

Interim Environmental ReportPeriod Ending: Thur 19th July 2007

Compiled By: Siobhan Quinn/ Mairtin Naughton

Approved By: Tony Doyle

1 Monitoring Data

1.1 Monitoring Equipment

Axonics	<ul style="list-style-type: none"> – Axonics plant operational during the reporting period. – Plant currently being upgraded to include inflow monitoring.
PO ₄	<ul style="list-style-type: none"> – The PO₄ analyser was operational during the reporting period. – Partech technician was on site on the 11th & 12th of July for equipment service. – The composite sampler is in place to cover any shortfalls in the PO₄ analyser.
TSS	<ul style="list-style-type: none"> – The TSS analyser was operational during the reporting period. – Partech technician was on site on the 11th & 12th of July for equipment service. – The composite sampler is in place to cover any shortfalls in the TSS analyser.
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 below. <ul style="list-style-type: none"> ○ Any exceedance events are explained on the relevant graph.
Weather Station	<ul style="list-style-type: none"> – The data used for this reporting period was taken from the on-site meteorological station.
Weirs	<ul style="list-style-type: none"> – Data included in table below

1.2 Rainfall Data

06/07/07	6.8	13/07/07	0.8
07/07/07	3.8	14/07/07	2.2
08/07/07	1.4	15/07/07	2.6
09/07/07	25.8	16/07/07	16.6
10/07/07	0.0	17/07/07	11.0
11/07/07	7.2	18/07/07	1.2
12/07/07	0.8	19/07/07	0.6
Total Rainfall 80.8mm			

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1.3 Summary

Environment	Comments
Surface Water	Based on the results currently available there are no exceedance events for the reporting period. Sonde results are explained on the relevant graphs.
Groundwater	The groundwater wells were bailed and sampled on the 06 th & 17 th of July. The information for MP2 is not available due to a probe error. The groundwater data (Sonde) is within anticipated ranges.
Dust	All results were within the limit of 350 mg/m ² /day. D3 was not analysed as the dust pot was soiled with bird droppings.
Weather	There was a total of 80.8 mm of rainfall during the reporting period, with a temperature range of 7.49 to 23.3 ^o C
Noise	No noise exceedances were recorded during the reporting period
Vibration	No vibration exceedances were recorded during the reporting period.

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

2 Environmental Exceedances/Incidents/Complaints

There were no exceedances, incidents or complaints during this reporting period.

Surface Water Monitoring Record Sheet

Conducted by		Signed						Approved by									
Name:		Signed						Name									
		Determinant Results															
	Date	Cond.	Temp	Turbidity	DO	pH	TSS	Ortho-phosphate as P	Nitrate as N	Nitrate as NO ₃	Total Phosphorus as P	Ammonia as NH ₃ -N	Nitrite as NO ₂	Aluminium (dissolved)	Aluminium (total)	Phosphate as PO ₄ -P	TDS
		µS/cm	°C	NTU	% Sat	pH units	mg l ⁻¹	µg l ⁻¹	mg l ⁻¹	mg l ⁻¹	mg l ⁻¹	mg l ⁻¹	mg l ⁻¹	µg l ⁻¹	µg l ⁻¹	mg l ⁻¹	mg l ⁻¹
Action Limits		400		150		<3.5 or >7.5	25	40	1.5			0.2	0.025	100	135		
Target Limits		500		200		<3 or >8	35	70	2.6			0.5	0.05	150	200		
Settlement Pond Monitoring																	
SP1	06/07/07	334	15.8	19.5	94.3	6.8			<LOD			0.27		40	0.14	0.1	228
SP1	09/07/07	275	15.4	44.9	79.1	6.7			<LOD			0.27		40	360	0.11	184
SP1	10/07/07	285	14.7	45.6	93.5	6.8			>LOD			0.08		40	280	0.09	191
SP1	11/07/07	301	16.5	38.2	91.4	6.6			<LOD			0.11		20	340	0.09	192
SP1	12/07/07	290	20.1	25.6	94.3	7.0			<LOD			0.26		70	160	0.21	151
SP1	13/07/07	310	16.1	14.9	90.1	6.5			<LOD			0.91		40	170	0.48	191
SP1	16/07/07	306	17.1	26.0	94.2	6.6			<LOD			0.34		30	70	0.56	202
SP1	17/07/07	267	16.1	16.7	91.3	6.8			<LOD			0.15		0.03	160	0.16	167
SP1	18/07/07	259	15.9	22.0	89.7	6.7			0.1			0.52		0.11	180	0.07	169
SP1	19/07/07	286	16.4	12.0	92.8	6.4			0.3			0.76		50	130	0.16	157
SP3	06/07/07	314	15.6	42.5	20.2	7.2			<LOD			0.18		40		0.06	215
SP3	09/07/07	245	14.6	62.7	99.0	6.4			<LOD			0.29		60		0.11	166
SP3	10/07/07	287	13.9	20.1	98.0	6.8			0.1			0.1		40		0.1	195
SP3	11/07/07	305	17.2	14.5	101.1	6.7			0.1			0.1		20		0.02	207
SP3	12/07/07	318	19.3	73.5	100.9	6.9			<LOD			1		90		0.06	215
SP3	13/07/07	316	17.2	11.4	96.6	6.4			<LOD			0.18		40		0.11	196
SP3	16/07/07	317	16.7	19.0	96.3	6.8			<LOD			0.11		20		0.21	200
SP3	17/07/07	316	16.4	32.7	91.3	6.5			<LOD			<LOD		0.06		0.22	195
SP3	18/07/07	294	16.3	46.0	92.9	6.8			<LOD			1.84		0.13		0.1	181
SP3	19/07/07	294	14.3	16.0	89.4	6.5			1.3			0.83		80			
SP1	09/07/07	203		71.8		7.1	63	27		I.P.	I.P.	0.021	I.P.	I.P.	I.P.		131
SP3	09/07/07	I.P.		133		I.P.	36	I.P.		I.P.	I.P.	0.021	I.P.	I.P.	I.P.		I.P.
SP1	16/07/07	165.5		42.1		8.9	4	I.P.		<0.44	0.065	<0.005	<0.017	<20	<20		142
SP3	16/07/07	I.P.		I.P.		I.P.	7	I.P.		I.P.	I.P.	I.P.	I.P.	I.P.	<20		I.P.
Additional Monitoring																	
D22	06/07/07	271	17.6	43.8	89.6	6.7			<LOD			0.16		140		0.12	184
D62	06/07/07	184	14.2	6.9	89.7	6.0			<LOD			0.15		50		0.06	120
D22	13/07/07	Not Taken Due to Access Restrictions from Protestor Activities															
D62	13/07/07	201	14.8	4.5	90.1	5.3			0.4			0.02		90		0.03	129
D22	16/07/07	246	13.8	25.6	87.6	6.6			0.3			0.63		60		0.36	156
D62	13/07/07	121.0		4.9		4.5	6	I.P.		<0.44	0.032	0.024	0.017	<20	I.P.	I.P.	99
Composite	08/07/07	195.3		13.9		7.3	11	22		0.452	0.076	0.009	0.029	<20	<20	0.068	157
Composite	09/07/07	185.5		43		7.4	10	24		1.523	0.102	<0.005	0.036	<20	<20	0.075	157
Composite	10/07/07	156.1		55.9		9	21	11		<0.44	0.093	0.015	0.026	<20	<20	0.034	139
Composite	11/07/07	145.2		93.2		6.9	9	I.P.		<0.44	I.P.	<0.005	0.017	I.P.	I.P.	I.P.	135
Composite	12/07/07	165.9		52		6.9	7	11		<0.44	0.051	<0.005	<0.017	<20	<20	0.033	140
Axonics Monitoring																	
Pre	06/07/07	288		>LOD		7			<LOD			1.06		>LOD		0.08	198
Post	06/07/07	288		20.9		6.2			0.6			0.55		50	0.25	0.06	195
Pre	09/07/07	287		<LOD		6.5			<LOD			0.55		<LOD		0.03	195
Post	09/07/07	301		5.3		6			0.2			0.47		40		0.03	204
Pre	10/07/07	227		>LOD		6.9			<LOD			0.93		>LOD		0.47	156
Post	10/07/07	268		9.2		6.6			0.3			0.31		30		0.14	183
Pre	11/07/07	235		>1000		6.7			<LOD			1.61		>LOD		0.17	161
Post	11/07/07	272		10		6.5			0.3			0.43		80	250	0.11	187

Surface Water Monitoring Record Sheet

Conducted by								Approved by									
Name:				Signed				Name				Signed					
Determinant Results																	
	Date	Cond. µS/cm	Temp °C	Turbidity NTU	DO % Sat	pH pH units	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 ⁻¹	Aluminium (dissolved) µg l ⁻¹	Aluminium (total) µg l ⁻¹	Phosphate as PO ₄ -P mg l ⁻¹	TDS mg l ⁻¹
Action Limits		400		150		<3.5 or >7.5	25	40	1.5			0.2	0.025	100	135		
Target Limits		500		200		<3 or >8	35	70	2.6			0.5	0.05	150	200		
Pre	12/07/07	251		>LOD		6.9			<LOD			1.99		>LOD		0.46	174
Post	12/07/07	282		4.3		5.3			<LOD			0.76		40	170	0.41	193
Pre	13/07/07	255		>1000		6.4			<LOD			1.84		>LOD		0.28	159
Post	13/07/07	282		7.4		6			0.2			0.53		20	120	0.09	176
Pre	16/07/07	260		>LOD		6.8			<LOD			2.01		>LOD		1.74	166
Post	16/07/07	127		8.1		6.1			0.2			0.21		40	320	0.07	203
Pre	17/07/07	270		99.9		6.4			<LOD			0.96		>LOD		0.24	>LOD
Post	17/07/07	299		10		5.7			0.5			0.55		0.05	70	0.06	191
Pre	18/07/07	255		>1000		6.6			<LOD			>LOD		>LOD		1.4	160
Post	18/07/07	280		6		6.4			0.6			1.4		0.03	180	0.01	174
Pre	19/07/07	253		>1000		6.5			<LOD			<LOD		>LOD	190	0.22	151
Post	19/07/07	277		10		6.3			0.7			0.88		40		0.06	176
Pre Axonics	09/07/07	209		638		7.2	138	41		0.586	0.346	0.164	0.036	I.P.	I.P.	0.126	138
Post Axonics	09/07/07	224		8.38		5.9	<4	<10		0.616	<0.01	0.201	0.056	I.P.	I.P.	<0.03	144

I.P. = In Progress

Italics = Indicative Only

< LOD = Below Limit of Detection

> LOD = Above Limit of Detection

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

On-Site Analysis

Dust Monitoring Record Sheet				no... 1 of 1			
Conducted by			Approved by				
Name: Sandra Barber		Signed		Name: Tony Doyle		Signed	
Determinant Results							
	Date Positioned	Date Removed	Ref. Number	Date Dispatched	Date Returned	Weight (mg/sq.m/day)	Comments
Target (Consent) Limit: 350 mg m² d⁻¹ on as a 30 day average							
D1	15/12/2006	15/01/2007	117724	15/01/2007	19/01/2007	170	
D2	15/12/2006	15/01/2007	117725	15/01/2007	19/01/2007	106	
D3	15/12/2006	15/01/2007	117726	15/01/2007	19/01/2007	88	
D4	15/12/2006	15/01/2007	117727	15/01/2007	19/01/2007	410	
D1	15/01/2007	14/02/2007	120365	16/02/2007	26/02/2007	153	
D2	15/01/2007	14/02/2007	120366	16/02/2007	26/02/2007	224	
D3	15/01/2007	14/02/2007	120367	16/02/2007	26/02/2007	12	
D4	15/01/2007	14/02/2007	120368	16/02/2007	26/02/2007	153	
D1	16/02/2007	14/03/2007	122991	14/03/2007	20/03/2007	133	
D2	16/02/2007	14/03/2007	122992	14/03/2007	20/03/2007	65	
D3	16/02/2007	14/03/2007	122993	14/03/2007	20/03/2007	216	
D4	16/02/2007	14/03/2007	122994	14/03/2007	20/03/2007	331	
D1	14/03/2007	12/04/2007	126118	12/04/2007	24/04/2007	77	
D2	14/03/2007	12/04/2007	126119	12/04/2007	24/04/2007	108	
D3	14/03/2007	12/04/2007	126120	12/04/2007	24/04/2007	283	
D4	14/03/2007	12/04/2007	126121	12/04/2007	24/04/2007	352	
D1	12/04/2007	11/05/2007	129448	11/05/2007	17/05/2007	135	
D2	12/04/2007	11/05/2007	129449	11/05/2007	17/05/2007	333	
D3	12/04/2007	11/05/2007	129450	11/05/2007	17/05/2007	520	Evidence of algae growth
D4	12/04/2007	11/05/2007	129451	11/05/2007	17/05/2007	90	
D1	11/05/2007	12/06/2007		15/06/2007		<1	
D2	11/05/2007	12/06/2007		15/06/2007		258	
D3	11/05/2007	12/06/2007		15/06/2007		No Result	D3 sample contaminated bird droppings
D4	11/05/2007	12/06/2007		15/06/2007		329	
D1	12/06/2007	12/07/2007		16/07/2007		I.P.	
D2	12/06/2007	12/07/2007		16/07/2007		I.P.	
D3	12/06/2007	12/07/2007		16/07/2007		I.P.	
D4	12/06/2007	12/07/2007		16/07/2007		I.P.	

Monitoring Points are numbered clockwise through the Cardinal Marks (N, E, S, W)
Monitoring Results will be presented monthly

Noise Monitoring Record Sheet no... 1 of 1

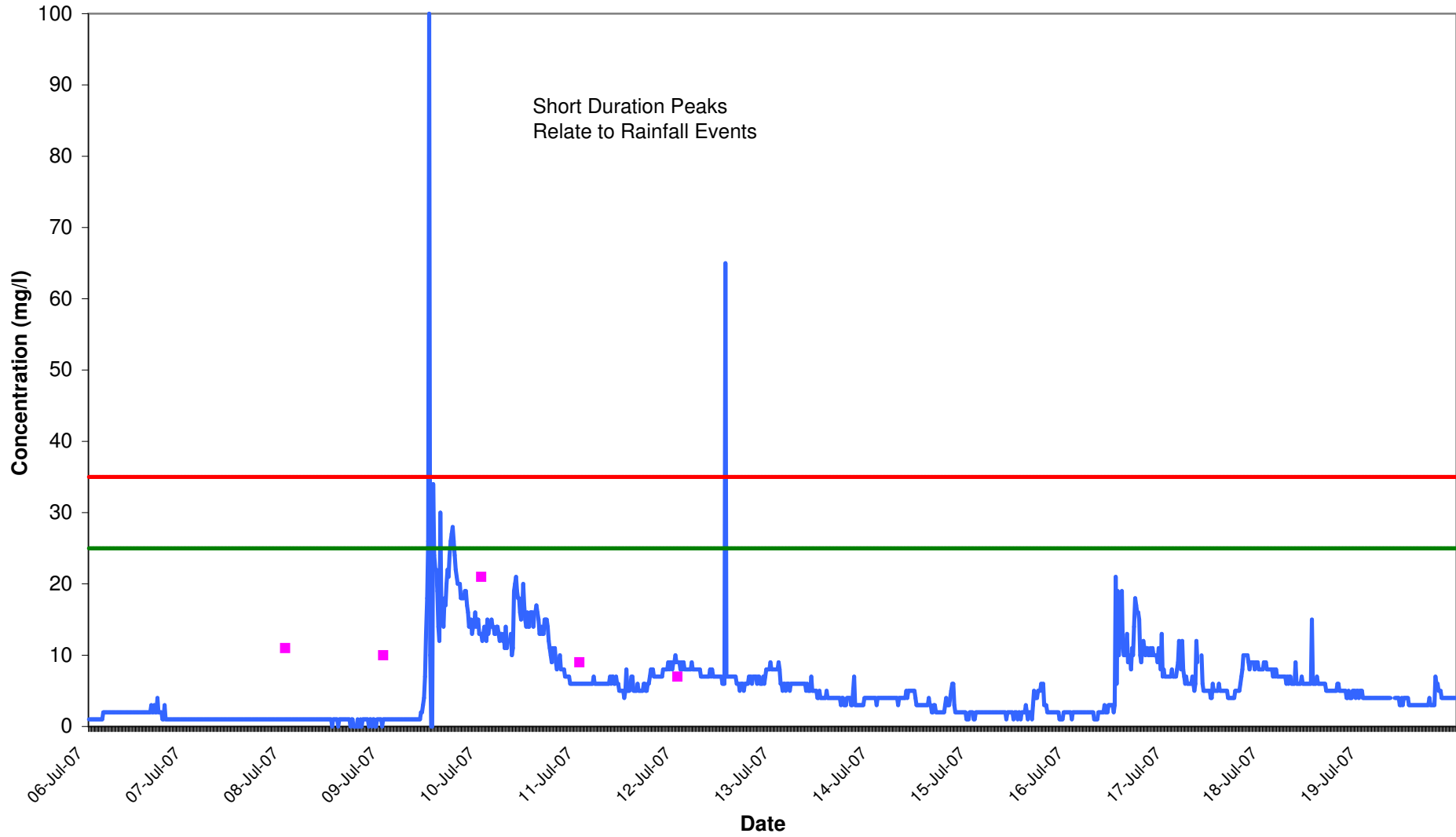
Conducted by Approved by
 Name: Sandra Barber Signed Name: Tony Doyle Signed

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 _{Amin}	L _{Amax}	
Action Limit									60			
Target Limit									65			
N1	15.8	11.3	06/07/2007	07:03:58	12:00:00	2343754	5.1	143.3	59.7	44.6	93.6	
N1	13.2	11.1	09/07/2007	08:39:45	12:00:00	2343754	5.6	110.8	*59.2	50.2	75.9	Wind speed > 5 m/s
N1	16.0	11.1	10/07/2007	06:54:01	12:00:00	2343754	3.9	132.1	59.3	46.5	71.5	
N1	16.9	12.0	11/07/2007	06:59:37	12:00:00	2343754	3.0	55.2	59.8	45.2	75.6	
N1	17.2	13.2	12/07/2007	06:57:55	12:00:00	2343754	2.8	78.5	60.5	45.6	90.6	
N1	17.9	11.9	13/07/2007	07:05:17	12:00:00	2343754	2.1	204.7	59.5	43.2	68.5	
N1	17.5	11.0	16/07/2007	07:58:24	12:00:00	2343754	1.6	202.1	59.3	44.8	71.2	
N1	15.3	11.0	17/07/2007	06:59:00	12:00:00	2343754	3.3	133.6	59.2	53.4	68.6	
N1	19.0	13.1	18/07/2007	07:04:36	12:00:00	2343754	3.3	164.4	59.3	45.6	66.8	
N1	17.5	11.8	19/07/2007	07:17:16	12:00:00	2343754	3.0	194.0	59.2	52.6	70.6	

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

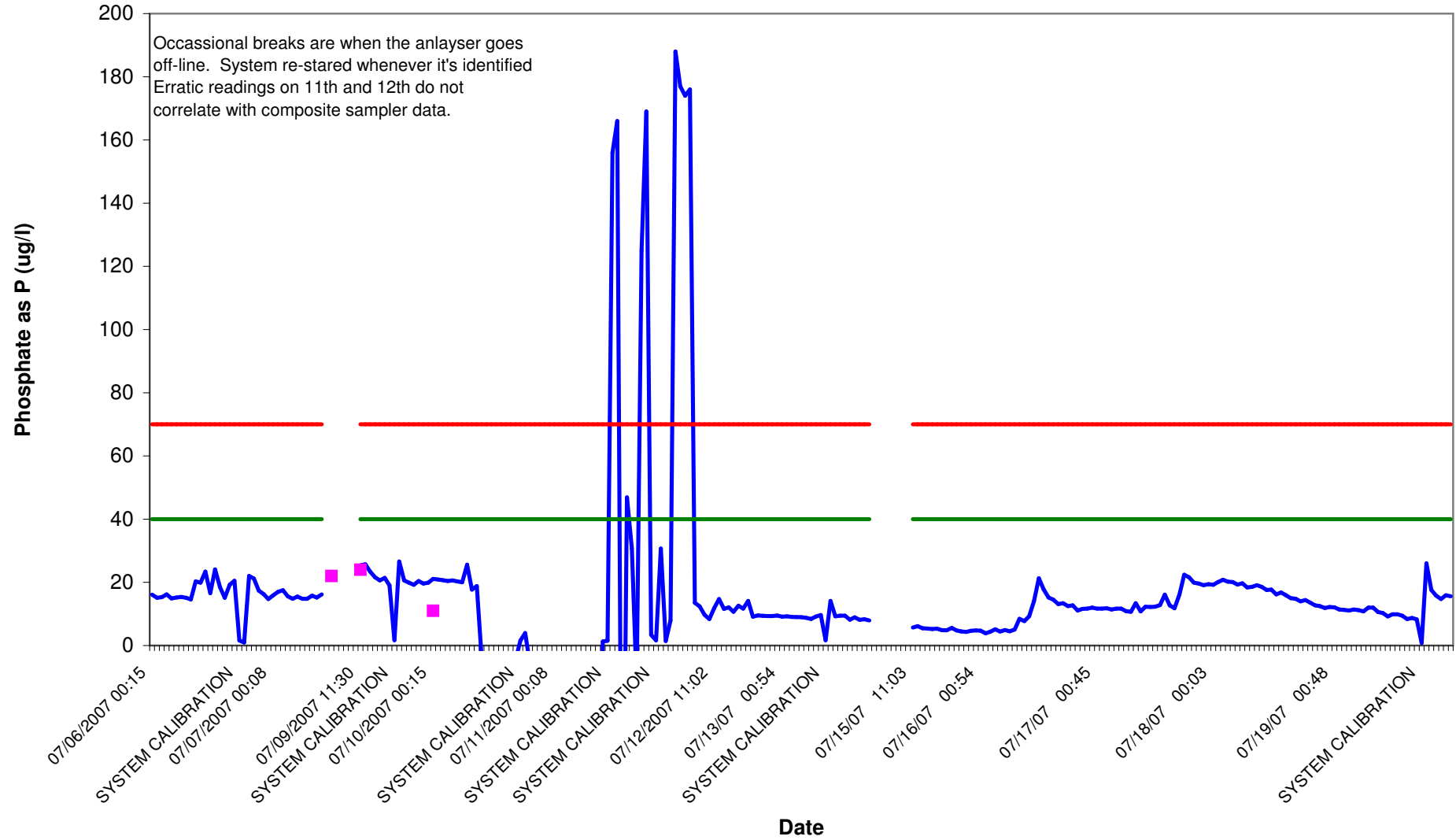
Total Suspended Solids Results at SP1 Week 28/29, 2007

TSS Lab Action Limit Target Limit

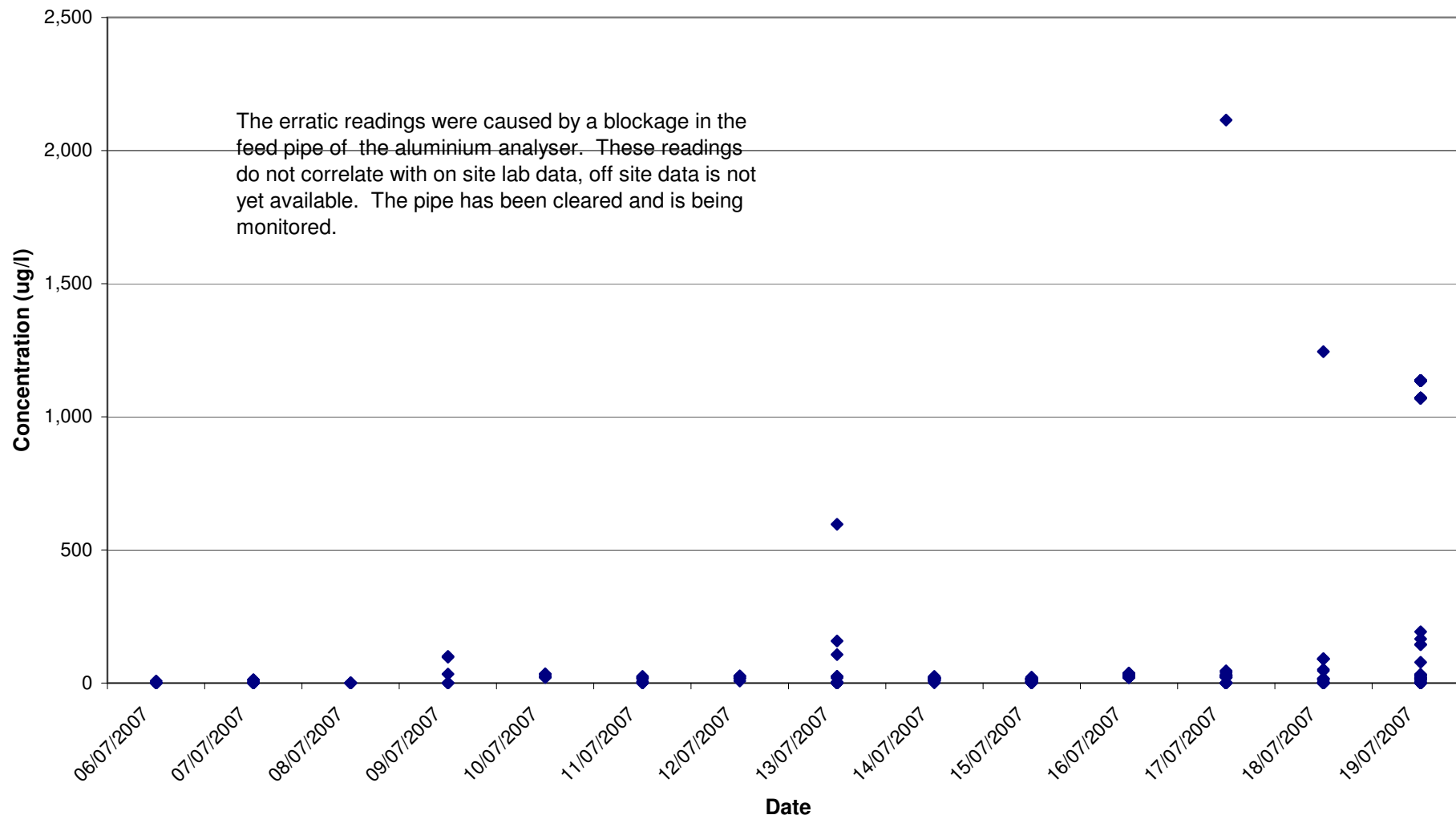


Orthophosphate Results at SP1 Week 28/29, 2007

— Ortho ■ Lab — Action Limit — Target Limit

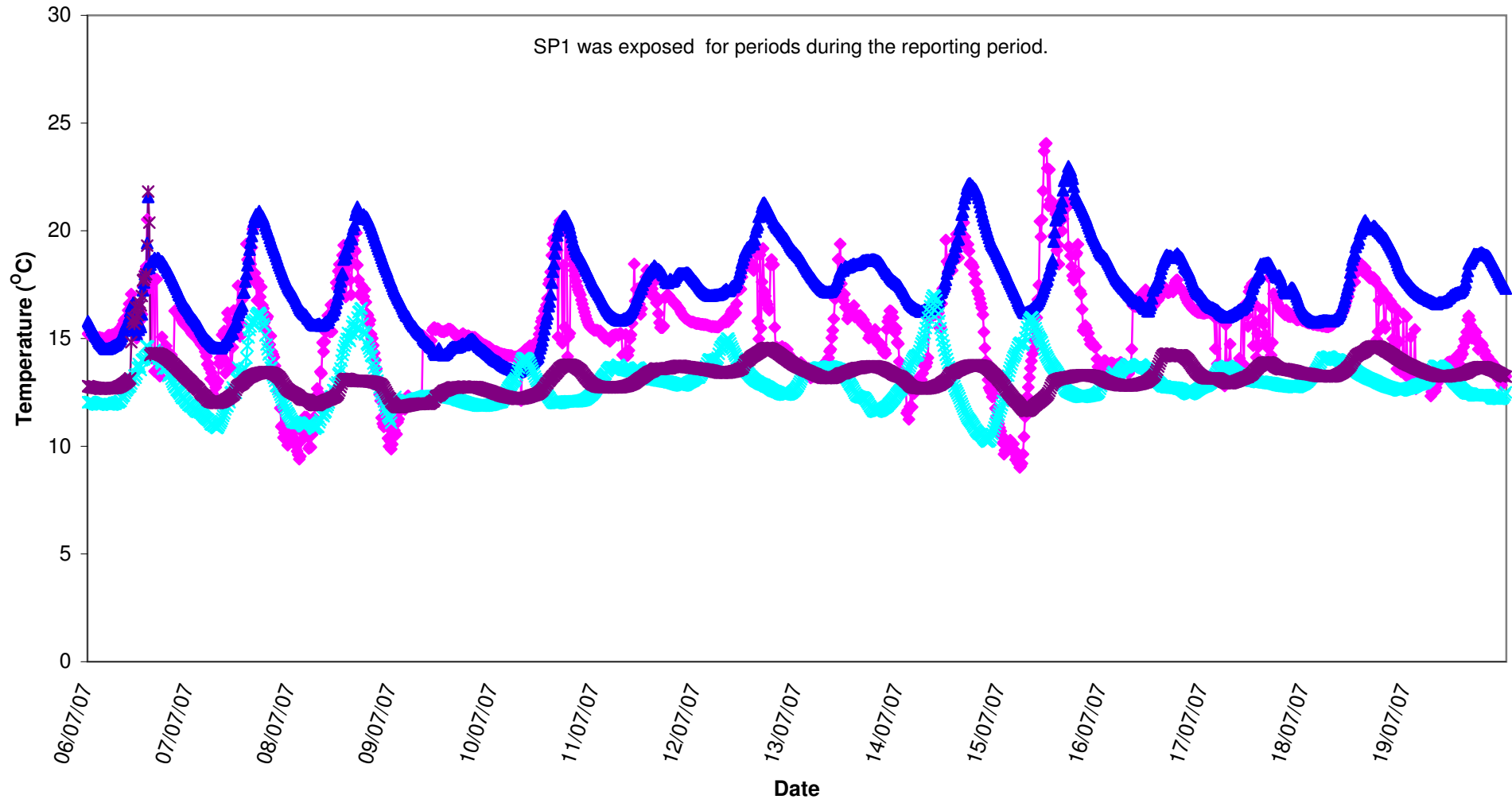


In-Situ Aluminium Analyser at SP1 Week 28/29, 2007

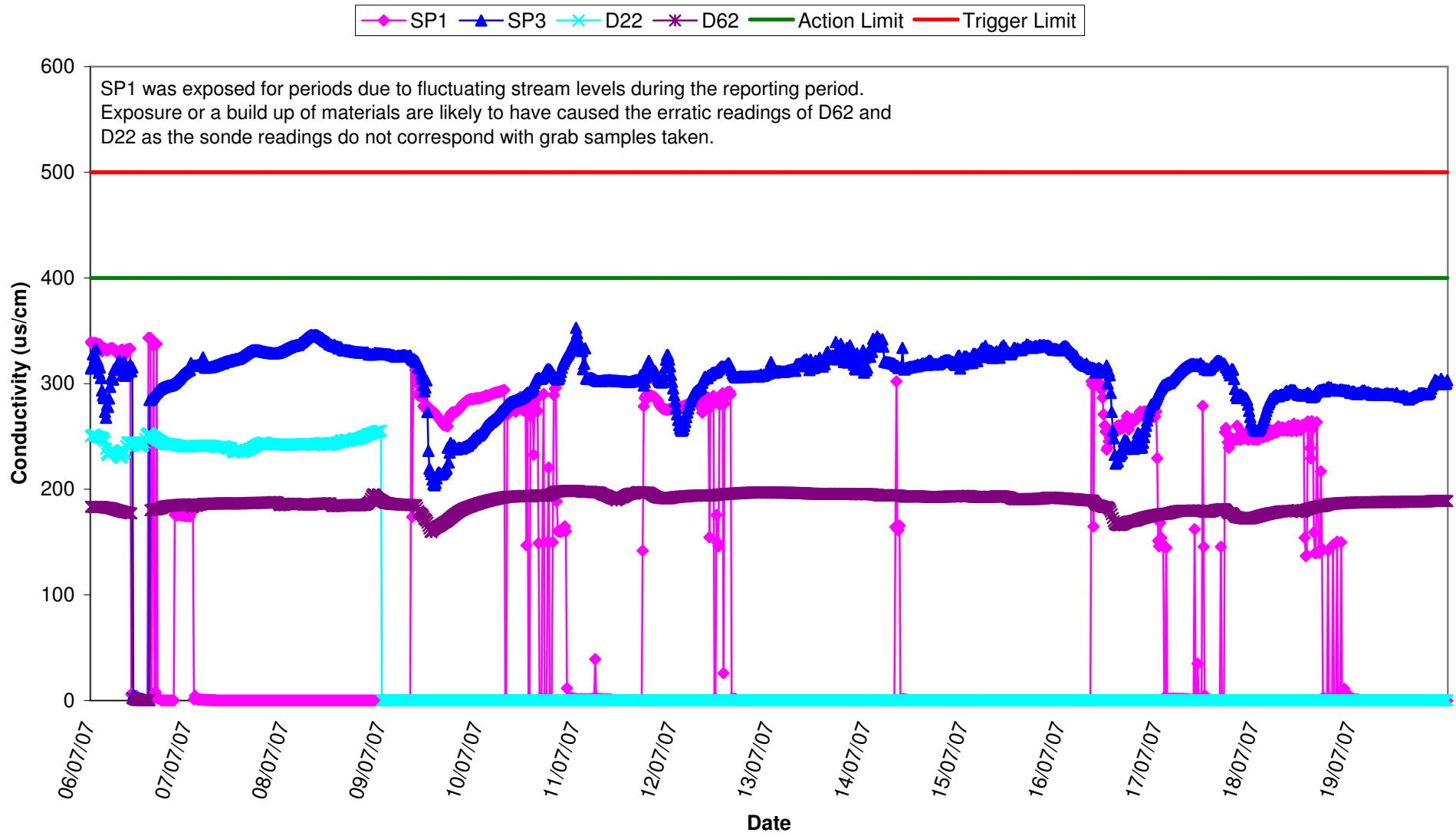


Temperature - Surface Waters, Week 28/29, 2007

◆ SP1 ▲ SP3 ✕ D22 ✱ D62

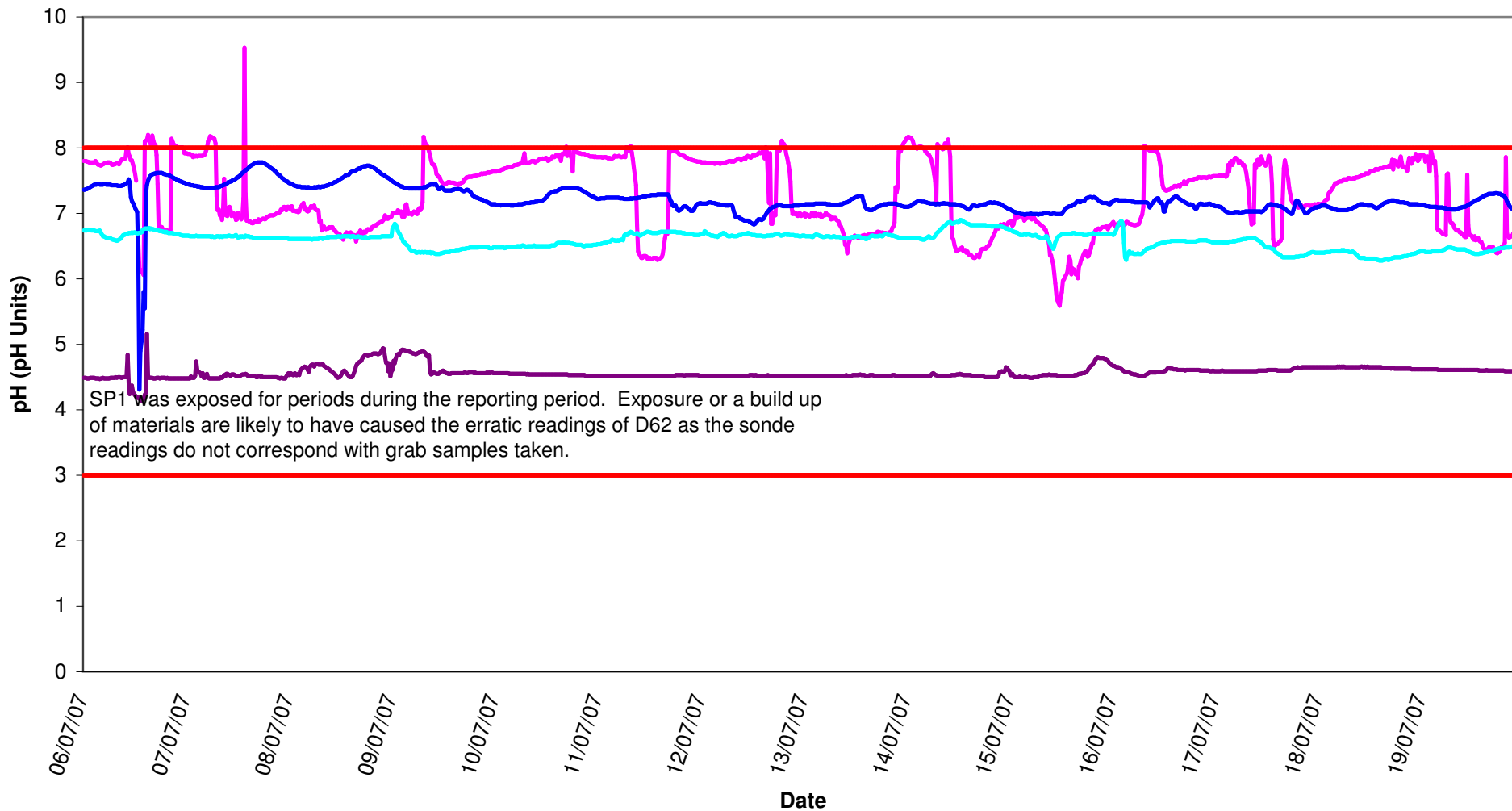


Conductivity - Surface Waters, Week 28/29, 2007



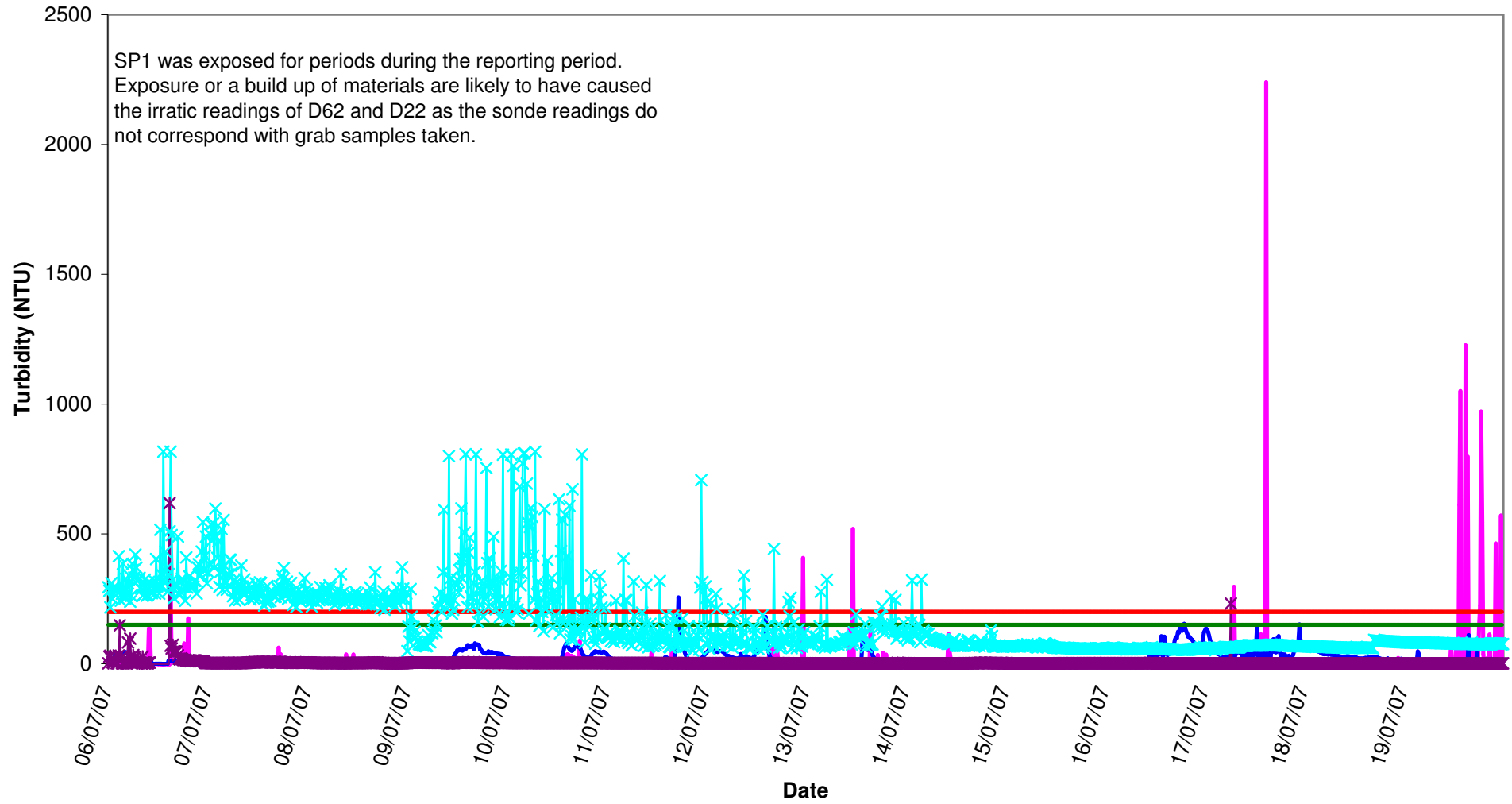
pH - Surface Waters, Week 28/29, 2007

SP1 SP3 D22 D62 Lower Limit Upper Limit



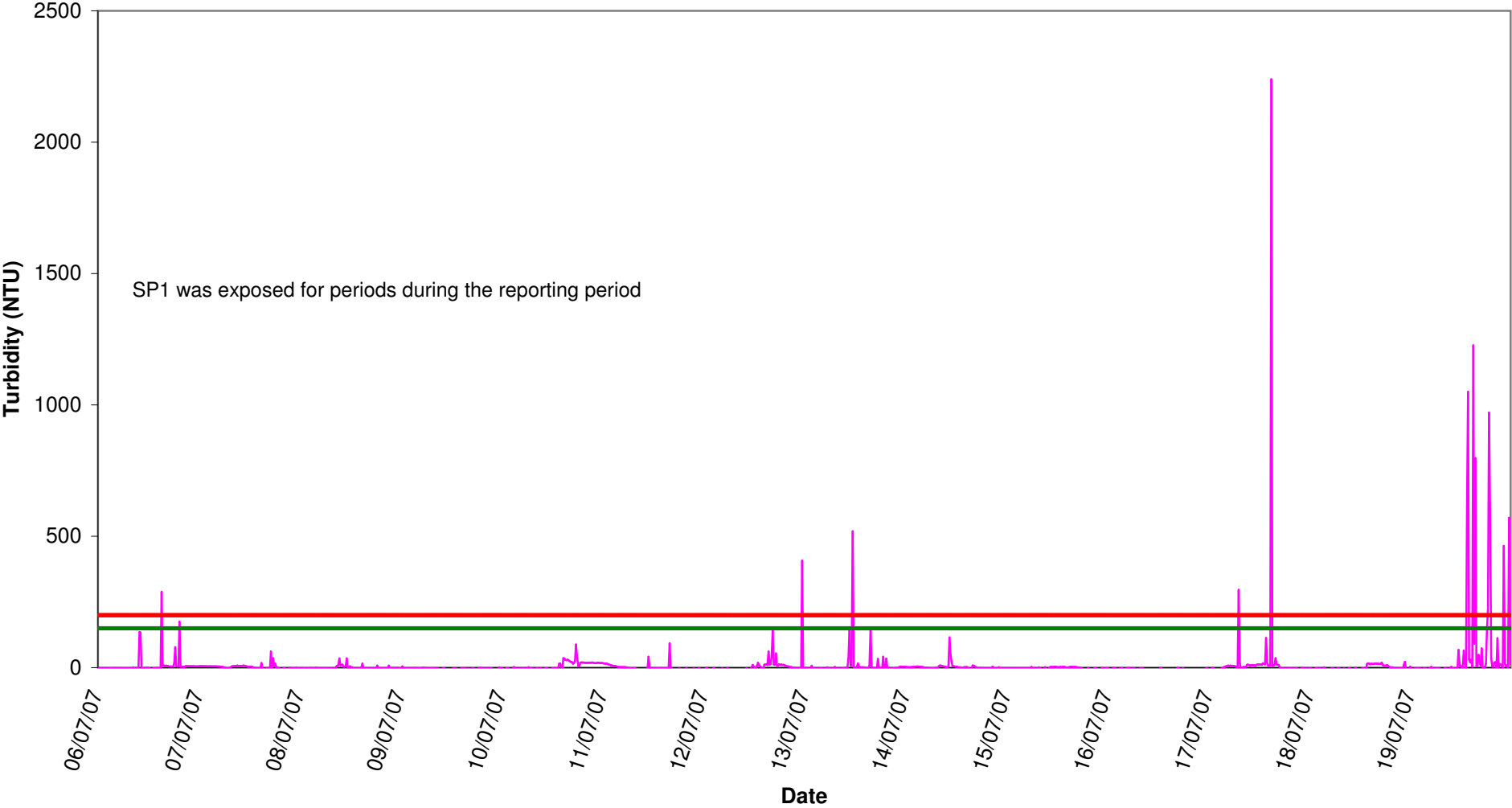
Turbidity - Surface Waters, Week 28/29, 2007

SP1 SP3 D22 D62 Action Limit Trigger Limit

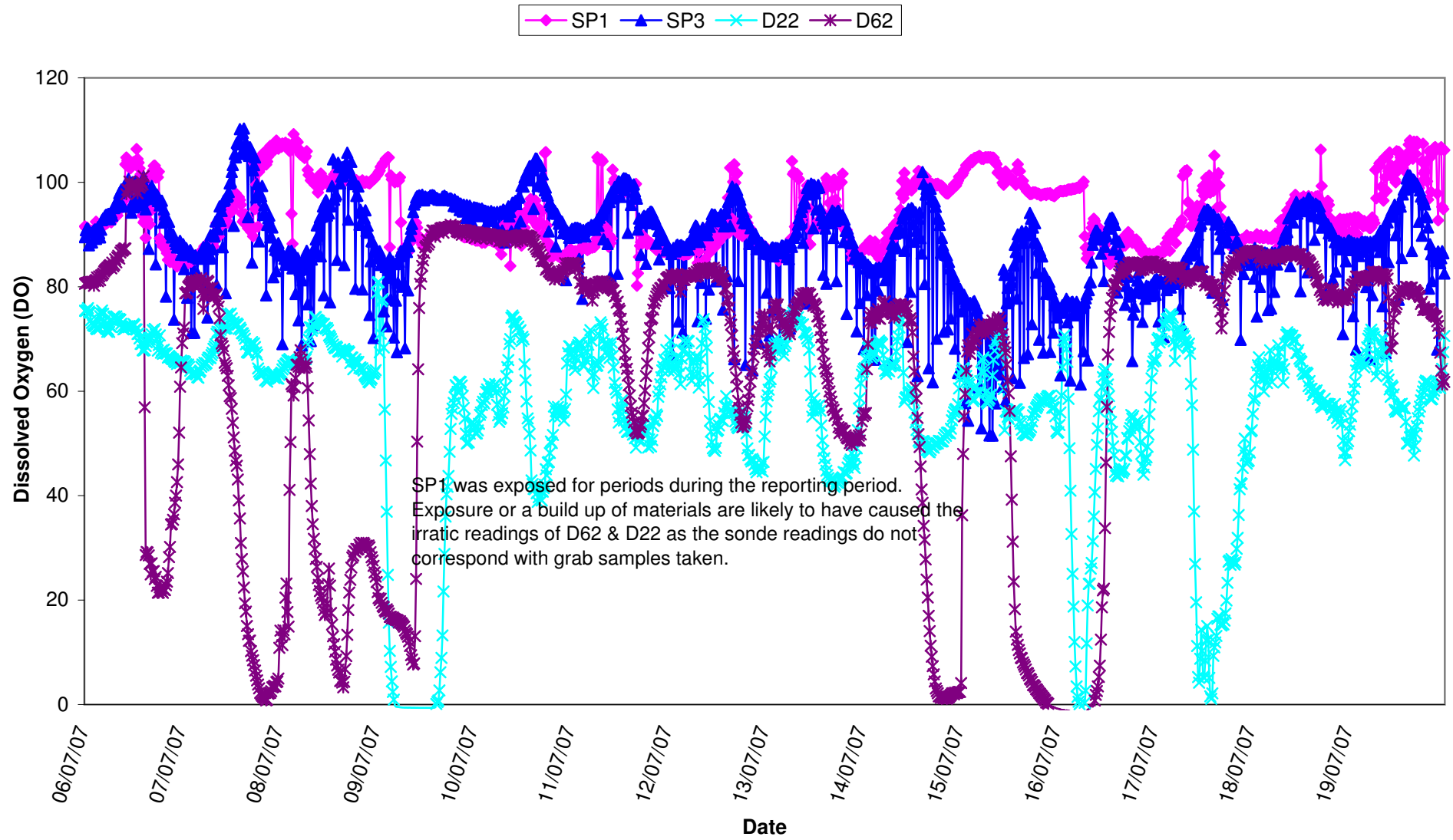


**Turbidity - Surface Waters @ SP1,
Week 28/29, 2007**

SP1 Action Limit Trigger Limit



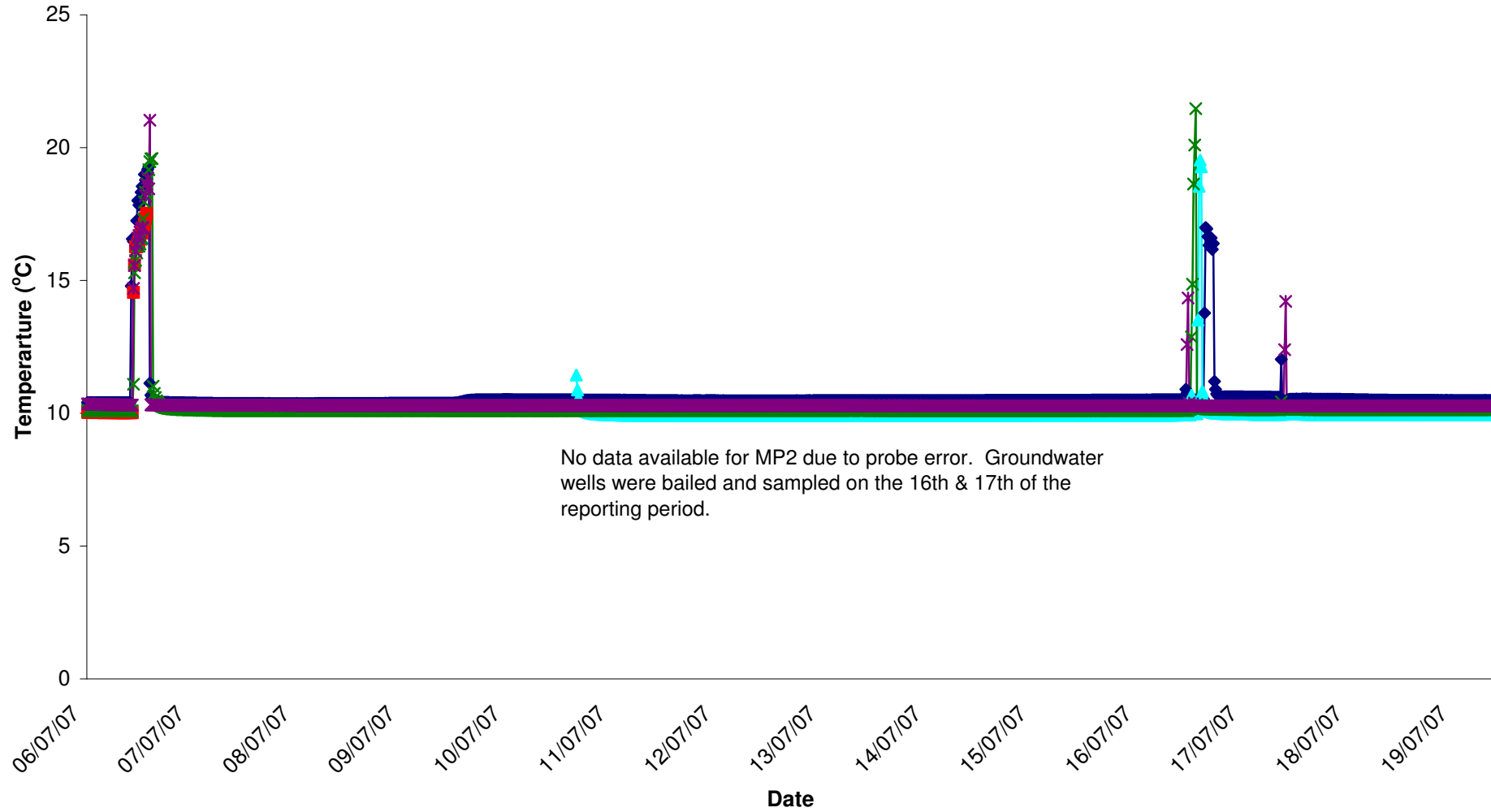
Dissolved Oxygen - Surface Waters, Week 28/29, 2007



Flow Weir Record Sheet				no... 1 of 1		
Conducted by			Approved by			
Name:	Sandra Barber	Signed	Name:	Signed		
Determinant Results						
Date	SP1			SP3		
	Max (l/s)	Min (l/s)	Avg (l/s)	Max (l/s)	Min (l/s)	Avg (l/s)
06/07/2007	6.4	0.1	2.5	5.4	0.9	2.0
07/07/2007	0.8	0.3	0.5	1.2	0.5	0.7
08/07/2007	0.3	0.1	0.2	0.7	0.2	0.3
09/07/2007	64.0	0.1	18.7	19.4	0.2	8.3
10/07/2007	5.5	0.6	2.4	8.5	2.4	4.2
11/07/2007	4.9	0.0	1.8	8.5	0.6	3.0
12/07/2007	4.3	0.5	2.1	4.5	1.9	3.1
13/07/2007	0.9	0.1	0.6	1.9	1.3	1.7
14/07/2007	1.4	0.1	0.5	3.7	-0.1	1.2
15/07/2007	0.2	0.0	0.1	0.8	-0.2	0.1
16/07/2007	47.1	0.1	9.3	16.1	0.6	4.4
17/07/2007	28.6	0.9	7.4	14.8	1.7	4.3
18/07/2007	13.3	2.0	5.9	8.0	3.5	5.3
19/07/2007	2.9	0.5	1.9	5.1	3.1	4.3

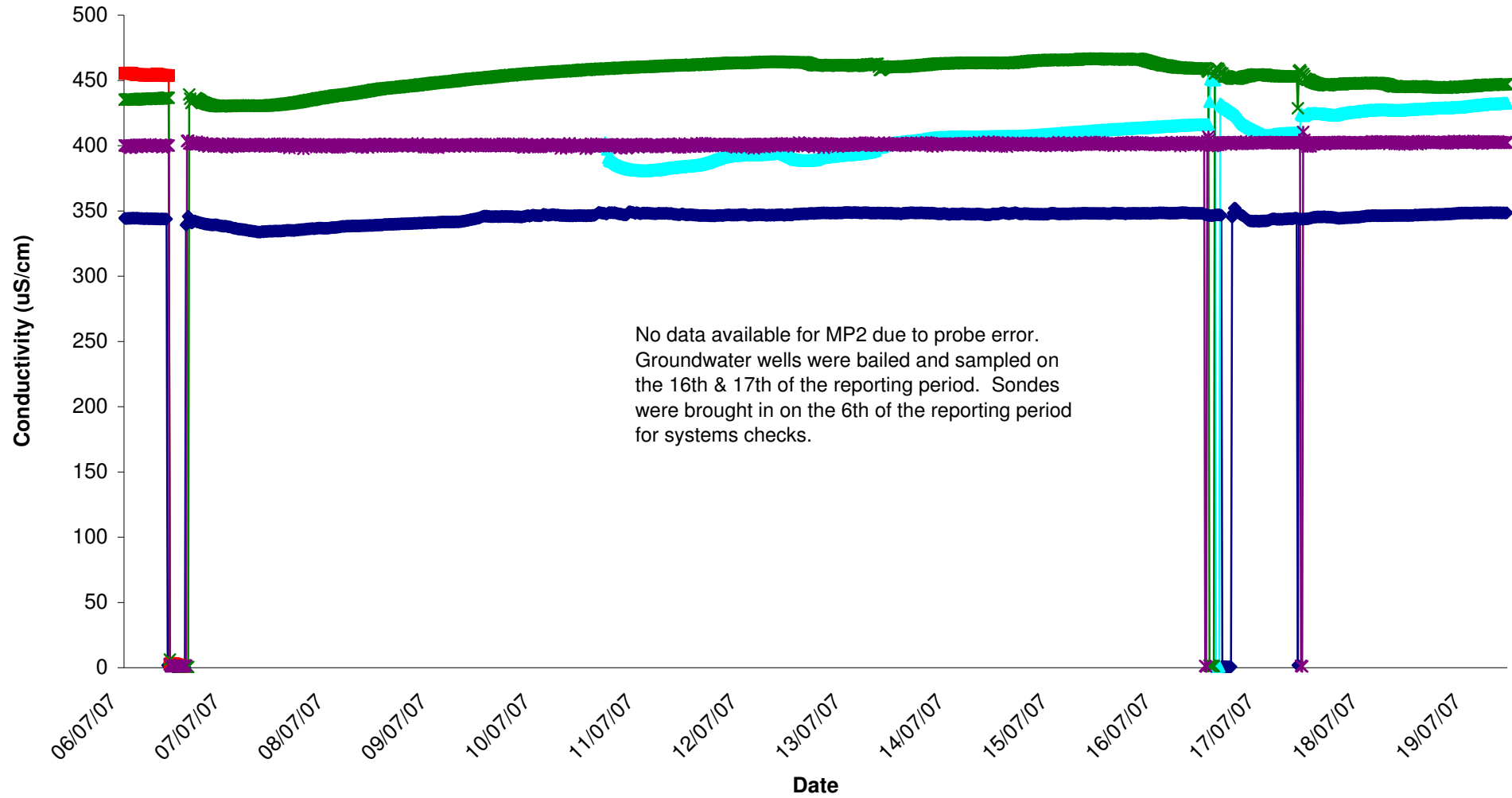
Temperature - Groundwaters Week 28/29, 2007

MP1 MP2 MP4 MP6 MP7



Conductivity - Groundwaters Week 28/29, 2007

—◆— MP1 —■— MP2 —▲— MP4 —×— MP6 —*— MP7



pH - Groundwaters Week 28/29, 2007

—◆— MP1 —■— MP2 —▲— MP4 —×— MP6 —*— MP7

