

Weekly Environmental Report - Status	Week Ending: Thur. 14 <sup>th</sup> April 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 also presented graphically.

### 1.1 Rainfall Data

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

Date	8-Apr-05	9-Apr-05	10-Apr-05	11-Apr-05	12-Apr-05	13-Apr-05	14-Apr-05
Rainfall (mm)	0.4	1.6	0.0	7.0	2.6	16.6	10.8

### 1.2 Summary

Environment	Comments
Surface Water	<p>Increased rainfall toward the middle of the week saw an increased volume of water in the drainage system on site.</p> <p>Sonde structures are, occasionally, points of build up for any foliage/debris in the drains. These then cause temporary or extended spikes in turbidity. Samples collected and monitored on site or at CLS labs show the turbidity to be fine.</p>
Groundwater	Laboratory results are detailed in the table below.
Noise	<p>L<sub>Aeq</sub> at N1 recorded between 53.1 and 53.7dB</p> <p>L<sub>Aeq</sub> at N2 recorded between 45.1 and 53.3dB</p> <p>The noise meter at N2 was taken off-site on the 12-04-05</p>
Vibration	Max Pk Disp 0.24 mm with an associated acceleration 0.013 g*
Dust	Dust Gauges were collected on the 1 <sup>st</sup> April 2005 and shipped to Complete Lab Solutions for analysis, the results are presented in the dust monitoring record sheet.
Weather	There was a total of 39 mm of rainfall during the reporting period, with a temperature range of 2.33 to 13.46 °C

\* The data defined above uses different parameters than those outlined in the Environmental Monitoring Plan (velocity in mm/sec). The Environmental Monitoring Plan will be updated to show this change.

## **2 Environmental Incidents/Near misses/Complaints**

There was one environmental complaint and one environmental incident.

The complaint was made regarding water quality at D16 on the afternoon of the 13-04-05. The Roadbridge environmental officer investigated the complaint and collected a water sample for analysis. This complaint is being followed up by Shell's Local Liaison Officer and Shell's environmental officer.

The environmental incident involved the overflow of the wastewater tank on the eastern edge of the compound area. The drain the wastewater leaked into is not directly connected to any of the drains which exit the site. There was an insufficient volume of wastewater in the drain to pump out. To ensure there was no significant impact the drain was flushed with water to dilute any wastewater in the drain.

## **3 Other**

- The groundwater wells MP10a and MEL BR4 were reinstated this week.
- The daily samples for total suspended solids and phosphate have been stopped as the two on-site analysers (D12) are now working effectively.
- D22 and the associated waters are still being checked for evidence of the organic growth. The presence of this growth on-site is now greatly reduced.
- D12 is currently monitoring prior to completion of all mitigation works. This means there may be exceedances for some water quality parameters at this location but this is not representative of the water quality leaving the site. The monitoring equipment at D12 will be transferred to it's new location next week.

Surface Water Monitoring Record Sheet											no...	1	of	2		
Conducted by					Approved by											
Name: Sandra Barber					Signed				Name Leslie Finnegan				Signed			
Determinant Results																
	Date	Cond.	Temp	Turbidity	DO	TSS*	Nitrate	Phosphate	pH	Ortho-phosphate* as P	Ammonia	*Comments				
		µS	°C	NTU	% Sat	mg l <sup>-1</sup>	mg l <sup>-1</sup>	mg l <sup>-1</sup> PO <sub>4</sub>		mg l <sup>-1</sup>	mg l <sup>-1</sup>					
D12	01-Apr-05	174	10.4	25.3	84	12	0	< 10	6.3	0.034	0.133					
D16	01-Apr-05	214	10.2	13.3	74	7	0	< 10	6.33	0.056	0.086					
D22	01-Apr-05	335	10.0	8.3	32	5	0	< 10	6.41	0.013	0.017					
DS1	01-Apr-05	190	10.2	5.7	86		0	< 10	5.32							
D12	02-Apr-05	215	12.3	16.8	41		0	< 10	6.37			Saturday samples not issued to the lab for analysis				
D16	02-Apr-05	236	10.8	4.4	32		0	< 10	6.18							
D22	02-Apr-05	267	12.4	3.9	30		0	< 10	6.64							
DS1	02-Apr-05	205	12.8	2.6	43		0	< 10	6.91							
D12	04-Apr-05	229	7.2	5.5	43	< 4	0	< 10	5.39	0.04	0.252					
D16	04-Apr-05	249	7.3	3.7	26	4	0	< 10	6.05	0.069	0.139					
D22	04-Apr-05	273	7.2	7.8	31	4	0	< 10	6.53	0.207	0.087					
DS1	04-Apr-05	222	7.2	2.2	42	< 4	0	< 10	6.86	0.012	0.014					
D12	05-Apr-05	200	8.1	5.4	42	28	0	< 10	5.77	0.029						
D16	05-Apr-05	246	8.2	3.5	32	< 4	0	< 10	6.21	0.064						
DS1	05-Apr-05	198	8.2	4.8	40	< 4	0	< 10	6.54	0.011						
D12	06-Apr-05	176	7.3	48.8	41	28	0	< 10	5.92	0.041	0.064					
D16	06-Apr-05	204	7.8	46.1	38	32	0	< 10	6.18	0.056	0.033					
DS1	06-Apr-05	168	8.0	14.0	40	237	0	< 10	6.23	0.017	< 0.005	TSS result is anomalous, not supported by Lab results taken.				
D12	07-Apr-05	231	6.9	54.0	40	50	0	< 10	5.44	0.086						
D16	07-Apr-05	210	7.7	46.0	40	32	0	< 10	6.29	0.062						
DS1	07-Apr-05	175	7.5	19.3	40	9	0	< 10	6.43	0.029						

The data above details the results from daily analyses (Except weekly grab sample 23-03-05) carried out by Complete Lab Solutions for the previous reporting period.

Surface Water Monitoring Record Sheet										no...	2	of	2					
Conducted by					Approved by													
Name: Sandra Barber					Signed					Name Leslie Finnegan					Signed			
Determinant Results																		
	Date	Cond. µS	Temp °C	Turbidity NTU	DO % Sat	TSS* <sup>§</sup> mg l <sup>-1</sup>	Nitrate mg l <sup>-1</sup>	Phosphate mg l <sup>-1</sup> PO <sub>4</sub>	pH	Ortho-phosphate as P * <sup>§</sup> mg l <sup>-1</sup>	Ammonia mg l <sup>-1</sup>	*Comments						
D12	08-Apr-05	264	7.6	16.1	92	15	0	< 10	6.20	0.109								
D16	08-Apr-05	210	6.3	3.6	86	< 4	0	< 10	5.83	0.036								
DS1	08-Apr-05	216	6.0	7.0	88	4	0	< 10	6.48	0.036								
D12	11-Apr-05	230	10.2	11.6	56		0	< 10	6.18									
D16	11-Apr-05	246	10.3	9.1	75		0	< 10	6.46									
D22	11-Apr-05	267	9.6	1.8	39		0	< 10	6.42									
D62	11-Apr-05	183	9.7	0.8	66		0	< 10	5.56									
DS1	11-Apr-05	233	10.3	1.6	83		0	< 10	6.70									
D12	12-Apr-05	235	7.1	31.2	69		0	< 10	5.80									
D16	12-Apr-05	235	8.9	13.9	50		0	< 10	6.01									
DS1	12-Apr-05	207	8.8	11.6	94		0	< 10	6.55									
D12	13-Apr-05	201	8.2	85.0	82		0	< 10	6.13									
D16	13-Apr-05	207	8.1	58.0	78		0	< 10	6.32									
D22	13-Apr-05	177	7.4	4.1	70		0	< 10	6.27									
DS1	13-Apr-05	240	8.7	21.1	90		0	< 10	6.42									
D12	14-Apr-05	214	6.7	120.0	79		0	< 10	6.14									
D16	14-Apr-05	216	5.9	52.0	81		0	< 10	6.14									
DS1	14-Apr-05	187	6.8	18.0	82		0	< 10	6.30									

\* Carried out at CLS labs

§ Data not presented will be included in the next weekly report (Week ending Thursday 7th April 2005).

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

Determinant Results												
Location	Date	Cond. uS/cm	Temp °C	BOD mg l <sup>-1</sup>	DO % Sat	TSS* mg l <sup>-1</sup>	Phosphate as P mg l <sup>-1</sup>	pH	Total Hardness mg/l caco3	Nitrite as NO <sub>2</sub> mg l <sup>-1</sup>	Nitrate as NO <sub>3</sub> mg l <sup>-1</sup>	Phosphate as PO <sub>4</sub> mg l <sup>-1</sup>
MP 1												
MP 2												
MP 3												
MP 4												
MP 5												
MP 6												
MP 7												
MP 8												
MP 9												
MP 10												

Location	Date	TDS mg l <sup>-1</sup>	Arsenic ug l <sup>-1</sup>	Mercury ug l <sup>-1</sup>	Lead ug l <sup>-1</sup>	Aluminium ug l <sup>-1</sup>	Zinc ug l <sup>-1</sup>	Chromium ug l <sup>-1</sup>	Copper ug l <sup>-1</sup>	Cadmium ug l <sup>-1</sup>	Iron ug l <sup>-1</sup>	Tin ug l <sup>-1</sup>
MP 1												
MP 2												
MP 3												
MP 4												
MP 5												
MP 6												
MP 7												
MP 8												
MP 9												
MP 10												

MP1, MP2, MP4, MP6 and MP7 have been installed with in-situ monitoring devices, these results are presented in attached tables.  
 MP10 was absorbed by the TCF area. This will be reinstated when an appropriate rig is on site.

Noise Monitoring Record Sheet										no... 1	of ... 1
Conducted by					Approved by						
Name: Sandra Barber				Signed		Name: Leslie Finnegan				Signed	
Determinant Results											
Location	Start Date	Time	Duration	Serial No.	Wind		Results dB			*Comments	
					Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>AFmin</sub>	L <sub>AFmax</sub>		
N1	08/04/2005	06:32:52	72:03:13	2343754	5.0	154.0	53.1	42	84.50	Meter run for entire weekend	
N1	11/04/2005	06:36:59	24:12:57	2343754	6.2	42.7	53.7	46	77.70		
N1	12/04/2005	06:51:34	12:00:00	2343754	3.6	73.5	53.2	47	81.00		
N1	14/04/2005	06:42:53	12:00:00	2343754	5.1	179.8	55.3	43	88.80		
N2	11/04/2005	08:37:51	12:00:00	2343753	6.2	42.7	53.3	45.1	74.9		
N2	12/04/2005	06:32:21	10:21:15	2343753	3.6	73.5	45.1	< 30	66.9		

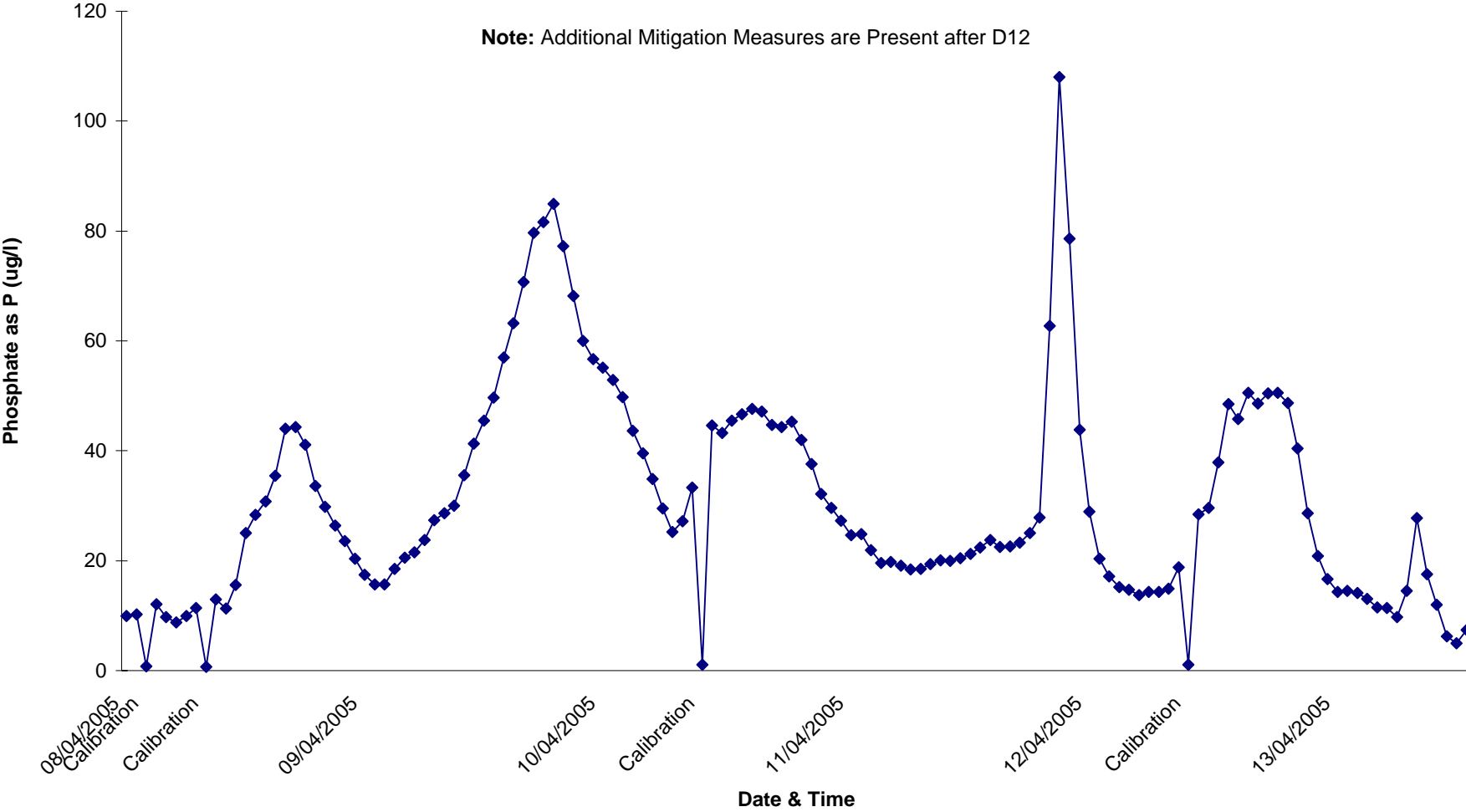
\* Wind speeds in excess of 5 m/s negatively impact noise readings (as per EPA Guidance Note on Noise Measurement).



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)
V1	13/04/2005	14/04/2005	15:36:40	0.24	0.013
V1	13/04/2005	14/04/2005	15:36:40	0.14	0.027
V1	13/04/2005	14/04/2005	15:36:40	0.34	0.013
V2	14/04/2005	15/04/2005	16:42:43	0	0.013
V2	14/04/2005	15/04/2005	16:42:43	0.039	0.04
V2	14/04/2005	15/04/2005	16:42:43	0.048	0.053

Vibration meter was moved between V1 and V2 daily

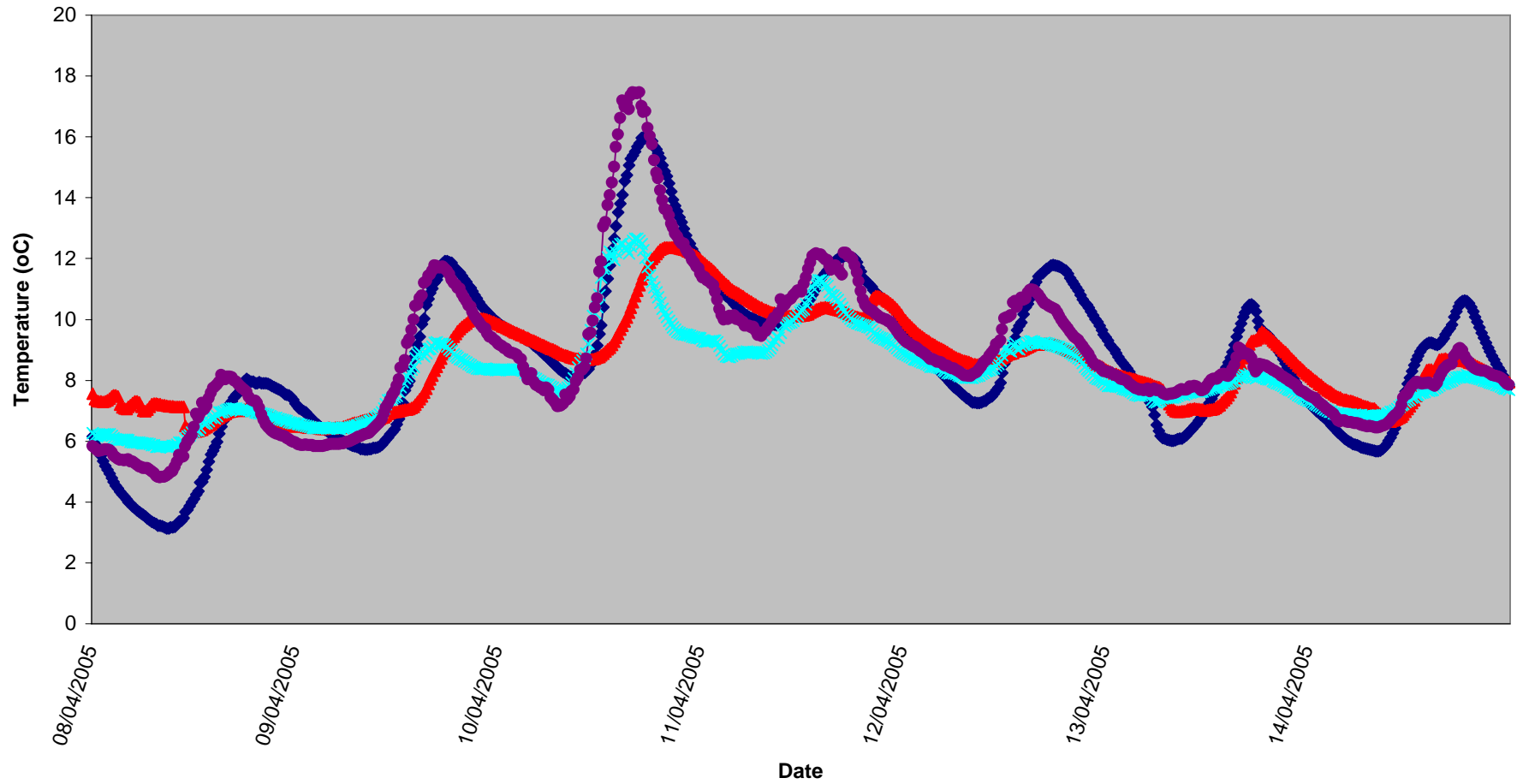
### Surface Water (D12) Phosphate, Week 15 2005





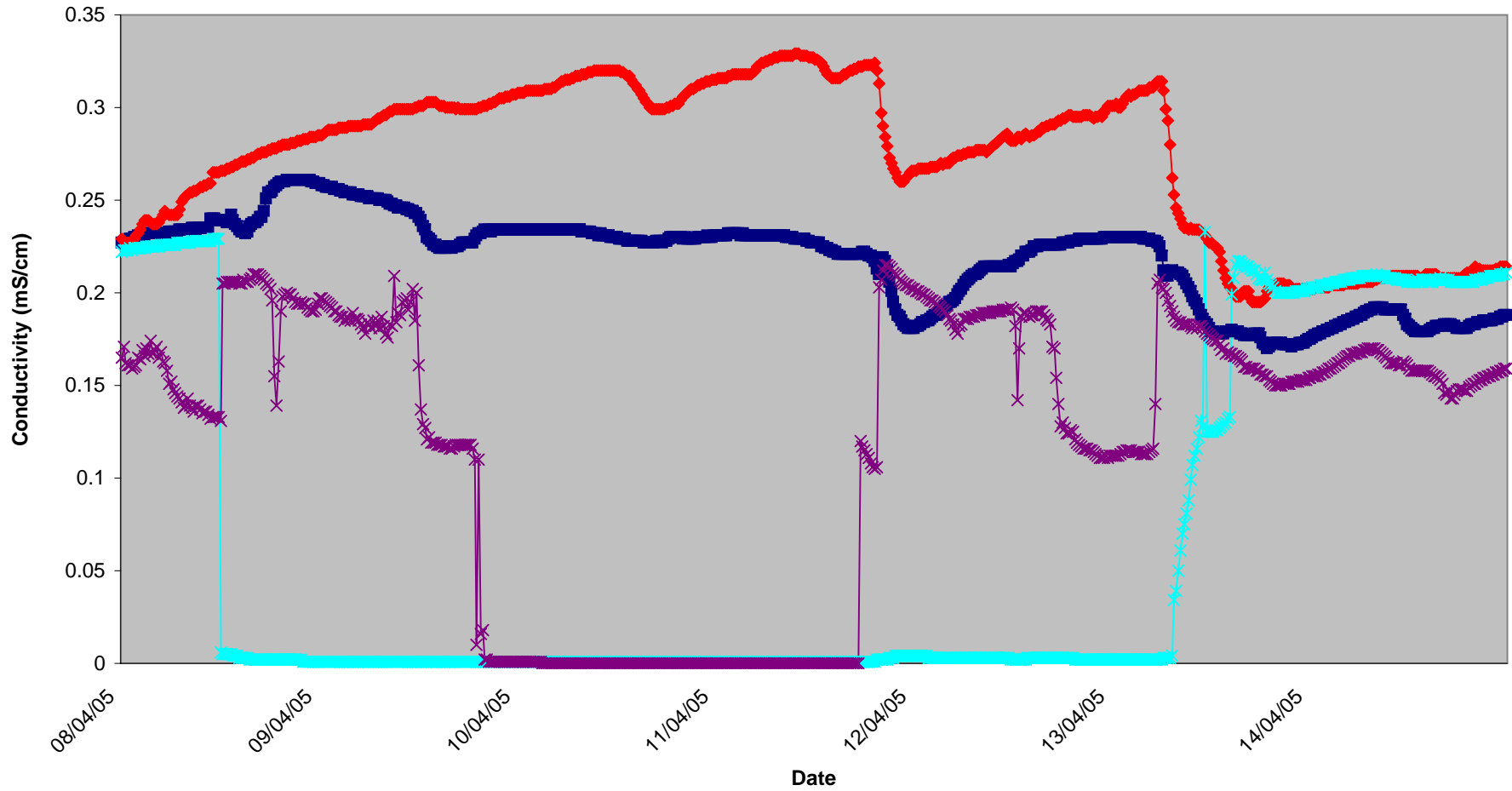
### Surface Waters Temperature, Week 15 2005

◆ D12 ▲ D16 ✕ D22 \* D62 ● DS1

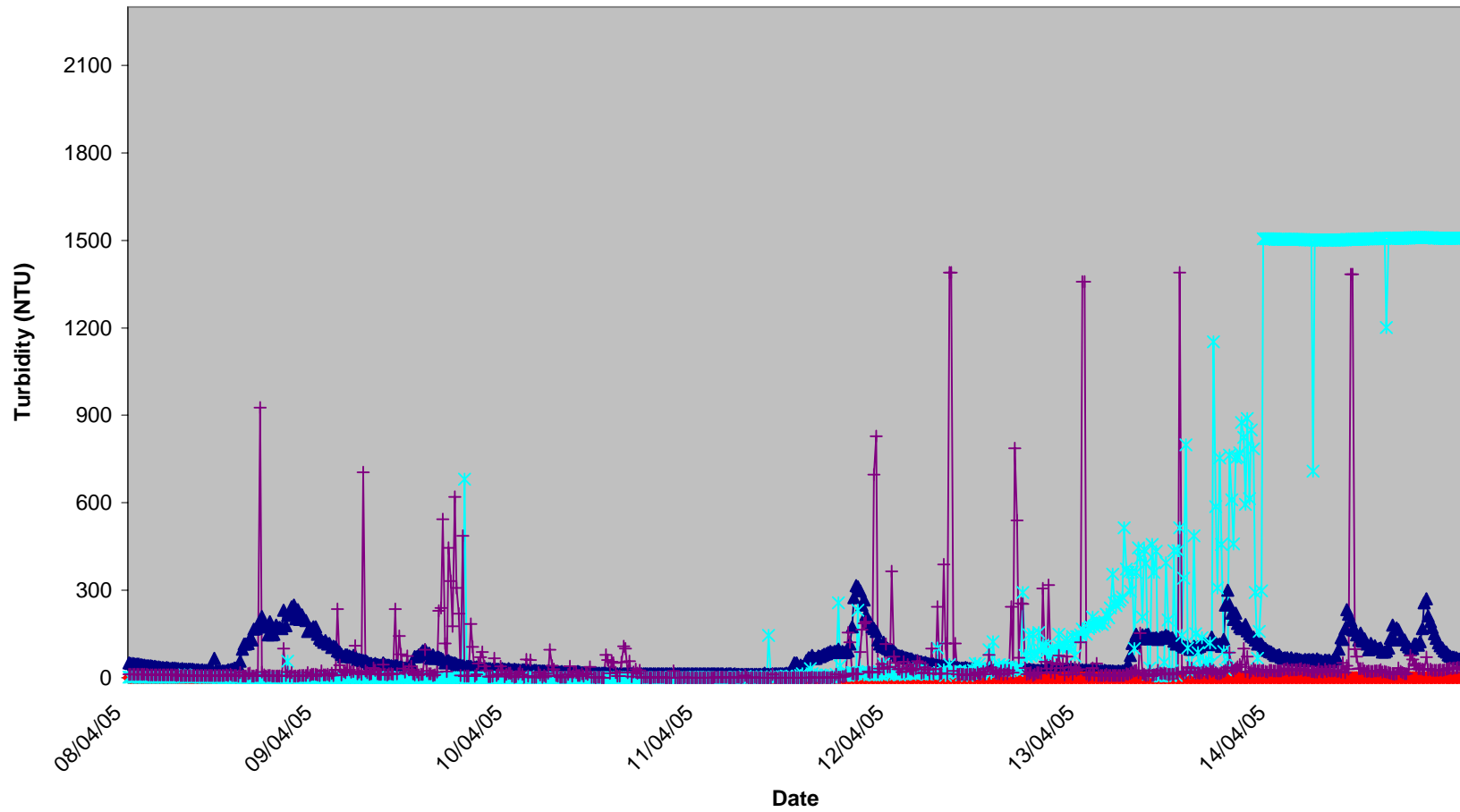


### Surface Waters Conductivity, Week 15 2005

■ D12    ◆ D16    ✧ D22    ▲ D62    ✕ DS1

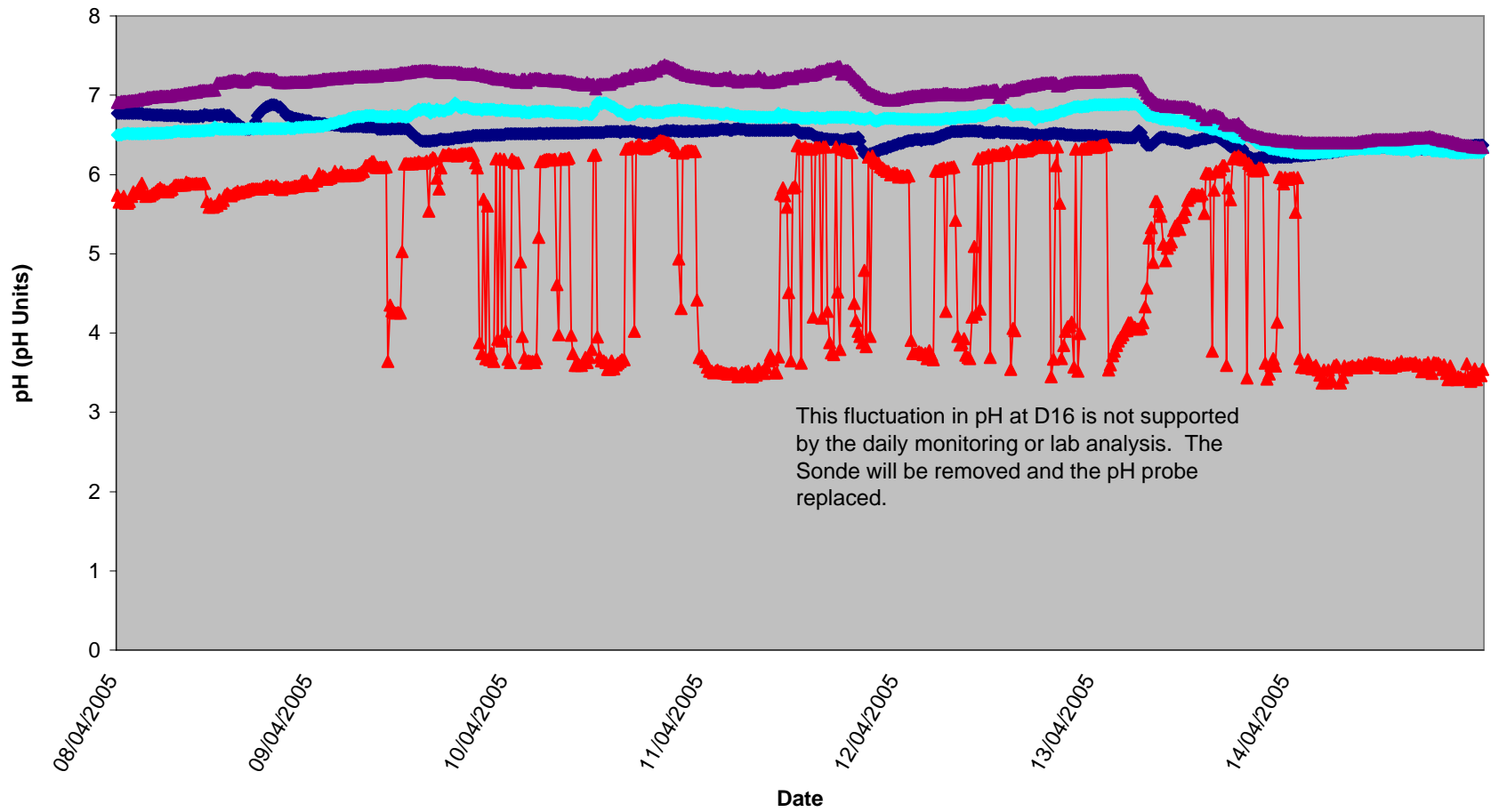


Surface Waters  
Turbidity, Week 15 2005



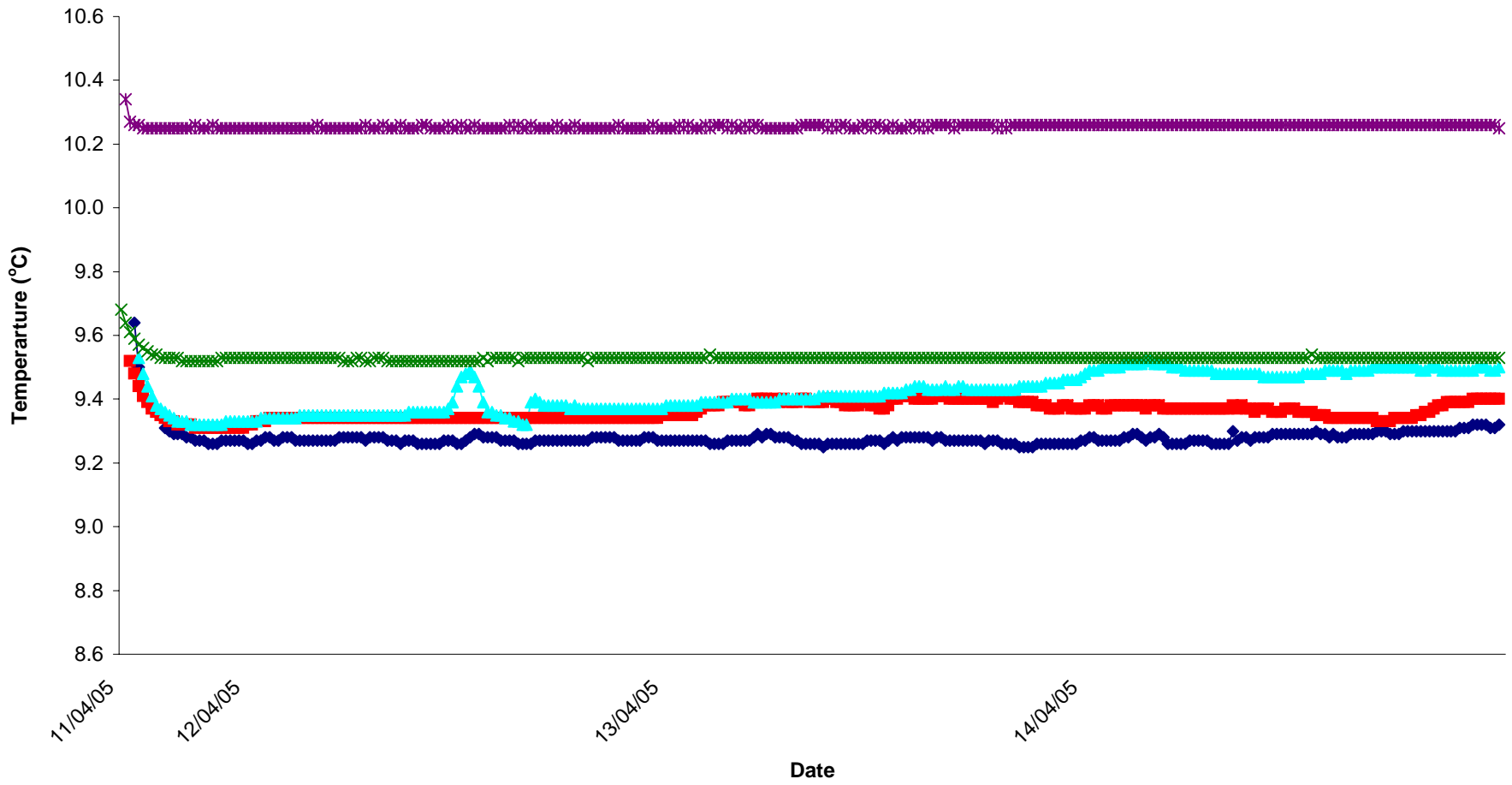
### Surface Waters pH, Week 15 2005

◆ D12 ▲ D16 ◆ D22 ■ D62 ▲ DS1



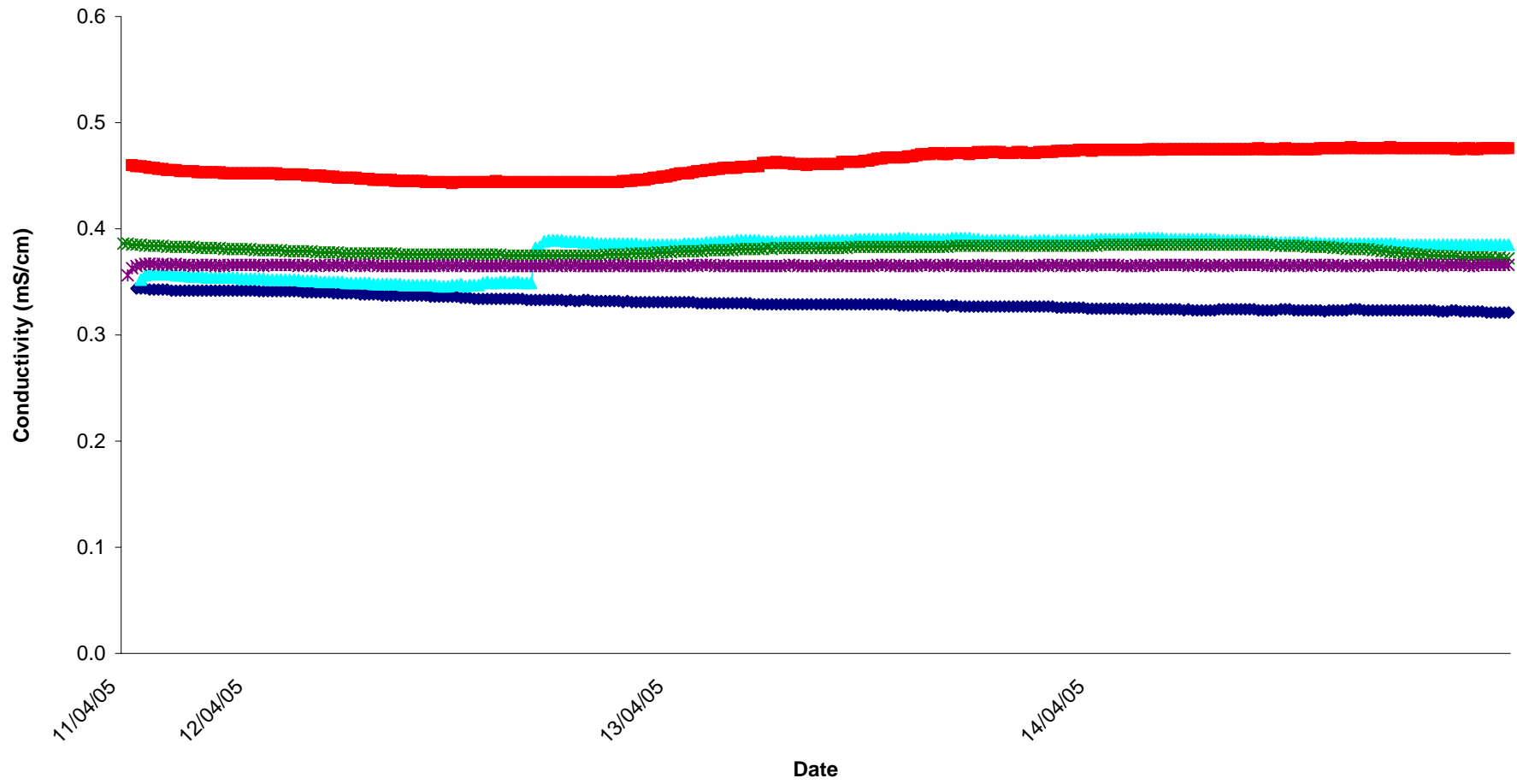
### Groundwaters Temp, Week 15 2005

MP1 MP2 MP4 MP6 MP7



### Groundwaters Conductivity, Week 15 2005

MP1 MP2 MP4 MP6 MP7



### Groundwaters pH, Week 15 2005

MP1 MP2 MP4 MP6 MP7

