

1 Monitoring Data

Note: Due to a suspension of works and an ongoing site access problem the monitoring programme has had to be reduced.

Both vibration and noise monitoring have been suspended

Those parameters still being monitored include:

1. Weekly water samples for on-site analysis
2. Downloading the in-situ TSS & Orthophosphate analysers and the weather station
3. Weekly sampling, for laboratory analysis, at SP1, SP3
4. Monthly sampling, for laboratory analysis, at D22, D62, and the MP series

All monitoring data is presented in tabular form, see attached. The sonde data is presented graphically.

1.1 Rainfall Data

The weather data is generated by the on-site weather station.

Date	Rainfall (mm)		Date	Rainfall (mm)
29/07/2005	1.0		05/08/2005	0.2
30/07/2005	0.2		06/08/2005	3.6
31/07/2005	0.4		07/08/2005	0.0
01/08/2005	0.0		08/08/2005	0.0
02/08/2005	4.6		09/08/2005	0.0
03/08/2005	1.2		10/08/2005	0.0
04/08/2005	5.4		11/08/2005	0.2
Total = 16.2 mm				

1.2 Summary

Environment	Comments
Surface Water	<p>Due to technical difficulties the orthophosphate analyser and D22 sonde could not provide data for the duration of the reporting period. These technical problems have now been resolved and the equipment is working.</p> <p>Due to the ongoing problems associated with these works, the in-situ monitoring equipment had not been calibrated in approximately two months. The exceedances seen during this reporting period may be due in part to a slip in equipment calibration. This can be corroborated by the lab analysis presented overleaf. All surface water and groundwater sondes were calibrated on the 12-08-05.</p>

Weekly Environmental Report - Status	Week Ending: Thur. 11 th August 2005
Generated By: Sandra Barber	
Checked By: Leslie Finnegan	

Environment	Comments
	The sondes were removed on the 3-08-05 and the batteries were replaced. There were some excursions from set action and trigger levels and these are discussed below in section 2. There were also some single event exceedances but these did not warrant any actions being taken.
Groundwater	The sonde data downloaded is shown graphically. Laboratory sample analysis is presented overleaf.
Noise	
Vibration	
Dust	Dust Pots for July 2005 have been sent to the lab for analysis. The replacement dust pots have not been returned but will be installed when they become available.
Weather	There was a total of 16.2 mm of rainfall during the reporting period, with a temperature range of 9.9 to 20.6 °C

2 Environmental Incidents/Near misses/Complaints

The following exceedances occurred during the reporting period.

1. Orthophosphate results analysed at the laboratory gave results for D22 and D62 that exceeded the trigger level of 70 ug/l. This increase is due to a reduced flow of surface water on site and an associated breakdown of organic material in the area.
2. The turbidity levels in SP1 have been over the trigger level for a period of ~5 hours on a number of occasions from the 5th August 2005 to the 9th August 2005. The water level in SP1 is low and there is virtually no flow. As a result any debris passing the sonde has the potential to lodge around the sonde's housing in the water and the sonde is now acting as an impediment to anything passing in the smaller water channel in the drain. It is quite possible that debris will now lodge in and around the housing for prolonged periods of time as a result of low to no flow.
3. SP3 exceeded the upper pH trigger level of 8 for the entire duration of the reporting period. This may be attributable to the lack of flow in the drain where SP3 is situated, or a slip in the pH probe calibration of this sonde.
4. The dissolved oxygen results for all surface water sondes are unreliable as they have not been calibrated recently. Access permitting the dissolved oxygen probes will be recalibrated on a weekly basis.

Surface Water Monitoring Record Sheet												no...		1 of 1	
Conducted by								Approved by							
Name: Leslie Finnegan				Signed				Name Leslie Finnegan				Signed			
Determinant Results															
	Date	Cond. μS/cm	Temp °C	Turbidity NTU	DO % Sat	TSS mg l ⁻¹	pH	Ortho-phosphate as P μg l ⁻¹	Nitrate as N mg l ⁻¹	Total Phosphorus as P (sw) mg l ⁻¹	Ammonia as NH ₃ -N mg l ⁻¹	Ammonium as NH ₄ mg l ⁻¹	Nitrite as N mg l ⁻¹	Comments	
Action Limits		400		150		25	<3.5 or >7.5	40			0.2				
Target Limits		500		200		35	<3 or >8	70			0.5				
Settlement Pond Monitoring															
SP1 - Lab	21-Jul-05	251		1.5		<4	7.4	< 10	<0.1	0.036	0.022	0.028	<0.005		
SP3 - Lab	21-Jul-05	247		2.8		<4	7.2	51	<0.1	0.095	0.126	0.162	<0.005		
SP1 - Lab	27-Jul-05	254		1.7		<4	7.5	11	<0.10	0.038	0.02	0.026	<0.005		
SP3 - Lab	27-Jul-05	255		4.9		<4	7.2	59	<0.1	0.085	0.024	0.03	<0.005		
SP1 - Lab	03-Aug-05	256		1.3		<4	7.5	< 10	<0.1	0.032	0.02	0.025	<0.005		
SP3 - Lab	03-Aug-05	361		5.5		8	7.3	31	<0.1	0.098	0.015	0.02	<0.005		
SP1 - Lab	10-Aug-05														
SP3 - Lab	10-Aug-05														
SP1		Sonde Data Presented Graphically													
SP3		Sonde Data Presented Graphically													
Additional Surface Water Monitoring															
D22 - Lab	21-Jul-05	200		7.3		4	6.7	171	0.245	0.175	0.061	0.078	<0.005		
D62 - Lab	21-Jul-05	134		0.7		<4	6.2	64	<0.1	0.071	0.037	0.047	<0.005		
D22 - Lab	27-Jul-05	198		11.7		13	7.0	190	0.257	0.218	0.076	0.098	<0.005		
D62 - Lab	27-Jul-05	144		0.7		<4	6.0	91	<0.10	0.094	0.072	0.092	<0.005		
D22 - Lab	03-Aug-05	218		9.8		7	6.8	148	0.3	0.2	0.076	0.098	<0.005		
D62 - Lab	03-Aug-05	157		0.9		<4	5.5	86	<0.1	0.128	0.03	0.039	<0.005		
D22		Sonde Data Presented Graphically													
D62		Sonde Data Presented Graphically													

Note: LAB - Carried out by CLS Laboratories
 Grey shaded areas denote parameters that cannot be analysed on-site or the lab.
 Results detailed above are from on site grab samples only, Data recorded continuously is shown on the following graphs
 Graphs provided for SP1, SP2, D22 and D62 for: Temperature, Turbidity, pH, Conductivity, Orthophosphate, Total Suspended Solids and Total Ammonia
 pH Target and Action Limits to be approved by Statutory Authorities

Groundwater Monitoring Record Sheet										no...	1	of	1
Conducted by						Approved by							
Name: Leslie Finnegan			Signed			Name Leslie Finnegan			Signed				
Determinant Results													
Location	Date	Cond. uS/cm	Temp °C	BOD mg l ⁻¹	DO % Sat	TSS mg l ⁻¹	Phosphate as P ug l ⁻¹	pH	Total Hardness mg/l CaCO3	Nitrite as NO ₂ mg l ⁻¹	Nitrate as NO ₃ mg l ⁻¹	Phosphate as PO ₄ mg l ⁻¹	Ammonia mg l ⁻¹
MP 1	27-Jul-05	250		2		45	469	5.9	71.6	<0.017	<0.44	1.44	
MP 2	27-Jul-05	430		2		118	312	6.4	119.8	<0.017	<0.44	0.958	
MP 3	27-Jul-05	426		6		8	524	5.6	91.6	<0.017	<0.44	1.608	
MP 4	27-Jul-05	255		11		8	384	6	128.2	<0.017	<0.44	1.178	
MP 5													
MP 6													
MP 7													
MP 8	27-Jul-05	409		10		90	138	6	91.8	<0.017	<0.44	0.424	
MP 9													
MP 10a	27-Jul-05	251		11		399	58	6.4	101.9	<0.017	<0.44	0.179	
MEL BR4a													

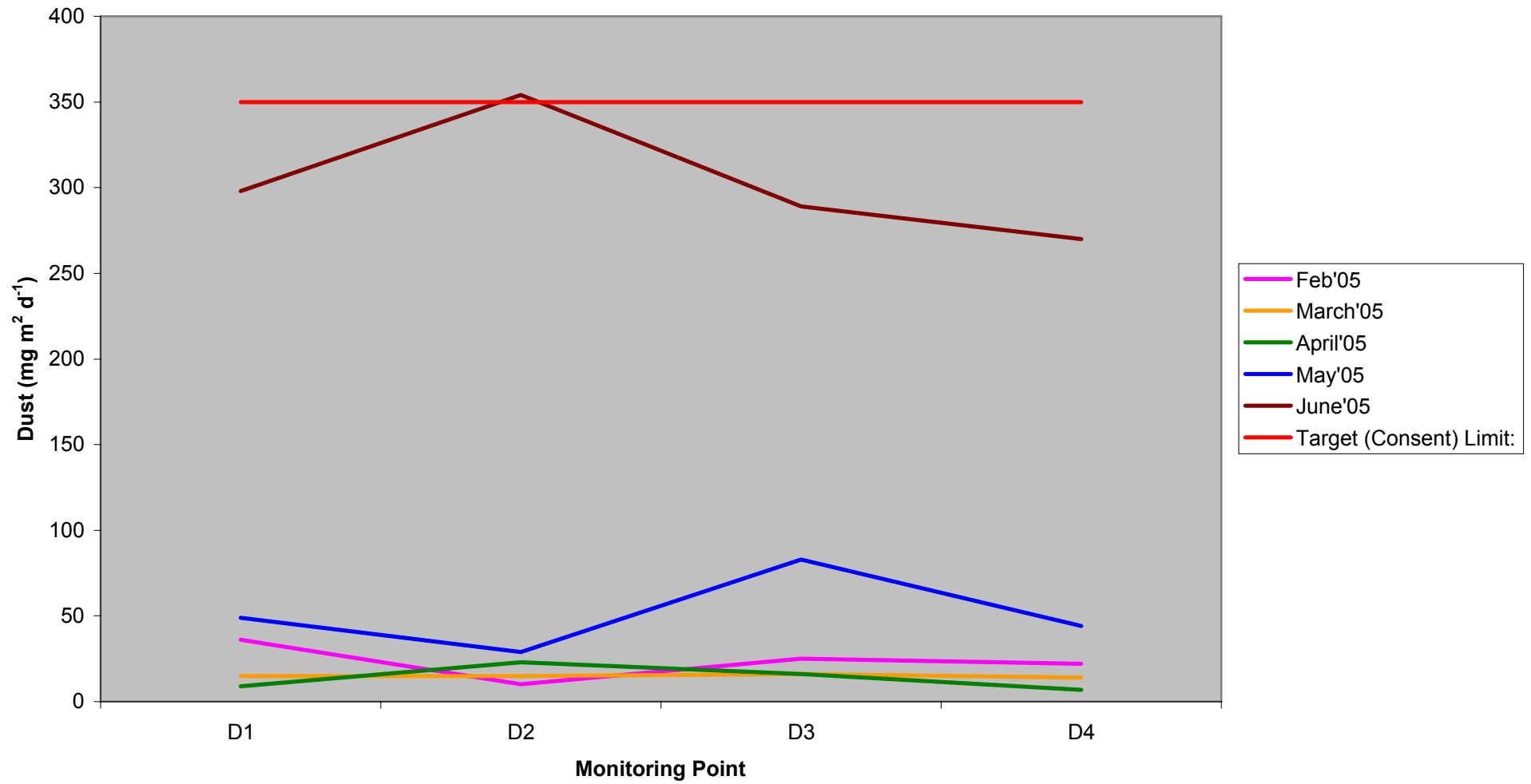
Location	Date	TDS mg l ⁻¹	Arsenic ug l ⁻¹	Mercury ug l ⁻¹	Lead ug l ⁻¹	Aluminium ug l ⁻¹	Zinc ug l ⁻¹	Chromium ug l ⁻¹	Copper ug l ⁻¹	Cadmium ug l ⁻¹	Iron ug l ⁻¹	Tin ug l ⁻¹	
MP 1	27-Jul-05	136	<1	<0.05	<5	<3	30	19	<5	<0.4	33	<5	
MP 2	27-Jul-05	212	<1	<0.05	<5	<3	15	24	<5	<0.4	36	<5	
MP 3	27-Jul-05	241	<1	<0.05	<5	39	18	11	<5	<0.4	3896	<5	
MP 4	27-Jul-05	186	<1	0.05	<5	<3	26	15	<5	<0.4	17	<5	
MP 5													
MP 6													
MP 7													
MP 8	27-Jul-05	215	2	<0.05	<5	145	31	17	<5	<0.4	5279	<5	
MP 9													
MP 10a	27-Jul-05	176	<1	<0.05	<5	<3	24	14	<5	<0.4	33	<5	
MEL BR4a													

Note: Results detailed above are from on site grab samples only. Data recorded continuously is shown on the following graphs
 Graphs provided for MP1, MP2,MP4, MP6 and MP7 for: Temperature, Conductivity, and pH.

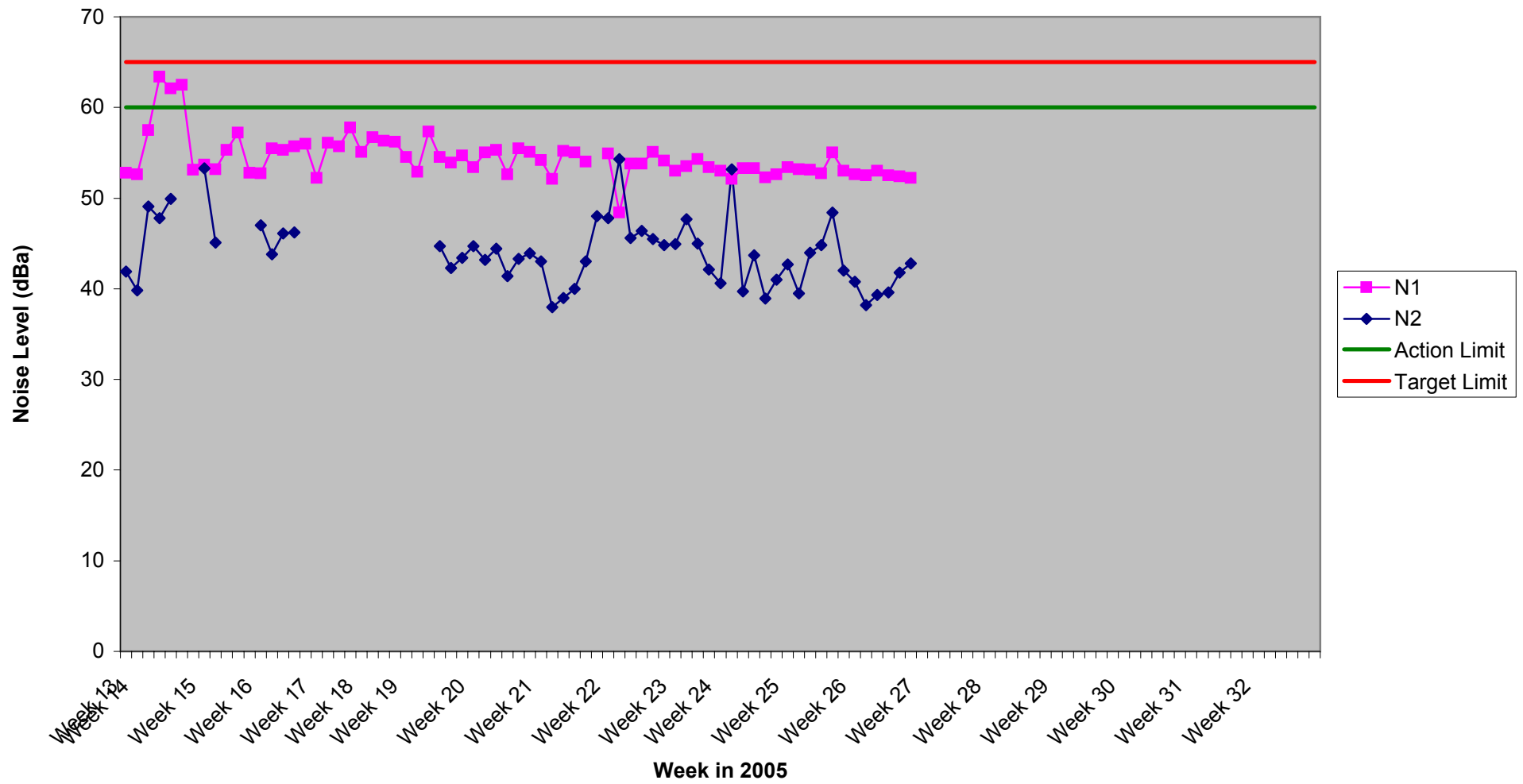
Dust Monitoring Record Sheet				no... 1 of 1			
Conducted by				Approved by			
Name: Leslie Finnegan		Signed		Name: Leslie Finnegan		Signed	
Determinant Results							
	Date Positioned	Date Removed	Ref. Number	Date Dispatched	Date Returned	Weight (mg/sq.m/day)	Comments
Target (Consent) Limit: 350 mg m² d⁻¹ on as a 30 day average							
D1	31/01/2005	02/03/2005	59793	02/03/2005	24/03/2005	36	
D2	31/01/2005	02/03/2005	59794	02/03/2005	24/03/2005	10	
D3	31/01/2005	02/03/2005	59795	02/03/2005	24/03/2005	25	
D4	31/01/2005	02/03/2005	59796	02/03/2005	24/03/2005	22	
D1	02/03/2005	01/04/2005	61907	01/04/2005	08/04/2005	15	
D2	02/03/2005	01/04/2005	61908	01/04/2005	08/04/2005	15	
D3	02/03/2005	01/04/2005	61909	01/04/2005	08/04/2005	16	
D4	02/03/2005	01/04/2005	61910	01/04/2005	08/04/2005	14	
D1	01/04/2005	04/05/2005	64400	04/05/2005	09/05/2005	9	
D2	01/04/2005	04/05/2005	64401	04/05/2005	09/05/2005	23	
D3	01/04/2005	04/05/2005	64402	04/05/2005	09/05/2005	16	
D4	01/04/2005	04/05/2005	64403	04/05/2005	09/05/2005	7	
D1	04/05/2005	07/06/2005	67524	07/06/2005	10/06/2006	49	
D2	04/05/2005	07/06/2005	67525	07/06/2005	10/06/2006	29	
D3	04/05/2005	07/06/2005	67526	07/06/2005	10/06/2006	83	
D4	04/05/2005	07/06/2005	67527	07/06/2005	10/06/2006	44	
D1	07/06/2005	13/07/2005	70512	13/07/2005	18/07/2005	298	
D2	07/06/2005	13/07/2005	70513	13/07/2005	18/07/2005	354	
D3	07/06/2005	13/07/2005	70514	13/07/2005	18/07/2005	289	
D4	07/06/2005	13/07/2005	70515	13/07/2005	18/07/2005	270	
D1	13/07/2005	11/08/2005					
D2	13/07/2005	11/08/2005					
D3	13/07/2005	11/08/2005					
D4	13/07/2005	11/08/2005					

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

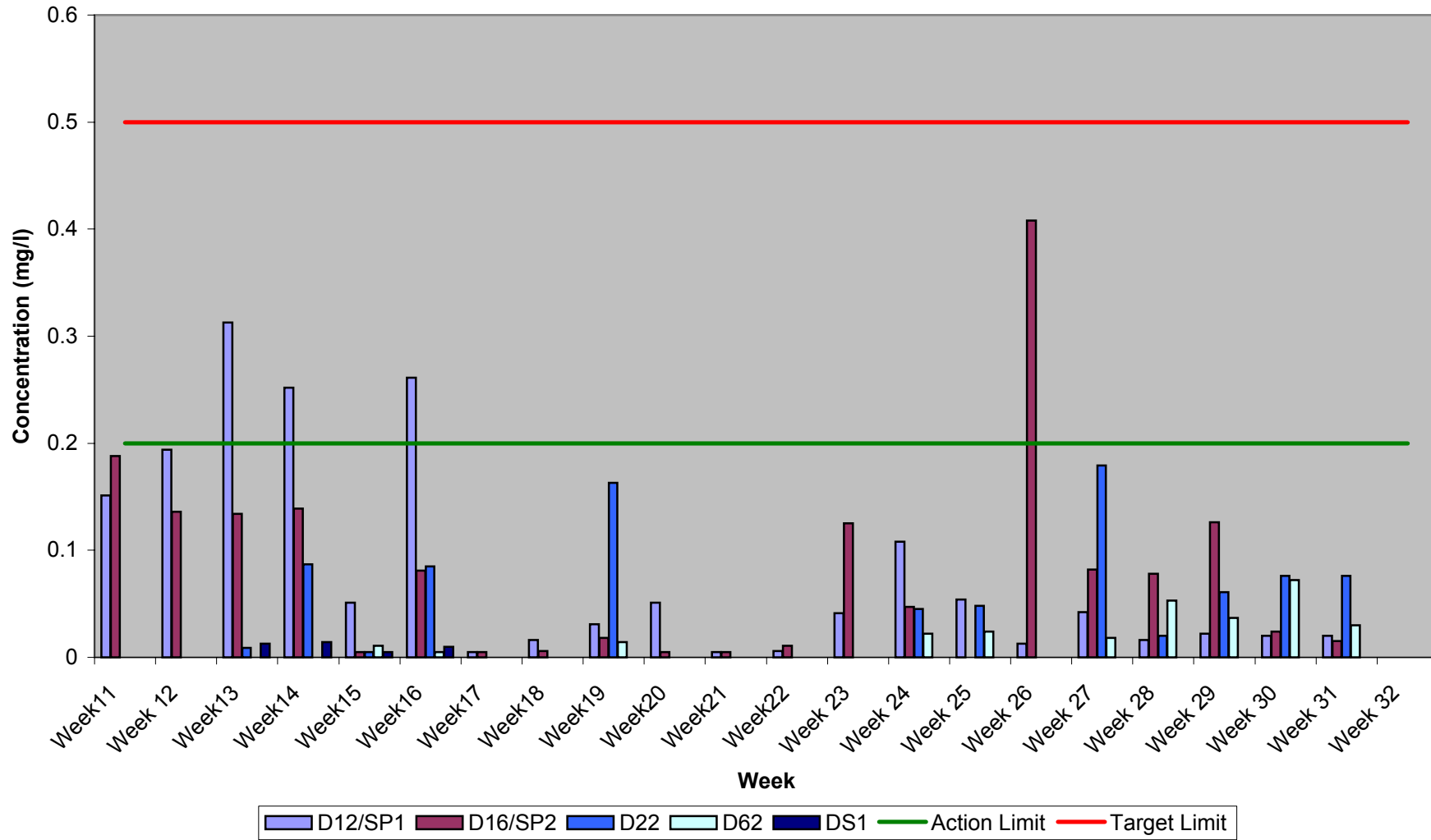
Dust Compiled Results 2005



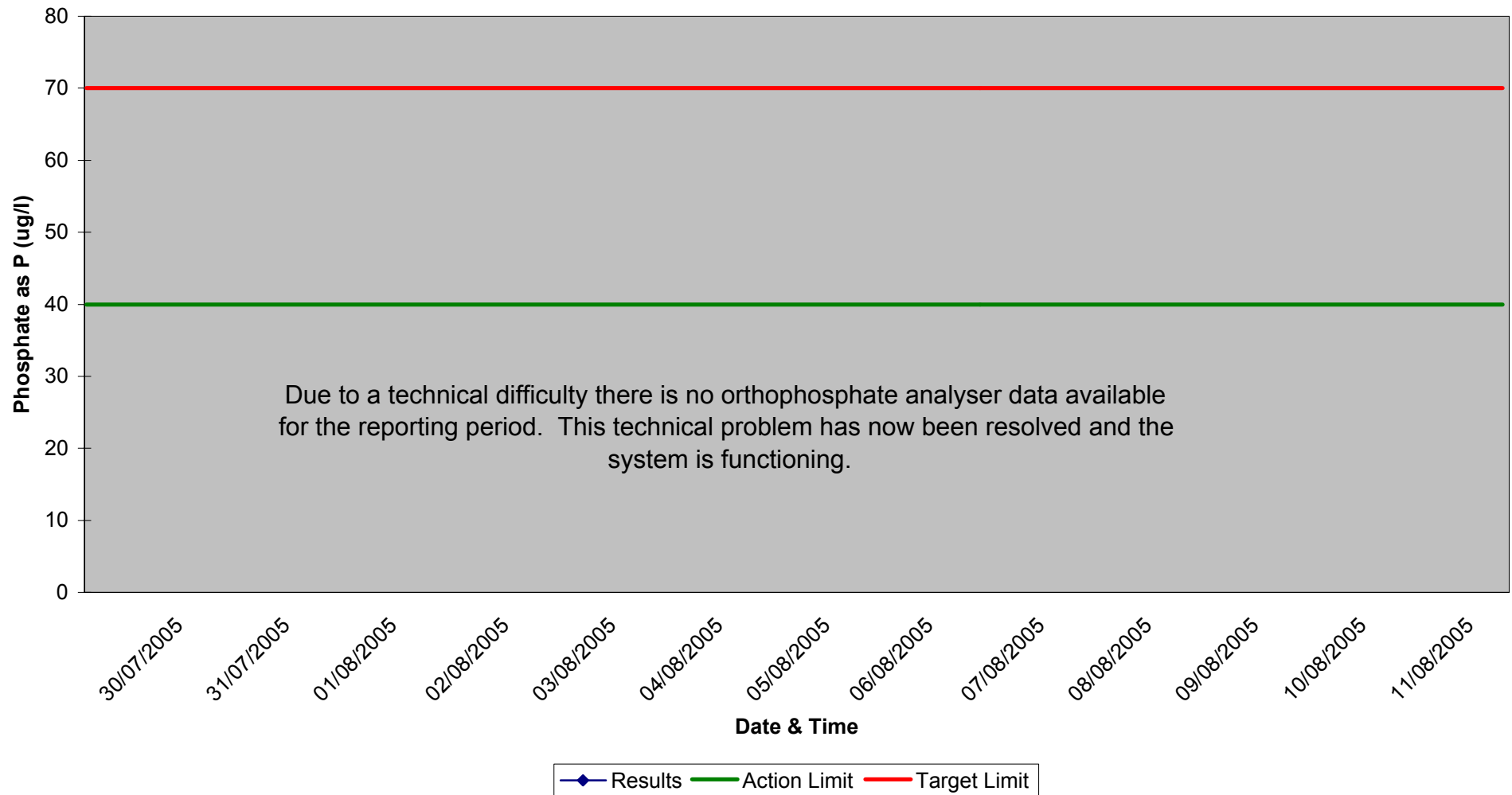
Noise Monitoring Compiled Results 2005



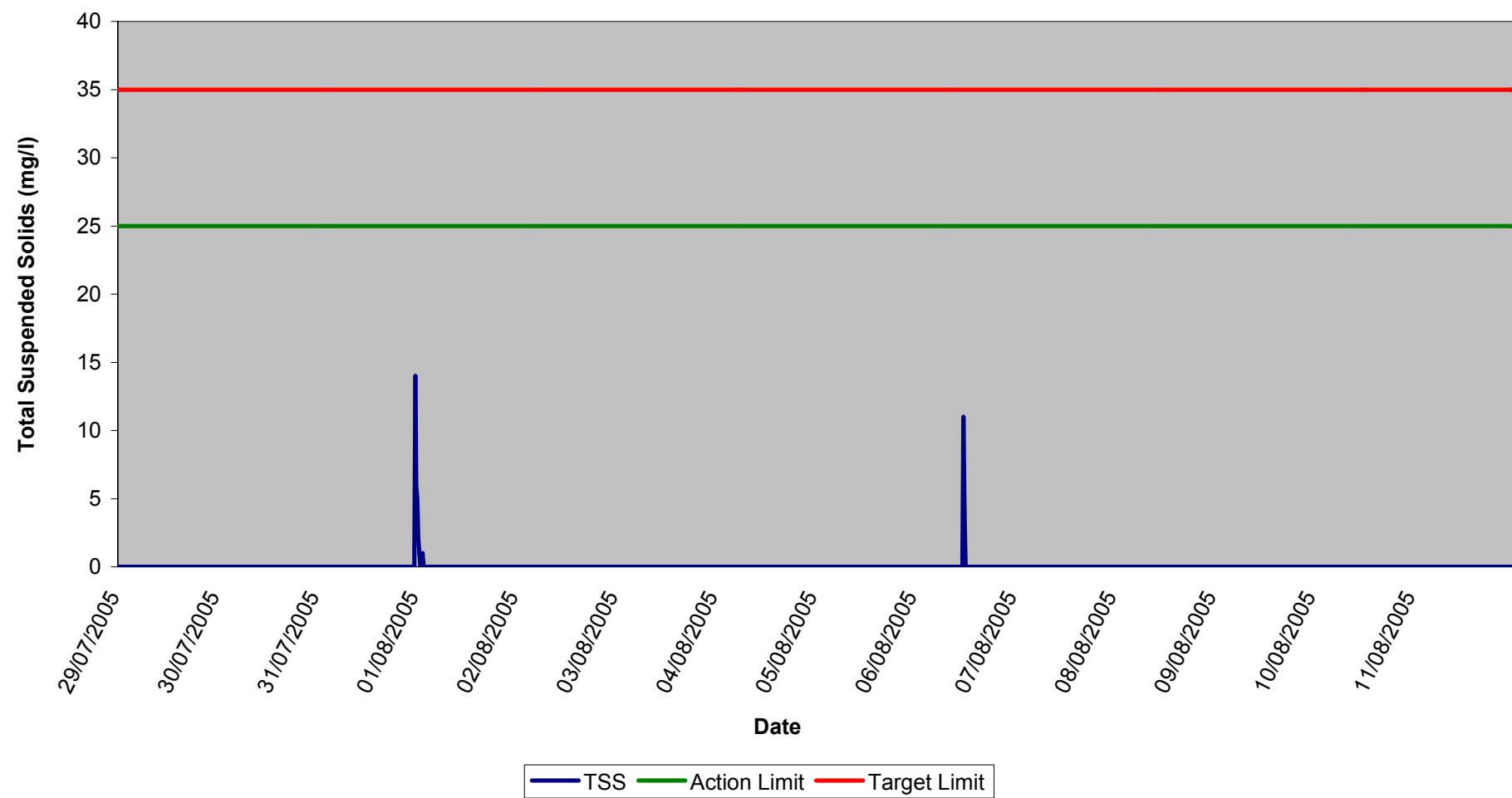
Ammonia as NH₃-N, Compiled Results 2005



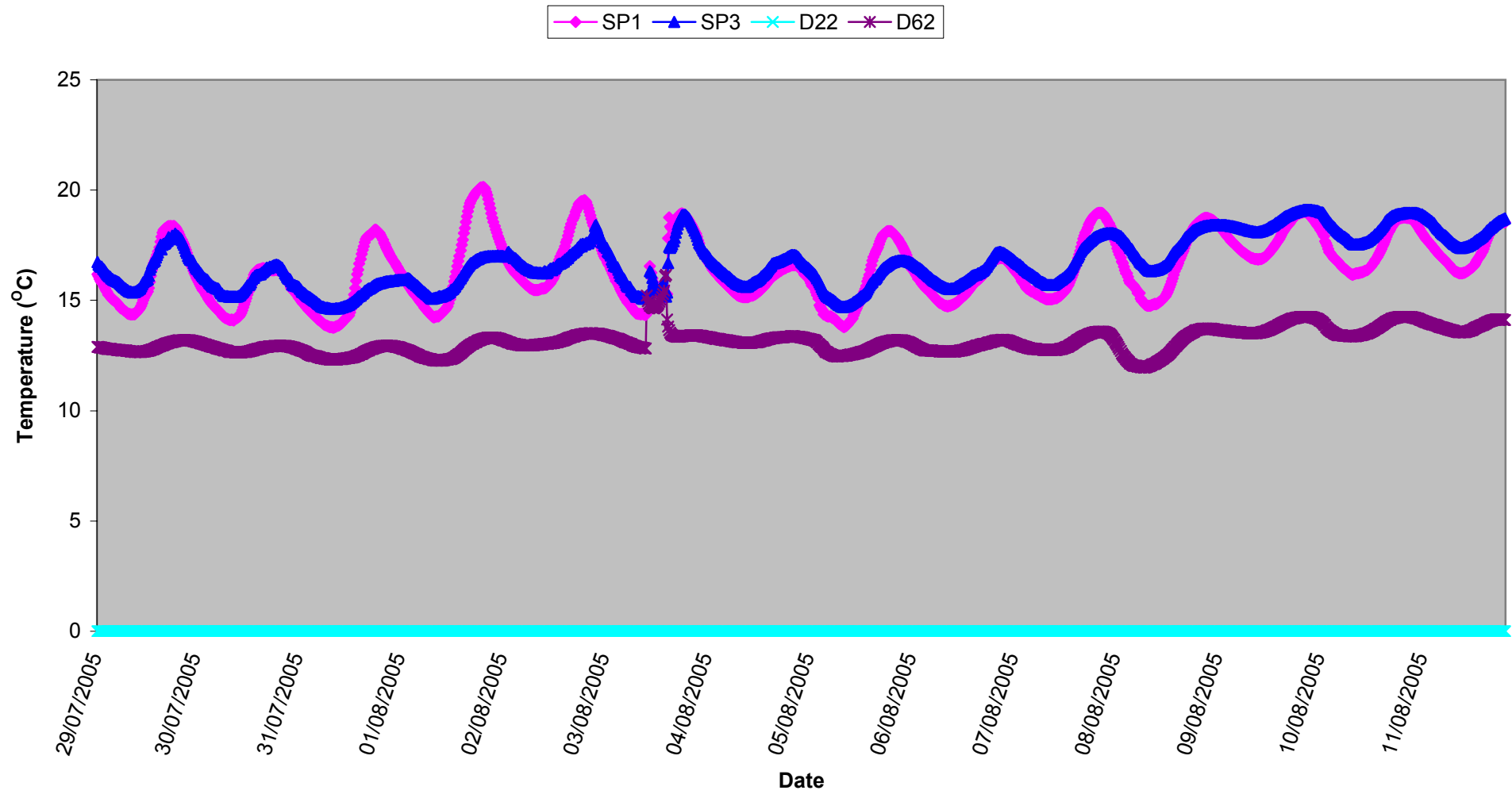
Surface Water (SP1)
Orthophosphate, Week 31/32 2005



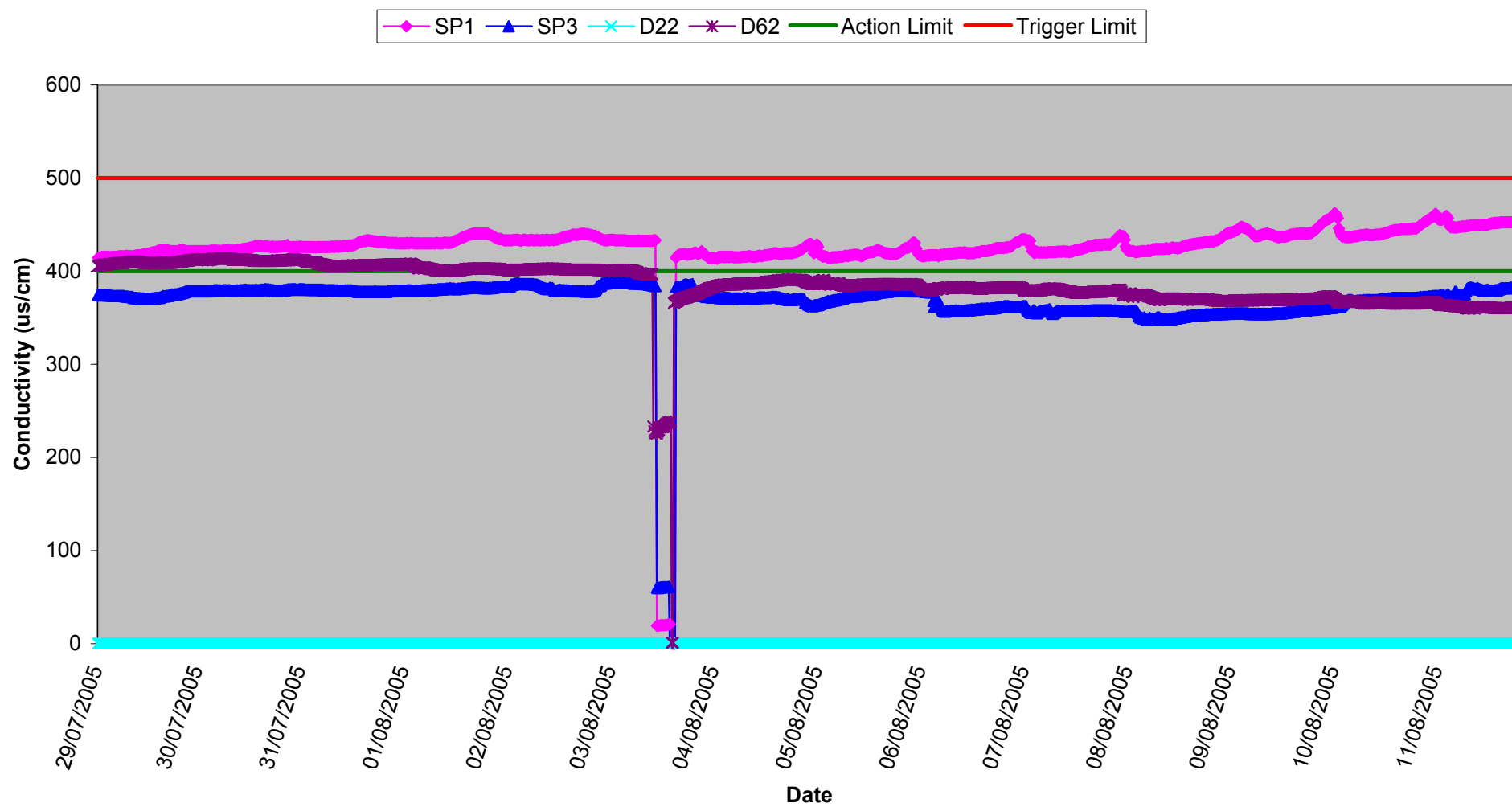
Surface Water (SP1)
Total Suspended Solids, Weeks 31/32 2005



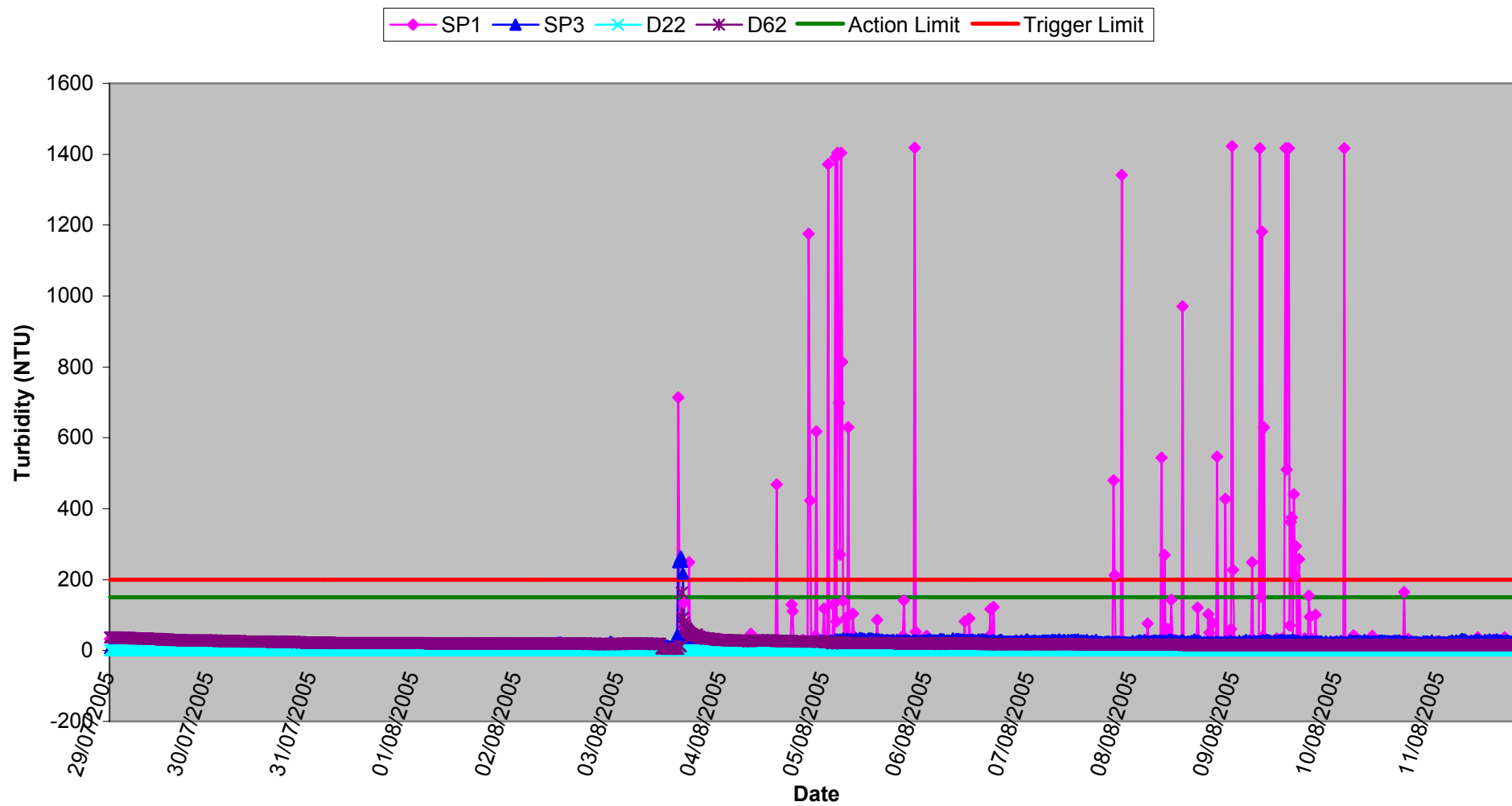
Surface Waters
Temperature, Weeks 31/32 2005



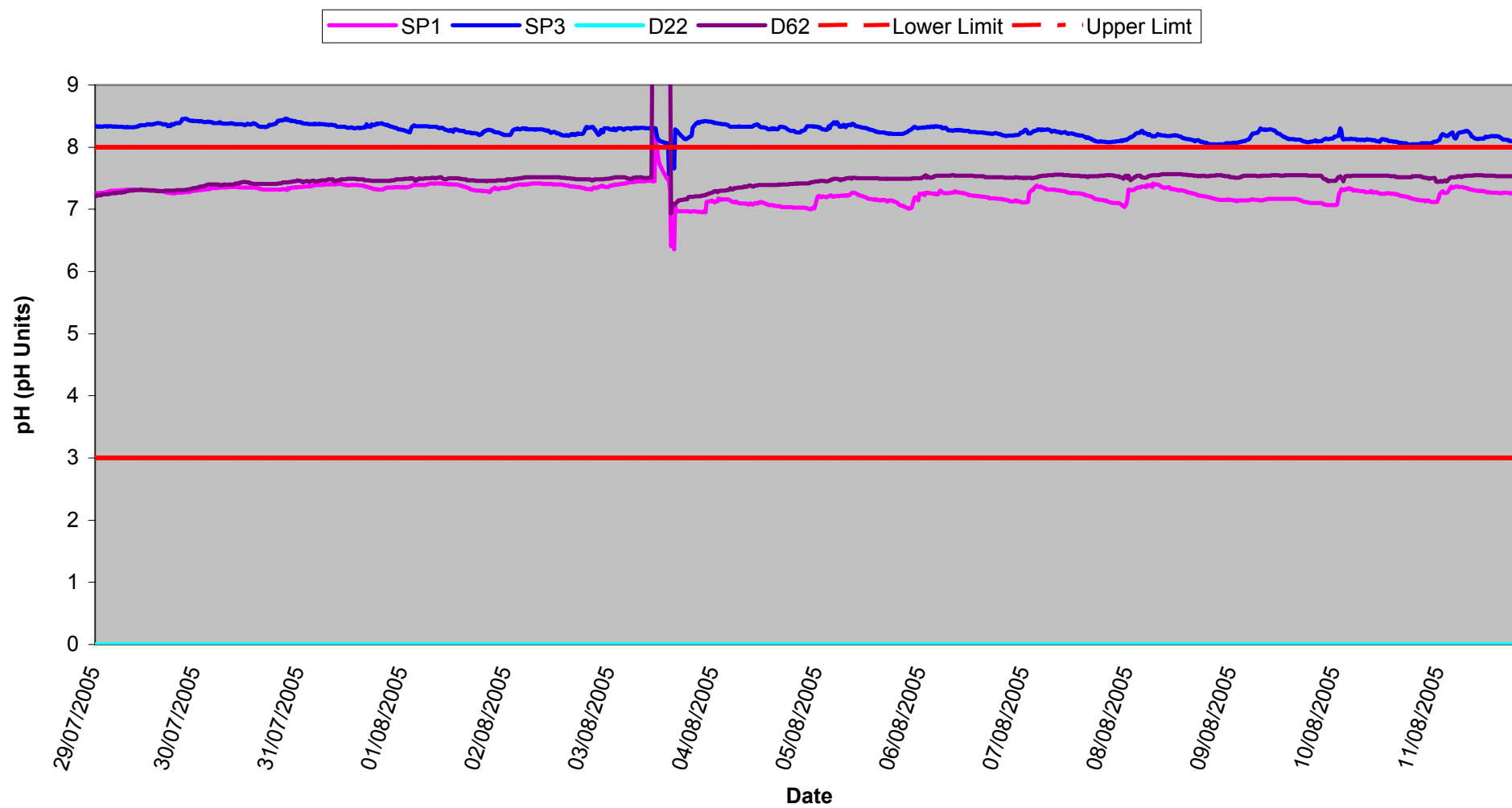
Surface Waters
Conductivity, Weeks 31/32 2005



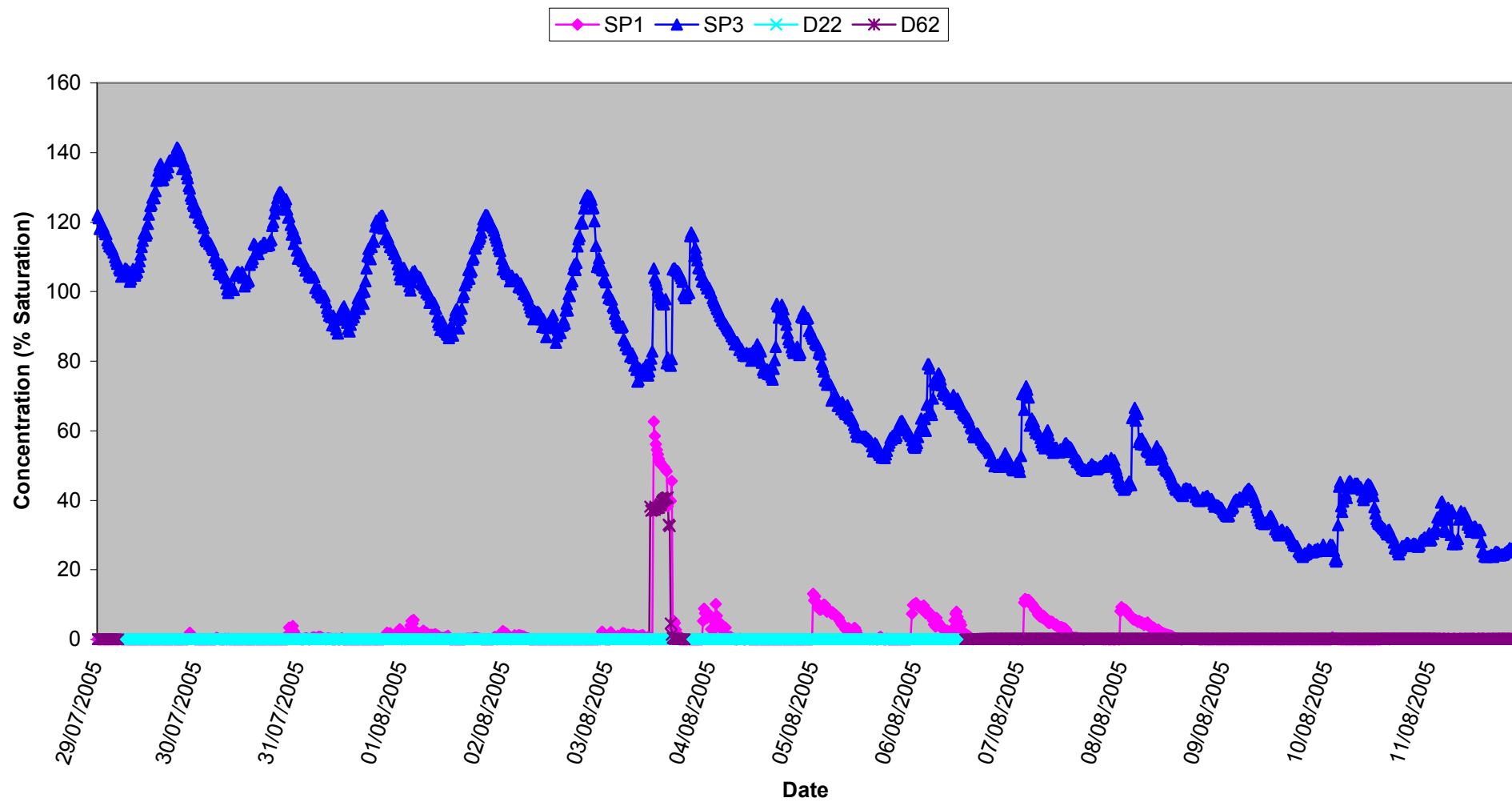
Surface Waters
Turbidity, Weeks 31/32 2005



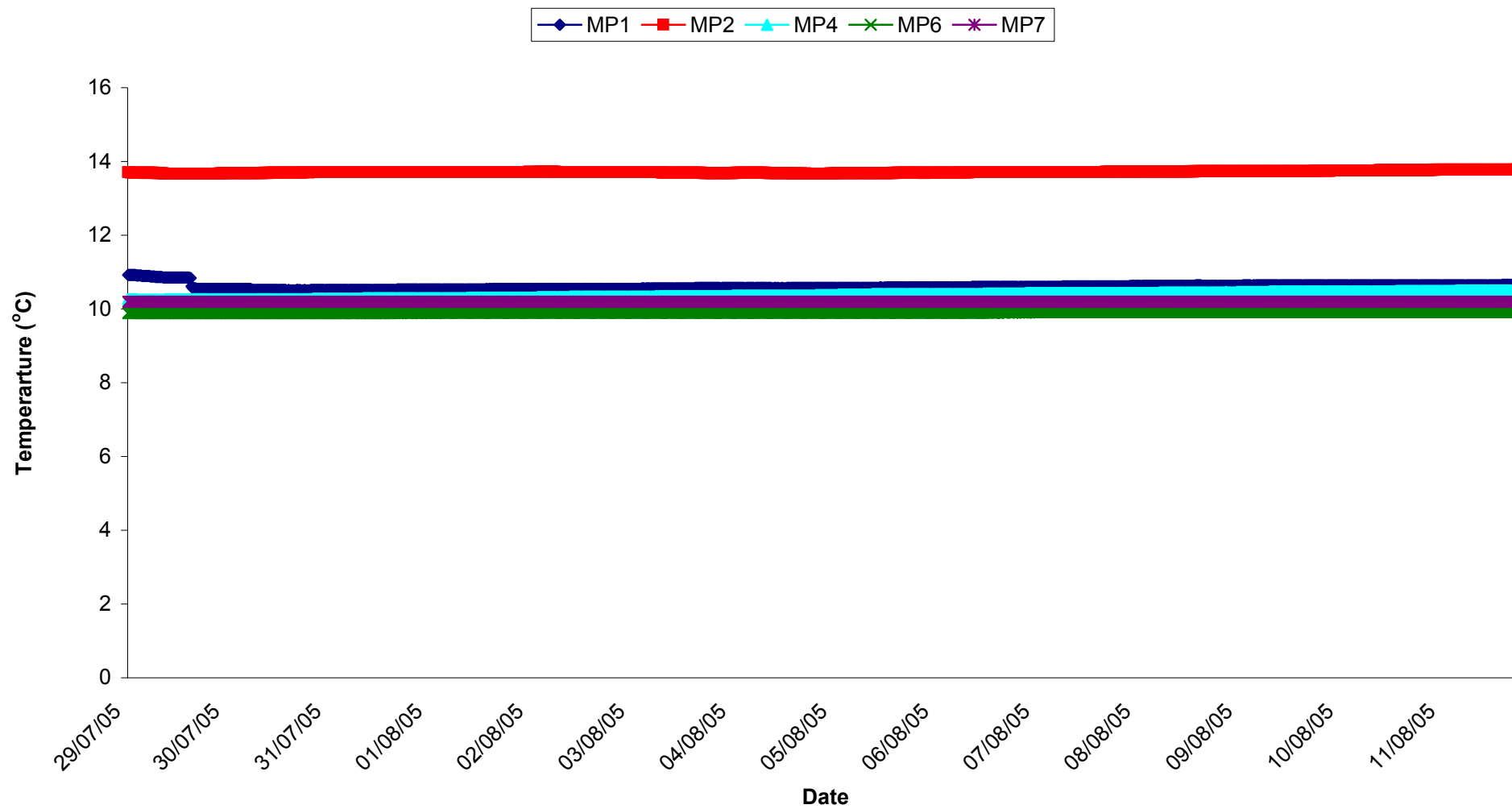
Surface Waters
pH, Weeks 31/32 2005



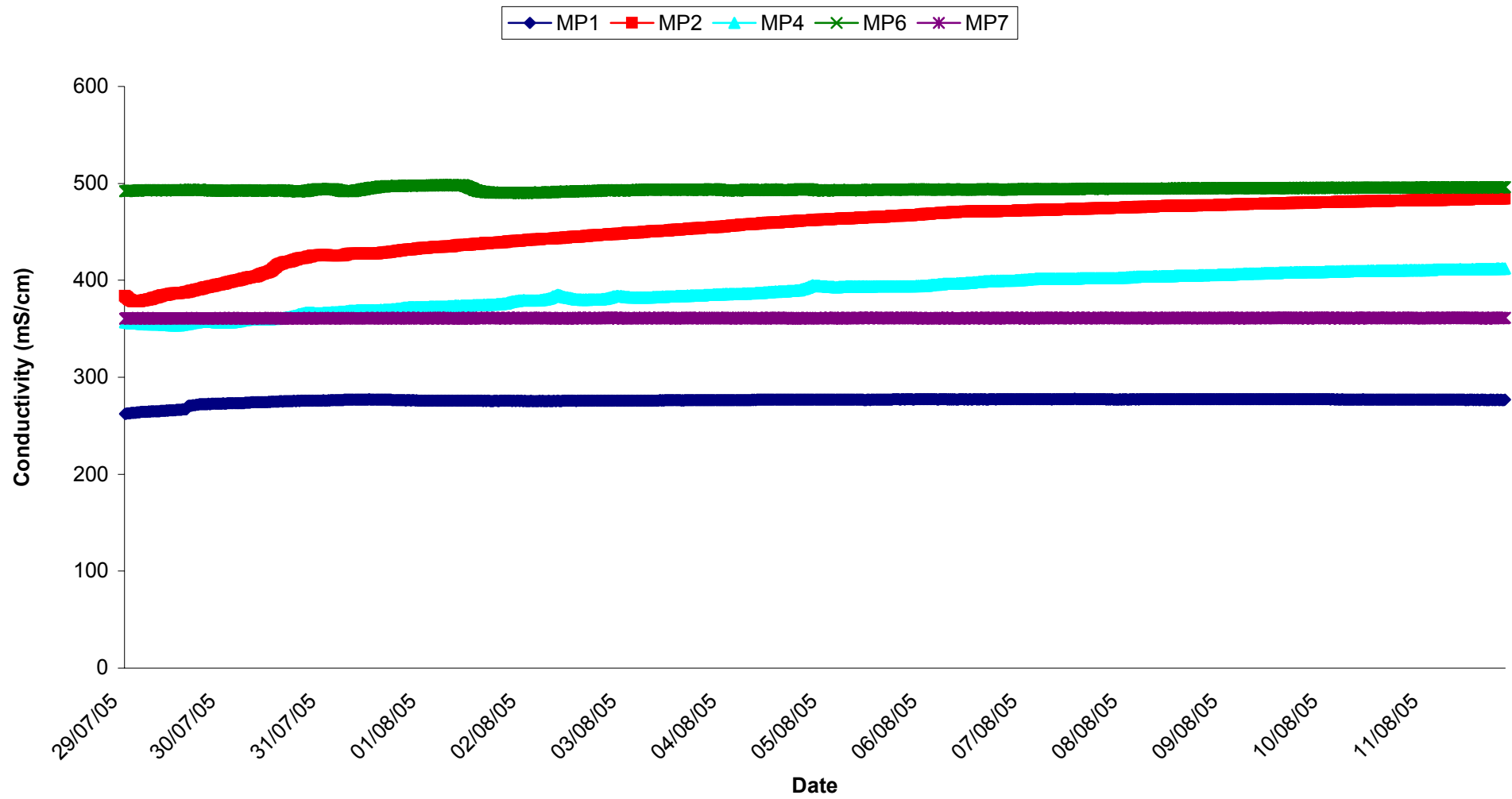
Surface Waters
Dissolved Oxygen, Weeks 31/32 2005



Groundwaters
Temp, Weeks 31/32 2005



Groundwaters
Conductivity, Weeks 31/32 2005



Groundwaters pH, Weeks 31/32 2005

