



APPENDIX C

HISTORICAL LAND TITLE INFORMATION

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 4881-211

SEARCH DATE	TIME	EDITION NO	DATE
22/10/2010	8:41 AM	-	-

VOL 4881 FOL 211 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS

AT RYDE
LOCAL GOVERNMENT AREA RYDE
PARISH OF HUNTERS HILL COUNTY OF CUMBERLAND
TITLE DIAGRAM SEE SCHEDULE OF PARCELS

FIRST SCHEDULE

THE CROWLE FOUNDATION LIMITED

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- * 2 U424453 LEASE TO THE CHALLENGE FOUNDATION OF NEW SOUTH WALES
BEING PREMISES AT 8 JUNCTION ST RYDE. EXPIRES:
30/6/2092.
- * 3 2992564 LEASE TO GERMAN SCHOOL JOHANNES GUTENBERG OF PART
BEING LINDSEY COTTAGE & THE LAND APPURTENANT THERETO
SHOWN IN PLAN WITH 2992564 EXCLUDING LACY HOUSE.
EXPIRES: 31/12/2001.
- * 8144949 VARIATION OF LEASE 2992564 EXPIRY DATE NOW
31/12/2006

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOT 12 IN DP51349
LOT 1 IN DP1109537

TITLE DIAGRAM

DP51349
DP1109537.

*** END OF SEARCH ***

J/APEX58511146

PRINTED ON 22/10/2010

Espreon hereby certifies that the information contained in this document has been provided electronically by the Registrar-General in accordance with Section 96B(2) of the Real Property Act, 1900.

*Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title.

Warning: The information appearing under notations has not been formally recorded in the register.

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH
-----SEARCH DATE

22/10/2010 8:45AM

FOLIO: AUTO CONSOL 4881-211

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
23/2/2007	AC958221	CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 4881-211	

PARCELS IN CONSOL ARE:
12/51349, 1/1109537.

*** END OF SEARCH ***

J/APEX58511146

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 1829-159

SEARCH DATE	TIME	EDITION NO	DATE
22/10/2010	8:43 AM	-	-

VOL 1829 FOL 159 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA RYDE
PARISH OF HUNTERS HILL COUNTY OF CUMBERLAND
TITLE DIAGRAM DP4481

FIRST SCHEDULE

THE CROWLE FOUNDATION LIMITED (T I692750)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 13-14 IN DP4481.

*** END OF SEARCH ***

J/APEX58511146

PRINTED ON 22/10/2010

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH
-----SEARCH DATE

22/10/2010 8:46AM

FOLIO: AUTO CONSOL 1829-159

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
9/8/1994		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 1829-159	

PARCELS IN CONSOL ARE:
13-14/4481.

*** END OF SEARCH ***

J/APEX58511146

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/921633

SEARCH DATE	TIME	EDITION NO	DATE
22/10/2010	8:42 AM	2	26/10/1993

LAND

LOT 1 IN DEPOSITED PLAN 921633
LOCAL GOVERNMENT AREA RYDE
PARISH OF HUNTERS HILL COUNTY OF CUMBERLAND
TITLE DIAGRAM DP921633

FIRST SCHEDULE

THE CROWLE FOUNDATION LIMITED (T I692750)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES
NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED
CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS
RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE
IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND
COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

J/APEX58511146

PRINTED ON 22/10/2010

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH
-----SEARCH DATE

22/10/2010 8:45AM

FOLIO: 1/921633
-----First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 1399 FOL 177

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
7/12/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
1/5/1992	E289967	CHANGE OF NAME	EDITION 1
26/10/1993	I692750	TRANSFER	EDITION 2

*** END OF SEARCH ***

J/APEX58511146

PRINTED ON 22/10/2010

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 11/51349

SEARCH DATE	TIME	EDITION NO	DATE
22/10/2010	8:43 AM	2	26/10/1993

LAND

LOT 11 IN DEPOSITED PLAN 51349
AT MEADOWBANK
LOCAL GOVERNMENT AREA RYDE
PARISH OF HUNTERS HILL COUNTY OF CUMBERLAND
TITLE DIAGRAM DP51349

FIRST SCHEDULE

THE CROWLE FOUNDATION LIMITED (T I692750)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES
NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED
CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS
RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE
IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND
COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

J/APEX58511146

PRINTED ON 22/10/2010

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

22/10/2010 8:44AM

FOLIO: 11/51349

First Title(s): VOL 27 FOL 23
Prior Title(s): VOL 46 FOL 115

Recorded	Number	Type of Instrument	C.T. Issue
13/3/1991		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
31/5/1993	I373538	REQUEST	
31/5/1993	I373539	CHANGE OF NAME	EDITION 1
26/10/1993	I692750	TRANSFER	EDITION 2

*** END OF SEARCH ***

J/APEX58511146

PRINTED ON 22/10/2010

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RP33

OFFICE USE ONLY

**B**I
373539 N**APPLICATION TO RECORD
CHANGE OF NAME**REAL PROPERTY ACT, 1900
CROWN LANDS CONSOLIDATION ACT, 1913
WESTERN LANDS ACT, 1901CN
KC

	of	X
\$		

**DESCRIPTION
OF LAND**

Note (a)

LAND of which applicant is registered proprietor/holder			
Torrens Title Reference	Location	Tenure Card Reference	Land District
XLVI (46) Folio 115 <i>New</i> <i>11/51349</i>	Municipality of Ryde		

**REGISTERED
DEALING**

Note (b)

Type of Dealing	Registered Number	Torrens Title Reference

**NAME OF REG'D
PROPRIETOR(S)/
HOLDER(S)
(as presently
recorded)**

Note (c)

THE SUB-NORMAL CHILDREN'S WELFARE ASSOCIATION

Lodged with dealing No. E289967

being the REGISTERED PROPRIETOR(S) and a change of name, as set out in the statutory declaration having been effected, the applicant hereby applies to have the following name(s) recorded in the Register.

The name(s), address(es) and occupation(s) or description(s) of the REGISTERED PROPRIETOR(S)/HOLDER(S) should now be recorded as

**NAME OF REG'D
PROPRIETOR(S)/
HOLDER(S)
(after change
of name)**CHALLENGE FOUNDATION OF NEW SOUTH WALES whose registered office
is 8 Junction Street, Ryde

Australian Company Number 000 099 098

OFFICE USE ONLY

STATUTORY DECLARATION

Note (d)

In support of this application I solemnly and sincerely declare that:

Note (e)

1. The applicant is identical with the registered proprietor/holder (or one of them) of the abovementioned land.

Note (f)

2. On the day of 19 at in the State of the applicant married

Note (g)

3.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act, 1900, and I hereby certify this application to be correct for the purposes of the Real Property Act, 1900.

Made and subscribed at *Ryde* the *18TH* day of *MAY*, 19*93*, inthe presence of—
THE COMMON SEAL of
CHALLENGE FOUNDATION OF NEW SOUTH
WALES was hereunto affixed by
authority of the Board of Directors
in the presence of (LETTERS)**EXECUTION**

Note (h)

Address and Occupation of Witness
Secretary

Director Signature of Applicant

**TO BE COMPLETED
BY LODGING PARTY**Notes (i)
and (j)

LODGED BY		LOCATION OF DOCUMENTS	
BURKHART & COMPANY PTY LTD DX 654 SYDNEY Phone: 213 8171 155 S Delivery Box Number <i>Stefan Crowle</i>		CT	OTHER
Checked	Passed		Herewith,
Signed	Extra Fee		In L.T.O. with
REGISTERED - 19			Produced by
		Secondary Directions	
		Delivery Directions	

OFFICE USE ONLY

Noted in video Comdo
W
28.10.93

Appn. No. 1349 (as to part)
Reference to last certificate
Vol. 46 Fol. 116

New South Wales.



[CERTIFICATE OF TITLE.]

ORDER NO. C558722

REGISTER BOOK.

Vol. 4881 Fol. 211

CANCELLED ☒

SEE AC 4081-211

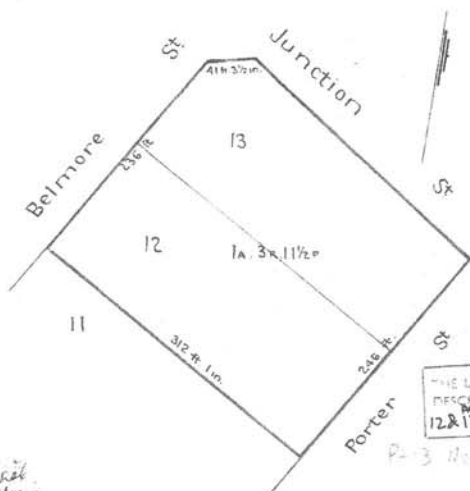
GEORGE AUSTRALIA DENNING, of Ryde, Retired Civil Servant, by virtue of Certificate of Title Volume 46 Folio 116 now surrendered is now the proprietor of an Estate in Fee Simple, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified hereon, in That piece of land situated in the Municipality of Ryde Parish of Hunters Hill, and County of Cumberland containing One acre three roods eleven and one half perches or thereabouts as shown in the plan hereon and therein edged red being Lot 12 and part of Lot 13 of Mullens Subdivision and being also part of 30 acres (Portion 15 of Parish) originally granted to Richard Cheers by Crown Grant dated the 29th day of September 1792 and also part of 1 acre 1 rood originally granted to Sarah Porter and Alfred Skinner by Crown Grant dated the 12th day of October 1865 Volume 20 Folio 111.

In witness whereof I have hereunto signed my name and affixed my Seal, this 12th day of November 1937.

Signed in the presence of

Mr. [Signature]

Reg. W. Mills
Registrar General



C558722
Reg. W. Mills

Scale: 100 ft. to one inch.

NOTIFICATION REFERRED TO

Subject to dower (if any) in the wives of Richard Cheers and James Wood.

Reg. W. Mills
Registrar General.



No. 1349 APPLICATION BY TRANSMISSION
the registered proprietor of the land within described in pursuance of the above Application entered 12th September 1937 at 11 o'clock in the fore noon.

Reg. W. Mills
REGISTRAR GENERAL

No. 2231A CAVEAT dated 21st September 1943 by the Registrar General. Produced 21st September 1943 and entered 21st September 1943 at 11 o'clock in the fore noon.

Reg. W. Mills
REGISTRAR GENERAL

The within notification with reference to claim to dower is hereby cancelled dated 3rd August, 1944.

Vide D 299215

Reg. W. Mills
Registrar General

The within Caveat No. D 23141 is hereby withdrawn Dated 15th November 1944

Reg. W. Mills
REGISTRAR GENERAL

No. D 2231A TRANSFER dated 21st September 1944 from the said George Australia Denning to John, Alice, Charles, and Alfred Cheers and William Alfred Griffiths, Proprietors, Company Limited, of Sydney as joint tenants of the land within described. Produced 19th October 1944 and entered 16th November 1944 at 12 o'clock in the noon.

Reg. W. Mills
REGISTRAR GENERAL

2231A
2231A
2231A

No. 12826 CAVEAT dated 12th March 1948
by the Registrar General.
Produced 12th March 1948 and
entered 12th March 1948
at 12 o'clock in the day noon.
REGISTRAR GENERAL

No. D223736 TRANSFER dated 19th March 1948
from the said John Pope and William Alfred
Pope to the said William Alfred
Pope and the said John Pope of the land within described
in Plan 121/11 E289967 Expires 31-12-1994
Optional of Renewal 3 years Registered
3-4-1992
REGISTRAR GENERAL

No. F75243 12th March 1948
12th March 1948
12th March 1948
12th March 1948
12th March 1948
REGISTRAR GENERAL

No. 12826 CAVEAT dated 12th March 1948
by the Registrar General.
Produced 12th March 1948 and
entered 12th March 1948
at 12 o'clock in the day noon.
REGISTRAR GENERAL

No. F75243 12th March 1948
12th March 1948
12th March 1948
12th March 1948
12th March 1948
REGISTRAR GENERAL

No. F755745 MORTGAGE dated 30th October 1954
from the said John Pope and William Alfred
Pope to the said William Alfred
Pope and the said John Pope of the land within described
in Plan 121/11 E289967 Expires 31-12-1994
Optional of Renewal 3 years Registered
3-4-1992
REGISTRAR GENERAL

No. F75243 12th March 1948
12th March 1948
12th March 1948
12th March 1948
12th March 1948
REGISTRAR GENERAL

Registered Proprietor Challenge Foundation of
New South Wales by Application
E289967 Reg. 3-4-1992

E289967 Lease to German School Johannes
Gutenberg of Part being Lindsey Cottage
and the land appurtenant thereto shown
in Plan 121/11 E289967 Expires 31-12-1994
Optional of Renewal 3 years Registered
3-4-1992

REGISTERED PROPRIETOR The Challenge Foundation
12th March 1948
12th March 1948
12th March 1948
12th March 1948

U424453 Lease to Challenge Foundation
of New South Wales being premises
at 8 Junction St. Ryde. Expires
30-6-2002. Registered 12-8-1994.

2992564 Lease to German School Johannes
Gutenberg of Part being Lindsey Cottage and
the land appurtenant thereto shown in plan
with 2992564. Excluding Lacey House.
Expires 31-12-2001. Registered 16-5-1997

2992564 Lease to German School Johannes
Gutenberg of Part being Lindsey Cottage and
the land appurtenant thereto shown in plan
with 2992564. Excluding Lacey House.
Expires 31-12-2001. Registered 16-5-1997

FOLIO CANCELLED UNRECORDED. AC 4881-211
NO FURTHER DEBENTURES TO BE REGISTERED

E289967 CN
68 L 4
7612750
U424453
2992564
2992564
2992564

11. Studswater & his crew moved to
camp 99 before 25th October 1961. Found
and returned to 25th October 1964 as
sets to 11 at last in the forest.

BY TRAIN

RECEIVED

NOV 18 1906

WILL

RECEIVED

NOV 18 1906

WILL

[illegible]

F755245 30th October 52
The sub-normal childhood Weyers
association
31st October 52
nt. pte 12
Spec

COMPUTER FOLIO CREATION NO FURTHER
DEALINGS TO BE REGISTERED.

CERTIFICATE OF TITLE.

(C.)

New South Wales,

[App' No. ———]

Reference to Sec. 17 - 18 - 19 - 20 - 21 - 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 30 - 31 - 32 - 33 - 34 - 35 - 36 - 37 - 38 - 39 - 40 - 41 - 42 - 43 - 44 - 45 - 46 - 47 - 48 - 49 - 50 - 51 - 52 - 53 - 54 - 55 - 56 - 57 - 58 - 59 - 60 - 61 - 62 - 63 - 64 - 65 - 66 - 67 - 68 - 69 - 70 - 71 - 72 - 73 - 74 - 75 - 76 - 77 - 78 - 79 - 80 - 81 - 82 - 83 - 84 - 85 - 86 - 87 - 88 - 89 - 90 - 91 - 92 - 93 - 94 - 95 - 96 - 97 - 98 - 99 - 100 - 101 - 102 - 103 - 104 - 105 - 106 - 107 - 108 - 109 - 110 - 111 - 112 - 113 - 114 - 115 - 116 - 117 - 118 - 119 - 120 - 121 - 122 - 123 - 124 - 125 - 126 - 127 - 128 - 129 - 130 - 131 - 132 - 133 - 134 - 135 - 136 - 137 - 138 - 139 - 140 - 141 - 142 - 143 - 144 - 145 - 146 - 147 - 148 - 149 - 150 - 151 - 152 - 153 - 154 - 155 - 156 - 157 - 158 - 159 - 160 - 161 - 162 - 163 - 164 - 165 - 166 - 167 - 168 - 169 - 170 - 171 - 172 - 173 - 174 - 175 - 176 - 177 - 178 - 179 - 180 - 181 - 182 - 183 - 184 - 185 - 186 - 187 - 188 - 189 - 190 - 191 - 192 - 193 - 194 - 195 - 196 - 197 - 198 - 199 - 200 - 201 - 202 - 203 - 204 - 205 - 206 - 207 - 208 - 209 - 210 - 211 - 212 - 213 - 214 - 215 - 216 - 217 - 218 - 219 - 220 - 221 - 222 - 223 - 224 - 225 - 226 - 227 - 228 - 229 - 230 - 231 - 232 - 233 - 234 - 235 - 236 - 237 - 238 - 239 - 240 - 241 - 242 - 243 - 244 - 245 - 246 - 247 - 248 - 249 - 250 - 251 - 252 - 253 - 254 - 255 - 256 - 257 - 258 - 259 - 260 - 261 - 262 - 263 - 264 - 265 - 266 - 267 - 268 - 269 - 270 - 271 - 272 - 273 - 274 - 275 - 276 - 277 - 278 - 279 - 280 - 281 - 282 - 283 - 284 - 285 - 286 - 287 - 288 - 289 - 290 - 291 - 292 - 293 - 294 - 295 - 296 - 297 - 298 - 299 - 300 - 301 - 302 - 303 - 304 - 305 - 306 - 307 - 308 - 309 - 310 - 311 - 312 - 313 - 314 - 315 - 316 - 317 - 318 - 319 - 320 - 321 - 322 - 323 - 324 - 325 - 326 - 327 - 328 - 329 - 330 - 331 - 332 - 333 - 334 - 335 - 336 - 337 - 338 - 339 - 340 - 341 - 342 - 343 - 344 - 345 - 346 - 347 - 348 - 349 - 350 - 351 - 352 - 353 - 354 - 355 - 356 - 357 - 358 - 359 - 360 - 361 - 362 - 363 - 364 - 365 - 366 - 367 - 368 - 369 - 370 - 371 - 372 - 373 - 374 - 375 - 376 - 377 - 378 - 379 - 380 - 381 - 382 - 383 - 384 - 385 - 386 - 387 - 388 - 389 - 390 - 391 - 392 - 393 - 394 - 395 - 396 - 397 - 398 - 399 - 400 - 401 - 402 - 403 - 404 - 405 - 406 - 407 - 408 - 409 - 410 - 411 - 412 - 413 - 414 - 415 - 416 - 417 - 418 - 419 - 420 - 421 - 422 - 423 - 424 - 425 - 426 - 427 - 428 - 429 - 430 - 431 - 432 - 433 - 434 - 435 - 436 - 437 - 438 - 439 - 440 - 441 - 442 - 443 - 444 - 445 - 446 - 447 - 448 - 449 - 450 - 451 - 452 - 453 - 454 - 455 - 456 - 457 - 458 - 459 - 460 - 461 - 462 - 463 - 464 - 465 - 466 - 467 - 468 - 469 - 470 - 471 - 472 - 473 - 474 - 475 - 476 - 477 - 478 - 479 - 480 - 481 - 482 - 483 - 484 - 485 - 486 - 487 - 488 - 489 - 490 - 491 - 492 - 493 - 494 - 495 - 496 - 497 - 498 - 499 - 500 - 501 - 502 - 503 - 504 - 505 - 506 - 507 - 508 - 509 - 510 - 511 - 512 - 513 - 514 - 515 - 516 - 517 - 518 - 519 - 520 - 521 - 522 - 523 - 524 - 525 - 526 - 527 - 528 - 529 - 530 - 531 - 532 - 533 - 534 - 535 - 536 - 537 - 538 - 539 - 540 - 541 - 542 - 543 - 544 - 545 - 546 - 547 - 548 - 549 - 550 - 551 - 552 - 553 - 554 - 555 - 556 - 557 - 558 - 559 - 560 - 561 - 562 - 563 - 564 - 565 - 566 - 567 - 568 - 569 - 570 - 571 - 572 - 573 - 574 - 575 - 576 - 577 - 578 - 579 - 580 - 581 - 582 - 583 - 584 - 585 - 586 - 587 - 588 - 589 - 590 - 591 - 592 - 593 - 594 - 595 - 596 - 597 - 598 - 599 - 600 - 601 - 602 - 603 - 604 - 605 - 606 - 607 - 608 - 609 - 610 - 611 - 612 - 613 - 614 - 615 - 616 - 617 - 618 - 619 - 620 - 621 - 622 - 623 - 624 - 625 - 626 - 627 - 628 - 629 - 630 - 631 - 632 - 633 - 634 - 635 - 636 - 637 - 638 - 639 - 640 - 641 - 642 - 643 - 644 - 645 - 646 - 647 - 648 - 649 - 650 - 651 - 652 - 653 - 654 - 655 - 656 - 657 - 658 - 659 - 660 - 661 - 662 - 663 - 664 - 665 - 666 - 667 - 668 - 669 - 670 - 671 - 672 - 673 - 674 - 675 - 676 - 677 - 678 - 679 - 680 - 681 - 682 - 683 - 684 - 685 - 686 - 687 - 688 - 689 - 690 - 691 - 692 - 693 - 694 - 695 - 696 - 697 - 698 - 699 - 700 - 701 - 702 - 703 - 704 - 705 - 706 - 707 - 708 - 709 - 710 - 711 - 712 - 713 - 714 - 715 - 716 - 717 - 718 - 719 - 720 - 721 - 722 - 723 - 724 - 725 - 726 - 727 - 728 - 729 - 730 - 731 - 732 - 733 - 734 - 735 - 736 - 737 - 738 - 739 - 740 - 741 - 742 - 743 - 744 - 745 - 746 - 747 - 748 - 749 - 750 - 751 - 752 - 753 - 754 - 755 - 756 - 757 - 758 - 759 - 760 - 761 - 762 - 763 - 764 - 765 - 766 - 767 - 768 - 769 - 770 - 771 - 772 - 773 - 774 - 775 - 776 - 777 - 778 - 779 - 780 - 781 - 782 - 783 - 784 - 785 - 786 - 787 - 788 - 789 - 790 - 791 - 792 - 793 - 794 - 795 - 796 - 797 - 798 - 799 - 800 - 801 - 802 - 803 - 804 - 805 - 806 - 807 - 808 - 809 - 810 - 811 - 812 - 813 - 814 - 815 - 816 - 817 - 818 - 819 - 820 - 821 - 822 - 823 - 824 - 825 - 826 - 827 - 828 - 829 - 830 - 831 - 832 - 833 - 834 - 835 - 836 - 837 - 838 - 839 - 840 - 841 - 842 - 843 - 844 - 845 - 846 - 847 - 848 - 849 - 850 - 85

[Fol. 116 — Folio 117 —]



RECEIVED

ON ISSUE OF NEW FOLIO
REGISTER BOOK,

Vol. 1399 Folio 177

George. Australia Denning

[illegible]

In witness whereof, I have hereunto signed my name and affixed my Seal, this day of

one thousand nine hundred and *seven*

Signed the _____ day of _____, 1907.

in the presence of

Deputy Registrar General.

NOTIFICATION REFERRED TO.

Subject to Powers may be the subject of a Highland
Chairs and seats Highland

1. *Agave* - *Agave* - *Agave*

No. 14-1011 APPLICATION BY TRANSMISSION
 Date June 20, 1914
 Registered at Los Angeles, Cal.
 Application Registered
 Entered at Los Angeles, Cal.
June 20, 1914
 RECEIVED OFFICE

Belmore

Porter St

$$\begin{array}{r} 0a \quad 3r \quad 3lp \\ \hline 3124 \quad 9in \end{array}$$

On 2. 23 $\frac{1}{4}$ p

Q. 10. 10. 8. 8.

Q_a 2r. 32p

THE LAND WITHIN
DESCRIBED IS LAND

No. 1000 F - T dated 10th October 1952
 by the Registrar General
 F. 1000
 entered 10th October 1952
 at 10th October 1952 noon
 Registrar General

The within caveat No. 1000 is hereby withdrawn
 Dated 10th October 1952
 Registrar General

F. 1000
 The within caveat No. 1000 is hereby withdrawn
 Dated 10th October 1952
 Registrar General

The within Caveat No. 1000 is hereby withdrawn
 Dated 10th October 1952
 Registrar General

No. 1000 TRANSFER dated 10th October 1952
 from the said John Joseph William Moore
 to the said John Joseph William Moore
 of the land within described
 Produced 10th October 1952 and entered 10th October 1952
 at 10th October 1952 noon
 Registrar General

No. 1000 CAVEAT dated 10th October 1952
 by the Registrar General
 Entered 10th October 1952
 at 10th October 1952 noon
 Registrar General

No. 1000 TRANSFER dated 10th March 1944
 from the said John Joseph William Moore
 to the said John Joseph William Moore
 of the land within described
 Produced 10th March 1944 and entered 10th March 1944
 at 10th March 1944 noon
 Registrar General

No. 1000 TRANSFER dated 10th March 1944
 from the said John Joseph William Moore
 to the said John Joseph William Moore
 of the land within described
 Produced 10th March 1944 and entered 10th March 1944
 at 10th March 1944 noon
 Registrar General

No. 1000 TRANSFER dated 10th March 1944
 from the said John Joseph William Moore
 to the said John Joseph William Moore
 of the land within described
 Produced 10th March 1944 and entered 10th March 1944
 at 10th March 1944 noon
 Registrar General

F. 1000
 The within caveat No. 1000 is hereby withdrawn
 Dated 10th October 1952
 Registrar General

NO FURTHER DEEDS TO BE REGISTERED.

CERTIFICATE OF TITLE.

(C.)

New South Wales.

[Appⁿ No. 1349 of 1897]
[Reference to last Certificate]
[Vol. 1110. Folio 25.]



REGISTER BOOK,
Vol. 1829 Folio 159

CANCELLED

1829-189

George Australia Penning of the Civil Service transferred under instrument of transfer from Robert

Rennell Johnson numbered 476807 is now the proprietor of an Estate in Fee Simple,

subject nevertheless to the reservations and conditions, if any, contained in the Grants hereinafter referred to, and also subject to such

encumbrances, liens, and interests as are notified hereon, in *that* piece of land situated

in the *Municipal District of Ryde*, Parish of *Hunter Hill*, and County of *Cumberland*

containing *two rods twelve and one half perches*, or thereabouts

as shown on the Plan hereon, and therein edged red, being *lots 13 and 14* on a plan deposited in the Land Titles Office Sydney

numbered 4481 and part of *forty acres* *Parcel 15* of *Parish* originally granted to *Richard Olson* by Crown Grant dated

the *twenty-fourth* day of *September* one thousand seven hundred and *ninety two* and also part of *one acre one rood*

originally granted to *Sarah Bole* and *Alfred Spencer* by Crown Grant dated the *twelfth* day of *October* one thousand

eight hundred and forty five registered in the Land Titles Office Sydney Volume 20 Folio 111, which said Grants are

deposited in the public map of the said parish deposited in the Department of Lands

In witness whereof I have hereunto signed my name and affixed my Seal, this *Nineteenth* day of

November one thousand nine hundred and *seven*

Signed the *19th* day of *November* 1907,

in the presence of

A. G. Brown

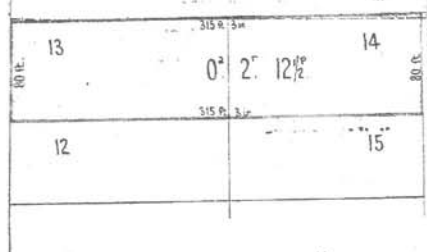
W. H. Williams
Deputy Registrar General

NOTIFICATION REFERRED TO.

No. 1349 of 1897		APPLICATION BY TRANSMISSION	
Proprietor of the land within described in pursuance of the above Application		Produced by the registered	
entered at 12 o'clock in the noon.		1907	
at 12 o'clock in the noon.		1907	
REGISTER GENERAL		REGISTER GENERAL	

No. 1349 of 1897		APPLICATION BY TRANSMISSION	
Proprietor of the land within described in pursuance of the above Application		Produced by the registered	
entered at 12 o'clock in the noon.		1907	
REGISTER GENERAL		REGISTER GENERAL	

Belmore St.



Porter St.

11/11/07

W. H. Williams

The within Caveat No. 2231411 is hereby withdrawn
 Dated 15 August 1949

 REGISTRAR GENERAL

No. 2312312 TRANSFER dated 9th September 1948
 from the said John Joseph and William Alfred
Joseph, formerly of Sydney, to John Joseph
Joseph, formerly of Sydney, to John Joseph
 of the land within described
 Produced 19th October 1948 and entered 19th October
 at 12 o'clock in the noon.

 REGISTRAR GENERAL

No. 2312312 CAVEAT dated 19th October 1948
 by the Registrar General.
 Produced 19th October 1948 and
 entered 19th October 1948
 at 12 o'clock in the noon.

 REGISTRAR GENERAL

No. 2312312 TRANSFER dated 9th March 1948
 from the said John Joseph and William Alfred
Joseph, formerly of Sydney, to John Joseph
Joseph, formerly of Sydney, to John Joseph
 of the land within described
 Produced 19th October 1948 and entered 19th October
 at 12 o'clock in the noon.

 REGISTRAR GENERAL

NOTE OF DEATH. Proof having been given
 in case of the death of the said John Joseph
 of the land within described
 Produced 19th October 1948 and entered 19th October
 at 12 o'clock in the noon.

 REGISTRAR GENERAL

The within Caveat No. 2231411 is hereby withdrawn
 Dated 15 August 1949

 REGISTRAR GENERAL

No. 2312312 TRANSFER dated 9th September 1948
 from the said John Joseph and William Alfred
Joseph, formerly of Sydney, to John Joseph
Joseph, formerly of Sydney, to John Joseph
 of the land within described
 Produced 19th October 1948 and entered 19th October
 at 12 o'clock in the noon.

 REGISTRAR GENERAL

No. 2312312 MORTGAGE dated 9th September 1948
 from the said John Joseph and William Alfred
Joseph, formerly of Sydney, to John Joseph
Joseph, formerly of Sydney, to John Joseph
 of the land within described
 Produced and entered 19th October 1948
 at 12 o'clock in the noon.

 REGISTRAR GENERAL

E289745
G464046 28th March

Registered Proprietary Challenge Foundation of
 New South Wales by Affidavit
E289745 Registered 30.4.1942

REGISTERED PROPRIETOR The Crown
Transfer E289745
30.4.1942

COMPUTER TO IN NO FURTHER
 DEALINGS TO BE REGISTERED.

E289745
G464046
28th March



APPENDIX D

SOIL PROFILE LOGS

Client: Achieve Australia		Project No.: 17900/8471B		BOREHOLE NO.: BH 1		
Project: 74 - 78 Belmore Street, Ryde		Date : 10 November 2010				
Location: Refer to Drawing No.: 10/1335		Logged: JK		Sheet 1 of 3		
W A T E R L E V E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
WT 17/11/10	SPT / S1 1.0 - 1.45 m 3, 3, 4, N = 7		SILTY CLAY: dark brown, low plasticity, trace fine grained sand	CL	FIRM TO STIFF	M
			TOPSOIL/FILL			
			SILTY CLAY: orange brown with dark grey, light grey and dark brown, medium plasticity, trace of gravel	CL	FIRM TO STIFF	M
			FILL			
			SILTY CLAY: orange brown with light grey, medium to high plasticity	CL/CH	VERY STIFF	M
			SILTY CLAY: light grey with orange brown, medium plasticity	CL	VERY STIFF	M
			SHALE: light grey with orange brown and occasional dark grey, fine gravel		EXTREMELY LOW STRENGTH	D
			AUGER REFUSAL AT 2.6 M ON WEATHERED SHALE			
			For core details, refer to the core log sheets			
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)				Contractor: Terratest Pty Ltd Equipment: Hydro Power		
See explanation sheets for meaning of all descriptive terms and symbols				Hole Diameter (mm): 100 Angle from Vertical (°) 0		

SMEC Testing Services Pty Ltd										GEOTECHNICAL LOG - CORED BOREHOLE												
Client: Achieve Australia					Project / STS No.: 17900/8471B					BOREHOLE NO.: BH 1												
Project: 74 - 78 Belmore Street, Ryde					Date: 10 November 2010					Sheet 3 of 3												
Location: Refer to Drawing No.: 10/1335					Logged: JK					Checked By:												
DRILLING			MATERIAL STRENGTH										DISCONTINUITIES									
Method	Water	Recovery	Depth (m)	Rock Type (Colour, Grain Size, Structure & Minor Components)	Weathering	Estimated Rock Strength						Joint Spacing (mm)					Visual	Additional Data (Joints, partings, seams, zones etc. Description, orientation, infilling, or coating, shape, roughness, thickness, other)				
						Extremely Low	Very Low	Low	Medium	High	Very High	Extremely High	20	40	100	300			1000			
				SHALE: light grey with orange brown and red brown	MW/ HW												6.10-6.20 Cy, Sm Fractured + clay 6.30 - 6.99 Cy, Sm					
			7.0	SHALE: dark grey with occasional light grey and orange brown	MW												6.00 - 7.64 - Fractured					
			8.0	SANDSTONE: orange brown with dark brown and occasional light grey, fine grained	MW												7.65 Pt 0 deg, Ir, Ro, Cy 7.77 Pt 0 deg, Ir, Ro, Cy 7.90 Jt 0 deg, Ir, Ro					
			9.0														8.12-8.19 Cy, Sm 8.26 Jt, 0 deg, Pl, Ro 8.34 Kt 0 deg, Pl, Ro 8.39 Sm ,Cy 8.52 Pt, 0 deg, Pl, Ro 8.47-8.67 Fractured/Cy					
			10.0														8.80 Jt 5 deg, Pl, Ro 8.92 Jt 5 deg, Pl, Ro,Cy					
			11.0	BOREHOLE DISCONTINUED AT 10.00 M													9.90 Pt, 0 deg, Pl, Ro					
			12.0																			
Notes:															Contractor: Terratest Pty Ltd							
															Equipment: Hydro Power							
															Hole Diameter (mm): 100							
															Angle from Vertical (°):							
See explanation sheets for meaning of all descriptive terms and symbols																						

Client: Achieve Australia		Project No.: 17900/8471B		BOREHOLE NO.: BH 4		
Project: 74 - 78 Belmore Street, Ryde		Date : 10 November 2010				
Location: Refer to Drawing No.: 10/1335		Logged: JK		Sheet 1 of 3		
W A T E R L E V E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
WT 15/12/10	S2 @ 0.6 m SPT 1.0 - 1.45m 4, 8.10 N=18	0.0	SILTY CLAY: dark brown, low plasticity TOPSOIL	CL	FIRM TO STIFF	M
		0.6	SILTY CLAY: orange brown with occasional light grey, medium plasticity trace gravel	CL	VERY STIFF	M
WT 17/11/10		2.0	SHALE: dark grey with light grey and orange brown, fine gravel, clayey seams		EXTREMELY LOW STRENGTH	D
		4.0				
		5.0	V-BIT REFUSAL AT 4.35 M For core details, refer to core log sheets			
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)				Contractor: Terratest Pty Ltd Equipment: Hydro Power Hole Diameter (mm): 100 Angle from Vertical (°) 0		
See explanation sheets for meaning of all descriptive terms and symbols						

SMEC Testing Services Pty Ltd										GEOTECHNICAL LOG - CORED BOREHOLE												
Client: Achieve Australia					Project / STS No.: 17900/8471B					BOREHOLE NO.: BH 4												
Project: 74 - 78 Belmore Street, Ryde					Date : 10 November 2010																	
Location: Refer to Drawing No.: 10/1335					Logged: JK					Checked By:												
										Sheet 2 of 3												
DRILLING			MATERIAL STRENGTH										DISCONTINUITIES									
Method	Water	Recovery	Depth (m)	Rock Type (Colour, Grain Size, Structure & Minor Components)	Weathering	Estimated Rock Strength						Joint Spacing (mm)					Visual	Additional Data (Joints, partings, seams, zones etc. Description, orientation, infilling, or coating, shape, roughness, thickness, other)				
						Extremely Low	Very Low	Low	Medium	High	Very High	Extremely High	20	40	100	300			1000			
			0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0	For further information refer to the Non Core Borehole sheets																		
				START CORING AT 4.32 M																		
N M L C			5.0 5.2 5.4 5.6 5.8 6.0	SHALE : dark grey with orange brown, occasional clay seams	MW												Fractured Jt/Rl, Ir, Ro some clay/ironstone					
C O R I N G																	5.50-5.53 Cy, Sm					
																	5.84-5.90 Cy, Sm					
Notes:															Contractor: Terratest Pty Ltd							
															Equipment: Hydro Power							
															Hole Diameter (mm):							
															Angle from Vertical (°):							
See explanation sheets for meaning of all descriptive terms and symbols																						

Client: Achieve Australia		Project No.: 17900/8471B		BOREHOLE NO.: BH 5		
Project: 74 - 78 Belmore Street, Ryde		Date : 10 November 2010				
Location: Refer to Drawing No.: 10/1335		Logged: JK		Sheet 1 of 3		
W A T E R L E V E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
WT 15/12/10 WT 17/11/10	SPT / S3 1.0-1.45m 11, 16, 16 N=32	0.0	SILTY CLAY: dark brown, low plasticity	CL	FIRM TO STIFF	M
		0.5	TOPSOIL/FILL			
		1.0	SILTY CLAY: orange brown with light grey, medium plasticity, occasional gravel (shale)	CL	FIRM TO STIFF	M
		1.5	SILTY CLAY: light grey with orange brown, low plasticity, trace gravel (shale)	CL	HARD	M
		2.0	(Completely weathered shale)			
		2.0	SHALE: dark brown/orange brown with light grey, fine grained		EXTREMELY LOW STRENGTH	D
		3.0	BOREHOLE DISCONTINUED AT 2.5 M			
		4.0				
		5.0	For further details refer to the cored borehole sheets			
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)				Contractor: Terratest Pty Ltd Equipment: Hydro Power		
See explanation sheets for meaning of all descriptive terms and symbols				Hole Diameter (mm): 100 Angle from Vertical (°) 0		

SMEC Testing Services Pty Ltd										GEOTECHNICAL LOG - CORED BOREHOLE												
Client: Achieve Australia					Project / STS No.: 17900/8471B					BOREHOLE NO.: BH 5												
Project: 74 - 78 Belmore Street, Ryde					Date : 10 November 2010																	
Location: Refer to Drawing No.: 10/1335					Logged: JK					Checked By:												
										Sheet 2 of 3												
DRILLING			MATERIAL STRENGTH										DISCONTINUITIES									
Method	Water	Recovery	Depth (m)	Rock Type (Colour, Grain Size, Structure & Minor Components)	Weathering	Estimated Rock Strength						Joint Spacing (mm)					Visual	Additional Data (Joints, partings, seams, zones etc. Description, orientation, infilling, or coating, shape, roughness, thickness, other)				
						Extremely Low	Very Low	Low	Medium	High	Very High	Extremely High	20	40	100	300			1000			
			1.0 2.0	For further information refer to the Non Core Borehole sheets																		
				START CORING AT 2.50 M																		
N M L C			3.0	SHALE: dark grey with orange brown and occasional light grey, occasion clay seams	MW												2.50-8.0 Jt/Pt 0-45 deg. Pl, Re, Ir Ro clayey seams some fractured zones					
			4.0		MW/ SW																	
				6.0																		
Notes:															Contractor: Terratest Pty Ltd Equipment: Hydro Power Hole Diameter (mm): Angle from Vertical (°):							
See explanation sheets for meaning of all descriptive terms and symbols																						

SMEC Testing Services Pty Ltd										GEOTECHNICAL LOG - CORED BOREHOLE												
Client: Achieve Australia					Project / STS No.: 17900/8471B					BOREHOLE NO.: BH 5												
Project: 74 - 78 Belmore Street, Ryde					Date: 10 November 2010																	
Location: Refer to Drawing No.: 10/1335					Logged: JK					Checked By:												
										Sheet 3 of 3												
DRILLING			MATERIAL STRENGTH										DISCONTINUITIES									
Method	Water	Recovery	Depth (m)	Rock Type (Colour, Grain Size, Structure & Minor Components)	Weathering	Estimated Rock Strength						Joint Spacing (mm)					Visual	Additional Data (Joints, partings, seams, zones etc. Description, orientation, infilling, or coating, shape, roughness, thickness, other)				
						Extremely Low	Very Low	Low	Medium	High	Very High	Extremely High	20	40	100	300			1000			
			7.0	SHALE: dark grey with orange brown and occasional light grey, occasional clay seams	MW																	
			8.0	SHALE: dark grey with light grey, occasional clay	Fr																	
			9.0																			
			10.0																			
			11.0	BOREHOLE DISCONTINUED AT 9.92 M																		
			12.0																			
Notes:															Contractor: Terratest Pty Ltd							
															Equipment: Hydro Power							
															Hole Diameter (mm):							
															Angle from Vertical (°):							
See explanation sheets for meaning of all descriptive terms and symbols																						

Client: Achieve Australia		Project No.: 17900/8471B		BOREHOLE NO.: BH 7		
Project: 74 - 78 Belmore Street, Ryde		Date : 10 November 2010				
Location: Refer to Drawing No.: 10/1335		Logged: JK		Sheet 1 of 3		
W A T E R L E V E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
WT 15/12/10 WT 17/11/10	S4 @ 0.3m SPT 1.0-1.45m 3, 7, 9 N=10	0.0	ASPHALTIC CONCRETE/ SANDY GRAVEL: dark grey, fine to medium grained FILL	GW	DENSE	D
		0.3	SILTY CLAY: dark brown with occasional orange brown, medium plasticity, occasional gravel TOPSOIL/FILL	CL	FIRM	M
		0.6	SILTY CLAY: orange brown with light grey, medium plasticity	CL	FIRM TO STIFF	M
		1.0				
		1.4	SILTY CLAY: light grey with orange brown, medium plasticity, trace gravel (shale)	CL	STIFF	M/D
		2.0				
		2.5	V-BIT REFUSAL AT 2.50 M			
		3.0				
		4.0				
		5.0				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)				Contractor: Terratest Pty Ltd Equipment: Hydro Power Hole Diameter (mm): 100 Angle from Vertical (°) 0		
See explanation sheets for meaning of all descriptive terms and symbols						

SMEC Testing Services Pty Ltd										GEOTECHNICAL LOG - CORED BOREHOLE												
Client: Achieve Australia					Project / STS No.: 17900/8471B					BOREHOLE NO.: BH 7												
Project: 74 - 78 Belmore Street, Ryde					Date: 10 November 2010																	
Location: Refer to Drawing No.: 10/1335					Logged: JK					Checked By:												
										Sheet 3 of 3												
DRILLING			MATERIAL STRENGTH										DISCONTINUITIES									
Method	Water	Recovery	Depth (m)	Rock Type (Colour, Grain Size, Structure & Minor Components)	Weathering	Estimated Rock Strength						Joint Spacing (mm)					Visual	Additional Data (Joints, partings, seams, zones etc. Description, orientation, infilling, or coating, shape, roughness, thickness, other)				
						Extremely Low	Very Low	Low	Medium	High	Very High	Extremely High	20	40	100	300			1000			
				SHALE: dark grey with orange brown and light grey, fine grained	SW													6.04 Pt 0 deg. Pl, Ro 6.18 Jt 0 deg. Pl, Ro 6.35 Jt 0 deg. Pl, Ro 6.44 Jt 0 deg. Pl, Ro 6.51 Jt 0 deg. Pl, Ro 6.67 Jt 0 deg. Pl, Ro 6.70 Jt 0 deg. Pl, Ro				
			7.0	SANDSTONE: light grey with orange brown, fine to medium grained, occasional dark grey bands	SW													7.18 Pt 0 deg. Pl, Ro 7.26 Jt 0 deg. Pl, Sm, Cy infill 7.45 Jt 3 deg. Pl, Sm 7.55 Jt 3 deg. Pl, Sm 7.91 Pt 10 deg. Pl, Ro 8.03 Jt 0 deg. Pl, Sm 8.19 Jt 5 deg. Pl, Sm 8.50 Jt 0 deg. Pl, Sm 8.60 Jt 0 deg. Pl, Ro 9.18 Jt 0 deg. Pl, Sm 9.50 Jt 0 deg. Pl, Sm 9.78 Jt 3 deg. Pl, Ro 9.84 Jt 0 deg. Pl, Ro				
			8.0																			
			9.0																			
				(9.20- 9.48 Shale interbedd)																		
			10.0																			
				BOREHOLE DISCONTINUED AT 10 M																		
			11.0																			
			12.0																			
Notes:															Contractor: Terratest Pty Ltd Equipment: Hydro Power Hole Diameter (mm): Angle from Vertical (°):							
See explanation sheets for meaning of all descriptive terms and symbols																						

Client: Achieve Australia		Project No.: 17900/8471B		BOREHOLE NO.: BH 8		
Project: 74 - 78 Belmore Street, Ryde		Date : 10 November 2010				
Location: Refer to Drawing No.: 10/1335		Logged: JK		Sheet 1 of 3		
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
WT 15/12/10	S5 @ 0.3m SPT / S6 1.0-1.45m 3, 3, 4 N=7		ASPHALTIC CONCRETE/ SANDY GRAVEL: dark grey	GW	DENSE	
			FILL			
			SILTY CLAY: dark brown, low plasticity, occasional gravel	CL	FIRM	M
			TOPSOIL			
			SILTY CLAY: orange brown with light grey, medium plasticity, occasional gravel (shale)	CL	FIRM TO STIFF	M
WT 17/11/10			SILTY CLAY: light grey with orange brown and occasional red brown, medium plasticity trace gravel (shale)	CL	FIRM TO STIFF	M
			V-BIT REFUSAL AT 2.5 M			
			For further details refer to the cored borehole sheets			
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)				Contractor: Terratest Pty Ltd Equipment: Hydro Power Hole Diameter (mm): 100 Angle from Vertical (°) 0		
See explanation sheets for meaning of all descriptive terms and symbols						

SMEC Testing Services Pty Ltd										GEOTECHNICAL LOG - CORED BOREHOLE												
Client: Achieve Australia					Project / STS No.: 17900/8471B					BOREHOLE NO.: BH 8												
Project: 74 - 78 Belmore Street, Ryde					Date : 10 November 2010					Sheet 3 of 3												
Location: Refer to Drawing No.: 10/1335					Logged: JK					Checked By:												
DRILLING			MATERIAL STRENGTH										DISCONTINUITIES									
Method	Water	Recovery	Depth (m)	Rock Type (Colour, Grain Size, Structure & Minor Components)	Weathering	Estimated Rock Strength						Joint Spacing (mm)					Visual	Additional Data (Joints, partings, seams, zones etc. Description, orientation, infilling, or coating, shape, roughness, thickness, other)				
						Extremely Low	Very Low	Low	Medium	High	Very High	Extremely High	20	40	100	300			1000			
				SHALE: dark grey with orange brown and light grey occasional clay	MW													6.03 Jt 0 deg. Pl, Ro 6.14 Jt 0 deg. Pl, Ro, Cy/Fe 6.23 Jt 0 deg. Pl, Sm 6.34 Jt 0 deg. Pl, Sm 6.40 Jt 0 deg. Pl, Ro, 6.47 Jt 0 deg. Pl Sm 6.52 Jt 0 deg. Pl, Ro, 6.62-6.64 Jt 40 deg. Pl, Ro 6.64-6.73 Und. Jt 6.88-6.91 Jt 0 deg. Pl, Ro, Cy				
			7.0	SANDSTONE: orange brown with dark grey and light grey, fine to medium grained	MW													7.05 Pt 0 deg. Ir, Ro 7.26 Jt 5 deg. Pl, Sm				
				SANDSTONE: light grey with dark grey, fine grained	Fr													7.63 Pt 0 deg. Pl, Ro 8.07 Pt 0 deg. Pl, Ro 8.33 Pt 20 deg. Pl, Ro 8.37 Jt 45 deg. 8.62 Pt 10 deg. Pl, Ro 8.86 Jt 0 deg. Pl, Sm 8.94 Pt 0 deg. Pl, Ro 9.03 Pt 0 deg. Pl, Ro				
			8.0																			
				(9.46-9.64 shale interbedd)	Fr/St													9.47 Jt 0 deg. Pl, Ro 9.64 Jt 0 deg. Pl, Ro 9.76 Jt 0 deg. Pl, Ro				
			9.0																			
				SANDSTONE: orange brown with light grey, fine to medium grained	SW																	
			10.0																			
				BOREHOLE DISCONTINUED AT 10 M																		
			11.0																			
			12.0																			
Notes:															Contractor: Terratest Pty Ltd Equipment: Hydro Power Hole Diameter (mm): Angle from Vertical (°):							
See explanation sheets for meaning of all descriptive terms and symbols																						

Client: Achieve Australia		Project No.: 17900/8471B		BOREHOLE NO.: BH 9		
Project: 74 - 78 Belmore Street, Ryde		Date : 10 November 2010				
Location: Refer to Drawing No.: 10/1335		Logged: JK		Sheet 1 of 1		
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	S7 @ 0.3 m		ASPHALTIC CONCRETE/ SANDY GRAVEL: dark grey	CW		D
			FILL			
			SILTY CLAY: dark brown with occasional orange brown, medium plasticity, occasional gravel	CL		M
			TOPSOIL/FILL			
			SILTY CLAY: orange brown with light grey, medium plasticity, trace gravel	CL		M
		1.0	BOREHOLE DISCONTINUED AT 0.8 M			
		2.0				
		3.0				
		4.0				
		5.0				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)				Contractor: STS Equipment: Edson RP 70		
See explanation sheets for meaning of all descriptive terms and symbols				Hole Diameter (mm): 100 Angle from Vertical (°) 0		

Client: Achieve Australia			Project No.: 17900/8471B		BOREHOLE NO.: BH 10	
Project: 74 - 78 Belmore Street, Ryde			Date : 10 November 2010			
Location: Refer to Drawing No.: 10/1335			Logged: JK		Sheet 1 of 1	
W A T E R L E V E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	S8 @ 0.3 m		ASPHALTIC CONCRETE/SANDY GRAVEL: dark grey	GW		D
			FILL			
			SILTY CLAY: dark brown with orange brown, medium plasticity, occa`	CL		M
			TOPSOIL/FILL			
			SILTY CLAY: orange brown with light grey, medium plasticity	CL		M
		1.0	BOREHOLE DISCONTINUED AT 0.7 M			
		2.0				
		3.0				
		4.0				
		5.0				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample				Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)				Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols				Hole Diameter (mm): 100		
				Angle from Vertical (°) 0		



APPENDIX E

CHAIN OF CUSTODY DOCUMENTATION



Environmental Division

SAMPLE RECEIPT NOTIFICATION (SRN)
Comprehensive Report

Work Order : EP1006993

Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Perth
Contact	: SMEC TESTING < last name >	Contact	: Scott James
Address	:	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: smectesting@pacific.net.au	E-mail	: perth.enviro.services@alsglobal.com
Telephone	: ----	Telephone	: +61-8-9209 7655
Facsimile	: ----	Facsimile	: +61-8-9209 7600
Project	: 17900	Page	: 1 of 2
Order number	: 8366		
C-O-C number	: 152305	Quote number	: ES2010SMETES0264 (EN/025/10)
Site	: Belmore St Ryde		
Sampler	: JC	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 18-NOV-2010	Issue Date	: 18-NOV-2010 16:14
Client Requested Due Date	: 25-NOV-2010	Scheduled Reporting Date	: 25-NOV-2010

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 8 - Ice present
No. of coolers/boxes	: 1 Medium Hard Esky	No. of samples received	: 9
Security Seal	: Intact.	No. of samples analysed	: 9

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Requested Deliverables
- Samples received in appropriately pretreated and preserved containers.
- Please see scanned COC for sample discrepancies: extra samples , samples not received etc.
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times.**
- **pH analysis should be conducted within 6 hours of sampling.**
- Analytical work for this work order will be conducted at ALS Environmental Perth.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (SamplesPerth@alsenviro.com)
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of Work Order.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exist.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EA002 pH (1:5)	SOIL - ED040S Soluble Major Anions	SOIL - ED045G (solids) Chloride Soluble by Discrete Analyser	SOIL - S-19 TPH/BTEX/P/Ph/OC/OP/PCB/8 metals
EP1006993-001	16-NOV-2010 15:00	S1 1.0m	✓	✓	✓	✓
EP1006993-002	16-NOV-2010 15:00	S2 0.6m				✓
EP1006993-003	16-NOV-2010 15:00	S3 1.0m	✓	✓	✓	✓
EP1006993-004	16-NOV-2010 15:00	S4 0.3m				✓
EP1006993-005	16-NOV-2010 15:00	S5 0.3m				✓
EP1006993-006	16-NOV-2010 15:00	S6 1.2m				✓
EP1006993-007	16-NOV-2010 15:00	S7 0.3m	✓	✓	✓	✓
EP1006993-008	16-NOV-2010 15:00	S8 0.3m				✓

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - W-18 TPH(C6 - C9)/BTEX
EP1006993-009	16-NOV-2010 15:00	ALS TRIP BLANK	✓

Requested Deliverables

SMEC TESTING < last name >

- *AU Certificate of Analysis - NATA
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA
- A4 - AU Sample Receipt Notification - Environmental
- A4 - AU Tax Invoice (INV)
- Chain of Custody (CoC)
- EDI Format - ENMRG
- EDI Format - ESDAT (ESDAT)
- EDI Format - XTab (XTAB)

Email	smectesting@pacific.net.au
Email	smectesting@pacific.net.au
Email	smectesting@pacific.net.au
Email	smectesting@pacific.net.au
Email	smectesting@pacific.net.au
Email	smectesting@pacific.net.au
Email	smectesting@pacific.net.au
Email	smectesting@pacific.net.au

[illegible]



APPENDIX F

ANALYTICAL LABORATORY REPORTS

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EP1006993	Page	: 1 of 12
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Perth
Contact	: SMEC TESTING < last name >	Contact	: Scott James
Address	:	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: smectesting@pacific.net.au	E-mail	: perth.enviro.services@alsglobal.com
Telephone	: ----	Telephone	: +61-8-9209 7655
Facsimile	: ----	Facsimile	: +61-8-9209 7600
Project	: 17900	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 8366	Date Samples Received	: 18-NOV-2010
C-O-C number	: 152305	Issue Date	: 26-NOV-2010
Sampler	: JC	No. of samples received	: 9
Site	: Belmore St Ryde	No. of samples analysed	: 9
Quote number	: EN/025/10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Cicella Bartels	Metals Instrument Chemist	Perth Inorganics
Daniel Fisher	Inorganics Analyst	Perth Inorganics
Rassem Ayoubi	Senior Organic Chemist	Perth Organics

Environmental Division Perth

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Page : 2 of 12
Work Order : EP1006993
Client : SMEC TESTING SERVICES PTY LTD
Project : 17900

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key :

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

▲ = This result is computed from individual analyte detections at or above the level of reporting



Analytical Results

Sub-Matrix: SOIL

Sub-Matrix: SOIL	Client sample ID						
Compound	Client sampling date / time		S1 1.0m 16-NOV-2010 15:00 EP1006993-001	S2 0.6m 16-NOV-2010 15:00 EP1006993-002	S3 1.0m 16-NOV-2010 15:00 EP1006993-003	S4 0.3m 16-NOV-2010 15:00 EP1006993-004	S5 0.3m 16-NOV-2010 15:00 EP1006993-005
	CAS Number	LOR					
EA002 : pH (Soils)							
pH Value	----	0.1	pH Unit	5.1	----	4.9	----
EA055: Moisture Content							
^ Moisture Content (dried @ 103°C)	----	1.0	%	14.7	18.7	13.7	20.0
ED040S : Soluble Sulfate by ICPAES							
Sulfate as SO4 2-	14808-79-8	10	mg/kg	30	----	20	----
ED045G: Chloride Discrete analyser							
Chloride	16887-00-6	10	mg/kg	40	----	90	----
EG005T: Total Metals by ICP-AES							
Arsenic	7440-38-2	5	mg/kg	<5	<5	7	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	19	18	7	17
Copper	7440-50-8	5	mg/kg	13	22	24	24
Lead	7439-92-1	5	mg/kg	19	24	16	56
Nickel	7440-02-0	2	mg/kg	2	3	5	36
Zinc	7440-66-6	5	mg/kg	24	18	24	32
EG035T: Total Recoverable Mercury by FIMS							
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	0.1
EP066: Polychlorinated Biphenyls (PCB)							
Total Polychlorinated biphenyls	----	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
EP068A: Organochlorine Pesticides (OC)							
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL

Sub-Matrix: SOIL	Client sample ID				Client sampling date / time			
Compound	CAS Number	LOR	Unit	S1 1.0m 16-NOV-2010 15:00 EP1006993-001	S2 0.6m 16-NOV-2010 15:00 EP1006993-002	S3 1.0m 16-NOV-2010 15:00 EP1006993-003	S4 0.3m 16-NOV-2010 15:00 EP1006993-004	S5 0.3m 16-NOV-2010 15:00 EP1006993-005
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID				
				Client sampling date / time				
				S1 1.0m 16-NOV-2010 15:00 EP1006993-001	S2 0.6m 16-NOV-2010 15:00 EP1006993-002	S3 1.0m 16-NOV-2010 15:00 EP1006993-003	S4 0.3m 16-NOV-2010 15:00 EP1006993-004	S5 0.3m 16-NOV-2010 15:00 EP1006993-005
EP075(SIM)A: Phenolic Compounds - Continued								
Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.8
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.8
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.6
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	90.0	100	110	98.0	98.0
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	80.4	69.6	103	88.2	89.8
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	72.7	62.4	89.9	74.9	82.7



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number		LOR		Client sampling date / time		Client sample ID				
						Unit	S1 1.0m 16-NOV-2010 15:00 EP1006993-001	S2 0.6m 16-NOV-2010 15:00 EP1006993-002	S3 1.0m 16-NOV-2010 15:00 EP1006993-003	S4 0.3m 16-NOV-2010 15:00 EP1006993-004	S5 0.3m 16-NOV-2010 15:00 EP1006993-005
EP075(SIM)S: Phenolic Compound Surrogates											
Phenol-d6	13127-88-3	0.1	%	82.7	86.5						
2-Chlorophenol-D4	93951-73-6	0.1	%	81.3	87.3						
2,4,6-Tribromophenol	118-79-6	0.1	%	81.2	83.0						
EP075(SIM)T: PAH Surrogates											
2-Fluorobiphenyl	321-60-8	0.1	%	86.6	93.4						
Anthracene-d10	1719-06-8	0.1	%	90.1	86.8						
4-Terphenyl-d14	1718-51-0	0.1	%	81.9	81.2						
EP080S: TPH(V)/BTX Surrogates											
1,2-Dichloroethane-D4	17060-07-0	0.1	%	87.4	87.8						
Toluene-D8	2037-26-5	0.1	%	114	96.9						
4-Bromofluorobenzene	460-00-4	0.1	%	91.2	93.1						



Analytical Results

Sub-Matrix: SOIL

Compound		CAS Number		LOR		Unit		Client sample ID			
		Client sampling date / time		S6		S7		S8			
EA002 : pH (Soils)				1.2m		0.3m		0.3m			
pH Value				16-NOV-2010 15:00		16-NOV-2010 15:00		16-NOV-2010 15:00			
EA055: Moisture Content				EP1006993-006		EP1006993-007		EP1006993-008			
^ Moisture Content (dried @ 103°C)											
ED040S : Soluble Sulfate by ICPAES											
Sulfate as SO4 2-		14808-79-8		10		mg/kg		20			
ED045G: Chloride Discrete analyser											
Chloride		16887-00-6		10		mg/kg		40			
EG005T: Total Metals by ICP-AES											
Arsenic		7440-38-2		5		mg/kg		5			
Cadmium		7440-43-9		1		mg/kg		<1			
Chromium		7440-47-3		2		mg/kg		16			
Copper		7440-50-8		5		mg/kg		12			
Lead		7439-92-1		5		mg/kg		26			
Nickel		7440-02-0		2		mg/kg		4			
Zinc		7440-66-6		5		mg/kg		13			
EG035T: Total Recoverable Mercury by FIMS											
Mercury		7439-97-6		0.1		mg/kg		<0.1			
EP066: Polychlorinated Biphenyls (PCB)											
Total Polychlorinated biphenyls				0.10		mg/kg		<0.10			
EP068A: Organochlorine Pesticides (OC)											
alpha-BHC		319-84-6		0.05		mg/kg		<0.05			
Hexachlorobenzene (HCB)		118-74-1		0.05		mg/kg		<0.05			
beta-BHC		319-85-7		0.05		mg/kg		<0.05			
gamma-BHC		58-89-9		0.05		mg/kg		<0.05			
delta-BHC		319-86-8		0.05		mg/kg		<0.05			
Heptachlor		76-44-8		0.05		mg/kg		<0.05			
Aldrin		309-00-2		0.05		mg/kg		<0.05			
Heptachlor epoxide		1024-57-3		0.05		mg/kg		<0.05			
trans-Chlordane		5103-74-2		0.05		mg/kg		<0.05			
alpha-Endosulfan		959-98-8		0.05		mg/kg		<0.05			
cis-Chlordane		5103-71-9		0.05		mg/kg		<0.05			
Dieldrin		60-57-1		0.05		mg/kg		<0.05			
4,4'-DDE		72-55-9		0.05		mg/kg		<0.05			
Endrin		72-20-8		0.05		mg/kg		<0.05			
beta-Endosulfan		33213-65-9		0.05		mg/kg		<0.05			
4,4'-DDD		72-54-8		0.05		mg/kg		<0.05			



Analytical Results

Sub-Matrix: SOIL

Compound		Client sample ID			
		CAS Number	LOR	Unit	Client sampling date / time
EP068A: Organochlorine Pesticides (OC) - Continued					
Endrin aldehyde	7421-93-4	0.05		mg/kg	
Endosulfan sulfate	1031-07-8	0.05		mg/kg	
4,4'-DDT	50-29-3	0.2		mg/kg	
Endrin ketone	53494-70-5	0.05		mg/kg	
Methoxychlor	72-43-5	0.2		mg/kg	
EP068B: Organophosphorus Pesticides (OP)					
Dichlorvos	62-73-7	0.05		mg/kg	
Demeton-S-methyl	919-86-8	0.05		mg/kg	
Monocrotophos	6923-22-4	0.2		mg/kg	
Dimethoate	60-51-5	0.05		mg/kg	
Diazinon	333-41-5	0.05		mg/kg	
Chlorpyrifos-methyl	5598-13-0	0.05		mg/kg	
Parathion-methyl	298-00-0	0.2		mg/kg	
Malathion	121-75-5	0.05		mg/kg	
Fenthion	55-38-9	0.05		mg/kg	
Chlorpyrifos	2921-88-2	0.05		mg/kg	
Parathion	56-38-2	0.2		mg/kg	
Pirimphos-ethyl	23505-41-1	0.05		mg/kg	
Chlorfenvinphos	470-90-6	0.05		mg/kg	
Bromophos-ethyl	4824-78-6	0.05		mg/kg	
Fenamiphos	22224-92-6	0.05		mg/kg	
Prothiofos	34643-46-4	0.05		mg/kg	
Ethion	563-12-2	0.05		mg/kg	
Carbophenothion	786-19-6	0.05		mg/kg	
Azinphos Methyl	86-50-0	0.05		mg/kg	
EP075(SIM)A: Phenolic Compounds					
Phenol	108-95-2	0.5		mg/kg	
2-Chlorophenol	95-57-8	0.5		mg/kg	
2-Methylphenol	95-48-7	0.5		mg/kg	
3- & 4-Methylphenol	1319-77-3	1.0		mg/kg	
2-Nitrophenol	88-75-5	0.5		mg/kg	
2,4-Dimethylphenol	105-67-9	0.5		mg/kg	
2,4-Dichlorophenol	120-83-2	0.5		mg/kg	
2,6-Dichlorophenol	87-65-0	0.5		mg/kg	
4-Chloro-3-Methylphenol	59-50-7	0.5		mg/kg	
2,4,6-Trichlorophenol	88-06-2	0.5		mg/kg	
2,4,5-Trichlorophenol	95-95-4	0.5		mg/kg	
S6 1.2m 16-NOV-2010 15:00 EP1006993-006					
S7 0.3m 16-NOV-2010 15:00 EP1006993-007					
S8 0.3m 16-NOV-2010 15:00 EP1006993-008					



Analytical Results

Sub-Matrix: SOIL

Sub-Matrix: SOIL		Client sample ID				
		Client sampling date / time				
Compound	CAS Number	LOR	Unit	S6 1.2m 16-NOV-2010 15:00 EP1006993-006	S7 0.3m 16-NOV-2010 15:00 EP1006993-007	S8 0.3m 16-NOV-2010 15:00 EP1006993-008
EP075(SIM)A: Phenolic Compounds - Continued						
Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons						
C6 - C9 Fraction		10	mg/kg	<10	<10	<10
C10 - C14 Fraction		50	mg/kg	<50	<50	<50
C15 - C28 Fraction		100	mg/kg	<100	<100	<100
C29 - C36 Fraction		100	mg/kg	<100	<100	<100
^ C10 - C36 Fraction (sum)		50	mg/kg	<50	<50	<50
EP080: BTEX						
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5
EP066S: PCB Surrogate						
Decachlorobiphenyl	2051-24-3	0.1	%	114	98.0	85.0
EP068S: Organochlorine Pesticide Surrogate						
Dibromo-DDE	21655-73-2	0.1	%	81.5	83.6	102
EP068T: Organophosphorus Pesticide Surrogate						
DEF	78-48-8	0.1	%	65.0	76.6	105



Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number			Client sample ID			Client sampling date / time		
	LOR	Unit		S6	S7	S8			
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%	87.4	92.0	88.2	16-NOV-2010 15:00	16-NOV-2010 15:00	
2-Chlorophenol-D4	93951-73-6	0.1	%	87.0	92.6	87.2			
2,4,6-Tribromophenol	118-79-6	0.1	%	86.7	83.8	85.6			
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	92.3	96.9	94.6			
Anthracene-d10	1719-06-8	0.1	%	89.2	95.6	90.7			
4-Terphenyl-d14	1718-51-0	0.1	%	86.7	92.3	86.9			
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	99.9	88.2	90.7			
Toluene-D8	2037-26-5	0.1	%	99.3	111	115			
4-Bromofluorobenzene	460-00-4	0.1	%	97.6	89.3	92.8			

Sub-Matrix: WATER

Sub-Matrix: WATER	Client sample ID Client sampling date / time					
Compound	CAS Number	LOR	Unit	ALS TRIP BLANK		
EP080/071: Total Petroleum Hydrocarbons						
C6 - C9 Fraction		20	µg/L	<20		
EP080: BTEX						
Benzene	71-43-2	1	µg/L	<1		
Toluene	108-88-3	2	µg/L	<2		
Ethylbenzene	100-41-4	2	µg/L	<2		
meta- & para-Xylene	108-38-3	2	µg/L	<2		
ortho-Xylene	95-47-6	2	µg/L	<2		
EP080S: TPH(V)/BTEX Surrogates						
1,2-Dichloroethane-D4	17060-07-0	0.1	%	95.1		
Toluene-D8	2037-26-5	0.1	%	102		
4-Bromofluorobenzene	460-00-4	0.1	%	86.4		



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Surrogate Control Limits

Sub-Matrix: SOIL			Recovery Limits (%)	
Compound	CAS Number		Low	High
EP066S: PCB Surrogate				
Decachlorobiphenyl	2051-24-3		43.1	141.9
EP068S: Organochlorine Pesticide Surrogate				
Dibromo-DDE	21655-73-2		53.4	152.4
EP068T: Organophosphorus Pesticide Surrogate				
DEF	78-48-8		27.5	151.7
EP075(SIM)S: Phenolic Compound Surrogates				
Phenol-d6	13127-88-3		70.6	120.8
2-Chlorophenol-D4	93951-73-6		66.9	114.4
2,4,6-Tribromophenol	118-79-6		38.7	121
EP075(SIM)T: PAH Surrogates				
2-Fluorobiphenyl	321-60-8		80.9	122.1
Anthracene-d10	1719-06-8		76.3	116.1
4-Terphenyl-d14	1718-51-0		58.7	128.3
EP080S: TPH(V)/BTEX Surrogates				
1,2-Dichloroethane-D4	17060-07-0		63.2	132
Toluene-D8	2037-26-5		66.0	125.4
4-Bromofluorobenzene	460-00-4		60.4	124
Sub-Matrix: WATER				
Compound	CAS Number		Low	High
EP080S: TPH(V)/BTEX Surrogates				
1,2-Dichloroethane-D4	17060-07-0		60.5	141.2
Toluene-D8	2037-26-5		73.4	126
4-Bromofluorobenzene	460-00-4		59.6	125.3

Environmental Division

QUALITY CONTROL REPORT

Work Order	: EP1006993	Page	: 1 of 14
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Perth
Contact	: SMEC TESTING < last name >	Contact	: Scott James
Address	:	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: smectesting@pacific.net.au	E-mail	: perth.enviro.services@alsglobal.com
Telephone	: ----	Telephone	: +61-8-9209 7655
Facsimile	: ----	Facsimile	: +61-8-9209 7600
Project	: 17900	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Belmore St Ryde	Date Samples Received	: 18-NOV-2010
C-O-C number	: 152305	Issue Date	: 26-NOV-2010
Sampler	: JC	No. of samples received	: 9
Order number	: 8366	No. of samples analysed	: 9
Quote number	: EN/025/10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics
Daniel Fisher	Inorganics Analyst	Perth Inorganics
Rassem Ayoubi	Senior Organic Chemist	Perth Organics

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Work Order : EP1006993
Client : SMEC TESTING SERVICES PTY LTD
Project : 17900

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :

Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA002 : pH (Soils) (QC Lot: 1575423)									
EP1006993-001	S1 1.0m	EA002: pH Value	----	0.1	pH Unit	5.1	5.2	0.0	0% - 20%
EA055: Moisture Content (QC Lot: 1567689)									
EP1006991-001	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	19.8	20.2	1.7	0% - 20%
EP1006993-006	S6 1.2m	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	19.0	20.3	6.8	0% - 20%
ED040S: Soluble Major Anions (QC Lot: 1575424)									
EP1006993-001	S1 1.0m	ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	30	30	0.0	No Limit
ED045G: Chloride Discrete analyser (QC Lot: 1575425)									
EP1006993-001	S1 1.0m	ED045G: Chloride	16887-00-6	10	mg/kg	40	40	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 1570620)									
EP1006993-001	S1 1.0m	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	19	15	18.4	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	2	2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	13	12	8.8	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	19	19	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	24	20	20.2	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	13	16	18.9	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
EP1007014-022	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1570621)									
EP1006993-001	S1 1.0m	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP1007014-022	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.2	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 1568188)									
EP1006992-002	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.10	mg/kg	<0.10	<0.10	0.0	No Limit
EP1006993-008	S8 0.3m	EP066: Total Polychlorinated biphenyls	----	0.10	mg/kg	<0.10	<0.10	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 1568189)									
EP1006992-013	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



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Sub-Matrix: SOIL			Laboratory Duplicate (DUP) Report								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP068A: Organochlorine Pesticides (OC) (QC Lot: 1568189) - continued											
EP1006992-013	Anonymous	EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP1006993-008	S8 0.3m	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
				EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
				EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
				EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP068: delta-BHC	319-86-8			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Heptachlor	76-44-8			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Aldrin	309-00-2			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Heptachlor epoxide	1024-57-3			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: trans-Chlordane	5103-74-2			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: alpha-Endosulfan	959-98-8			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: cis-Chlordane	5103-71-9			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Dieldrin	60-57-1			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: 4,4'-DDE	72-55-9			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Endrin	72-20-8			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: beta-Endosulfan	33213-65-9			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: 4,4'-DDD	72-54-8			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Endrin aldehyde	7421-93-4			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Endosulfan sulfate	1031-07-8			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Endrin ketone	53494-70-5			0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: 4,4'-DDT	50-29-3			0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
EP068: Methoxychlor	72-43-5			0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 1568189)											



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Sub-Matrix: SOIL			Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)			
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 1568189) - continued EP1006992-013	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit			
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit			
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit			
		EP1006993-008	S8 0.3m	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit	
EP068: Demeton-S-methyl	919-86-8			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Dimethoate	60-51-5			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Diazinon	333-41-5			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Chlorpyrifos-methyl	5598-13-0			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Malathion	121-75-5			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Fenthion	55-38-9			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Chlorpyrifos	2921-88-2			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Pirimphos-ethyl	23505-41-1			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Chlorfenvinphos	470-90-6			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Bromophos-ethyl	4824-78-6			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Fenamiphos	22224-92-6			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Prothiofos	34643-46-4			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Ethion	563-12-2			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Carbophenothion	786-19-6			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Azinphos Methyl	86-50-0			0.05	mg/kg	<0.05	<0.05	0.0	No Limit			
EP068: Monocrotophos	6923-22-4			0.2	mg/kg	<0.2	<0.2	0.0	No Limit			
EP068: Parathion-methyl	298-00-0			0.2	mg/kg	<0.2	<0.2	0.0	No Limit			
EP068: Parathion	56-38-2			0.2	mg/kg	<0.2	<0.2	0.0	No Limit			
EP075(SIM)A: Phenolic Compounds (QC Lot: 1568191)												



Sub-Matrix: SOIL			Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)A: Phenolic Compounds (QC Lot: 1568191) - continued									
EP1006992-002	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	0.0	No Limit
		EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit		
EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	0.0	No Limit		
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1568191)									
EP1006992-002	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



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Sub-Matrix: SOIL			Laboratory Duplicate (DUP) Report								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1568191) - continued											
EP1006992-002	Anonymous	EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP1006992-022	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1567351)	Anonymous	EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit		
		EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit		
		EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1568190)									
		EP1006992-002	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
EP071: C29 - C36 Fraction	----			100	mg/kg	<100	<100	0.0	No Limit		
EP071: C10 - C14 Fraction	----			50	mg/kg	<50	<50	0.0	No Limit		
EP071: C15 - C28 Fraction	----			100	mg/kg	<100	<100	0.0	No Limit		
EP1006992-022	Anonymous	EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit		
EP080: BTEX (QC Lot: 1567351)											
EP1006991-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP1006993-007	S7 0.3m	EP080: ortho-Xylene	106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080: BTEX (QC Lot: 1567351) - continued									
EP1006993-007	S7 0.3m	EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		106-42-3							
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
Sub-Matrix: WATER									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1570494)									
EP1006993-009	ALS TRIP BLANK	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP1007060-009	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEX (QC Lot: 1570494)									
EP1006993-009	ALS TRIP BLANK	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
EP1007060-009	Anonymous								
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit



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Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EA002 : pH (Soils) (QCLot: 1575423)									
EA002: pH Value	----	0.1	pH Unit	----	7.00 pH Unit		100	70	130
ED040S: Soluble Major Anions (QCLot: 1575424)									
ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	<10	250 mg/kg		95.3	86	116
ED045G: Chloride Discrete analyser (QCLot: 1575425)									
ED045G: Chloride	16887-00-6	10	mg/kg	<10	5000 mg/kg		111	82	126
EG005T: Total Metals by ICP-AES (QCLot: 1570620)									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.75 mg/kg		95.9	85.5	116
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.82 mg/kg		97.0	82.2	112
EG005T: Chromium	7440-47-3	2	mg/kg	<2	61.6 mg/kg		105	90	112
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.7 mg/kg		105	93	115
EG005T: Lead	7439-92-1	5	mg/kg	<5	55.5 mg/kg		98.9	88.8	111
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.1 mg/kg		104	91	115
EG005T: Zinc	7440-66-6	5	mg/kg	<5	105 mg/kg		99.6	86.6	113
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1570621)									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	1.36 mg/kg		94.1	75.4	121
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 1568188)									
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.10	1 mg/kg		85.0	48.9	135
EP068A: Organochlorine Pesticides (OC) (QCLot: 1568189)									
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg		108	61.7	127
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg		106	60.5	127
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg		93.8	63.8	128
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg		97.5	61.2	128
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg		97.4	64.8	128
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg		94.1	63.6	136
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg		89.1	62.4	124
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg		87.9	66.1	127
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg		92.3	66.1	127
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg		112	65.8	126
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg		113	66.3	127
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg		96.9	65.3	127
EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg		105	66	126
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg		92.6	65.7	134
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg		108	63.7	130
EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg		107	63	124



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 1568189) - continued									
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg		109	41.5	135
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg		90.4	62	133
EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg		83.0	52.7	153
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg		94.2	63.4	134
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg		73.4	53.4	151
EP068B: Organophosphorus Pesticides (OP) (QCLot: 1568189)									
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg		94.2	58.8	130
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg		62.1	16.2	137
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg		67.5	9.88	184
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg		98.6	54.3	137
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg		98.2	64.4	127
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg		95.3	64.7	126
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg		103	60.5	127
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg		102	61.6	132
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg		103	56.2	125
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg		105	65	127
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg		104	61.8	152
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg		92.5	63.6	127
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg		89.4	59.4	141
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg		91.0	65.2	130
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg		101	44.2	144
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg		106	64.8	126
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg		100	64.4	128
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg		102	64	126
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg		85.9	37.4	154
EP075(SIM)A: Phenolic Compounds (QCLot: 1568191)									
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	10 mg/kg		87.2	75.7	130
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	10 mg/kg		88.1	74.2	132
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	10 mg/kg		90.7	74.4	130
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1.0	20 mg/kg		92.6	74	130
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	10 mg/kg		93.9	66.4	136
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	10 mg/kg		94.4	68.2	129
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	10 mg/kg		96.0	74.9	129
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	10 mg/kg		88.7	73.8	128
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	10 mg/kg		86.5	74.1	128
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	10 mg/kg		87.5	70.1	130
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	10 mg/kg		84.5	72.1	130
EP075(SIM): Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	10 mg/kg		61.1	19.2	150
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1568191)									



Sub-Matrix: SOIL				Method Blank (MB) Report		Spike Concentration		Spike Recovery (%)		Recovery Limits (%)	
Method: Compound				CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1568191) - continued											
EP075(SIM): Naphthalene				91-20-3	0.5	mg/kg	<0.5	10 mg/kg	89.0	75.4	127
EP075(SIM): Acenaphthylene				208-96-8	0.5	mg/kg	<0.5	10 mg/kg	92.8	74.3	128
EP075(SIM): Acenaphthene				83-32-9	0.5	mg/kg	<0.5	10 mg/kg	88.6	76.6	127
EP075(SIM): Fluorene				86-73-7	0.5	mg/kg	<0.5	10 mg/kg	87.5	76.6	127
EP075(SIM): Phenanthrene				85-01-8	0.5	mg/kg	<0.5	10 mg/kg	90.4	75.6	126
EP075(SIM): Anthracene				120-12-7	0.5	mg/kg	<0.5	10 mg/kg	89.3	73.6	130
EP075(SIM): Fluoranthene				206-44-0	0.5	mg/kg	<0.5	10 mg/kg	87.0	72.8	127
EP075(SIM): Pyrene				129-00-0	0.5	mg/kg	<0.5	10 mg/kg	87.3	74.7	127
EP075(SIM): Benz(a)anthracene				56-55-3	0.5	mg/kg	<0.5	10 mg/kg	83.7	72.8	127
EP075(SIM): Chrysene				218-01-9	0.5	mg/kg	<0.5	10 mg/kg	85.6	75.2	129
EP075(SIM): Benzo(b)fluoranthene				205-99-2	0.5	mg/kg	<0.5	10 mg/kg	82.0	63.7	135
EP075(SIM): Benzo(k)fluoranthene				207-08-9	0.5	mg/kg	<0.5	10 mg/kg	87.9	68.7	133
EP075(SIM): Benzo(a)pyrene				50-32-8	0.5	mg/kg	<0.5	10 mg/kg	84.4	73	127
EP075(SIM): Indeno(1,2,3.cd)pyrene				193-39-5	0.5	mg/kg	<0.5	10 mg/kg	85.3	67.1	131
EP075(SIM): Dibenz(a,h)anthracene				53-70-3	0.5	mg/kg	<0.5	10 mg/kg	86.1	66.5	131
EP075(SIM): Benzo(g,h,i)perylene				191-24-2	0.5	mg/kg	<0.5	10 mg/kg	86.1	68.8	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1567351)											
EP080: C6 - C9 Fraction				----	10	mg/kg	<10	32 mg/kg	104	68	140
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1568190)											
EP071: C10 - C14 Fraction				----	25	mg/kg	----	1445 mg/kg	69.9	64.7	126
					50	mg/kg	<50	----	----	----	----
EP071: C15 - C28 Fraction				----	100	mg/kg	<100	----	----	----	----
					50	mg/kg	----	2593 mg/kg	82.3	61.7	124
EP071: C29 - C36 Fraction				----	100	mg/kg	<100	----	----	----	----
					50	mg/kg	----	518 mg/kg	89.6	64.6	131
EP080: BTEX (QCLot: 1567351)											
EP080: Benzene				71-43-2	0.2	mg/kg	<0.2	2 mg/kg	94.4	73.4	122
EP080: Toluene				108-88-3	0.5	mg/kg	<0.5	2 mg/kg	104	74.3	121
EP080: Ethylbenzene				100-41-4	0.5	mg/kg	<0.5	2 mg/kg	107	74.2	122
EP080: meta- & para-Xylene				108-38-3	0.5	mg/kg	<0.5	4 mg/kg	104	74.8	121
				106-42-3							
EP080: ortho-Xylene				95-47-6	0.5	mg/kg	<0.5	2 mg/kg	104	74.2	121
Sub-Matrix: WATER											
						Method Blank (MB) Report		Spike Concentration		Spike Recovery (%)	
				CAS Number	LOR	Unit	Result		LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1570494)											
EP080: C6 - C9 Fraction				----	20	µg/L	<20	320 µg/L	137	74.2	142
EP080: BTEX (QCLot: 1570494)											



Sub-Matrix: **WATER**

Method Blank (MB) Report				Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
EP080: BTEX (QCLot: 1570494) - continued							
EP080: Benzene	71-43-2	1	µg/L	20 µg/L	102	72.6	122
EP080: Toluene	108-88-3	2	µg/L	20 µg/L	103	71.1	123
EP080: Ethylbenzene	100-41-4	2	µg/L	20 µg/L	99.2	71.9	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	40 µg/L	98.5	72.3	122
EP080: ortho-Xylene	95-47-6	2	µg/L	20 µg/L	102	72.3	121



Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	MS
EP045G: Chloride Discrete analyser (QCLot: 1575425)							
EP1006993-003	S3 1.0m	ED045G: Chloride	16887-00-6	1250 mg/kg	119	70	130
EP005T: Total Metals by ICP-AES (QCLot: 1570620)							
EP1006993-002	S2 0.6m	EG005T: Arsenic	7440-38-2	50 mg/kg	87.7	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	103	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	106	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	98.2	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	99.9	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	103	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	99.0	70	130
EP035T: Total Recoverable Mercury by FIMS (QCLot: 1570621)							
EP1006993-002	S2 0.6m	EG035T: Mercury	7439-97-6	10 mg/kg	103	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 1568188)							
EP1006992-004	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	83.0	43.1	141.9
EP068A: Organochlorine Pesticides (OC) (QCLot: 1568189)							
EP1006992-014	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	94.2	57.9	124
		EP068: Heptachlor	76-44-8	0.5 mg/kg	91.6	57.4	135
		EP068: Aldrin	309-00-2	0.5 mg/kg	90.8	59.6	125
		EP068: Dieldrin	60-57-1	0.5 mg/kg	112	62.2	131
		EP068: Endrin	72-20-8	0.5 mg/kg	87.5	55.8	138
		EP068: 4,4'-DDT	50-29-3	0.5 mg/kg	95.4	50.5	145
EP068B: Organophosphorus Pesticides (OP) (QCLot: 1568189)							
EP1006992-014	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	87.6	59.5	128
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	86.8	60.3	128
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	75.6	58.8	127
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	63.0	60.7	128
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	103	60.0	129
EP075(SIM)A: Phenolic Compounds (QCLot: 1568191)							
EP1006992-004	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	80.9	73.4	135
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	81.0	71.7	136
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	84.1	62.8	137
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	10 mg/kg	84.1	73.6	128
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	69.4	18.0	152
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1568191)							
EP1006992-004	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	84.4	73.5	125



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Project : 17900

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1568191) - continued							
EP1006992-004	Anonymous	EP075(SIM): Pyrene	129-00-0	10 mg/kg	78.1	70.8	125
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1567351)							
EP1006991-002	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	79.9	69.1	135
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1568190)							
EP1006992-004	Anonymous	EP071: C10 - C14 Fraction	----	1445 mg/kg	71.8	64.7	126
		EP071: C15 - C28 Fraction	----	2592 mg/kg	83.0	61.7	124
		EP071: C29 - C36 Fraction	----	518 mg/kg	89.1	64.6	131
EP080: BTEX (QCLot: 1567351)							
EP1006991-002	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	78.2	76.4	118
		EP080: Toluene	108-88-3	2 mg/kg	87.9	67.4	127

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)		Recovery Limits (%)	
				Concentration	MS	Low	High	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1570494)								
EP1007060-001	Anonymous	EP080: C6 - C9 Fraction		280 µg/L	137		77.0	137
EP080: BTEX (QCLot: 1570494)								
EP1007060-001	Anonymous	EP080: Benzene	71-43-2	20 µg/L	100		77.0	122
		EP080: Toluene	108-88-3	20 µg/L	105		73.5	126

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EP1006993	Page	: 1 of 9
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Perth
Contact	: SMEC TESTING < last name >	Contact	: Scott James
Address	:	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: smectesting@pacific.net.au	E-mail	: perth.enviro.services@alsglobal.com
Telephone	: ----	Telephone	: +61-8-9209 7655
Facsimile	: ----	Facsimile	: +61-8-9209 7600
Project	: 17900	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Belmore St Ryde	Date Samples Received	: 18-NOV-2010
C-O-C number	: 152305	Issue Date	: 26-NOV-2010
Sampler	: JC	No. of samples received	: 9
Order number	: 8366	No. of samples analysed	: 9
Quote number	: EN/025/10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

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Work Order : EP1006993
Client : SMEC TESTING SERVICES PTY LTD
Project : 17900

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: SOIL

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation		Analysis	
Container / Client Sample ID(s)			Date extracted	Due for extraction	Date analysed	Due for analysis
EA002 : pH (Soils)						
Soil Glass Jar - Unpreserved S1 - 1.0m, S7 - 0.3m		16-NOV-2010	25-NOV-2010	23-NOV-2010	25-NOV-2010	25-NOV-2010
					✖	✔
EA055: Moisture Content						
Soil Glass Jar - Unpreserved S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,		16-NOV-2010	----	----	19-NOV-2010	30-NOV-2010
					----	✔
ED040S : Soluble Sulfate by ICPAES						
Soil Glass Jar - Unpreserved S1 - 1.0m, S7 - 0.3m		16-NOV-2010	25-NOV-2010	23-NOV-2010	25-NOV-2010	23-DEC-2010
					✖	✔
ED045G: Chloride Discrete analyser						
Soil Glass Jar - Unpreserved S1 - 1.0m, S7 - 0.3m		16-NOV-2010	25-NOV-2010	23-NOV-2010	25-NOV-2010	23-DEC-2010
					✖	✔
EG005T: Total Metals by ICP-AES						
Soil Glass Jar - Unpreserved S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,		16-NOV-2010	22-NOV-2010	15-MAY-2011	23-NOV-2010	15-MAY-2011
					✔	✔
EG035T: Total Recoverable Mercury by FIMS						
Soil Glass Jar - Unpreserved S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,		16-NOV-2010	22-NOV-2010	14-DEC-2010	23-NOV-2010	14-DEC-2010
					✔	✔



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 Project : 17900

Matrix: **SOIL** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method		Sample Date	Extraction / Preparation		Evaluation	Analysis			
Container / Client Sample ID(s)	Date extracted		Due for extraction	Date analysed		Due for analysis	Evaluation		
EP066: Polychlorinated Biphenyls (PCB)									
Soil Glass Jar - Unpreserved	S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,	16-NOV-2010	22-NOV-2010	30-NOV-2010	✓	22-NOV-2010	01-JAN-2011	✓	
	S2 - 0.6m, S4 - 0.3m, S6 - 1.2m, S8 - 0.3m								
	EP068A: Organochlorine Pesticides (OC)								
	Soil Glass Jar - Unpreserved	S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,	16-NOV-2010	22-NOV-2010	30-NOV-2010	✓	22-NOV-2010	01-JAN-2011	✓
		S2 - 0.6m, S4 - 0.3m, S6 - 1.2m, S8 - 0.3m							
EP068B: Organophosphorus Pesticides (OP)									
Soil Glass Jar - Unpreserved		S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,	16-NOV-2010	22-NOV-2010	30-NOV-2010	✓	22-NOV-2010	01-JAN-2011	✓
	S2 - 0.6m, S4 - 0.3m, S6 - 1.2m, S8 - 0.3m								
	EP075(SIM)A: Phenolic Compounds								
	Soil Glass Jar - Unpreserved	S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,	16-NOV-2010	21-NOV-2010	30-NOV-2010	✓	22-NOV-2010	31-DEC-2010	✓
S2 - 0.6m, S4 - 0.3m, S6 - 1.2m, S8 - 0.3m									
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Soil Glass Jar - Unpreserved		S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,	16-NOV-2010	21-NOV-2010	30-NOV-2010	✓	22-NOV-2010	31-DEC-2010	✓
	S2 - 0.6m, S4 - 0.3m, S6 - 1.2m, S8 - 0.3m								
	EP080/071: Total Petroleum Hydrocarbons								
	Soil Glass Jar - Unpreserved	S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,	16-NOV-2010	19-NOV-2010	30-NOV-2010	✓	19-NOV-2010	30-NOV-2010	✓
S2 - 0.6m, S4 - 0.3m, S6 - 1.2m, S8 - 0.3m									
Soil Glass Jar - Unpreserved		S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,	16-NOV-2010	21-NOV-2010	30-NOV-2010	✓	22-NOV-2010	31-DEC-2010	✓
		S2 - 0.6m, S4 - 0.3m, S6 - 1.2m, S8 - 0.3m							



Matrix: **SOIL** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method		Sample Date	Extraction / Preparation		Analysis	
Container / Client Sample ID(s)	Date extracted		Due for extraction	Evaluation	Date analysed	Evaluation
EP080: BTEX						
Soil Glass Jar - Unpreserved S1 - 1.0m, S3 - 1.0m, S5 - 0.3m, S7 - 0.3m,	S2 - 0.6m, S4 - 0.3m, S6 - 1.2m, S8 - 0.3m	16-NOV-2010	19-NOV-2010	30-NOV-2010	19-NOV-2010	30-NOV-2010

Matrix: **WATER** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
Container / Client Sample ID(s)		Date extracted	Due for extraction	Date analysed	Due for analysis
EP080/071: Total Petroleum Hydrocarbons					
Amber VOC Vial - HCl ALS TRIP BLANK	16-NOV-2010	23-NOV-2010	30-NOV-2010	23-NOV-2010	30-NOV-2010
EP080: BTEX					
Amber VOC Vial - HCl ALS TRIP BLANK	16-NOV-2010	23-NOV-2010	30-NOV-2010	23-NOV-2010	30-NOV-2010



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Method	Count		Rate (%)		Quality Control Specification
Analytical Methods			QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)							
Chloride Soluble By Discrete Analyser		ED045G	1	3	33.3	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Soluble		ED040S	1	3	33.3	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Moisture Content		EA055-103	2	20	10.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)		EP075(SIM)	2	14	14.3	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS		EP068	2	15	13.3	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
pH (1:5)		EA002	1	3	33.3	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)		EP066	2	12	16.7	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS		EG035T	2	20	10.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES		EG005T	2	20	10.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction		EP071	2	19	10.5	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX		EP080	2	18	11.1	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Chloride Soluble By Discrete Analyser		ED045G	2	3	66.7	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Soluble		ED040S	1	3	33.3	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)		EP075(SIM)	1	14	7.1	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS		EP068	1	15	6.7	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
pH (1:5)		EA002	2	3	66.7	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)		EP066	1	12	8.3	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS		EG035T	1	20	5.0	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES		EG005T	1	20	5.0	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction		EP071	1	19	5.3	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX		EP080	1	18	5.6	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Chloride Soluble By Discrete Analyser		ED045G	1	3	33.3	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Soluble		ED040S	1	3	33.3	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)		EP075(SIM)	1	14	7.1	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS		EP068	1	15	6.7	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)		EP066	1	12	8.3	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS		EG035T	1	20	5.0	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES		EG005T	1	20	5.0	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction		EP071	1	19	5.3	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX		EP080	1	18	5.6	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Chloride Soluble By Discrete Analyser		ED045G	1	3	33.3	5.0	ALS QCS3 requirement
PAH/Phenols (SIM)		EP075(SIM)	1	14	7.1	5.0	ALS QCS3 requirement
Pesticides by GCMS		EP068	1	15	6.7	5.0	ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)		EP066	1	12	8.3	5.0	ALS QCS3 requirement
Total Mercury by FIMS		EG035T	1	20	5.0	5.0	ALS QCS3 requirement
Total Metals by ICP-AES		EG005T	1	20	5.0	5.0	ALS QCS3 requirement



Matrix: **SOIL** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Method	Count		Rate (%)		Quality Control Specification	
Analytical Methods			QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued								
TPH - Semivolatile Fraction	EP071	1	19	5.3	5.0	✓	ALS QCS3 requirement	
TPH Volatiles/BTEX	EP080	1	18	5.6	5.0	✓	ALS QCS3 requirement	

Matrix: **WATER** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Method	Count		Rate (%)		Quality Control Specification	
Analytical Methods			QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)								
TPH Volatiles/BTEX		EP080	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)								
TPH Volatiles/BTEX		EP080	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)								
TPH Volatiles/BTEX		EP080	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)								
TPH Volatiles/BTEX		EP080	1	20	5.0	5.0	✓	ALS QCS3 requirement



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Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH (1:5)	EA002	SOIL	(APHA 21st ed., 4500H+) pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM (1999) Schedule B(3) (Method 103)
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (1999) Schedule B(3) (Method 102)
Major Anions - Soluble	ED040S	SOIL	In-house. Soluble Anions are determined off a 1:5 soil / water extract by ICPAES.
Chloride Soluble By Discrete Analyser	ED045G	SOIL	The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the liberated thiocyanate forms highly coloured ferric thiocyanate which is measured at 480 nm APHA 21st edition 4500-Cl- E.
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 504,505)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM (1999) Schedule B(3) (Method 506.1)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Preparation Methods	Method	Matrix	Method Descriptions
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of distilled water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)



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Preparation Methods		Method	Matrix	Method Descriptions
Methanolic Extraction of Soils for Purge and Trap		ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)		ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)		ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.
Volatiles Water Preparation		ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.



Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QW/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: SOIL

Method	Extraction / Preparation		Analysis	
	Date extracted	Due for extraction	Date analysed	Due for analysis
EA002 : pH (Solis)				
Soil Glass Jar - Unpreserved				
S1 - 1.0m,				
S7 - 0.3m				
	25-NOV-2010	23-NOV-2010		
		2		
ED040S : Soluble Sulfate by ICPAES				
Soil Glass Jar - Unpreserved				
S1 - 1.0m,				
S7 - 0.3m				
	25-NOV-2010	23-NOV-2010		
		2		
ED045G: Chloride Discrete analyser				
Soil Glass Jar - Unpreserved				
S1 - 1.0m,				
S7 - 0.3m				
	25-NOV-2010	23-NOV-2010		
		2		

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- No Quality Control Sample Frequency Outliers exist.