Weekly Environmental Report - Status		Week Ending:	Thur. 2nd June 2005
Generated By:	Sandra Barber		
Checked By:	Leslie Finnegan		

1 Monitoring Data

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

1.1 Rainfall Data

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

Date	27-May-05	28-May-05	29-May-05	30-May-05	31-May-05	1-June-05	2-June-05
Rainfall (mm)	8.4	13.6	1.0	1.8	5.2	23.2	27.0

1.2 Summary

Environment	**Comments**
Surface Water	A heavy rain incident on the 25th May 2005 generated an enormous volume of water across the site and with the turbid water being pumped from the terminal footprint (via D99a) resulted in a marked increase in the concentrations (above agreed trigger levels) of suspended solids and turbidity passing through the northern settlement pond and SP1. This issue was compounded by heavy rains on the 27th and 28th May 2005. TSS concentrations continued to remain over the trigger level until 31-05-05 before falling sharply for a number of hours. However on the 01-05-05 the trigger level was again exceeded for another period greater than 5 hours only for it to fall below the action level early in the morning of 02-06-05. MCC were kept informed of all fluctuations and the NWRFB conducted a number of site visits during this period. PO_4 levels never rose above the action level during the last 7 days. All water quality data is shown in both tabular and graphical forms. 960kg of hydrated lime was added to the northern settlement pond as part of a controlled test on Thurs 02-06-05.
Groundwater	The sonde data downloaded is shown graphically.
Noise	L_{Aeq} at N1 recorded between 48 and 55dB L_{Aeq} at N2 recorded between 45 and 54dB The results for both locations were below the 65 dB limit.
Vibration	There were no vibration events recorded during the reporting period
Dust	Dust pots will be taken down on the 3-06-05 and the results will be included when available.
Weather	There was a total of 79.8 mm of rainfall during the reporting period, with a temperature range of 5.0 to 16.1 ^{o}C

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2 Environmental Incidents/Near misses/Complaints

A heavy rain incident on Wednesday 25th May 2005 generated an enormous volume of water across the site. This water coupled with water heavy laden with silt being pumped from the terminal footprint, resulted in a marked increase in the concentrations of suspended solids and turbidity above the agreed action and trigger levels at SP1. The matter was compounded by additional rains on the 27th and 28th May 2005. TSS levels did not settle consistently below the action levels during this week.

There was one near miss on Thursday 02-06-05 where lime treated water from the northern settlement pond collected in the central spine between the two ponds. An small overflow spilled in to the carrier drain that feeds SP1. There were no exceedances in pH or conductivity at SP1.

Surface Water Monitoring Record Sheet														no… 1 of 1
Conducted by								Approved by						
Name: Sandra Barber				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	27-May-05	247	11.4	87.0	65		5.3							
SP3	27-May-05	210	12.3	34.0	70		6.2							
SP1	28-May-05	261	11.6	122.0	74		6.3							
SP2	28-May-05	157	11.4	338.0	88		6.0							
SP1	30-May-05	239	10.3	29.8	66		5.98							
SP2	30-May-05	269	10.4	11.8	72		6.31							
SP1 - Lab	29-May-05	198		23.0		10	6.2	37	< 0.1	0.081	0.006	< 0.01	< 0.005	
SP2 - Lab	29-May-05	219		7.8		< 4	6.6	57	< 0.1	0.1	0.011	0.014	< 0.005	
SP1	31-May-05	241	14.0	16.4	64		6.00							
SP2	31-May-05	262	14.3	8.3	75		6.02							
SP1	01-Jun-05	240	14.1	38.0	75		6.23							
SP2	01-Jun-05	264	13.7	125.0	78		6.01							
SP1	02-Jun-05	151	14.3	31.3	78		5.84							
SP2	02-Jun-05	159	14.5	114.0	79		6.13							
Additional Surface Water Monitoring														
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.
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
SP2 has been used instead of SP3 as the second primary monitoring point on site for this period. This is due to fact that majority of site surface water was diverted to this drain during this week to facilitate commissioning of the settlement ponds. Thus SP2 was more representative of surface water prior to the settlement ponds than SP3.

Groundwater Monitoring Record Sheet													no… 1 of 1
Conducted by						Approved by							
Name: Sandra Barber			Signed			Name Leslie Finnegan			Signed				
Determinant Results													
Location	Date	Cond. uS/cm	Temp ^{o}C	BOD mg l^{-1}	DO % Sat	TDS* mg l^{-1}	Phosphate as P mg l-1	pH	Total Hardness mg/l CaCO3	Nitrite as $N0_2$ mg l^{-1}	Nitrate as $N0_3$ mg l^{-1}	Phosphate as PO_4 mg l^{-1}	Ammonia mg l^{-1}
MP 1													
MP 2													
MP 3	23-May-05	406	11.4	<1	39	855	0.71	5.9	101.1	<0.017	<0.44	2.18	
MP 4													
MP 5	23-May-05	426	10.6	7	60	169	0.461	6.1	153.8	<0.017	<0.44	1.416	
MP 6													
MP 7													
MP 8	23-May-05	435	11.5	5	40	299	0.245	6.2	134.3	<0.017	<0.44	0.753	
MP 9	23-May-05	234	13.0	<1	45	<4	0.189	6	67.4	<0.017	<0.44	0.579	
MP 10a	23-May-05	711	10.4	1	26	20980	<0.01	6.4	412.6	<0.017	<0.44	<0.03	
MEL BR4a	23-May-05	249	13.1	<1	28	1504	0.089	6.3	85.5	<0.017	<0.44	0.273	

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													
MP 2													
MP 3	23-May-05	235	<1	0.05	< 5	60	32	1	< 5	<0.4	4266	< 5	
MP 4													
MP 5	23-May-05	248	<1	< 0.05	< 5	< 3	27	<1	< 5	<0.4	688	< 5	
MP 6													
MP 7													
MP 8	23-May-05	253	<1	< 0.05	< 5	< 3	19	<1	< 5	<0.4	5	< 5	
MP 9	23-May-05	135	<1	< 0.05	< 5	< 3	49	1	< 5	<0.4	8	< 5	
MP 10a	23-May-05	427	<1	< 0.05	< 5	< 3	11	1	< 5	<0.4	5	< 5	
MEL BR4a	23-May-05	150	<1	< 0.05	< 5	< 3	26	<1	< 5	<0.4	5	< 5	

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.

Noise Monitoring Record Sheet											no… 1 of 1
Conducted by								Approved by			
Name: Sandra Barber					Signed			Name: Leslie Finnegan			Signed
Determinant Results											
Location	Air Temp.	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	9.2	27/05/2005	08:08:01	12:00:00	2343753	3.1	216	55	47	77	
N1	9.6	28/05/2005	07:08:38	12:00:00	2343753	2.0	146	48	38	52	
N1	9.7	30/05/2005	07:28:40	12:00:00	2343753	1.7	183	54	41	79	
N1	11.8	31/05/2005	07:25:34	12:00:00	2343753	2.6	205	54	47	74	
N1	13.4	01/06/2005	07:36:27	12:00:00	2343753	5.3	27	55	47	82	
N1	12.8	02/06/2005	08:05:21	12:00:00	2343753	6.0	18	54	47	83	
N2	9.2	27/05/2005	08:10:15	12:00:00	2343754	3.1	216	48	33	72	
N2	9.6	28/05/2005	07:32:52	12:00:00	2343754	2.0	146	54	< 30	105	
N2	9.7	30/05/2005	07:43:44	12:00:00	2343754	1.7	183	46	37	62	
N2	11.8	31/05/2005	07:53:41	12:00:00	2343754	2.6	205	46	< 30	65	
N2	13.4	01/06/2005	08:04:52	12:00:00	2343754	5.3	27	46	< 30	64	
N2	12.8	02/06/2005	07:37:36	12:00:00	2343754	6.0	18	45	< 30	67	

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

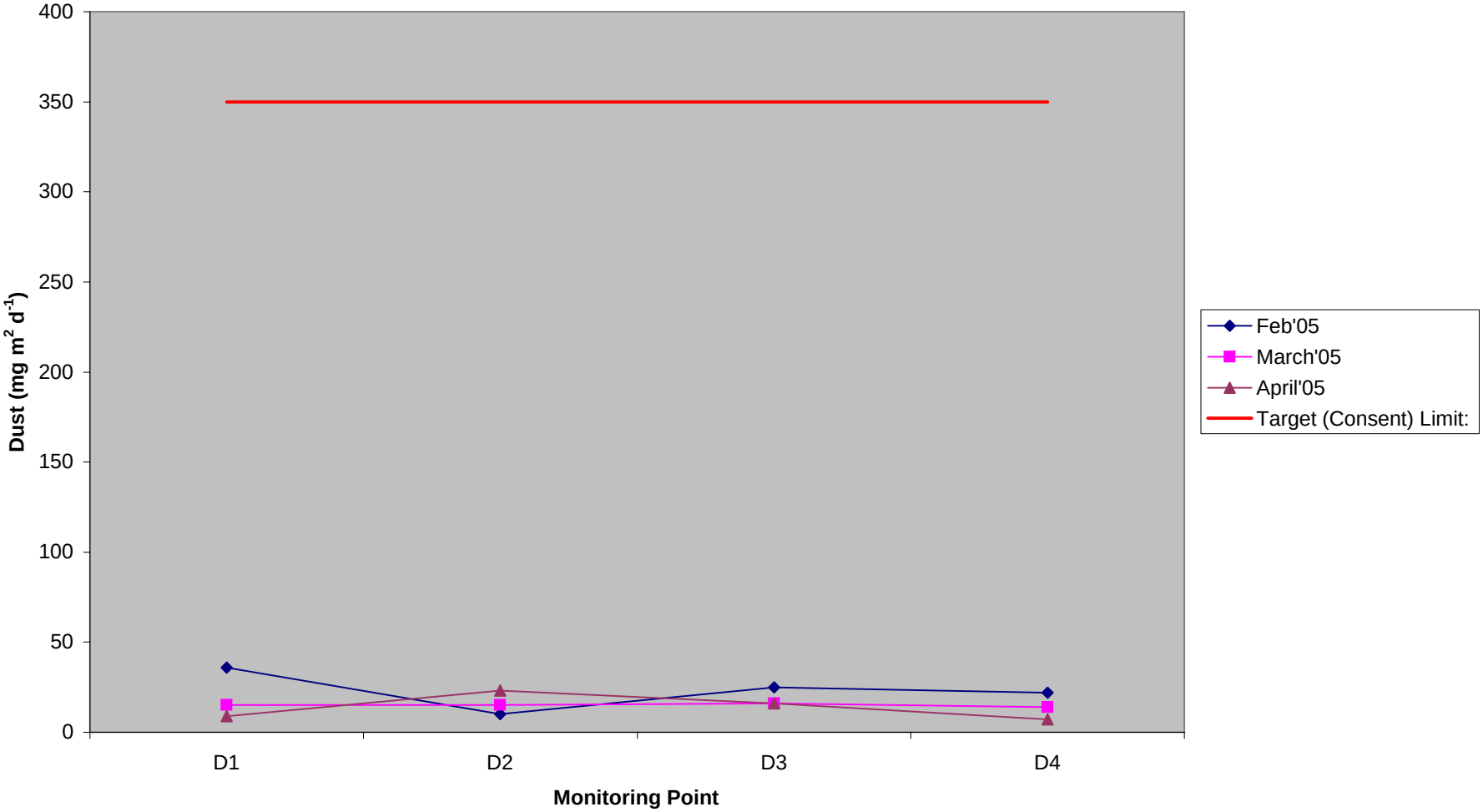
Dust Monitoring Record Sheet				no… 1 of 1			
Conducted by				Approved by			
Name: Sandra Barber		Signed		Name: Leslie Finnegan		Signed	
Determinant Results							
	Date Positioned	Date Removed	Ref. Number	Date Dispatched	Date Returned	Weight (mg/sq.m/day)	Comments
Target (Consent) Limit:		**350 mg m^2 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						
D2	04/05/2005						
D3	04/05/2005						
D4	04/05/2005						

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

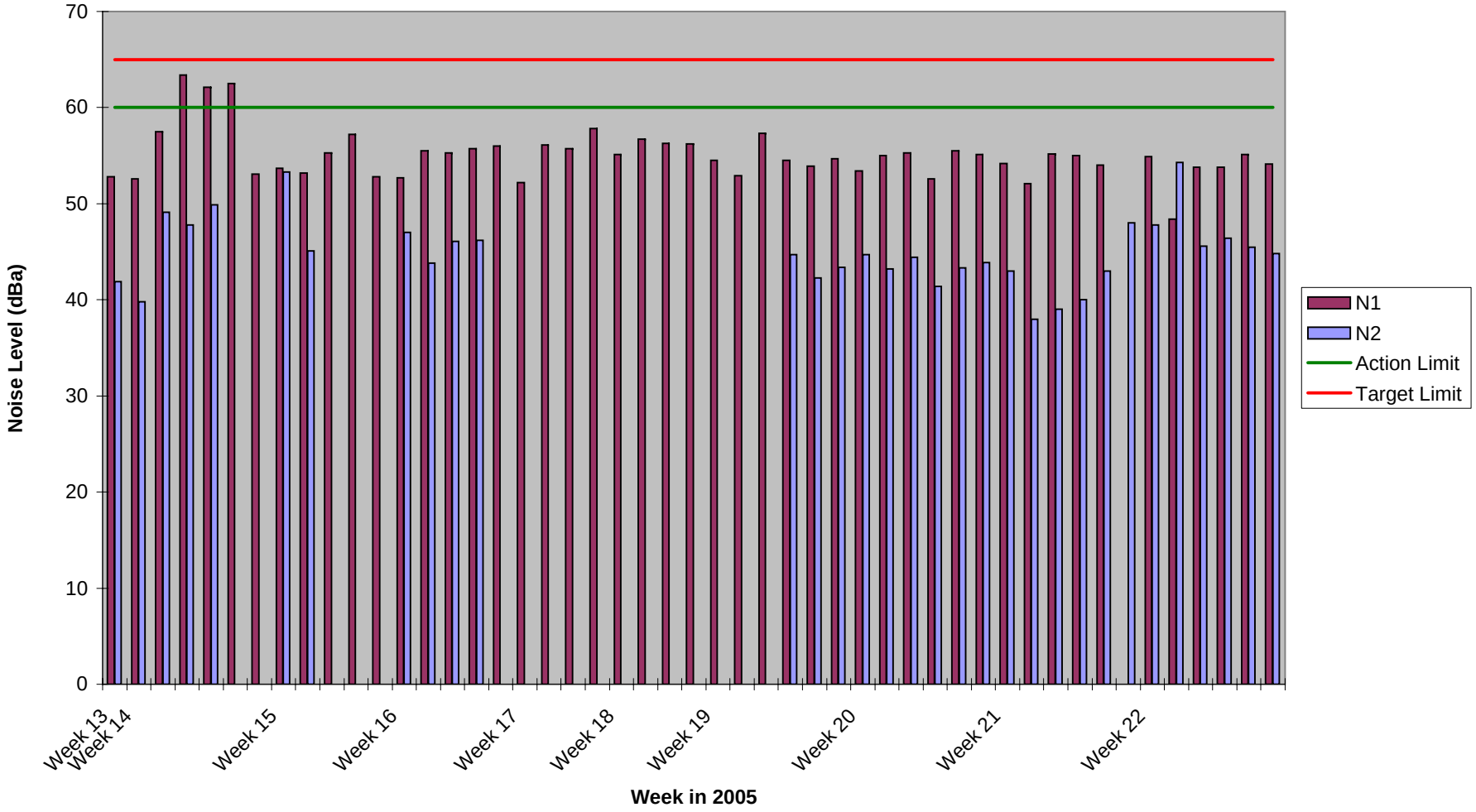
Vibration Monitoring Record Sheet			no… 1 of 1		
Conducted by			Approved by		
Name:	Sandra Barber	Signed	Name:	Leslie Finnegan	Signed
Determinant Results					
Location	Date Positioned	Date Removed	Event Time	Pk Disp (mm)	Accel (g)
No Readings recorded this week					

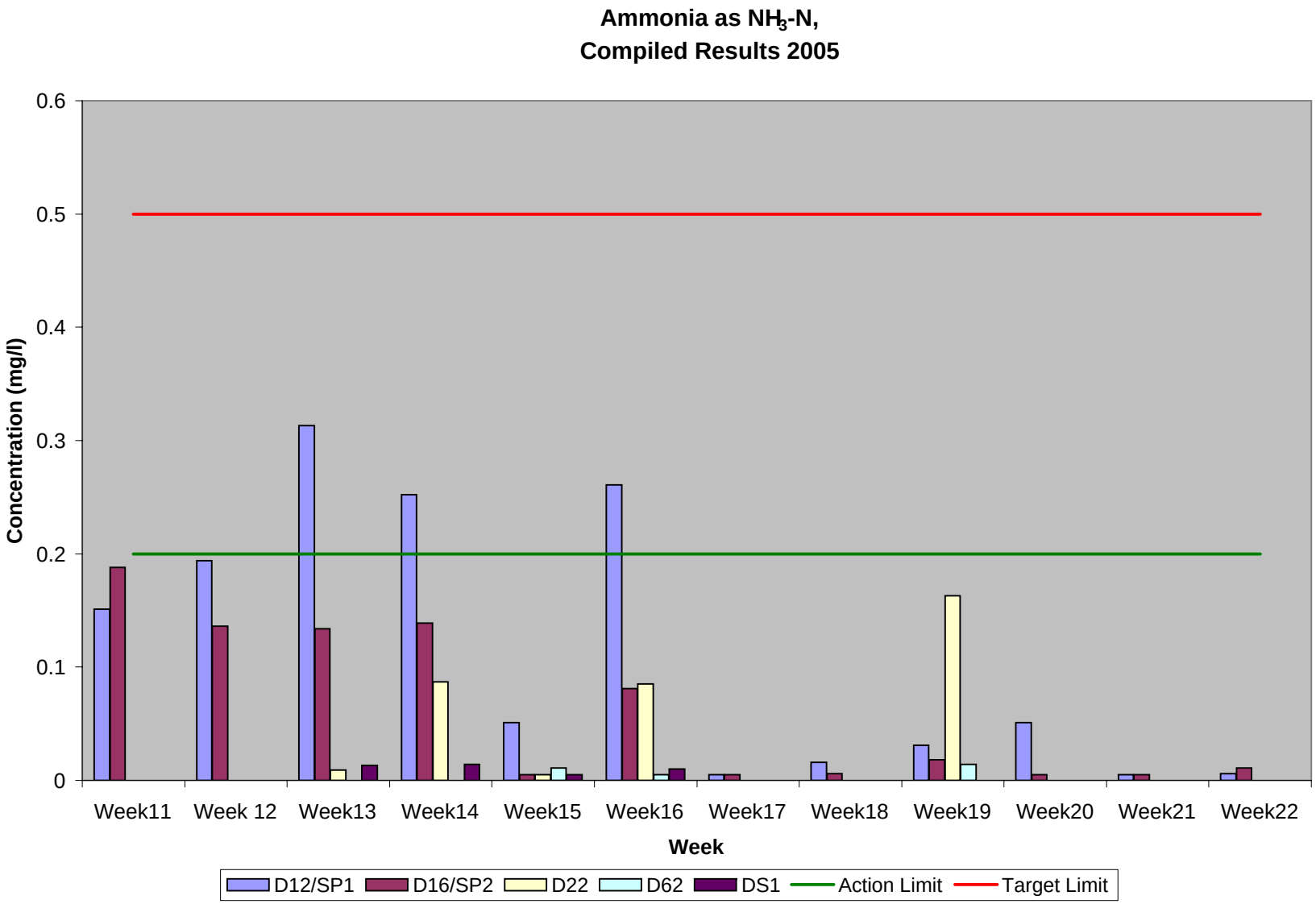
Vibration meter was moved between V1 and V2 daily to provide indicative vibration levels accross the site

Dust
Compiled Results 2005

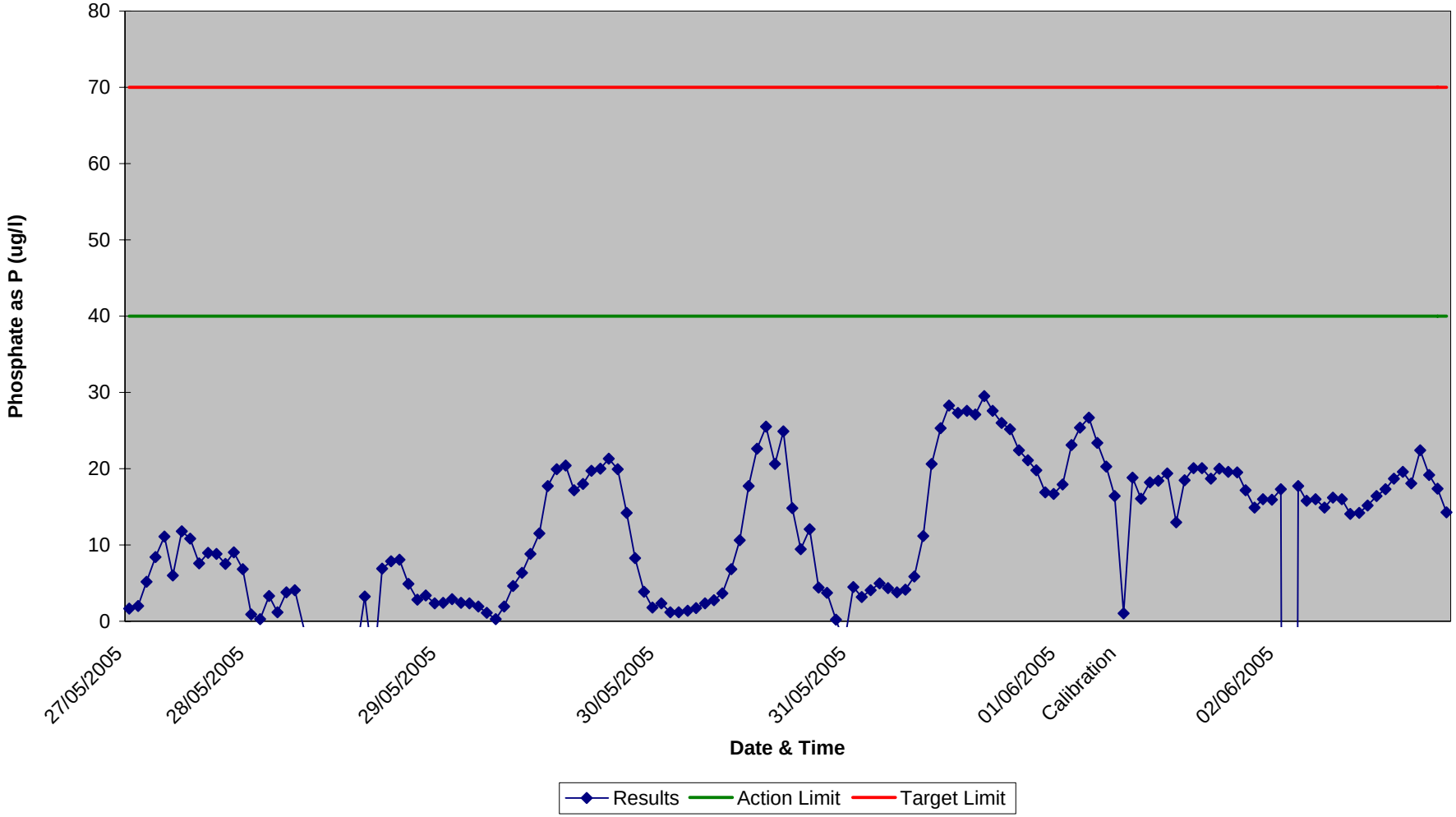


Noise Monitoring
Compiled Results 2005

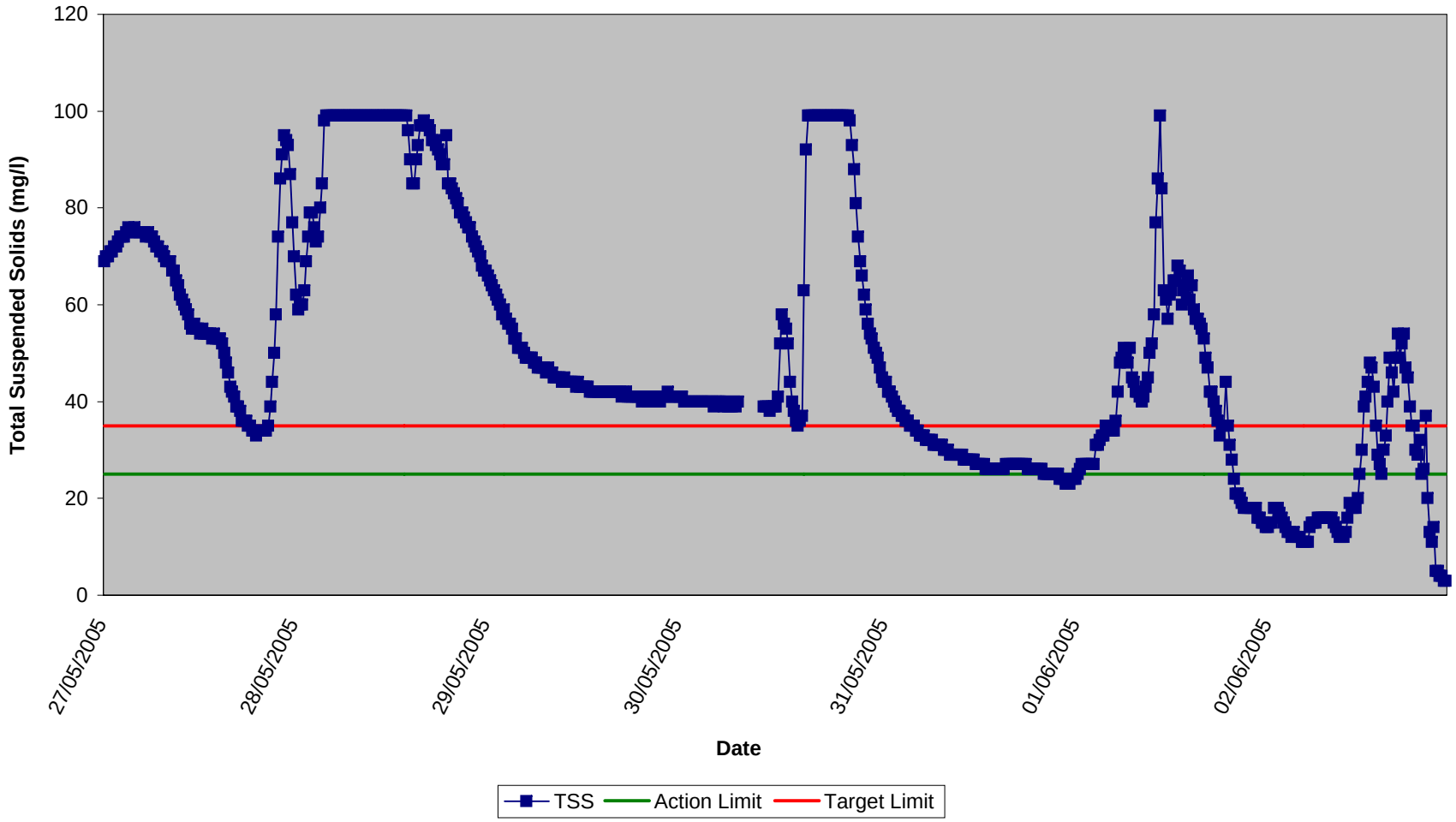



Ammonia as NH3-N,
Compiled Results 2005
Concentration (mg/l)
0.6
0.5
0.4
0.3
0.2
0.1
0
Week11
Week 12
Week13
Week14
Week15
Week16
Week17
Week18
Week19
Week20
Week21
Week22
Week
D12/SP1
D16/SP2
D22
D62
DS1
Action Limit
Target Limit

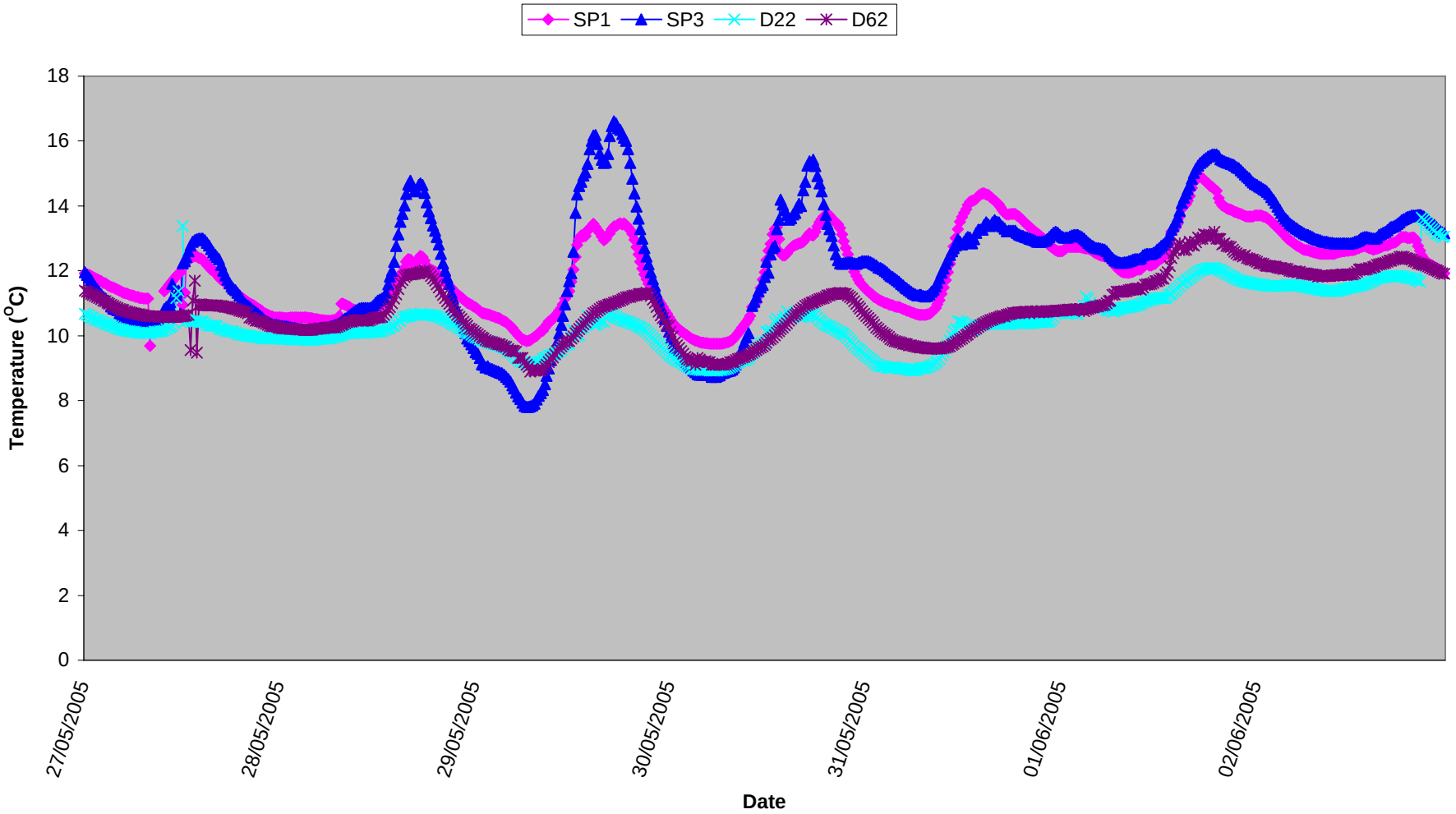
Surface Water (SP1)
Orthophosphate, Week 22 2005



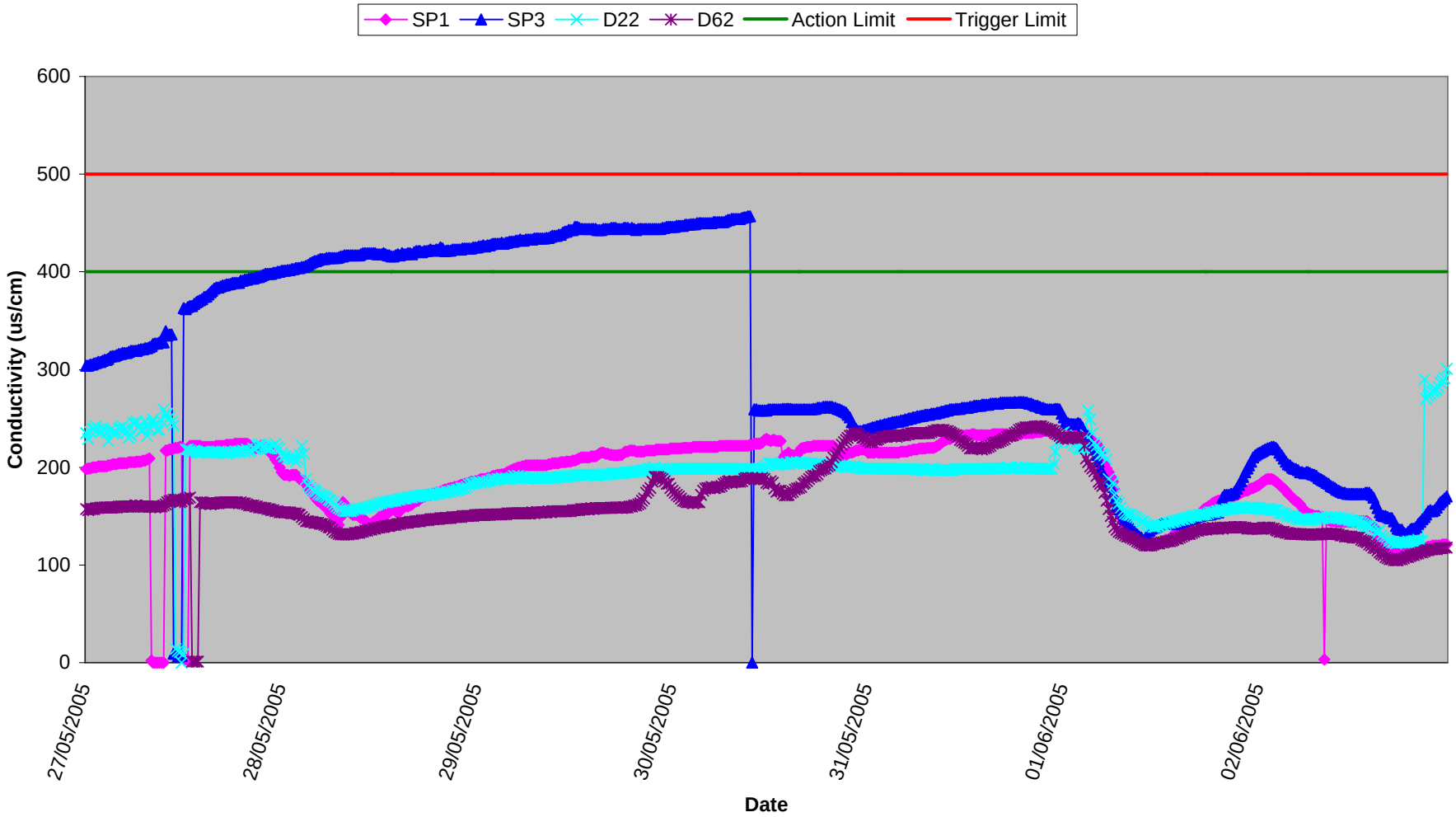
Surface Water (SP1)
Total Suspended Solids, Week 22 2005



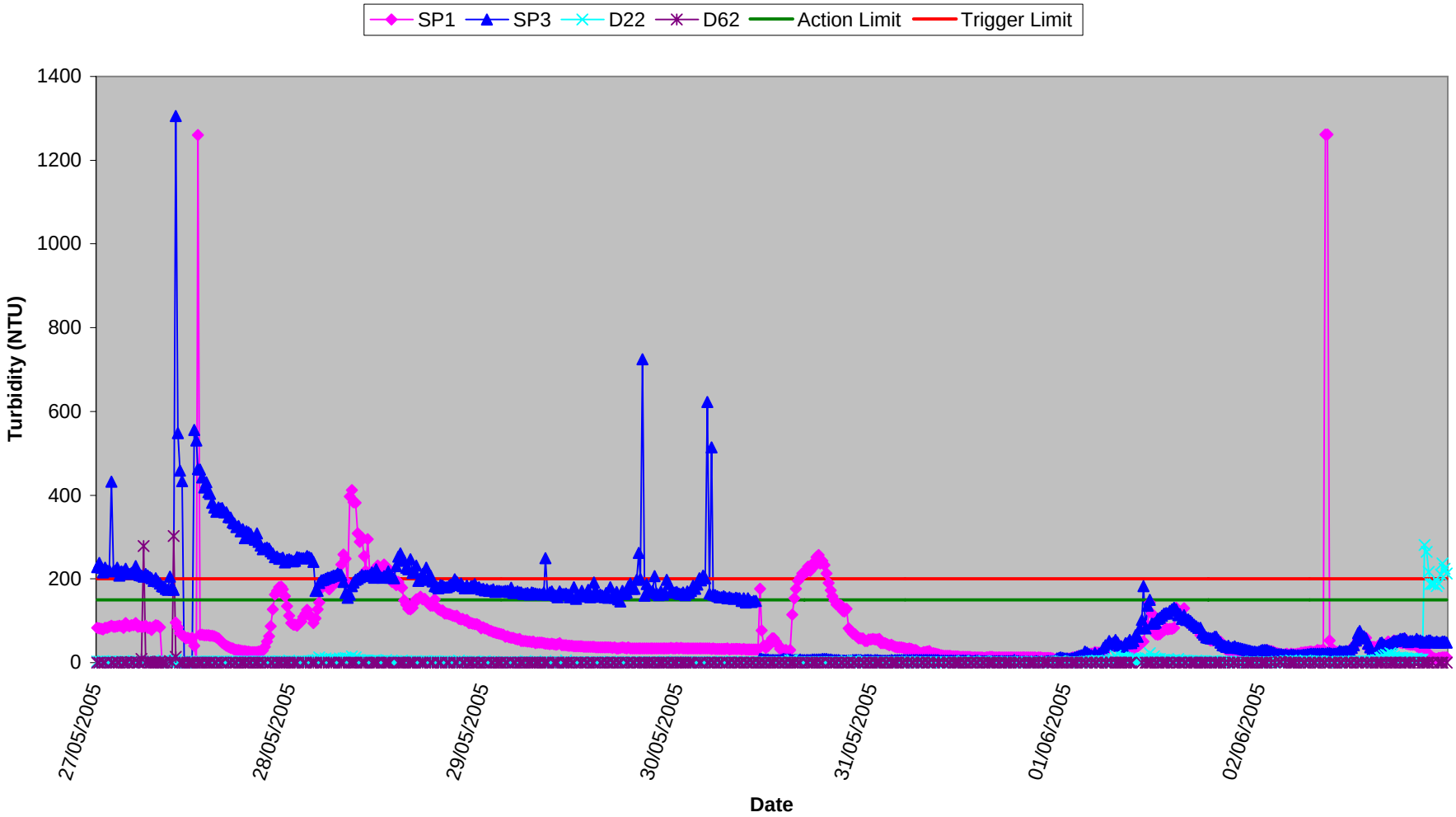
Surface Waters
Temperature, Week 22 2005



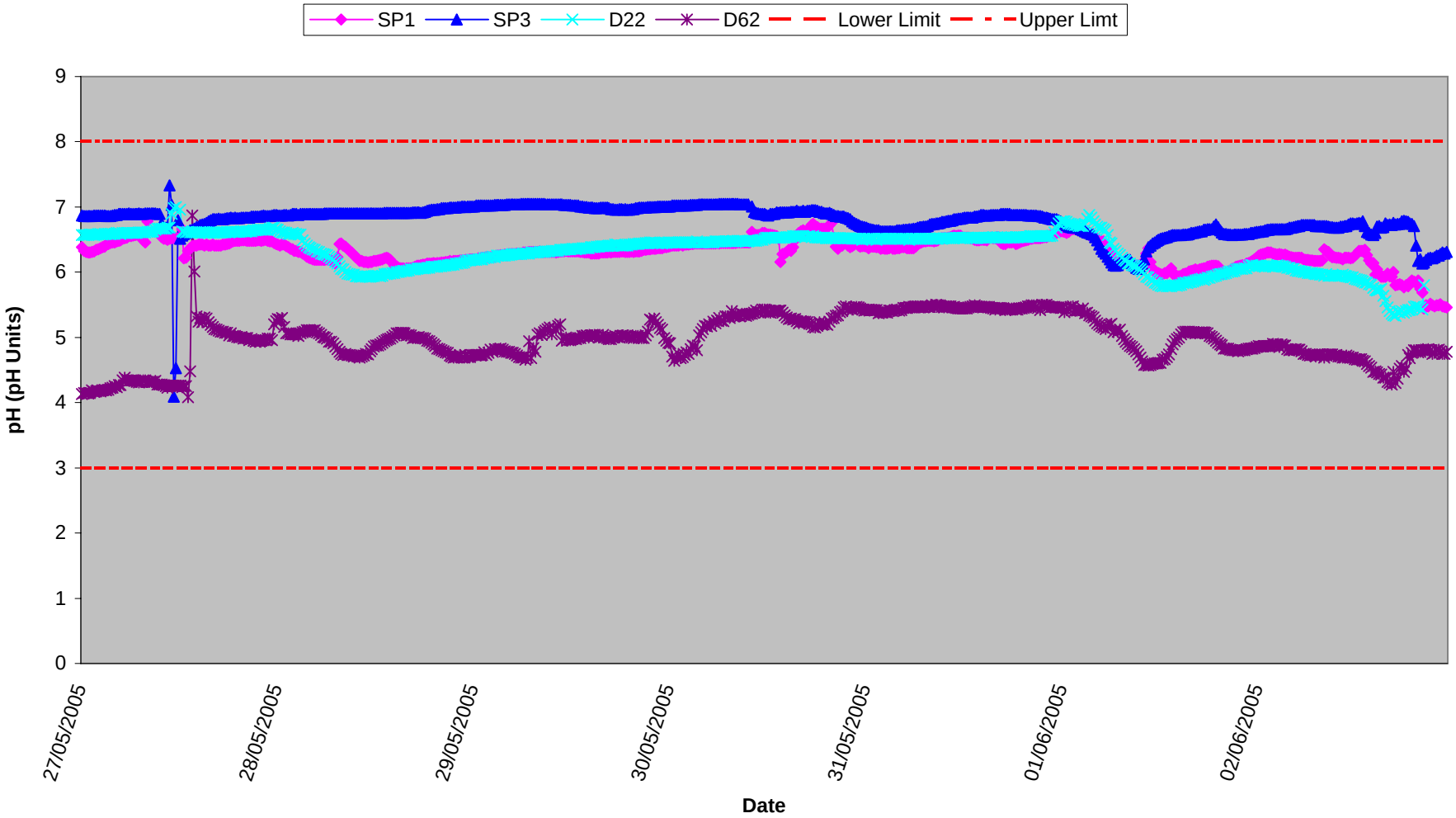
Surface Waters
Conductivity, Week 22 2005

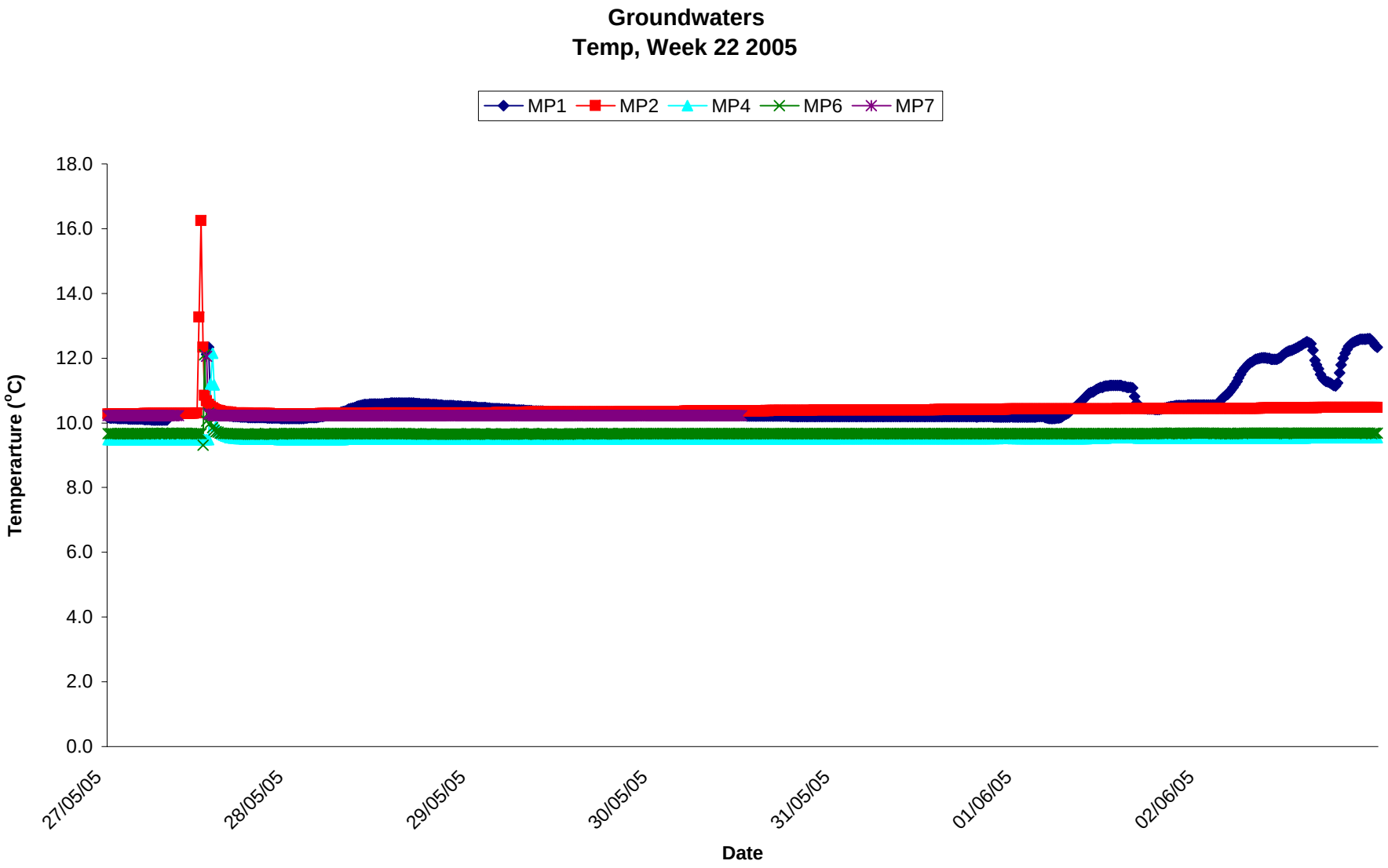


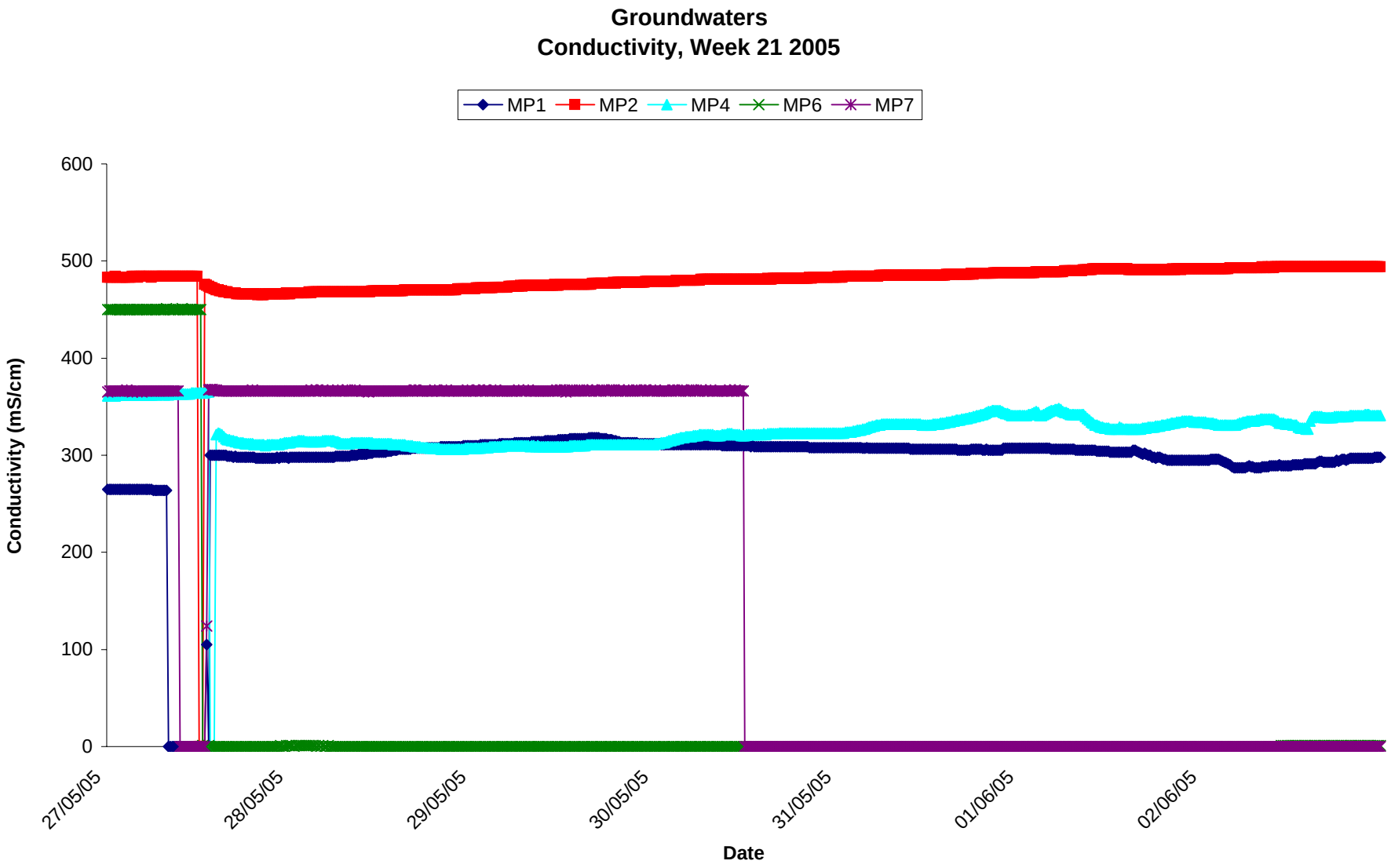
Surface Waters
Turbidity, Week 22 2005

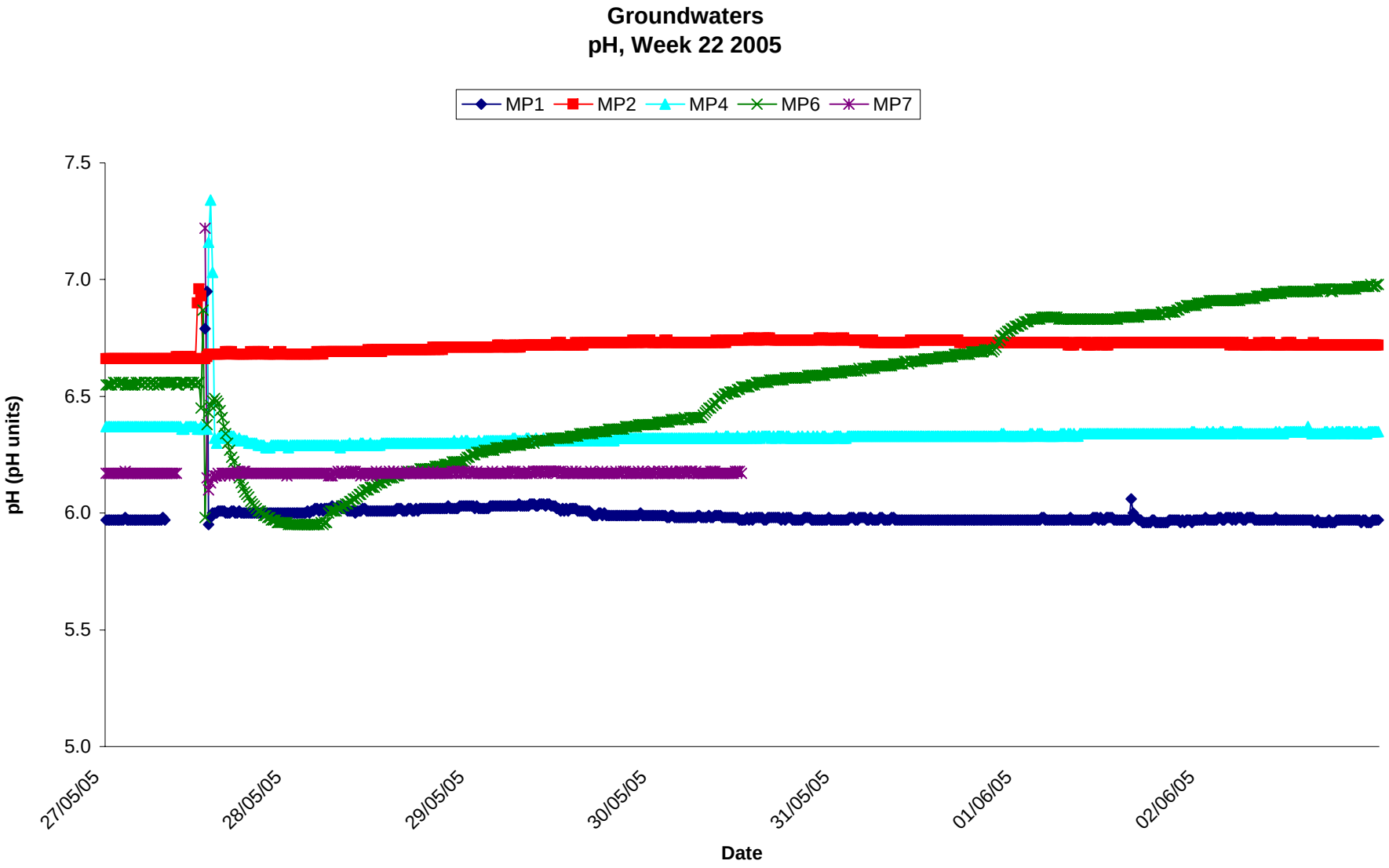


Surface Waters
pH, Week 22 2005




Groundwaters
Temp, Week 22 2005
MP1
MP2
MP4
MP6
MP7
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Temperarture (°C)
27/05/05
28/05/05
29/05/05
30/05/05
31/05/05
01/06/05
02/06/05
Date


Groundwaters
Conductivity, Week 21 2005
MP1
MP2
MP4
MP6
MP7
600
500
400
300
200
100
0
Conductivity (mS/cm)
27/05/05
28/05/05
29/05/05
30/05/05
31/05/05
01/06/05
02/06/05
Date


Groundwaters
pH, Week 22 2005
MP1
MP2
MP4
MP6
MP7
7.5
7.0
6.5
6.0
5.5
5.0
pH (pH units)
27/05/05
28/05/05
29/05/05
30/05/05
31/05/05
01/06/05
02/06/05
Date