

Appendix 4

SURFACE WATER AND WET WEATHER DISCHARGE MONITORING DATA

Surface Water Monitoring Data

| Sample No. | Date | Time | Sample Location | pH | Electrical Conductivity (µS/cm) | Total Suspended Solids (mg/L) | Total Organic Carbon (TOC) | Grease & Oil (mg/L) | Comments |
|--|--|------------------------------|----------------------------------|-----------------------------|---------------------------------|-------------------------------|----------------------------|--------------------------|--|
| 31492.01 | 23 September 2008 | 1310 | UNDC | 7.7 | 150 | 510 | | <2 | |
| 32279.01 32279.02 | 17 December 2008 17 December 2008 | 1029 1100 | SB8 UNDC | 7.8 6.6 | 295 145 | 1080 21 | | <2 <2 | |
| ES0909245-001 ES0909245-002 ES0909245-003 | 24 June 2009 24 June 2009 24 June 2009 | | Dam Void 1 SB3 SD3 | 9.3 8.36 8.56 | 1540 502 354 | 216 110 1340 | 20 10 35 | <10 <10 <10 | Limit of Reporting was raised for Oil and Grease due to insufficient samples Limit of Reporting was raised for Oil and Grease due to insufficient samples Limit of Reporting was raised for Oil and Grease due to insufficient samples |
| ES0912984-001 ES0912984-002 ES0912984-003 | 27 August 2009 27 August 2009 27 August 2009 | 1335 1240 1255 | Dam Void 1 SB3 SD3 | 8.85 8.86 8.34 | 2260 504 587 | 60 66 71 | 3 10 8 | <10 <10 <10 | Limit of Reporting (LOR) was raised for Oil and Grease due to insufficient samples Limit of Reporting (LOR) was raised for Oil and Grease due to insufficient samples Limit of Reporting (LOR) was raised for Oil and Grease due to insufficient samples |
| ES0918304-001 | 30 November 2009 | 1130 | SB3 | 7.78 | 620 | 128 | 3 | <10 | Limit of Reporting (LOR) was raised for Oil and Grease due to insufficient samples |
| ES0919288-001 ES0919290-001 ES0919290-002 ES0919290-003 | 16 December 2009 16 December 2009 16 December 2009 16 December 2009 | 1415 1205 1225 1255 | Dam Void 1 SB7 SB5 SB14 | 9.15 9.38 8.9 8.76 | 4210 600 1440 577 | 14 18 50 50 | 4 8 7 7 | <10 <10 <10 <10 | Limit of Reporting (LOR) was raised for Oil and Grease due to insufficient samples Limit of Reporting (LOR) was raised for Oil and Grease due to insufficient samples Limit of Reporting (LOR) was raised for Oil and Grease due to insufficient samples Limit of Reporting (LOR) was raised for Oil and Grease due to insufficient samples |
| ES0919733-001 | 29 December 2009 | 1530 | SB19 | 6.85 | 110 | 444 | 5 | | |
| ES1003579-001 ES1003579-002 ES1003579-003 | 25 February 2010 25 February 2010 25 February 2010 | 1535 1550 1515 | SB3 SD3 Dam Void 1 | 8.34 8.44 8.99 | 423 374 1390 | 56 37 106 | 15 <5 5 | <5 <5 <5 | Limit of Reporting (LOR) was raised for TOC due to matrix interference |
| ES1005718-001 | 25 March 2010 | 1550 | SD3 | 8.71 | 445 | 58 | | <5 | |
| ES1008743-001 | 7 May 2010 | 0830 | SD3 | 8.26 | 434 | 13 | | <5 | |
| ES1008996-001 ES1008996-002 ES1008996-003 | 12 May 2010 12 May 2010 12 May 2010 | 1400 1408 1315 | SB3 SD3 Dam Void 1 | 8.2 8.42 8.9 | 565 422 2470 | 64 19 20 | 7 14 3 | <5 56 <5 | |

| Sample No. | Date | Time | Sample Location | pH | Electrical Conductivity ($\mu\text{S/cm}$) | Total Suspended Solids (mg/L) | Total Organic Carbon (TOC) | Grease & Oil (mg/L) | Comments |
|---------------|-----------------|------|-----------------|------|--|-------------------------------|----------------------------|---------------------|----------|
| ES1009880-001 | 24 May 2010 | 1320 | SD3 | 8.57 | 412 | 92 | 4 | 6 | |
| ES1014922-001 | 26 July 2010 | 0840 | SB8 | 8.34 | 458 | 17 | 5 | <5 | |
| ES1015928-001 | 9 August 2010 | 1015 | SB19 | 7.47 | 464 | 238 | 13 | <5 | |
| ES1015928-002 | 9 August 2010 | 0955 | SD3 | 7.62 | 458 | 239 | 12 | <5 | |
| ES1015928-003 | 9 August 2010 | 1055 | Dam Void 1 | 8.56 | 2330 | 8 | 2 | <5 | |
| ES1015928-004 | 9 August 2010 | 1035 | SD7 | 7.85 | 92 | 8 | 9 | <5 | |
| ES1022524-001 | 8 November 2010 | 0920 | SB19 | 8.39 | 636 | 41 | 5 | <5 | |
| ES1022524-002 | 8 November 2010 | 0905 | SD3 | 8.42 | 472 | 107 | 7 | <5 | |
| ES1022524-003 | 8 November 2010 | 0950 | Dam Void 1 | 9.12 | 2330 | 16 | 2 | <5 | |
| ES1022524-004 | 8 November 2010 | 1010 | SD7 | 9.56 | 77 | 52 | 11 | <5 | |
| ES1104559-001 | 2 March 2011 | 0920 | SD3 | 8.43 | 605 | 210 | 22 | <5 | |
| ES1104559-002 | 2 March 2011 | 0940 | SB19 | 8.45 | 573 | 70 | 9 | <5 | |
| ES1104559-003 | 2 March 2011 | 1020 | SB18 | 8.4 | 724 | 43 | 8 | <5 | |
| ES1104559-004 | 2 March 2011 | 1000 | SD7 | 9.17 | 1080 | 236 | 37 | <5 | |
| ES1110300-001 | 17 May 2011 | 1030 | SB19 | 8.75 | 880 | 76 | 15 | <5 | |
| ES1110300-002 | 17 May 2011 | 1020 | SD3 | 8.31 | 709 | 214 | 15 | <5 | |
| ES1110300-003 | 17 May 2011 | 1040 | SB18 | 9.12 | 1610 | 3090 | 17 | <5 | |
| ES1110300-004 | 17 May 2011 | 0925 | SD7 | 7.45 | 159 | 78 | 23 | <5 | |
| ES1110300-005 | 17 May 2011 | 1100 | Dam Void 1 | 8.51 | 3320 | 25 | 2 | <5 | |

Wet Weather Discharge Monitoring Data

| Sample No. | Sample Location | Date | Time | pH | Electrical Conductivity (µS/cm) | Total Suspended Solids (mg/L) | Total Organic Carbon (TOC) | Grease & Oil (mg/L) | Comments |
|---|--|--|--------------------------------------|--------------------------------------|---------------------------------|-------------------------------|----------------------------|----------------------------|----------|
| ES0919733-002 ES0919733-003 | SD3 UNDC | 29 December 2009 29 December 2009 | 1530 1545 | 7.51 6.87 | 180 94 | 552 236 | 4 7 | | |
| ES1000144-001 ES1000144-002 | SD3 UNDC | 4 January 2010 4 January 2010 | 1200 1245 | 7.74 7.37 | 325 467 | 1490 34 | 2 17 | <5 6 | |
| ES1000715-001 ES1000715-002 | DD CK SB 18 | 15 January 2010 15 January 2010 | 1130 1150 | 6.86 7.51 | 338 356 | 258 1490 | 3 3 | <5 <5 | |
| ES1002195-001 | SD3 | 8 February 2010 | 0925 | 7.87 | 323 | 157 | 6 | 6 | |
| ES1002884-001 ES1002884-002 ES1002884-003 ES1002884-004 ES1002884-005 | SD3 UNDC SB 18 DDCK SB 20 | 15 February 2010 15 February 2010 15 February 2010 15 February 2010 16 February 2010 | 0900 0925 0945 1010 0715 | 7.48 7.15 7.37 7.34 7.16 | 329 318 395 359 119 | 406 186 556 15 46 | 3 8 5 6 9 | <5 <5 <5 <5 <5 | |
| ES1006098-001 | SD3 | 31 March 2010 | 0925 | 8.14 | 435 | 108 | 12 | <5 | |
| ES1010661-001 | SD3 | 2 June 2010 | 1200 | 8.21 | 410 | 260 | 35 | <5 | |
| ES1014922-001 ES1015036-001 | SD 3 Pre discharge (controlled) SD3 | 26 July 2010 28 July 2010 | 0840 1430 | 8.34 8.23 | 458 437 | 17 23 | 5 4 | <5 <10 | |
| ES1015610-001 | Downstream Bluevale | 3 August 2010 | 1320 | 7.43 | 109 | 45 | 17 | <5 | |

| Sample No. | Sample Location | Date | Time | pH | Electrical Conductivity ($\mu\text{S}/\text{cm}$) | Total Suspended Solids (mg/L) | Total Organic Carbon (TOC) | Grease & Oil (mg/L) | Comments |
|--|--|--|------------------------------|------------------------------|---|-------------------------------|----------------------------|----------------------|--|
| ES1016051-001 ES1016051-002 | DDCK SB18 | 10 August 2010 10 August 2010 | 1340 1405 | 7.4 7.37 | 151 261 | 964 2320 | 12 <5 | <5 <5 | |
| ES1016145-001 ES1016145-002 | SD3 UNDC | 11 August 2010 11 August 2010 | 1350 1420 | 8.04 7.72 | 450 333 | 368 116 | 6 12 | <5 <5 | |
| ES1016965-001 ES1016965-002 ES1016965-003 ES1016965-004 | SB18 DDCK SD3 UNDC | 20 August 2010 20 August 2010 20 August 2010 20 August 2010 | 1500 1520 1540 1555 | 7.97 7.96 8.04 7.9 | 422 344 508 390 | 2300 912 172 152 | 10 20 10 25 | <5 <5 <5 <5 | |
| ES1018433-001 ES1018433-002 ES1018433-003 ES1018433-004 | SD3 SB18 DDCK UNDC | 10 September 2010 10 September 2010 10 September 2010 10 September 2010 | 1215 1230 1245 1300 | 8.18 7.94 7.74 8.34 | 583 500 359 477 | 50 1220 680 229 | 6 <5 <5 5 | <5 <5 <5 <5 | |
| ES1020462-001 ES1021130-001 | SD 3 Pre discharge (controlled) SD 3 Re-sample (oil and grease) | 12 October 2010 19 October 2010 | 1645 1500 | 8.31 8.64 | 575 556 | 11 33 | 5 6 | 32 <5 | Sample taken to determine whether a controlled discharge could occur. Grease and oil high. No discharge occurred. Oil and grease within limit, however no discharge occurred due to a high pH. |
| ES1021254-001 | SB18 (Pre flocculation) | 21 October 2010 | 1315 | 8.56 | 554 | 276 | 9 | <5 | |
| ES1022161-001 | SD 3 Pre discharge (controlled) | 2 November 2010 | 1200 | 8.25 | 478 | 33 | 6 | <5 | Sample taken to determine whether a controlled discharge could occur. Water was discharged after results were obtained (all results are within limits). |

| Sample No. | Sample Location | Date | Time | pH | Electrical Conductivity (µS/cm) | Total Suspended Solids (mg/L) | Total Organic Carbon (TOC) | Grease & Oil (mg/L) | Comments |
|---|--------------------------------|---|----------------------|----------------------|---------------------------------|-------------------------------|----------------------------|---------------------|---|
| ES1021481-001 ES1021481-002 | SB18 DDCK | 25 October 2010 25 October 2010 | 0745 0800 | 7.6 7.13 | 477 95 | 488 234 | 11 9 | <5 <5 | |
| ES1022526-001 | SB18 (Pre flocculation) | 8 November 2010 | 1200 | 8.19 | 558 | 1070 | <10 | <5 | |
| ES1024131-001 | SD3 (Pre flocculation) | 25 November 2010 | 1010 | 7.4 | 522 | 52 | 9 | 36 | High oil and grease. Resample was taken after flocculation and prior to discharge (see below). Oil And Grease for resample remained within limits. |
| ES1024689-001 | SD3 Pre discharge (controlled) | 1 December 2010 | 1300 | 8.05 | 507 | 23 | 7 | <5 | Sample taken to determine whether a controlled discharge could occur. Water was discharged after results were obtained (all results are within limits). |
| ES1025105-001 ES1025105-002 ES1025105-003 | UNDC SB18 DDCK | 6 December 2010 6 December 2010 6 December 2010 | 1300 1320 1335 | 7.58 8.15 8.37 | 378 532 452 | 25 996 462 | 15 11 8 | <5 <5 <5 | |

Denotes samples taken prior to a controlled discharge or prior to flocculation to determine appropriate flocculation rates. These samples are not associated with a discharge.