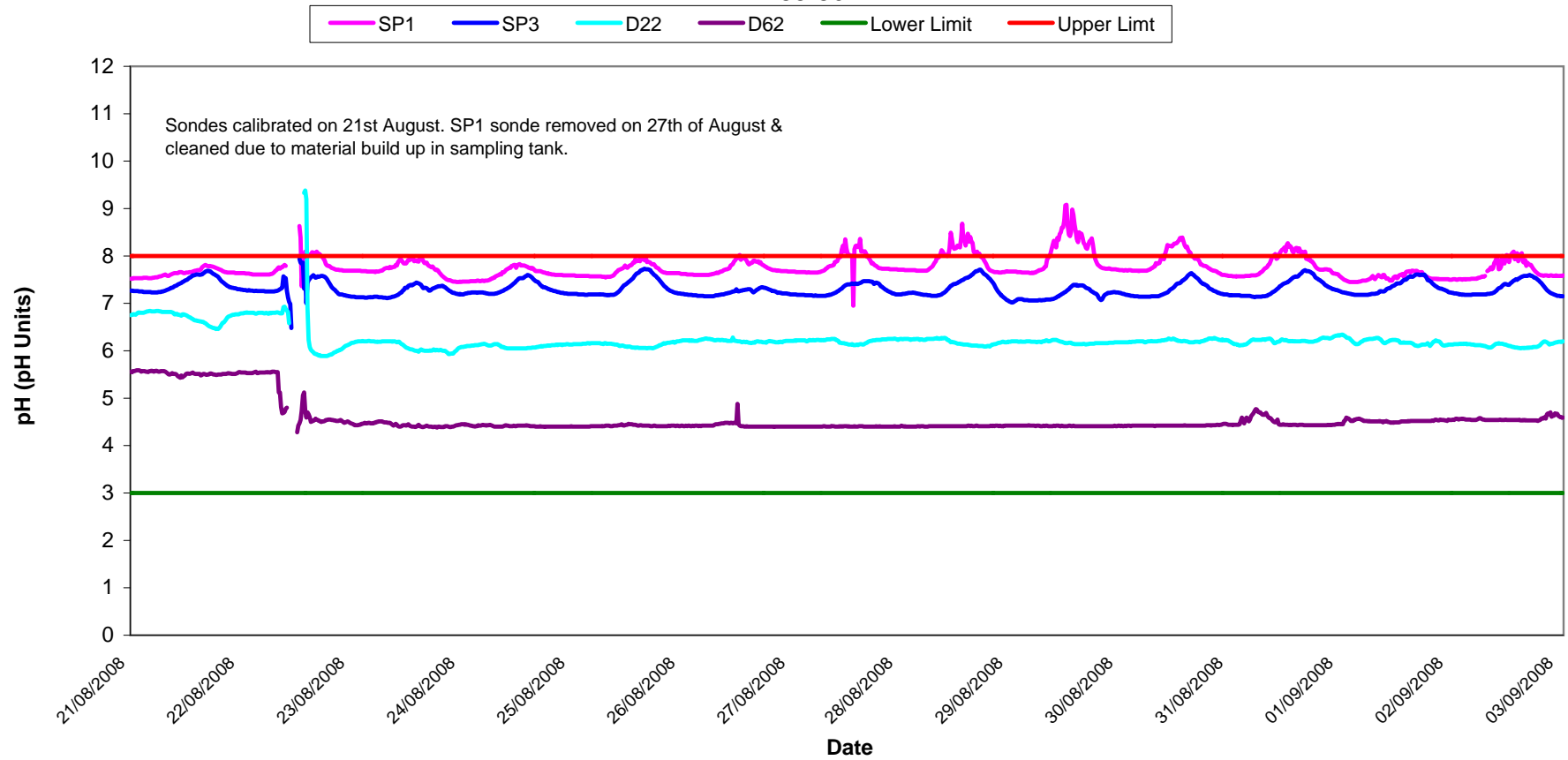
Conductivity - Surface Waters, Wk 35-36



Turbidity - Surface Waters Wk 35-36

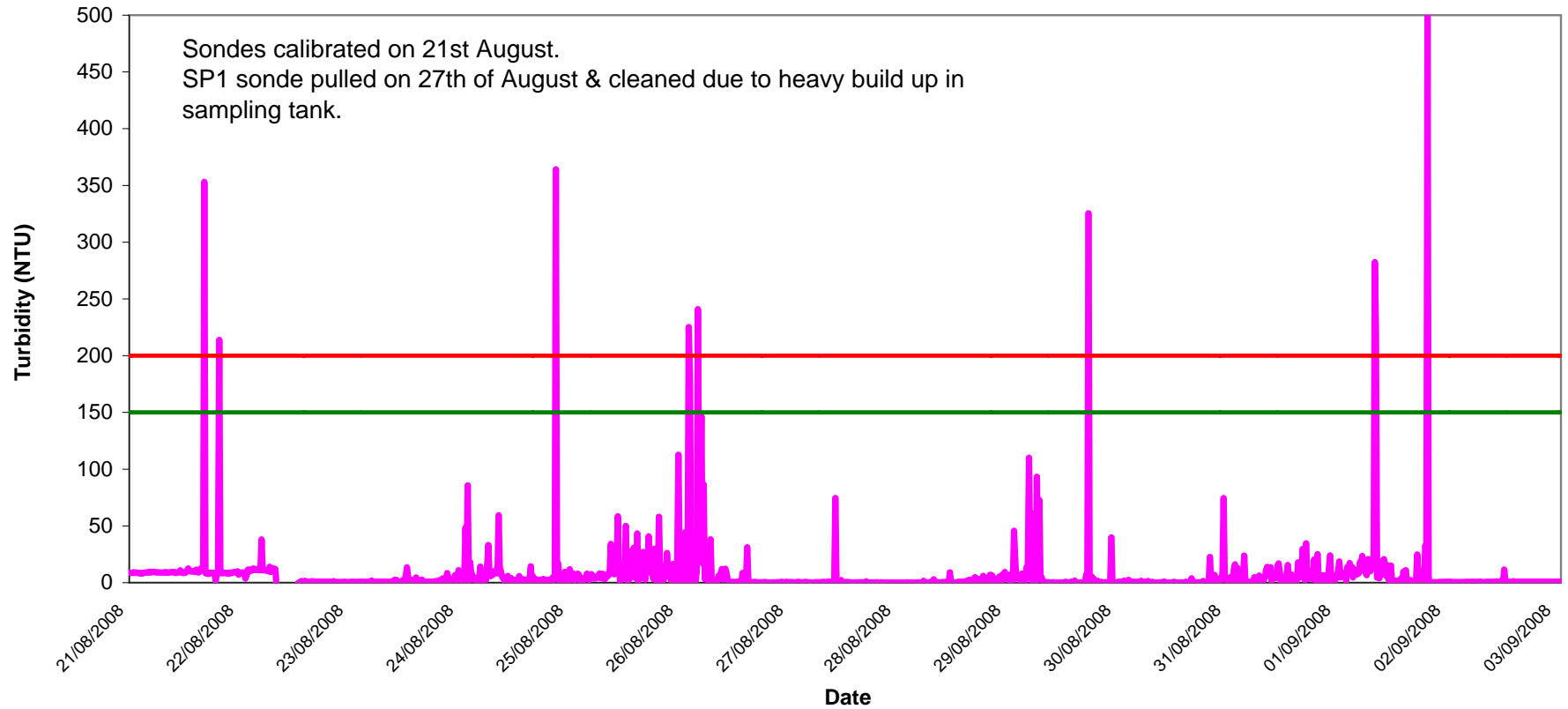


**pH - Surface Waters
Wk 35-36**

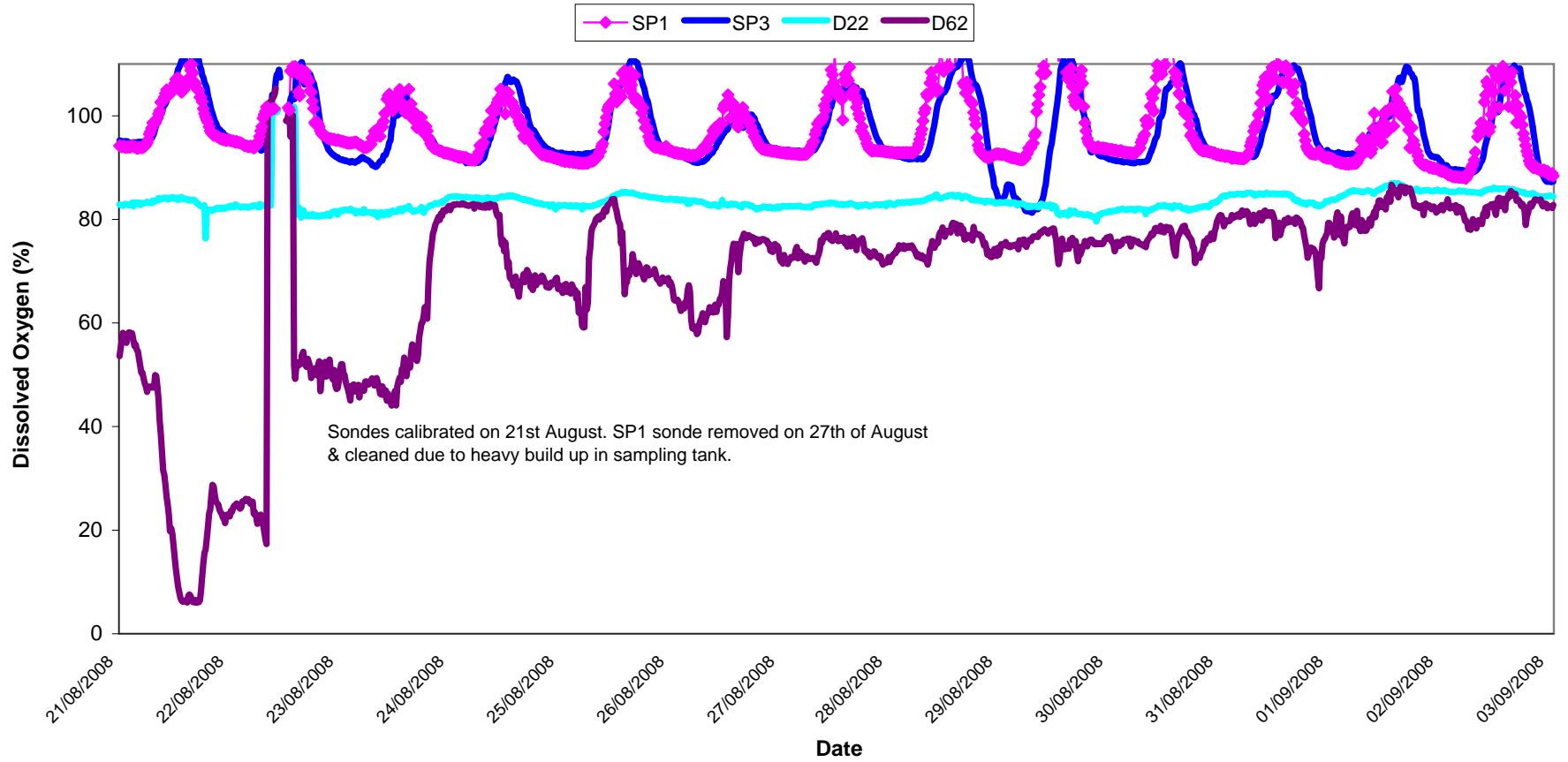


**Turbidity - Surface Waters @ SP1,
Wk 35-36**

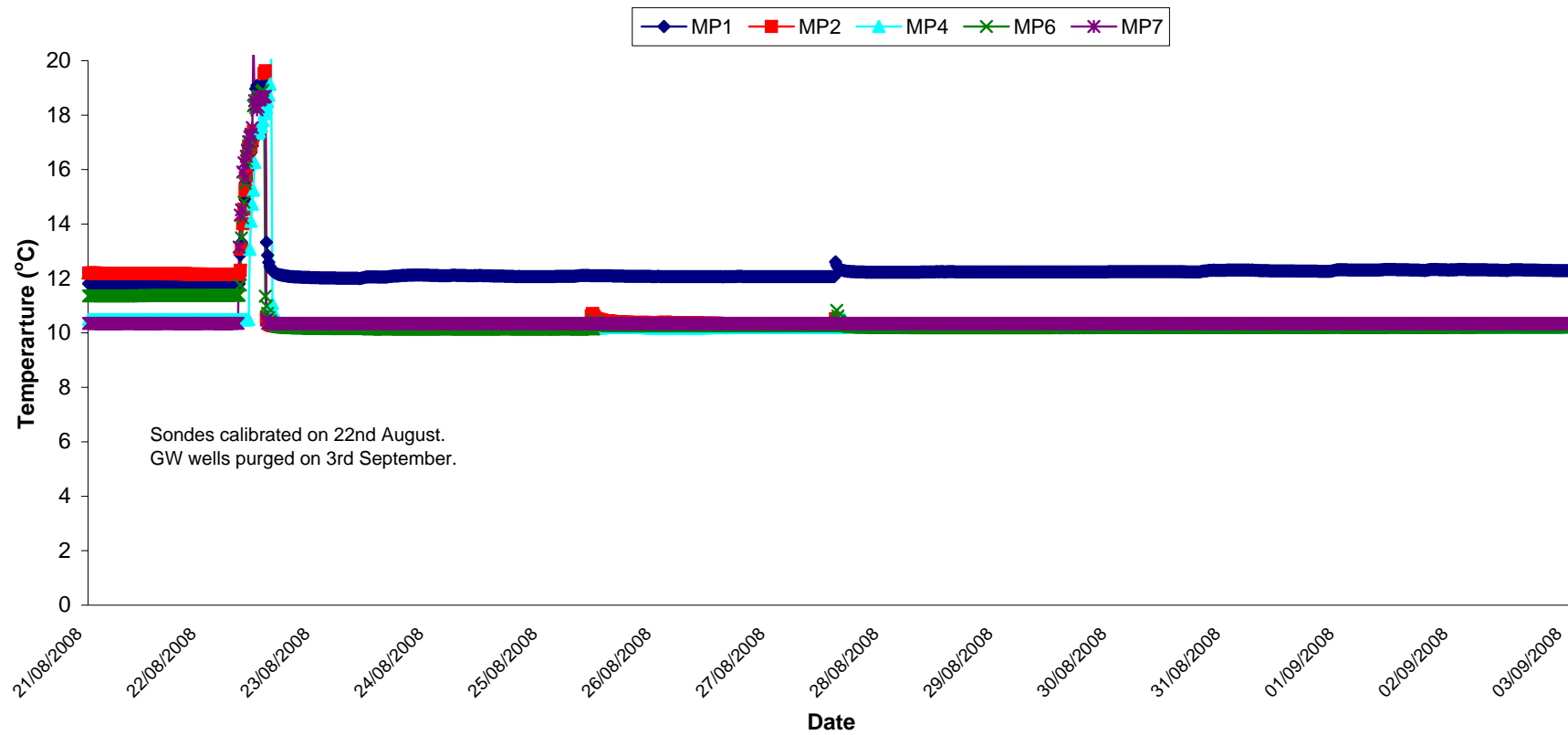
SP1 Action Limit Target Limit



**Dissolved Oxygen - Surface Waters,
Wk 35-36**

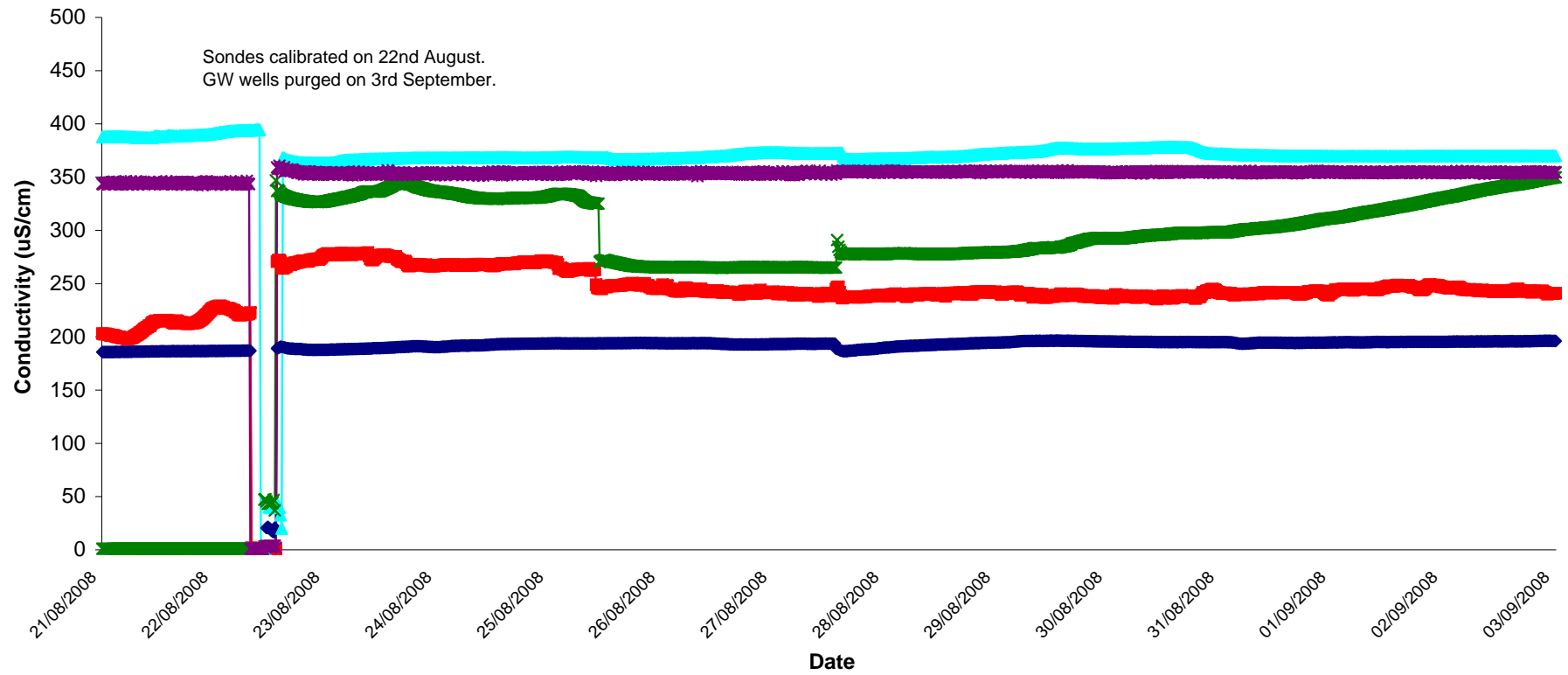


Temperature - Groundwaters Wk 35-36



Conductivity - Groundwaters Wk 35-36

MP1 MP2 MP4 MP6 MP7



pH - Groundwaters Wk 35-36

MP1 MP2 MP4 MP6 MP7

