

Weekly Environmental Report - Status	Week Ending: Thur. 9 th 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	3-June-05	4-June-05	5-June-05	6-June-05	7-June-05	8-June-05	9-June-05
Rainfall (mm)	6.6	0.8	0	0	0	0.4	0

1.2 Summary

Environment	Comments
Surface Water	For Orthophosphate see Section 2. For TSS see Section 2. For DO see Section 2. All other parameters were below limits set.
Groundwater	The sonde data downloaded is shown graphically.
Noise	L _{Aeq} at N1 recorded between 53 and 54dB L _{Aeq} at N2 recorded between 42 and 48dB The results for both locations were below the 65 dB limit.
Vibration	Max Pk Disp 0.50 mm with an associated acceleration 0.01 g was recorded. Almost all events recorded appear to be associated with the movement of the meter.
Dust	Dust pots for May were taken down on the 7-06-05 and the results are attached.
Weather	There was a total of 8.0 mm of rainfall during the reporting period, with a temperature range of 7.8 to 19.3 °C

2 Environmental Incidents/Near misses/Complaints

There was a single environmental exceedance during the reporting period. At approximately 1.45am on 03-06-05 a TSS exceedance was recorded by the automated logger at the primary monitoring point (SP1) when the pond level reached the spillway and the pond began discharging. The TSS data was downloaded from SP1 at 7.00am and the exceedance was reported. TSS was monitored throughout the day and water samples were collected at the southern settlement pond as well as at SP1 for analysis by CLS laboratories. During the course of the day TSS levels were seen to fall gradually. The download on Saturday morning reveals that TSS has continued to drop to below action limits.

Three notifications were made to Mayo County Council during the reporting period.

The first was to inform Mayo County Council of decreasing dissolved oxygen levels at SP1. It is thought that due to the reduced volume of water on site, there is now a degree of infiltration of groundwater into the sampling chamber at SP1. This situation is currently being investigated. Note that prior to leaving the site dissolved oxygen levels have been seen to recover somewhat.

The second was to inform Mayo County Council that due to low water flows on site, the TSS probes had been exposed giving false readings. The probe was reset and the results returned to the background levels expected.

The third was to inform Mayo County Council that whilst being downloaded the phosphate analyser programme was halted but not restarted. As soon as this situation was noted the situation was rectified. laboratory analysis was carried out on the days the machine was not actively logging and the trigger limit was not exceeded.

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	03-Jun-05	152	14.2	9.3	75		5.9							
SP3	03-Jun-05	208	14.3	8.4	72		6.6							
SP1	04-Jun-05	185	13.0	14.7	70		6.1							
SP3	04-Jun-05	235	13.0	15.2	78		6.5							
SP1 - Lab	04-Jun-05	157		24.3		18	6.7	46	<0.1	0.107	0.02	0.02	<0.005	
SP3 - Lab	04-Jun-05	174		15.7		13	6.8	39	<0.1	0.099	0.01	0.02	<0.005	
SP1	06-Jun-05	205	14.6	15.9	75		6.33							
SP3	06-Jun-05	270	17.9	23.2	85		6.75							
SP1 - Lab	06-Jun-05	185		13.4		7	6.8	41	<0.1	0.084	0.03	0.04	<0.005	
SP1	07-Jun-05	193	14.4	29.3	31		5.64							
SP3	07-Jun-05	279	17.1	14.6	71		6.63							
SP1 - Lab	07-Jun-05	177		5.3		5	6.3	42	<0.1	0.086	0.04	0.05	<0.005	
SP3 - Lab	07-Jun-05	266		13.1		7	7.1	136	<0.1	0.202	0.13	0.16	<0.005	
SP1	08-Jun-05	187	14.0	6.5	27		5.64							
SP3	08-Jun-05	267	14.7	13.0	78		6.41							
SP1 - Lab	08-Jun-05	180		4.8		<4	7.2	50	<0.1	In Progress	0.06	0.08	<0.005	
SP3 - Lab	08-Jun-05	255		11.8		6	7.2	123	<0.1	In Progress	0.12	0.16	<0.005	
SP1	09-Jun-05	219	15.0	6.3	20		6.03							
SP3	09-Jun-05	281	16.5	16.9	78		6.67							
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 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
 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.

Conducted by Approved by
 Name: Sandra Barber Name Leslie Finnegan
 Signed Signed

Determinant Results													
Location	Date	Cond. uS/cm	Temp °C	BOD mg l ⁻¹	DO % Sat	TDS* mg l ⁻¹	Phosphate as P mg l ⁻¹	pH	Total Hardness mg/l CaCO ₃	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													
MP 2													
MP 3													
MP 4													
MP 5													
MP 6													
MP 7													
MP 8													
MP 9													
MP 10a													
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												
MP 2												
MP 3												
MP 4												
MP 5												
MP 6												
MP 7												
MP 8												
MP 9												
MP 10a												
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.

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	12.2	03/06/2005	07:41:20	12:00:00	2343753	5.6	32.9	53	46	78	
N1	14.7	07/06/2005	06:41:58	12:00:00	2343753	3.8	118.6	54	45	79	
N1	14.4	08/06/2005	06:56:51	12:00:00	2343753	3.6	38.1	54	46	89	
N1	14.6	09/06/2005	06:41:00	12:00:00	2343753	2.2	151.8	53	47	76	
N2	12.2	03/06/2005	07:27:09	12:00:00	2343754	5.6	32.9	45	< 30	68	
N2	14.7	07/06/2005	06:53:06	12:00:00	2343754	3.8	118.6	48	< 30	81	
N2	14.4	08/06/2005	06:30:11	12:00:00	2343754	3.6	38.1	45	< 30	75	
N2	14.6	09/06/2005	06:53:54	12:00:00	2343754	2.2	151.8	42	< 30	78	

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

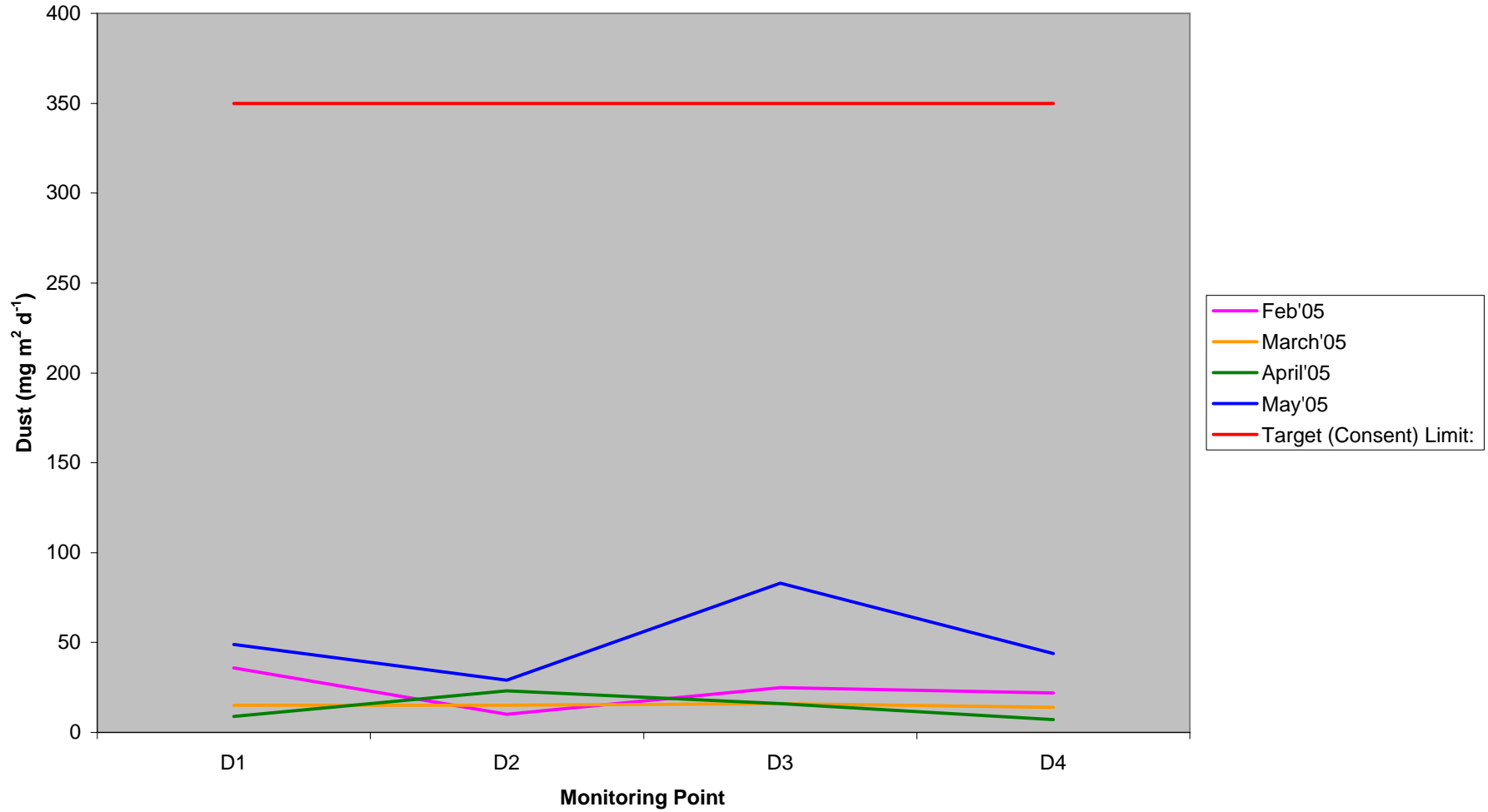
Dust Monitoring Record Sheet				no... 1 of 1			
Conducted by			Approved by				
Name: Sandra Barber		Signed		Name: Leslie Finnegan		Signed	
Determinant Results							
	Date Positioned	Date Removed	Ref. Number	Date Dispatched	Date Returned	Weight (mg/sq.m/day)	Comments
Target (Consent) Limit: 350 mg m² 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	

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

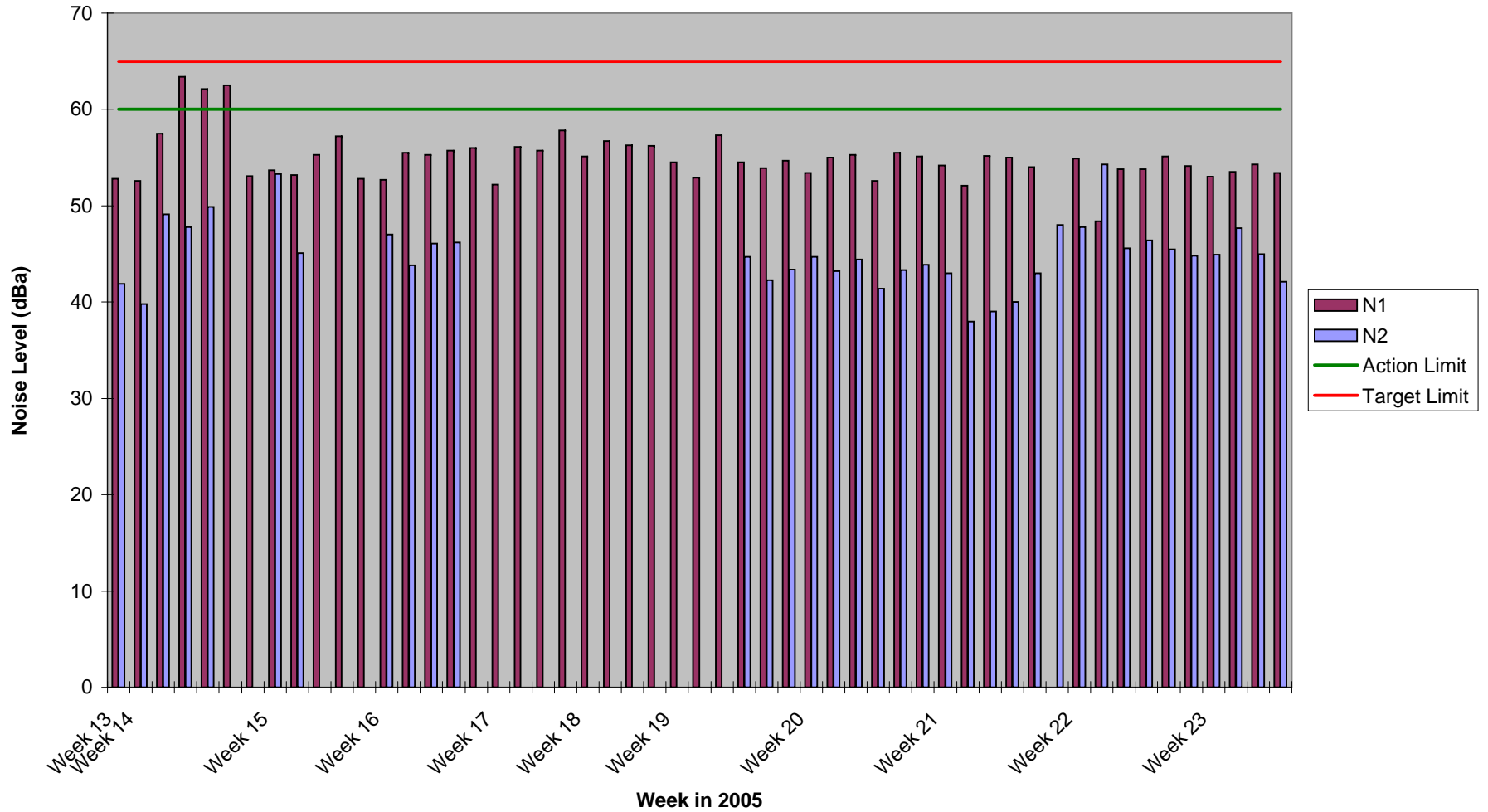
Vibration Monitoring Record Sheet			no... 1 of 1		
Conducted by			Approved by		
Name:	Sandra Barber	Signed	Name:	Leslie Finnegan	Signed
Determinant Results					
Location	Date Positioned	Date Removed	Event Time	Pk Disp (mm)	Accel (g)
TSP	08/06/05	09/06/2005	07:53:03	0.00	0.01
TSP	08/06/05	09/06/2005	07:53:03	0.27	0.04
TSP	08/06/05	09/06/2005	07:53:03	0.03	0.01
SP1	07/06/05	08/06/2005	17:21:57	0.00	0.01
SP1	07/06/05	08/06/2005	17:21:57	0.10	0.01
SP1	07/06/05	08/06/2005	17:21:57	0.34	0.01
SP1	07/06/05	08/06/2005	17:21:15	0.00	0.01
SP1	07/06/05	08/06/2005	17:21:15	0.14	0.01
SP1	07/06/05	08/06/2005	17:21:15	0.50	0.01
SP1	07/06/05	08/06/2005	07:37:25	0.07	0.09
SP1	07/06/05	08/06/2005	07:37:25	0.08	0.25
SP1	07/06/05	08/06/2005	07:37:25	0.06	0.16

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

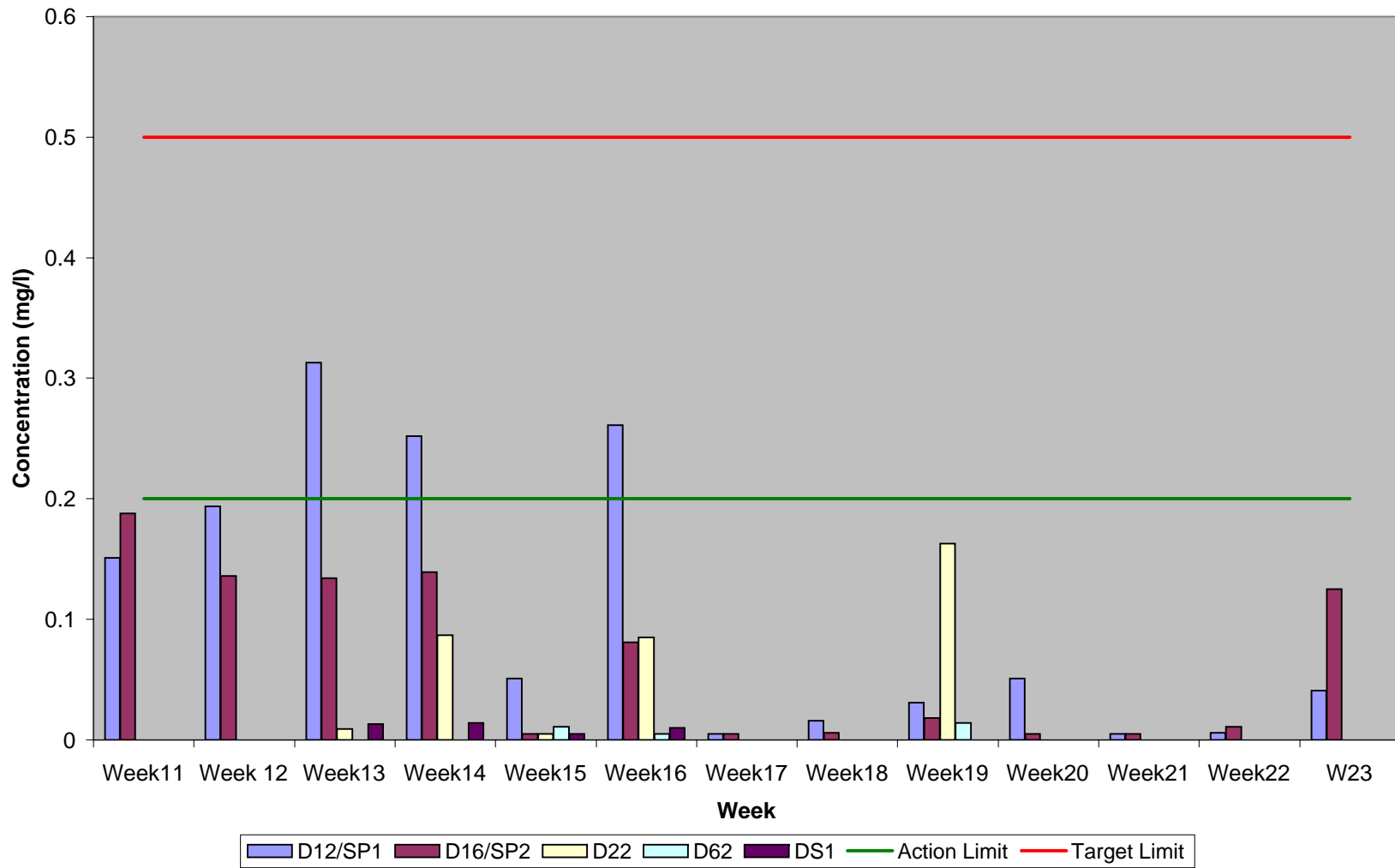
Dust Compiled Results 2005



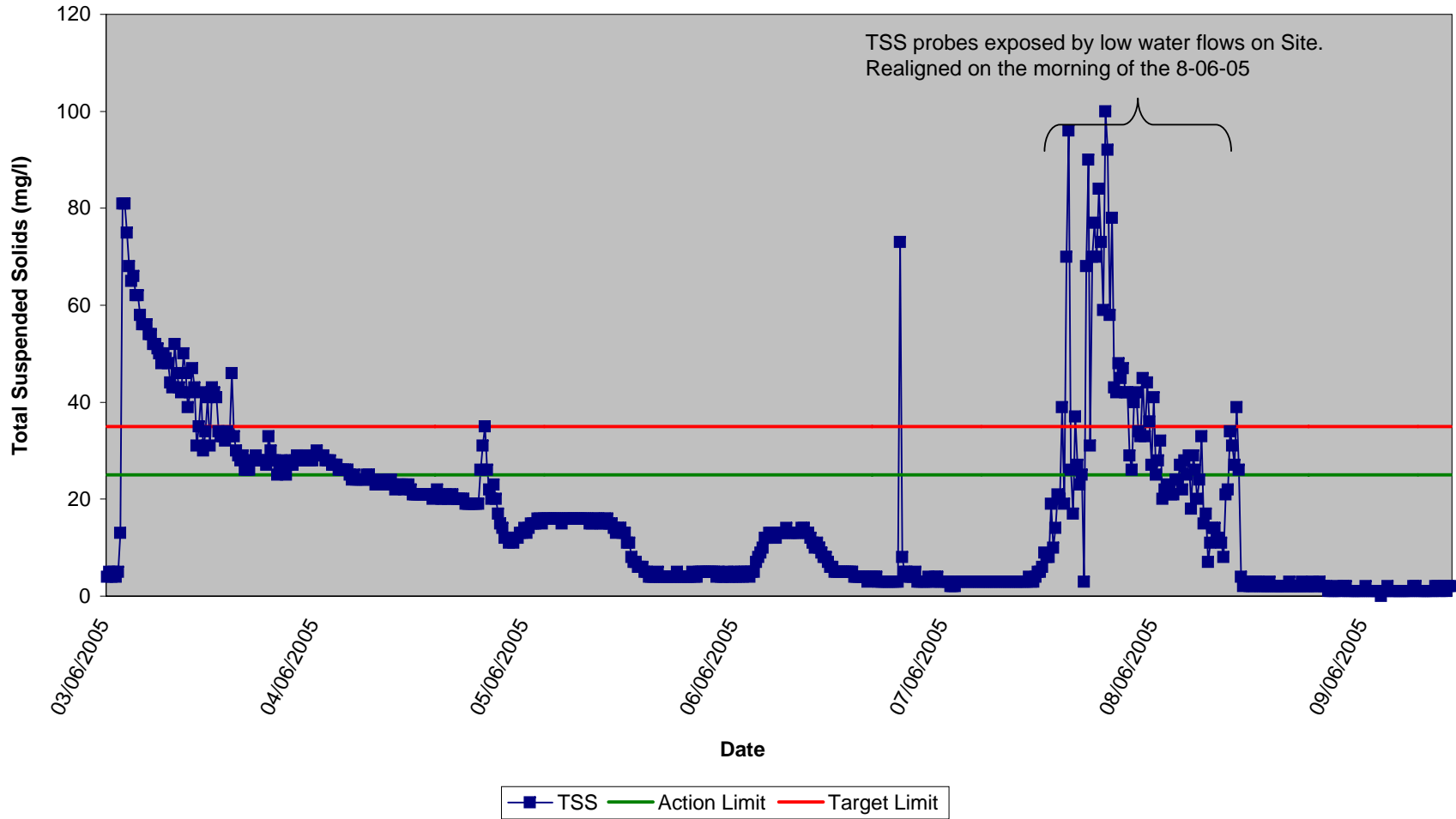
Noise Monitoring Compiled Results 2005



**Ammonia as NH₃-N,
Compiled Results 2005**

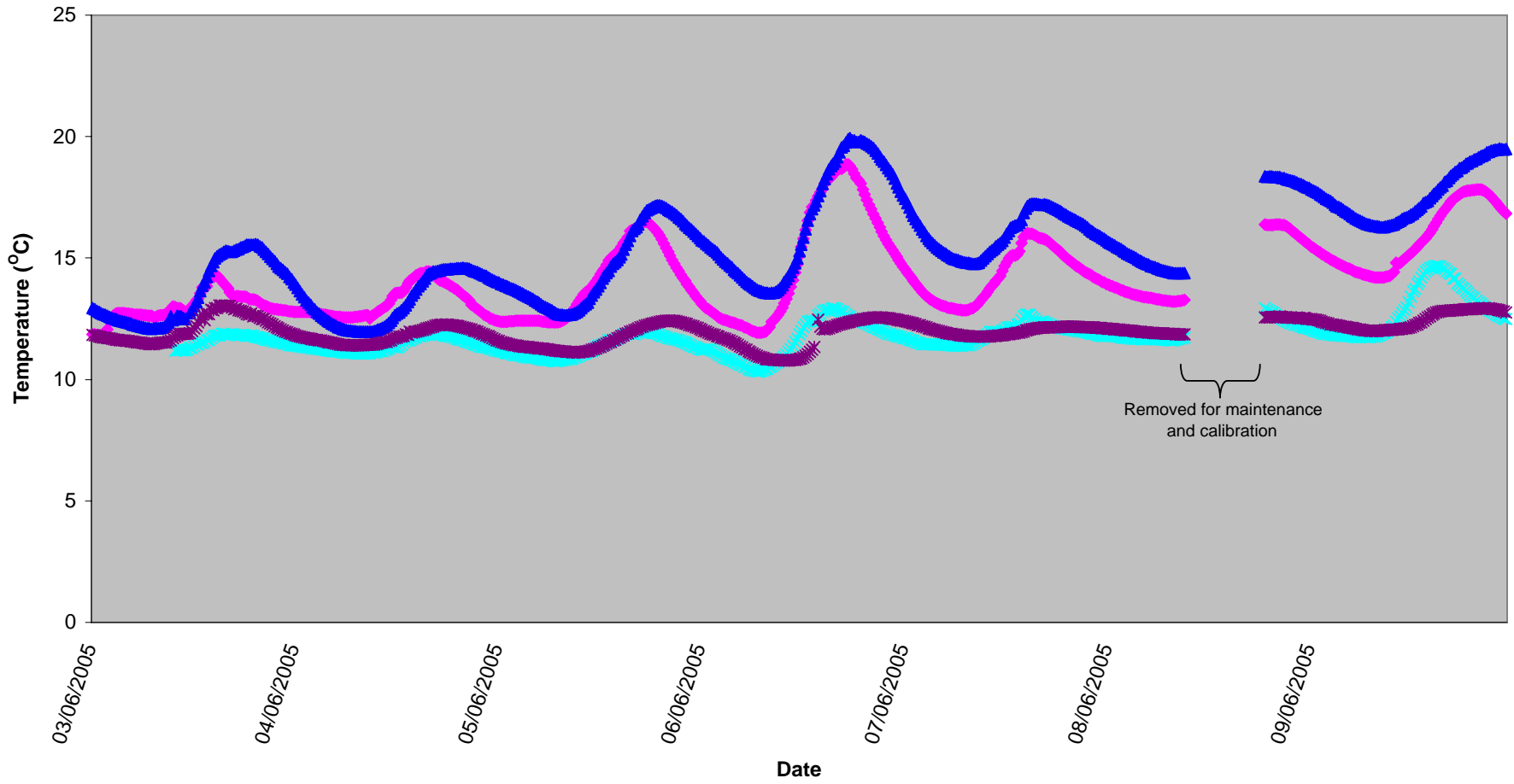


**Surface Water (SP1)
Total Suspended Solids, Week 23 2005**

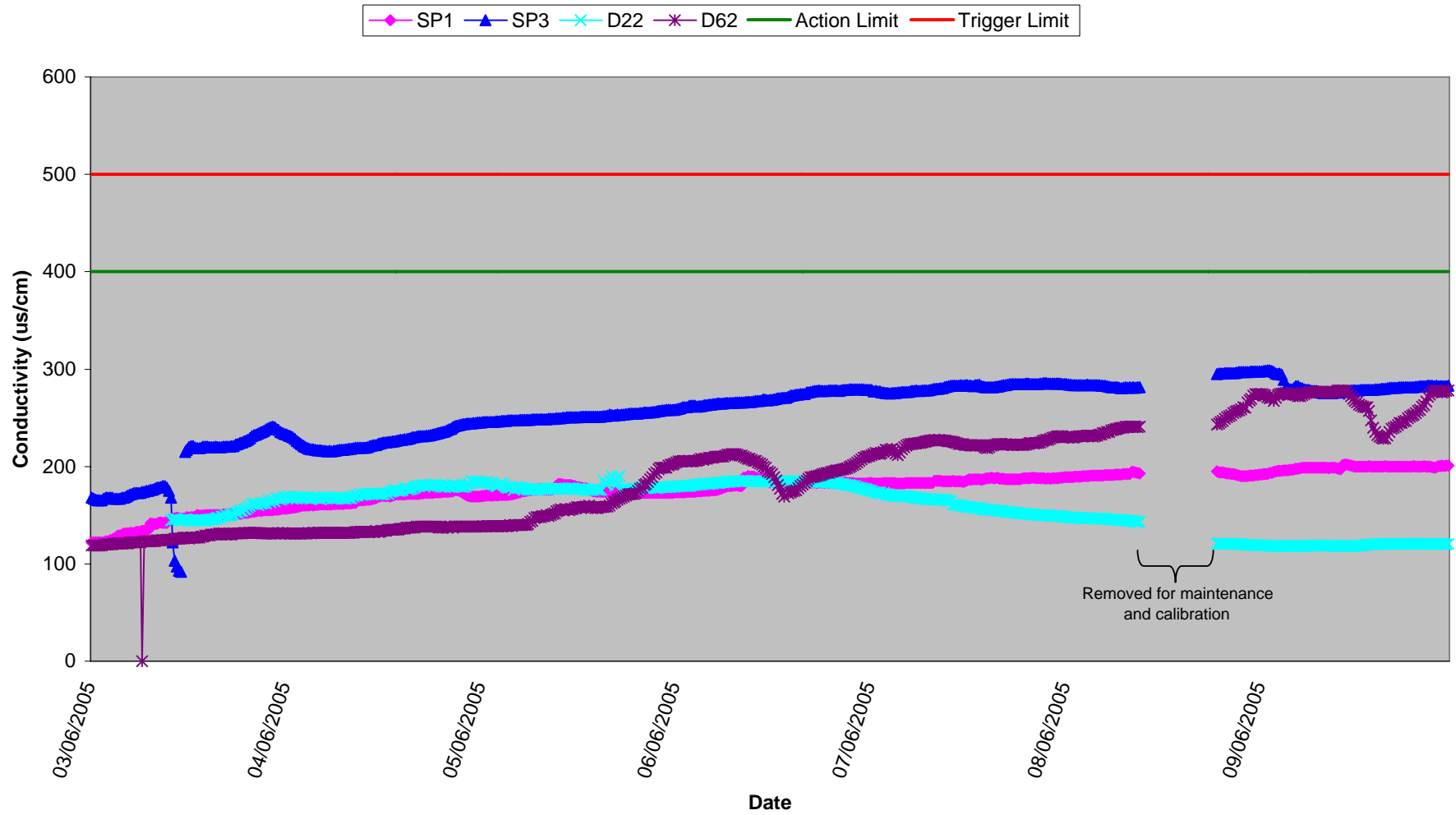


Surface Waters Temperature, Week 23 2005

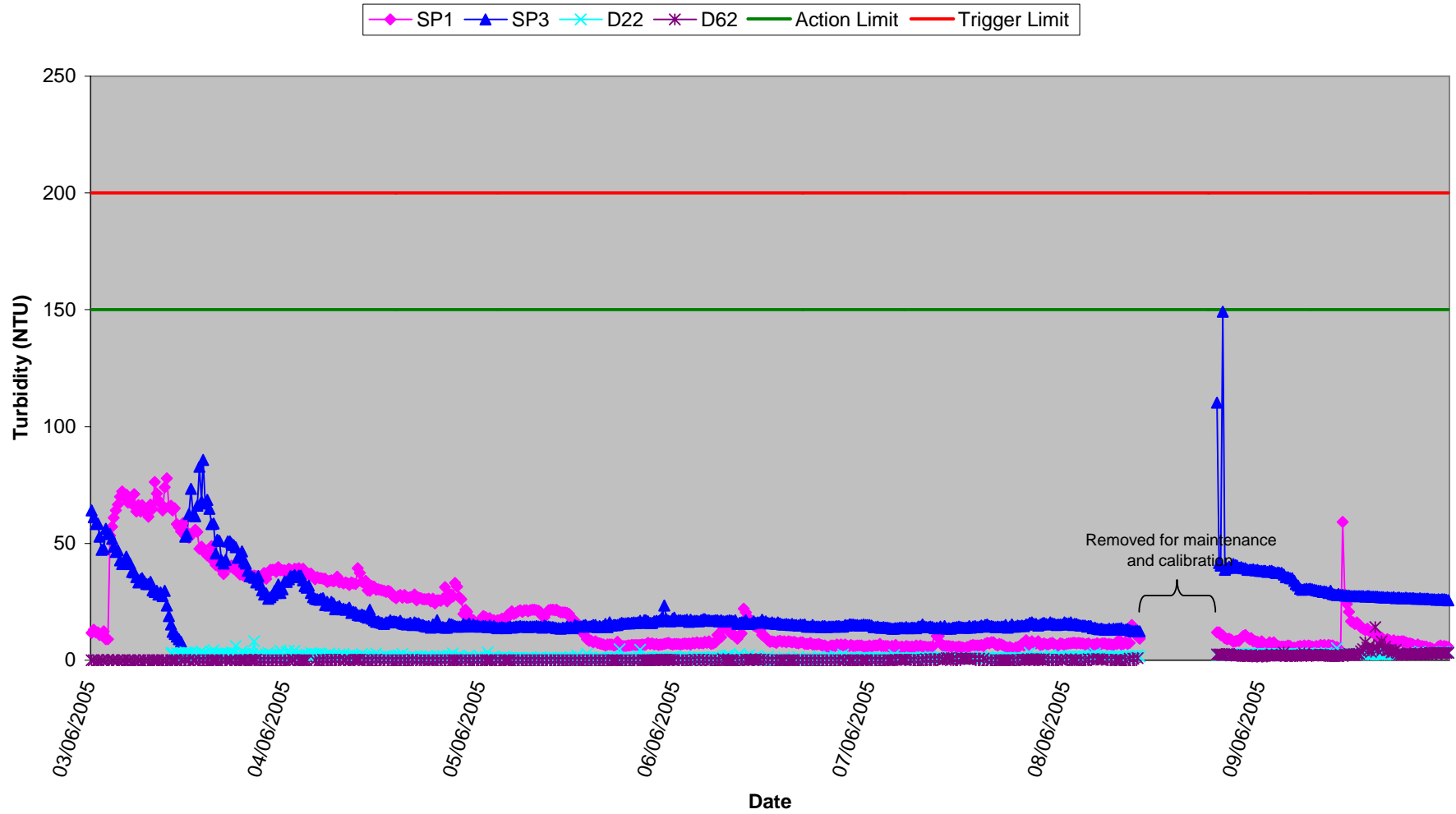
SP1 SP3 D22 D62



Surface Waters Conductivity, Week 23 2005

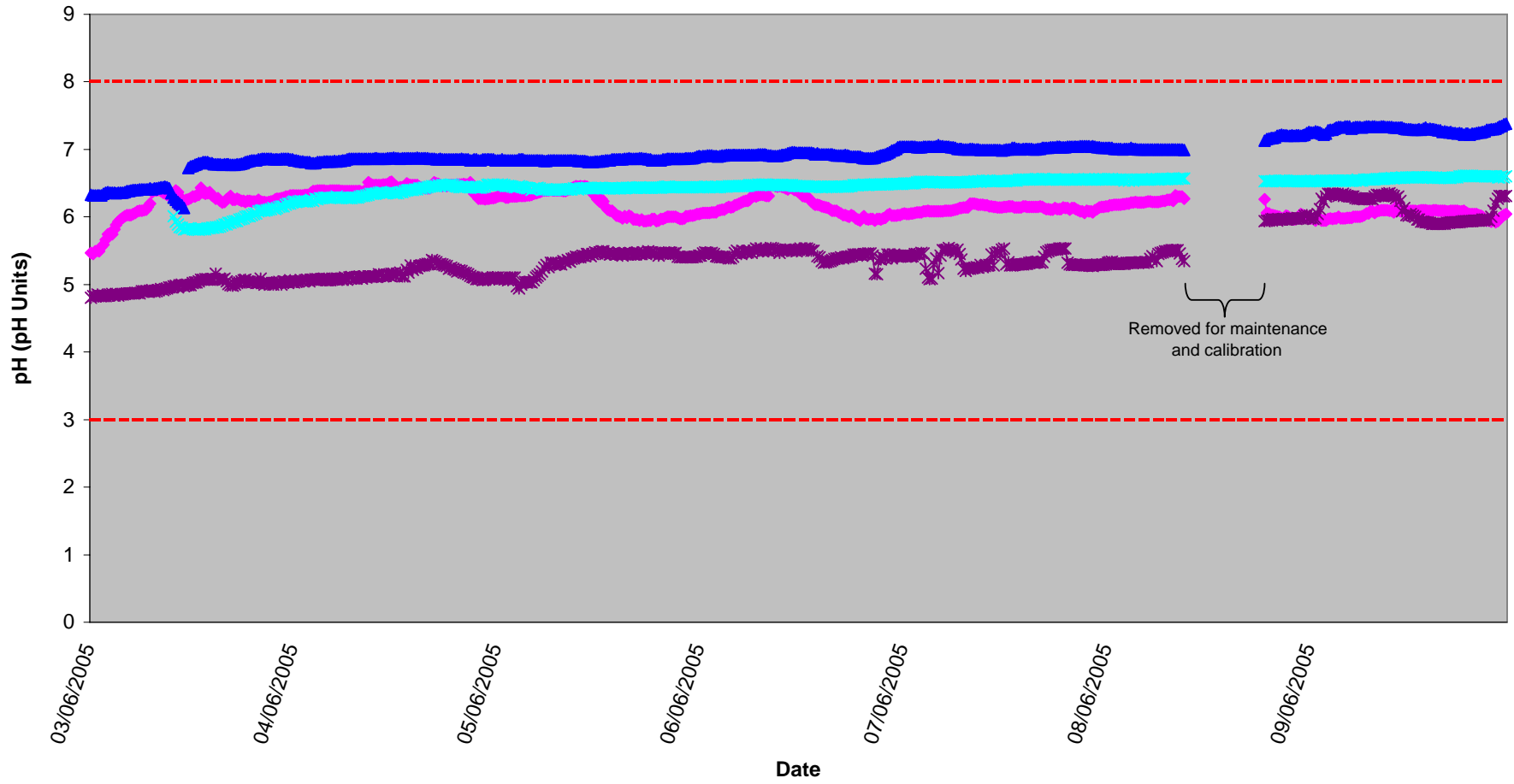


Surface Waters Turbidity, Week 23 2005

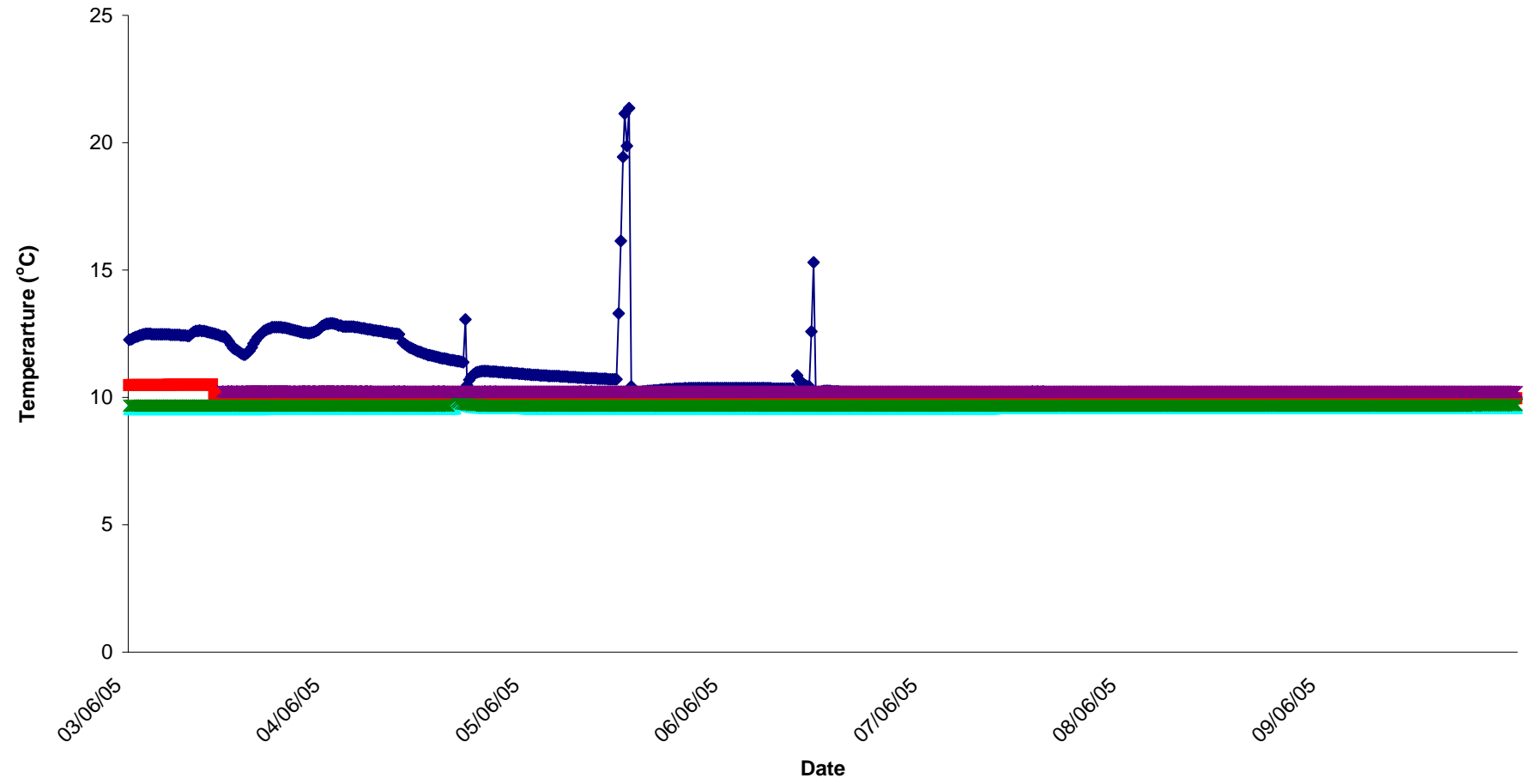


Surface Waters pH, Week 23 2005

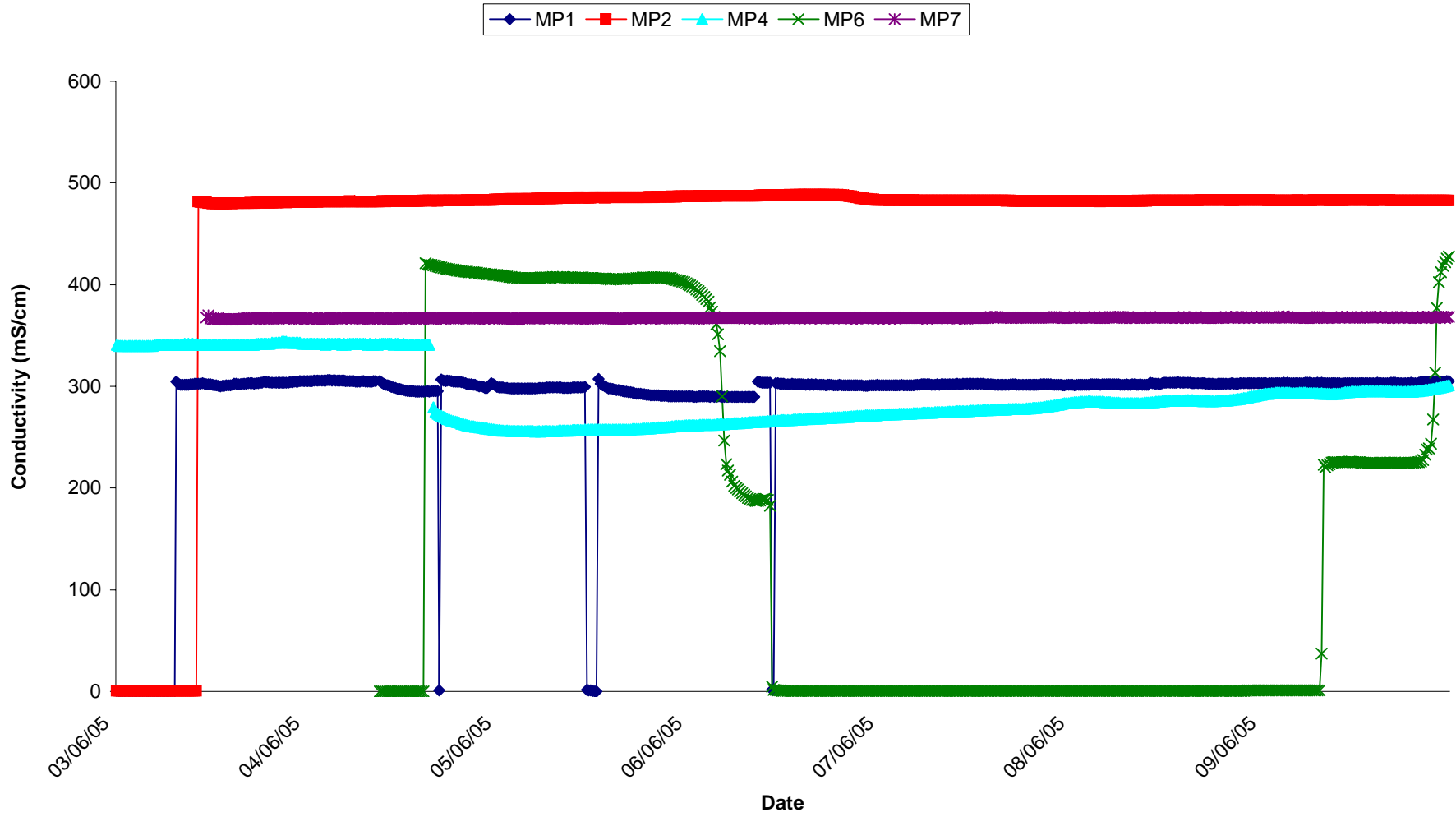
SP1 SP3 D22 D62 Lower Limit Upper Limit



Groundwaters Temp, Week 23 2005



Groundwaters Conductivity, Week 23 2005



Groundwaters pH, Week 23 2005

