

|   |   |
|---|---|
| <b>Final Environmental Report</b>           | Period Ending: 12 <sup>th</sup> November 2008 |
| Compiled By: Siobhán Quinn & Aoife Reynolds |   |
| Approved By: Tony Doyle                     |   |

## 1 Monitoring Data

### 1.1 Monitoring Equipment

|                 |   |
|-----------------|---|
| Axonics         | – Axonics plant operated as required during the reporting period.   |
| PO <sub>4</sub> | – The PO <sub>4</sub> analyser was operational during the reporting period.<br>– The composite sampler was in place to cover any shortfalls in the PO <sub>4</sub> analyser.  |
| TSS             | – The TSS analyser was operational during the reporting period.<br>– The composite sampler was in place to cover any shortfalls in the TSS analyser.  |
| Composite       | – The composite sampler was operational during the reporting period.  |
| Noise           | – There is a single noise monitoring location currently being used – N1.<br>– The other location is visible from off-site and because of current protestor action it cannot be guaranteed that the equipment remains undisturbed.     |
| Vibration       | – There is a single vibration monitoring location currently being used – V1.<br>– The other location is visible from off-site and because of current protestor action it cannot be guaranteed that the equipment remains undisturbed. |
| Sondes          | – The results are displayed graphically.<br>o Any unusual values are explained on the relevant graph.   |
| Weather Station | – The data used for this reporting period was taken from the on-site meteorological station.  |
| Weirs           | – Weirs were operational during the reporting period.   |

### 1.2 Rainfall Data

|                         |       |            |        |
|-------------------------|-------|------------|--------|
| 30/10/2008              | 1.950 | 06/11/2008 | 6.630  |
| 31/10/2008              | 3.315 | 07/11/2008 | 15.015 |
| 01/11/2008              | 0.390 | 08/11/2008 | 11.700 |
| 02/11/2008              | 0.390 | 09/11/2008 | 9.165  |
| 03/11/2008              | 2.340 | 10/11/2008 | 13.260 |
| 04/11/2008              | 0.390 | 11/11/2008 | 1.365  |
| 05/11/2008              | 0.195 | 12/11/2008 | 0.585  |
| Total Rainfall 66.690mm |       |            |        |

|   |   |
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### 1.3 Summary

| Environment   | Comments  |
|---------------|---|
| Surface Water | There were no reported exceedances during the reporting period.<br>A value of 67µg/l for Total Aluminium was recorded at SP1 on the 6 <sup>th</sup> of November which is significantly lower than the exceedance on the 28 <sup>th</sup> of October (248 µg/l). |
| Groundwater   | The groundwater data (Sonde) is within anticipated ranges.  |
| Dust          | All dust levels were within the set limits.   |
| Weather       | There was a total of 66.690mm of rainfall during the reporting period, with a temperature range of 1.5°C to 12.0°C.   |
| Noise         | All noise levels were within the set limits.  |
| Vibration     | No vibration exceedances were recorded during the reporting period, based on available results.   |

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

## 2 Environmental Exceedences / Incidents / Complaints

|                           |  |
|---------------------------|--|
| <b>Date and Time</b>      | 11 <sup>th</sup> of November   |
| <b>Location</b>           | SP1  |
| <b>Nature of Incident</b> | A value of 229µg/l was recorded for total aluminium at SP1 on the 11 <sup>th</sup> of November 2008. This value is in exceedance of the site discharge limit for total aluminium of 200µg/l. During the 5 days leading up to the exceedance, a total of 55.77mm of rain fell. The value recorded was as a result in heavy rainfall.                      |
| <b>Actions Taken</b>      | <ul style="list-style-type: none"> <li>On going surveillance and maintenance of site drainage outside the main footprint area.</li> <li>Close monitoring of Total Aluminium will be carried out at SP1.</li> <li>Storage and pumping back to Axonic's of footprint waters.</li> <li>Continued implementation of agreed surface water actions.</li> </ul> |
| <b>Category</b>           | Environmental Exceedance   |
| <b>Status</b>             | Open   |

## Surface Water Monitoring Record Sheet: Accredited Laboratory Results

|   | Date       | Cond.      | Temp | Turbidity  | DO    | pH                        | TSS                | Ortho-phosphate as P | Nitrate as N       | Nitrate as NO <sub>3</sub> | Total Phosphorus as P | Ammonia as NH <sub>3</sub> -N | Nitrite as NO <sub>2</sub> | Aluminium (dissolved) | Aluminium (total)  | Phosphate as PO <sub>4</sub> -P | TDS                |
|---|------------|------------|------|------------|-------|---------------------------|--------------------|----------------------|--------------------|----------------------------|-----------------------|-------------------------------|----------------------------|-----------------------|--------------------|---------------------------------|--------------------|
|   |            | µS/cm      | °C   | NTU        | % Sat | pH units                  | mg l <sup>-1</sup> | µg l <sup>-1</sup>   | mg l <sup>-1</sup> | mg l <sup>-1</sup>         | mg l <sup>-1</sup>    | mg l <sup>-1</sup>            | mg l <sup>-1</sup>         | µg l <sup>-1</sup>    | µg l <sup>-1</sup> | mg l <sup>-1</sup>              | mg l <sup>-1</sup> |
| <b>Action Limits</b>  |            | <b>400</b> |      | <b>150</b> |       | <b>&lt;3.5 or &gt;7.5</b> | <b>25</b>          | <b>40</b>            | <b>1.5</b>         | <b>4.0</b>                 |                       | <b>0.2</b>                    | <b>0.025</b>               | <b>100</b>            | <b>135</b>         |                                 |                    |
| <b>Target Limits</b>  |            | <b>500</b> |      | <b>200</b> |       | <b>&lt;3 or &gt;8</b>     | <b>35</b>          | <b>70</b>            | <b>2.6</b>         | <b>6.0</b>                 |                       | <b>0.5</b>                    | <b>0.05</b>                | <b>150</b>            | <b>200</b>         |                                 |                    |
|   |            |            |      |            |       |                           |                    |                      |                    |                            |                       |                               |                            |                       |                    |                                 |                    |
| <b>SP1</b>  | 06/11/2008 | 304        |      | 4.1        |       | 7.8                       | <2                 | 48                   |                    | <0.44                      | 0.078                 | 0.01                          | 0.04                       | 52                    | 67                 | 0.146                           | 134                |
| <b>SP3</b>  | 06/11/2008 | 315        |      | 3.9        |       | 7.7                       | 2                  | 38                   |                    | 0.856                      | 0.077                 | 0.04                          | 0.04                       | 33                    | 87                 | 0.116                           | 141                |
| <b>SP1</b>  | 11/11/2008 | 218        |      | 11.5       |       | 7.6                       | <2                 | <10                  |                    | <0.44                      | 0.031                 | <0.005                        | <0.017                     | 45                    | 229                | <0.03                           | 99                 |
| <b>SP3</b>  | 11/11/2008 | 293        |      | 9.4        |       | 7.4                       | <2                 | <10                  |                    | 1.019                      | 0.022                 | 0.02                          | <0.017                     | 30                    | 182                | <0.03                           | 133                |
| <b>Additional Monitoring</b>  |            |            |      |            |       |                           |                    |                      |                    |                            |                       |                               |                            |                       |                    |                                 |                    |
| <b>D22</b>  | 11/11/2008 | 217        |      | 1.4        |       | 6.1                       | <2                 | <10                  |                    | <0.44                      | <0.01                 | 0.02                          | <0.017                     | 78                    | 109                | <0.03                           | 101                |
| <b>D62</b>  | 11/11/2008 | 148        |      | 0.4        |       | 4.4                       | <2                 | <10                  |                    | <0.44                      | <0.01                 | 0.01                          | 0.02                       | 62                    | 73                 | <0.03                           | 69                 |
| <b>Axonics Monitoring</b>   |            |            |      |            |       |                           |                    |                      |                    |                            |                       |                               |                            |                       |                    |                                 |                    |
| <b>Pre Axonics</b>  | 06/11/2008 | 303        |      | 764.0      |       | 7.5                       | 1302               | 21                   |                    | 0.744                      | 0.070                 | <0.005                        | <0.017                     | 37                    | 285                | 0.066                           | 136                |
| <b>Post Axonics</b>   | 06/11/2008 | 321        |      | 1.2        |       | 7.4                       | <2                 | <10                  |                    | 1.072                      | 0.081                 | 0.03                          | 0.04                       | <20                   | 72                 | <0.03                           | 144                |
| <b>Pre Axonics</b>  | 11/11/2008 | 281        |      | 13.9       |       | 7.1                       | 13                 | <10                  |                    | 1.299                      | 0.033                 | 0.02                          | <0.017                     | <20                   | 490                | <0.03                           | 126                |
| <b>Post Axonics</b>   | 11/11/2008 | 294        |      | 2.6        |       | 6.7                       | <2                 | <10                  |                    | 1.231                      | 0.011                 | 0.01                          | <0.017                     | <20                   | 180                | <0.03                           | 130                |
| I.P. = In Progress<br>< LOD = Below Limit of Detection<br>> LOD = Above Limit of Detection<br>On site laboratory results included in Appendix 1 |            |            |      |            |       |                           |                    |                      |                    |                            |                       |                               |                            |                       |                    |                                 |                    |
| Grey shaded areas denote parameters that cannot or were not analysed on-site or the lab.  |            |            |      |            |       |                           |                    |                      |                    |                            |                       |                               |                            |                       |                    |                                 |                    |

| Groundwater Monitoring Record Sheet |            |       |      |       |     |                    |                    |                    |                        |                            |                            |                              |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                      |                    |
|-------------------------------------|------------|-------|------|-------|-----|--------------------|--------------------|--------------------|------------------------|----------------------------|----------------------------|------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|--------------------|
| Location                            | Date       | DO    | Temp | Cond. | pH  | TDS                | BOD                | TSS                | Total Hardness         | Nitrite as NO <sub>2</sub> | Nitrate as NO <sub>3</sub> | Phosphate as PO <sub>4</sub> | Arsenic            | Mercury            | Lead               | Aluminium (total)  | Zinc               | Chromium           | Copper             | Cadmium            | Iron               | Tin                | Ammonia            | Aluminium, dissolved | Manganese, total   |
|                                     |            | % Sat | °C   | uS/cm |     | mg l <sup>-1</sup> | mg l <sup>-1</sup> | mg l <sup>-1</sup> | mg/l CaCO <sub>3</sub> | mg l <sup>-1</sup>         | mg l <sup>-1</sup>         | mg l <sup>-1</sup>           | ug l <sup>-1</sup> | ug l <sup>-1</sup> | ug l <sup>-1</sup> | ug l <sup>-1</sup> | ug l <sup>-1</sup> | ug l <sup>-1</sup> | ug l <sup>-1</sup> | ug l <sup>-1</sup> | ug l <sup>-1</sup> | ug l <sup>-1</sup> | mg l <sup>-1</sup> | ug l <sup>-1</sup>   | ug l <sup>-1</sup> |
| MP 1                                | 04/11/2008 | 21.0  | 11.1 | 336   | 5.7 | 148                | 16                 | 7                  | 66.2                   | <0.017                     | <0.44                      | 1.62                         | 5.0                | <0.05              | 1.0                | 85                 | 20                 | 0.9                | 4                  | <0.5               | 17460              | 2                  | 1.74               | 72                   | 656                |
| MP 2                                | 04/11/2008 | 26.0  | 12.1 | 379   | 5.8 | 136                | 13                 | 131                | 77.3                   | 0.032                      | <0.44                      | 0.66                         | 3.0                | <0.05              | 4.0                | 1665               | 26                 | 3.0                | 8                  | <0.5               | 12500              | 4                  | 2.18               | <20                  | 288                |
| MP 3                                | 04/11/2008 | 19.0  | 10.4 | 375   | 5.5 | 166                | 6                  | 39                 | 67.9                   | 0.017                      | <0.44                      | 1.74                         | 4.0                | <0.05              | <0.5               | 369                | 20                 | 1.0                | 5                  | <0.5               | 11800              | 3                  | 2.08               | 126                  | 266                |
| MP 4                                | 04/11/2008 | 13.6  | 10.2 | 457   | 5.9 | 208                | 7                  | 89                 | 71.1                   | 0.038                      | <0.44                      | 0.47                         | 2.0                | <0.05              | 2.0                | 808                | 27                 | 2.0                | 12                 | <0.5               | 41570              | 1                  | 1.66               | <20                  | 1547               |
| MP 5                                | 04/11/2008 | 36.0  | 10.6 | 291   | 5.5 | 130                | 18                 | 42                 | 71.4                   | 0.035                      | <0.44                      | 0.43                         | 1.0                | <0.05              | 1.0                | 1008               | 22                 | 4.0                | 6                  | <0.5               | 10240              | 3                  | 1.84               | 181                  | 282                |
| MP 6                                | 04/11/2008 | 56.0  | 9.8  | 470   | 6.2 | 212                | 8                  | 9                  | 95.4                   | 0.027                      | <0.44                      | 1.44                         | 10.0               | <0.05              | <0.5               | 26                 | 19                 | <0.5               | 2                  | <0.5               | 31470              | 2                  | 1.71               | <20                  | 1064               |
| MP 7                                | 04/11/2008 | 33.0  | 10.0 | 379   | 5.7 | 169                | 16                 | 6                  | 51.9                   | 0.028                      | <0.44                      | 0.68                         | 0.7                | <0.05              | 0.9                | 107                | 28                 | 2.0                | 7                  | <0.5               | 30720              | 4                  | 2.63               | <20                  | 549                |
| MP 8                                | 04/11/2008 | 101.0 | 10.4 | 165   | 5.1 | 75                 | 16                 | 236                | 31.1                   | 0.033                      | <0.44                      | 0.28                         | 0.9                | <0.05              | 2.0                | 819                | 40                 | 1.0                | 2                  | <0.5               | 2838               | 1                  | 0.65               | 155                  | 60                 |
| MP 10a                              | 04/11/2008 | 22.0  | 9.9  | 374   | 5.5 | 168                | <1                 | 27                 | 106.7                  | 0.023                      | <0.44                      | <0.03                        | 2.0                | <0.05              | 3.0                | 464                | 45                 | 2.0                | 27                 | <0.5               | 14850              | 3                  | 0.69               | 73                   | 3348               |
| MP 11                               | 04/11/2008 | 21.0  | 10.5 | 214   | 5.2 | 98                 | <1                 | 47                 | 28.4                   | 0.057                      | <0.44                      | 0.04                         | 0.6                | <0.05              | 6.0                | 186                | 40                 | 0.6                | 19                 | <0.5               | 621                | 2                  | 0.01               | <20                  | 1073               |

Graphs provided for MP1, MP2,MP4, MP6 and MP7: Temperature, Conductivity, and pH.

Graphs provided for MP1, MP2,MP4, MP6 and MP7: Temperature, Conductivity, and pH.

| Determinant Results   |                 |              |             |                 |               |                                 |          |
|---|-----------------|--------------|-------------|-----------------|---------------|---------------------------------|----------|
|   | Date Positioned | Date Removed | Ref. Number | Date Dispatched | Date Returned | Weight (mg/m <sup>2</sup> /day) | Comments |
| <b>Target (Consent) Limit: 350 mg m<sup>2</sup> d<sup>-1</sup> on as a 30 day average</b> |                 |              |             |                 |               |                                 |          |
| D1  | 26/06/2008      | 25/07/2008   | 179466      | 30/07/2008      | 20/08/2008    | 52                              |          |
| D2  | 26/06/2008      | 25/07/2008   | 179467      | 30/07/2008      | 20/08/2008    | 347                             |          |
| D3  | 26/06/2008      | 25/07/2008   | 179464      | 30/07/2008      | 20/08/2008    | 87                              |          |
| D4  | 26/06/2008      | 25/07/2008   | 179465      | 30/07/2008      | 20/08/2008    | 33                              |          |
| D1  | 25/07/2008      | 25/08/2008   | 182830      | 29/08/2008      | 04/09/2008    | 86                              |          |
| D2  | 25/07/2008      | 25/08/2008   | 182831      | 29/08/2008      | 04/09/2008    | 166                             |          |
| D3  | 25/07/2008      | 25/08/2008   | 182833      | 29/08/2008      | 04/09/2008    | 41                              |          |
| D4  | 25/07/2008      | 25/08/2008   | 182834      | 29/08/2008      | 04/09/2008    | 76                              |          |
| D1  | 25/08/2008      | 25/09/2008   | 185830      | 26/09/2008      | 30/09/2008    | 135                             |          |
| D2  | 25/08/2008      | 25/09/2008   | 185831      | 26/09/2008      | 30/09/2008    | 92                              |          |
| D3  | 25/08/2008      | 25/09/2008   | 185832      | 26/09/2008      | 30/09/2008    | 102                             |          |
| D4  | 25/08/2008      | 25/09/2008   | 185833      | 26/09/2008      | 30/09/2008    | 83                              |          |
| D1  | 25/09/2008      | 24/10/2008   | 188708      | 24/10/2008      | 28/10/2008    | 233                             |          |
| D2  | 25/09/2008      | 24/10/2008   | 188709      | 24/10/2008      | 28/10/2008    | 186                             |          |
| D3  | 25/09/2008      | 24/10/2008   | 188710      | 24/10/2008      | 28/10/2008    | 155                             |          |
| D4  | 25/09/2008      | 24/10/2008   | 188711      | 24/10/2008      | 28/10/2008    | 208                             |          |
| NDP = No Determination Possible   |                 |              |             |                 |               |                                 |          |
| Monitoring Points are numbered clockwise through the Cardinal Marks (N, E, S, W)          |                 |              |             |                 |               |                                 |          |
| Monitoring Results will be presented monthly  |                 |              |             |                 |               |                                 |          |

## Day Time Noise Monitoring Record Sheet

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|---------------------|
| Determinant Results |
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| Location            | Air Temp.<br>(Min) | Air Temp.<br>(Max) | Start Date | Time     | Duration | Serial No. | Wind            |                        | Results dB       |                   |                   | *Comments                                     |
|---------------------|--------------------|--------------------|------------|----------|----------|------------|-----------------|------------------------|------------------|-------------------|-------------------|---|
|                     |                    |                    |            |          |          |            | Speed<br>(m/s)* | Direction<br>(Degrees) | L <sub>Aeq</sub> | L <sub>Amax</sub> | L <sub>Amin</sub> |   |
| <b>Action Limit</b> |                    |                    |            |          |          |            |                 |                        | <b>60</b>        |                   |                   |   |
| <b>Target Limit</b> |                    |                    |            |          |          |            |                 |                        | <b>65</b>        |                   |                   |   |
| N1                  | 5.0                | 11.5               | 30/10/2008 | 08:00:00 | 14:00:00 | 2539533    | 3.6             | 215.0                  | 51.4             | 70.4              | 41.3              |   |
| N1                  | 5.2                | 11.5               | 31/10/2008 | 08:00:00 | 14:00:00 | 2539533    | 2.7             | 199.1                  | 50.2             | 81.3              | 40.4              |   |
| N1                  | 9.0                | 11.8               | 03/11/2008 | 08:00:00 | 14:00:00 | 2539533    | 0.9             | 147.1                  | 46.4             | 71.5              | 33.3              |   |
| N1                  | 7.6                | 11.4               | 04/11/2008 | 08:00:00 | 14:00:00 | 2539533    | 1.2             | 256.8                  | 50.7             | 78.3              | 34.2              |   |
| N1                  | 5.0                | 10.7               | 05/11/2008 | 08:00:00 | 14:00:00 | 2539533    | 0.9             | 193.5                  | 48.7             | 71.0              | 31.1              |   |
| N1                  | 4.5                | 11.3               | 06/11/2008 | 08:00:00 | 14:00:00 | 2539533    | 4.0             | 263.6                  | 40.5             | 56.9              | 32.0              |   |
| N1                  | 4.5                | 9.1                | 07/11/2008 | 08:00:00 | 14:00:00 | 2539533    | 3.2             | 135.5                  | 47.4             | 62.6              | 40.7              |   |
| N1                  | 4.7                | 9.2                | 10/11/2008 | 08:00:00 | 14:00:00 | 2539533    | 6.7             | 73.6                   | 67.2             | 101.7             | 42.1              | Noise reading impacted by windspeed of 6.7m/s |
| N1                  | 6.4                | 11.1               | 11/11/2008 | 08:00:00 | 14:00:00 | 2539533    | 6.3             | 131.5                  | 58.2             | 96.3              | 39.9              | Noise reading impacted by windspeed of 6.7m/s |
| N1                  | 6.0                | 11.1               | 12/11/2008 | 08:00:00 | 14:00:00 | 2539533    | 3.3             | 72.2                   | 61.1             | 100.1             | 35.5              |   |

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

## Night Time Noise Monitoring Record Sheet

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|---------------------|--|
| Determinant Results |  |
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| Determinant Results |                 |                 |            |          |          |            |              |                     |                  |                   |                   |   |
|---------------------|-----------------|-----------------|------------|----------|----------|------------|--------------|---------------------|------------------|-------------------|-------------------|---|
| Location            | Air Temp. (Min) | Air Temp. (Max) | Start Date | Time     | Duration | Serial No. | Wind         |                     | Results dB       |                   |                   | *Comments                                 |
|                     |                 |                 |            |          |          |            | Speed (m/s)* | Direction (Degrees) | L <sub>Aeq</sub> | L <sub>Amax</sub> | L <sub>Amin</sub> |   |
| <b>Action Limit</b> |                 |                 |            |          |          |            |              |                     | <b>50</b>        |                   |                   |   |
| <b>Target Limit</b> |                 |                 |            |          |          |            |              |                     | <b>55</b>        |                   |                   |   |
| N1                  | 5.0             | 11.5            | 30/10/2008 | 22:00:00 | 10:00:00 | 2539533    | 3.6          | 215.0               | 47.4             | 75.7              | 40.6              |   |
| N1                  | 5.2             | 11.5            | 31/10/2008 | 22:00:00 | 10:00:00 | 2539533    | 2.7          | 199.1               | 44.7             | 68.1              | 38.4              |   |
| N1                  | 9.0             | 11.8            | 03/11/2008 | 22:00:00 | 10:00:00 | 2539533    | 0.9          | 147.1               | 43.2             | 67.0              | 35.5              |   |
| N1                  | 7.6             | 11.4            | 04/11/2008 | 22:00:00 | 10:00:00 | 2539533    | 1.2          | 256.8               | 36.2             | 41.1              | 34.7              |   |
| N1                  | 5.0             | 10.7            | 05/11/2008 | 22:00:00 | 10:00:00 | 2539533    | 0.9          | 193.5               | 45.3             | 73.0              | 30.0              |   |
| N1                  | 4.5             | 11.3            | 06/11/2008 | 22:00:00 | 10:00:00 | 2539533    | 4.0          | 263.6               | 52.8             | 70.8              | 40.5              |   |
| N1                  | 4.5             | 9.1             | 07/11/2008 | 22:00:00 | 10:00:00 | 2539533    | 3.2          | 135.5               | 44.8             | 69.9              | 38.1              |   |
| N1                  | 4.7             | 9.2             | 10/11/2008 | 22:00:00 | 10:00:00 | 2539533    | 6.7          | 73.6                | 52.8             | 90.1              | 42.9              | Elevated readings due to high wind speeds |
| N1                  | 6.4             | 11.1            | 11/11/2008 | 22:00:00 | 10:00:00 | 2539533    | 6.3          | 131.5               | 53.1             | 94.8              | 37.1              | Elevated readings due to high wind speeds |
| N1                  | 6.0             | 11.1            | 12/11/2008 | 22:00:00 | 10:00:00 | 2539533    | 3.3          | 72.2                | 45.9             | 68.2              | 34.0              |   |

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

## Flow Weir Record Sheet

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|---------------------|
| Determinant Results |
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| Date       | SP1       |           |           | SP3       |           |           |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|
|            | Max (l/s) | Min (l/s) | Avg (l/s) | Max (l/s) | Min (l/s) | Avg (l/s) |
| 30/10/2008 | 39.73     | 20.37     | 26.44     | 17.06     | 6.98      | 13.27     |
| 31/10/2008 | 26.93     | 20.37     | 22.71     | 16.08     | 8.49      | 12.52     |
| 01/11/2008 | 20.37     | 13.55     | 17.47     | 11.51     | 6.98      | 10.36     |
| 02/11/2008 | 13.55     | 11.90     | 12.61     | 6.98      | 6.26      | 6.35      |
| 03/11/2008 | 11.90     | 7.54      | 10.79     | 6.26      | 2.05      | 5.09      |
| 04/11/2008 | 34.63     | 9.14      | 13.32     | 5.80      | 3.10      | 4.51      |
| 05/11/2008 | 28.92     | 6.12      | 13.68     | 4.69      | 0.90      | 2.54      |
| 06/11/2008 | 21.20     | 3.80      | 7.24      | 8.75      | -0.23     | 2.02      |
| 07/11/2008 | 116.77    | 17.99     | 41.91     | 30.93     | 6.74      | 12.80     |
| 08/11/2008 | 109.12    | 20.92     | 44.81     | 34.19     | 7.98      | 17.32     |
| 09/11/2008 | 42.66     | 26.29     | 32.81     | 23.29     | 10.38     | 13.54     |
| 10/11/2008 | 82.83     | 22.34     | 35.99     | 32.96     | 8.23      | 14.93     |
| 11/11/2008 | 77.23     | 23.51     | 35.95     | 27.02     | 10.38     | 15.53     |
| 12/11/2008 | 23.22     | 11.31     | 15.67     | 14.50     | 6.50      | 8.71      |

**Note:** Negative values indicate low flow conditions.



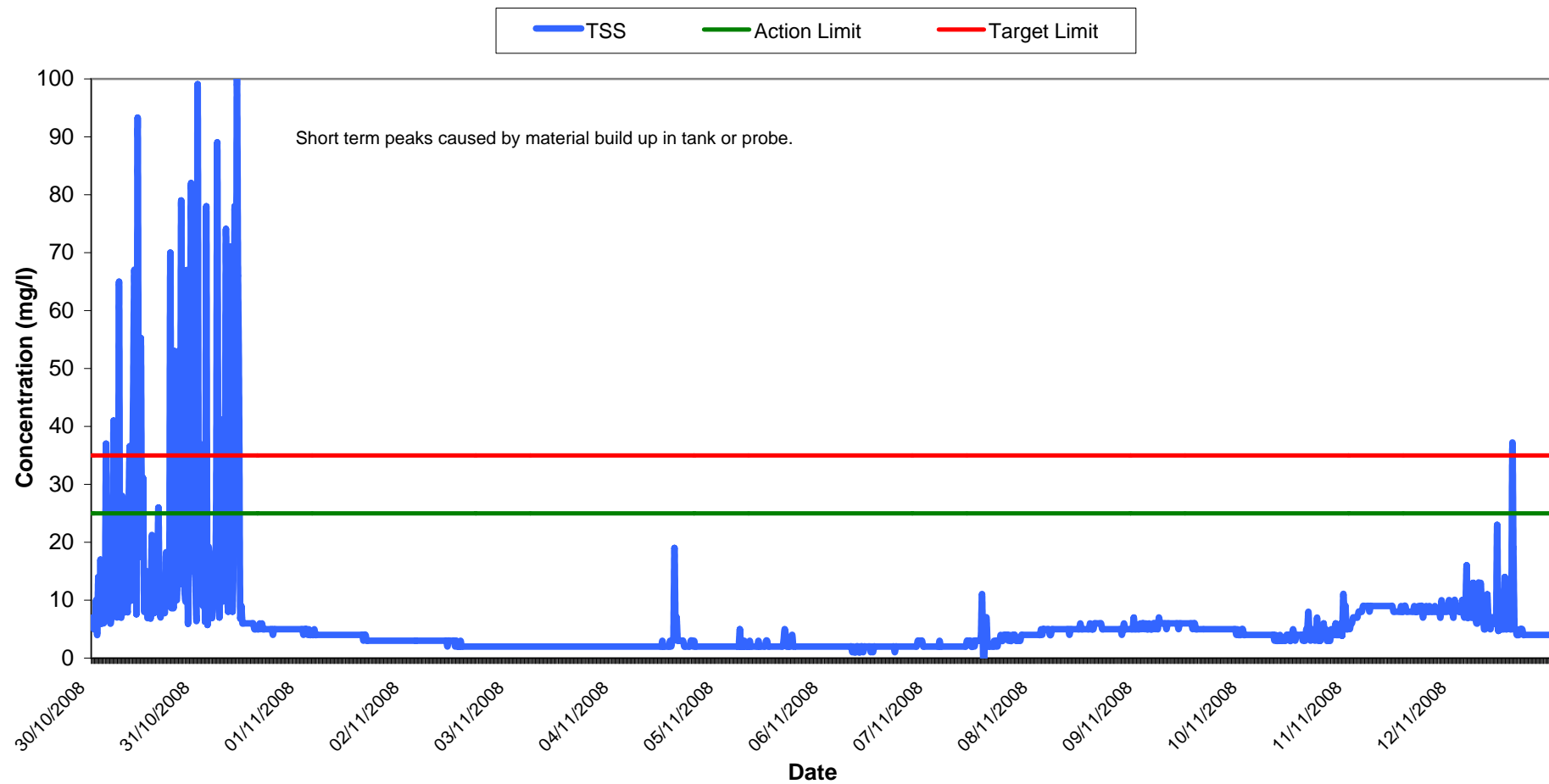
## Vibration Monitoring Record Sheet

| Determinant Results |  |
|---------------------|--|
|---------------------|--|

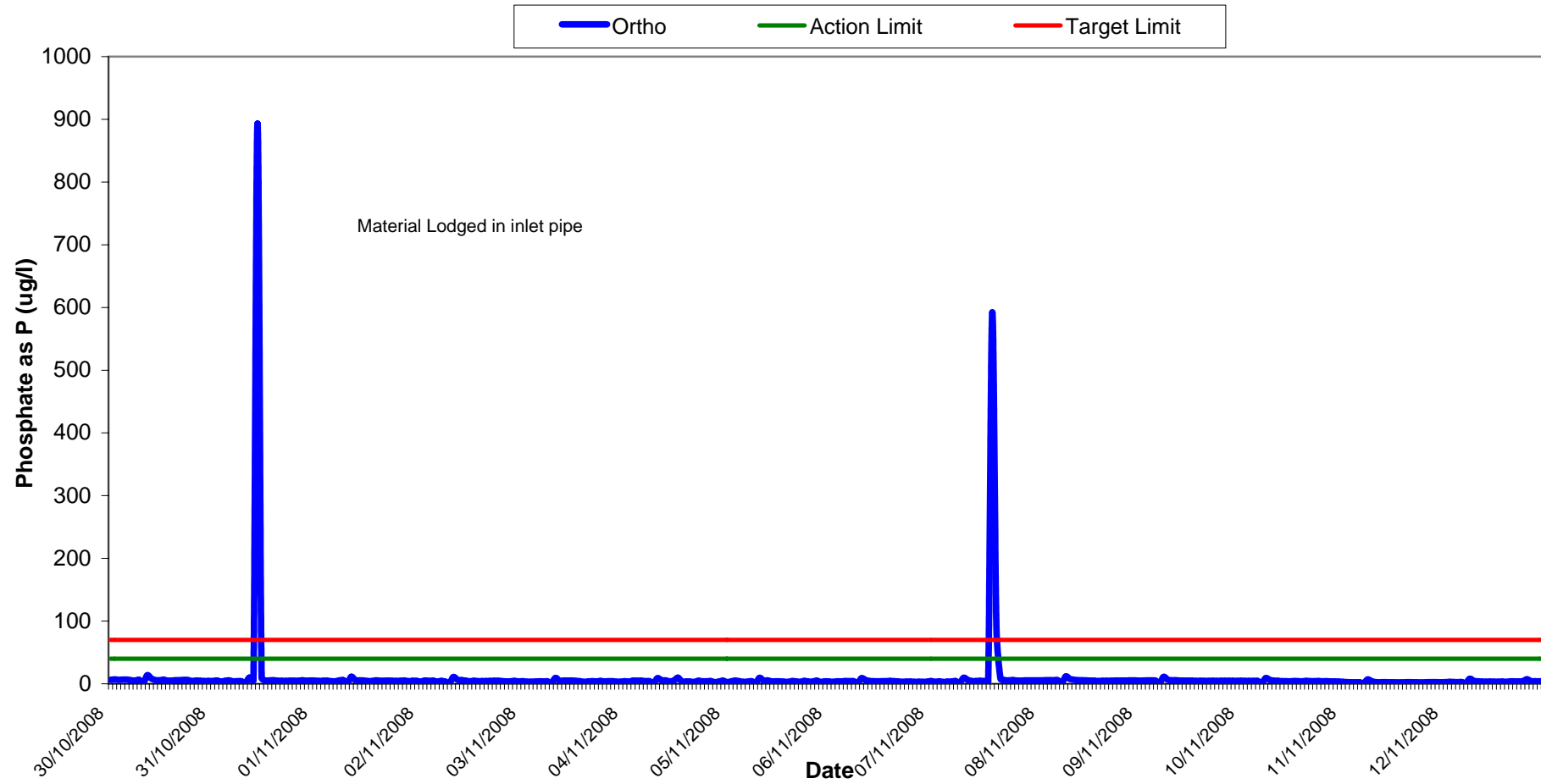
[illegible]

Vibration meter was located at V1 only.

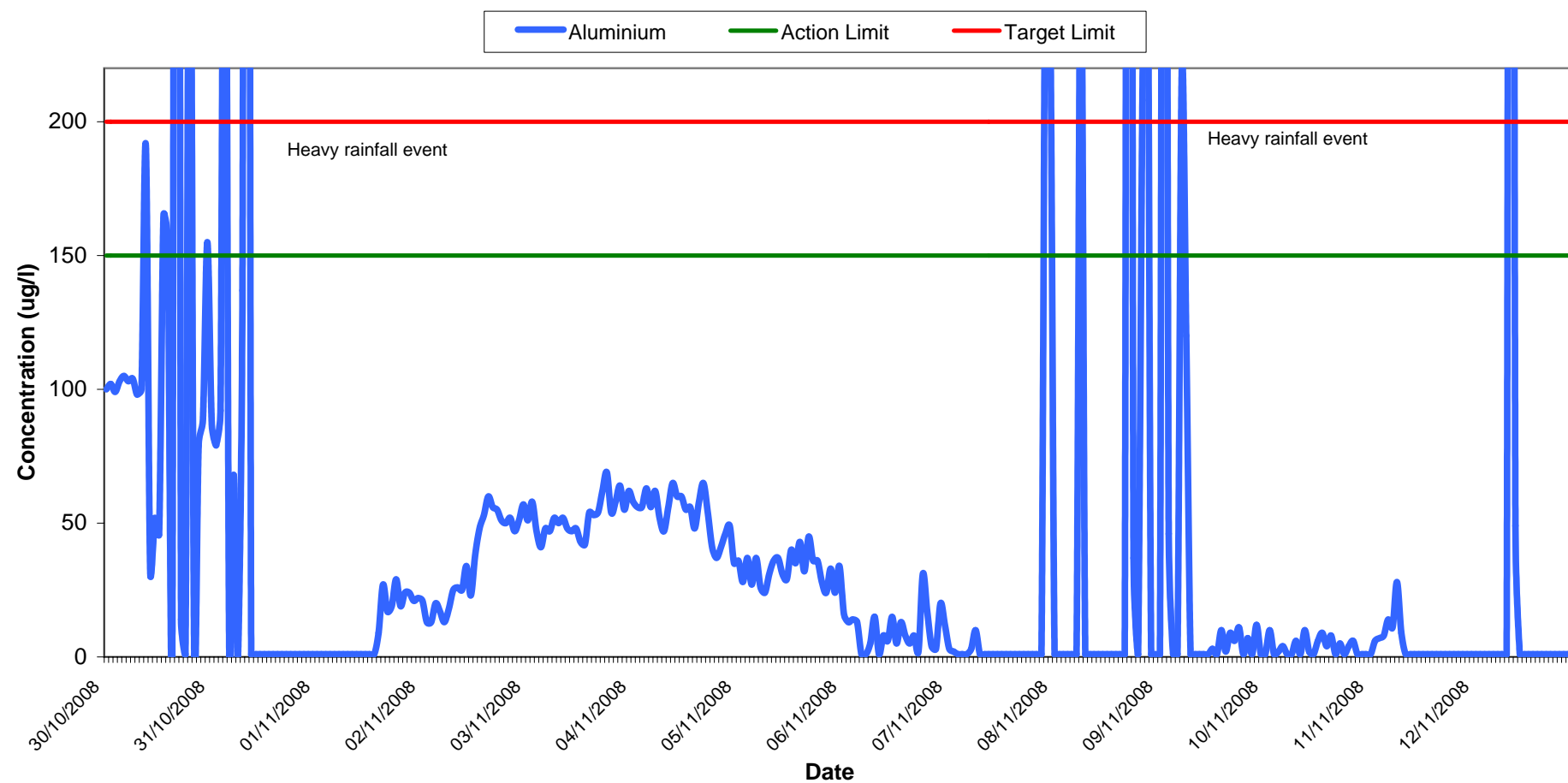
# Total Suspended Solids Results at SP1 Wk 45-46



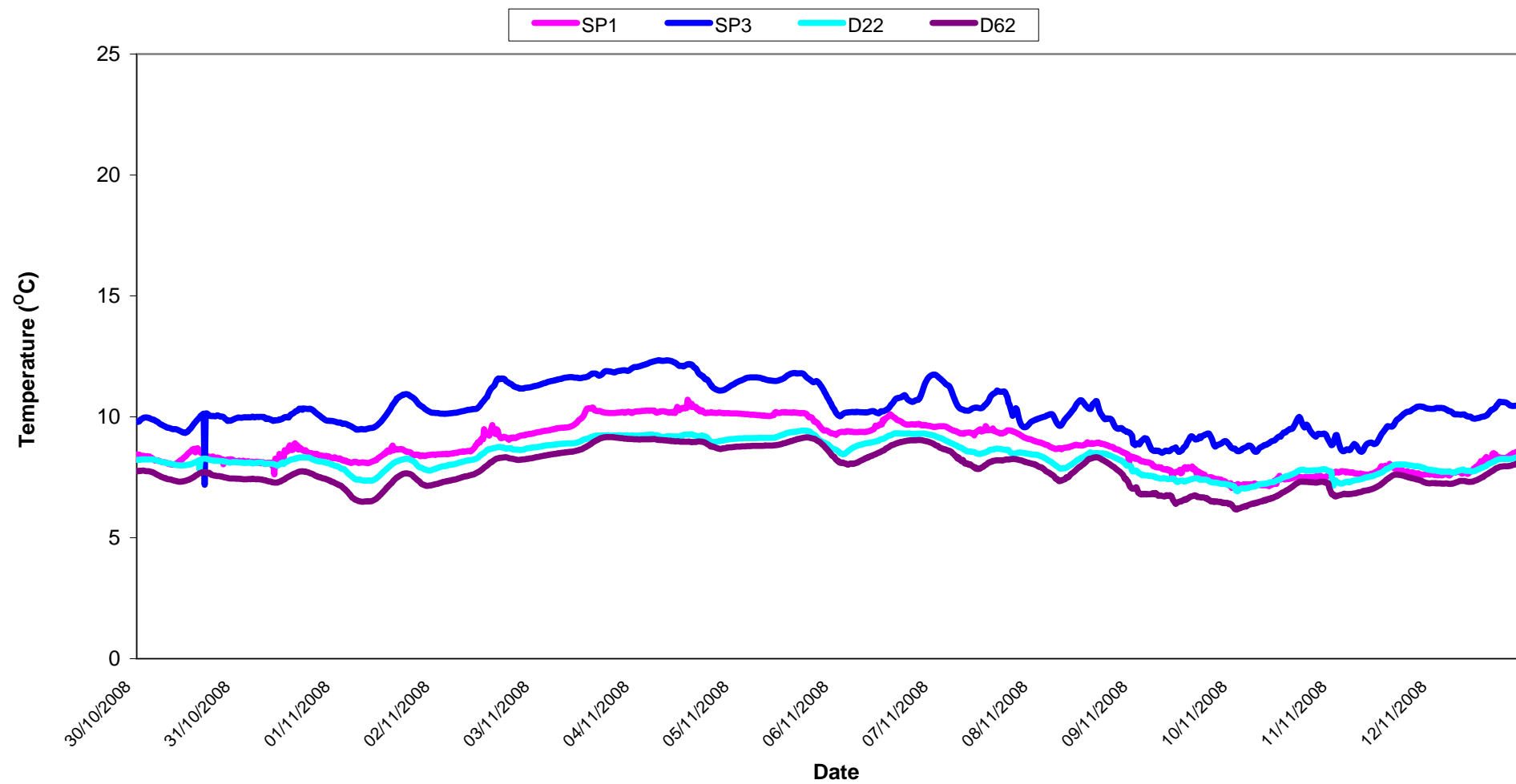
# Orthophosphate Results at SP1 Wk 45-46



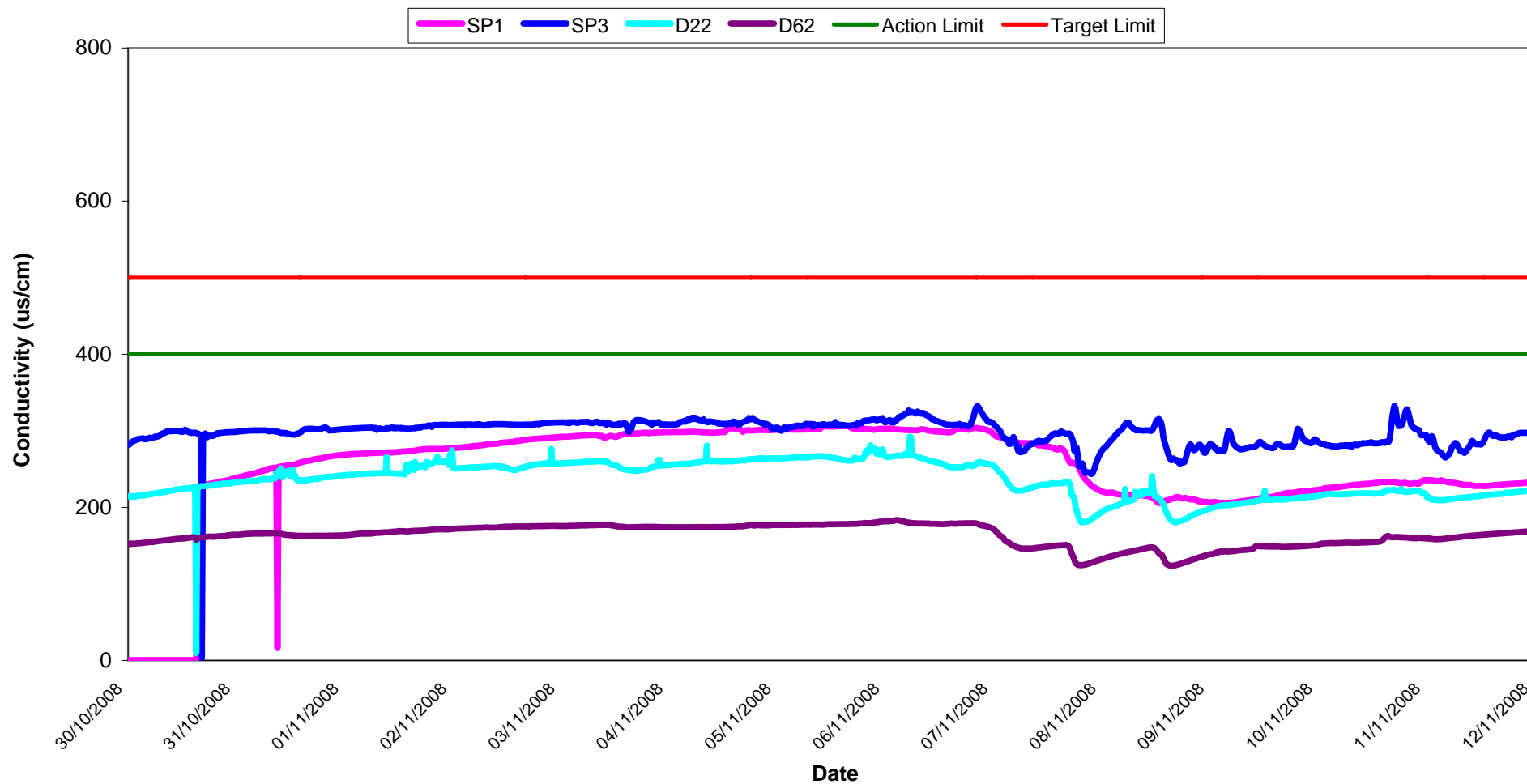
# Aluminium Concentration at SP1 Wk 45-46



Temperature - Surface Waters  
Wk 45-46

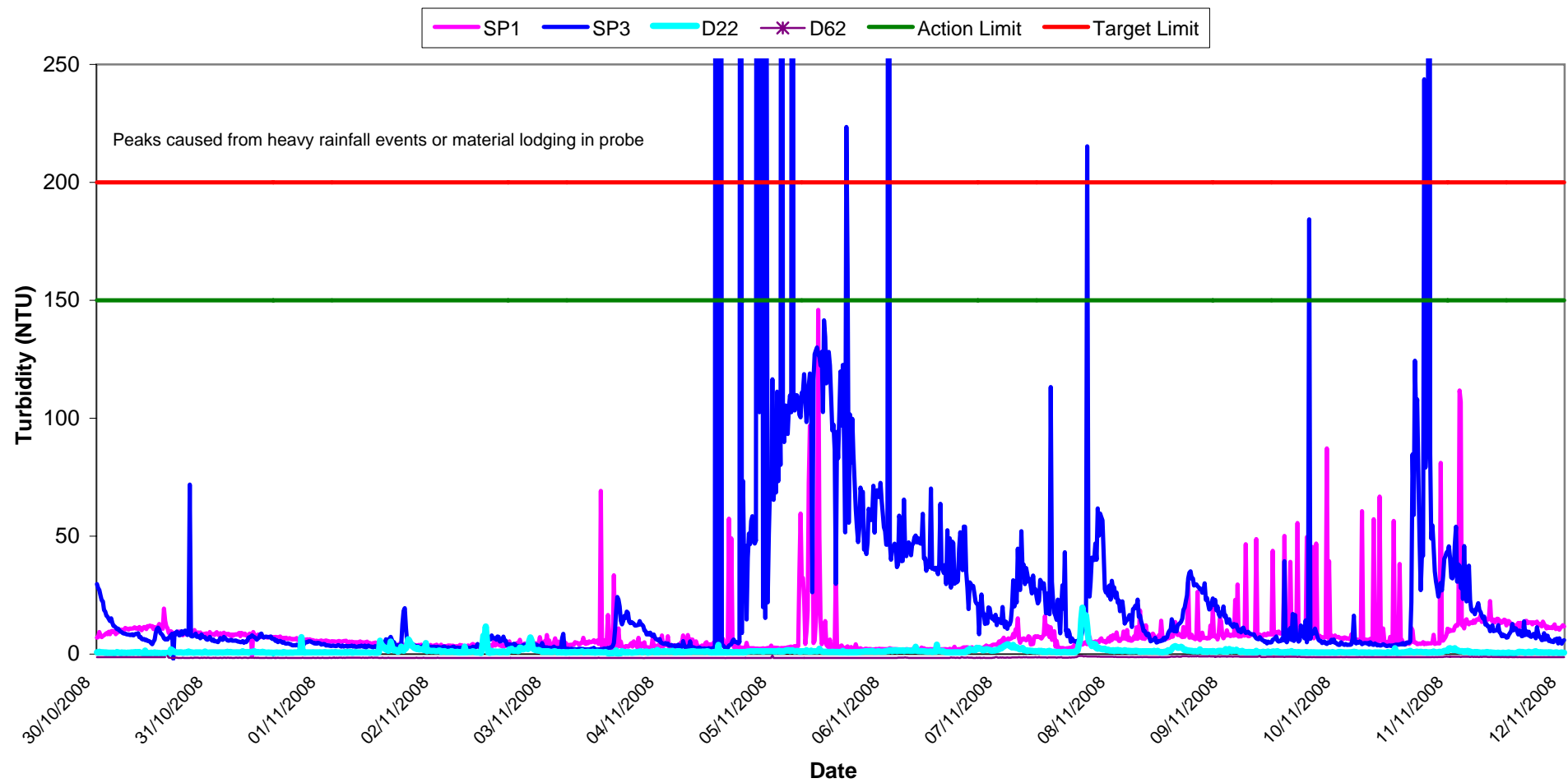


# Conductivity - Surface Waters, Wk 45-46

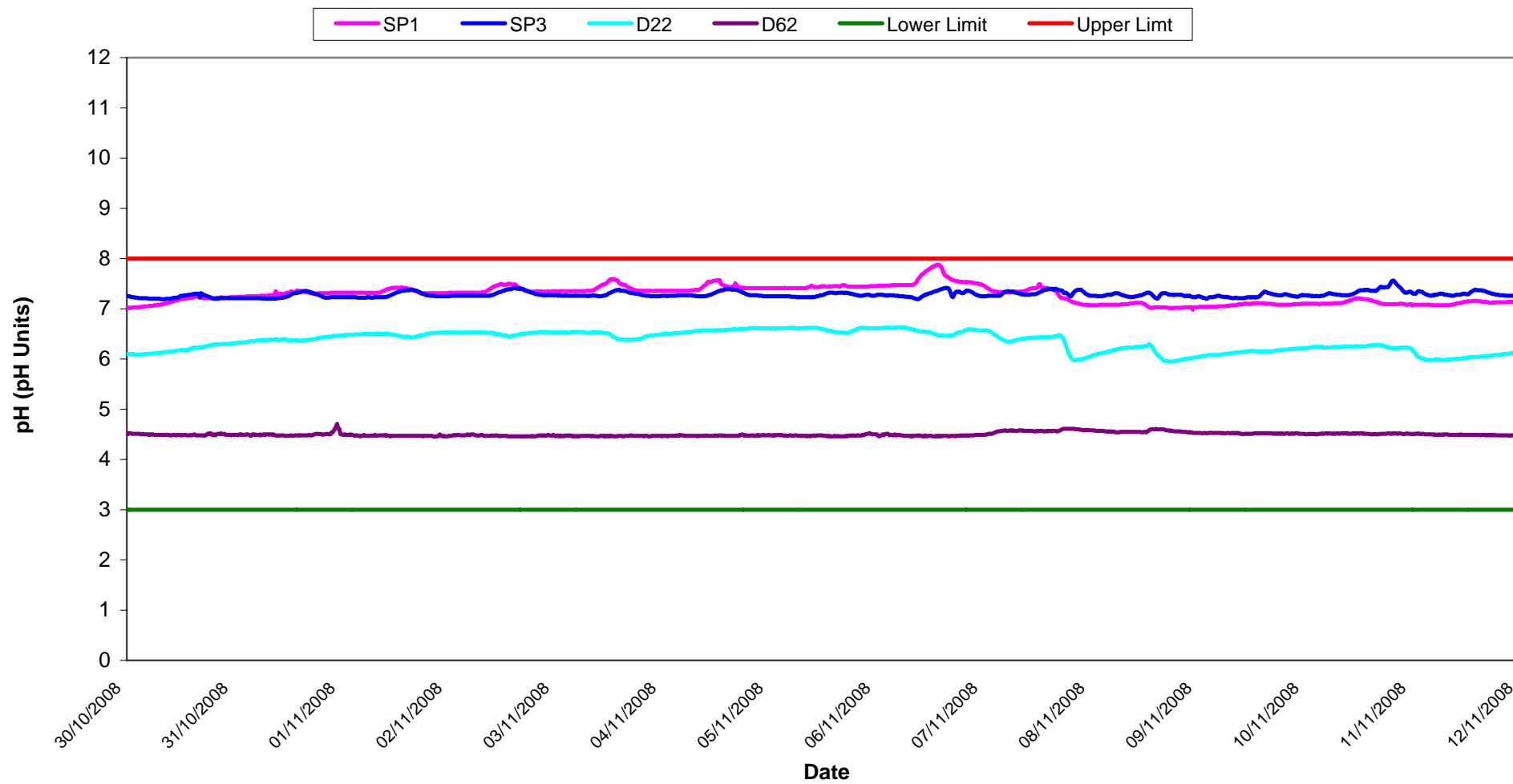


# Turbidity - Surface Waters

## Wk 45-46

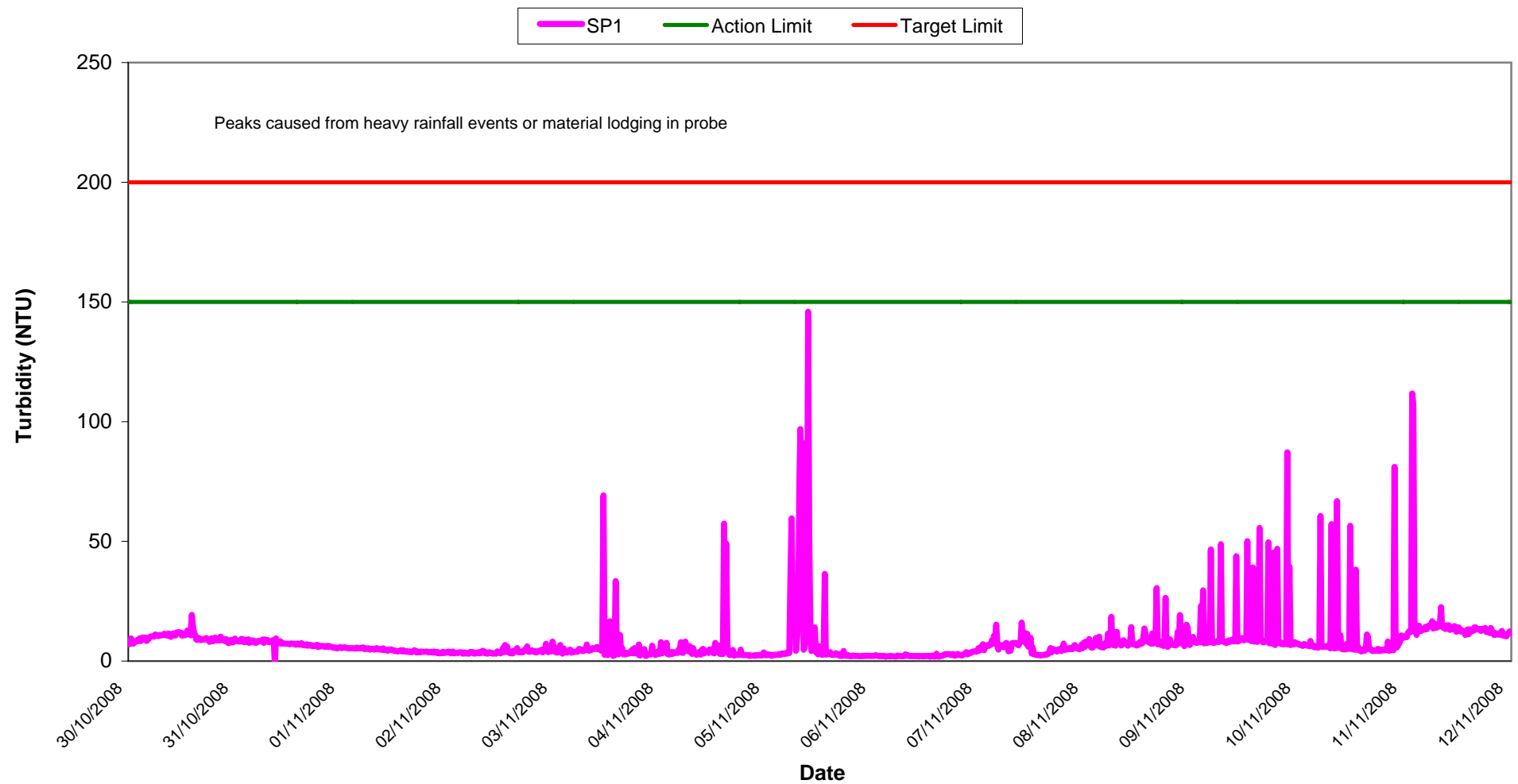


# pH - Surface Waters Wk 45-46

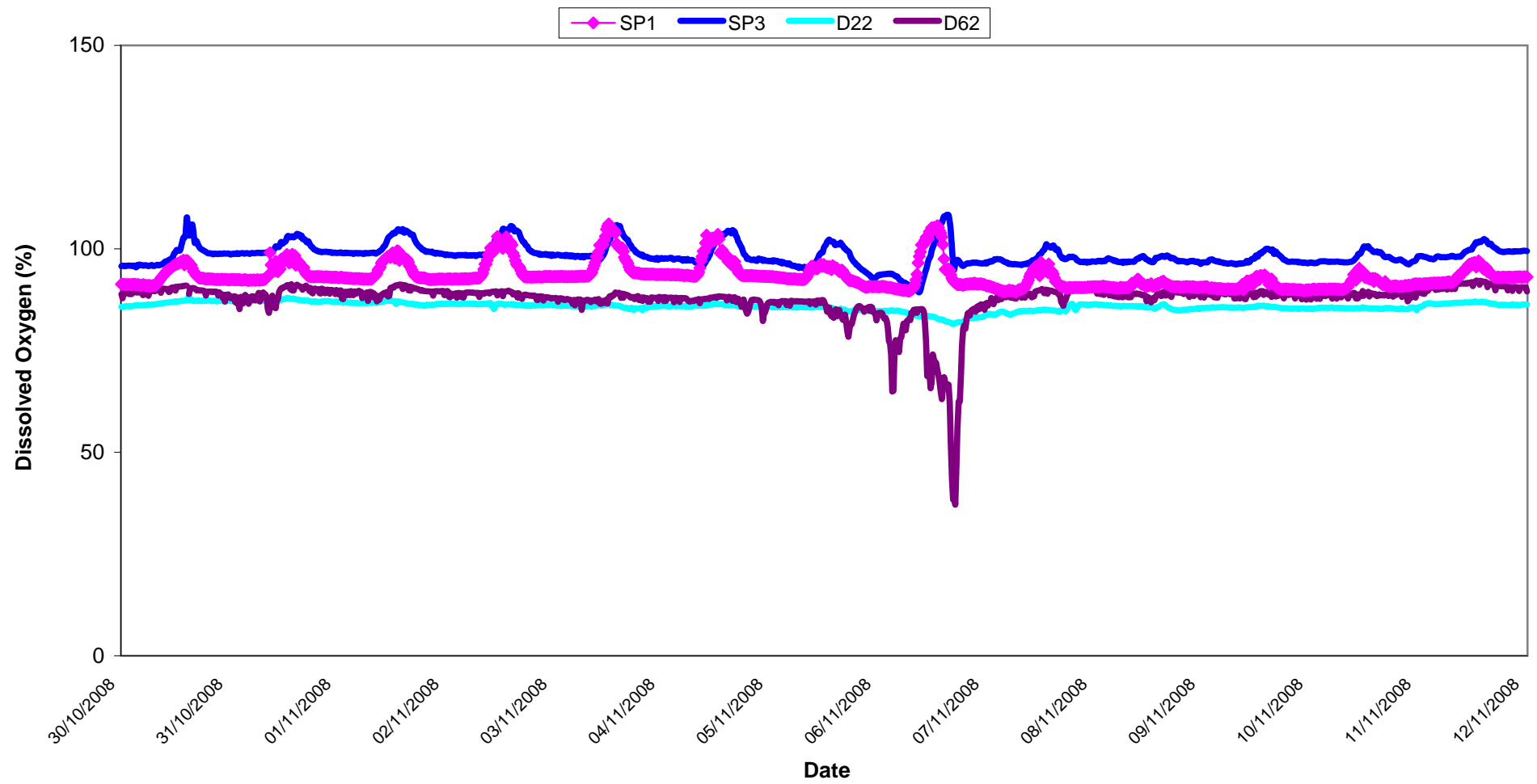




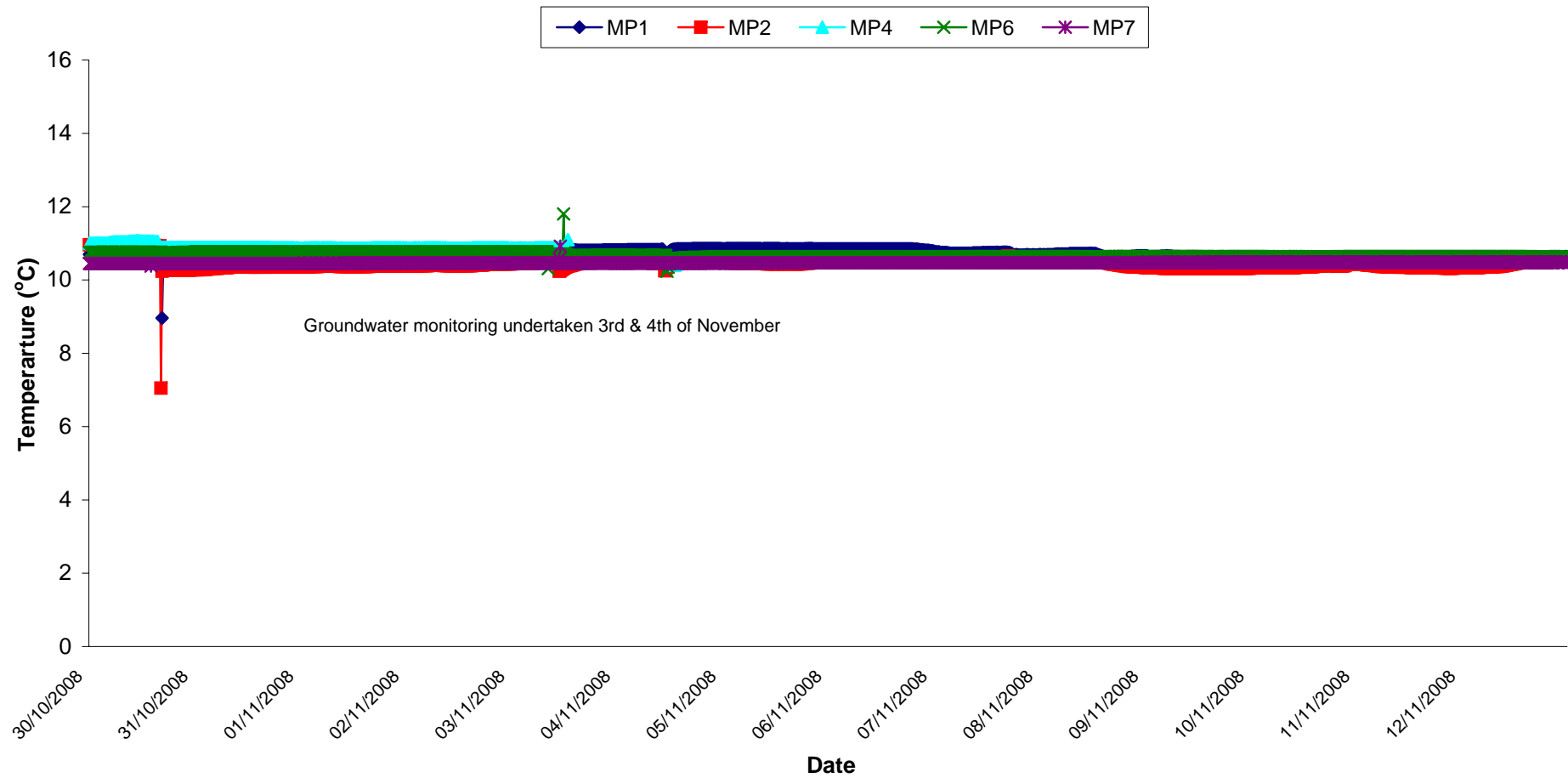
# Turbidity - Surface Waters @ SP1, Wk 45-46



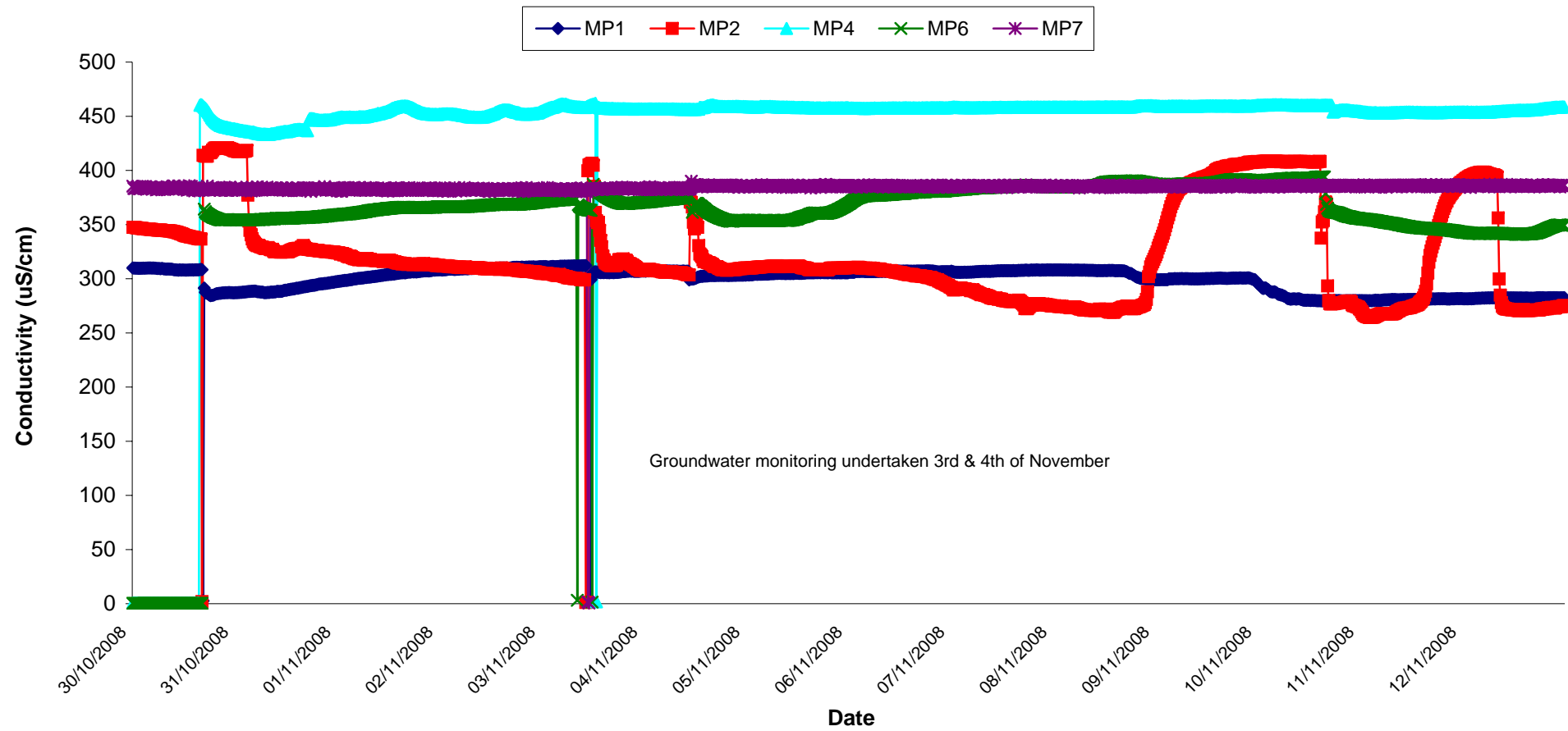
**Dissolved Oxygen - Surface Waters,  
Wk 45-46**



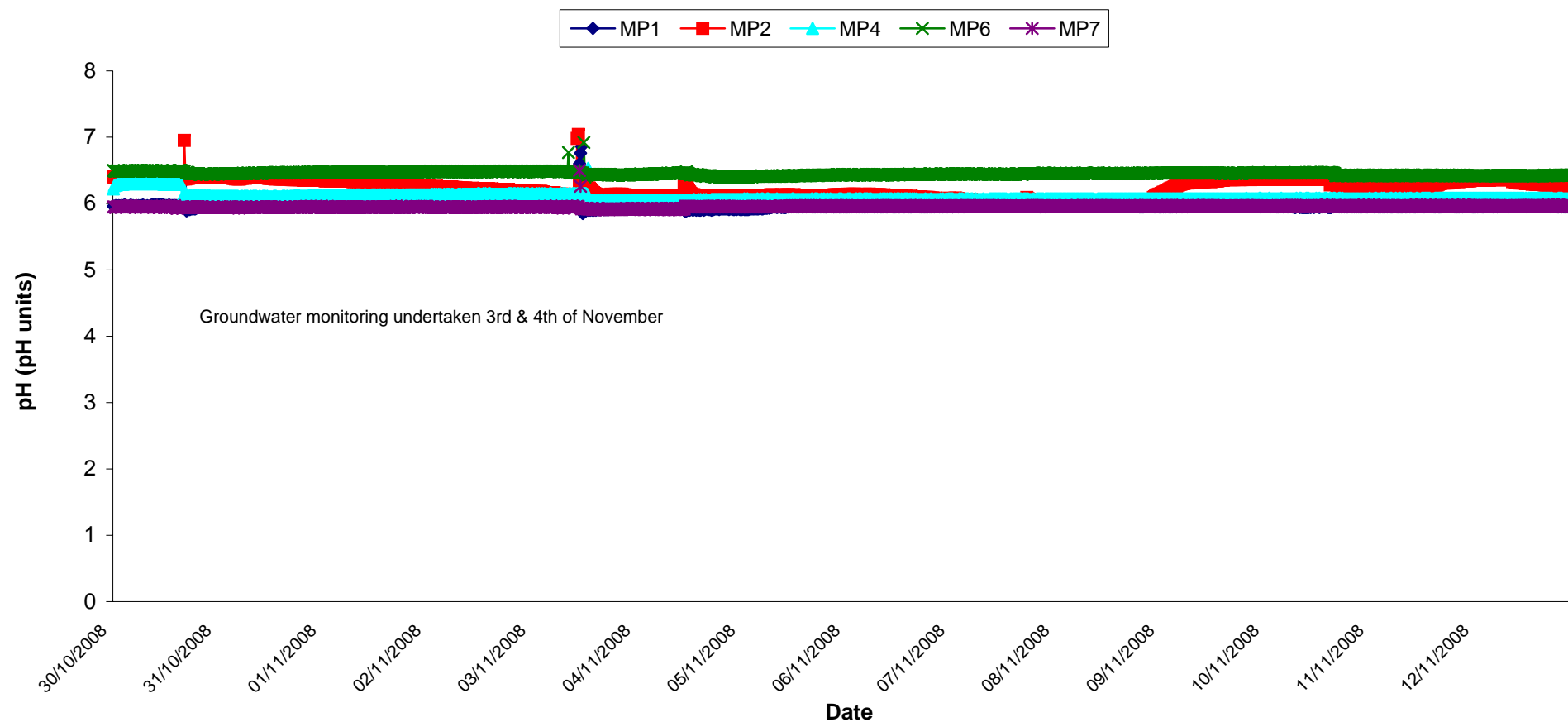
# Temperature - Groundwaters Wk 45-46



# Conductivity - Groundwaters Wk 45-46



# pH - Groundwaters Wk 45-46



# **Appendix 1**

## Appendix 1: Surface Water Monitoring Record Sheet- Onsite Monitoring

|                                   | Date       | Cond.<br>µS/cm | Temp<br>°C | Turbidity<br>NTU | DO<br>% Sat | pH  | TSS<br>mg l <sup>-1</sup> | Ortho-phosphate as P<br>µg l <sup>-1</sup> | Nitrate as N<br>mg l <sup>-1</sup> | Nitrate as NO <sub>3</sub><br>mg l <sup>-1</sup> | Total Phosphorus as P<br>mg l <sup>-1</sup> | Ammonia as NH <sub>3</sub> -N<br>mg l <sup>-1</sup> | Nitrite as NO <sub>2</sub><br>mg/l | Aluminium (dissolved)<br>ug/l | Aluminium (total)<br>ug/l | Phosphate as PO <sub>4</sub><br>mg/l | Total dissolved solids<br>mg/l |
|-----------------------------------|------------|----------------|------------|------------------|-------------|-----|---------------------------|--|------------------------------------|--|---|---|------------------------------------|-------------------------------|---------------------------|--------------------------------------|--------------------------------|
| <b>Settlement Pond Monitoring</b> |            |                |            |                  |             |     |                           |  |                                    |  |   |   |                                    |                               |                           |                                      |                                |
| SP1                               | 30/10/2008 | 240            | 10.1       | 23               | 92.6        | 6.7 |                           |  | <LOD                               |  |   | 0.01  |                                    | 54                            | 189                       | <LOD                                 | 154                            |
| SP1                               | 31/10/2008 | 264            | 9.7        | 17               | 91.1        | 7.5 |                           |  | <LOD                               |  |   | 0.10  |                                    | 58                            | 212                       | 0.12                                 | 174                            |
| SP1                               | 03/11/2008 | 300            | 11.9       | 9                | 94.9        | 7.1 |                           |  | <LOD                               |  |   | 0.09  |                                    | 43                            | 152                       | 0.14                                 | 198                            |
| SP1                               | 04/11/2008 | 307            | 11.5       | 9                | 93.5        | 7.1 |                           |  | 0.6                                |  |   | 0.12  |                                    | 32                            | 139                       | 0.20                                 | 216                            |
| SP1                               | 05/11/2008 | 310            | 11.5       | 8                | 91.9        | 7.1 |                           |  | <LOD                               |  |   | <LOD  |                                    | 44                            | 133                       | 0.23                                 | 215                            |
| SP1                               | 06/11/2008 | 292            | 11.0       | 8                | 100.9       | 6.6 |                           |  | <LOD                               |  |   | 0.06  |                                    | 43                            | 130                       | 0.06                                 | 206                            |
| SP1                               | 07/11/2008 | 273            | 10.1       | 8                | 93.1        | 7.5 |                           |  | <LOD                               |  |   | 0.12  |                                    | 39                            | 115                       | 0.03                                 | 194                            |
| SP1                               | 10/11/2008 | 228            | 8.5        | 11               | 94.5        | 7.0 |                           |  | <LOD                               |  |   | 0.25  |                                    | 28                            | 162                       | 0.05                                 | 153                            |
| SP1                               | 11/11/2008 | 224            | 8.5        | 20               | 92.0        | 7.3 |                           |  | <LOD                               |  |   | <LOD  |                                    | 37                            | 244                       | 0.06                                 | 159                            |
| SP1                               | 12/11/2008 | 234            | 8.1        | 13               | 92.1        | 6.9 |                           |  | <LOD                               |  |   | <LOD  |                                    | 35                            | 140                       | 0.16                                 | 166                            |
| SP3                               | 30/10/2008 | 322            | 10.1       | 17               | 96.6        | 6.5 |                           |  | 0.6                                |  |   | 0.04  |                                    | 35                            |                           | 0.02                                 | 209                            |
| SP3                               | 31/10/2008 | 324            | 10.2       | 11               | 94.9        | 6.9 |                           |  | <LOD                               |  |   | 1.32  |                                    | 47                            |                           | 0.02                                 | 209                            |
| SP3                               | 03/11/2008 | 342            | 12.1       | 27               | 94.7        | 7.5 |                           |  | <LOD                               |  |   | 0.14  |                                    | 21                            |                           | 0.06                                 | 222                            |
| SP3                               | 04/11/2008 | 325            | 12.3       | 6                | 92.1        | 7.1 |                           |  | 0.4                                |  |   | 0.07  |                                    | 21                            |                           | 0.04                                 | 225                            |
| SP3                               | 05/11/2008 | 323            | 12.0       | 8                | 95.9        | 7.0 |                           |  | 0.8                                |  |   | <LOD  |                                    | <LOD                          |                           | 0.03                                 | 221                            |
| SP3                               | 06/11/2008 | 323            | 10.9       | 6                | 103.8       | 6.6 |                           |  | 1.1                                |  |   | 0.15  |                                    | 30                            |                           | 0.02                                 | 222                            |
| SP3                               | 07/11/2008 | 302            | 10.5       | 17               | 95.6        | 7.2 |                           |  | <LOD                               |  |   | 0.05  |                                    | 29                            |                           | 0.02                                 | 206                            |
| SP3                               | 10/11/2008 | 296            | 9.3        | 10               | 98.0        | 6.9 |                           |  | 0.1                                |  |   | 1.01  |                                    | 25                            |                           | 0.03                                 | 203                            |
| SP3                               | 11/11/2008 | 296            | 10.4       | 15               | 92.3        | 7.1 |                           |  | 0.3                                |  |   | 1.14  |                                    | 25                            |                           | 0.03                                 | 202                            |
| SP3                               | 12/11/2008 | 303            | 10.0       | 10               | 92.7        | 6.8 |                           |  | <LOD                               |  |   | 0.03  |                                    | 44                            |                           | 0.06                                 | 205                            |
| <b>Additional Monitoring</b>      |            |                |            |                  |             |     |                           |  |                                    |  |   |   |                                    |                               |                           |                                      |                                |
| D22                               | 30/10/2008 | 236            | 8.0        | 2                | 87.0        | 6.4 |                           |  | 1.4                                |  |   | 0.02  |                                    | 84                            |                           | 0.11                                 | 150                            |
| D62                               | 30/10/2008 | 182            | 7.3        | 10               | 90.6        | 5.9 |                           |  | 1.8                                |  |   | 0.06  |                                    | 29                            |                           | 0.11                                 | 104                            |
| D22                               | 06/11/2008 | 260            | 9.7        | 4                | 84.0        | 6.6 |                           |  | <LOD                               |  |   | 0.15  |                                    | 39                            |                           | 0.07                                 | 176                            |
| D62                               | 06/11/2008 | 205            | 9.4        | 1                | 85.4        | 4.9 |                           |  | 0.3                                |  |   | 0.05  |                                    | 41                            |                           | 0.07                                 | 147                            |
| <b>Axonics Monitoring</b>         |            |                |            |                  |             |     |                           |  |                                    |  |   |   |                                    |                               |                           |                                      |                                |
| Pre                               | 30/10/2008 | 344            |            | 83               |             | 6.5 |                           |  | <LOD                               |  |   | 0.16  |                                    | 137                           |                           | 0.01                                 | 218                            |
| Post                              | 30/10/2008 | 339            |            | 10               |             | 6.3 |                           |  | <LOD                               |  |   | 0.08  |                                    | 26                            | >LOD                      | 0.01                                 | 216                            |
| Pre                               | 31/10/2008 | 322            |            | 50               |             | 7.0 |                           |  | <LOD                               |  |   | 0.38  |                                    | 189                           |                           | 0.05                                 | 206                            |
| Post                              | 31/10/2008 | 335            |            | 14               |             | 6.9 |                           |  | <LOD                               |  |   | 0.15  |                                    | 36                            | >LOD                      | 0.02                                 | 215                            |