21 February 2012

BIBBLEWINDI WATER TREATMENT FACILITY

Soil Investigation

Submitted to:
Santos Limited
Stephen Tapsall

REPORT

Report Number. 117626001-3000-004-R-Rev0

Golder Associates

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1.0 INTRODUCTION

Golder Associates Pty Ltd (Golder Associates) was engaged by Santos Limited (Santos) to undertake a soil investigation in the vicinity of the Bibblewindi Water Treatment Facility (BWTF) in the Pilliga State Forest south of Narrabri, New South Wales, herein referred to as the Site. The investigation was commissioned following an incident notification by Santos to the NSW Environment Protection Authority (EPA) of a release of water from the BWTF in June 2011.

The area affected by the release comprised a south-west trending “corridor” extending approximately 700 m from a produced water storage pond. Vegetation stress was apparent for approximately the first 300 m southwest of the BWTF, and a black residue was visible on the ground surface that diminished with distance from the pond.

1.1 Scope of Works

The following scope of works was provided by Golder:

- An inspection of the Site was undertaken to visually assess the extent of the affected area;
- Hand augering was completed to collect shallow soil samples to assess the contamination status of the affected area. Background samples were collected from investigation locations outside, but adjacent to, the affected area to provide an indication of background soil conditions;
- Soil samples were collected from the surface (0-0.05 m below ground level (bgl)), immediate subsurface (0.05-0.10 m bgl) and from depths ranging from 0.2 to 0.6 m bgl;
- Selected soil samples, including quality assurance and quality control (QA/QC) samples, were submitted to a commercial laboratory for analysis for a range of general soil quality parameters and specific CSG water indicator parameters; and
- The results of the field investigation and laboratory analytical program are presented in this report.

2.0 SITE IDENTIFICATION / DESCRIPTION

A summary of the characteristics of the Site are provided in Table 1. The Site is located approximately 36 km south of Narrabri, NSW and approximately 8 km east of where the Newell Highway intersects X-line Road.

Site location plans are presented in Figures 1 and 2 (Appendix A).

Table 1: Site Identification and Setting.

Topic	Data
Current Occupier	Pilliga East State Forest, Crown Land State Forests
Suburb, State, Postcode	Garlands Rd, The Pilliga, NSW, 2388
Council and Current Zoning	Within the LGA of Narrabri the site is zoned as Crown Land State Forests.
Site Area	2 ha (approximate)
Surrounding Site Use	The Site is surrounded by the Pilliga State Forest.
Acid Sulfate Soils	The Australian Soil Resource Information System (ASRIS) Acid Sulfate Soils Map indicates that there is a low probability of acid sulfate soils within and around the Site.
Topography and Site Drainage	The affected area slopes gently towards the south-west with an elevation of approximately 285 m Australian Height Datum (AHD) at the produced water storage ponds to 280 m AHD where the black residue had diminished.
Geology	The 1:250,000 Narrabri geological sheet shows that the Site is situated on Quaternary sands with minor silty sands.

3.0 SAMPLING RATIONALE AND METHODS

3.1 Sampling Rationale

Soil samples were collected from 19 locations to provide general coverage across the area of interest, including within the release area, and adjacent to the release area to provide "background" reference points. It is acknowledged that the number of investigation locations is less than the standard recommendation in Table A of the NSW EPA (1995) *Contaminated Sites: Sampling Design Guidelines*, which recommends 30 investigation locations for a two hectare investigation area. However, the targeted nature of the investigation justified a reduction in investigation locations for the following reasons:

- The recommended sampling densities in Table A the *Sampling Design Guidelines* are intended to provide broad, grid-based coverage of areas where there is limited information available regarding potential contamination sources (i.e. no method for selecting judgemental investigation locations). This scenario is not applicable to the current investigation, where the affected area is clearly defined by visual evidence of plant stress and the presence of a black residue on the ground surface; and
- Within the affected area, a greater density of investigation locations was judgementally selected in the areas of greatest apparent visual impact (i.e. closest to the BWTF), with a decreased sampling density in areas of limited or no visual evidence of impact.

Samples were collected from five investigation locations adjacent to the produced water pond where evidence of the release was most apparent. Samples were then collected from ten additional investigation locations at intervals of approximately 50 m along transect through the affected area, with judgemental targeting of the visually most affected areas. Two to three samples were collected from various depths at each location targeting the ground surface, the soil directly beneath the surface (approx 0.2 m depth) and deeper soil (approx. 0.5 m depth). Visual surface evidence of the release diminished towards the southern end of the affected area thus fewer deep samples were collected in this area.

Background samples were collected from four locations adjacent to the affected area to provide an indication of background soil quality outside of the affected area.

The investigation locations are presented in Figure 2 of Appendix A, and Table 1 in Appendix B contains details of sampling depths and location.

3.2 Sampling Methods

Soil samples were collected using a stainless steel sampling trowel from the ground surface (0.0-0.05 m) and immediate subsurface (0.05-0.10 m). Soil samples at depths between 0.2 and 0.6 m were collected using a hand auger. Soil samples were placed directly into laboratory prepared glass jars and sample bags.

Nitrile gloves were worn during sample collection to minimise the potential for cross contamination. The auger and trowel were decontaminated between sampling locations and depths using Decon 90, a non-phosphate detergent, and then rinsed using fresh potable water.

Soil samples were stored and transported in ice cooled eskies under chain of custody procedures until received at the laboratory. National Association of Testing Authorities (NATA)-accredited laboratories were used for analysis including Australia Laboratory Services Environmental Laboratory Group (ALS) Pty Ltd for primary and duplicate samples and Envirolab Pty Ltd for triplicate samples.

3.3 Analytical Programme

The analytical programme is summarised in Table 2. Selected samples in which total petroleum hydrocarbons (TPH) was detected were subjected to silica gel clean-up to remove non-petroleum hydrocarbon (biogenic) interferences. Such interferences can result in false positive TPH detections, and are removed based on their polar properties.

Table 2: Analytical Programme.

Analysis	Primary	Duplicate	Triplicate	Rinsate
Soil / Water leach for pH, electrical conductivity and fluoride	50	6	3	0
Exchangeable cations – calcium, magnesium, sodium, potassium and aluminium	50	6	3	0
Exchangeable sodium percent	50	6	0	0
Total nitrogen as N	50	6	3	0
Total phosphorus as P	50	6	3	0
Total organic carbon (TOC)	50	6	3	0
DTPA extracted metals by ICPAES – copper, zinc, manganese and iron	50	6	3	0
Bicarbonate extractable potassium	50	6	3	0
Bicarbonate extractable phosphorus	50	6	3	0
Metals – arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, manganese, mercury, nickel, lead, strontium, vanadium and zinc	50	6	3	3[1]
Total recoverable hydrocarbons (C_6 – C_{36})	50	6	3	3
Potassium chloride extractable sulphur[2]	15	0	3	0
Benzene, toluene, ethylbenzene and Xylene (BTEX)	50	6	3	3
Polycyclic aromatic hydrocarbons	50	6	3	3
Volatile organic compounds (VOCs)	2	0	1	0
Semi-volatile organic compounds (SVOCs)	2	0	1	0
Silica gel clean-up[3]	7	0	0	0

Notes:

[1] Analysed for arsenic, cadmium, chromium, copper, lead, nickel, zinc and mercury only.

[2] Soil collected in sample bags and frozen within 24 hours to extend holding time.

[3] Performed on samples where TPH/TRH was detected.

4.0 QUALITY ASSURANCE AND QUALITY CONTROL

An assessment of the QA/QC results for this investigation is provided in the sections below. ***The quality of the data generated from this assessment is considered sufficient and the data set is considered representative for the purpose of assessing contamination at the locations sampled with the exception of the results for temperature sensitive analytes.***

A range of field QC samples were collected and analysed as part of this investigation, including a field duplicate, field triplicate and rinsate. Descriptions of the field QC samples are included below. Results for the field duplicate, triplicate and rinsate were assessed with regard to the validity of the data.

4.1 Field Duplicate, Triplicate and Rinsate Samples

Field duplicate samples are prepared by the collection of two samples from the same location. These samples are collected, preserved, stored, transported, prepared and analysed in an identical manner. The results of the duplicate pair are compared by calculating the Relative Percent Differences (RPDs) between the primary and duplicate analytical results. Field duplicates provide an indication of the precision or reproducibility of the analytical results.

Field triplicates are prepared in the same manner as field duplicates. The primary sample is sent to the primary laboratory, while the triplicate sample is sent to the check laboratory. The results of the pair are then compared in the same manner as field duplicate samples. Field triplicates provide an indication of the precision or reproducibility of the analytical results and provide a check on the primary analytical laboratory.

Relative Percent Difference is expressed as the absolute value of:

$$\%RPD = \left(\frac{C_2 - C_1}{C_2 + C_1} \right) \times 200\%$$

where: C_1 = primary sample concentration
C_2 = duplicate/triplicate sample concentration

RPD values range from 0% (indicating perfect correlation between results) to 200% (indicating a large divergence in results). For RPD values that exceed a generally accepted 30 to 50% limit (AS 4482.1 –2005), correlation of data between the sample pair is considered poor. In calculating RPD values, the following protocols have been adopted according to the particular circumstance:

- Where the laboratory has reported results below the detection limit for both the sample and duplicate for a particular analyte, the RPD has not been calculated;
- Where the laboratory has reported results below the detection limit for either the sample or the duplicate, the RPD has not been calculated;
- Where the laboratory has reported detectable concentrations of an analyte in both the sample and duplicate a RPD has been calculated and tabulated; and
- Data precision is considered acceptable if the RPD is:
  - equal to or less than 30%; or
  - greater than 30% if the result is less than 10 times the Limit of Reporting (LOR); or
  - equal to or less than 50% if the result is greater than 10 times the LOR but less than 20 times the LOR.

The RPD calculations for primary and corresponding duplicate and triplicate samples are presented in Appendix C. In some instances RPD values outside the acceptable criteria for duplicates and triplicates were identified. This may be due to poor sample heterogeneity and/or different laboratory preparation techniques. As a conservative measure, the highest concentration was adopted for interpretation. This is not expected to impact on the reliability of this dataset. It should be noted that the concentrations detected in the corresponding primary, duplicate and triplicate samples are below the adopted site criteria.

Three rinsate samples were analysed as part of the field program. All results were less than laboratory detection limits with the exception of copper (0.001 mg/L) and zinc (0.505 mg/L) in sample 'Rinsate_14/1/12'.

4.2 Holding Times

Holding times were exceeded for a number of analytes due to issues with sample shipment, and laboratory error in sample processing. The laboratory certificates are presented in Appendix F.

Table 3: Exceedances of technical holding times.

Analyte	ES1201573[1]	ES1201577[2]	EB1201577[3]
pH	extraction 3-4 days overdue and analysis 3 days overdue	extraction 10-12 days overdue and analysis 1 days overdue	-
Conductivity	extraction 3-4 days overdue	extraction 10-12 days overdue	-
Fluoride	extraction 3-4 days overdue	extraction 10-12 days overdue	-
TOC	extraction 3-4 days overdue	extraction 16-18 days overdue	-
Moisture Content	-	analysis 2-4 days overdue	-
PAH	-	extraction 2-4 days overdue	extraction 9-11 days overdue
TPH/TRH/BTEX	-	Extraction and analysis 2-4 days overdue	extraction 9-11 days overdue and analysis 2-4 days overdue

Notes:

[1] Sample locations WTP1, WTP2, WTP3, WTP4, WTP5, WTP16 and WTP17

[2] Sample locations WTP6, WTP7, WTP8, WTP9, WTP10, WTP11, WTP12, WTP13, WTP14, WTP15, WTP18 and WTP19

[3] Rinsate_13/1/12, Rinsate_14/1/12 and Rinsate_15/1/12

The exceedances of extraction holding limits for the inorganic analytes and TOC are not anticipated to significantly impact the analytical results, as these analytes are relatively stable and not prone to degradation or alteration within a sample container. The exceedances for the trace organic analyses may have influenced the data quality to an unquantifiable extent. These analyses were also subject to temperature non-compliances (described below), that would render these analytical results as "indicative" only. Confirmation sampling would be required to quantitatively assess the potential influence of the holding limit exceedances on these analytes.

4.3 Sample Temperatures

The primary, duplicate and rinsate samples sent to ALS Brisbane arrived at the laboratory at a temperature of between 27.1°C and 28.5°C due to a delay in courier service. Temperature sensitive analyses including BTEX, TPH (C_6 – C_{36}), VOCs, SVOCs and PAHs require samples to be cooled to 4°C. Thus limited confidence can be placed non-detect results from the lab for these analyses. It should be noted that triplicate samples were received chilled by Envirolab and these temperature sensitive analyses returned non-detect results.

Daytime temperatures of 23.5 to 29.5°C[1] were encountered during sampling and temperatures greater than 35°C have been recorded since the release. These temperatures exceed those reported for the samples on arrival to the lab, therefore temperature-induced volatilisation of VOCs/SVOCs is likely to have already

[1] BOM (2012) Narrabri Airport AWS {station 054038}

occurred naturally in the time since the release. However, the volatile and semi-volatile organic analytical results are considered to be “indicative” pending the results of confirmation sampling.

4.4 Laboratory QA/QC

The following internal laboratory quality control (QC) samples were reviewed as part of this investigation:

- Internal Laboratory Duplicates: are prepared by the laboratory by dividing a field sample into two or more aliquots, which is analysed separately to provide an indication of the effect of sample matrix variability on precision. These are assessed through the calculation of RPDs. Some laboratory duplicates exceeded the acceptable LOR based limits due to sample heterogeneity. As a conservative measure the highest concentration will be adopted for interpretation.

- Method Blanks: are contaminant free samples analysed by the laboratory to assess the level of contamination that exists in the laboratory analytical system. Results are evaluated by comparison to reporting limits. Method blank results reported were less than the LOR.

- Laboratory Control Samples (LCS): are samples spiked with known concentrations of specific analytes to assess the laboratory performance on sample preparation and the analysis procedure. Results are assessed in terms of accuracy by calculating a percent recovery between the observed and spiked concentrations. Some LCS recoveries were greater than the acceptable ALS dynamic control limit. LCS recoveries above the control limit indicate possible over reporting and thus do not affect the data quality as concentrations were below the LOR.

- Matrix Spikes: are field samples spiked (by the laboratory) with known concentrations of specific analytes to assess the effects of the sample matrix on the accuracy and precision of analyses. Like laboratory control samples, matrix spike sample accuracy is evaluated in terms of a percent recovery between the observed and expected spiked compound concentrations. MS recoveries for some SVOCs from sample NAR_WTP(3A)_SOIL_S were below the ALS lower data quality objective, which may indicate an under reporting. However, other samples analysed reported concentrations of SVOCs below the LOR and thus the potential under reporting is not expected affect the overall quality of the data.

- Surrogates: are organic compounds of similar chemical composition, extraction, and chromatography to analytes of interest, but which are not normally found in field samples spiked into sample aliquots prior to preparation and analysis. Surrogates provide an indication of analytical accuracy and potential matrix effects. Percent recoveries are calculated for each surrogate. No surrogate outliers were noted.

4.5 Data Validation

The data validation review are summarised above and presented within Appendix C. ***The quality of the data generated from this assessment is considered sufficient for the purpose of assessing the environmental contamination status for the Site at the locations sampled for analytes that are not sensitive to storage temperatures (i.e. non-volatile analyses). Temperature sensitive analyses (i.e. volatile and semi-volatile analyses) are considered to be indicative pending confirmation sampling.***

5.0 ASSESSMENT CRITERIA

The Site is situated in the Pilliga State Forest. The most appropriate land use criteria to compare the results of the soil analysis against is the health based soil investigation levels for parks, recreational open space and playing fields (HIL E), and the provisional phytotoxicity-based Ecological Investigation Levels (EILs) from Table 5-A in *Schedule B(1): Guidelines on Investigation Levels for Soil and Groundwater* of the *National Environment Protection (Assessment of Site Contamination) Measure (NEPM)*, 1999 (NEPC 1999). The EILs are single number criteria which represent provisional phytotoxicity criteria for contaminants, principally metals, which may have phytotoxic effects on sensitive plant species.

For assessment of petroleum hydrocarbon results, the sensitive land use criteria for soils provided in the NSW EPA (1994) *Contaminated Sites: Guidelines for Assessing Service Station Sites* have been adopted.

The adopted assessment criteria for soils are presented in Table 4.

Table 4: Soil Assessment Criteria.

Analyte	NEPM HILs E (mg/kg)	NEPM EILs (mg/kg)	NSW EPA Service Station Guidelines (mg/kg)
Arsenic	200	20	-
Barium	-	300	-
Beryllium	40	-	-
Boron	6,000	-	-
Cadmium	40	3	-
Chromium[1]	240,000	400	-
Cobalt	200	-	-
Copper	2,000	100	-
Lead	600	600	-
Manganese	3,000	500	-
Mercury (inorganic)	30	1	-
Nickel	600	60	-
Vanadium	-	50	-
Zinc	14,000	200	-
Sulfur	-	600	-
Phosphorus	-	2000	-
Benzo(a)pyrene	2	-	-
Total PAH	40	-	-
Heptachlor	20	-	-
Aldrin + Dieldrin	20	-	-
Chlordane	100	-	-
DDT+DDD+DDE	400	-	-

Phenols	17,000	-	-
TRH C_6-C_9	-	-	65
TRH C_{10}-C_{36}	-	-	1,000
Benzene	-	-	1
Toluene	-	-	130
Ethyl benzene	-	-	50
Total xylenes	-	-	25

Notes:
[1]Chromium III criteria.

It is noted that the provisional EILs have a number of inherent limitations as assessment criteria, which were acknowledged in a CSIRO report entitled *The Australian Methodology to Derive Ecological Investigation Levels in Contaminated Soils* (Heemsbergen et al, 2009). The report lists 11 limitations of the EILs, which are repeated below for ease of reference:

- There are only 15 EILs for inorganic contaminants and there are none for organic contaminants;
- They were calculated using a variety of methods and thus there is no consistency regarding what receptors they protect;
- The methods used to derive the EILs are inconsistent and outdated;
- They apply a single numerical value to all Australian soils - they do not consider land use or soil physicochemical properties – and are therefore conservative due to consideration of high bioavailability soils only (i.e. sandy, low pH soils);
- There is no method available to modify the interim urban phytotoxicity EILs so that they are suitable for other soil types or pHs;
- They do not consider background soil concentrations of contaminants;
- They are based predominantly on non-Australian toxicity data;
- They are not risk-based;
- They do not provide a tiered approach to risk assessment such as that adopted in Australian and New Zealand water quality guidelines (ANZECC and ARMCANZ, 2000);
- They do not consider bioavailability or the potential for ageing; and
- There is no written method for deriving new EILs.

Whilst the recognised limitations of the EILs are considerable, they are currently the only endorsed Australian ecological soil quality guidelines available. In particular, the representative soil texture upon which they were derived (sandy, low pH soils) is different from that encountered at the site. Hence, the EILs have been adopted with the recognition that they are likely to be overly conservative for the local soil profile.

6.0 INVESTIGATION RESULTS

6.1 Subsurface Conditions

A summary of the subsurface conditions encountered at each borehole is presented in Appendix D.

The subsurface conditions encountered consisted of a black residue which comprised a dry, black crust with a thickness of approximately 5 cm near the BWTP thinning to 1-2 mm towards the south-western extent of the Site. A silty black, grey substance was encountered directly beneath the crust to depths of up to 0.15 mbgl from the BWTP to approximately 300 m south-west near investigation location WTP8. A sulfur and eucalypt odour was observed from the black residue.

The natural soil beneath the black residue was relatively consistent throughout the Site. It was generally described as clayey sand characterised by fine to medium grained sand, low to medium plasticity and brown red in colour.

6.2 Analytical Results

The soil analytical results are presented in Appendix E, and the laboratory certificates of analysis are presented in Appendix F. The sample locations are presented on Figure 2 (Appendix A).

The analytical results were either below the adopted health-based and ecological assessment criteria, or below the laboratory LOR, with the exception of limited exceedances of the barium and vanadium EIL criteria (Table 5). It is noted that whilst the HIL-E land use criteria are considered to be the most relevant to the Site, the soil analytical results were also below the most sensitive health-based land use soil criteria in the NEPM guidelines (HIL-A, applicable to low-density residential with garden/accessible soil, children's day care centres, kindergartens, preschools and primary schools).

Detections of TPH/TRH below the adopted criteria were reported at sample locations WTP1, WTP2, WTP3, WTP4, WTP5, WTP7[2], WTP13 and WTP15. The seven samples with TPH detections from locations WTP1, WTP2, WTP3, WTP4 and WTP5, which were representative of the "black residue" observed in the release area, were re-analysed following a silica gel cleanup, which is designed to remove polar organic compounds (such as those that result from the degradation of natural organic matter) that can interfere with the TPH analytical method (i.e. result in false positives). Each of these samples reported TPH concentrations below the laboratory LOR following the silica gel treatment, suggesting that the black substance is not consistent with a petroleum hydrocarbon source, and the TPH/TRH detections were likely attributable to biogenic interference from natural organic material.

Table 5: Soil Exceedances.

Analyte	Barium	Vanadium
Unit	mg/kg	mg/kg
HILs E	-	-
EILs	300	50
NAR_WTP(3A)_SOIL_S	510	-
NAR_WTP(3B)_SOIL_S	360	68
NAR_WTP(6C)_SOIL_S	-	55
NAR_WTP(14B)_SOIL_S	-	57
NAR_WTP(17A)_SOIL_S	440	52

[2] TPH/TRH detected in corresponding duplicate sample NAR_WTP(D3)_SOIL_S

6.2.1 Comparison of Background and Affected Area Samples

The results were grouped into upper, lower and background locations. The upper surface samples (containing visual evidence of the black residue) include the A and B samples where three samples were collected and the A sample where two samples were collected. The lower samples (containing no visual evidence of the spill) include the C sample where three samples were collected and the B sample where two samples were collected.

The following general patterns were noted between these sample groupings:

- The average concentrations of metals, TPH/TRH, pH, nutrients and salts in the upper surface samples collected from the affected area are generally greater than the average concentrations for background samples. This pattern is most pronounced for barium, strontium, manganese, iron and exchangeable sodium;
- The average concentrations of metals, TPH/TRH, pH, nutrients and salts in the deeper samples from the affected area were generally equal to or greater than the average concentrations for the background samples (although less so than the shallower samples), with the exception of manganese, strontium, some exchangeable salts and nutrients.
- The average concentration of metals, TPH/TRH, pH, nutrients and salts in the upper samples was greater than or equal to the lower samples with the exception of chromium and vanadium which were slightly higher.

Table 7 of Appendix E summarises the average, minimum and maximum values for the upper, lower and background samples.

7.0 CONCLUSIONS AND RECOMMENDATIONS

A soil investigation was performed in the vicinity of the BWTF in the Pilliga State Forest south of Narrabri, New South Wales, following an incident notification by Santos to the NSW Environment Protection Authority (EPA) of a release of water from the BWTF in June 2011. The area affected by the release was characterised by vegetation stress and a black residue on the ground surface that diminished with distance from the pond.

The analytical results were either below the adopted assessment criteria, or less than the laboratory LOR, with the exception of barium and vanadium which exceeded the EILs at sample locations WTP3, WTP6, WTP14 and WTP17 within the release area. The concentrations of barium and vanadium detected, were less than 2.5 times the adopted criteria, therefore do not constitute a “hot spot”. In addition, the EILs are considered to be very conservative assessment criteria for the reasons outlined in Section 5; the marginal exceedances of the EILs for barium and vanadium may warrant further assessment but do not in themselves indicate an ecological risk.

Detect concentrations of TPH/TRH were reported at eight sample locations, albeit below the adopted assessment criteria, predominantly at locations closest to the BWTP where the presence of the black residue on the ground surface was most prominent. The TPH/TRH detections were predominantly associated with the shallow samples characterised by the presence of the black residue. Selected samples were re-analysed following a silica gel clean-up to remove biogenic interferences to the TPH/TRH analytical method, which resulted in TPH/TRH concentrations below the laboratory LOR. This outcome suggests that the black substance is not consistent with a petroleum hydrocarbon source, and the TPH/TRH detections were likely attributable to biogenic interference from natural organic material.

The soil investigation completed across the Site indicated that concentrations of heavy metals, TPH/TRH, nutrients, salts and pH were generally higher in the upper samples relative to both the deepest sample at each location, and relative to the background concentrations from investigation locations outside the affected area. This pattern is most pronounced for barium, strontium, manganese, iron and exchangeable sodium, which are generally characteristic indicators of CSG water.

Based on the results of initial investigation, the shallow soil in the release area, including the black residue on the soil surface, does not appear to represent a health risk in accordance with the relevant health-based assessment criteria for sensitive land uses. With the exception of the minor EIL exceedances previously noted, it is considered that the most distinct soil quality difference within the release area is a concentration of salts, and particularly sodium, in the shallow soil profile. This may have been the major contributing factor to the observed vegetation stress within the release area; advice from an ecologist or ecotoxicologist would be required to confirm this.

It is recommended that a supplementary soil sampling programme is performed to evaluate the potential influence of the holding time and sample temperature exceedances on the integrity of the analytical results. Specific details for a supplementary programme can be developed upon request.

8.0 REFERENCES

Heemsbergen , D., Warne, M., McLaughlin, M. and Kookana, R. (2009) The Australian Methodology to Derive Ecological Investigation Levels in Contaminated Soils, CSIRO Land and Water Science Report 43/09, prepared for the National Environmental Protection Council.

NEPC (1999) National Environment Protection (Assessment of Site Contamination) Measure. National Environment Protection Council.

NSW EPA (1994) Contaminated Sites: Guidelines for Assessing Service Station Sites.

NSW EPA (1995) Contaminated Sites: Sampling Design Guidelines.

9.0 LIMITATIONS

Your attention is drawn to the document “Limitations”, which is included in Appendix G of this report. The statements presented in this document are intended to advise you of what your realistic expectations of this report should be. The document is not intended to reduce the level of responsibility accepted by Golder Associates, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in so doing.

Report Signature Page

GOLDER ASSOCIATES PTY LTD

Rita Bonetti
Environmental Scientist

Lange Jorstad
Principal Hydrogeologist

RB/LGJ/rb

A.B.N. 64 006 107 857

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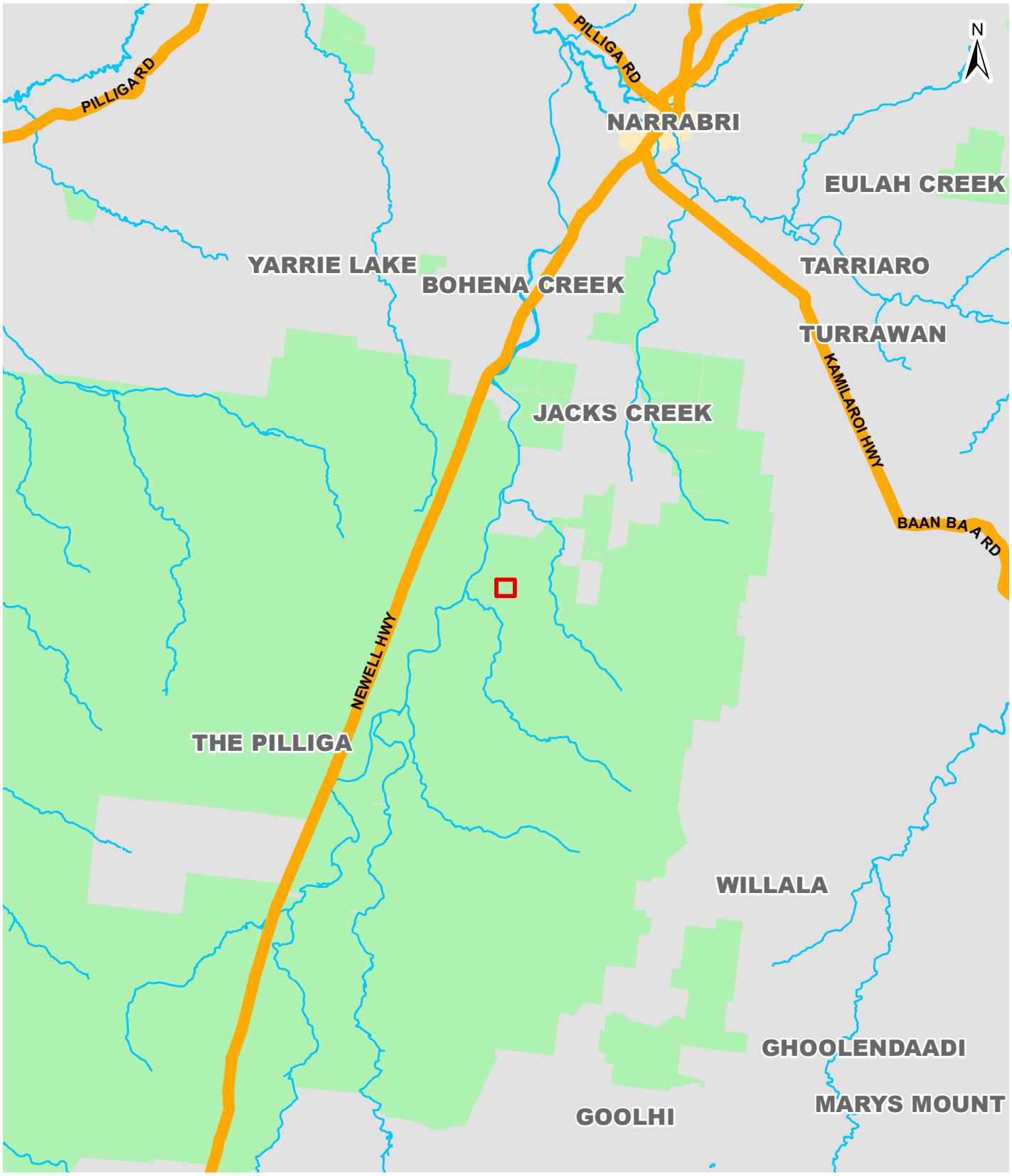
APPENDIX A

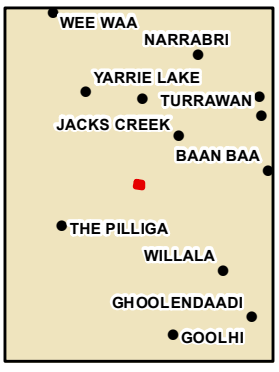
Figures



BIBBLEWINDI WATER TREATMENT FACILITY
SANTOS LIMITED

SITE LOCALITY

DRAFT



LEGEND

Site Location

0 1,125 2,250 4,500 6,750 9,000 11,250 metres

SCALE (at A4) 1:400,000

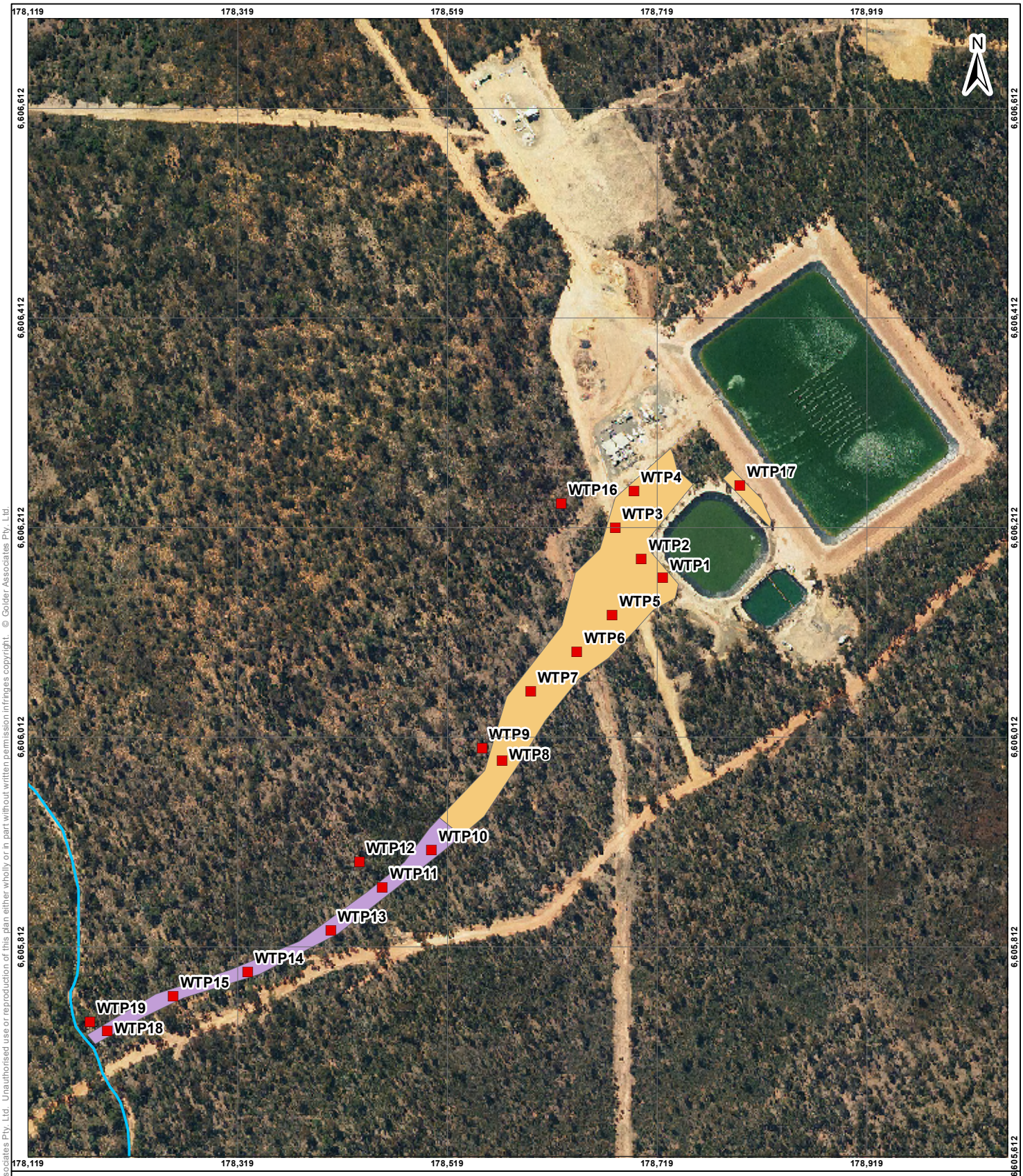
Coordinate System: GDA 1994 MGA Zone 56

PROJECT: 117626001-3000
DATE: 21/02/2012
DRAWN: RB
CHECKED: LBJ

FIGURE 1

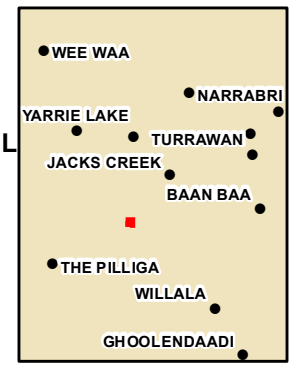
Golder Associates

File Location: J:\GIS\Jobs\SANTOS\SANTOS GUNNEDAH\SiteLocality.mxd



BIBBLEWINDI WATER
TREATMENT FACILITY
SANTOS LIMITED

BIBBLEWINDI WATER TREATMENT FACILITY SOIL SAMPLING LOCATIONS



LEGEND

- Soil Sample Locations
- Drainage Lines

Affected Area

- Visual Vegetation Stress
- Downgradient Surface Drainage Pathway

0 12.525 50 75 100 125 metres

SCALE (at A4) 1:5,000

Coordinate System: GDA 1994 MGA Zone 56

PROJECT: 117626001-3000
DATE: 21/02/2012
DRAWN: FA/RB
CHECKED: LBJ

FIGURE 2

Golder Associates

File Location: J:\GIS\Jobs\SANTOS\SANTOS GUNNEDAH\WTP_SampleLocations.mxd

APPENDIX B

Sampling Locations

APPENDIX B
Sampling Locations and Depths

Table 1: Sampling locations and depths.

Sample ID	Depths samples collected (m)	Location	Y Coordinate	X Coordinate
WTP1	0.0-0.05 0.05-0.10 0.3-0.4	Near BWTF	-30.63403	149.64832
WTP2	0.0-0.05 0.05-0.10 0.4-0.5	Near BWTF	-30.63386	149.64811
WTP3	0.0-0.05 0.05-0.10 0.3-0.4	Near BWTF	-30.63358	149.64786
WTP4	0.0-0.05 0.05-0.10 0.4-0.5	Near BWTF	-30.63328	149.64806
WTP5	0.0-0.1 0.1-0.2 0.4-0.5	Corridor - north	-30.63433	149.64781
WTP6	0.0-0.05 0.1-0.2 0.4-0.5	Corridor - north	-30.63464	149.64744
WTP7	0.0-0.05 0.05-0.10 0.3-0.4	Corridor - north	-30.63497	149.64697
WTP8	0.0-0.05 0.1-0.2 0.5-0.6	Corridor - central	-30.63556	149.64667
WTP9	0.0-0.5 0.1-0.2 0.4-0.5	Background sample	-30.63544	149.64647
WTP10	0.0-0.05 0.05-0.15 0.3-0.4	Corridor - central	-30.63631	149.64594
WTP11	0.0-0.05 0.1-0.2 0.4-0.5	Corridor - central	-30.63661	149.64544
WTP12	0.0-0.5 0.2-0.3	Background sample	-30.63639	149.64522
WTP13	0.0-0.05 0.2-0.3	Corridor - central	-30.63697	149.64492
WTP14	0.0-0.1 0.1-0.2	Corridor - south	-30.63731	149.64408
WTP15	0.0-0.05 0.2-0.3	Corridor - south	-30.63750	149.64333
WTP16	0.0-0.1 0.3-0.4	Background sample	-30.63336	149.64733
WTP17	0.0-0.05 0.05-0.1 0.3-0.4	Near BWTF	-30.63325	149.64911
WTP18	0.0-0.05 0.1-0.2	Corridor - south	-30.63778	149.64267
WTP19	0.0-0.1 0.3-0.4	Background sample	-30.63769	149.64250

Notes:

Corridor – north: closest to BWTF

Corridor – south: furthest from BWTF

Coordinate System: GCS_WGS_1984

APPENDIX C

Data Validation

DATA VALIDATION SUMMARY SHEET (Sydney)

Project Name:	**Santos - Bibblewindi Water Treatment Facility**	**Project Number:**	**117626001-3000**
Primary Laboratory:	**ALS**	**Workorder Number:**	**EB1201573, EB1201577**
Secondary Laboratory:	**Envirolab**	**Workorder Number:**	**67728**
Date Sampled:	**13/01/2012, 14/01/2012, 15/01/2012**	**Sample Medium:**	**Soil**

Sample Information

Number of Primary Samples:	**50**	**Number of Triplicate Samples:**	**3**
Number of Duplicate Samples:	**6**	**Number of Other QAQC Samples:**	**3**

Documentation and Sample Handling Information

	Y/N	Comments
COC completed properly?	Y	Signed by both field scientists and labs personnel
All requested analysis completed?	Y	
Samples received intact and chilled?	N	ALS - 27.1-28.5°C, intact / ELS - Cool, ice, intact (see comments)
Samples analysed within appropriate holding times?	N	ES1201573: pH extraction 3-4 days overdue and analysis 3 days overdue Conductivity extraction 3-4 days overdue Flouride extraction 3-4 days overdue TOC extraction 3-4 days overdue ES1201577 (soil samples): pH extraction 10-12 days overdue and analysis 1 days overdue Conductivity extraction 10-12 days overdue Moisture Content analysis 2-4 days overdue Flouride extraction 10-12 days overdue TOC extraction 16-18 days overdue PAH extraction 2-4 days overdue TPH/TRH/BTEX extraction 2-4 days overdue and analysis 2-4 days overdue EB1201577 (Rinsate samples): PAH extraction 9-11 days overdue TPH/TRH/BTEX extraction 9-11 days overdue and analysis 2-4 days overdue
Sample volumes sufficient for QC analysis?	Y	
Are there non-NATA accredited methods used?	Y	Envirolab analysis for strontium, DTPA extractable copper, iron, manganese and zinc, and bicarbonate extractable potassium and phosphurus. Field observations reported in ALS reports are not NATA accredited.
Chromatograms supplied as appropriate?		NA
Laboratory reports signed by authorised personnel?	Y	

QAQC Sample Information (Method Blank - MB, Rinsate Blank - RB, Field Blank - FB, Trip Blank - TB)

Type	Sample ID	Comments
MB	Method Blank	All results less than LOR
RB	Rinsate_13/01/12, Rinsate_14/01/12, Rinstae_15/01/12	All results less than LOR with the exception of Copper (0.001 mg/L) and zinc (0.505mg/L) in sample Rinsate_14/1/12

Trip Spike Information

Analyte	Spike Concentrations	Recovery Concentration	% Recovery	Comments
				No trip spikes within batches.

Laboratory Control Spike (LCS) Analyses

Analyte Group	Comments
VOCs (Halogenated Aliphatic Compounds)	LCS for chloroethane (128%) is greater than the upper control limit (120.75%)
PAHs	LCS for phenanthrene (122%) is greater than the upper control limit (112%)
SVOCs (Nitroaromatics and ketones)	LCS for 4-aminobiphenyl (35.4%) is less than the lower control limit (42%)
PAHs	LCS for fluoranthene (122%) is greater than the upper control limit (111%).
PAHs	LCS for chrysene (124%) is greater than the upper control limit (114%).
PAHs	LCS for benzo(k)fluoranthene (132%) is greater than the upper control limit (124%).
	All other LCS results from ALS and ELS were within the laboratory control limit.

Matrix Spike (MS) Analyses

Analyte Group	Comments
SVOCs (Phenols)	MS for 2-chlorophenol (68.7%) in sample NAR_WTP(3A)_SOIL_S is less than the lower data quality objective (70%).
SVOCs (Nitroaromatics and ketones)	MS for 2,4-dinitrotoluene (66.3%) in sample NAR_WTP(3A)_SOIL_S is less than the lower data quality objective (70%).
SVOCs (Chlorinated Hydrocarbons)	MS for 1,4-dochlorobenzene (57.8%) and 1,2,4-trichlorobenzene (67.0%) in sample NAR_WTP(3A)_SOIL_S are less than the lower data quality objective (70%).
	All MS results from ELS were within the laboratory control limit

Laboratory Duplicates (LD) Analyses

Analyte Group	Analyte(s)	Sample ID	Comments
Total Metals	Barium, Manganese	NAR_WTP(1A)_SOIL_S	LD for barium (29.3%) and manganese (20.0%) exceed or equal the LOR based limits (20%).
TPH	C10-C36 Fraction (sum)	NAR_WTP(1A)_SOIL_S	LD for C10-C36 Fraction (sum) (89.4%) exceed the LOR based limits (50%).
Total Metals	Barium	NAR_WTP(17A)_SOIL_S	LD for barium (52.7%) exceeds the LOR based limits (50%).
Total Metals	Manganese	NAR_WTP(13A)_SOIL_S	LD for manganese (60.0%) exceeds or equal the LOR based limits (20%).
			All other LD results from ALS and ELS were within the laboratory control limit.

Field Duplicates (FD) Analyses

Analyte Group	Primary ID	Duplicate ID	Comments
	NAR_WTP(2A)_SOIL_S	NAR_WTP(D1)_SOIL_S	RPDs for barium (66.7%), manganese (58.9%), iron (77.5%), C10-C36 (116.4%), total Kjeldahl nitrogen (66.7%), total nitrogen (66.7%), exchangeable calcium (35.3%) and exchangeable potassium (34.1%) exceed LOR based limits.
	NAR_WTP(4B)_SOIL_S	NAR_WTP(D2)_SOIL_S	RPDs for bicarbonate extractable potassium (56.3%), electrical conductivity (47.5%) and exchangeable potassium (41.4%) exceed LOR based limits.
	NAR_WTP(7A)_SOIL_S	NAR_WTP(D3)_SOIL_S	RPDs for bicarbonate extractable phosphorus (60.9%) exceed accepatble LOR based limits.
	NAR_WTP(9A)_SOIL_S	NAR_WTP(D4)_SOIL_S	RPD for manganese (37.9%) exceeds accepatble LOR based limits.
	NAR_WTP(14A)_SOIL_S	NAR_WTP(D5)_SOIL_S	RPD for particle sizing +300µm (44.9%), +425µm (62.1%), +600µm (88.9%) and fines (<75µm) (31.6%) exceed acceptable LOR based limits.
	NAR_WTP(19A)_SOIL_S	NAR_WTP(D6)_SOIL_S	RPDs for manganese (98.9%) and total phosphorus (46.8%) exceed accepatble LOR based limits.

Field Triplicates (FT) Analyses

Analyte Group	Primary ID	Triplicate ID	Comments
	NAR_WTP(7A)_SOIL_S	NAR_WTP(T3)_SOIL_S	RPDs for bicarbonate extractable phosphorus (60.9%), electrical conductivity (36.7%), cation exchange capacity (112.7%), exchangeable calcium (112.9%), exchangeable magnesium (120.6%), exchangeable potassium (135.4%) and exchangeable sodium (107.8%) exceed LOR based limits.
	NAR_WTP(14A)_SOIL_S	NAR_WTP(T5)_SOIL_S	RPDs for electrical conductivity (67.8%), moisture content (57.3%, cation exchange capacity (108.2%), iron(96.3%) exchangeable calcium (137.7%), exchangeable magnesium (141.2%) and exchangeable potassium (145.7%) exceed LOR based limits.
	NAR_WTP(19A)_SOIL_S	NAR_WTP(T6)_SOIL_S	RPDs for manganese (107.1%), DTPA extracted manganese (152.0%), electrical conductivity (118.84%), total nitrogen (86.67%), cation exchange capacity (136.84%), exchangeable calcium (131.8%), exchangeable magnesium (140.8%) and exchangeable potassium (152.94%) exceed LOR based limits.

Surrogate Compound Monitoring Analyses

Analyte Group	Analyte(s)	Comments
		All surrogate recoveries within acceptable control limits.

Overall Comments

As stated by ALS:
Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from kg/t dry weight to kg/m3 in-situ soil, multiply reported results x wet bulk density of soil in t/m3.
ED021 (Bicarbonate Extractable K - Colwell) - The LOR for samples in workorder EB1201573 and EB1201577 have been raised due to matrix interference.
EG005T (Total Metals) Sample EB1201573-001(NAR_WTP(1A)_SOIL_S) shows poor duplicate results due to sample heterogeneity. Confirmed by visual inspection.
EK059G(Nitrite and Nitrate as NOx):The LOR for some samples have been raised due to matrix interference.
EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
SVOC: Sample 'NAR_WTP(3A)_SOIL_S' shows poor matrix spike recovery due to matrix interference.
Field Observations and Measurements submitted to the laboratory by external samplers and appearing in this report are not covered by ALS' NATA Accreditation.
EG005T (Total Metals) - Sample EB1201577-021 (NAR_WTP(13A)_SOIL_S) shows poor duplicate results due to sample heterogeneity. Confirmed by visual inspection.
EK040-P (Fluoride): All samlpes in batch EB1201577 were centrifudged to acquire clean enough sample for PCT Fluoride analysis.
EK059G(Nitrite and Nitrate as Nox): Samples EB1201577-001,EB1201577-002,EB1201577-005,EB1201577-008,EB1201577-0013,EB1201577-0025 andEB1201577-0037 required dilution prior to extraction due to matrix interferences. LOR values have been adjusted accordingly.

The temperature on arrival of primary and duplicate samples at ALS was greater than 25°c. Thus temperature-sensitive analyses such as VOCs (BTEX, C6-C9) and SVOCs (PAHs) may have been affected during shipment and limited confidence can be placed non-detect results from the lab. It should be noted that triplicate samples were received chilled by Envirolab and temperature sensitive analyses returned not-detect results.
MS recoveries will not affect the quality of the batch data as they were only marginally below the data quality objective.
LCS recoveries above the control limit indicate possible over reporting and thus do not affect the data quality as concentrations were below the LOR.
Unacceptable LD RPD values are likely due to sample heterogenity. As a conservative measure, the highest concentration will be adopted for interpretation. This is not expected to impact on the reliability of this dataset.
Unacceptable RPD values in field duplicates and triplicates is likely a result of sample heterogeneity and/or different laboratory preparation techniques. As a conservative measure, the highest concentration will be adopted for interpretation. This is not expected to impact on the reliability of this dataset. Furthermore it should be noted that the concentrations detected in the corresponding primary, duplicate and triplicate samples are below the adopted site criteria.

This batch has been validated and is considered suitable for environmental interpretive use.

Note: Data validation assesses each analyte in terms of all the data validation variables and only the exceedances and outliers are reported in this form.

*When concentrations are less than the LOR for both primary and duplicate/triplicate results, no RPDs are calculated

Performed By:	**Rita Bonetti**	**Checked By:**	**Olga Bukhteeva**
Date:	**9/02/2012**	**Date:**	**10/02/2011**

Project No. 117626001-3000
Duplicate Analysis RPDs
Batches EB1201573/EB1201577/67728

			Sample ID	NAR_WTP(2A)_SOIL_S	NAR_WTP(D1)_SOIL_S	
			Sample Type	Primary	Field Duplicate	
			Date Sampled	13/01/2012	13/01/2012	RPDs
Metals		**LOR**	**Unit**			Primary vs Duplicate
Total Metals by ICP-AES	Arsenic	5	mg/kg	<5	<5	ND
	Barium	10	mg/kg	220	110	66.7%
	Beryllium	1	mg/kg	<1	<1	ND
	Boron	50	mg/kg	<50	<50	ND
	Cadmium	1	mg/kg	<1	<1	ND
	Chromium	2	mg/kg	10	10	0.0%
	Cobalt	2	mg/kg	5	3	50.0%
	Copper	5	mg/kg	<5	<5	ND
	Lead	5	mg/kg	<5	<5	ND
	Manganese	5	mg/kg	299	163	58.9%
	Nickel	2	mg/kg	4	4	0.0%
	Strontium	2	mg/kg	20	10	66.7%
	Vandium	5	mg/kg	20	20	0.0%
	Zinc	5	mg/kg	7	<5	ND
	Mercury	0.1	mg/kg	<0.1	<0.1	ND
DTPA Extractable Metals	Copper	1	mg/kg	<1.00	<1.00	ND
	Iron	1	mg/kg	200	453	77.5%
	Manganese	1	mg/kg	105	79.5	27.6%
	Zinc	1	mg/kg	<1.00	<1.00	ND
BTEX	Benzene	0.2	mg/kg	<0.2	<0.2	ND
	Toluene	0.5	mg/kg	<0.5	<0.5	ND
	Ethylbenzene	0.5	mg/kg	<0.5	<0.5	ND
	meta- & para-Xylene	0.5	mg/kg	<0.5	<0.5	ND
	ortho-Xylene	0.5	mg/kg	<0.5	<0.5	ND
	Sum of BTEX	0.2	mg/kg	<0.2	<0.5	ND
	Total Xylenes	0.5	mg/kg	<0.5	<0.2	ND
TPHs	C6 - C9 Fraction	10	mg/kg	<10	<10	ND
	C10 - C14 Fraction	50	mg/kg	90	<50	ND
	C15 - C28 Fraction	100	mg/kg	280	140	66.7%
	C29 - C36 Fraction	100	mg/kg	160	<100	ND
	C10 - C36 Fraction	50	mg/kg	530	140	116.4%
TRHs - NEPM 2010 Draft	C6 - C10 Fraction	10	mg/kg	<10	<10	ND
	C6 - C10 Fraction minus B	10	mg/kg	<10	<10	ND
	C10 - C16 Fraction	50	mg/kg	110	<50	ND
	C16 - C34 Fraction	100	mg/kg	380	190	66.7%
	C34 - C40 Fraction	100	mg/kg	<100	<100	ND
	C10 - C40 Fraction (sum)	50	mg/kg	490	190	88.2%
	Bicarbonate Extractable Pot	10	mg/kg	<200	290	ND
	Bicarbonate Extractable Phy	2	mg/kg	9	2	127.3%
	Electrical Conductivity @ 25	1	µS/cm	433	470	8.2%
	Flouride	1	mg/kg	<1	1	ND
	Moisture Content	1	%	9.5	5.2	58.5%
	Nitrite + Nitrate as N	0.1	mg/kg	0.9	0.6	40.0%
	pH Value	0.1	pH unit	9.5	9.4	1.1%
	Water Extractable Sulphur	10	mg/kg	-	-	ND
	KCl Extractable Sulfur (23C	0.2	%	<0.02	-	ND
	Total Kjeldahl Nitrogen as N	20	mg/kg	1220	610	66.7%
	Total Nitrogen as N	20	mg/kg	1220	610	66.7%
	Total Organic Carbon	1000	mg/kg	-	-	ND
	Total Organic Carbon	0.2	%	1.64	1.17	33.5%
	Total Phosphorus as P	2	mg/kg	130	112	14.9%
Exchangeable Cations	Cation Exchange Capacity	0.1	meq/100g	33.6	28.9	15.0%
	Exchangeable Aluminium	0.1	meq/100g	<0.2	0.3	ND
	Exchangeable Calcium	0.1	meq/100g	7	4.9	35.3%
	Exchangeable Magnesium	0.1	meq/100g	7	6	15.4%
	Exchangeable Potassium	0.1	meq/100g	1.7	2.4	34.1%
	Exchangeable Sodium	0.1	meq/100g	17.9	15.6	13.7%
	Exchangeable Sodium Perc	0.1	%	53.3	54	1.3%
Particle Sizing	+1180µm	1	%	2	2	0.0%
	+150µm	1	%	60	56	6.9%
	+19.0mm	1	%	<1	<1	ND
	+2.36mm	1	%	<1	<1	ND
	+300µm	1	%	38	35	8.2%
	+37.5 mm	1	%	<1	<1	ND
	+4.75mm	1	%	<1	<1	ND
	+425µm	1	%	24	22	8.7%
	+600µm	1	%	12	11	8.7%
	+75.0mm	1	%	<1	<1	ND
	+75µm	1	%	67	62	7.8%
	+9.5mm	1	%	<1	<1	ND
	Cobbles (>6cm)	1	%	<1	<1	ND
	Fines (<75 µm)	1	%	33	38	14.1%
	Gravel (>2mm)	1	%	1	1	0.0%
	Sand (>75 µm)	1	%	66	62	6.3%
Polynuclear Aromatic Hydrocarbons	Naphthalene	0.5	mg/kg	<0.5	<0.5	ND
	Acenaphthylene	0.5	mg/kg	<0.5	<0.5	ND
	Acenaphthene	0.5	mg/kg	<0.5	<0.5	ND
	Fluorene	0.5	mg/kg	<0.5	<0.5	ND
	Phenanthrene	0.5	mg/kg	<0.5	<0.5	ND
	Anthracene	0.5	mg/kg	<0.5	<0.5	ND
	Fluoranthene	0.5	mg/kg	<0.5	<0.5	ND
	Pyrene	0.5	mg/kg	<0.5	<0.5	ND
	Benz(a)anthracene	0.5	mg/kg	<0.5	<0.5	ND
	Chrysene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(b)fluoranthene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(k)fluoranthene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(a)pyrene	0.5	mg/kg	<0.5	<0.5	ND
	Indeno(1.2.3.cd)pyrene	0.5	mg/kg	<0.5	<0.5	ND
	Dibenz(a.h)anthracene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	<0.5	ND
	Sum of PAHs	0.5	mg/kg	<0.5	<0.5	ND

Legend
ND = Not Detected (RPDs not calculated if both primary and duplicate results are below LOR)
- = Not analysed/calculated
RPD exceeds acceptable limits
Acceptable RPDs:
RPD <= 30%
RPD > 30%, Analysis result < 10 times LOR
RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

Prepared by: RB
Checked by: OB

Project No. 117626001-3000
Duplicate Analysis RPDs
Batches EB1201573/EB1201577/67728

			Sample ID	NAR_WTP(4B)_SOIL_S	NAR_WTP(D2)_SOIL_S	
			Sample Type	Primary	Field Duplicate	
			Date Sampled	13/01/2012	13/01/2012	RPDs
Metals		**LOR**	**Unit**			Primary vs Duplicate
Total Metals by ICP-AES	Arsenic	5	mg/kg	<5	<5	ND
	Barium	10	mg/kg	150	150	0.0%
	Beryllium	1	mg/kg	<1	<1	ND
	Boron	50	mg/kg	<50	<50	ND
	Cadmium	1	mg/kg	<1	<1	ND
	Chromium	2	mg/kg	12	11	8.7%
	Cobalt	2	mg/kg	3	4	28.6%
	Copper	5	mg/kg	<5	<5	ND
	Lead	5	mg/kg	5	5	0.0%
	Manganese	5	mg/kg	72	85	16.6%
	Nickel	2	mg/kg	3	4	28.6%
	Strontium	2	mg/kg	15	15	0.0%
	Vandium	5	mg/kg	29	26	10.9%
	Zinc	5	mg/kg	5	7	33.3%
	Mercury	0.1	mg/kg	<0.1	<0.1	ND
DTPA Extractable Metals	Copper	1	mg/kg	1.89	1.53	21.1%
	Iron	1	mg/kg	687	763	10.5%
	Manganese	1	mg/kg	33.4	45	29.6%
	Zinc	1	mg/kg	<1.00	1.06	ND
BTEX	Benzene	0.2	mg/kg	<0.2	<0.2	ND
	Toluene	0.5	mg/kg	<0.5	<0.5	ND
	Ethylbenzene	0.5	mg/kg	<0.5	<0.5	ND
	meta- & para-Xylene	0.5	mg/kg	<0.5	<0.5	ND
	ortho-Xylene	0.5	mg/kg	<0.5	<0.5	ND
	Sum of BTEX	0.2	mg/kg	<0.2	<0.5	ND
	Total Xylenes	0.5	mg/kg	<0.5	<0.2	ND
TPHs	C6 - C9 Fraction	10	mg/kg	<10	<10	ND
	C10 - C14 Fraction	50	mg/kg	<50	<50	ND
	C15 - C28 Fraction	100	mg/kg	120	140	15.4%
	C29 - C36 Fraction	100	mg/kg	<100	<100	ND
	C10 - C36 Fraction	50	mg/kg	120	140	15.4%
TRHs - NEPM 2010 Draft	C6 - C10 Fraction	10	mg/kg	<10	<10	ND
	C6 - C10 Fraction minus B	10	mg/kg	<10	<10	ND
	C10 - C16 Fraction	50	mg/kg	<50	<50	ND
	C16 - C34 Fraction	100	mg/kg	170	210	21.1%
	C34 - C40 Fraction	100	mg/kg	<100	<100	ND
	C10 - C40 Fraction (sum)	50	mg/kg	170	210	21.1%
	Bicarbonate Extractable Pot	10	mg/kg	230	410	56.3%
	Bicarbonate Extractable Phy	2	mg/kg	6	3	66.7%
	Electrical Conductivity @ 25	1	µS/cm	715	1160	47.5%
	Flouride	1	mg/kg	<1	2	ND
	Moisture Content	1	%	33.6	29.8	12.0%
	Nitrite + Nitrate as N	0.1	mg/kg	<0.5	<0.5	ND
	pH Value	0.1	pH unit	9.5	9.4	1.1%
	Water Extractable Sulphur	10	mg/kg	-	-	ND
	KCl Extractable Sulfur (23C	0.2	%	<0.02	-	ND
	Total Kjeldahl Nitrogen as N	20	mg/kg	760	780	2.6%
	Total Nitrogen as N	20	mg/kg	760	780	2.6%
	Total Organic Carbon	1000	mg/kg	-	-	ND
	Total Organic Carbon	0.2	%	1.59	1.94	19.8%
	Total Phosphorus as P	2	mg/kg	129	130	0.8%
Exchangeable Cations	Cation Exchange Capacity	0.1	meq/100g	49.6	53.2	7.0%
	Exchangeable Aluminium	0.1	meq/100g	<0.2	<0.2	ND
	Exchangeable Calcium	0.1	meq/100g	5.9	7.4	22.6%
	Exchangeable Magnesium	0.1	meq/100g	5.6	7.4	27.7%
	Exchangeable Potassium	0.1	meq/100g	2.3	3.5	41.4%
	Exchangeable Sodium	0.1	meq/100g	35.8	34.9	2.5%
	Exchangeable Sodium Perc	0.1	%	72.2	65.6	9.6%
Particle Sizing	+1180µm	1	%	2	3	40.0%
	+150µm	1	%	42	40	4.9%
	+19.0mm	1	%	<1	<1	ND
	+2.36mm	1	%	<1	<1	ND
	+300µm	1	%	25	25	0.0%
	+37.5 mm	1	%	<1	<1	ND
	+4.75mm	1	%	<1	<1	ND
	+425µm	1	%	16	16	0.0%
	+600µm	1	%	9	9	0.0%
	+75.0mm	1	%	<1	<1	ND
	+75µm	1	%	49	47	4.2%
	+9.5mm	1	%	<1	<1	ND
	Cobbles (>6cm)	1	%	<1	<1	ND
	Fines (<75 µm)	1	%	51	53	3.8%
	Gravel (>2mm)	1	%	<1	1	ND
	Sand (>75 µm)	1	%	49	46	6.3%
Polynuclear Aromatic Hydrocarbons	Naphthalene	0.5	mg/kg	<0.5	<0.5	ND
	Acenaphthylene	0.5	mg/kg	<0.5	<0.5	ND
	Acenaphthene	0.5	mg/kg	<0.5	<0.5	ND
	Fluorene	0.5	mg/kg	<0.5	<0.5	ND
	Phenanthrene	0.5	mg/kg	<0.5	<0.5	ND
	Anthracene	0.5	mg/kg	<0.5	<0.5	ND
	Fluoranthene	0.5	mg/kg	<0.5	<0.5	ND
	Pyrene	0.5	mg/kg	<0.5	<0.5	ND
	Benz(a)anthracene	0.5	mg/kg	<0.5	<0.5	ND
	Chrysene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(b)fluoranthene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(k)fluoranthene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(a)pyrene	0.5	mg/kg	<0.5	<0.5	ND
	Indeno(1.2.3.cd)pyrene	0.5	mg/kg	<0.5	<0.5	ND
	Dibenz(a.h)anthracene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	<0.5	ND
	Sum of PAHs	0.5	mg/kg	<0.5	<0.5	ND

Legend
ND = Not Detected (RPDs not calculated if both primary and duplicate results are below LOR)
- = Not analysed/calculated
RPD exceeds acceptable limits
Acceptable RPDs:
RPD <= 30%
RPD > 30%, Analyis result < 10 times LOR
RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

Prepared by: RB
Checked by: OB

Project No. 117626001-3000
Duplicate Analysis RPDs
Batches EB1201573/EB1201577/67728

			Sample ID	NAR_WTP(7A)_SOIL_S	NAR_WTP(D3)_SOIL_S	NAR_WTP(T3)_SOIL_S		
			Sample Type	Primary	Field Duplicate	Field Triplicate		
			Date Sampled	14/01/2012	14/01/2012	14/01/2012	RPDs	RPDs
Metals		**LOR**	**Unit**				Primary vs Duplicate	Primary vs Triplicate
Total Metals by ICP-AES	Arsenic	5	mg/kg	<5	<5	<4	ND	ND
	Barium	10	mg/kg	110	120	180	8.7%	48.3%
	Beryllium	1	mg/kg	<1	<1	<1	ND	ND
	Boron	50	mg/kg	<50	<50	<3	ND	ND
	Cadmium	1	mg/kg	<1	<1	<0.5	ND	ND
	Chromium	2	mg/kg	9	9	11	0.0%	20.0%
	Cobalt	2	mg/kg	3	3	3	0.0%	0.0%
	Copper	5	mg/kg	<5	<5	4	ND	ND
	Lead	5	mg/kg	6	<5	7	ND	15.38%
	Manganese	5	mg/kg	344	414	450	18.5%	26.70%
	Nickel	2	mg/kg	4	5	4	22.2%	0.00%
	Strontium	2	mg/kg	21	22	34	4.7%	47.27%
	Vandium	5	mg/kg	24	23	27	4.3%	11.76%
	Zinc	5	mg/kg	<5	<5	5	ND	ND
	Mercury	0.1	mg/kg	<0.1	<0.1	<0.1	ND	ND
DTPA Extractable Metals	Copper	1	mg/kg	1.04	1.11	<1	6.5%	ND
	Iron	1	mg/kg	154	169	130	9.3%	16.90%
	Manganese	1	mg/kg	239	284	190	17.2%	22.84%
	Zinc	1	mg/kg	<1.00	<1.00	<1	ND	ND
BTEX	Benzene	0.2	mg/kg	<0.2	<0.2	<0.2	ND	ND
	Toluene	0.5	mg/kg	<0.5	<0.5	<0.5	ND	ND
	Ethylbenzene	0.5	mg/kg	<0.5	<0.5	<1	ND	ND
	meta- & para-Xylene	0.5	mg/kg	<0.5	<0.5	<2	ND	ND
	ortho-Xylene	0.5	mg/kg	<0.5	<0.5	<1	ND	ND
	Sum of BTEX	0.2	mg/kg	<0.5	<0.5	-	ND	ND
	Total Xylenes	0.5	mg/kg	<0.2	<0.2	-	ND	ND
TPHs	C6 - C9 Fraction	10	mg/kg	<10	<10	<25	ND	ND
	C10 - C14 Fraction	50	mg/kg	<50	<50	<50	ND	ND
	C15 - C28 Fraction	100	mg/kg	<100	<100	<100	ND	ND
	C29 - C36 Fraction	100	mg/kg	<100	100	<100	ND	ND
	C10 - C36 Fraction	50	mg/kg	<50	100	-	ND	ND
TRHs - NEPM 2010 Draft	C6 - C10 Fraction	10	mg/kg	<10	<10	-	ND	ND
	C6 - C10 Fraction minus B	10	mg/kg	<10	<10	-	ND	ND
	C10 - C16 Fraction	50	mg/kg	<50	50	-	ND	ND
	C16 - C34 Fraction	100	mg/kg	<100	160	-	ND	ND
	C34 - C40 Fraction	100	mg/kg	<100	<100	-	ND	ND
	C10 - C40 Fraction (sum)	50	mg/kg	<50	210	-	ND	ND
	Bicarbonate Extractable Pot	10	mg/kg	380	340	350	11.1%	8.2%
	Bicarbonate Extractable Phy	2	mg/kg	16	3	30	136.8%	60.9%
	Electrical Conductivity @ 25	1	µS/cm	690	831	1000	18.5%	36.7%
	Flouride	1	mg/kg	2	3	2.2	40.0%	9.5%
	Moisture Content	1	%	22.1	21.8	20	1.4%	10.0%
	Nitrite + Nitrate as N	0.1	mg/kg	4	3.6	-	10.5%	ND
	pH Value	0.1	pH unit	9.2	9.2	8.7	0.0%	5.6%
	Water Extractable Sulphur	10	mg/kg	-	-	11	ND	ND
	KCl Extractable Sulfur (23C	0.2	%	-	-	-	ND	ND
	Total Kjeldahl Nitrogen as N	20	mg/kg	1060	1030	-	2.9%	ND
	Total Nitrogen as N	20	mg/kg	1060	1030	820	2.9%	25.5%
	Total Organic Carbon	1000	mg/kg	-	-	20000	ND	ND
	Total Organic Carbon	0.2	%	3.01	3.47	-	14.2%	ND
	Total Phosphorus as P	2	mg/kg	170	157	140	8.0%	19.4%
Exchangeable Cations	Cation Exchange Capacity	0.1	meq/100g	60.9	62.6	17	2.8%	112.7%
	Exchangeable Aluminium	0.1	meq/100g	<0.2	<0.2	<0.01	ND	ND
	Exchangeable Calcium	0.1	meq/100g	21.2	25.7	5.9	19.2%	112.9%
	Exchangeable Magnesium	0.1	meq/100g	10.9	11.4	2.7	4.5%	120.6%
	Exchangeable Potassium	0.1	meq/100g	4	4.1	0.77	2.5%	135.4%
	Exchangeable Sodium	0.1	meq/100g	24.7	21.4	7.4	14.3%	107.8%
	Exchangeable Sodium Perc	0.1	%	40.6	34.1	-	17.4%	ND
Particle Sizing	+1180µm	1	%	4	5	-	22.2%	ND
	+150µm	1	%	59	56	-	5.2%	ND
	+19.0mm	1	%	<1	<1	-	ND	ND
	+2.36mm	1	%	<1	2	-	ND	ND
	+300µm	1	%	38	36	-	5.4%	ND
	+37.5 mm	1	%	<1	<1	-	ND	ND
	+4.75mm	1	%	<1	<1	-	ND	ND
	+425µm	1	%	26	25	-	3.9%	ND
	+600µm	1	%	15	16	-	6.5%	ND
	+75.0mm	1	%	<1	<1	-	ND	ND
	+75µm	1	%	66	63	-	4.7%	ND
	+9.5mm	1	%	<1	<1	-	ND	ND
	Cobbles (>6cm)	1	%	<1	<1	-	ND	ND
	Fines (<75 µm)	1	%	34	37	-	8.5%	ND
	Gravel (>2mm)	1	%	1	1	-	0.0%	ND
	Sand (>75 µm)	1	%	65	61	-	6.3%	ND
Polynuclear Aromatic Hydrocarbons	Naphthalene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Acenaphthylene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Acenaphthene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Fluorene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Phenanthrene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Anthracene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Fluoranthene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Pyrene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Benz(a)anthracene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Chrysene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Benzo(b)fluoranthene	0.5	mg/kg	<0.5	<0.5	<0.2*	ND	ND
	Benzo(k)fluoranthene	0.5	mg/kg	<0.5	<0.5	-	ND	ND
	Benzo(a)pyrene	0.5	mg/kg	<0.5	<0.5	<0.05	ND	ND
	Indeno(1.2.3.cd)pyrene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Dibenz(a.h)anthracene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Sum of PAHs	0.5	mg/kg	<0.5	<0.5	-	ND	ND

Legend
ND = Not Detected (RPDs not calculated if both primary and duplicate results are below LOR)
- = Not analysed/calculated
RPD exceeds acceptable limits
Acceptable RPDs:
RPD <= 30%
RPD > 30%, Analyis result < 10 times LOR
RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

Prepared by: RB
Checked by: OB

Project No. 117626001-3000
Duplicate Analysis RPDs
Batches EB1201573/EB1201577/67728

			Sample ID	NAR_WTP(9A)_SOIL_S	NAR_WTP(D4)_SOIL_S	
			Sample Type	Primary	Field Duplicate	
			Date Sampled	14/01/2012	14/01/2012	RPDs
Metals		**LOR**	**Unit**			Primary vs Duplicate
Total Metals by ICP-AES	Arsenic	5	mg/kg	<5	<5	ND
	Barium	10	mg/kg	40	40	0.0%
	Beryllium	1	mg/kg	<1	<1	ND
	Boron	50	mg/kg	<50	<50	ND
	Cadmium	1	mg/kg	<1	<1	ND
	Chromium	2	mg/kg	7	9	25.0%
	Cobalt	2	mg/kg	<2	<2	ND
	Copper	5	mg/kg	<5	<5	ND
	Lead	5	mg/kg	<5	<5	ND
	Manganese	5	mg/kg	162	141	13.9%
	Nickel	2	mg/kg	2	3	40.0%
	Strontium	2	mg/kg	8	9	11.8%
	Vandium	5	mg/kg	19	25	27.3%
	Zinc	5	mg/kg	<5	<5	ND
	Mercury	0.1	mg/kg	<0.1	<0.1	ND
DTPA Extractable Metals	Copper	1	mg/kg	<1.00	<1.00	ND
	Iron	1	mg/kg	31.2	27.7	11.9%
	Manganese	1	mg/kg	32	21.8	37.9%
	Zinc	1	mg/kg	<1.00	<1.00	ND
BTEX	Benzene	0.2	mg/kg	<0.2	<0.2	ND
	Toluene	0.5	mg/kg	<0.5	<0.5	ND
	Ethylbenzene	0.5	mg/kg	<0.5	<0.5	ND
	meta- & para-Xylene	0.5	mg/kg	<0.5	<0.5	ND
	ortho-Xylene	0.5	mg/kg	<0.5	<0.5	ND
	Sum of BTEX	0.2	mg/kg	<0.5	<0.5	ND
	Total Xylenes	0.5	mg/kg	<0.2	<0.2	ND
TPHs	C6 - C9 Fraction	10	mg/kg	<10	<10	ND
	C10 - C14 Fraction	50	mg/kg	<50	<50	ND
	C15 - C28 Fraction	100	mg/kg	<100	<100	ND
	C29 - C36 Fraction	100	mg/kg	<100	<100	ND
	C10 - C36 Fraction	50	mg/kg	<50	<50	ND
TRHs - NEPM 2010 Draft	C6 - C10 Fraction	10	mg/kg	<10	<10	ND
	C6 - C10 Fraction minus B	10	mg/kg	<10	<10	ND
	C10 - C16 Fraction	50	mg/kg	<50	<50	ND
	C16 - C34 Fraction	100	mg/kg	<100	<100	ND
	C34 - C40 Fraction	100	mg/kg	<100	<100	ND
	C10 - C40 Fraction (sum)	50	mg/kg	<50	<50	ND
	Bicarbonate Extractable Pot	10	mg/kg	<200	<200	ND
	Bicarbonate Extractable Ph	2	mg/kg	<2	<2	ND
	Electrical Conductivity @ 25	1	µS/cm	16	18	11.8%
	Flouride	1	mg/kg	<1	<1	ND
	Moisture Content	1	%	10.7	16.1	40.3%
	Nitrite + Nitrate as N	0.1	mg/kg	1.8	2.1	15.4%
	pH Value	0.1	pH unit	5.6	5.6	0.0%
	Water Extractable Sulphur	10	mg/kg	-	-	ND
	KCl Extractable Sulfur (23C	0.2	%	-	-	ND
	Total Kjeldahl Nitrogen as N	20	mg/kg	620	610	1.6%
	Total Nitrogen as N	20	mg/kg	620	610	1.6%
	Total Organic Carbon	1000	mg/kg	-	-	ND
	Total Organic Carbon	0.2	%	1.13	1.26	10.9%
	Total Phosphorus as P	2	mg/kg	99	99	0.0%
Exchangeable Cations	Cation Exchange Capacity	0.1	meq/100g	15.8	16	1.3%
	Exchangeable Aluminium	0.1	meq/100g	0.8	0.8	0.0%
	Exchangeable Calcium	0.1	meq/100g	9.6	9.8	2.1%
	Exchangeable Magnesium	0.1	meq/100g	4.8	4.8	0.0%
	Exchangeable Potassium	0.1	meq/100g	1.4	1.4	0.0%
	Exchangeable Sodium	0.1	meq/100g	<0.2	<0.2	ND
	Exchangeable Sodium Perc	0.1	%	0.5	<0.2	ND
Particle Sizing	+1180µm	1	%	2	3	40.0%
	+150µm	1	%	60	60	0.0%
	+19.0mm	1	%	<1	<1	ND
	+2.36mm	1	%	<1	<1	ND
	+300µm	1	%	34	35	2.9%
	+37.5 mm	1	%	<1	<1	ND
	+4.75mm	1	%	<1	<1	ND
	+425µm	1	%	20	22	9.5%
	+600µm	1	%	11	12	8.7%
	+75.0mm	1	%	<1	<1	ND
	+75µm	1	%	71	73	2.8%
	+9.5mm	1	%	<1	<1	ND
	Cobbles (>6cm)	1	%	<1	<1	ND
	Fines (<75 µm)	1	%	29	27	7.1%
	Gravel (>2mm)	1	%	<1	1	ND
	Sand (>75 µm)	1	%	71	72	1.4%
Polynuclear Aromatic Hydrocarbons	Naphthalene	0.5	mg/kg	<0.5	<0.5	ND
	Acenaphthylene	0.5	mg/kg	<0.5	<0.5	ND
	Acenaphthene	0.5	mg/kg	<0.5	<0.5	ND
	Fluorene	0.5	mg/kg	<0.5	<0.5	ND
	Phenanthrene	0.5	mg/kg	<0.5	<0.5	ND
	Anthracene	0.5	mg/kg	<0.5	<0.5	ND
	Fluoranthene	0.5	mg/kg	<0.5	<0.5	ND
	Pyrene	0.5	mg/kg	<0.5	<0.5	ND
	Benz(a)anthracene	0.5	mg/kg	<0.5	<0.5	ND
	Chrysene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(b)fluoranthene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(k)fluoranthene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(a)pyrene	0.5	mg/kg	<0.5	<0.5	ND
	Indeno(1.2.3.cd)pyrene	0.5	mg/kg	<0.5	<0.5	ND
	Dibenz(a.h)anthracene	0.5	mg/kg	<0.5	<0.5	ND
	Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	<0.5	ND
	Sum of PAHs	0.5	mg/kg	<0.5	<0.5	ND

Legend
ND = Not Detected (RPDs not calculated if both primary and duplicate results are below LOR)
- = Not analysed/calculated
RPD exceeds acceptable limits
Acceptable RPDs:
RPD <= 30%
RPD > 30%, Analysis result < 10 times LOR
RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

Prepared by: RB
Checked by: OB

Project No. 117626001-3000
Duplicate Analysis RPDs
Batches EB1201573/EB1201577/67728

			Sample ID	NAR_WTP(14A)_SOIL_S	NAR_WTP(D5)_SOIL_S	NAR_WTP(T5)_SOIL_S		
			Sample Type	Primary	Field Duplicate	Field Triplicate		
			Date Sampled	14/01/2012	14/01/2012	14/01/2012	RPDs	RPDs
Metals		**LOR**	**Unit**				Primary vs Duplicate	Primary vs Triplicate
Total Metals by ICP-AES	Arsenic	5	mg/kg	<5	<5	<4	ND	ND
	Barium	10	mg/kg	10	10	18	0.0%	57.1%
	Beryllium	1	mg/kg	<1	<1	<1	ND	ND
	Boron	50	mg/kg	<50	<50	<3	ND	ND
	Cadmium	1	mg/kg	<1	<1	<0.5	ND	ND
	Chromium	2	mg/kg	4	4	10	0.0%	85.7%
	Cobalt	2	mg/kg	<2	<2	<1	ND	ND
	Copper	5	mg/kg	<5	<5	<1	ND	ND
	Lead	5	mg/kg	<5	<5	3	ND	ND
	Manganese	5	mg/kg	15	18	24	18.2%	46.2%
	Nickel	2	mg/kg	<2	<2	<1	ND	ND
	Strontium	2	mg/kg	<2	2	3	ND	ND
	Vandium	5	mg/kg	12	12	24	0.0%	ND
	Zinc	5	mg/kg	<5	<5	1	ND	ND
	Mercury	0.1	mg/kg	<0.1	<0.1	<0.1	ND	ND
DTPA Extractable Metals	Copper	1	mg/kg	<1.00	<1.00	<1	ND	ND
	Iron	1	mg/kg	10.5	10.7	30	1.9%	96.3%
	Manganese	1	mg/kg	2.57	2.48	7	3.6%	92.6%
	Zinc	1	mg/kg	<1.00	<1.00	<1	ND	ND
BTEX	Benzene	0.2	mg/kg	<0.2	<0.2	<0.2	ND	ND
	Toluene	0.5	mg/kg	<0.5	<0.5	<0.5	ND	ND
	Ethylbenzene	0.5	mg/kg	<0.5	<0.5	<1	ND	ND
	meta- & para-Xylene	0.5	mg/kg	<0.5	<0.5	<2	ND	ND
	ortho-Xylene	0.5	mg/kg	<0.5	<0.5	<1	ND	ND
	Sum of BTEX	0.2	mg/kg	<0.5	<0.5	-	ND	ND
	Total Xylenes	0.5	mg/kg	<0.2	<0.2	-	ND	ND
TPHs	C6 - C9 Fraction	10	mg/kg	<10	<10	<25	ND	ND
	C10 - C14 Fraction	50	mg/kg	<50	<50	<50	ND	ND
	C15 - C28 Fraction	100	mg/kg	<100	<100	<100	ND	ND
	C29 - C36 Fraction	100	mg/kg	<100	<100	<100	ND	ND
	C10 - C36 Fraction	50	mg/kg	<50	<50	-	ND	ND
TRHs - NEPM 2010 Draft	C6 - C10 Fraction	10	mg/kg	<10	<10	-	ND	ND
	C6 - C10 Fraction minus BTEX	10	mg/kg	<10	<10	-	ND	ND
	C10 - C16 Fraction	50	mg/kg	<50	<50	-	ND	ND
	C16 - C34 Fraction	100	mg/kg	<100	<100	-	ND	ND
	C34 - C40 Fraction	100	mg/kg	<100	<100	-	ND	ND
	C10 - C40 Fraction (sum)	50	mg/kg	<50	<50	-	ND	ND
	Bicarbonate Extractable Potassium	10	mg/kg	<200	<200	90	ND	ND
	Bicarbonate Extractable Phosphorus	2	mg/kg	<2	<2	<10	ND	ND
	Electrical Conductivity @ 25°C	1	µS/cm	158	125	320	23.3%	67.8%
	Flouride	1	mg/kg	<1	<1	0.5	ND	ND
	Moisture Content	1	%	12.8	13.5	7.1	5.3%	57.3%
	Nitrite + Nitrate as N	0.1	mg/kg	0.2	<0.1	-	ND	ND
	pH Value	0.1	pH unit	8.6	8.7	8.2	1.2%	4.8%
	Water Extractable Sulphur	10	mg/kg	-	-	<10	ND	ND
	KCl Extractable Sulfur (23Ce)	0.2	%	-	-	-	ND	ND
	Total Kjeldahl Nitrogen as N	20	mg/kg	80	60	-	28.6%	ND
	Total Nitrogen as N	20	mg/kg	80	60	180	28.6%	76.9%
	Total Organic Carbon	1000	mg/kg	-	-	3800	ND	ND
	Total Organic Carbon	0.2	%	0.18	0.31	-	53.1%	ND
	Total Phosphorus as P	2	mg/kg	40	44	30	9.5%	28.6%
Exchangeable Cations	Cation Exchange Capacity	0.1	meq/100g	4.7	4.7	1.4	0.0%	108.2%
	Exchangeable Aluminium	0.1	meq/100g	<0.2	0.3	<0.01	ND	ND
	Exchangeable Calcium	0.1	meq/100g	1.3	1.2	0.24	8.0%	137.7%
	Exchangeable Magnesium	0.1	meq/100g	1.8	1.6	0.31	11.8%	141.2%
	Exchangeable Potassium	0.1	meq/100g	0.7	0.7	0.11	0.0%	145.7%
	Exchangeable Sodium	0.1	meq/100g	0.9	1.2	0.73	28.6%	20.9%
	Exchangeable Sodium Percent	0.1	%	19.7	26	-	27.6%	ND
Particle Sizing	+1180µm	1	%	2	7	-	111.1%	ND
	+150µm	1	%	65	79	-	19.4%	ND
	+19.0mm	1	%	<1	<1	-	ND	ND
	+2.36mm	1	%	<1	5	-	ND	ND
	+300µm	1	%	19	30	-	44.9%	ND
	+37.5 mm	1	%	<1	<1	-	ND	ND
	+4.75mm	1	%	<1	3	-	ND	ND
	+425µm	1	%	10	19	-	62.1%	ND
	+600µm	1	%	5	13	-	88.9%	ND
	+75.0mm	1	%	<1	<1	-	ND	ND
	+75µm	1	%	89	92	-	3.3%	ND
	+9.5mm	1	%	<1	<1	-	ND	ND
	Cobbles (>6cm)	1	%	<1	<1	-	ND	ND
	Fines (<75 µm)	1	%	11	8	-	31.6%	ND
	Gravel (>2mm)	1	%	<1	5	-	ND	ND
	Sand (>75 µm)	1	%	89	87	-	2.3%	ND
Polynuclear Aromatic Hydrocarbons	Naphthalene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Acenaphthylene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Acenaphthene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Fluorene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Phenanthrene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Anthracene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Fluoranthene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Pyrene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Benz(a)anthracene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Chrysene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Benzo(b)fluoranthene	0.5	mg/kg	<0.5	<0.5	<0.2*	ND	ND
	Benzo(k)fluoranthene	0.5	mg/kg	<0.5	<0.5	-	ND	ND
	Benzo(a)pyrene	0.5	mg/kg	<0.5	<0.5	<0.05	ND	ND
	Indeno(1.2.3.cd)pyrene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Dibenz(a.h)anthracene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Sum of PAHs	0.5	mg/kg	<0.5	<0.5	-	ND	ND

Legend
ND = Not Detected (RPDs not calculated if both primary and duplicate results are below LOR)
- = Not analysed/calculated
RPD exceeds acceptable limits
Acceptable RPDs:

RPD <= 30%
RPD > 30%, Analyis result < 10 times LOR
RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

Prepared by: RB
Checked by: OB

Project No. 117626001-3000
Duplicate Analysis RPDs
Batches EB1201573/EB1201577/67728

			Sample ID	NAR_WTP(19A)_SOIL_S	NAR_WTP(D6)_SOIL_S	NAR_WTP(T6)_SOIL_S		
			Sample Type	Primary	Field Duplicate	Field Triplicate		
			Date Sampled	15/01/2012	15/01/2012	15/01/2012	RPDs	RPDs
Metals		**LOR**	**Unit**				Primary vs Duplicate	Primary vs Triplicate
Total Metals by ICP-AES	Arsenic	5	mg/kg	<5	<5	<4	ND	ND
	Barium	10	mg/kg	20	20	28	0.0%	33.3%
	Beryllium	1	mg/kg	<1	<1	<1	ND	ND
	Boron	50	mg/kg	<50	<50	<3	ND	ND
	Cadmium	1	mg/kg	<1	<1	<0.5	ND	ND
	Chromium	2	mg/kg	2	3	3	40.0%	40.0%
	Cobalt	2	mg/kg	<2	2	3	ND	ND
	Copper	5	mg/kg	<5	<5	<1	ND	ND
	Lead	5	mg/kg	<5	<5	2	ND	ND
	Manganese	5	mg/kg	23	68	76	98.9%	107.1%
	Nickel	2	mg/kg	<2	<2	<1	ND	ND
	Strontium	2	mg/kg	4	5	8	22.2%	66.7%
	Vandium	5	mg/kg	11	12	13	8.7%	16.7%
	Zinc	5	mg/kg	<5	<5	1	ND	ND
	Mercury	0.1	mg/kg	<0.1	<0.1	<0.1	ND	ND
DTPA Extractable Metals	Copper	1	mg/kg	<1.00	<1.00	<1	ND	ND
	Iron	1	mg/kg	34.2	32.7	30	4.5%	13.1%
	Manganese	1	mg/kg	2.32	4.07	17	54.8%	152.0%
	Zinc	1	mg/kg	<1.00	<1.00	<1	ND	ND
BTEX	Benzene	0.2	mg/kg	<0.2	<0.2	<0.2	ND	ND
	Toluene	0.5	mg/kg	<0.5	<0.5	<0.5	ND	ND
	Ethylbenzene	0.5	mg/kg	<0.5	<0.5	<1	ND	ND
	meta- & para-Xylene	0.5	mg/kg	<0.5	<0.5	<2	ND	ND
	ortho-Xylene	0.5	mg/kg	<0.5	<0.5	<1	ND	ND
	Sum of BTEX	0.2	mg/kg	<0.5	<0.5	-	ND	ND
	Total Xylenes	0.5	mg/kg	<0.2	<0.2	-	ND	ND
TPHs	C6 - C9 Fraction	10	mg/kg	<10	<10	<25	ND	ND
	C10 - C14 Fraction	50	mg/kg	<50	<50	<50	ND	ND
	C15 - C28 Fraction	100	mg/kg	<100	<100	<100	ND	ND
	C29 - C36 Fraction	100	mg/kg	<100	<100	<100	ND	ND
	C10 - C36 Fraction	50	mg/kg	<50	<50	-	ND	ND
TRHs - NEPM 2010 Draft	C6 - C10 Fraction	10	mg/kg	<10	<10	-	ND	ND
	C6 - C10 Fraction minus BTEX	10	mg/kg	<10	<10	-	ND	ND
	C10 - C16 Fraction	50	mg/kg	<50	<50	-	ND	ND
	C16 - C34 Fraction	100	mg/kg	<100	<100	-	ND	ND
	C34 - C40 Fraction	100	mg/kg	<100	<100	-	ND	ND
	C10 - C40 Fraction (sum)	50	mg/kg	<50	<50	-	ND	ND
	Bicarbonate Extractable Potassium	10	mg/kg	<200	<120	120	ND	ND
	Bicarbonate Extractable Phosphorus	2	mg/kg	<2	2	<10	ND	ND
	Electrical Conductivity @ 25°C	1	µS/cm	14	13	55	7.4%	118.84%
	Flouride	1	mg/kg	<1	<1	<0.5	ND	ND
	Moisture Content	1	%	13.8	13.1	8.6	5.2%	46.43%
	Nitrite + Nitrate as N	0.1	mg/kg	1.3	1.4	-	7.4%	ND
	pH Value	0.1	pH unit	6	5.8	6.1	3.4%	1.65%
	Water Extractable Sulphur	10	mg/kg	-	-	65	ND	ND
	KCl Extractable Sulfur (23Ce)	0.2	%	-	-	-	ND	ND
	Total Kjeldahl Nitrogen as N	20	mg/kg	170	240	-	34.1%	ND
	Total Nitrogen as N	20	mg/kg	170	240	430	34.1%	86.67%
	Total Organic Carbon	1000	mg/kg	-	-	10000	ND	ND
	Total Organic Carbon	0.2	%	0.56	0.63	-	11.8%	ND
	Total Phosphorus as P	2	mg/kg	36	58	32	46.8%	11.76%
Exchangeable Cations	Cation Exchange Capacity	0.1	meq/100g	6.4	7.9	1.2	21.0%	136.84%
	Exchangeable Aluminium	0.1	meq/100g	<0.2	<0.2	<0.01	ND	ND
	Exchangeable Calcium	0.1	meq/100g	3.6	4.7	0.74	26.5%	131.80%
	Exchangeable Magnesium	0.1	meq/100g	1.9	2.2	0.33	14.6%	140.81%
	Exchangeable Potassium	0.1	meq/100g	0.9	1	0.12	10.5%	152.94%
	Exchangeable Sodium	0.1	meq/100g	<0.2	<0.2	0.018	ND	ND
	Exchangeable Sodium Percent	0.1	%	<0.2	<0.2	-	ND	ND
Particle Sizing	+1180µm	1	%	2	2	-	0.0%	ND
	+150µm	1	%	78	76	-	2.6%	ND
	+19.0mm	1	%	<1	<1	-	ND	ND
	+2.36mm	1	%	<1	<1	-	ND	ND
	+300µm	1	%	36	31	-	14.9%	ND
	+37.5 mm	1	%	<1	<1	-	ND	ND
	+4.75mm	1	%	<1	<1	-	ND	ND
	+425µm	1	%	19	15	-	23.5%	ND
	+600µm	1	%	10	7	-	35.3%	ND
	+75.0mm	1	%	<1	<1	-	ND	ND
	+75µm	1	%	90	89	-	1.1%	ND
	+9.5mm	1	%	<1	<1	-	ND	ND
	Cobbles (>6cm)	1	%	<1	<1	-	ND	ND
	Fines (<75 µm)	1	%	10	11	-	9.5%	ND
	Gravel (>2mm)	1	%	<1	<1	-	ND	ND
	Sand (>75 µm)	1	%	89	89	-	0.0%	ND
Polynuclear Aromatic Hydrocarbons	Naphthalene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Acenaphthylene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Acenaphthene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Fluorene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Phenanthrene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Anthracene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Fluoranthene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Pyrene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Benz(a)anthracene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Chrysene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Benzo(b)fluoranthene	0.5	mg/kg	<0.5	<0.5	<0.2*	ND	ND
	Benzo(k)fluoranthene	0.5	mg/kg	<0.5	<0.5	-	ND	ND
	Benzo(a)pyrene	0.5	mg/kg	<0.5	<0.5	<0.05	ND	ND
	Indeno(1.2.3.cd)pyrene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Dibenz(a.h)anthracene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	<0.5	<0.1	ND	ND
	Sum of PAHs	0.5	mg/kg	<0.5	<0.5	-	ND	ND

Legend
ND = Not Detected (RPDs not calculated if both primary and duplicate results are below LOR)
- = Not analysed/calculated
RPD exceeds acceptable limits
Acceptable RPDs:
RPD <= 30%
RPD > 30%, Analyis result < 10 times LOR
RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

Prepared by: RB
Checked by: OB

APPENDIX D

Subsurface Conditions

Table 1: Subsurface Conditions.

Location ID	Depth (mbgl)	Description	Other Observations
WTP1	0.0 – 0.05	Dry black crust	Sulfur and eucalypt odour
	0.05 – 0.15	Moist silty grey / black sludge	Sulfur and eucalypt odour
	0.15 – 0.4	Clayey Sand – fine grained sand, brown, medium plasticity clay with trace charcoal and rootlets, moist.	Natural material, no odour
WTP2	0.0 – 0.05	Dry black crust	Sulphur and eucalypt odour
	0.05 – 0.2	Moist silty grey / black sludge	Sulphur and eucalypt odour
	0.2 – 0.5	Clayey Sand - fine grained sand, brown, moist, trace rootlets	Natural material, no odour
WTP3	0.0 – 0.05	Dry black crust	Sulfur and eucalypt odour
	0.05 – 0.2	Moist silty grey / black sludge	Sulfur and eucalypt odour
	0.2 – 0.4	Clayey Sand - fine to medium grained sand, brown, moist, trace rootlets	Natural material, no odour
WTP4	0.0 – 0.05	Dry black crust	Sulfur and eucalypt odour
	0.05 – 0.2	Moist silty grey / black sludge	Sulfur and eucalypt odour
	0.4 – 0.5	Clayey SAND - fine to medium grained sand, brown red, trace rootlets	Natural material, no odour
WTP5	0.0 – 0.1	Dry black crust	Sulfur odour
	0.1 – 0.2	Moist silty grey / black sludge	Sulfur odour
	0.2 – 0.5	Sand - fine to medium grained, orange brown, moist-dry, no odour	Natural material, no odour
WTP6	0.0 – 0.05	Thinner dry black crust	Sulfur odour
	0.05 – 0.2	Sand – fine to medium grained, orange brown, moist	Slight sulfur odour
	0.2 – 0.5	Clayey SAND, fine to medium grained sand, orange / brown / grey, medium plasticity, dry	Natural material, no odour
WTP7	0.0 – 0.05	Thin dry black crust	Sulfur odour
	0.05 – 0.2	Silty Sand – fine to medium grained sand, dark brown, moist	Slight sulfur odour
	0.2 – 0.4	Clayey Sand - fine to medium grained sand, orange brown, medium plasticity	Natural material, no odour
WTP8	0.0 – 0.05	Thin dry black crust	Slight sulfur odour
	0.05 – 0.3	Sand – fine to medium grained orange brown	Slight sulfur odour
	0.3 – 0.6	Clayey Sand – fine to medium grained sand, orange brown, medium plasticity	Natural material, no odour
WTP9	0.0 – 0.3	Sand - fine to medium grained sand, brown orange, some clay	Natural material, no odour
	0.3 – 0.5	Clayey Sand - fine to medium grained sand, orange brown, medium plasticity	Natural material, no odour
WTP10	0.0 – 0.05	Thin dry black crust	No odour
	0.05 – 0.15	Sand - fine to medium grained sand, red brown	No odour
	0.15 – 0.4	Clayey Sand - fine to medium grained sand pale brown, grey, low to medium plasticity	Natural material, no odour

Location ID	Depth (mbgl)	Description	Other Observations
WTP11	0.0 0.05	Thin black crust (1-2 mm)	No odour
	0.05 – 0.3	Sand - fine to medium grained sand, red brown, dry	No odour
	0.3 – 0.5	Clayey Sand - fine to medium grained sand pale brown, grey, low to medium plasticity, dry	No odour
WTP12	0.0 – 0.1	Sand - fine to medium grained sand, red, brown, dry	No odour
	0.1 – 0.3	Sand - fine to medium grained sand, red brown, moist	No odour
WTP13	0.0 – 0.05	Thin black crust (1-2 mm)	No odour
	0.05 – 0.3	Sand - fine to medium grained sand, red brown, moist	No odour
WTP14	0.0 – 0.05	Thin black crust (1-2 mm)	No odour
	0.05 – 0.2	Sand - fine to medium grained sand, red brown, moist	No odour
WTP15	0.0 – 0.05	Thin black crust (1-2 mm)	No odour
	0.05 – 0.3	Sand - fine to medium grained sand, red brown, moist	No odour
WTP16	0.0 – 0.2	Clayey Sand - fine to medium grained sand, brown, medium plasticity, moist	Natural material, no odour
	0.2 – 0.4	Clayey Sand - fine to medium grained sand, brown grey, medium plasticity, dry	Natural material, no odour
WTP17	0.0 – 0.05	Dry black crust	Sulfur and eucalypt odour
	0.05 – 0.2	Moist silty grey / black sludge	Sulfur and eucalypt odour
	0.2 – 0.4	Clayey SAND, fine to medium grained sand, brown, dry-moist	Natural material, no odour
WTP18	0.0 – 0.05	Thin black crust (1 mm)	No odour
	0.05 – 0.2	Sand - fine to medium grained sand, orange brown, moist	No odour
WTP19	0.0 – 0.4	Sand – fine to medium grained, orange brown, moist	Natural material, no odour

APPENDIX E

Summary Analytical Results

Table 1: Soil analytical results for heavy metals, cyanide, BTEX and TPH.

			Total Metals by ICP-AES														DTPA Extractable Metals				BTEX							TPHs[2]					TRHs - NEPM 2010 Draft[2]					
			Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Strontium	Vanadium	Zinc	Mercury	Copper	Iron	Manganese	Zinc	Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Sum of BTEX	Total Xylenes	C6 - C9 Fraction	C10 - C14 Fraction	C15 - C28 Fraction	C29 - C36 Fraction	C10 - C36 Fraction	C6 - C10 Fraction	C6 - C10 Fraction minus BTEX	C10 - C16 Fraction	C16 - C34 Fraction	C34 - C40 Fraction	C10 - C40 Fraction (sum)
Unit			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			5	10	1	50	1	2	2	5	5	5	2	2	5	5	0.1	1	1	1	1	0.2	0.5	0.5	0.5	0.5	0.2	0.5	10	50	100	100	50	10	10	50	100	100	50
HIL 'E'			200		40	6000	40	240000[1]	200	2000	600	3000	600			14000	30	200		3000	14000																		
EILs			20	300			3	400[1]		100	600	500	60		50	200	1	100		500	200																		
NSW EPA Service Station																						1	130	50				25	65				1000						
Sample ID	**Date Sampled**	**Sample Type**																																					
NAR_WTP(1A)_SOIL_S	13/01/2012	Primary	<5	290	<1	<50	<1	18	8	7	8	314	8	22	33	14	<0.1	1.87	231	100	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	160 (<100)	100	260 (<50)	<10	<10	<50	220 (<100)	<100	220 (<50)
NAR_WTP(1B)_SOIL_S	13/01/2012	Primary	<5	40	<1	<50	<1	8	<2	<5	<5	27	2	3	21	<5	<0.1	<1.00	90.4	9.97	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(1C)_SOIL_S	13/01/2012	Primary	<5	50	<1	<50	<1	14	<2	<5	<5	12	3	<2	31	<5	<0.1	<1.00	47.2	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(2A)_SOIL_S	13/01/2012	Primary	<5	220	<1	<50	<1	10	5	<5	<5	299	4	20	20	7	<0.1	<1.00	200	105	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	90 (<50)	280 (<100)	160 (<100)	530 (<50)	<10	<10	110 (<50)	380 (<100)	<100	490 (<50)
NAR_WTP(D1)_SOIL_S	13/01/2012	Duplicate	<5	110	<1	<50	<1	10	3	<5	<5	163	4	10	20	<5	<0.1	<1.00	453	79.5	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	140	<100	140	<10	<10	<50	190	<100	190
NAR_WTP(2B)_SOIL_S	13/01/2012	Primary	<5	40	<1	<50	<1	11	<2	<5	<5	19	<2	2	31	<5	<0.1	<1.00	208	5.68	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(2C)_SOIL_S	13/01/2012	Primary	<5	30	<1	<50	<1	13	3	<5	6	<5	3	<2	42	<5	<0.1	<1.00	68.6	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(3A)_SOIL_S	13/01/2012	Primary	<5	**510**	1	<50	<1	25	13	6	10	204	10	55	44	22	<0.1	2.21	322	48.3	1.09	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	140 (<100)	130 (<100)	270 (<50)	<10	<10	<50	240 (<100)	<100	240 (<50)
NAR_WTP(3B)_SOIL_S	13/01/2012	Primary	<5	**360**	<1	<50	<1	23	6	<5	9	114	5	40	**68**	8	<0.1	1.4	186	32.7	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(3C)_SOIL_S	13/01/2012	Primary	<5	30	<1	<50	<1	13	2	<5	5	<5	4	<2	31	<5	<0.1	<1.00	77.3	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(4A)_SOIL_S	13/01/2012	Primary	<5	210	<1	<50	<1	14	6	<5	6	101	5	19	30	13	<0.1	2.34	439	38.8	1.67	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	150 (<100)	<100	150 (<50)	<10	<10	<50	210 (<100)	<100	210 (<50)
NAR_WTP(4B)_SOIL_S	13/01/2012	Primary	<5	150	<1	<50	<1	12	3	<5	5	72	3	15	29	5	<0.1	1.89	687	33.4	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	120 (<100)	<100	120 (<50)	<10	<10	<50	170 (<100)	<100	170 (<50)
NAR_WTP(D2)_SOIL_S	14/01/2012	Duplicate	<5	150	<1	<50	<1	11	4	<5	5	85	4	15	26	7	<0.1	1.53	763	45	1.06	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	140	<100	140	<10	<10	<50	210	<100	210
NAR_WTP(4C)_SOIL_S	13/01/2012	Primary	<5	30	<1	<50	<1	12	2	<5	6	<5	2	<2	31	<5	<0.1	<1.00	206	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(5A)_SOIL_S	14/01/2012	Primary	<5	220	<1	<50	<1	11	4	<5	6	168	4	19	24	8	<0.1	1.23	371	104	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	110 (<50)	490 (<100)	290 (<100)	890 (<50)	<10	<10	130 (<50)	700 (<100)	100 (<100	930 (<50)
NAR_WTP(5B)_SOIL_S	14/01/2012	Primary	<5	90	<1	<50	<1	8	2	<5	5	31	3	5	22	<5	<0.1	<1.00	409	15.5	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	70 (<50)	380 (<100)	130 (<100)	580 (<50)	<10	<10	100 (<50)	430 (<100)	<100	530 (<50)
NAR_WTP(5C)_SOIL_S	14/01/2012	Primary	<5	70	<1	<50	<1	13	3	<5	5	<5	3	<2	32	<5	<0.1	<1.00	197	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(6A)_SOIL_S	14/01/2012	Primary	<5	110	<1	<50	<1	8	2	<5	<5	168	3	13	18	<5	<0.1	2.13	180	56.7	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(6B)_SOIL_S	14/01/2012	Primary	<5	30	<1	<50	<1	8	<2	<5	<5	68	2	5	20	<5	<0.1	6.24	<1.00	1.09	28.4	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(6C)_SOIL_S	14/01/2012	Primary	<5	40	<1	<50	<1	20	6	6	10	6	6	2	**55**	<5	<0.1	<1.00	77.9	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(7A)_SOIL_S	14/01/2012	Primary	<5	110	<1	<50	<1	9	3	<5	6	344	4	21	24	<5	<0.1	1.04	154	239	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(D3)_SOIL_S	14/01/2012	Duplicate	<5	120	<1	<50	<1	9	3	<5	<5	414	5	22	23	<5	<0.1	1.11	169	284	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<10	<50	<100	100	100	<10	<10	50	160	<100	210
NAR_WTP(T3)SOIL_S	14/01/2012	Triplicate	<4	180	<1	<3	<0.5	11	3	4	7	450	4	34	27	5	<0.1	<1	130	190	<1	<0.2	<0.5	<1	<2	<1	-	-	<25	<50	<100	<100	-	-	-	-	-	-	-
NAR_WTP(7B)_SOIL_S	14/01/2012	Primary	<5	50	<1	<50	<1	8	<2	<5	5	170	3	9	23	<5	<0.1	<1.00	180	114	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(7C)_SOIL_S	14/01/2012	Primary	<5	280	<1	<50	<1	16	3	5	7	6	3	12	37	<5	<0.1	<1.00	89.6	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(8A)_SOIL_S	14/01/2012	Primary	<5	70	<1	<50	<1	9	2	<5	<5	217	4	15	22	<5	<0.1	1.47	633	79.8	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(8B)_SOIL_S	14/01/2012	Primary	<5	20	<1	<50	<1	10	<2	<5	<5	24	3	5	27	<5	<0.1	<1.00	93.7	4.52	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(8C)_SOIL_S	14/01/2012	Primary	<5	50	<1	<50	<1	14	3	<5	7	13	4	4	29	<5	<0.1	<1.00	18	1.4	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(9A)_SOIL_S	14/01/2012	Primary	<5	40	<1	<50	<1	7	<2	<5	<5	162	2	8	19	<5	<0.1	<1.00	31.2	32	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(D4)_SOIL_S	14/01/2012	Duplicate	<5	40	<1	<50	<1	9	<2	<5	<5	141	3	9	25	<5	<0.1	<1.00	27.7	21.8	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(9B)_SOIL_S	14/01/2012	Primary	<5	10	<1	<50	<1	15	2	<5	5	9	3	5	40	<5	<0.1	<1.00	89.4	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(9C)_SOIL_S	14/01/2012	Primary	<5	30	<1	<50	<1	12	3	<5	6	<5	3	4	35	<5	<0.1	<1.00	34.5	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(10A)_SOIL_S	14/01/2012	Primary	<5	70	<1	<50	<1	13	2	<5	5	228	3	18	44	<5	<0.1	<1.00	119	133	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(10B)_SOIL_S	14/01/2012	Primary	<5	20	<1	<50	<1	7	<2	<5	<5	30	<2	4	26	<5	<0.1	<1.00	68.2	5.7	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(10C)_SOIL_S	14/01/2012	Primary	<5	10	<1	<50	<1	9	<2	<5	<5	<5	2	<2	14	<5	<0.1	<1.00	31.2	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(11A)_SOIL_S	14/01/2012	Primary	<5	80	<1	<50	<1	7	2	<5	<5	277	3	12	21	<5	<0.1	<1.00	226	44.5	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(11B)_SOIL_S	14/01/2012	Primary	<5	20	<1	<50	<1	6	<2	<5	<5	21	<2	2	24	<5	<0.1	<1.00	33.6	3.36	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(11C)_SOIL_S	14/01/2012	Primary	<5	30	<1	<50	<1	14	3	<5	<5	<5	3	<2	32	<5	<0.1	<1.00	55.9	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(12A)_SOIL_S	14/01/2012	Primary	<5	30	<1	<50	<1	6	<2	<5	<5	160	2	9	16	<5	<0.1	<1.00	25	11	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(12B)_SOIL_S	14/01/2012	Primary	<5	10	<1	<50	<1	5	<2	<5	<5	9	<2	2	15	<5	<0.1	<1.00	25.2	1.64	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(13A)_SOIL_S	14/01/2012	Primary	<5	40	<1	<50	<1	6	<2	<5	<5	191	2	8	20	<5	<0.1	<1.00	116	59.3	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	110	130	<100	240	<10	<10	110	140	<100	250
NAR_WTP(13B)_SOIL_S	14/01/2012	Primary	<5	10	<1	<50	<1	5	<2	<5	<5	<5	<2	<2	17	<5	<0.1	<1.00	83.7	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(14A)_SOIL_S	14/01/2012	Primary	<5	10	<1	<50	<1	4	<2	<5	<5	15	<2	<2	12	<5	<0.1	<1.00	10.5	2.57	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(D5)_SOIL_S	14/01/2012	Duplicate	<5	10	<1	<50	<1	4	<2	<5	<5	18	<2	2	12	<5	<0.1	<1.00	10.7	2.48	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(T5)SOIL_S	14/01/2012	Triplicate	<4	18	<1	<3	<0.5	10	<1	<1	3	24	<1	3	24	1	<0.1	<1	30	7	<1	<0.2	<0.5	<1	<2	<1	-	-	<25	<50	<100	<100	-	-	-	-	-	-	-
NAR_WTP(14B)_SOIL_S	14/01/2012	Primary	<5	40	<1	<50	<1	14	2	<5	6	12	3	4	**57**	<5	<0.1	<1.00	82.3	1.14	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(15A)_SOIL_S	14/01/2012	Primary	<5	20	<1	<50	<1	4	<2	<5	<5	18	<2	2	12	<5	<0.1	<1.00	95.2	10.4	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(15B)_SOIL_S	14/01/2012	Primary	<5	20	<1	<50	<1	6	<2	<5	<5	<5	<2	<2	19	<5	<0.1	<1.00	348	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	160	<100	160	<10	<10	<50	180	<100	180
NAR_WTP(16A)_SOIL_S	15/01/2012	Primary	<5	60	<1	<50	<1	9	<2	<5	5	29	2	4	24	<5	<0.1	<1.00	45.3	13.5	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(16B)_SOIL_S	15/01/2012	Primary	<5	40	<1	<50	<1	12	2	<5	7	<5	2	<2	30	<5	<0.1	<1.00	54.3	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(17A)_SOIL_S	15/01/2012	Primary	<5	**440**	1	<50	<1	22	14	8	11	128	10	18	**52**	12	<0.1	1.91	174	51.3	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(17B)_SOIL_S	15/01/2012	Primary	<5	90	<1	<50	<1	11	8	<5	6	216	6	13	27	<5	<0.1	<1.00	38.5	17.7	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(17C)_SOIL_S	15/01/2012	Primary	<5	60	<1	<50	<1	17	9	<5	7	7	6	4	42	5	<0.1	<1.00	32.2	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(18A)_SOIL_S	15/01/2012	Primary	<5	10	<1	<50	<1	2	<2	<5	<5	13	<2	<2	11	<5	<0.1	<1.00	22.2	11.3	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	17	17	<50	<100	<100	<50
NAR_WTP(18B)_SOIL_S	15/01/2012	Primary	<5	<10	<1	<50	<1	2	<2	<5	<5	<5	<2	<2	10	<5	<0.1	<1.00	9.09	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(19A)_SOIL_S	15/01/2012	Primary	<5	20	<1	<50	<1	2	<2	<5	<5	23	<2	4	11	<5	<0.1	<1.00	34.2	2.32	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(D6)_SOIL_S	15/01/2012	Duplicate	<5	20	<1	<50	<1	3	2	<5	<5	68	<2	5	12	<5	<0.1	<1.00	32.7	4.07	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50
NAR_WTP(T6)SOIL_S	15/01/2012	Triplicate	<4	28	<1	<3	<0.5	3	3	<1	2	76	<1	8	13	1	<0.1	<1	30	17	<1	<0.2	<0.5	<1	<2	<1	-	-	<25	<50	<100	<100	-	-	-	-	-	-	-
NAR_WTP(19B)_SOIL_S	15/01/2012	Primary	<5	<10	<1	<50	<1	2	<2	<5	<5	<5	<2	<2	11	<5	<0.1	<1.00	99.8	<1.00	<1.00	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<50	<100	<100	<50	<10	<10	<50	<100	<100	<50

Notes:

[1] Chromium III

[2] Values in parenthesis indicate TPH/TRH after silica gel clean-up.

Legend

250	Exceeds EILs
250	Exceeds NEPM 'E' or NSW EPA Serivce Station Guidelines

Table 2: Soil analytical results for salts, nutrients and pH

														Exchangeable Cations						
			Bicarbonate Extractable Potassium	Bicarbonate Extractable Phosphorus	Electrical Conductivity @ 25°C	Flouride	Moisture Content	Nitrite + Nitrate as N	pH Value	KCl Extractable Sulfur (23Ce)	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Organic Carbon	Total Phosphorus as P	Caton Exchange Capacity	Exchangeable Aluminium	Exchangeable Calcium	Exchangeable Magnesium	Exchangeable Potassium	Exchangeable Sodium	Exchangeable Sodium Percent
Unit			mg/kg	mg/kg	µS/cm	mg/kg	%	mg/kg	pH unit	%	mg/kg	mg/kg	%	mg/kg	meq/100g	meq/100g	meq/100g	meq/100g	meq/100g	meq/100g	%
LOR			10	2	1	1	1	0.1	0.1	0.02	20	20	0.2	2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
EIL										0.06[1]				2000							
Sample ID	**Date Sampled**	**Sample Type**																			
NAR_WTP(1A)_SOIL_S	13/01/2012	Primary	700	9	824	<1	27.3	<0.5	9.5	<0.02	1130	1130	1.84	169	59.9	<0.2	15.7	10.6	5.9	27.7	46.2
NAR_WTP(1B)_SOIL_S	13/01/2012	Primary	<200	3	292	<1	16.4	<0.5	9.1	<0.02	420	420	0.5	80	19.4	<0.2	1.9	6	1.6	9.9	51.1
NAR_WTP(1C)_SOIL_S	13/01/2012	Primary	<200	<2	265	<1	9.6	0.6	7.8	<0.02	280	280	0.34	48	46.4	<0.2	<0.2	38.2	0.4	7.7	16.5
NAR_WTP(2A)_SOIL_S	13/01/2012	Primary	<200	9	433	<1	9.5	0.9	9.5	<0.02	1220	1220	1.64	130	33.6	<0.2	7	7	1.7	17.9	53.3
NAR_WTP(D1)_SOIL_S	13/01/2012	Duplicate	290	2	470	1	5.2	0.6	9.4	-	610	610	1.17	112	28.9	0.3	4.9	6	2.4	15.6	54
NAR_WTP(2B)_SOIL_S	13/01/2012	Primary	<200	6	360	<1	11.8	<0.5	9.1	<0.02	300	300	0.38	81	18.6	<0.2	1.2	4.6	0.9	11.9	63.8
NAR_WTP(2C)_SOIL_S	13/01/2012	Primary	<200	<2	424	<1	26.2	<0.1	8.8	<0.02	330	330	0.4	39	26.9	<0.2	<0.2	17	0.5	9.2	34.1
NAR_WTP(3A)_SOIL_S	13/01/2012	Primary	840	5	1450	<1	29.3	<0.5	9.7	<0.02	1340	1340	2.14	226	95.6	<0.2	23.6	8.9	5.7	57.5	60.1
NAR_WTP(3B)_SOIL_S	13/01/2012	Primary	800	12	837	<1	34.9	<0.5	9.8	<0.02	730	730	1.7	148	62.1	<0.2	13.4	7.3	3.9	37.5	60.4
NAR_WTP(3C)_SOIL_S	13/01/2012	Primary	<200	<2	352	<1	12.8	0.6	9.2	<0.02	280	280	0.51	66	30.2	<0.2	0.8	11.2	0.5	17.8	58.8
NAR_WTP(4A)_SOIL_S	13/01/2012	Primary	310	4	1270	<1	25.1	<0.5	9.5	<0.02	890	890	2.72	119	65.3	<0.2	8.7	6.5	2.8	47.4	72.5
NAR_WTP(4B)_SOIL_S	13/01/2012	Primary	230	6	715	<1	33.6	<0.5	9.5	<0.02	760	760	1.59	129	49.6	<0.2	5.9	5.6	2.3	35.8	72.2
NAR_WTP(D2)_SOIL_S	14/01/2012	Duplicate	410	3	1160	2	29.8	<0.5	9.4	-	780	780	1.94	130	53.2	<0.2	7.4	7.4	3.5	34.9	65.6
NAR_WTP(4C)_SOIL_S	13/01/2012	Primary	<200	<2	179	<1	16.9	0.1	5.7	<0.02	280	280	0.72	32	47.1	1.3	<0.2	37.9	0.3	8.8	18.7
NAR_WTP(5A)_SOIL_S	14/01/2012	Primary	270	8	421	<1	20.4	3	8.9	<0.02	1720	1720	2.86	140	64.8	<0.2	11.2	13.8	2.9	36.8	56.9
NAR_WTP(5B)_SOIL_S	14/01/2012	Primary	<200	<2	275	<1	21.3	<0.5	8.3	<0.02	760	760	1.82	78	40.3	<0.2	2.5	10.2	1.4	26.2	65
NAR_WTP(5C)_SOIL_S	14/01/2012	Primary	<200	2	148	<1	16	0.1	5.6	<0.02	480	480	0.52	58	32.4	4.5	<0.2	25.7	0.5	6.1	18.9
NAR_WTP(6A)_SOIL_S	14/01/2012	Primary	<200	9	3220	3	1.5	<2.5	10.5	-	440	440	1.63	80	37.3	<0.2	7.4	4.3	2.3	23.3	62.6
NAR_WTP(6B)_SOIL_S	14/01/2012	Primary	<200	9	562	4	15.9	<0.5	9	-	310	310	0.7	98	22.3	<0.2	3.7	3.9	1.6	13.1	58.6
NAR_WTP(6C)_SOIL_S	14/01/2012	Primary	<200	<2	212	<1	19.4	0.4	6.4	-	290	290	0.34	52	54.5	0.3	<0.2	47.4	0.7	6.2	11.4
NAR_WTP(7A)_SOIL_S	14/01/2012	Primary	380	16	690	2	22.1	4	9.2	-	1060	1060	3.01	170	60.9	<0.2	21.2	10.9	4	24.7	40.6
NAR_WTP(D3)_SOIL_S	14/01/2012	Duplicate	340	3	831	3	21.8	3.6	9.2	-	1030	1030	3.47	157	62.6	<0.2	25.7	11.4	4.1	21.4	34.1
NAR_WTP(T3)SOIL_S	14/01/2012	Triplicate	350	30	1000	2.2	20	-	8.7	0.0011[1]	-	820	2[1]	140	17	<0.01	5.9	2.7	0.77	7.4	-
NAR_WTP(7B)_SOIL_S	14/01/2012	Primary	270	10	303	5	16.8	<0.5	8.7	-	470	470	1.16	124	31.2	<0.2	5.6	6.7	2.6	16.3	52.1
NAR_WTP(7C)_SOIL_S	14/01/2012	Primary	<200	<2	198	<1	26.4	0.9	6.1	-	300	300	0.35	47	50.2	0.4	4	39.6	1.3	5.4	10.7
NAR_WTP(8A)_SOIL_S	14/01/2012	Primary	300	10	2070	2	6.6	8	10	-	720	730	1.65	154	43.8	<0.2	5.5	5.8	2.9	29.5	67.4
NAR_WTP(8B)_SOIL_S	14/01/2012	Primary	<200	8	346	3	18.5	<0.5	8.5	-	330	330	0.6	110	21.3	<0.2	1.6	5.5	1.8	12.4	58.3
NAR_WTP(8C)_SOIL_S	14/01/2012	Primary	<200	<2	236	5	24.6	0.3	8.2	-	310	310	0.3	50	51.9	<0.2	1.1	41.1	2.1	7.6	14.6
NAR_WTP(9A)_SOIL_S	14/01/2012	Primary	<200	<2	16	<1	10.7	1.8	5.6	-	620	620	1.13	99	15.8	0.8	9.6	4.8	1.4	<0.2	0.5
NAR_WTP(D4)_SOIL_S	14/01/2012	Duplicate	<200	<2	18	<1	16.1	2.1	5.6	-	610	610	1.26	99	16	0.8	9.8	4.8	1.4	<0.2	<0.2
NAR_WTP(9B)_SOIL_S	14/01/2012	Primary	<200	<2	88	<1	14.8	0.2	5.6	-	160	160	0.27	45	32.4	0.5	1.4	27.1	1.4	2.5	7.8
NAR_WTP(9C)_SOIL_S	14/01/2012	Primary	<200	<2	209	<1	9.5	0.3	5.8	-	130	130	0.18	32	33	0.7	1.4	27.6	1.4	2.6	7.7
NAR_WTP(10A)_SOIL_S	14/01/2012	Primary	<200	12	391	2	19.4	<0.5	8	-	600	600	2.04	99	45.2	<0.2	19.5	9	2.8	14	30.8
NAR_WTP(10B)_SOIL_S	14/01/2012	Primary	<200	<2	69	2	16.5	<0.1	7.6	-	280	280	0.44	74	9.5	0.6	2	3.2	1	3.3	35.1
NAR_WTP(10C)_SOIL_S	14/01/2012	Primary	210	<2	174	<1	12.8	1.6	6.3	-	190	190	0.22	53	30.1	0.3	0.3	23.3	3	3.4	11.5
NAR_WTP(11A)_SOIL_S	14/01/2012	Primary	<200	7	628	<1	15.4	2.3	7.9	-	690	690	1.82	113	30.4	<0.2	8.3	7	2.2	13	42.6
NAR_WTP(11B)_SOIL_S	14/01/2012	Primary	<200	2	61	1	11	0.2	7.5	-	160	160	0.37	55	7.4	0.6	0.5	2.6	0.7	3.5	47.8
NAR_WTP(11C)_SOIL_S	14/01/2012	Primary	<200	<2	221	<1	18.7	0.4	6.7	-	270	270	0.33	46	29.8	<0.2	<0.2	23.5	2	4.3	14.3
NAR_WTP(12A)_SOIL_S	14/01/2012	Primary	<200	10	13	<1	7.4	2	5.7	-	580	580	1.18	107		1.1	8.3	3.6	1.6	<0.2	<0.2
NAR_WTP(12B)_SOIL_S	14/01/2012	Primary	<200	<2	23	<1	18	0.5	6.4	-	210	210	0.25	92	7.2	0.2	0.4	5.7	0.9	0.2	3.5
NAR_WTP(13A)_SOIL_S	14/01/2012	Primary	<200	2	298	1	14.4	0.2	7.6	-	850	850	1.14	140	25.7	<0.2	7.6	7.6	2.4	8.1	31.4
NAR_WTP(13B)_SOIL_S	14/01/2012	Primary	<200	3	61	<1	15.4	<0.1	7.2	-	220	220	0.42	65	7.1	0.8	0.2	4.6	1	1.2	16.8
NAR_WTP(14A)_SOIL_S	14/01/2012	Primary	<200	<2	158	<1	12.8	0.2	8.6	-	80	80	0.18	40	4.7	<0.2	1.3	1.8	0.7	0.9	19.7
NAR_WTP(D5)_SOIL_S	14/01/2012	Duplicate	<200	<2	125	<1	13.5	<0.1	8.7	-	60	60	0.31	44	4.7	0.3	1.2	1.6	0.7	1.2	26
NAR_WTP(T5)SOIL_S	14/01/2012	Triplicate	90	<10	320	0.5	7.1	-	8.2	<0.001[1]	-	180	0.38[1]	30	1.4	<0.01	0.24	0.31	0.11	0.73	-
NAR_WTP(15A)_SOIL_S	14/01/2012	Primary	<200	<2	416	1	23.5	<0.5	9.1	-	660	660	0.37	61	7	<0.2	1.7	1.8	0.7	2.8	40.4
NAR_WTP(15B)_SOIL_S	14/01/2012	Primary	<200	2	69	<1	17.4	<0.1	6.6	-	300	300	0.76	62	13.2	0.8	0.8	5.9	1.6	4.9	37.5
NAR_WTP(16A)_SOIL_S	15/01/2012	Primary	<200	<2	10	<1	19.7	0.5	5.1	-	600	600	1.27	96	8.8	6.1	1.5	6.2	0.8	<0.2	2.5
NAR_WTP(16B)_SOIL_S	15/01/2012	Primary	<200	<2	68	<1	18.3	0.2	6.1	-	270	270	0.39	42	44.8	0.4	<0.2	40.8	0.4	3.4	7.6
NAR_WTP(17A)_SOIL_S	15/01/2012	Primary	460	11	742	<1	29.7	<0.1	9	-	1260	1260	3.03	233	90.2	<0.2	16.2	34.3	4	35.8	39.7
NAR_WTP(17B)_SOIL_S	15/01/2012	Primary	<200	7	353	2	14.8	3.3	9.2	-	620	620	1.52	176	52.4	<0.2	14.9	21.2	1.7	14.6	27.8
NAR_WTP(17C)_SOIL_S	15/01/2012	Primary	<200	<2	335	<1	22.8	0.5	5.6	-	310	310	1.68	67	47.4	0.5	0.8	41.2	0.8	4.6	9.7
NAR_WTP(18A)_SOIL_S	15/01/2012	Primary	<200	<2	93	<1	21	0.1	6.9	-	150	150	1.56	28	5.2	<0.2	1.9	2.1	0.6	0.5	9.5
NAR_WTP(18B)_SOIL_S	15/01/2012	Primary	<200	<2	14	<1	17.4	0.4	6.7	-	70	70	0.18	36	2.2	<0.2	0.6	1	0.5	<0.2	4.6
NAR_WTP(19A)_SOIL_S	15/01/2012	Primary	<200	<2	14	<1	13.8	1.3	6	-	170	170	0.56	36	6.4	<0.2	3.6	1.9	0.9	<0.2	<0.2
NAR_WTP(D6)_SOIL_S	15/01/2012	Duplicate	<120	2	13	<1	13.1	1.4	5.8	-	240	240	0.63	58	7.9	<0.2	4.7	2.2	1	<0.2	<0.2
NAR_WTP(T6)SOIL_S	15/01/2012	Triplicate	120	<10	55	<0.5	8.6	-	6.1	0.0065[1]	-	430	1[1]	32	1.2	<0.01	0.74	0.33	0.12	0.018	-
NAR_WTP(19B)_SOIL_S	15/01/2012	Primary	<200	2	14	<1	13.2	0.6	4.8	-	110	110	0.2	26	1	1.7	<0.2	0.3	0.4	<0.2	5.1

Notes:

[1] Converted from mg/kg

Legend

250	Exceeds EILs
250	Exceeds NEPM 'E' or NSW EPA Serivce Station Guidelines

Table 3: Soil analytical results for PAHs.

			Polynuclear Aromatic Hydrocarbons																	
			Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1.2.3.cd)pyrene	Dibenz(a.h)anthracene	Benzo(g.h.i)perylene	Sum of PAHs
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
HIL 'E'															2				40
Sample ID	**Date Sampled**	**Sample Type**																	
NAR_WTP(1A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(1B)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(1C)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(2A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(D1)_SOIL_S	13/01/2012	Duplicate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(2B)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(2C)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(3A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(3B)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(3C)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(4A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(4B)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(D2)_SOIL_S	14/01/2012	Duplicate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(4C)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(5A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(5B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(5C)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(6A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(6B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(6C)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(7A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(D3)_SOIL_S	14/01/2012	Duplicate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(T3)SOIL_S	14/01/2012	Triplicate	<0.1	<0.1	<0.1	<0.1	<0.1	>0.1	<0.1	<0.1	<0.1	<0.1	<0.2*	-	<0.05	<0.1	<0.1	<0.1	-
NAR_WTP(7B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(7C)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(8A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(8B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(8C)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(9A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(D4)_SOIL_S	14/01/2012	Duplicate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(9B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(9C)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(10A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(10B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(10C)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(11A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(11B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(11C)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(12A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(12B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(13A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(13B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(14A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(D5)_SOIL_S	14/01/2012	Duplicate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(T5)SOIL_S	14/01/2012	Triplicate	<0.1	<0.1	<0.1	<0.1	<0.1	>0.2	<0.1	<0.1	<0.1	<0.1	<0.2*	-	<0.05	<0.1	<0.1	<0.1	-
NAR_WTP(14B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(15A)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(15B)_SOIL_S	14/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(16A)_SOIL_S	15/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(16B)_SOIL_S	15/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(17A)_SOIL_S	15/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(17B)_SOIL_S	15/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(17C)_SOIL_S	15/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(18A)_SOIL_S	15/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(18B)_SOIL_S	15/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(19A)_SOIL_S	15/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(D6)_SOIL_S	15/01/2012	Duplicate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(T6)SOIL_S	15/01/2012	Triplicate	<0.1	<0.1	<0.1	<0.1	<0.1	>0.3	<0.1	<0.1	<0.1	<0.1	<0.2*	-	<0.05	<0.1	<0.1	<0.1	-
NAR_WTP(19B)_SOIL_S	15/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

*Benzo(b&k)fluoranthene

Legend

250 Exceeds NEPM HIL 'E'

Table 4: Soil analytical results for VOCs.

			Monocyclic Aromatic Hydrocarbons									*Oxygenated Compounds*				*SC*	*Fumigants*						*Halogenated Aromatic Compounds*									*Trihalomethanes*			
			Styrene	Isopropylbenzene	n-Propylbenzene	1.3.5-Trimethylbenzene	sec-Butylbenzene	1.2.4-Trimethylbenzene	tert-Butylbenzene	p-Isopropyltoluene	n-Butylbenzene	Vinyl Acetate	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	2-Hexanone (MBK)	Carbon disulfide	2,2-Dichloropropane	1,2-Dichloropropane	cis-1,3-Dichloropropylene	trans-1,3-Dichloropropylene	1,2-Dibromoethane (EDB)	Chlorobenzene	Bromobenzene	2-Chlorotoluene	4-Chlorotoluene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Chloroform	Bromodichloromethane	Dibromochloromethane	Bromoform
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	5	5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sample ID	**Date Sampled**	**Sample Type**																																	
NAR_WTP(1A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(3A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(T3)_SOIL_S	14/01/2012	Triplicate	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

SC: Sulfanated Compounds

			Halogenated Aliphatic Compounds																																
			Dichlorodifluoromethane	Chloromethane	Vinyl chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	1,1-Dichloroethene	Iodomethane	trans-1,2-Dichloroethene	1,1-Dichloroethane	cis-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1-Dichloropropylene	Carbon Tetrachloride	1,2-Dichloroethane	Trichloroethene	Dibromomethane	1,1,2-Trichloroethane	1,3-Dichloropropane	Tetrachloroethene	1,1,1,2-Tetrachloroethane	trans-1,4-Dichloro-2-butene	cis-1,4-Dichloro-2-butene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Pentachloroethane	1,2-Dibromo-3-chloropropane	Hexachlorobutadiene
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			5	5	5	5	5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sample ID	**Date Sampled**	**Sample Type**																																	
NAR_WTP(1A)_SOIL_S	13/01/2012	Primary	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(3A)_SOIL_S	13/01/2012	Primary	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(T3)_SOIL_S	14/01/2012	Triplicate	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1

Table 5: Soil analytical results for SVOCs.

			Phthalate Esters						*Nitrosamines*									*Nitroaromatics and ketones*															*Phenols*												
			Dimethyl phthalate	Diethyl phthalate	Di-n-butyl phthalate	Butyl benzyl phthalate	bis(2-ethylhexyl) phthalate	Di-n-octylphthalate	Methapyrilene	N-Nitrosodibutylamine	N-Nitrosodiethylamine	N-Nitrosodi-n-propylamine	N-Nitrosodiphenyl & Diphenylamine	N-Nitrosomethylethylamine	N-Nitrosomorpholine	N-Nitrosopiperidine	N-Nitrosopyrrolidine	1,3,5-Trinitrobenzene	1-Naphthylamine	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Picoline	4-Aminobiphenyl	4-Nitroquinoline-N-oxide	5-Nitro-o-toluidine	Acetophenone	Azobenzene	Chlorobenziate	Dimethylaminoazobenzene	Isophorone	Nitrobenzene	Pentachloronitrobenzene	Phenacetin	Pronamide	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	3- & 4-Methylphenol	4-Chloro-3-Methylphenol	Pentachlorophenol	2,4-dinitrophenol	2-methyl-4,6-dinitrophenol	4-nitrophenol	Phenol
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HIL 'E'																																														17000
LOR			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	1	0.5	0.5	1	1	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	10	10	10	0.5
Sample ID	**Date Sampled**	**Sample Type**																																											
NAR_WTP(1A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	-	-	-	<0.5
NAR_WTP(3A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	-	-	-	<0.5
NAR_WTP(T3)_SOIL_S	14/01/2012	Triplicate	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	-	<1	<1	-	-	<1	-	<1	-	-	-	<1	<1	<1	-	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<2	-	<10	<10	<10	<10	<1

			Haloethers					*Cholorinated Hydrocarbons*								*Anilines and Benzidines*							*PAHs*																								
			4-Bromophenyl phenyl ether	4-Chlorophenyl phenyl ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl) ether	Bis (2-chloroisopropyl) ether	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	Hexachlorobutadiene	1,2,4-Trichlorobenzene	Hexachlorocyclopentadiene	Hexachloroethane	Hexachloropropylene	Pentachlorobenzene	Hexachlorobenzene (HCB)	2-Nitroaniline	3,3`-Dichlorobenzidine	3-Nitroaniline	4-Chloroaniline	4-Nitroaniline	Aniline	Carbazole	Dibenzofuran	2-Methylnaphthalene	2-Chloronaphthalene	3-Methylcholanthrene	7,12-Dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b) & Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	N-2-Fluorenyl Acetamide	Naphthalene	Phenanthrene	Pyrene	Sum of PAHs
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HIL 'E'																																													
LOR			0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	2.5	0.5	0.5	0.5	1	1	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sample ID	**Date Sampled**	**Sample Type**																																											
NAR_WTP(1A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	<0.5	<0.5	<0.5	<1	<1.0	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(3A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	<0.5	<0.5	<0.5	<1	<1.0	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(T3)_SOIL_S	14/01/2012	Triplicate	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-

			OCPs															*OPPs*										
			alpha-BHC	beta-BHC	gamma-BHC	delta-BHC	Heptachlor	Aldrin	Heptachlor epoxide	alpha-Endosulfan	Dieldrin	4,4`-DDE	Endrin	beta-Endosulfan	4,4`-DDD	Endosulfan sulfate	4,4`-DDT	Dichlorvos	Dimethoate	Diazinon	Chlorpyrifos-methyl	Malathion	Fenthion	Chlorpyrifos	Pirimphos-ethyl	Chlorfenvinphos	Prothiofos	Ethion
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HIL 'E'							20	20[1]			20[1]	400[2]			400[2]		400[2]												
LOR			0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Sample ID	**Date Sampled**	**Sample Type**																											
NAR_WTP(1A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(3A)_SOIL_S	13/01/2012	Primary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAR_WTP(T3)_SOIL_S	14/01/2012	Triplicate	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

[1] Guildeline value for Aldrin + Dieldrin

[2] Guildeline value for DDT + DDD +DDE

Table 6: Soil analytical results for particle sizing

			Particle Sizing															
			+1180µm	+150µm	+19.0mm	+2.36mm	+300µm	+37.5 mm	+4.75mm	+425µm	+600µm	+75.0mm	+75µm	+9.5mm	Cobbles (>6cm)	Fines (<75 µm)	Gravel (>2mm)	Sand (>75 µm)
Unit			%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
LOR			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sample ID	**Date Sampled**	**Sample Type**																
NAR_WTP(1A)_SOIL_S	13/01/2012	Primary	4	50	<1	2	32	<1	<1	21	13	<1	56	<1	<1	44	2	55
NAR_WTP(1B)_SOIL_S	13/01/2012	Primary	7	58	<1	4	37	<1	2	26	17	<1	67	<1	<1	33	4	63
NAR_WTP(1C)_SOIL_S	13/01/2012	Primary	7	43	<1	4	29	<1	1	21	14	<1	50	<1	<1	50	3	46
NAR_WTP(2A)_SOIL_S	13/01/2012	Primary	2	60	<1	<1	38	<1	<1	24	12	<1	67	<1	<1	33	1	66
NAR_WTP(D1)_SOIL_S	13/01/2012	Duplicate	2	56	<1	<1	35	<1	<1	22	11	<1	62	<1	<1	38	1	62
NAR_WTP(2B)_SOIL_S	13/01/2012	Primary	3	60	<1	<1	36	<1	<1	23	13	<1	70	<1	<1	30	<1	69
NAR_WTP(2C)_SOIL_S	13/01/2012	Primary	1	43	<1	<1	26	<1	<1	16	8	<1	50	<1	<1	50	<1	50
NAR_WTP(3A)_SOIL_S	13/01/2012	Primary	3	16	<1	1	11	<1	<1	8	5	<1	17	<1	<1	83	1	16
NAR_WTP(3B)_SOIL_S	13/01/2012	Primary	3	40	<1	1	25	<1	<1	17	10	<1	45	<1	<1	55	1	44
NAR_WTP(3C)_SOIL_S	13/01/2012	Primary	7	49	<1	4	31	<1	2	21	14	<1	55	<1	<1	45	4	51
NAR_WTP(4A)_SOIL_S	13/01/2012	Primary	2	22	<1	<1	15	<1	<1	10	6	<1	26	<1	<1	74	1	25
NAR_WTP(4B)_SOIL_S	13/01/2012	Primary	2	42	<1	<1	25	<1	<1	16	9	<1	49	<1	<1	51	<1	49
NAR_WTP(D2)_SOIL_S	14/01/2012	Duplicate	3	40	<1	<1	25	<1	<1	16	9	<1	47	<1	<1	53	1	46
NAR_WTP(4C)_SOIL_S	13/01/2012	Primary	3	46	<1	<1	28	<1	<1	18	10	<1	53	<1	<1	47	1	53
NAR_WTP(5A)_SOIL_S	14/01/2012	Primary	5	46	<1	2	32	<1	<1	22	14	<1	50	<1	<1	50	2	48
NAR_WTP(5B)_SOIL_S	14/01/2012	Primary	2	59	<1	<1	39	<1	<1	26	14	<1	66	<1	<1	34	1	65
NAR_WTP(5C)_SOIL_S	14/01/2012	Primary	2	42	<1	<1	25	<1	<1	16	9	<1	47	<1	<1	53	1	47
NAR_WTP(6A)_SOIL_S	14/01/2012	Primary	4	60	<1	1	38	<1	<1	24	15	<1	70	<1	<1	30	1	68
NAR_WTP(6B)_SOIL_S	14/01/2012	Primary	2	64	<1	<1	37	<1	<1	23	13	<1	75	<1	<1	25	<1	74
NAR_WTP(6C)_SOIL_S	14/01/2012	Primary	2	44	<1	<1	28	<1	<1	18	10	<1	50	<1	<1	50	<1	50
NAR_WTP(7A)_SOIL_S	14/01/2012	Primary	4	59	<1	<1	38	<1	<1	26	15	<1	66	<1	<1	34	1	65
NAR_WTP(D3)_SOIL_S	14/01/2012	Duplicate	5	56	<1	2	36	<1	<1	25	16	<1	63	<1	<1	37	1	61
NAR_WTP(T3)SOIL_S	14/01/2012	Triplicate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NAR_WTP(7B)_SOIL_S	14/01/2012	Primary	6	62	<1	2	40	<1	<1	27	18	<1	70	<1	<1	30	2	69
NAR_WTP(7C)_SOIL_S	14/01/2012	Primary	6	40	<1	3	26	<1	1	18	13	<1	46	<1	<1	54	3	43
NAR_WTP(8A)_SOIL_S	14/01/2012	Primary	2	59	<1	<1	34	<1	<1	21	11	<1	69	<1	<1	31	<1	69
NAR_WTP(8B)_SOIL_S	14/01/2012	Primary	4	62	<1	2	37	<1	<1	24	15	<1	71	<1	<1	29	2	69
NAR_WTP(8C)_SOIL_S	14/01/2012	Primary	6	46	<1	4	28	<1	1	19	12	<1	53	<1	<1	47	4	50
NAR_WTP(9A)_SOIL_S	14/01/2012	Primary	2	60	<1	<1	34	<1	<1	20	11	<1	71	<1	<1	29	<1	71
NAR_WTP(D4)_SOIL_S	14/01/2012	Duplicate	3	60	<1	<1	35	<1	<1	22	12	<1	73	<1	<1	27	1	72
NAR_WTP(9B)_SOIL_S	14/01/2012	Primary	6	51	<1	4	30	<1	4	20	13	<1	61	3	<1	39	4	57
NAR_WTP(9C)_SOIL_S	14/01/2012	Primary	2	50	<1	1	29	<1	<1	18	10	<1	59	<1	<1	41	1	58
NAR_WTP(10A)_SOIL_S	14/01/2012	Primary	3	60	<1	<1	38	<1	<1	25	14	<1	67	<1	<1	33	1	66
NAR_WTP(10B)_SOIL_S	14/01/2012	Primary	5	72	<1	<1	47	<1	<1	32	19	<1	81	<1	<1	19	<1	81
NAR_WTP(10C)_SOIL_S	14/01/2012	Primary	7	60	<1	3	38	<1	1	26	17	<1	70	<1	<1	30	3	67
NAR_WTP(11A)_SOIL_S	14/01/2012	Primary	7	64	<1	2	44	<1	<1	31	20	<1	70	<1	<1	30	2	69
NAR_WTP(11B)_SOIL_S	14/01/2012	Primary	5	72	<1	1	44	<1	<1	30	18	<1	85	<1	<1	15	1	84
NAR_WTP(11C)_SOIL_S	14/01/2012	Primary	2	55	<1	<1	31	<1	<1	19	10	<1	64	<1	<1	36	<1	64
NAR_WTP(12A)_SOIL_S	14/01/2012	Primary	4	65	<1	<1	38	<1	<1	24	14	<1	76	<1	<1	24	1	75
NAR_WTP(12B)_SOIL_S	14/01/2012	Primary	6	63	<1	2	36	<1	<1	23	15	<1	77	<1	<1	23	2	75
NAR_WTP(13A)_SOIL_S	14/01/2012	Primary	2	68	<1	<1	39	<1	<1	23	12	<1	78	<1	<1	22	<1	78
NAR_WTP(13B)_SOIL_S	14/01/2012	Primary	4	73	<1	1	41	<1	<1	26	15	<1	85	<1	<1	15	1	84
NAR_WTP(14A)_SOIL_S	14/01/2012	Primary	2	65	<1	<1		<1	<1	10	5	<1	89	<1	<1	11	<1	89
NAR_WTP(D5)_SOIL_S	14/01/2012	Duplicate	7	79	<1	5	30	<1	3	19	13	<1	92	<1	<1	8	5	87
NAR_WTP(T5)SOIL_S	14/01/2012	Triplicate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NAR_WTP(15A)_SOIL_S	14/01/2012	Primary	2	56	<1	<1	14	<1	<1	6	3	<1	88	<1	<1	12	1	87
NAR_WTP(15B)_SOIL_S	14/01/2012	Primary	4	68	<1	<1	44	<1	<1	30	18	<1	78	<1	<1	22	<1	77
NAR_WTP(16A)_SOIL_S	15/01/2012	Primary	3	56	<1	<1	34	<1	<1	21	11	<1	66	<1	<1	34	<1	65
NAR_WTP(16B)_SOIL_S	15/01/2012	Primary	4	44	<1	2	26	<1	1	17	10	<1	51	<1	<1	49	2	49
NAR_WTP(17A)_SOIL_S	15/01/2012	Primary	<1	2	<1	<1	2	<1	<1	1	1	<1	2	<1	<1	98	1	1
NAR_WTP(17B)_SOIL_S	15/01/2012	Primary	4	54	<1	1	33	<1	<1	21	12	<1	61	<1	<1	39	1	60
NAR_WTP(17C)_SOIL_S	15/01/2012	Primary	2	40	<1	<1	23	<1	<1	14	7	<1	46	<1	<1	54	<1	46
NAR_WTP(18A)_SOIL_S	15/01/2012	Primary	1	69	<1	<1		<1	<1	22	10	<1	86	<1	<1	14	<1	86
NAR_WTP(18B)_SOIL_S	15/01/2012	Primary	5	74	<1	<1	45	<1	<1	29	18	<1	86	<1	<1	14	1	86
NAR_WTP(19A)_SOIL_S	15/01/2012	Primary	2	78	<1	<1	36	<1	<1	19	10	<1	90	<1	<1	10	<1	89
NAR_WTP(D6)_SOIL_S	15/01/2012	Duplicate	2	76	<1	<1	31	<1	<1	15	7	<1	89	<1	<1	11	<1	89
NAR_WTP(T6)SOIL_S	15/01/2012	Triplicate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NAR_WTP(19B)_SOIL_S	15/01/2012	Primary	5	76	<1	2	42	<1	<1	26	16	<1	89	<1	<1	11	2	87

Table 7: Average, minimum and maximum values

		Total Metals by ICP-AES															DTPA Extractable Metals				BTEX							TPHs					TRHs - NEPM 2010 Draft					
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Strontium	Vandium	Zinc	Mercury	Copper	Iron	Manganese	Zinc	Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Sum of BTEX	Total Xylenes	C6 - C9 Fraction	C10 - C14 Fraction	C15 - C28 Fraction	C29 - C36 Fraction	C10 - C36 Fraction	C6 - C10 Fraction	C6 - C10 Fraction minus BTEX	C10 - C16 Fraction	C16 - C34 Fraction	C34 - C40 Fraction	C10 - C40 Fraction (sum)
Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		5	10	1	50	1	2	2	5	5	5	2	2	5	5	0.1	1	1	1	1	0.2	0.5	0.5	0.5	0.5	0.2	0.5	10	50	100	100	50	10	10	50	100	100	50
Upper Samples	Average	-	122	1	-	-	10	4	5	6	145	4	14	26	6	-	1	214	60	2	-	-	-	-	-	-	-	-	56	135	110	146	10	10	57	173	100	162
	Minimum	-	10	1	-	-	2	1	1	3	13	1	2	11	1	-	1	1	1	1	-	-	-	-	-	-	-	-	50	100	100	50	10	10	50	100	100	50
	Maximum	-	510	1	-	-	25	14	8	11	450	10	55	68	22	-	6	763	284	28	-	-	-	-	-	-	-	-	110	490	290	890	17	10	130	700	100	930
Lower Samples	Average	-	51	-	-	-	12	3	5	6	7	3	3	32	5	-	-	95	1	-	-	-	-	-	-	-	-	-	-	104	-	57	-	-	-	105	-	59
	Minimum	-	10	-	-	-	2	2	5	5	5	2	2	10	5	-	-	9	1	-	-	-	-	-	-	-	-	-	-	100	-	50	-	-	-	100	-	50
	Maximum	-	280	-	-	-	20	9	6	10	13	6	12	57	5	-	-	348	1	-	-	-	-	-	-	-	-	-	-	160	-	160	-	-	-	180	-	180
Control Samples	Average	-	28	-	-	-	7	2	-	5	58	2	5	21	5	-	-	44	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Minimum	-	10	-	-	-	2	2	-	2	5	1	2	11	1	-	-	25	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Maximum	-	60	-	-	-	15	3	-	7	162	3	9	40	5	-	-	100	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

														Exchangeable Cations							
		Bicarbonate Extractable Potassium	Bicarbonate Extractable Phosphorus	Electrical Conductivity @ 25°C	Flouride	Moisture Content	Nitrite + Nitrate as N	pH Value	KCl Extractable Sulfur (23Ce)	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Organic Carbon	Total Phosphorus as P	Cation Exchange Capacity	Exchangeable Aluminium	Exchangeable Calcium	Exchangeable Magnesium	Exchangeable Potassium	Exchangeable Sodium	Exchangeable Sodium Percent
Unit		mg/kg	mg/kg	µS/cm	mg/kg	%	mg/kg	pH unit	%	mg/kg	mg/kg	%	mg/kg	meq/100	meq/100	meq/100	meq/100	meq/100	meq/100	%
LOR		10	2	1	1	1	0.1	0.1	0.02	20	20	0.2	2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Upper Samples	Average	295	7	662	1.6	18.3	1.2	8.9	0.02	681	670	1.5	115	36.6	0.2	8.0	7.4	2.3	18.9	48.2
	Minimum	90	2	61	0.5	1.5	0.1	6.9	0.02	60	60	0.2	28	1.4	0.0	0.2	0.3	0.1	0.5	9.5
	Maximum	840	30	3220	5.0	34.9	8.0	10.5	0.02	1720	1720	3.5	233	95.6	0.6	25.7	34.3	5.9	57.5	72.5
Lower Samples	Average	201	2	203	1.3	17.9	0.4	7.0	0.02	266	266	0.5	51	31.6	0.7	0.7	24.0	1.1	5.9	19.9
	Minimum	200	2	14	1.0	9.6	0.1	5.6	0.02	70	70	0.2	32	2.2	0.2	0.2	1.0	0.3	0.2	4.6
	Maximum	210	3	424	5.0	26.4	1.6	9.2	0.02	480	480	1.7	67	54.5	4.5	4.0	47.4	3.0	17.8	58.8
Control Samples	Average	187	3	45	-	13.6	1.0	5.7	0.0065	336	344	0.7	64	15.7	1.1	3.5	10.4	1.0	0.8	3.2
	Minimum	120	2	10	-	7.4	0.2	4.8	0.0065	110	110	0.2	26	1.0	0.0	0.2	0.3	0.1	0.0	0.2
	Maximum	200	10	209	-	19.7	2.1	6.4	0.0065	620	620	1.3	107	44.8	6.1	9.8	40.8	1.6	3.4	7.8

Notes:
- all results less than LOR
All PAHs, VOCs and SVOCs results are less than LOR

APPENDIX F

Laboratory Certificates

Craig Bryant

From: Bryn Stephens
Sent: Wednesday, 1 February 2012 5:11 PM
To: rebatches.brisbane
Subject: FW: SANTOS REBATCH REQUEST - EB 1201573 - Silica gel clean up request
Attachments: EB1201573_COC.pdf

Importance: High

7/2

From: Jodie Hancock
Sent: Wednesday, 1 February 2012 5:11 PM
To: Craig Bryant; Bryn Stephens
Cc: Matt Frost
Subject: SANTOS REBATCH REQUEST - EB 1201573 - Silica gel clean up request
Importance: High

Can you please arrange for this Rebatch to be done for Silica Gel Clean Up?

1 EB1201573 #1
2 EB1201573 #4
3 EB1201573 #7
4 EB1201573 #10
5 EB1201573 #11
6 EB1201573 #13
7 EB1201573 #14

Environmental Division
Brisbane
Work Order
EB1202982

Telephone : +61-7-3243 7222

I know that these samples are quite urgent, so a reasonably fast TAT will be appreciated.

These samples are from the same site as EB1201577...

Cheers

From: Jorstad, Lange [mailto:ljorstad@golder.com.au]
Sent: Tuesday, 31 January 2012 10:04 AM

ALS Group
Environmental Division

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EB1202982**

Client	: **SANTOS LTD**	Laboratory	: Environmental Division Brisbane
Contact	: REMALIA SHARPLIN	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rsharplin@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	Page	: 1 of 3
Order number	: ----		
C-O-C number	: ----	Quote number	: EB2011SANTOS0313 (BN/107/11 V3)
Site	: Narrabri		
Sampler	: Rita Bonetti	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 01-FEB-2012	Issue Date	: 06-FEB-2012 10:40
Client Requested Due Date	: 09-FEB-2012	Scheduled Reporting Date	: **09-FEB-2012**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: CHILLED
No. of coolers/boxes	: REBATCH	No. of samples received	: 7
Security Seal	: N/A	No. of samples analysed	: 7

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- **Please note these samples were originally reported in EB1201573.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Matt Goodwin.
- Analytical work for this work order will be conducted at ALS Brisbane.
- 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 neccessary 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.
If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EA055-103 Moisture Content	SOIL - EP071SG-S TPH Silica Gel Clean Up
EB1202982-001	13-JAN-2012 15:00	NAR_WTP(1A)_SOIL_S	✓	✓
EB1202982-002	13-JAN-2012 15:00	NAR_WTP(2A)_SOIL_S	✓	✓
EB1202982-003	13-JAN-2012 15:00	NAR_WTP(3A)_SOIL_S	✓	✓
EB1202982-004	13-JAN-2012 15:00	NAR_WTP(4A)_SOIL_S	✓	✓
EB1202982-005	13-JAN-2012 15:00	NAR_WTP(4B)_SOIL_S	✓	✓
EB1202982-006	14-JAN-2012 15:00	NAR_WTP(5A)_SOIL_S	✓	✓
EB1202982-007	14-JAN-2012 15:00	NAR_WTP(5B)_SOIL_S	✓	✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method		Due for extraction	Due for analysis	Samples Received		Instructions Received	
Client Sample ID(s)	Container			Date	Evaluation	Date	Evaluation
EA055-103: Moisture Content							
NAR_WTP(1A)_SOIL	Soil Glass Jar - Unpreserved	----	27-JAN-2012	01-FEB-2012	×	----	----
NAR_WTP(2A)_SOIL	Soil Glass Jar - Unpreserved	----	27-JAN-2012	01-FEB-2012	×	----	----
NAR_WTP(3A)_SOIL	Soil Glass Jar - Unpreserved	----	27-JAN-2012	01-FEB-2012	×	----	----
NAR_WTP(4A)_SOIL	Soil Glass Jar - Unpreserved	----	27-JAN-2012	01-FEB-2012	×	----	----
NAR_WTP(4B)_SOIL	Soil Glass Jar - Unpreserved	----	27-JAN-2012	01-FEB-2012	×	----	----
NAR_WTP(5A)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	01-FEB-2012	×	----	----
NAR_WTP(5B)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	01-FEB-2012	×	----	----
EP071SG-S: TPH - Semivolatile Fraction (Silica Gel Clean Up)							
NAR_WTP(1A)_SOIL	Soil Glass Jar - Unpreserved	27-JAN-2012	----	01-FEB-2012	×	----	----
NAR_WTP(2A)_SOIL	Soil Glass Jar - Unpreserved	27-JAN-2012	----	01-FEB-2012	×	----	----
NAR_WTP(3A)_SOIL	Soil Glass Jar - Unpreserved	27-JAN-2012	----	01-FEB-2012	×	----	----
NAR_WTP(4A)_SOIL	Soil Glass Jar - Unpreserved	27-JAN-2012	----	01-FEB-2012	×	----	----
NAR_WTP(4B)_SOIL	Soil Glass Jar - Unpreserved	27-JAN-2012	----	01-FEB-2012	×	----	----
NAR_WTP(5A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	01-FEB-2012	×	----	----
NAR_WTP(5B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	01-FEB-2012	×	----	----

Requested Deliverables

MR LANGE JORSTAD		
- *AU Certificate of Analysis - NATA	Email	ljorstad@golder.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	ljorstad@golder.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	ljorstad@golder.com.au
- A4 - AU Sample Receipt Notification - Environmental HT	Email	ljorstad@golder.com.au
- Attachment - Report	Email	ljorstad@golder.com.au
- Chain of Custody (CoC)	Email	ljorstad@golder.com.au
- EDI Format - SRAENVT_SANTOS	Email	ljorstad@golder.com.au
MS JODIE HANCOCK		
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jodie.hancock@alsenviro.com
- Chain of Custody (CoC) (COC)	Email	jodie.hancock@alsenviro.com
MS RITA BONETTI		
- *AU Certificate of Analysis - NATA (COA)	Email	rbonetti@golder.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	rbonetti@golder.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	rbonetti@golder.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	rbonetti@golder.com.au
- Attachment - Report (SUBCO)	Email	rbonetti@golder.com.au
- Chain of Custody (CoC) (COC)	Email	rbonetti@golder.com.au
- EDI Format - SRAENVT_SANTOS (SRAENVT_SANTOS)	Email	rbonetti@golder.com.au
REMALIA SHARPLIN		
- *AU Certificate of Analysis - NATA	Email	rsharplin@golder.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	rsharplin@golder.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	rsharplin@golder.com.au
- A4 - AU Sample Receipt Notification - Environmental HT	Email	rsharplin@golder.com.au
- Attachment - Report	Email	rsharplin@golder.com.au
- Chain of Custody (CoC)	Email	rsharplin@golder.com.au
- EDI Format - SRAENVT_SANTOS	Email	rsharplin@golder.com.au
THE ACCOUNTS PAYABLE		
- A4 - AU Tax Invoice (INV)	Email	accounts.payable@santos.com
THE RESULTS ADDRESS		
- *AU Certificate of Analysis - NATA (COA)	Email	enviro_data@santos.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	enviro_data@santos.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	enviro_data@santos.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	enviro_data@santos.com
- Attachment - Report (SUBCO)	Email	enviro_data@santos.com
- Chain of Custody (CoC) (COC)	Email	enviro_data@santos.com
- EDI Format - SRAENVT_SANTOS (SRAENVT_SANTOS)	Email	enviro_data@santos.com

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EB1202982**	Page	: 1 of 6
Client	: SANTOS LTD	Laboratory	: Environmental Division Brisbane
Contact	: MS RITA BONETTI	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rbonetti@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Narrabri		
C-O-C number	: ----	Date Samples Received	: 01-FEB-2012
Sampler	: Rita Bonetti	Issue Date	: 14-FEB-2012
Order number	: 117626001		
		No. of samples received	: 7
Quote number	: BN/107/11 V3	No. of samples analysed	: 7

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

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 aliquot was taken. Elapsed period to 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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content							
Soil Glass Jar - Unpreserved (EA055-103) NAR_WTP(1A)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S	**13-JAN-2012**	**----**	----	----	**06-FEB-2012**	27-JAN-2012	×
Soil Glass Jar - Unpreserved (EA055-103) NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S	**14-JAN-2012**	**----**	----	----	**06-FEB-2012**	28-JAN-2012	×
EP071 SG-S: Total Petroleum Hydrocarbons in Soil - Silica gel cleanup							
Soil Glass Jar - Unpreserved (EP071SG-S) NAR_WTP(1A)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S	**13-JAN-2012**	**06-FEB-2012**	27-JAN-2012	×	**07-FEB-2012**	17-MAR-2012	✓
Soil Glass Jar - Unpreserved (EP071SG-S) NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S	**14-JAN-2012**	**06-FEB-2012**	28-JAN-2012	×	**07-FEB-2012**	17-MAR-2012	✓
EP071 SG: Total Recoverable Hydrocarbons (NEPM 2010 draft) - Silica gel cleanup							
Soil Glass Jar - Unpreserved (EP071SG-S) NAR_WTP(1A)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S	**13-JAN-2012**	**06-FEB-2012**	27-JAN-2012	×	**07-FEB-2012**	17-MAR-2012	✓
Soil Glass Jar - Unpreserved (EP071SG-S) NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S	**14-JAN-2012**	**06-FEB-2012**	28-JAN-2012	×	**07-FEB-2012**	17-MAR-2012	✓

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(where) 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		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	2	17	**11.8**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction (Silica Gel Clean Up)	EP071SG-S	1	7	**14.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
TPH - Semivolatile Fraction (Silica Gel Clean Up)	EP071SG-S	1	7	**14.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
TPH - Semivolatile Fraction (Silica Gel Clean Up)	EP071SG-S	1	7	**14.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

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
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 (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
TPH - Semivolatile Fraction (Silica Gel Clean Up)	EP071SG-S	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)

Preparation Methods	Method	Matrix	Method Descriptions
Tumbler Extraction of Solids/ Silica Gel Clean Up	ORG17A-SG	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.

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-QWI/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		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content							
Soil Glass Jar - Unpreserved							
NAR_WTP(1A)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(4B)_SOIL_S	NAR_WTP(2A)_SOIL_S, NAR_WTP(4A)_SOIL_S,	----	----	----	06-FEB-2012	27-JAN-2012	**10**
Soil Glass Jar - Unpreserved							
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S	----	----	----	06-FEB-2012	28-JAN-2012	**9**
EP071 SG: Total Recoverable Hydrocarbons (NEPM 2010 draft) - Silica gel cleanup							
Soil Glass Jar - Unpreserved							
NAR_WTP(1A)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(4B)_SOIL_S	NAR_WTP(2A)_SOIL_S, NAR_WTP(4A)_SOIL_S,	06-FEB-2012	27-JAN-2012	**10**	----	----	----
Soil Glass Jar - Unpreserved							
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S	06-FEB-2012	28-JAN-2012	**9**	----	----	----
EP071 SG-S: Total Petroleum Hydrocarbons in Soil - Silica gel cleanup							
Soil Glass Jar - Unpreserved							
NAR_WTP(1A)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(4B)_SOIL_S	NAR_WTP(2A)_SOIL_S, NAR_WTP(4A)_SOIL_S,	06-FEB-2012	27-JAN-2012	**10**	----	----	----
Soil Glass Jar - Unpreserved							
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S	06-FEB-2012	28-JAN-2012	**9**	----	----	----

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.**

QUALITY CONTROL REPORT

Work Order	: **EB1202982**	Page	: 1 of 5
Client	: **SANTOS LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MS RITA BONETTI	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rbonetti@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Narrabri		
C-O-C number	: ----	Date Samples Received	: 01-FEB-2012
Sampler	: Rita Bonetti	Issue Date	: 14-FEB-2012
Order number	: 117626001	No. of samples received	: 7
Quote number	: BN/107/11 V3	No. of samples analysed	: 7

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
WORLD RECOGNISED ACCREDITATION

NATA Accredited Laboratory 825

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*
Matt Frost	Senior Organic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Organics

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 insuffient 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 (%)*
EA055: Moisture Content (QC Lot: 2154969)									
EB1202962-004	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	9.2	9.0	1.7	No Limit
EB1202982-001	NAR_WTP(1A)_SOIL_S	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	20.4	20.8	2.0	0% - 20%
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup (QC Lot: 2154924)									
EB1202982-001	NAR_WTP(1A)_SOIL_S	EP071SG-S: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071SG-S: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071SG-S: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071SG-S: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP071 SG: Total Recoverable Hydrocarbons (NEPM 2010 draft) - Silica gel cleanup (QC Lot: 2154924)									
EB1202982-001	NAR_WTP(1A)_SOIL_S	EP071SG-S: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071SG-S: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071SG-S: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071SG-S: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup (QCLot: 2154924)								
EP071SG-S: C10 - C14 Fraction	----	25	mg/kg	----	312 mg/kg	93.5	60	112
		50	mg/kg	<50	----	----	----	----
EP071SG-S: C15 - C28 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	500 mg/kg	93.3	71	122
EP071SG-S: C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
EP071SG-S: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP071 SG: Total Recoverable Hydrocarbons (NEPM 2010 draft) - Silica gel cleanup (QCLot: 2154924)								
EP071SG-S: >C10 - C16 Fraction	----	50	mg/kg	<50	413 mg/kg	97.6	58	112
EP071SG-S: >C16 - C34 Fraction	----	100	mg/kg	<100	360 mg/kg	86.9	69	122
EP071SG-S: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
EP071SG-S: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----

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.

- **No Matrix Spike (MS) Results are required to be reported.**

ALS Group
Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EB1202982**	Page	: 1 of 4
Client	: **SANTOS LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MS RITA BONETTI	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rbonetti@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 117626001		
C-O-C number	: ----	Date Samples Received	: 01-FEB-2012
Sampler	: Rita Bonetti	Issue Date	: 14-FEB-2012
Site	: Narrabri		
		No. of samples received	: 7
Quote number	: BN/107/11 V3	No. of samples analysed	: 7

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

NATA
WORLD RECOGNISED ACCREDITATION

NATA Accredited Laboratory 825

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*
Matt Frost	Senior Organic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Organics

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 insuffient 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

- **Field Observations and Measurements submitted to the laboratory by external samplers and appearing in this report are not covered by ALS' NATA Accreditation.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(1A)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(4A)_SOIL_S	NAR_WTP(4B)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1202982-001	EB1202982-002	EB1202982-003	EB1202982-004	EB1202982-005
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**20.4**	**10.3**	**30.9**	**40.8**	**32.1**
EP071 SG: Total Recoverable Hydrocarbons (NEPM 2010 draft) - Silica gel cleanup									
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP071 SG-S: Total Petroleum Hydrocarbons in Soil - Silica gel cleanup									
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

Analytical Results

Sub-Matrix: SOIL			Client sample ID	NAR_WTP(5A)_SOIL_S	NAR_WTP(5B)_SOIL_S	----	----	----
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	----	----	----
Compound	CAS Number	LOR	Unit	EB1202982-006	EB1202982-007	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	24.4	18.5	----	----	----
EP071 SG: Total Recoverable Hydrocarbons (NEPM 2010 draft) - Silica gel cleanup								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
EP071 SG-S: Total Petroleum Hydrocarbons in Soil - Silica gel cleanup								
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----

CHAIN OF CUSTODY DOCUMENTATION

Santos
We have the energy.

CLIENT:	Santos Ltd	SAMPLER:	Rita Bonetti
ADDRESS / OFFICE:	Santos Place, Level 22, 32 Turbot Street, Brisbane QLD 4000	MOBILE:	0437 039 929
PROJECT MANAGER (PM):	Remalia Sharplin	PHONE:	02 9478 3906
PROJECT ID:	117626001	EMAIL INVOICE TO:	accounts.payable@santos.com
SITE:	Narrabri	EMAIL REPORT TO:	enviro_data@santos.com rbonetti@golder.com.au and rsharplin@golder.com.au
RESULTS REQUIRED:	Standard Turn Around QUOTE: EN/039/10 Addendum	Notes:	Samples frozen for Acid Sulfate Soil Analysis

Note: Please provide results in SRAENVT SANTOS format

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE
CHILLED: Yes No

COMMENTS / HANDLING / STORAGE OR DIPOSAL:
Please store samples for 3 weeks prior to disposal

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFO		Field Observations (ALS Code SAMP02) — Soil parameters										Lab Analysis (ALS SAMP2)			
ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	#Jars	Depth/Depth Range (mm)	Soil Colour	Mottled	Dominant Horizon	Field Texture	Moisture	Odour	Rainfall	Sample Method	Sample Type	Suite W - Drill Soil	PAHS	BTEX	
[redacted]							0-100	Blk		O		Dry	SULF		H Auger					
[redacted]							100-200	Blk		A		Moist	SULF		H Auger					
[redacted]							400-500	Org		B		Dry	No		H Auger					
1	NAR_WTP(6A)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
2	NAR_WTP(6B)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	100-200	Org		A		Moist	SULF		H Auger		x	x	x	
3	NAR_WTP(6C)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	400-500	Org		B		Dry	No		H Auger		x	x	x	
4	NAR_WTP(7A)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
5	NAR_WTP(7B)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	50-100	Bwn		A		Moist	SULF		H Auger		x	x	x	
6	NAR_WTP(7C)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	300-400	Org		B		Dry	No		H Auger		x	x	x	
7	NAR_WTP(8A)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
8	NAR_WTP(8B)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	50-150	Org		A		Moist	SULF		H Auger		x	x	x	
9	NAR_WTP(8C)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	500-600	Org		B		Dry	No		H Auger		x	x	x	

Environmental Division
Brisbane
Work Order
EB1201577

Telephone : +61-7-3243 7222

RELINQUISHED BY:				RECEIVED BY				METHOD OF SHIPMENT
Name:	Rita Bonetti	Date:	15/01/2012	Name:	[illegible]	Date:	19.1.12	Con' Note No:
Of:	Golder Associates	Time:	4:00 PM	Of:	ALS	Time:	1400	Transport Co:
Name:		Date:		Name:		Date:		
Of:		Time:		Of:		Time:		

Soil Container Codes:

CHAIN OF CUSTODY DOCUMENTATION

Santos
We have the energy.

CLIENT:	Santos Ltd	SAMPLER:	Rita Bonetti
ADDRESS / OFFICE:	Santos Place, Level 22, 32 Turbot Street, Brisbane QLD 4000	MOBILE:	0437 039 929
PROJECT MANAGER (PM):	Remalia Sharplin	PHONE:	02 9478 3906
PROJECT ID:	117626001	EMAIL INVOICE TO:	accounts.payable@santos.com
SITE:	Narrabri	EMAIL REPORT TO:	enviro_data@santos.com rbonetti@golder.com.au and rsharplin@golder.com.au
RESULTS REQUIRED:	Standard Turn Around QUOTE: EN/039/10 Addendum	Notes:	Samples frozen for Acid Sulfate Soil Analysis

Note: Please provide results in SRAENVT SANTOS format

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE:
CHILLED: Yes No

COMMENTS / HANDLING / STORAGE OR DISPOSAL:
Please store samples for 3 weeks prior to disposal

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFO		Field Observations (ALS Code SAMP02)										Lab Analysis (ALS SAMP2)			
							Soil parameters													
ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	#Jars	Depth/Depth Range (mm)	Soil Colour	Mottled	Dominant Horizon	Field Texture	Moisture	Odour	Rainfall	Sample Method	Sample Type	Suite W - Drill Soil	PAHS	BTEX	
10	NAR_WTP(9A)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	0-50	Bwn		O		Dry	No		H Auger		x	x	x	
11	NAR_WTP(9B)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	100-200	Bwn		A		Moist	No		H Auger		x	x	x	
12	NAR_WTP(9C)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	400-500	Org		B		Moist	No		H Auger		x	x	x	
13	NAR_WTP(10A)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	0-50	Blk		O		Dry	No		H Auger		x	x	x	
14	NAR_WTP(10B)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	50-150	Bwn		A		Moist	No		H Auger		x	x	x	
15	NAR_WTP(10C)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	300-400	Bwn		B		Dry	No		H Auger		x	x	x	
16	NAR_WTP(11A)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	0-50	Blk		O		Dry	No		H Auger		x	x	x	
17	NAR_WTP(11B)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	100-200	Bwn		A		Moist	No		H Auger		x	x	x	
18	NAR_WTP(11C)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	400-500	Bwn		B		Dry	No		H Auger		x	x	x	
19	NAR_WTP(12A)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	0-50	Bwn		O		Dry	No		H Auger		x	x	x	
20	NAR_WTP(12B)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	200-300	Bwn		A		Moist	No		H Auger		x	x	x	
21	NAR_WTP(13A)_SOIL_S	S	14/01/2012	########	250ML JAR,2 BA	3	0-50	Blk		O		Dry	No		H Auger		x	x	x	

RELINQUISHED BY:			RECEIVED BY			METHOD OF SHIPMENT
Name: Rita Bonetti	Date: 15/01/2012		Name: Josh ALS	Date: 19.1.12		Con' Note No:
Of: Golder Associates	Time: 4:00 PM		Of:	Time: 1400		Transport Co:
Name:	Date:		Name:	Date:		
Of:	Time:		Of:	Time:		

Soil Container Codes:

AIN OF CUSTODY DOCUMENTATION

Santos
We have the energy.

CLIENT:	Santos Ltd
ADDRESS / OFFICE:	Santos Place, Level 22, 32 Turbot Street, Brisbane QLD 4000
PROJECT MANAGER (PM):	Remalia Sharplin
PROJECT ID:	117626001
SITE:	Narrabri
RESULTS REQUIRED:	Standard Turn Around QUOTE: EN/039/10 Addendum

SAMPLER:	Rita Bonetti
MOBILE:	0437 039 929
PHONE:	02 9478 3906
EMAIL INVOICE TO:	accounts.payable@santos.com
EMAIL REPORT TO:	enviro_data@santos.com rbonetti@golder.com.au and rsharplin@golder.com.au

Note: Please provide results in SRAENVT SANTOS format

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE
CHILLED: Yes No

COMMENTS / HANDLING / STORAGE OR DISPOSAL:
Please store samples for 3 weeks prior to disposal

Notes: Samples frozen for Acid Sulfate Soil Analysis

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFO		Field Observations (ALS Code SAMP02)										Lab Analysis (ALS SAMP2)			
							Soil parameters													
ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	#Jars	Depth/Depth Range (mm)	Soil Colour	Mottled	Dominant Horizon	Field Texture	Moisture	Odour	Rainfall	Sample Method	Sample Type	Suite W - Drill Soil	PAHS	BTEX	
22	NAR_WTP(13B)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	200-300	Bwn		A		Moist	No		H Auger		x	x	x	
23	NAR_WTP(14A)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	0-100	Blk		O		Dry	No		H Auger		x	x	x	
24	NAR_WTP(14B)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	100-200	Bwn		A		Moist	No		H Auger		x	x	x	
25	NAR_WTP(15A)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	0-50	Blk		O		Dry	No		H Auger		x	x	x	
26	NAR_WTP(15B)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	200-300	Bwn		A		Moist	No		H Auger		x	x	x	
27	NAR_WTP(16A)_SOIL_S	S	15/01/2012	#######	250ML JAR,2 BA	3	0-100	Bwn		O		Moist	SULF		H Auger		x	x	x	
28	NAR_WTP(16B)_SOIL_S	S	15/01/2012	#######	250ML JAR,2 BA	3	300-400	Bwn		A		Dry	SULF		H Auger		x	x	x	
29	NAR_WTP(17A)_SOIL_S	S	15/01/2012	#######	250ML JAR,2 BA	3	0-50	Blk		O		Dry	No		H Auger		x	x	x	
30	NAR_WTP(17B)_SOIL_S	S	15/01/2012	#######	250ML JAR,2 BA	3	50-100	Gry		A		Moist	No		H Auger		x	x	x	
31	NAR_WTP(17C)_SOIL_S	S	15/01/2012	#######	250ML JAR,2 BA	3	300-400	Bwn		B		Dry	No		H Auger		x	x	x	
32	NAR_WTP(18A)_SOIL_S	S	15/01/2012	#######	250ML JAR,2 BA	3	0-50	Blk		O		Dry	No		H Auger		x	x	x	
33	NAR_WTP(18B)_SOIL_S	S	15/01/2012	#######	250ML JAR,2 BA	3	100-200	Org		A		Moist	No		H Auger		x	x	x	

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: Rita Bonetti	Date: 15/01/2012	Name: [illegible]	Date: 19-1-12	Con' Note No:
Of: Golder Associates	Time: 4:00 PM	Of: ALS	Time: 1400	Transport Co:
Name:	Date:	Name:	Date:	
Of:	Time:	Of:	Time:	

Soil Container Codes:

AIN OF CUSTODY DOCUMENTATION

Santos
We have the energy.

CLIENT:	Santos Ltd	SAMPLER:	Rita Bonetti
ADDRESS / OFFICE:	Santos Place, Level 22, 32 Turbot Street, Brisbane QLD 4000	MOBILE:	0437 039 929
PROJECT MANAGER (PM):	Remalia Sharplin	PHONE:	02 9478 3906
PROJECT ID:	117626001	EMAIL INVOICE TO:	accounts.payable@santos.com
SITE:	Narrabri	EMAIL REPORT TO:	enviro_data@santos.com rbonetti@golder.com.au and rsharplin@golder.com.au
RESULTS REQUIRED:	Standard Turn Around QUOTE: EN/039/10 Addendum	**Notes:**	Samples frozen for Acid Sulfate Soil Analysis

Note: Please provide results in SRAENVT SANTOS format

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact Yes No N/A
SAMPLE TEMPERATURE
CHILLED Yes No

COMMENTS / HANDLING / STORAGE OR DIPOSAL:
Please store samples for 3 weeks prior to disposal

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFO		**Field Observations** (ALS Code SAMP02) Soil parameters										**Lab Analysis** (ALS SAMP2)			
ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	#Jars	Depth/Depth Range (mm)	Soil Colour	Mottled	Dominant Horizon	Field Texture	Moisture	Odour	Rainfall	Sample Method	Sample Type	Suite W - Drill Soil	PAHS	BTEX	Metals/TPH
34	NAR_WTP(19A)_SOIL_S	S	15/01/2012	#######	250ML JAR,2 BA	3	0-100	Org		O		Moist	No		H Auger		x	x	x	
35	NAR_WTP(19B)_SOIL_S	S	15/01/2012	#######	250ML JAR,2 BA	3	300-400	Org		A		Moist	No		H Auger		x	x	x	
36	NAR_WTP(D1)_SOIL_S	S	13/01/2012		250ML JAR,2 BA	3											x	x	x	
37	NAR_WTP(D2)_SOIL_S	S	14/01/2012		250ML JAR,2 BA	3											x	x	x	
38	NAR_WTP(D3)_SOIL_S	S	14/01/2012		250ML JAR,2 BA	3											x	x	x	
39	NAR_WTP(D4)_SOIL_S	S	14/01/2012		250ML JAR,2 BA	3											x	x	x	
40	NAR_WTP(D5)_SOIL_S	S	14/01/2012		250ML JAR,2 BA	3											x	x	x	
41	NAR_WTP(D6)_SOIL_S	S	15/01/2012		250ML JAR,2 BA	3											x	x	x	
42	Rinsate_13/1/12	S	13/01/2012			4												x	x	x
43	Rinsate_14/1/12	S	14/01/2012			4												x	x	x
44	Rinsate_15/1/11	S	15/01/2012			4												x	x	x

RELINQUISHED BY:				RECEIVED BY				METHOD OF SHIPMENT
Name:	Rita Bonetti	Date:	15/01/2012	Name:	Josh	Date:	19.1.12	Con' Note No:
Of:	Golder Associates	Time:	4:00 PM	Of:	ALS	Time:	1400	Transport Co:
Name:		Date:		Name:		Date:		
Of:		Time:		Of:		Time:		

Soil Container Codes:

ALS Group
Environmental Division

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EB1201577**

Client	: **SANTOS LTD**	Laboratory	: Environmental Division Brisbane
Contact	: REMALIA SHARPLIN	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rsharplin@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	Page	: 1 of 9
Order number	: 117626001		
C-O-C number	: ----	Quote number	: EB2011SANTOS0313 (BN/107/11 V3)
Site	: Narrabri		
Sampler	: Rita Bonetti	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 19-JAN-2012	Issue Date	: 31-JAN-2012 10:00
Client Requested Due Date	: 03-FEB-2012	Scheduled Reporting Date	: **03-FEB-2012**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 27.1°C<->28.5°C
No. of coolers/boxes	: 9 MEDIUM	No. of samples received	: 44
Security Seal	: Intact.	No. of samples analysed	: 44

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Matt Goodwin.
- Analytical work for this work order will be conducted at ALS Brisbane and ALS Newcastle.
- 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 neccessary 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.
If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - EP080 BTEXN	SOIL - SAMP-02 Field Observations (Soil Sampling)	SOIL - Santos Suite W SUITE W - Drill Soil
EB1201577-001	14-JAN-2012 15:00	NAR_WTP(6A)_SOIL_S	✓	✓	✓	✓
EB1201577-002	14-JAN-2012 15:00	NAR_WTP(6B)_SOIL_S	✓	✓	✓	✓
EB1201577-003	14-JAN-2012 15:00	NAR_WTP(6C)_SOIL_S	✓	✓	✓	✓
EB1201577-004	14-JAN-2012 15:00	NAR_WTP(7A)_SOIL_S	✓	✓	✓	✓
EB1201577-005	14-JAN-2012 15:00	NAR_WTP(7B)_SOIL_S	✓	✓	✓	✓
EB1201577-006	14-JAN-2012 15:00	NAR_WTP(7C)_SOIL_S	✓	✓	✓	✓
EB1201577-007	14-JAN-2012 15:00	NAR_WTP(8A)_SOIL_S	✓	✓	✓	✓
EB1201577-008	14-JAN-2012 15:00	NAR_WTP(8B)_SOIL_S	✓	✓	✓	✓
EB1201577-009	14-JAN-2012 15:00	NAR_WTP(8C)_SOIL_S	✓	✓	✓	✓
EB1201577-010	14-JAN-2012 15:00	NAR_WTP(9A)_SOIL_S	✓	✓	✓	✓
EB1201577-011	14-JAN-2012 15:00	NAR_WTP(9B)_SOIL_S	✓	✓	✓	✓
EB1201577-012	14-JAN-2012 15:00	NAR_WTP(9C)_SOIL_S	✓	✓	✓	✓
EB1201577-013	14-JAN-2012 15:00	NAR_WTP(10A)_SOIL_S	✓	✓	✓	✓
EB1201577-014	14-JAN-2012 15:00	NAR_WTP(10B)_SOIL_S	✓	✓	✓	✓
EB1201577-015	14-JAN-2012 15:00	NAR_WTP(10C)_SOIL_S	✓	✓	✓	✓
EB1201577-016	14-JAN-2012 15:00	NAR_WTP(11A)_SOIL_S	✓	✓	✓	✓
EB1201577-017	14-JAN-2012 15:00	NAR_WTP(11B)_SOIL_S	✓	✓	✓	✓
EB1201577-018	14-JAN-2012 15:00	NAR_WTP(11C)_SOIL_S	✓	✓	✓	✓
EB1201577-019	14-JAN-2012 15:00	NAR_WTP(12A)_SOIL_S	✓	✓	✓	✓
EB1201577-020	14-JAN-2012 15:00	NAR_WTP(12B)_SOIL_S	✓	✓	✓	✓
EB1201577-021	14-JAN-2012 15:00	NAR_WTP(13A)_SOIL_S	✓	✓	✓	✓
EB1201577-022	14-JAN-2012 15:00	NAR_WTP(13B)_SOIL_S	✓	✓	✓	✓
EB1201577-023	14-JAN-2012 15:00	NAR_WTP(14A)_SOIL_S	✓	✓	✓	✓
EB1201577-024	14-JAN-2012 15:00	NAR_WTP(14B)_SOIL_S	✓	✓	✓	✓
EB1201577-025	14-JAN-2012 15:00	NAR_WTP(15A)_SOIL_S	✓	✓	✓	✓
EB1201577-026	14-JAN-2012 15:00	NAR_WTP(15B)_SOIL_S	✓	✓	✓	✓
EB1201577-027	15-JAN-2012 15:00	NAR_WTP(16A)_SOIL_S	✓	✓	✓	✓
EB1201577-028	15-JAN-2012 15:00	NAR_WTP(16B)_SOIL_S	✓	✓	✓	✓
EB1201577-029	15-JAN-2012 15:00	NAR_WTP(17A)_SOIL_S	✓	✓	✓	✓
EB1201577-030	15-JAN-2012 15:00	NAR_WTP(17B)_SOIL_S	✓	✓	✓	✓
EB1201577-031	15-JAN-2012 15:00	NAR_WTP(17C)_SOIL_S	✓	✓	✓	✓
EB1201577-032	15-JAN-2012 15:00	NAR_WTP(18A)_SOIL_S	✓	✓	✓	✓
EB1201577-033	15-JAN-2012 15:00	NAR_WTP(18B)_SOIL_S	✓	✓	✓	✓
EB1201577-034	15-JAN-2012 15:00	NAR_WTP(19A)_SOIL_S	✓	✓	✓	✓
EB1201577-035	15-JAN-2012 15:00	NAR_WTP(19B)_SOIL_S	✓	✓	✓	✓

			SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - EP080 BTEXN	SOIL - SAMP-02 Field Observations (Soil Sampling)	SOIL - Santos Suite W SUITE W - Drill Soil
EB1201577-036	13-JAN-2012 15:00	NAR_WTP(D1)_SOIL_S	✓	✓		✓
EB1201577-037	14-JAN-2012 15:00	NAR_WTP(D2)_SOIL_S	✓	✓		✓
EB1201577-038	14-JAN-2012 15:00	NAR_WTP(D3)_SOIL_S	✓	✓		✓
EB1201577-039	14-JAN-2012 15:00	NAR_WTP(D4)_SOIL_S	✓	✓		✓
EB1201577-040	14-JAN-2012 15:00	NAR_WTP(D5)_SOIL_S	✓	✓		✓
EB1201577-041	15-JAN-2012 15:00	NAR_WTP(D6)_SOIL_S	✓	✓		✓

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	WATER - W-02T 8 metals (Total)	WATER - W-07 HS TPH/BTEX/PAH Volatiles by HS
EB1201577-042	13-JAN-2012 15:00	Rinsate_13/1/12	✓	✓
EB1201577-043	14-JAN-2012 15:00	Rinsate_14/1/12	✓	✓
EB1201577-044	15-JAN-2012 15:00	Rinsate_15/1/13	✓	✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method		Due for extraction	Due for analysis	Samples Received		Instructions Received	
Client Sample ID(s)	Container			Date	Evaluation	Date	Evaluation
EA002: pH (1:5)							
NAR_WTP(10A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(10B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(10C)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(11A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(11B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(11C)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(12A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(12B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(13A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(13B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(14A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(14B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(15A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(15B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(16A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(16B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(17A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(17B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(17C)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(18A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(18B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(19A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(19B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(6A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(6B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(6C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(7A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(7B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(7C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(8A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(8B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(8C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(9A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(9B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(9C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(D1)_SOIL	Soil Glass Jar - Unpreserved	20-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(D2)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(D3)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(D4)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(D5)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(D6)_SOIL	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
EA010: Electrical Conductivity (1:5)							
NAR_WTP(10A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(10B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(10C)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(11A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(11B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(11C)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(12A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(12B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(13A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(13B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(14A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(14B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(15A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(15B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(16A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×
NAR_WTP(16B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	×

NAR_WTP(17A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17C)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D1)_SOIL	Soil Glass Jar - Unpreserved	20-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D2)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D3)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D4)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D5)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D6)_SOIL	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
EA055-103: Moisture Content							
NAR_WTP(10A)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10B)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10C)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11A)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11B)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11C)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12A)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12B)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13A)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13B)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14A)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14B)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15A)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15B)_SOI	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16A)_SOI	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16B)_SOI	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17A)_SOI	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17B)_SOI	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17C)_SOI	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18A)_SOI	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18B)_SOI	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19A)_SOI	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19B)_SOI	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6A)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6B)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6C)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7A)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7B)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7C)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8A)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8B)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8C)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9A)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9B)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9C)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D1)_SOIL	Soil Glass Jar - Unpreserved	----	27-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D2)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D3)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D4)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D5)_SOIL	Soil Glass Jar - Unpreserved	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗

NAR_WTP(D6)_SOIL	Soil Glass Jar - Unpreserved	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
EK040S: Fluoride - Soluble							
NAR_WTP(10A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10C)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11C)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15A)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15B)_SOI	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17C)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19A)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19B)_SOI	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9A)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9B)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9C)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D1)_SOIL	Soil Glass Jar - Unpreserved	20-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D2)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D3)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D4)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D5)_SOIL	Soil Glass Jar - Unpreserved	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D6)_SOIL	Soil Glass Jar - Unpreserved	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
EP003: Total Organic Carbon							
NAR_WTP(10A)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10B)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10C)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11A)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11B)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11C)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12A)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12B)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13A)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13B)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14A)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14B)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15A)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15B)_SOI	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16A)_SOI	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16B)_SOI	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17A)_SOI	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17B)_SOI	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17C)_SOI	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18A)_SOI	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18B)_SOI	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19A)_SOI	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗

NAR_WTP(19B)_SOIL	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6A)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6B)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6C)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7A)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7B)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7C)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8A)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8B)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8C)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9A)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9B)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9C)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D1)_SOIL	Pulp Bag	20-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D2)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D3)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D4)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D5)_SOIL	Pulp Bag	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D6)_SOIL	Pulp Bag	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
EP071: TPH - Semivolatile Fraction							
NAR_WTP(10A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10C)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11C)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17C)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D1)_SOIL	Soil Glass Jar - Unpreserved	27-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D2)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D3)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D4)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D5)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D6)_SOIL	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
EP075(SIM): PAH/Phenols (SIM)							
NAR_WTP(10A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10C)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗

NAR_WTP(11B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11C)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17C)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D1)_SOIL	Soil Glass Jar - Unpreserved	27-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D2)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D3)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D4)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D5)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D6)_SOIL	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
EP080: TPH Volatiles/BTEX							
NAR_WTP(10A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(10C)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(11C)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(12B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(13B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(14B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15A)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(15B)_SOI	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(16B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(17C)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(18B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19A)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(19B)_SOI	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(6C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(7B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗

NAR_WTP(7C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(8C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9A)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9B)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(9C)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D1)_SOIL	Soil Glass Jar - Unpreserved	27-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D2)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D3)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D4)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D5)_SOIL	Soil Glass Jar - Unpreserved	28-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
NAR_WTP(D6)_SOIL	Soil Glass Jar - Unpreserved	29-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗

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

Method		Due for extraction	Due for analysis	Samples Received		Instructions Received	
Client Sample ID(s)	Container			Date	Evaluation	Date	Evaluation
EP071: TPH - Semivolatile Fraction							
Rinsate_13/1/12	Amber Glass Bottle - Unpreserv	20-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
Rinsate_14/1/12	Amber Glass Bottle - Unpreserv	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
Rinsate_15/1/13	Amber Glass Bottle - Unpreserv	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
EP075(SIM): PAH/Phenols (GC/MS - SIM)							
Rinsate_13/1/12	Amber Glass Bottle - Unpreserv	20-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
Rinsate_14/1/12	Amber Glass Bottle - Unpreserv	21-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
Rinsate_15/1/13	Amber Glass Bottle - Unpreserv	22-JAN-2012	----	19-JAN-2012	✓	31-JAN-2012	✗
EP080-HS: TRH Volatiles/BTEXN							
Rinsate_13/1/12	Amber VOC Vial - Sulfuric Acid	----	27-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
Rinsate_14/1/12	Amber VOC Vial - Sulfuric Acid	----	28-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗
Rinsate_15/1/13	Amber VOC Vial - Sulfuric Acid	----	29-JAN-2012	19-JAN-2012	✓	31-JAN-2012	✗

Requested Deliverables

MS JODIE HANCOCK

- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jodie.hancock@alsenviro.com
- Chain of Custody (CoC) (COC)	Email	jodie.hancock@alsenviro.com

MS RITA BONETTI

- *AU Certificate of Analysis - NATA	Email	rbonetti@golder.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	rbonetti@golder.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	rbonetti@golder.com.au
- A4 - AU Sample Receipt Notification - Environmental HT	Email	rbonetti@golder.com.au
- Attachment - Report	Email	rbonetti@golder.com.au
- Chain of Custody (CoC)	Email	rbonetti@golder.com.au
- EDI Format - SRAENVT_SANTOS	Email	rbonetti@golder.com.au

REMALIA SHARPLIN

- *AU Certificate of Analysis - NATA	Email	rsharplin@golder.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	rsharplin@golder.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	rsharplin@golder.com.au
- A4 - AU Sample Receipt Notification - Environmental HT	Email	rsharplin@golder.com.au
- Attachment - Report	Email	rsharplin@golder.com.au
- Chain of Custody (CoC)	Email	rsharplin@golder.com.au
- EDI Format - SRAENVT_SANTOS	Email	rsharplin@golder.com.au

THE ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)	Email	accounts.payable@santos.com

THE RESULTS ADDRESS

- *AU Certificate of Analysis - NATA (COA)	Email	enviro_data@santos.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	enviro_data@santos.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	enviro_data@santos.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	enviro_data@santos.com
- Attachment - Report (SUBCO)	Email	enviro_data@santos.com
- Chain of Custody (CoC) (COC)	Email	enviro_data@santos.com
- EDI Format - SRAENVT_SANTOS (SRAENVT_SANTOS)	Email	enviro_data@santos.com

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EB1201577**	Page	: 1 of 37
Client	: SANTOS LTD	Laboratory	: Environmental Division Brisbane
Contact	: MS RITA BONETTI	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rbonetti@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Narrabri		
C-O-C number	: ----	Date Samples Received	: 19-JAN-2012
Sampler	: Rita Bonetti	Issue Date	: 08-FEB-2012
Order number	: 117626001		
		No. of samples received	: 44
Quote number	: BN/107/11 V3	No. of samples analysed	: 44

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

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 aliquot was taken. Elapsed period to 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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA002 : pH (Soils)							
Soil Glass Jar - Unpreserved (EA002)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**01-FEB-2012**	20-JAN-2012	×	**02-FEB-2012**	01-FEB-2012	×
Soil Glass Jar - Unpreserved (EA002)							
NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**01-FEB-2012**	21-JAN-2012	×	**02-FEB-2012**	01-FEB-2012	×
Soil Glass Jar - Unpreserved (EA002)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	21-JAN-2012	×	**02-FEB-2012**	01-FEB-2012	×
Soil Glass Jar - Unpreserved (EA002)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**01-FEB-2012**	22-JAN-2012	×	**02-FEB-2012**	01-FEB-2012	×

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA010: Conductivity							
Soil Glass Jar - Unpreserved (EA010)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**01-FEB-2012**	20-JAN-2012	×	**02-FEB-2012**	29-FEB-2012	✓
Soil Glass Jar - Unpreserved (EA010)							
NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**01-FEB-2012**	21-JAN-2012	×	**02-FEB-2012**	29-FEB-2012	✓
Soil Glass Jar - Unpreserved (EA010)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	21-JAN-2012	×	**02-FEB-2012**	28-FEB-2012	✓
Soil Glass Jar - Unpreserved (EA010)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**01-FEB-2012**	22-JAN-2012	×	**02-FEB-2012**	29-FEB-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content							
Soil Glass Jar - Unpreserved (EA055-103)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**----**	----	----	**31-JAN-2012**	27-JAN-2012	×
Soil Glass Jar - Unpreserved (EA055-103)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**----**	----	----	**31-JAN-2012**	28-JAN-2012	×
Soil Glass Jar - Unpreserved (EA055-103)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**----**	----	----	**31-JAN-2012**	29-JAN-2012	×

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA150: Particle Sizing							
Snap Lock Bag (EA150)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	---	11-JUL-2012	----	**01-FEB-2012**	30-JUL-2012	✓
Snap Lock Bag (EA150)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	---	12-JUL-2012	----	**01-FEB-2012**	30-JUL-2012	✓
Snap Lock Bag (EA150)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	---	13-JUL-2012	----	**01-FEB-2012**	30-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA150: Soil Classification based on Particle Size							
Snap Lock Bag (EA150)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	---	11-JUL-2012	----	**01-FEB-2012**	30-JUL-2012	✓
Snap Lock Bag (EA150)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	---	12-JUL-2012	----	**01-FEB-2012**	30-JUL-2012	✓
Snap Lock Bag (EA150)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	---	13-JUL-2012	----	**01-FEB-2012**	30-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED008: Exchangeable Cations							
Soil Glass Jar - Unpreserved (ED008)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**01-FEB-2012**	11-JUL-2012	✓	**02-FEB-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (ED008)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**01-FEB-2012**	12-JUL-2012	✓	**02-FEB-2012**	12-JUL-2012	✓
Soil Glass Jar - Unpreserved (ED008)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**01-FEB-2012**	13-JUL-2012	✓	**02-FEB-2012**	13-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED021: Bicarbonate Extractable Potassium (Colwell)							
Soil Glass Jar - Unpreserved (ED021)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**01-FEB-2012**	11-JUL-2012	✓	**03-FEB-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (ED021)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**01-FEB-2012**	12-JUL-2012	✓	**03-FEB-2012**	12-JUL-2012	✓
Soil Glass Jar - Unpreserved (ED021)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**01-FEB-2012**	13-JUL-2012	✓	**03-FEB-2012**	13-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED092: DTPA Extractable Metals							
Soil Glass Jar - Unpreserved (ED092)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**01-FEB-2012**	11-JUL-2012	✓	**02-FEB-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (ED092)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**01-FEB-2012**	12-JUL-2012	✓	**02-FEB-2012**	12-JUL-2012	✓
Soil Glass Jar - Unpreserved (ED092)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**01-FEB-2012**	13-JUL-2012	✓	**02-FEB-2012**	13-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**31-JAN-2012**	11-JUL-2012	✓	**31-JAN-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (EG005T)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	12-JUL-2012	✓	**31-JAN-2012**	12-JUL-2012	✓
Soil Glass Jar - Unpreserved (EG005T)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**31-JAN-2012**	13-JUL-2012	✓	**31-JAN-2012**	13-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**31-JAN-2012**	10-FEB-2012	✓	**01-FEB-2012**	10-FEB-2012	✓
Soil Glass Jar - Unpreserved (EG035T)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	11-FEB-2012	✓	**01-FEB-2012**	11-FEB-2012	✓
Soil Glass Jar - Unpreserved (EG035T)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**31-JAN-2012**	12-FEB-2012	✓	**01-FEB-2012**	12-FEB-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK040: Fluoride							
Soil Glass Jar - Unpreserved (EK040S)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**01-FEB-2012**	20-JAN-2012	×	**03-FEB-2012**	29-FEB-2012	✓
Soil Glass Jar - Unpreserved (EK040S)							
NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**01-FEB-2012**	21-JAN-2012	×	**03-FEB-2012**	29-FEB-2012	✓
Soil Glass Jar - Unpreserved (EK040S)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	21-JAN-2012	×	**03-FEB-2012**	28-FEB-2012	✓
Soil Glass Jar - Unpreserved (EK040S)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**01-FEB-2012**	22-JAN-2012	×	**03-FEB-2012**	29-FEB-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Soil Glass Jar - Unpreserved (EK059G)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**01-FEB-2012**	11-JUL-2012	✓	**02-FEB-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK059G)							
NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**01-FEB-2012**	12-JUL-2012	✓	**02-FEB-2012**	12-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK059G)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	12-JUL-2012	✓	**02-FEB-2012**	12-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK059G)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**01-FEB-2012**	13-JUL-2012	✓	**02-FEB-2012**	13-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Soil Glass Jar - Unpreserved (EK061G)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**31-JAN-2012**	11-JUL-2012	✓	**03-FEB-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK061G)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	12-JUL-2012	✓	**03-FEB-2012**	12-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK061G)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**31-JAN-2012**	13-JUL-2012	✓	**03-FEB-2012**	13-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK067G: Total Phosphorus as P by Discrete Analyser								
Soil Glass Jar - Unpreserved (EK067G)								
NAR_WTP(D1)_SOIL_S		**13-JAN-2012**	**31-JAN-2012**	11-JUL-2012	✓	**03-FEB-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK067G)								
NAR_WTP(6A)_SOIL_S,	NAR_WTP(6B)_SOIL_S,	**14-JAN-2012**	**31-JAN-2012**	12-JUL-2012	✓	**03-FEB-2012**	12-JUL-2012	✓
NAR_WTP(6C)_SOIL_S,	NAR_WTP(7A)_SOIL_S,							
NAR_WTP(7B)_SOIL_S,	NAR_WTP(7C)_SOIL_S,							
NAR_WTP(8A)_SOIL_S,	NAR_WTP(8B)_SOIL_S,							
NAR_WTP(8C)_SOIL_S,	NAR_WTP(9A)_SOIL_S,							
NAR_WTP(9B)_SOIL_S,	NAR_WTP(9C)_SOIL_S,							
NAR_WTP(10A)_SOIL_S,	NAR_WTP(10B)_SOIL_S,							
NAR_WTP(10C)_SOIL_S,	NAR_WTP(11A)_SOIL_S,							
NAR_WTP(11B)_SOIL_S,	NAR_WTP(11C)_SOIL_S,							
NAR_WTP(12A)_SOIL_S,	NAR_WTP(12B)_SOIL_S,							
NAR_WTP(13A)_SOIL_S,	NAR_WTP(13B)_SOIL_S,							
NAR_WTP(14A)_SOIL_S,	NAR_WTP(14B)_SOIL_S,							
NAR_WTP(15A)_SOIL_S,	NAR_WTP(15B)_SOIL_S,							
NAR_WTP(D2)_SOIL_S,	NAR_WTP(D3)_SOIL_S,							
NAR_WTP(D4)_SOIL_S,	NAR_WTP(D5)_SOIL_S							
Soil Glass Jar - Unpreserved (EK067G)								
NAR_WTP(16A)_SOIL_S,	NAR_WTP(16B)_SOIL_S,	**15-JAN-2012**	**31-JAN-2012**	13-JUL-2012	✓	**03-FEB-2012**	13-JUL-2012	✓
NAR_WTP(17A)_SOIL_S,	NAR_WTP(17B)_SOIL_S,							
NAR_WTP(17C)_SOIL_S,	NAR_WTP(18A)_SOIL_S,							
NAR_WTP(18B)_SOIL_S,	NAR_WTP(19A)_SOIL_S,							
NAR_WTP(19B)_SOIL_S,	NAR_WTP(D6)_SOIL_S							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK080: Bicarbonate Extractable Phosphorus (Colwell)							
Soil Glass Jar - Unpreserved (EK080)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**----**	----	----	**01-FEB-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK080)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**----**	----	----	**01-FEB-2012**	12-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK080)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**----**	----	----	**01-FEB-2012**	13-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP003: Total Organic Carbon (TOC) in Soil							
Pulp Bag (EP003)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**07-FEB-2012**	20-JAN-2012	×	**07-FEB-2012**	06-MAR-2012	✓
Pulp Bag (EP003)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**07-FEB-2012**	21-JAN-2012	×	**07-FEB-2012**	06-MAR-2012	✓
Pulp Bag (EP003)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**07-FEB-2012**	22-JAN-2012	×	**07-FEB-2012**	06-MAR-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**31-JAN-2012**	27-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓
Soil Glass Jar - Unpreserved (EP071)							
NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	28-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓
Soil Glass Jar - Unpreserved (EP071)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	28-JAN-2012	×	**31-JAN-2012**	11-MAR-2012	✓
Soil Glass Jar - Unpreserved (EP071)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**31-JAN-2012**	29-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**31-JAN-2012**	27-JAN-2012	×	**31-JAN-2012**	11-MAR-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	28-JAN-2012	×	**31-JAN-2012**	11-MAR-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**31-JAN-2012**	29-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S	**15-JAN-2012**	**31-JAN-2012**	29-JAN-2012	×	**31-JAN-2012**	11-MAR-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**31-JAN-2012**	27-JAN-2012	×	**31-JAN-2012**	27-JAN-2012	×
Soil Glass Jar - Unpreserved (EP080)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	28-JAN-2012	×	**31-JAN-2012**	28-JAN-2012	×
Soil Glass Jar - Unpreserved (EP080)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**31-JAN-2012**	29-JAN-2012	×	**31-JAN-2012**	29-JAN-2012	×

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
NAR_WTP(D1)_SOIL_S	**13-JAN-2012**	**31-JAN-2012**	27-JAN-2012	×	**31-JAN-2012**	27-JAN-2012	×
Soil Glass Jar - Unpreserved (EP080)							
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	**14-JAN-2012**	**31-JAN-2012**	28-JAN-2012	×	**31-JAN-2012**	28-JAN-2012	×
Soil Glass Jar - Unpreserved (EP080)							
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	**15-JAN-2012**	**31-JAN-2012**	29-JAN-2012	×	**31-JAN-2012**	29-JAN-2012	×

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
Rinsate_13/1/12	**13-JAN-2012**	**03-FEB-2012**	11-JUL-2012	✓	**03-FEB-2012**	11-JUL-2012	✓
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
Rinsate_14/1/12	**14-JAN-2012**	**03-FEB-2012**	12-JUL-2012	✓	**03-FEB-2012**	12-JUL-2012	✓
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
Rinsate_15/1/13	**15-JAN-2012**	**03-FEB-2012**	13-JUL-2012	✓	**03-FEB-2012**	13-JUL-2012	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
Rinsate_13/1/12	**13-JAN-2012**	**----**	----	----	**02-FEB-2012**	10-FEB-2012	✓
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
Rinsate_14/1/12	**14-JAN-2012**	**----**	----	----	**02-FEB-2012**	11-FEB-2012	✓
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
Rinsate_15/1/13	**15-JAN-2012**	**----**	----	----	**02-FEB-2012**	12-FEB-2012	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Amber Glass Bottle - Unpreserved (EP071) Rinsate_13/1/12	**13-JAN-2012**	**31-JAN-2012**	20-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓
Amber Glass Bottle - Unpreserved (EP071) Rinsate_14/1/12	**14-JAN-2012**	**31-JAN-2012**	21-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓
Amber Glass Bottle - Unpreserved (EP071) Rinsate_15/1/13	**15-JAN-2012**	**31-JAN-2012**	22-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) Rinsate_13/1/12	**13-JAN-2012**	**31-JAN-2012**	20-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓
Amber Glass Bottle - Unpreserved (EP075(SIM)) Rinsate_14/1/12	**14-JAN-2012**	**31-JAN-2012**	21-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓
Amber Glass Bottle - Unpreserved (EP075(SIM)) Rinsate_15/1/13	**15-JAN-2012**	**31-JAN-2012**	22-JAN-2012	×	**01-FEB-2012**	11-MAR-2012	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080-HS) Rinsate_13/1/12	**13-JAN-2012**	**----**	----	----	**31-JAN-2012**	27-JAN-2012	×
Amber VOC Vial - Sulfuric Acid (EP080-HS) Rinsate_14/1/12	**14-JAN-2012**	**----**	----	----	**31-JAN-2012**	28-JAN-2012	×
Amber VOC Vial - Sulfuric Acid (EP080-HS) Rinsate_15/1/13	**15-JAN-2012**	**----**	----	----	**31-JAN-2012**	29-JAN-2012	×
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Amber VOC Vial - Sulfuric Acid (EP080-HS) Rinsate_13/1/12	**13-JAN-2012**	**----**	----	----	**31-JAN-2012**	27-JAN-2012	×
Amber VOC Vial - Sulfuric Acid (EP080-HS) Rinsate_14/1/12	**14-JAN-2012**	**----**	----	----	**31-JAN-2012**	28-JAN-2012	×
Amber VOC Vial - Sulfuric Acid (EP080-HS) Rinsate_15/1/13	**15-JAN-2012**	**----**	----	----	**31-JAN-2012**	29-JAN-2012	×

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(where) 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		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Bicarbonate Extractable K (Colwell)	ED021	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Bicarbonate Extractable P (Colwell)	EK080	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
DTPA Extractable Metals	ED092	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Electrical Conductivity (1:5)	EA010	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Exchangeable Cations with pre-treatment	ED008	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride - Soluble	EK040S	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Moisture Content	EA055-103	4	40	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
pH (1:5)	EA002	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TKN as N By Discrete Analyser	EK061G	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Organic Carbon	EP003	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosporus By Discrete Analyser	EK067G	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	5	41	**12.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
DTPA Extractable Metals	ED092	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Electrical Conductivity (1:5)	EA010	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Exchangeable Cations with pre-treatment	ED008	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride - Soluble	EK040S	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
pH (1:5)	EA002	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TKN as N By Discrete Analyser	EK061G	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Organic Carbon	EP003	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosporus By Discrete Analyser	EK067G	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Bicarbonate Extractable K (Colwell)	ED021	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Bicarbonate Extractable P (Colwell)	EK080	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
DTPA Extractable Metals	ED092	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Electrical Conductivity (1:5)	EA010	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Exchangeable Cations with pre-treatment	ED008	3	41	**7.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Method Blanks (MB) - Continued							
Fluoride - Soluble	EK040S	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TKN as N By Discrete Analyser	EK061G	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Organic Carbon	EP003	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosporus By Discrete Analyser	EK067G	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	3	41	7.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	2	40	5.0	5.0	✓	ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	2	40	5.0	5.0	✓	ALS QCS3 requirement
TKN as N By Discrete Analyser	EK061G	2	40	5.0	5.0	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	40	5.0	5.0	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	40	5.0	5.0	✓	ALS QCS3 requirement
Total Phosporus By Discrete Analyser	EK067G	2	40	5.0	5.0	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	40	5.0	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	40	5.0	5.0	✓	ALS QCS3 requirement

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEXN	EP080-HS	1	8	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	5	20.0	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-MS - Suite A	EG020A-T	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEXN	EP080-HS	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	5	20.0	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-MS - Suite A	EG020A-T	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEXN	EP080-HS	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	ALS QCS3 requirement

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Matrix Spikes (MS) - Continued							
Total Metals by ICP-MS - Suite A	EG020A-T	1	9	**11.1**	**5.0**	✓	ALS QCS3 requirement
TRH Volatiles/BTEXN	EP080-HS	1	8	**12.5**	**5.0**	✓	ALS QCS3 requirement

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)
Electrical Conductivity (1:5)	EA010	SOIL	(APHA 21st ed., 2510) Conductivity is determined on soil samples using a 1:5 soil/water leach. This method is compliant with NEPM (1999) Schedule B(3) (Method 104)
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	SOIL	Ahern et al 2004 - a suspension peroxide oxidation method following the 'sulfur trail' by determining the level of 1M KCL extractable sulfur and the sulfur level after oxidation of soil sulphides. The 'acidity trail' is followed by measurement of TAA, TPA and TSA. Liming Rate is based on results for samples as submitted and incorporates a minimum safety factor of 1.5.
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 (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Particle Size Analysis (Sieving)	EA150	SOIL	Particle Size Analysis by Sieving according to AS1289.3.6.1 - 1995
Exchangeable Cations with pre-treatment	ED008	SOIL	Rayment & Higginson (1992) Method 15A2. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. This method is compliant with NEPM (1999) Schedule B(3) (Method 301)
Bicarbonate Extractable K (Colwell)	ED021	SOIL	Rayment & Higginson (1992) Method 18A1 Potassium is extracted from the soil using 0.5M NaHCO3 at a 1:100 soil:solution ratio and determined by ICP.
DTPA Extractable Metals	ED092	SOIL	Rayment and Higginson 12A1
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)
Fluoride - Soluble	EK040S	SOIL	APHA 21st ed., 4500 F--C Soluble Fluoride is determined after a 1:5 soil/water extract using an ion selective electrode.
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	SOIL	APHA 21st ed., 4500 NO3- F. Combined oxidised Nitrogen (NO2+NO3) in a water extract is determined by Cadmium Reduction, and direct colourimetry by Discrete Analyser.
TKN as N By Discrete Analyser	EK061G	SOIL	APHA 21st ed., 4500-Norg-D Soil samples are digested using Kjeldahl digestion followed by determination by Discrete Analyser.
Total Nitrogen as N (TKN + NOx) By Discrete Analyser	EK062G	SOIL	APHA 21st ed., 4500 Norg/NO3- Total Nitrogen is determined as the sum of TKN and Oxidised Nitrrogen, each determined seperately as N.
Total Phosporus By Discrete Analyser	EK067G	SOIL	APHA 21st ed., 4500 P-B&F This procedure involves sulfuric acid digestion and quantification using Discrete Analyser.
Bicarbonate Extractable P (Colwell)	EK080	SOIL	Rayment & Higginson (1992) Method 9B1 Phosphorus is extracted from the soil using 0.5M NaHCO3 at a 1:100 soil:solution ratio and determined by FIA.

Analytical Methods	Method	Matrix	Method Descriptions
Total Organic Carbon	EP003	SOIL	In-house C-IR17. Dried and pulverised sample is reacted with acid to remove inorganic Carbonates, then combusted in a LECO furnace in the presence of strong oxidants / catalysts. The evolved (Organic) Carbon (as CO2) is automaticaly measured by infra-red detector.
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)
Field Observations (Provided by Client)	SAMP-02	SOIL	Field Conditions, Sample Physical Description, Colour and Texture as provided by Sampler. ALS NATA Accreditation does not cover the reporting of these observations.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The 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) (Appdx. 2)
TPH - Semivolatile Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TRH Volatiles/BTEXN	EP080-HS	WATER	In-House (after US EPA Methods 5021 and 8260): A 10 mL aliquot of water is saturated with sodium chlorided in a sealed headspace vial. The sample is equilibrated with gentle agitation for a fixed period of time. A portion of the headspace is transferred automatically to the GCMS for analysis.

Preparation Methods	Method	Matrix	Method Descriptions
Exchangeable Cations Preparation Method	ED007PR	SOIL	Rayment & Higginson (1992) method 15A1. A 1M NH4Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
Bicarbonate Extractable K (Colwell)	ED021PR	SOIL	Rayment & Higginson (1992) Method 18A1 Potassium is extracted from the soil using 0.5M NaHCO3 at a 1:100 soil:solution ratio and determined by ICP.
DTPA Extraction for Cu, Zn, Mn, Fe (2 hour leach)	ED092PR	SOIL	Rayment & Higginson (1992) Method 12A1 2 hour end over end tumbler extraction with 0.005M DTPA at a ratio of 1:2. Extracts can be run by ICP for metals.
TKN/TP Digestion	EK061/EK067	SOIL	APHA 21st ed., 4500 Norg- D; APHA 21st ed., 4500 P - H. Macro Kjeldahl digestion.
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house
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.

Preparation Methods	Method	Matrix	Method Descriptions
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)
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 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.
Digestion for Total Recoverable Metals	EN25	WATER	USEPA SW846-3005 Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 500 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.

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-QWI/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

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005T: Total Metals by ICP-AES	EB1201577-031	NAR_WTP(17C)_SOIL_S	**Barium**	7440-39-3	52.7 %	0-50%	**RPD exceeds LOR based limits**
EG005T: Total Metals by ICP-AES	EB1201577-021	NAR_WTP(13A)_SOIL_S	**Manganese**	7439-96-5	60.0 %	0-20%	**RPD exceeds LOR based limits**
Laboratory Control Spike (LCS) Recoveries							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	2542046-006	----	**Fluoranthene**	206-44-0	122 %	64-111%	**Recovery greater than upper control limit**
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	2542046-006	----	**Chrysene**	218-01-9	124 %	57-114%	**Recovery greater than upper control limit**
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	2542051-006	----	**Benzo(k)fluoranthene**	207-08-9	132 %	48-124%	**Recovery greater than upper control limit**

- **For all matrices, no Method Blank value 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 / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA002 : pH (Soils)						
Soil Glass Jar - Unpreserved NAR_WTP(D1)_SOIL_S	01-FEB-2012	20-JAN-2012	**12**	02-FEB-2012	01-FEB-2012	**1**
Soil Glass Jar - Unpreserved NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	01-FEB-2012	21-JAN-2012	**11**	02-FEB-2012	01-FEB-2012	**1**

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA002 : pH (Soils) - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
NAR_WTP(6A)_SOIL_S,	NAR_WTP(6B)_SOIL_S,	31-JAN-2012	21-JAN-2012	**10**	02-FEB-2012	01-FEB-2012	**1**
NAR_WTP(6C)_SOIL_S,	NAR_WTP(7A)_SOIL_S,						
NAR_WTP(7B)_SOIL_S,	NAR_WTP(7C)_SOIL_S,						
NAR_WTP(8A)_SOIL_S,	NAR_WTP(8B)_SOIL_S,						
NAR_WTP(8C)_SOIL_S,	NAR_WTP(9A)_SOIL_S,						
NAR_WTP(9B)_SOIL_S,	NAR_WTP(9C)_SOIL_S,						
NAR_WTP(10A)_SOIL_S,	NAR_WTP(10B)_SOIL_S,						
NAR_WTP(10C)_SOIL_S,	NAR_WTP(11A)_SOIL_S,						
NAR_WTP(11B)_SOIL_S,	NAR_WTP(11C)_SOIL_S,						
NAR_WTP(12A)_SOIL_S,	NAR_WTP(12B)_SOIL_S						
Soil Glass Jar - Unpreserved							
NAR_WTP(16A)_SOIL_S,	NAR_WTP(16B)_SOIL_S,	01-FEB-2012	22-JAN-2012	**10**	02-FEB-2012	01-FEB-2012	**1**
NAR_WTP(17A)_SOIL_S,	NAR_WTP(17B)_SOIL_S,						
NAR_WTP(17C)_SOIL_S,	NAR_WTP(18A)_SOIL_S,						
NAR_WTP(18B)_SOIL_S,	NAR_WTP(19A)_SOIL_S,						
NAR_WTP(19B)_SOIL_S,	NAR_WTP(D6)_SOIL_S						
EA010: Conductivity							
Soil Glass Jar - Unpreserved							
NAR_WTP(D1)_SOIL_S		01-FEB-2012	20-JAN-2012	**12**	----	----	----
Soil Glass Jar - Unpreserved							
NAR_WTP(13A)_SOIL_S,	NAR_WTP(13B)_SOIL_S,	01-FEB-2012	21-JAN-2012	**11**	----	----	----
NAR_WTP(14A)_SOIL_S,	NAR_WTP(14B)_SOIL_S,						
NAR_WTP(15A)_SOIL_S,	NAR_WTP(15B)_SOIL_S,						
NAR_WTP(D2)_SOIL_S,	NAR_WTP(D3)_SOIL_S,						
NAR_WTP(D4)_SOIL_S,	NAR_WTP(D5)_SOIL_S						
Soil Glass Jar - Unpreserved							
NAR_WTP(6A)_SOIL_S,	NAR_WTP(6B)_SOIL_S,	31-JAN-2012	21-JAN-2012	**10**	----	----	----
NAR_WTP(6C)_SOIL_S,	NAR_WTP(7A)_SOIL_S,						
NAR_WTP(7B)_SOIL_S,	NAR_WTP(7C)_SOIL_S,						
NAR_WTP(8A)_SOIL_S,	NAR_WTP(8B)_SOIL_S,						
NAR_WTP(8C)_SOIL_S,	NAR_WTP(9A)_SOIL_S,						
NAR_WTP(9B)_SOIL_S,	NAR_WTP(9C)_SOIL_S,						
NAR_WTP(10A)_SOIL_S,	NAR_WTP(10B)_SOIL_S,						
NAR_WTP(10C)_SOIL_S,	NAR_WTP(11A)_SOIL_S,						
NAR_WTP(11B)_SOIL_S,	NAR_WTP(11C)_SOIL_S,						
NAR_WTP(12A)_SOIL_S,	NAR_WTP(12B)_SOIL_S						
Soil Glass Jar - Unpreserved							
NAR_WTP(16A)_SOIL_S,	NAR_WTP(16B)_SOIL_S,	01-FEB-2012	22-JAN-2012	**10**	----	----	----
NAR_WTP(17A)_SOIL_S,	NAR_WTP(17B)_SOIL_S,						
NAR_WTP(17C)_SOIL_S,	NAR_WTP(18A)_SOIL_S,						
NAR_WTP(18B)_SOIL_S,	NAR_WTP(19A)_SOIL_S,						
NAR_WTP(19B)_SOIL_S,	NAR_WTP(D6)_SOIL_S						
EA055: Moisture Content							

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved						
NAR_WTP(D1)_SOIL_S	----	----	----	31-JAN-2012	27-JAN-2012	**4**
Soil Glass Jar - Unpreserved						
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	----	----	----	31-JAN-2012	28-JAN-2012	**3**
Soil Glass Jar - Unpreserved						
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	----	----	----	31-JAN-2012	29-JAN-2012	**2**
EK040: Fluoride						
Soil Glass Jar - Unpreserved						
NAR_WTP(D1)_SOIL_S	01-FEB-2012	20-JAN-2012	**12**	----	----	----
Soil Glass Jar - Unpreserved						
NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	01-FEB-2012	21-JAN-2012	**11**	----	----	----
Soil Glass Jar - Unpreserved						
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S	31-JAN-2012	21-JAN-2012	**10**	----	----	----

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EK040: Fluoride - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
NAR_WTP(16A)_SOIL_S,	NAR_WTP(16B)_SOIL_S,	01-FEB-2012	22-JAN-2012	**10**	----	----	----
NAR_WTP(17A)_SOIL_S,	NAR_WTP(17B)_SOIL_S,						
NAR_WTP(17C)_SOIL_S,	NAR_WTP(18A)_SOIL_S,						
NAR_WTP(18B)_SOIL_S,	NAR_WTP(19A)_SOIL_S,						
NAR_WTP(19B)_SOIL_S,	NAR_WTP(D6)_SOIL_S						
EP003: Total Organic Carbon (TOC) in Soil							
Pulp Bag							
NAR_WTP(D1)_SOIL_S		07-FEB-2012	20-JAN-2012	**18**	----	----	----
Pulp Bag							
NAR_WTP(6A)_SOIL_S,	NAR_WTP(6B)_SOIL_S,	07-FEB-2012	21-JAN-2012	**17**	----	----	----
NAR_WTP(6C)_SOIL_S,	NAR_WTP(7A)_SOIL_S,						
NAR_WTP(7B)_SOIL_S,	NAR_WTP(7C)_SOIL_S,						
NAR_WTP(8A)_SOIL_S,	NAR_WTP(8B)_SOIL_S,						
NAR_WTP(8C)_SOIL_S,	NAR_WTP(9A)_SOIL_S,						
NAR_WTP(9B)_SOIL_S,	NAR_WTP(9C)_SOIL_S,						
NAR_WTP(10A)_SOIL_S,	NAR_WTP(10B)_SOIL_S,						
NAR_WTP(10C)_SOIL_S,	NAR_WTP(11A)_SOIL_S,						
NAR_WTP(11B)_SOIL_S,	NAR_WTP(11C)_SOIL_S,						
NAR_WTP(12A)_SOIL_S,	NAR_WTP(12B)_SOIL_S,						
NAR_WTP(13A)_SOIL_S,	NAR_WTP(13B)_SOIL_S,						
NAR_WTP(14A)_SOIL_S,	NAR_WTP(14B)_SOIL_S,						
NAR_WTP(15A)_SOIL_S,	NAR_WTP(15B)_SOIL_S,						
NAR_WTP(D2)_SOIL_S,	NAR_WTP(D3)_SOIL_S,						
NAR_WTP(D4)_SOIL_S,	NAR_WTP(D5)_SOIL_S						
Pulp Bag							
NAR_WTP(16A)_SOIL_S,	NAR_WTP(16B)_SOIL_S,	07-FEB-2012	22-JAN-2012	**16**	----	----	----
NAR_WTP(17A)_SOIL_S,	NAR_WTP(17B)_SOIL_S,						
NAR_WTP(17C)_SOIL_S,	NAR_WTP(18A)_SOIL_S,						
NAR_WTP(18B)_SOIL_S,	NAR_WTP(19A)_SOIL_S,						
NAR_WTP(19B)_SOIL_S,	NAR_WTP(D6)_SOIL_S						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved							
NAR_WTP(D1)_SOIL_S		31-JAN-2012	27-JAN-2012	**4**	----	----	----

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
NAR_WTP(6A)_SOIL_S,	NAR_WTP(6B)_SOIL_S,	31-JAN-2012	28-JAN-2012	**3**	----	----	----
NAR_WTP(6C)_SOIL_S,	NAR_WTP(7A)_SOIL_S,						
NAR_WTP(7B)_SOIL_S,	NAR_WTP(7C)_SOIL_S,						
NAR_WTP(8A)_SOIL_S,	NAR_WTP(8B)_SOIL_S,						
NAR_WTP(8C)_SOIL_S,	NAR_WTP(9A)_SOIL_S,						
NAR_WTP(9B)_SOIL_S,	NAR_WTP(9C)_SOIL_S,						
NAR_WTP(10A)_SOIL_S,	NAR_WTP(10B)_SOIL_S,						
NAR_WTP(10C)_SOIL_S,	NAR_WTP(11A)_SOIL_S,						
NAR_WTP(11B)_SOIL_S,	NAR_WTP(11C)_SOIL_S,						
NAR_WTP(12A)_SOIL_S,	NAR_WTP(12B)_SOIL_S,						
NAR_WTP(13A)_SOIL_S,	NAR_WTP(13B)_SOIL_S,						
NAR_WTP(14A)_SOIL_S,	NAR_WTP(14B)_SOIL_S,						
NAR_WTP(15A)_SOIL_S,	NAR_WTP(15B)_SOIL_S,						
NAR_WTP(D2)_SOIL_S,	NAR_WTP(D3)_SOIL_S,						
NAR_WTP(D4)_SOIL_S,	NAR_WTP(D5)_SOIL_S						
Soil Glass Jar - Unpreserved							
NAR_WTP(D6)_SOIL_S		31-JAN-2012	29-JAN-2012	**2**	----	----	----
Soil Glass Jar - Unpreserved							
NAR_WTP(16A)_SOIL_S,	NAR_WTP(16B)_SOIL_S,	31-JAN-2012	29-JAN-2012	**2**	----	----	----
NAR_WTP(17A)_SOIL_S,	NAR_WTP(17B)_SOIL_S,						
NAR_WTP(17C)_SOIL_S,	NAR_WTP(18A)_SOIL_S,						
NAR_WTP(18B)_SOIL_S,	NAR_WTP(19A)_SOIL_S,						
NAR_WTP(19B)_SOIL_S							
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved							
NAR_WTP(D1)_SOIL_S		31-JAN-2012	27-JAN-2012	**4**	----	----	----
Soil Glass Jar - Unpreserved							
NAR_WTP(D1)_SOIL_S		31-JAN-2012	27-JAN-2012	**4**	31-JAN-2012	27-JAN-2012	**4**
Soil Glass Jar - Unpreserved							
NAR_WTP(13A)_SOIL_S,	NAR_WTP(13B)_SOIL_S,	31-JAN-2012	28-JAN-2012	**3**	----	----	----
NAR_WTP(14A)_SOIL_S,	NAR_WTP(14B)_SOIL_S,						
NAR_WTP(15A)_SOIL_S,	NAR_WTP(15B)_SOIL_S,						
NAR_WTP(D2)_SOIL_S,	NAR_WTP(D3)_SOIL_S,						
NAR_WTP(D4)_SOIL_S,	NAR_WTP(D5)_SOIL_S						

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP080/071: Total Petroleum Hydrocarbons - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved						
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	31-JAN-2012	28-JAN-2012	3	31-JAN-2012	28-JAN-2012	3
Soil Glass Jar - Unpreserved						
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	31-JAN-2012	29-JAN-2012	2	----	----	----
Soil Glass Jar - Unpreserved						
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	31-JAN-2012	29-JAN-2012	2	31-JAN-2012	29-JAN-2012	2
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft						
Soil Glass Jar - Unpreserved						
NAR_WTP(D1)_SOIL_S	31-JAN-2012	27-JAN-2012	4	----	----	----
Soil Glass Jar - Unpreserved						
NAR_WTP(D1)_SOIL_S	31-JAN-2012	27-JAN-2012	4	31-JAN-2012	27-JAN-2012	4
Soil Glass Jar - Unpreserved						
NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	31-JAN-2012	28-JAN-2012	3	----	----	----

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
NAR_WTP(6A)_SOIL_S,	NAR_WTP(6B)_SOIL_S,	31-JAN-2012	28-JAN-2012	**3**	31-JAN-2012	28-JAN-2012	**3**
NAR_WTP(6C)_SOIL_S,	NAR_WTP(7A)_SOIL_S,						
NAR_WTP(7B)_SOIL_S,	NAR_WTP(7C)_SOIL_S,						
NAR_WTP(8A)_SOIL_S,	NAR_WTP(8B)_SOIL_S,						
NAR_WTP(8C)_SOIL_S,	NAR_WTP(9A)_SOIL_S,						
NAR_WTP(9B)_SOIL_S,	NAR_WTP(9C)_SOIL_S,						
NAR_WTP(10A)_SOIL_S,	NAR_WTP(10B)_SOIL_S,						
NAR_WTP(10C)_SOIL_S,	NAR_WTP(11A)_SOIL_S,						
NAR_WTP(11B)_SOIL_S,	NAR_WTP(11C)_SOIL_S,						
NAR_WTP(12A)_SOIL_S,	NAR_WTP(12B)_SOIL_S,						
NAR_WTP(13A)_SOIL_S,	NAR_WTP(13B)_SOIL_S,						
NAR_WTP(14A)_SOIL_S,	NAR_WTP(14B)_SOIL_S,						
NAR_WTP(15A)_SOIL_S,	NAR_WTP(15B)_SOIL_S,						
NAR_WTP(D2)_SOIL_S,	NAR_WTP(D3)_SOIL_S,						
NAR_WTP(D4)_SOIL_S,	NAR_WTP(D5)_SOIL_S						
Soil Glass Jar - Unpreserved							
NAR_WTP(16A)_SOIL_S,	NAR_WTP(16B)_SOIL_S,	31-JAN-2012	29-JAN-2012	**2**	----	----	----
NAR_WTP(17A)_SOIL_S,	NAR_WTP(17B)_SOIL_S,						
NAR_WTP(17C)_SOIL_S,	NAR_WTP(18A)_SOIL_S,						
NAR_WTP(18B)_SOIL_S,	NAR_WTP(19A)_SOIL_S,						
NAR_WTP(19B)_SOIL_S,	NAR_WTP(D6)_SOIL_S						
Soil Glass Jar - Unpreserved							
NAR_WTP(16A)_SOIL_S,	NAR_WTP(16B)_SOIL_S,	31-JAN-2012	29-JAN-2012	**2**	31-JAN-2012	29-JAN-2012	**2**
NAR_WTP(17A)_SOIL_S,	NAR_WTP(17B)_SOIL_S,						
NAR_WTP(17C)_SOIL_S,	NAR_WTP(18A)_SOIL_S,						
NAR_WTP(18B)_SOIL_S,	NAR_WTP(19A)_SOIL_S,						
NAR_WTP(19B)_SOIL_S,	NAR_WTP(D6)_SOIL_S						
EP080: BTEXN							
Soil Glass Jar - Unpreserved							
NAR_WTP(D1)_SOIL_S		31-JAN-2012	27-JAN-2012	**4**	31-JAN-2012	27-JAN-2012	**4**

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP080: BTEXN - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved						
NAR_WTP(6A)_SOIL_S, NAR_WTP(6B)_SOIL_S, NAR_WTP(6C)_SOIL_S, NAR_WTP(7A)_SOIL_S, NAR_WTP(7B)_SOIL_S, NAR_WTP(7C)_SOIL_S, NAR_WTP(8A)_SOIL_S, NAR_WTP(8B)_SOIL_S, NAR_WTP(8C)_SOIL_S, NAR_WTP(9A)_SOIL_S, NAR_WTP(9B)_SOIL_S, NAR_WTP(9C)_SOIL_S, NAR_WTP(10A)_SOIL_S, NAR_WTP(10B)_SOIL_S, NAR_WTP(10C)_SOIL_S, NAR_WTP(11A)_SOIL_S, NAR_WTP(11B)_SOIL_S, NAR_WTP(11C)_SOIL_S, NAR_WTP(12A)_SOIL_S, NAR_WTP(12B)_SOIL_S, NAR_WTP(13A)_SOIL_S, NAR_WTP(13B)_SOIL_S, NAR_WTP(14A)_SOIL_S, NAR_WTP(14B)_SOIL_S, NAR_WTP(15A)_SOIL_S, NAR_WTP(15B)_SOIL_S, NAR_WTP(D2)_SOIL_S, NAR_WTP(D3)_SOIL_S, NAR_WTP(D4)_SOIL_S, NAR_WTP(D5)_SOIL_S	31-JAN-2012	28-JAN-2012	**3**	31-JAN-2012	28-JAN-2012	**3**
Soil Glass Jar - Unpreserved						
NAR_WTP(16A)_SOIL_S, NAR_WTP(16B)_SOIL_S, NAR_WTP(17A)_SOIL_S, NAR_WTP(17B)_SOIL_S, NAR_WTP(17C)_SOIL_S, NAR_WTP(18A)_SOIL_S, NAR_WTP(18B)_SOIL_S, NAR_WTP(19A)_SOIL_S, NAR_WTP(19B)_SOIL_S, NAR_WTP(D6)_SOIL_S	31-JAN-2012	29-JAN-2012	**2**	31-JAN-2012	29-JAN-2012	**2**

Matrix: **WATER**

Method / Container / Client Sample ID(s)	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
Amber Glass Bottle - Unpreserved						
Rinsate_13/1/12	31-JAN-2012	20-JAN-2012	**11**	----	----	----
Amber Glass Bottle - Unpreserved						
Rinsate_14/1/12	31-JAN-2012	21-JAN-2012	**10**	----	----	----
Amber Glass Bottle - Unpreserved						
Rinsate_15/1/13	31-JAN-2012	22-JAN-2012	**9**	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
Amber Glass Bottle - Unpreserved						
Rinsate_13/1/12	31-JAN-2012	20-JAN-2012	**11**	----	----	----
Amber Glass Bottle - Unpreserved						
Rinsate_14/1/12	31-JAN-2012	21-JAN-2012	**10**	----	----	----
Amber Glass Bottle - Unpreserved						
Rinsate_15/1/13	31-JAN-2012	22-JAN-2012	**9**	----	----	----
Amber VOC Vial - Sulfuric Acid						
Rinsate_13/1/12	----	----	----	31-JAN-2012	27-JAN-2012	**4**

Matrix: **WATER**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP080/071: Total Petroleum Hydrocarbons - Analysis Holding Time Compliance						
Amber VOC Vial - Sulfuric Acid Rinsate_14/1/12	----	----	----	31-JAN-2012	28-JAN-2012	**3**
Amber VOC Vial - Sulfuric Acid Rinsate_15/1/13	----	----	----	31-JAN-2012	29-JAN-2012	**2**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft						
Amber Glass Bottle - Unpreserved Rinsate_13/1/12	31-JAN-2012	20-JAN-2012	**11**	----	----	----
Amber Glass Bottle - Unpreserved Rinsate_14/1/12	31-JAN-2012	21-JAN-2012	**10**	----	----	----
Amber Glass Bottle - Unpreserved Rinsate_15/1/13	31-JAN-2012	22-JAN-2012	**9**	----	----	----
Amber VOC Vial - Sulfuric Acid Rinsate_13/1/12	----	----	----	31-JAN-2012	27-JAN-2012	**4**
Amber VOC Vial - Sulfuric Acid Rinsate_14/1/12	----	----	----	31-JAN-2012	28-JAN-2012	**3**
Amber VOC Vial - Sulfuric Acid Rinsate_15/1/13	----	----	----	31-JAN-2012	29-JAN-2012	**2**
EP080: BTEXN						
Amber VOC Vial - Sulfuric Acid Rinsate_13/1/12	----	----	----	31-JAN-2012	27-JAN-2012	**4**
Amber VOC Vial - Sulfuric Acid Rinsate_14/1/12	----	----	----	31-JAN-2012	28-JAN-2012	**3**
Amber VOC Vial - Sulfuric Acid Rinsate_15/1/13	----	----	----	31-JAN-2012	29-JAN-2012	**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.**

ALS Group
Environmental Division

QUALITY CONTROL REPORT

Work Order	: **EB1201577**	Page	: 1 of 26
Client	: **SANTOS LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MS RITA BONETTI	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rbonetti@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Narrabri		
C-O-C number	: ----	Date Samples Received	: 19-JAN-2012
Sampler	: Rita Bonetti	Issue Date	: 08-FEB-2012
Order number	: 117626001	No. of samples received	: 44
Quote number	: BN/107/11 V3	No. of samples analysed	: 44

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

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WORLD RECOGNISED ACCREDITATION

NATA Accredited Laboratory 825

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*
Dianne Blane	Laboratory Supervisor	Newcastle
Jonathon Angell	Inorganic Coordinator	Brisbane Inorganics
Jonathon Angell	Inorganic Coordinator	Stafford Minerals - AY
Kim McCabe	Senior Inorganic Chemist	Brisbane External Subcontracting
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Organics

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 insuffient 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: 2147425)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EA002: pH Value	----	0.1	pH Unit	10.5	10.5	0.0	0% - 20%
EB1201577-010	NAR_WTP(9A)_SOIL_S	EA002: pH Value	----	0.1	pH Unit	5.6	5.7	0.0	0% - 20%
EA002 : pH (Soils) (QC Lot: 2147429)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EA002: pH Value	----	0.1	pH Unit	7.6	7.7	0.0	0% - 20%
EB1201577-030	NAR_WTP(17B)_SOIL_S	EA002: pH Value	----	0.1	pH Unit	9.2	9.2	0.0	0% - 20%
EA002 : pH (Soils) (QC Lot: 2147433)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EA002: pH Value	----	0.1	pH Unit	5.8	5.8	0.0	0% - 20%
EA010: Conductivity (QC Lot: 2147426)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	3220	3260	1.2	0% - 20%
EB1201577-010	NAR_WTP(9A)_SOIL_S	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	16	16	0.0	0% - 50%
EA010: Conductivity (QC Lot: 2147430)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	298	286	4.1	0% - 20%
EB1201577-030	NAR_WTP(17B)_SOIL_S	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	353	357	1.1	0% - 20%
EA010: Conductivity (QC Lot: 2147434)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	13	14	7.4	0% - 50%
EA055: Moisture Content (QC Lot: 2147422)									
EB1201577-004	NAR_WTP(7A)_SOIL_S	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	22.1	22.6	2.0	0% - 20%
EB1201577-011	NAR_WTP(9B)_SOIL_S	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	14.8	15.1	2.3	0% - 50%
EA055: Moisture Content (QC Lot: 2147423)									
EB1201577-024	NAR_WTP(14B)_SOIL_S	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	17.7	17.2	2.7	0% - 50%
EB1201577-031	NAR_WTP(17C)_SOIL_S	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	22.8	23.1	1.1	0% - 20%
ED008: Exchangeable Cations (QC Lot: 2147373)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	ED008: Exchangeable Sodium Percent	----	0.1	%	62.6	62.6	0.0	0% - 20%
		ED008: Exchangeable Calcium	----	0.1	meq/100g	7.4	6.9	7.0	0% - 20%
		ED008: Exchangeable Magnesium	----	0.1	meq/100g	4.3	4.2	0.0	0% - 20%
		ED008: Exchangeable Potassium	----	0.1	meq/100g	2.3	2.2	0.0	0% - 20%
		ED008: Exchangeable Sodium	----	0.1	meq/100g	23.3	22.3	4.4	0% - 20%
		ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	0.3	0.0	No Limit
		ED008: Cation Exchange Capacity	----	0.1	meq/100g	37.3	35.6	4.4	0% - 20%
EB1201577-009	NAR_WTP(8C)_SOIL_S	ED008: Exchangeable Sodium Percent	----	0.1	%	14.6	14.6	0.0	0% - 20%
		ED008: Exchangeable Calcium	----	0.1	meq/100g	1.1	1.2	0.0	0% - 50%
		ED008: Exchangeable Magnesium	----	0.1	meq/100g	41.1	42.9	4.3	0% - 20%
		ED008: Exchangeable Potassium	----	0.1	meq/100g	2.1	2.1	0.0	0% - 20%
		ED008: Exchangeable Sodium	----	0.1	meq/100g	7.6	7.9	4.1	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 (%)*
ED008: Exchangeable Cations (QC Lot: 2147373) - continued									
EB1201577-009	NAR_WTP(8C)_SOIL_S	ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	<0.2	0.0	No Limit
		ED008: Cation Exchange Capacity	----	0.1	meq/100g	51.9	54.1	4.2	0% - 20%
ED008: Exchangeable Cations (QC Lot: 2147380)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	ED008: Exchangeable Sodium Percent	----	0.1	%	31.4	31.0	1.5	0% - 20%
		ED008: Exchangeable Calcium	----	0.1	meq/100g	7.6	7.6	0.0	0% - 20%
		ED008: Exchangeable Magnesium	----	0.1	meq/100g	7.6	7.6	0.0	0% - 20%
		ED008: Exchangeable Potassium	----	0.1	meq/100g	2.4	2.4	0.0	0% - 20%
		ED008: Exchangeable Sodium	----	0.1	meq/100g	8.1	7.8	2.8	0% - 20%
		ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	<0.2	0.0	No Limit
		ED008: Cation Exchange Capacity	----	0.1	meq/100g	25.7	25.4	1.2	0% - 20%
EB1201577-029	NAR_WTP(17A)_SOIL_S	ED008: Exchangeable Sodium Percent	----	0.1	%	39.7	39.8	0.4	0% - 20%
		ED008: Exchangeable Calcium	----	0.1	meq/100g	16.2	16.2	0.0	0% - 20%
		ED008: Exchangeable Magnesium	----	0.1	meq/100g	34.3	34.3	0.0	0% - 20%
		ED008: Exchangeable Potassium	----	0.1	meq/100g	4.0	3.9	0.0	0% - 20%
		ED008: Exchangeable Sodium	----	0.1	meq/100g	35.8	36.0	0.6	0% - 20%
		ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	<0.2	0.0	No Limit
		ED008: Cation Exchange Capacity	----	0.1	meq/100g	90.2	90.4	0.3	0% - 20%
ED008: Exchangeable Cations (QC Lot: 2147382)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	ED008: Exchangeable Sodium Percent	----	0.1	%	<0.2	<0.2	0.0	No Limit
		ED008: Exchangeable Calcium	----	0.1	meq/100g	4.7	4.6	3.4	0% - 20%
		ED008: Exchangeable Magnesium	----	0.1	meq/100g	2.2	2.0	6.3	0% - 20%
		ED008: Exchangeable Potassium	----	0.1	meq/100g	1.0	0.9	0.0	No Limit
		ED008: Exchangeable Sodium	----	0.1	meq/100g	<0.2	<0.2	0.0	No Limit
		ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	<0.2	0.0	No Limit
		ED008: Cation Exchange Capacity	----	0.1	meq/100g	7.9	7.5	4.7	0% - 20%
ED021: Bicarbonate Extractable Potassium (Colwell) (QC Lot: 2147396)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	<200	0.0	No Limit
EB1201577-009	NAR_WTP(8C)_SOIL_S	ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	<200	0.0	No Limit
ED021: Bicarbonate Extractable Potassium (Colwell) (QC Lot: 2147397)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	<200	0.0	No Limit
EB1201577-029	NAR_WTP(17A)_SOIL_S	ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	460	430	5.6	0% - 20%
ED021: Bicarbonate Extractable Potassium (Colwell) (QC Lot: 2147401)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<120	<120	0.0	No Limit
ED092: DTPA Extractable Metals (QC Lot: 2147402)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	ED092: Copper	7440-50-8	1.00	mg/kg	2.13	1.77	18.4	No Limit
		ED092: Iron	7439-89-6	1.00	mg/kg	180	171	5.0	0% - 20%
		ED092: Manganese	7439-96-5	1.00	mg/kg	56.7	51.5	9.6	0% - 20%
		ED092: Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	0.0	No Limit
EB1201577-010	NAR_WTP(9A)_SOIL_S	ED092: Copper	7440-50-8	1.00	mg/kg	<1.00	<1.00	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 (%)*
ED092: DTPA Extractable Metals (QC Lot: 2147402) - continued									
EB1201577-010	NAR_WTP(9A)_SOIL_S	ED092: Iron	7439-89-6	1.00	mg/kg	31.2	31.5	0.9	0% - 20%
		ED092: Manganese	7439-96-5	1.00	mg/kg	32.0	31.6	1.6	0% - 20%
		ED092: Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	0.0	No Limit
ED092: DTPA Extractable Metals (QC Lot: 2147407)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	ED092: Copper	7440-50-8	1.00	mg/kg	<1.00	<1.00	0.0	No Limit
		ED092: Iron	7439-89-6	1.00	mg/kg	116	111	4.3	0% - 20%
		ED092: Manganese	7439-96-5	1.00	mg/kg	59.3	60.1	1.4	0% - 20%
		ED092: Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	0.0	No Limit
EB1201577-030	NAR_WTP(17B)_SOIL_S	ED092: Copper	7440-50-8	1.00	mg/kg	<1.00	<1.00	0.0	No Limit
		ED092: Iron	7439-89-6	1.00	mg/kg	38.5	32.3	17.4	0% - 20%
		ED092: Manganese	7439-96-5	1.00	mg/kg	17.7	18.8	5.7	0% - 50%
		ED092: Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	0.0	No Limit
ED092: DTPA Extractable Metals (QC Lot: 2147408)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	ED092: Copper	7440-50-8	1.00	mg/kg	<1.00	<1.00	0.0	No Limit
		ED092: Iron	7439-89-6	1.00	mg/kg	32.7	32.7	0.2	0% - 20%
		ED092: Manganese	7439-96-5	1.00	mg/kg	4.07	3.78	7.2	No Limit
		ED092: Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2147226)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	110	120	0.0	0% - 50%
		EG005T: Chromium	7440-47-3	2	mg/kg	8	8	0.0	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	2	2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	3	4	0.0	No Limit
		EG005T: Strontium	7440-24-6	2	mg/kg	13	14	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
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	168	172	1.9	0% - 20%
		EG005T: Vanadium	7440-62-2	5	mg/kg	18	19	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EB1201577-011	NAR_WTP(9B)_SOIL_S	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	10	20	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	13	13.0	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	2	2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	3	3	0.0	No Limit
		EG005T: Strontium	7440-24-6	2	mg/kg	5	5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<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 (%)*
EG005T: Total Metals by ICP-AES (QC Lot: 2147226) - continued									
EB1201577-011	NAR_WTP(9B)_SOIL_S	EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	9	7	23.4	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	40	33	18.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2147228)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	40	50	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	6	0.0	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	2	2	0.0	No Limit
		EG005T: Strontium	7440-24-6	2	mg/kg	8	8	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
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	191	354	# 60.0	0% - 20%
		EG005T: Vanadium	7440-62-2	5	mg/kg	20	19	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EB1201577-031	NAR_WTP(17C)_SOIL_S	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	60	100	# 52.7	0% - 50%
		EG005T: Chromium	7440-47-3	2	mg/kg	17	18	0.0	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	9	10	11.6	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	6	7	0.0	No Limit
		EG005T: Strontium	7440-24-6	2	mg/kg	4	5	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
		EG005T: Lead	7439-92-1	5	mg/kg	7	7	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	7	9	24.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	42	43	2.5	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	5	5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2147230)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	20	20	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	3	2	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 (%)*
EG005T: Total Metals by ICP-AES (QC Lot: 2147230) - continued									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EG005T: Cobalt	7440-48-4	2	mg/kg	2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Strontium	7440-24-6	2	mg/kg	5	6	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
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	68	49	31.6	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	12	10	14.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2147227)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EB1201577-011	NAR_WTP(9B)_SOIL_S	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2147229)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EB1201577-031	NAR_WTP(17C)_SOIL_S	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2147231)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EK040S: Fluoride Soluble (QC Lot: 2147427)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EK040S: Fluoride	16984-48-8	1	mg/kg	3	3	0.0	No Limit
EB1201577-010	NAR_WTP(9A)_SOIL_S	EK040S: Fluoride	16984-48-8	1	mg/kg	<1	<1	0.0	No Limit
EK040S: Fluoride Soluble (QC Lot: 2147431)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EK040S: Fluoride	16984-48-8	1	mg/kg	1	1	0.0	No Limit
EB1201577-030	NAR_WTP(17B)_SOIL_S	EK040S: Fluoride	16984-48-8	1	mg/kg	2	3	0.0	No Limit
EK040S: Fluoride Soluble (QC Lot: 2147435)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EK040S: Fluoride	16984-48-8	1	mg/kg	<1	<1	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 2147428)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<2.5	<2.5	0.0	No Limit
EB1201577-010	NAR_WTP(9A)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	1.8	1.8	0.0	0% - 50%
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 2147432)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	0.2	0.2	0.0	No Limit
EB1201577-030	NAR_WTP(17B)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	3.3	3.3	0.0	0% - 20%
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 2147436)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	1.4	1.3	0.0	0% - 50%
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 2147409)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	440	430	0.0	0% - 20%
EB1201577-011	NAR_WTP(9B)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	160	170	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 2147411)									

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 (%)*
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 2147411) - continued									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	850	740	13.6	0% - 20%
EB1201577-031	NAR_WTP(17C)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	310	250	22.0	0% - 50%
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 2147419)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	240	280	17.5	0% - 50%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 2147410)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EK067G: Total Phosphorus as P	----	2	mg/kg	80	81	0.0	0% - 20%
EB1201577-011	NAR_WTP(9B)_SOIL_S	EK067G: Total Phosphorus as P	----	2	mg/kg	45	45	0.0	0% - 20%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 2147412)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EK067G: Total Phosphorus as P	----	2	mg/kg	140	115	19.2	0% - 20%
EB1201577-031	NAR_WTP(17C)_SOIL_S	EK067G: Total Phosphorus as P	----	2	mg/kg	67	60	11.7	0% - 20%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 2147420)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EK067G: Total Phosphorus as P	----	2	mg/kg	58	48	18.9	0% - 20%
EK080: Bicarbonate Extractable Phosphorus (Colwell) (QC Lot: 2147765)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EK080: Bicarbonate Ext. P (Colwell)	----	2	mg/kg	9	10	10.5	No Limit
EB1201577-010	NAR_WTP(9A)_SOIL_S	EK080: Bicarbonate Ext. P (Colwell)	----	2	mg/kg	<2	2	0.0	No Limit
EK080: Bicarbonate Extractable Phosphorus (Colwell) (QC Lot: 2147769)									
EB1201577-018	NAR_WTP(11C)_SOIL_S	EK080: Bicarbonate Ext. P (Colwell)	----	2	mg/kg	<2	2	0.0	No Limit
EB1201577-027	NAR_WTP(16A)_SOIL_S	EK080: Bicarbonate Ext. P (Colwell)	----	2	mg/kg	<2	<2	0.0	No Limit
EK080: Bicarbonate Extractable Phosphorus (Colwell) (QC Lot: 2147773)									
EB1201577-035	NAR_WTP(19B)_SOIL_S	EK080: Bicarbonate Ext. P (Colwell)	----	2	mg/kg	2	<2	0.0	No Limit
EP003: Total Organic Carbon (TOC) in Soil (QC Lot: 2157254)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EP003: Total Organic Carbon	----	0.02	%	1.63	1.65	1.2	0% - 20%
EB1201577-011	NAR_WTP(9B)_SOIL_S	EP003: Total Organic Carbon	----	0.02	%	0.27	0.28	3.6	0% - 50%
EP003: Total Organic Carbon (TOC) in Soil (QC Lot: 2157255)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EP003: Total Organic Carbon	----	0.02	%	1.14	1.14	0.0	0% - 20%
EB1201577-031	NAR_WTP(17C)_SOIL_S	EP003: Total Organic Carbon	----	0.02	%	1.68	1.76	4.6	0% - 20%
EP003: Total Organic Carbon (TOC) in Soil (QC Lot: 2157256)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EP003: Total Organic Carbon	----	0.02	%	0.63	0.65	3.1	0% - 20%
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2147221)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	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

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: 2147221) - continued									
EB1201577-001	NAR_WTP(6A)_SOIL_S	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
		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
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EB1201577-011	NAR_WTP(9B)_SOIL_S	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
		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
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2147223)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	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

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: 2147223) - continued									
EB1201577-021	NAR_WTP(13A)_SOIL_S	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
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EB1201577-031	NAR_WTP(17C)_SOIL_S	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
		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
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2147225)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	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
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	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 (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2147225) - continued									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2147040)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EB1201577-011	NAR_WTP(9B)_SOIL_S	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2147041)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EB1201577-031	NAR_WTP(17C)_SOIL_S	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2147042)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2147220)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	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: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EB1201577-011	NAR_WTP(9B)_SOIL_S	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: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2147222)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EP071: C15 - C28 Fraction	----	100	mg/kg	130	110	16.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	110	90	20.1	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	240	200	18.2	No Limit
EB1201577-031	NAR_WTP(17C)_SOIL_S	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: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2147224)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	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: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2147040)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	0.0	No Limit
EB1201577-011	NAR_WTP(9B)_SOIL_S	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	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 (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2147041)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	0.0	No Limit
EB1201577-031	NAR_WTP(17C)_SOIL_S	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2147042)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2147220)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EB1201577-011	NAR_WTP(9B)_SOIL_S	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2147222)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EP071: >C16 - C34 Fraction	----	100	mg/kg	140	140	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	110	90	21.9	No Limit
EB1201577-031	NAR_WTP(17C)_SOIL_S	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2147224)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 2147040)									
EB1201577-001	NAR_WTP(6A)_SOIL_S	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	----	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EB1201577-011	NAR_WTP(9B)_SOIL_S	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	----	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 sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080: BTEXN (QC Lot: 2147040) - continued									
EB1201577-011	NAR_WTP(9B)_SOIL_S	EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 2147041)									
EB1201577-021	NAR_WTP(13A)_SOIL_S	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	----	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EB1201577-031	NAR_WTP(17C)_SOIL_S	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	----	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 2147042)									
EB1201577-041	NAR_WTP(D6)_SOIL_S	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	----	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QC Lot: 2149649)									
EB1202627-004	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG020T: Total Metals by ICP-MS (QC Lot: 2149649) - continued									
EB1202627-004	Anonymous	EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2151757)									
EB1201538-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB1201893-008	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2147046)									
EB1201577-042	Rinsate_13/1/12	EP080-HS: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2147046)									
EB1201577-042	Rinsate_13/1/12	EP080-HS: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
		EP080-HS: C6 - C10 Fraction minus BTEX (F1)	----	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 2147046)									
EB1201577-042	Rinsate_13/1/12	EP080-HS: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080-HS: Sum of BTEX	----	1	µg/L	<1	<1	0.0	No Limit
		EP080-HS: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080-HS: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080-HS: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080-HS: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080-HS: Total Xylenes	1330-20-7	2	µg/L	<2	<2	0.0	No Limit
		EP080-HS: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA002 : pH (Soils) (QCLot: 2147425)								
EA002: pH Value	----	0.1	pH Unit	----	5.2 pH Unit	99.6	94	103
EA002 : pH (Soils) (QCLot: 2147429)								
EA002: pH Value	----	0.1	pH Unit	----	5.2 pH Unit	100	94	103
EA002 : pH (Soils) (QCLot: 2147433)								
EA002: pH Value	----	0.1	pH Unit	----	5.2 pH Unit	100	94	103
EA010: Conductivity (QCLot: 2147426)								
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	196 µS/cm	95.9	83	110
EA010: Conductivity (QCLot: 2147430)								
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	196 µS/cm	100	83	110
EA010: Conductivity (QCLot: 2147434)								
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	196 µS/cm	102	83	110
ED008: Exchangeable Cations (QCLot: 2147373)								
ED008: Exchangeable Calcium	----	0.1	meq/100g	<0.2	1.5 meq/100g	110	70	130
ED008: Exchangeable Magnesium	----	0.1	meq/100g	<0.2	0.77 meq/100g	99.2	70	130
ED008: Exchangeable Potassium	----	0.1	meq/100g	<0.2	0.3 meq/100g	108	70	130
ED008: Exchangeable Sodium	----	0.1	meq/100g	<0.2	0.15 meq/100g	89.0	70	130
ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	----	----	----	----
ED008: Exchangeable Sodium Percent	----	0.1	%	<0.2	----	----	----	----
ED008: Cation Exchange Capacity	----	0.1	meq/100g	<0.2	2.5 meq/100g	115	70	130
ED008: Exchangeable Cations (QCLot: 2147380)								
ED008: Exchangeable Calcium	----	0.1	meq/100g	<0.2	1.5 meq/100g	114	70	130
ED008: Exchangeable Magnesium	----	0.1	meq/100g	<0.2	0.77 meq/100g	98.8	70	130
ED008: Exchangeable Potassium	----	0.1	meq/100g	<0.2	0.3 meq/100g	106	70	130
ED008: Exchangeable Sodium	----	0.1	meq/100g	<0.2	0.1 meq/100g	106	70	130
ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	----	----	----	----
ED008: Exchangeable Sodium Percent	----	0.1	%	<0.2	----	----	----	----
ED008: Cation Exchange Capacity	----	0.1	meq/100g	<0.2	2.5 meq/100g	116	70	130
ED008: Exchangeable Cations (QCLot: 2147382)								
ED008: Exchangeable Calcium	----	0.1	meq/100g	<0.2	1.5 meq/100g	106	70	130
ED008: Exchangeable Magnesium	----	0.1	meq/100g	<0.2	0.77 meq/100g	91.6	70	130
ED008: Exchangeable Potassium	----	0.1	meq/100g	<0.2	0.3 meq/100g	100	70	130
ED008: Exchangeable Sodium	----	0.1	meq/100g	<0.2	0.1 meq/100g	95.0	70	130
ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	----	----	----	----

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
ED008: Exchangeable Cations (QCLot: 2147382) - continued								
ED008: Exchangeable Sodium Percent	----	0.1	%	<0.2	----	----	----	----
ED008: Cation Exchange Capacity	----	0.1	meq/100g	<0.2	2.5 meq/100g	107	70	130
ED021: Bicarbonate Extractable Potassium (Colwell) (QCLot: 2147396)								
ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	----	----	----	----
ED021: Bicarbonate Extractable Potassium (Colwell) (QCLot: 2147397)								
ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	----	----	----	----
ED021: Bicarbonate Extractable Potassium (Colwell) (QCLot: 2147401)								
ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<120	----	----	----	----
ED092: DTPA Extractable Metals (QCLot: 2147402)								
ED092: Copper	7440-50-8	1	mg/kg	<1.00	6.758 mg/kg	77.4	70	130
ED092: Iron	7439-89-6	1	mg/kg	<1.00	0.937 mg/kg	78.0	70	130
ED092: Manganese	7439-96-5	1	mg/kg	<1.00	1.214 mg/kg	73.4	70	130
ED092: Zinc	7440-66-6	1	mg/kg	<1.00	31.948 mg/kg	72.8	70	130
ED092: DTPA Extractable Metals (QCLot: 2147407)								
ED092: Copper	7440-50-8	1	mg/kg	<1.00	6.758 mg/kg	77.8	70	130
ED092: Iron	7439-89-6	1	mg/kg	<1.00	0.937 mg/kg	80.0	70	130
ED092: Manganese	7439-96-5	1	mg/kg	<1.00	0.607 mg/kg	107	70	130
ED092: Zinc	7440-66-6	1	mg/kg	<1.00	31.948 mg/kg	75.6	70	130
ED092: DTPA Extractable Metals (QCLot: 2147408)								
ED092: Copper	7440-50-8	1	mg/kg	<1.00	6.758 mg/kg	75.0	70	130
ED092: Iron	7439-89-6	1	mg/kg	<1.00	0.937 mg/kg	84.3	70	130
ED092: Manganese	7439-96-5	1	mg/kg	<1.00	0.607 mg/kg	99.4	70	130
ED092: Zinc	7440-66-6	1	mg/kg	<1.00	31.948 mg/kg	75.1	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2147226)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	92.6	90	130
EG005T: Barium	7440-39-3	10	mg/kg	<10	137.41 mg/kg	96.1	91	127
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.51 mg/kg	97.8	94	125
EG005T: Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	83.6	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	93.7	89	126
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	24.49 mg/kg	93.6	87	125
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	92.1	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	91.6	83	123
EG005T: Manganese	7439-96-5	5	mg/kg	<5	135.6 mg/kg	91.6	88	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	95.8	86	123
EG005T: Strontium	7440-24-6	2	mg/kg	<2	60.42 mg/kg	92.6	90	122
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	34.03 mg/kg	95.4	92	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	90.9	86	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2147228)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	98.0	90	130
EG005T: Barium	7440-39-3	10	mg/kg	<10	137.41 mg/kg	97.7	91	127
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.51 mg/kg	99.5	94	125
EG005T: Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	86.2	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	95.7	89	126
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	24.49 mg/kg	108	87	125
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	94.2	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	93.4	83	123
EG005T: Manganese	7439-96-5	5	mg/kg	<5	135.6 mg/kg	95.8	88	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	98.8	86	123
EG005T: Strontium	7440-24-6	2	mg/kg	<2	60.42 mg/kg	94.8	90	122
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	34.03 mg/kg	97.6	92	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	93.4	86	124
EG005T: Total Metals by ICP-AES (QCLot: 2147230)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	92.3	90	130
EG005T: Barium	7440-39-3	10	mg/kg	<10	137.41 mg/kg	92.7	91	127
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.51 mg/kg	96.8	94	125
EG005T: Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	83.8	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	91.5	89	126
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	24.49 mg/kg	94.3	87	125
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	93.0	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	86.6	83	123
EG005T: Manganese	7439-96-5	5	mg/kg	<5	135.6 mg/kg	91.4	88	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	89.5	86	123
EG005T: Strontium	7440-24-6	2	mg/kg	<2	60.42 mg/kg	92.1	90	122
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	34.03 mg/kg	94.9	92	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	87.7	86	124
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2147227)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	-0.0000400	1.34 mg/kg	83.6	73	127
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2147229)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	78.4	73	127
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2147231)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	74.6	73	127
EK040S: Fluoride Soluble (QCLot: 2147427)								
EK040S: Fluoride	16984-48-8	1.0	mg/kg	<1	50 mg/kg	97.1	85	115
EK040S: Fluoride Soluble (QCLot: 2147431)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EK040S: Fluoride Soluble (QCLot: 2147431) - continued								
EK040S: Fluoride	16984-48-8	1.0	mg/kg	<1	50 mg/kg	95.7	85	115
EK040S: Fluoride Soluble (QCLot: 2147435)								
EK040S: Fluoride	16984-48-8	1.0	mg/kg	<1	50 mg/kg	99.1	85	115
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 2147428)								
EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.1	2.5 mg/kg	101	72	124
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 2147432)								
EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.1	2.5 mg/kg	102	72	124
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 2147436)								
EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.1	2.5 mg/kg	92.4	72	124
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 2147409)								
EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	<20	534 mg/kg	75.8	70	118
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 2147411)								
EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	<20	534 mg/kg	78.5	70	118
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 2147419)								
EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	<20	534 mg/kg	79.0	70	118
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 2147410)								
EK067G: Total Phosphorus as P	----	2	mg/kg	<2	75 mg/kg	85.3	74	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 2147412)								
EK067G: Total Phosphorus as P	----	2	mg/kg	<2	75 mg/kg	91.1	74	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 2147420)								
EK067G: Total Phosphorus as P	----	2	mg/kg	<2	75 mg/kg	92.3	74	130
EK080: Bicarbonate Extractable Phosphorus (Colwell) (QCLot: 2147765)								
EK080: Bicarbonate Ext. P (Colwell)	----	100	mg/kg	<100	----	----	----	----
EK080: Bicarbonate Extractable Phosphorus (Colwell) (QCLot: 2147769)								
EK080: Bicarbonate Ext. P (Colwell)	----	100	mg/kg	<100	----	----	----	----
EK080: Bicarbonate Extractable Phosphorus (Colwell) (QCLot: 2147773)								
EK080: Bicarbonate Ext. P (Colwell)	----	100	mg/kg	<100	----	----	----	----
EP003: Total Organic Carbon (TOC) in Soil (QCLot: 2157254)								
EP003: Total Organic Carbon	----	0.02	%	<0.02	100 %	100	70	130
EP003: Total Organic Carbon (TOC) in Soil (QCLot: 2157255)								
EP003: Total Organic Carbon	----	0.02	%	<0.02	100 %	97.7	70	130
EP003: Total Organic Carbon (TOC) in Soil (QCLot: 2157256)								
EP003: Total Organic Carbon	----	0.02	%	<0.02	100 %	97.7	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2147221)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	100	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	99.6	58	113

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2147221) - continued								
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	103	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	106	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	106	60	112
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	95.7	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	104	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	111	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	100	56	115
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	109	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	98.2	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	117	48	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	110	50	116
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	105	47	130
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	98.8	41	129
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	113	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2147223)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	106	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	101	58	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	112	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	107	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	108	60	112
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	110	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	# 122	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	123	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	101	56	115
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	# 124	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	92.2	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	117	48	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	110	50	116
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	91.6	47	130
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	72.0	41	129
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	102	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2147225)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	98.9	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	99.0	58	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	103	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	100	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	86.4	60	112

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2147225) - continued								
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	85.3	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	100	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	101	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	76.2	56	115
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	99.9	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	97.4	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	# 132	48	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	112	50	116
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	81.5	47	130
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	63.6	41	129
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	107	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147040)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	16 mg/kg	85.7	71	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147041)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	16 mg/kg	85.6	71	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147042)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	16 mg/kg	88.2	71	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147220)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	312 mg/kg	106	65	112
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	500 mg/kg	91.3	76.2	122
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147222)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	312 mg/kg	90.6	65	112
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	500 mg/kg	85.6	76.2	122
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147224)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	312 mg/kg	91.6	65	112
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	500 mg/kg	78.4	76.2	122
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147040)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	18.5 mg/kg	84.1	71	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147041)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	18.5 mg/kg	84.3	71	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147042)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	18.5 mg/kg	87.3	71	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147220)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147220) - continued								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	413 mg/kg	104	63	112
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	360 mg/kg	82.4	74	122
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147222)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	413 mg/kg	95.6	63	112
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	360 mg/kg	76.9	74	122
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147224)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	413 mg/kg	94.4	63	112
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	360 mg/kg	82.4	74	122
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080: BTEXN (QCLot: 2147040)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	78.4	78	121
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	87.8	78	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	90.0	72	119
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	92.3	61	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	95.7	70	118
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	101	77.1	117
EP080: BTEXN (QCLot: 2147041)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	88.8	78	121
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	102	78	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	90.7	72	119
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	94.8	61	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	94.0	70	118
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	92.1	77.1	117
EP080: BTEXN (QCLot: 2147042)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	86.4	78	121
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	88.2	78	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	85.7	72	119
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	85.2	61	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	85.8	70	118
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	90.1	77.1	117

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 2149649)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.100 mg/L	104	78	120
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.100 mg/L	105	84	114
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.100 mg/L	108	86	121
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.200 mg/L	109	70	119
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.100 mg/L	104	70	117
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.100 mg/L	109	86	119
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.200 mg/L	108	81	123
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2151757)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	98.8	80	116
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2147216)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	10 µg/L	81.4	46	115
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	10 µg/L	87.2	51	122
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	10 µg/L	82.2	50	118
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	10 µg/L	85.3	55	121
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	10 µg/L	68.4	54	110
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	10 µg/L	70.0	49	118
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	10 µg/L	71.2	51	117
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	10 µg/L	72.1	51	117
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	10 µg/L	73.5	53	120
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	10 µg/L	76.1	48	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	1	µg/L	<1.0	10 µg/L	92.6	48	133
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	10 µg/L	95.6	43	127
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	10 µg/L	99.5	44	120
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	10 µg/L	86.2	45	132
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	10 µg/L	86.5	47	135
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	10 µg/L	83.8	42	131
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	1	µg/L	<1.0	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147046)								
EP080-HS: C6 - C9 Fraction	----	20	µg/L	<20	160 µg/L	96.1	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147215)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	1275 µg/L	87.2	49	125.5
EP071: C15 - C28 Fraction	----	100	µg/L	<100	1850 µg/L	107	58	131
EP071: C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147046)								
EP080-HS: C6 - C10 Fraction	----	20	µg/L	<20	185 µg/L	95.6	70	130
EP080-HS: C6 - C10 Fraction minus BTEX (F1)	----	20	µg/L	<20	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147215)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	1670 µg/L	104	49	125.5

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147215) - continued								
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	1285 µg/L	93.8	58	131
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
EP080: BTEXN (QCLot: 2147046)								
EP080-HS: Benzene	71-43-2	1	µg/L	<1	10 µg/L	98.6	70	130
EP080-HS: Toluene	108-88-3	2	µg/L	<2	10 µg/L	99.9	70	130
EP080-HS: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	96.8	70	130
EP080-HS: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	20 µg/L	95.1	70	130
EP080-HS: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	100	70	130
EP080-HS: Total Xylenes	1330-20-7	2	µg/L	<2	----	----	----	----
EP080-HS: Sum of BTEX	----	1	µg/L	<1	----	----	----	----
EP080-HS: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	89.3	70	130

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**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2147226)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EG005T: Arsenic	7440-38-2	50 mg/kg	81.2	70	130
		EG005T: Barium	7440-39-3	50 mg/kg	101	70	130
		EG005T: Beryllium	7440-41-7	5 mg/kg	92.1	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	89.3	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	85.3	70	130
		EG005T: Cobalt	7440-48-4	50 mg/kg	90.9	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	84.0	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	82.4	70	130
		EG005T: Manganese	7439-96-5	50 mg/kg	123	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	87.6	70	130
		EG005T: Vanadium	7440-62-2	50 mg/kg	86.5	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	84.6	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2147228)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EG005T: Arsenic	7440-38-2	50 mg/kg	79.0	70	130
		EG005T: Barium	7440-39-3	50 mg/kg	85.8	70	130
		EG005T: Beryllium	7440-41-7	5 mg/kg	90.0	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	87.6	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	83.1	70	130
		EG005T: Cobalt	7440-48-4	50 mg/kg	83.2	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	83.9	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	82.2	70	130
		EG005T: Manganese	7439-96-5	50 mg/kg	82.2	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	90.7	70	130
		EG005T: Vanadium	7440-62-2	50 mg/kg	88.8	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	83.2	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2147227)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EG035T: Mercury	7439-97-6	5.0 mg/kg	74.1	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2147229)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EG035T: Mercury	7439-97-6	5.0 mg/kg	75.1	70	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 2147428)							
EB1201577-003	NAR_WTP(6C)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	10 mg/kg	84.5	70	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 2147432)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	2.0 mg/kg	82.2	70	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 2147409)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	500 mg/kg	92.0	70	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 2147411)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	500 mg/kg	89.0	70	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 2147410)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EK067G: Total Phosphorus as P	----	100 mg/kg	81.8	70	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 2147412)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EK067G: Total Phosphorus as P	----	100 mg/kg	89.4	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2147221)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	104	70	130
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	96.9	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2147223)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	112	70	130
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	98.5	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147040)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EP080: C6 - C9 Fraction	----	8 mg/kg	86.9	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147041)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EP080: C6 - C9 Fraction	----	8 mg/kg	93.2	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147220)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EP071: C10 - C14 Fraction	----	312 mg/kg	95.4	70	130
		EP071: C15 - C28 Fraction	----	500 mg/kg	102	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147222)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EP071: C10 - C14 Fraction	----	312 mg/kg	78.4	70	130
		EP071: C15 - C28 Fraction	----	500 mg/kg	87.0	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147040)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EP080: C6 - C10 Fraction	----	8 mg/kg	94.3	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147041)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EP080: C6 - C10 Fraction	----	8 mg/kg	101	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147220)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EP071: >C10 - C16 Fraction	----	413 mg/kg	103	70	130
		EP071: >C16 - C34 Fraction	----	360 mg/kg	99.8	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147222)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EP071: >C10 - C16 Fraction	----	413 mg/kg	87.6	70	130
		EP071: >C16 - C34 Fraction	----	360 mg/kg	78.5	70	130
EP080: BTEXN (QCLot: 2147040)							
EB1201577-002	NAR_WTP(6B)_SOIL_S	EP080: Benzene	71-43-2	2 mg/kg	75.5	70	130
		EP080: Toluene	108-88-3	2 mg/kg	82.6	70	130
EP080: BTEXN (QCLot: 2147041)							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EP080: Benzene	71-43-2	2 mg/kg	84.0	70	130

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Spike Recovery (%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080: BTEXN (QCLot: 2147041) - continued							
EB1201577-022	NAR_WTP(13B)_SOIL_S	EP080: Toluene	108-88-3	2 mg/kg	92.5	70	130

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Spike Recovery (%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 2149649)							
EB1201577-043	Rinsate_14/1/12	EG020A-T: Arsenic	7440-38-2	1.000 mg/L	96.8	70	130
		EG020A-T: Cadmium	7440-43-9	0.500 mg/L	100	70	130
		EG020A-T: Chromium	7440-47-3	1.000 mg/L	91.4	70	130
		EG020A-T: Copper	7440-50-8	1.000 mg/L	96.5	70	130
		EG020A-T: Lead	7439-92-1	1.000 mg/L	94.8	70	130
		EG020A-T: Nickel	7440-02-0	1.000 mg/L	98.6	70	130
		EG020A-T: Zinc	7440-66-6	1.000 mg/L	93.4	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2151757)							
EB1201577-042	Rinsate_13/1/12	EG035T: Mercury	7439-97-6	0.010 mg/L	83.6	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2147046)							
EB1201577-043	Rinsate_14/1/12	EP080-HS: C6 - C9 Fraction	----	40 µg/L	84.7	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2147046)							
EB1201577-043	Rinsate_14/1/12	EP080-HS: C6 - C10 Fraction	----	40 µg/L	102	70	130
EP080: BTEXN (QCLot: 2147046)							
EB1201577-043	Rinsate_14/1/12	EP080-HS: Benzene	71-43-2	10 µg/L	94.9	70	130
		EP080-HS: Toluene	108-88-3	10 µg/L	96.1	70	130

ALS Group
Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EB1201577**	Page	: 1 of 46
Client	: **SANTOS LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MS RITA BONETTI	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rbonetti@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 117626001		
C-O-C number	: ----	Date Samples Received	: 19-JAN-2012
Sampler	: Rita Bonetti	Issue Date	: 08-FEB-2012
Site	: Narrabri		
		No. of samples received	: 44
Quote number	: BN/107/11 V3	No. of samples analysed	: 44

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
- Descriptive Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

WORLD RECOGNISED ACCREDITATION

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*
Dianne Blane	Laboratory Supervisor	Newcastle
Jonathon Angell	Inorganic Coordinator	Brisbane Inorganics
Jonathon Angell	Inorganic Coordinator	Stafford Minerals - AY
Kim McCabe	Senior Inorganic Chemist	Brisbane External Subcontracting
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Organics

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 insuffient 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

- **ASS: EA029 (SPOCAS): Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from kg/t dry weight to kg/m3 in-situ soil, multiply reported results x wet bulk density of soil in t/m3.**
- **ED021 (Bicarbonate Extractable K - Colwell) - The LOR for samples in workorder EB1201577 has been raised due to matrix interference.**
- **EG005T (Total Metals) - Sample EB1201577-021 (NAR_WTP(13A)_SOIL_S) shows poor duplicate results due to sample heterogeneity. Confirmed by visual inspection.**
- **EK040-P (Fluoride): All samlpes were centrifudged to acquire clean enough sample for PCT Fluoride analysis.**
- **EK059G(Nitrite and Nitrate as Nox): Samples EB1201577-001,EB1201577-002,EB1201577-005,EB1201577-008,EB1201577-0013,EK059G(Nitrite and Nitrate as Nox): Samples EB1201577-001,EB1201577-002,EB1201577-005,EB1201577-008,EB1201577-0013,EB1201577-0025 andEB1201577-0037 required dilution prior to extraction due to matrix interferences. LOR values have been adjusted accordingly.**
- **Field Observations and Measurements submitted to the laboratory by external samplers and appearing in this report are not covered by ALS' NATA Accreditation.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(6A)_SOIL_S	NAR_WTP(6B)_SOIL_S	NAR_WTP(6C)_SOIL_S	NAR_WTP(7A)_SOIL_S	NAR_WTP(7B)_SOIL_S
				Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-001	EB1201577-002	EB1201577-003	EB1201577-004	EB1201577-005
EA150: Particle Sizing									
+75µm	----	1	%		70	75	50	66	70
+150µm	----	1	%		60	64	44	59	62
+300µm	----	1	%		38	37	28	38	40
+425µm	----	1	%		24	23	18	26	27
+600µm	----	1	%		15	13	10	15	18
+1180µm	----	1	%		4	2	2	4	6
+2.36mm	----	1	%		1	<1	<1	<1	2
+4.75mm	----	1	%		<1	<1	<1	<1	<1
+9.5mm	----	1	%		<1	<1	<1	<1	<1
+19.0mm	----	1	%		<1	<1	<1	<1	<1
+37.5mm	----	1	%		<1	<1	<1	<1	<1
+75.0mm	----	1	%		<1	<1	<1	<1	<1
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		10.5	9.0	6.4	9.2	8.7
EA010: Conductivity									
Electrical Conductivity @ 25°C	----	1	µS/cm		3220	562	212	690	303
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		1.5	15.9	19.4	22.1	16.8
EA150: Soil Classification based on Particle Size									
Fines (<75 µm)	----	1	%		30	25	50	34	30
Sand (>75 µm)	----	1	%		68	74	50	65	69
Gravel (>2mm)	----	1	%		1	<1	<1	1	2
Cobbles (>6cm)	----	1	%		<1	<1	<1	<1	<1
ED008: Exchangeable Cations									
Exchangeable Calcium	----	0.1	meq/100g		7.4	3.7	<0.2	21.2	5.6
Exchangeable Magnesium	----	0.1	meq/100g		4.3	3.9	47.4	10.9	6.7
Exchangeable Potassium	----	0.1	meq/100g		2.3	1.6	0.7	4.0	2.6
Exchangeable Sodium	----	0.1	meq/100g		23.3	13.1	6.2	24.7	16.3
Exchangeable Aluminium	----	0.1	meq/100g		<0.2	<0.2	0.3	<0.2	<0.2
Exchangeable Sodium Percent	----	0.1	%		62.6	58.6	11.4	40.6	52.1
Cation Exchange Capacity	----	0.1	meq/100g		37.3	22.3	54.5	60.9	31.2
ED021: Bicarbonate Extractable Potassium (Colwell)									
Bicarbonate Extractable K (Colwell)	----	10	mg/kg		<200	<200	<200	380	270
ED092: DTPA Extractable Metals									
Copper	7440-50-8	1.00	mg/kg		2.13	6.24	<1.00	1.04	<1.00

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(6A)_SOIL_S	NAR_WTP(6B)_SOIL_S	NAR_WTP(6C)_SOIL_S	NAR_WTP(7A)_SOIL_S	NAR_WTP(7B)_SOIL_S
				Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-001	EB1201577-002	EB1201577-003	EB1201577-004	EB1201577-005
ED092: DTPA Extractable Metals - Continued									
Iron	7439-89-6	1.00	mg/kg		180	<1.00	77.9	154	180
Manganese	7439-96-5	1.00	mg/kg		56.7	1.09	<1.00	239	114
Zinc	7440-66-6	1.00	mg/kg		<1.00	28.4	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		110	30	40	110	50
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg		<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		8	8	20	9	8
Cobalt	7440-48-4	2	mg/kg		2	<2	6	3	<2
Copper	7440-50-8	5	mg/kg		<5	<5	6	<5	<5
Lead	7439-92-1	5	mg/kg		<5	<5	10	6	5
Manganese	7439-96-5	5	mg/kg		168	68	6	344	170
Nickel	7440-02-0	2	mg/kg		3	2	6	4	3
Strontium	7440-24-6	2	mg/kg		13	5	2	21	9
Vanadium	7440-62-2	5	mg/kg		18	20	55	24	23
Zinc	7440-66-6	5	mg/kg		<5	<5	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride									
Fluoride	16984-48-8	1	mg/kg		3	4	<1	2	5
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg		<2.5	<0.5	0.4	4.0	<0.5
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	20	mg/kg		440	310	290	1060	470
EK062: Total Nitrogen as N (TKN + NOx)									
^ Total Nitrogen as N	----	20	mg/kg		440	310	290	1060	470
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	2	mg/kg		80	98	52	170	124
EK080: Bicarbonate Extractable Phosphorus (Colwell)									
Bicarbonate Ext. P (Colwell)	----	2	mg/kg		9	9	<2	16	10
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%		1.63	0.70	0.34	3.01	1.16

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(6A)_SOIL_S	NAR_WTP(6B)_SOIL_S	NAR_WTP(6C)_SOIL_S	NAR_WTP(7A)_SOIL_S	NAR_WTP(7B)_SOIL_S
				Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-001	EB1201577-002	EB1201577-003	EB1201577-004	EB1201577-005
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	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ Sum of polycyclic aromatic hydrocarbons	----	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
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

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(6A)_SOIL_S	NAR_WTP(6B)_SOIL_S	NAR_WTP(6C)_SOIL_S	NAR_WTP(7A)_SOIL_S	NAR_WTP(7B)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-001	EB1201577-002	EB1201577-003	EB1201577-004	EB1201577-005
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)								
Depth/Depth Range	----	-	mm	**0-50**	**100-200**	**400-500**	**0-50**	**50-100**
Santos Suite	----	-	-	**Suite W**	**Suite W**	**Suite W**	**Suite W**	**Suite W**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**96.4**	**69.9**	**67.4**	**56.1**	**68.8**
2-Chlorophenol-D4	93951-73-6	0.1	%	**110**	**83.4**	**79.1**	**70.2**	**83.6**
2.4.6-Tribromophenol	118-79-6	0.1	%	**50.9**	**66.1**	**60.6**	**54.4**	**55.6**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**98.3**	**98.5**	**94.2**	**78.3**	**93.0**
Anthracene-d10	1719-06-8	0.1	%	**93.4**	**70.0**	**59.3**	**62.8**	**61.3**
4-Terphenyl-d14	1718-51-0	0.1	%	**122**	**109**	**109**	**93.5**	**107**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**95.4**	**81.6**	**92.9**	**84.7**	**90.8**
Toluene-D8	2037-26-5	0.1	%	**95.6**	**84.1**	**112**	**95.2**	**93.8**
4-Bromofluorobenzene	460-00-4	0.1	%	**91.6**	**85.2**	**115**	**91.2**	**88.8**

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(7C)_SOIL_S	NAR_WTP(8A)_SOIL_S	NAR_WTP(8B)_SOIL_S	NAR_WTP(8C)_SOIL_S	NAR_WTP(9A)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-006	EB1201577-007	EB1201577-008	EB1201577-009	EB1201577-010
EA150: Particle Sizing								
+75µm	----	1	%	46	69	71	53	71
+150µm	----	1	%	40	59	62	46	60
+300µm	----	1	%	26	34	37	28	34
+425µm	----	1	%	18	21	24	19	20
+600µm	----	1	%	13	11	15	12	11
+1180µm	----	1	%	6	2	4	6	2
+2.36mm	----	1	%	3	<1	2	4	<1
+4.75mm	----	1	%	1	<1	<1	1	<1
+9.5mm	----	1	%	<1	<1	<1	<1	<1
+19.0mm	----	1	%	<1	<1	<1	<1	<1
+37.5mm	----	1	%	<1	<1	<1	<1	<1
+75.0mm	----	1	%	<1	<1	<1	<1	<1
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	6.1	10.0	8.5	8.2	5.6
EA010: Conductivity								
Electrical Conductivity @ 25°C	----	1	µS/cm	198	2070	346	236	16
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	26.4	6.6	18.5	24.6	10.7
EA150: Soil Classification based on Particle Size								
Fines (<75 µm)	----	1	%	54	31	29	47	29
Sand (>75 µm)	----	1	%	43	69	69	50	71
Gravel (>2mm)	----	1	%	3	<1	2	4	<1
Cobbles (>6cm)	----	1	%	<1	<1	<1	<1	<1
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	4.0	5.5	1.6	1.1	9.6
Exchangeable Magnesium	----	0.1	meq/100g	39.6	5.8	5.5	41.1	4.8
Exchangeable Potassium	----	0.1	meq/100g	1.3	2.9	1.8	2.1	1.4
Exchangeable Sodium	----	0.1	meq/100g	5.4	29.5	12.4	7.6	<0.2
Exchangeable Aluminium	----	0.1	meq/100g	0.4	<0.2	<0.2	<0.2	0.8
Exchangeable Sodium Percent	----	0.1	%	10.7	67.4	58.3	14.6	0.5
Cation Exchange Capacity	----	0.1	meq/100g	50.2	43.8	21.3	51.9	15.8
ED021: Bicarbonate Extractable Potassium (Colwell)								
Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	300	<200	<200	<200
ED092: DTPA Extractable Metals								
Copper	7440-50-8	1.00	mg/kg	<1.00	1.47	<1.00	<1.00	<1.00

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(7C)_SOIL_S	NAR_WTP(8A)_SOIL_S	NAR_WTP(8B)_SOIL_S	NAR_WTP(8C)_SOIL_S	NAR_WTP(9A)_SOIL_S
				Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-006	EB1201577-007	EB1201577-008	EB1201577-009	EB1201577-010
ED092: DTPA Extractable Metals - Continued									
Iron	7439-89-6	1.00	mg/kg		**89.6**	**633**	**93.7**	**18.0**	**31.2**
Manganese	7439-96-5	1.00	mg/kg		<1.00	**79.8**	**4.52**	**1.40**	**32.0**
Zinc	7440-66-6	1.00	mg/kg		<1.00	<1.00	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		**280**	**70**	**20**	**50**	**40**
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg		<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**16**	**9**	**10**	**14**	**7**
Cobalt	7440-48-4	2	mg/kg		**3**	**2**	<2	**3**	<2
Copper	7440-50-8	5	mg/kg		**5**	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg		**7**	<5	<5	**7**	<5
Manganese	7439-96-5	5	mg/kg		**6**	**217**	**24**	**13**	**162**
Nickel	7440-02-0	2	mg/kg		**3**	**4**	**3**	**4**	**2**
Strontium	7440-24-6	2	mg/kg		**12**	**15**	**5**	**4**	**8**
Vanadium	7440-62-2	5	mg/kg		**37**	**22**	**27**	**29**	**19**
Zinc	7440-66-6	5	mg/kg		<5	<5	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride									
Fluoride	16984-48-8	1	mg/kg		<1	**2**	**3**	**5**	<1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg		**0.9**	**8.0**	<0.5	**0.3**	**1.8**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	20	mg/kg		**300**	**720**	**330**	**310**	**620**
EK062: Total Nitrogen as N (TKN + NOx)									
^ **Total Nitrogen as N**	----	20	mg/kg		**300**	**730**	**330**	**310**	**620**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	2	mg/kg		**47**	**154**	**110**	**50**	**99**
EK080: Bicarbonate Extractable Phosphorus (Colwell)									
Bicarbonate Ext. P (Colwell)	----	2	mg/kg		<2	**10**	**8**	<2	<2
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%		**0.35**	**1.65**	**0.60**	**0.30**	**1.13**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(7C)_SOIL_S	NAR_WTP(8A)_SOIL_S	NAR_WTP(8B)_SOIL_S	NAR_WTP(8C)_SOIL_S	NAR_WTP(9A)_SOIL_S
				Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-006	EB1201577-007	EB1201577-008	EB1201577-009	EB1201577-010
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	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ Sum of polycyclic aromatic hydrocarbons	----	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
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

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(7C)_SOIL_S	NAR_WTP(8A)_SOIL_S	NAR_WTP(8B)_SOIL_S	NAR_WTP(8C)_SOIL_S	NAR_WTP(9A)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-006	EB1201577-007	EB1201577-008	EB1201577-009	EB1201577-010
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)								
Depth/Depth Range	----	-	mm	**300-400**	**0-50**	**50-150**	**500-600**	**0-50**
Santos Suite	----	-	-	**Suite W**	**Suite W**	**Suite W**	**Suite W**	**Suite W**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**101**	**69.6**	**72.3**	**72.6**	**67.4**
2-Chlorophenol-D4	93951-73-6	0.1	%	**106**	**81.1**	**76.3**	**77.3**	**78.3**
2.4.6-Tribromophenol	118-79-6	0.1	%	**73.8**	**57.5**	**47.1**	**46.8**	**73.0**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**93.8**	**92.4**	**90.7**	**89.8**	**90.4**
Anthracene-d10	1719-06-8	0.1	%	**91.6**	**73.3**	**49.2**	**45.7**	**72.2**
4-Terphenyl-d14	1718-51-0	0.1	%	**114**	**104**	**103**	**102**	**105**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**94.1**	**87.4**	**86.8**	**90.9**	**87.4**
Toluene-D8	2037-26-5	0.1	%	**92.2**	**93.1**	**96.0**	**93.7**	**106**
4-Bromofluorobenzene	460-00-4	0.1	%	**92.9**	**91.5**	**102**	**98.2**	**98.7**

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(9B)_SOIL_S	NAR_WTP(9C)_SOIL_S	NAR_WTP(10A)_SOIL_S	NAR_WTP(10B)_SOIL_S	NAR_WTP(10C)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-011	EB1201577-012	EB1201577-013	EB1201577-014	EB1201577-015
EA150: Particle Sizing								
+75µm	----	1	%	61	59	67	81	70
+150µm	----	1	%	51	50	60	72	60
+300µm	----	1	%	30	29	38	47	38
+425µm	----	1	%	20	18	25	32	26
+600µm	----	1	%	13	10	14	19	17
+1180µm	----	1	%	6	2	3	5	7
+2.36mm	----	1	%	4	1	<1	<1	3
+4.75mm	----	1	%	4	<1	<1	<1	1
+9.5mm	----	1	%	3	<1	<1	<1	<1
+19.0mm	----	1	%	<1	<1	<1	<1	<1
+37.5mm	----	1	%	<1	<1	<1	<1	<1
+75.0mm	----	1	%	<1	<1	<1	<1	<1
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	5.6	5.8	8.0	7.6	6.3
EA010: Conductivity								
Electrical Conductivity @ 25°C	----	1	µS/cm	88	209	391	69	174
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	14.8	9.5	19.4	16.5	12.8
EA150: Soil Classification based on Particle Size								
Fines (<75 µm)	----	1	%	39	41	33	19	30
Sand (>75 µm)	----	1	%	57	58	66	81	67
Gravel (>2mm)	----	1	%	4	1	1	<1	3
Cobbles (>6cm)	----	1	%	<1	<1	<1	<1	<1
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	1.4	1.4	19.5	2.0	0.3
Exchangeable Magnesium	----	0.1	meq/100g	27.1	27.6	9.0	3.2	23.3
Exchangeable Potassium	----	0.1	meq/100g	1.4	1.4	2.8	1.0	3.0
Exchangeable Sodium	----	0.1	meq/100g	2.5	2.6	14.0	3.3	3.4
Exchangeable Aluminium	----	0.1	meq/100g	0.5	0.7	<0.2	0.6	0.3
Exchangeable Sodium Percent	----	0.1	%	7.8	7.7	30.8	35.1	11.5
Cation Exchange Capacity	----	0.1	meq/100g	32.4	33.0	45.2	9.5	30.1
ED021: Bicarbonate Extractable Potassium (Colwell)								
Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	<200	<200	<200	210
ED092: DTPA Extractable Metals								
Copper	7440-50-8	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(9B)_SOIL_S	NAR_WTP(9C)_SOIL_S	NAR_WTP(10A)_SOIL_S	NAR_WTP(10B)_SOIL_S	NAR_WTP(10C)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-011	EB1201577-012	EB1201577-013	EB1201577-014	EB1201577-015
ED092: DTPA Extractable Metals - Continued								
Iron	7439-89-6	1.00	mg/kg	89.4	34.5	119	68.2	31.2
Manganese	7439-96-5	1.00	mg/kg	<1.00	<1.00	133	5.70	<1.00
Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	10	30	70	20	10
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	15	12	13	7	9
Cobalt	7440-48-4	2	mg/kg	2	3	2	<2	<2
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg	5	6	5	<5	<5
Manganese	7439-96-5	5	mg/kg	9	<5	228	30	<5
Nickel	7440-02-0	2	mg/kg	3	3	3	<2	2
Strontium	7440-24-6	2	mg/kg	5	4	18	4	<2
Vanadium	7440-62-2	5	mg/kg	40	35	44	26	14
Zinc	7440-66-6	5	mg/kg	<5	<5	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride								
Fluoride	16984-48-8	1	mg/kg	<1	<1	2	2	<1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	0.2	0.3	<0.5	<0.1	1.6
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	160	130	600	280	190
EK062: Total Nitrogen as N (TKN + NOx)								
^ Total Nitrogen as N	----	20	mg/kg	160	130	600	280	190
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	45	32	99	74	53
EK080: Bicarbonate Extractable Phosphorus (Colwell)								
Bicarbonate Ext. P (Colwell)	----	2	mg/kg	<2	<2	12	<2	<2
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	0.27	0.18	2.04	0.44	0.22

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(9B)_SOIL_S	NAR_WTP(9C)_SOIL_S	NAR_WTP(10A)_SOIL_S	NAR_WTP(10B)_SOIL_S	NAR_WTP(10C)_SOIL_S
				Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-011	EB1201577-012	EB1201577-013	EB1201577-014	EB1201577-015
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	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ Sum of polycyclic aromatic hydrocarbons	----	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
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

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(9B)_SOIL_S	NAR_WTP(9C)_SOIL_S	NAR_WTP(10A)_SOIL_S	NAR_WTP(10B)_SOIL_S	NAR_WTP(10C)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-011	EB1201577-012	EB1201577-013	EB1201577-014	EB1201577-015
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)								
Depth/Depth Range	----	-	mm	100-200	400-500	0-50	50-150	300-400
Santos Suite	----	-	-	Suite W	Suite W	Suite W	Suite W	Suite W
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	66.6	64.8	109	94.5	77.7
2-Chlorophenol-D4	93951-73-6	0.1	%	79.3	80.3	114	103	83.9
2.4.6-Tribromophenol	118-79-6	0.1	%	61.7	67.1	92.2	73.5	52.3
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	88.3	88.5	104	89.3	97.6
Anthracene-d10	1719-06-8	0.1	%	66.1	58.4	93.8	93.5	60.1
4-Terphenyl-d14	1718-51-0	0.1	%	104	96.2	118	115	113
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	87.4	91.8	81.7	82.8	85.5
Toluene-D8	2037-26-5	0.1	%	99.7	96.6	91.2	92.5	88.7
4-Bromofluorobenzene	460-00-4	0.1	%	96.4	96.7	90.6	98.5	90.9

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(11A)_SOIL_S	NAR_WTP(11B)_SOIL_S	NAR_WTP(11C)_SOIL_S	NAR_WTP(12A)_SOIL_S	NAR_WTP(12B)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-016	EB1201577-017	EB1201577-018	EB1201577-019	EB1201577-020
EA150: Particle Sizing								
+75µm	----	1	%	70	85	64	76	77
+150µm	----	1	%	64	72	55	65	63
+300µm	----	1	%	44	44	31	38	36
+425µm	----	1	%	31	30	19	24	23
+600µm	----	1	%	20	18	10	14	15
+1180µm	----	1	%	7	5	2	4	6
+2.36mm	----	1	%	2	1	<1	<1	2
+4.75mm	----	1	%	<1	<1	<1	<1	<1
+9.5mm	----	1	%	<1	<1	<1	<1	<1
+19.0mm	----	1	%	<1	<1	<1	<1	<1
+37.5mm	----	1	%	<1	<1	<1	<1	<1
+75.0mm	----	1	%	<1	<1	<1	<1	<1
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	7.9	7.5	6.7	5.7	6.4
EA010: Conductivity								
Electrical Conductivity @ 25°C	----	1	µS/cm	628	61	221	13	23
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	15.4	11.0	18.7	7.4	18.0
EA150: Soil Classification based on Particle Size								
Fines (<75 µm)	----	1	%	30	15	36	24	23
Sand (>75 µm)	----	1	%	69	84	64	75	75
Gravel (>2mm)	----	1	%	2	1	<1	1	2
Cobbles (>6cm)	----	1	%	<1	<1	<1	<1	<1
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	8.3	0.5	<0.2	8.3	0.4
Exchangeable Magnesium	----	0.1	meq/100g	7.0	2.6	23.5	3.6	5.7
Exchangeable Potassium	----	0.1	meq/100g	2.2	0.7	2.0	1.6	0.9
Exchangeable Sodium	----	0.1	meq/100g	13.0	3.5	4.3	<0.2	0.2
Exchangeable Aluminium	----	0.1	meq/100g	<0.2	0.6	<0.2	1.1	0.2
Exchangeable Sodium Percent	----	0.1	%	42.6	47.8	14.3	<0.2	3.5
Cation Exchange Capacity	----	0.1	meq/100g	30.4	7.4	29.8	13.6	7.2
ED021: Bicarbonate Extractable Potassium (Colwell)								
Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	<200	<200	<200	<200
ED092: DTPA Extractable Metals								
Copper	7440-50-8	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(11A)_SOIL_S	NAR_WTP(11B)_SOIL_S	NAR_WTP(11C)_SOIL_S	NAR_WTP(12A)_SOIL_S	NAR_WTP(12B)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-016	EB1201577-017	EB1201577-018	EB1201577-019	EB1201577-020
ED092: DTPA Extractable Metals - Continued								
Iron	7439-89-6	1.00	mg/kg	226	33.6	55.9	25.0	25.2
Manganese	7439-96-5	1.00	mg/kg	44.5	3.36	<1.00	11.0	1.64
Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	80	20	30	30	10
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	7	6	14	6	5
Cobalt	7440-48-4	2	mg/kg	2	<2	3	<2	<2
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	277	21	<5	160	9
Nickel	7440-02-0	2	mg/kg	3	<2	3	2	<2
Strontium	7440-24-6	2	mg/kg	12	2	<2	9	2
Vanadium	7440-62-2	5	mg/kg	21	24	32	16	15
Zinc	7440-66-6	5	mg/kg	<5	<5	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride								
Fluoride	16984-48-8	1	mg/kg	<1	1	<1	<1	<1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	2.3	0.2	0.4	2.0	0.5
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	690	160	270	580	210
EK062: Total Nitrogen as N (TKN + NOx)								
^ Total Nitrogen as N	----	20	mg/kg	690	160	270	580	210
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	113	55	46	107	92
EK080: Bicarbonate Extractable Phosphorus (Colwell)								
Bicarbonate Ext. P (Colwell)	----	2	mg/kg	7	2	<2	10	<2
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	1.82	0.37	0.33	1.18	0.25

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(11A)_SOIL_S	NAR_WTP(11B)_SOIL_S	NAR_WTP(11C)_SOIL_S	NAR_WTP(12A)_SOIL_S	NAR_WTP(12B)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-016	EB1201577-017	EB1201577-018	EB1201577-019	EB1201577-020
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	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ Sum of polycyclic aromatic hydrocarbons	----	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
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

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(11A)_SOIL_S	NAR_WTP(11B)_SOIL_S	NAR_WTP(11C)_SOIL_S	NAR_WTP(12A)_SOIL_S	NAR_WTP(12B)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-016	EB1201577-017	EB1201577-018	EB1201577-019	EB1201577-020
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)								
Depth/Depth Range	----	-	mm	**0-50**	**100-200**	**400-500**	**0-50**	**200-300**
Santos Suite	----	-	-	**Suite W**	**Suite W**	**Suite W**	**Suite W**	**Suite W**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**79.3**	**72.4**	**55.1**	**89.9**	**68.4**
2-Chlorophenol-D4	93951-73-6	0.1	%	**86.9**	**92.8**	**76.8**	**121**	**75.9**
2.4.6-Tribromophenol	118-79-6	0.1	%	**108**	**112**	**96.0**	**134**	**70.1**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**112**	**114**	**89.7**	**133**	**90.6**
Anthracene-d10	1719-06-8	0.1	%	**92.6**	**86.8**	**77.3**	**113**	**56.2**
4-Terphenyl-d14	1718-51-0	0.1	%	**126**	**128**	**114**	**140**	**97.2**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**77.0**	**86.7**	**84.7**	**92.0**	**77.2**
Toluene-D8	2037-26-5	0.1	%	**85.0**	**93.0**	**98.1**	**98.8**	**85.0**
4-Bromofluorobenzene	460-00-4	0.1	%	**84.0**	**90.2**	**96.1**	**102**	**87.7**

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(13A)_SOIL_S	NAR_WTP(13B)_SOIL_S	NAR_WTP(14A)_SOIL_S	NAR_WTP(14B)_SOIL_S	NAR_WTP(15A)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-021	EB1201577-022	EB1201577-023	EB1201577-024	EB1201577-025
EA150: Particle Sizing								
+75µm	----	1	%	78	85	89	75	88
+150µm	----	1	%	68	73	65	55	56
+300µm	----	1	%	39	41	19	25	14
+425µm	----	1	%	23	26	10	17	6
+600µm	----	1	%	12	15	5	11	3
+1180µm	----	1	%	2	4	2	6	2
+2.36mm	----	1	%	<1	1	<1	3	<1
+4.75mm	----	1	%	<1	<1	<1	1	<1
+9.5mm	----	1	%	<1	<1	<1	<1	<1
+19.0mm	----	1	%	<1	<1	<1	<1	<1
+37.5mm	----	1	%	<1	<1	<1	<1	<1
+75.0mm	----	1	%	<1	<1	<1	<1	<1
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	7.6	7.2	8.6	6.8	9.1
EA010: Conductivity								
Electrical Conductivity @ 25°C	----	1	µS/cm	298	61	158	37	416
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	14.4	15.4	12.8	17.7	23.5
EA150: Soil Classification based on Particle Size								
Fines (<75 µm)	----	1	%	22	15	11	25	12
Sand (>75 µm)	----	1	%	78	84	89	72	87
Gravel (>2mm)	----	1	%	<1	1	<1	3	1
Cobbles (>6cm)	----	1	%	<1	<1	<1	<1	<1
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	7.6	0.2	1.3	1.7	1.7
Exchangeable Magnesium	----	0.1	meq/100g	7.6	4.6	1.8	8.6	1.8
Exchangeable Potassium	----	0.1	meq/100g	2.4	1.0	0.7	1.4	0.7
Exchangeable Sodium	----	0.1	meq/100g	8.1	1.2	0.9	1.5	2.8
Exchangeable Aluminium	----	0.1	meq/100g	<0.2	0.8	<0.2	0.6	<0.2
Exchangeable Sodium Percent	----	0.1	%	31.4	16.8	19.7	11.6	40.4
Cation Exchange Capacity	----	0.1	meq/100g	25.7	7.1	4.7	13.3	7.0
ED021: Bicarbonate Extractable Potassium (Colwell)								
Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	<200	<200	<200	<200
ED092: DTPA Extractable Metals								
Copper	7440-50-8	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(13A)_SOIL_S	NAR_WTP(13B)_SOIL_S	NAR_WTP(14A)_SOIL_S	NAR_WTP(14B)_SOIL_S	NAR_WTP(15A)_SOIL_S
Client sampling date / time				14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-021	EB1201577-022	EB1201577-023	EB1201577-024	EB1201577-025
ED092: DTPA Extractable Metals - Continued								
Iron	7439-89-6	1.00	mg/kg	116	83.7	10.5	82.3	95.2
Manganese	7439-96-5	1.00	mg/kg	59.3	<1.00	2.57	1.14	10.4
Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	40	10	10	40	20
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	6	5	4	14	4
Cobalt	7440-48-4	2	mg/kg	<2	<2	<2	2	<2
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg	<5	<5	<5	6	<5
Manganese	7439-96-5	5	mg/kg	191	<5	15	12	18
Nickel	7440-02-0	2	mg/kg	2	<2	<2	3	<2
Strontium	7440-24-6	2	mg/kg	8	<2	<2	4	2
Vanadium	7440-62-2	5	mg/kg	20	17	12	57	12
Zinc	7440-66-6	5	mg/kg	<5	<5	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride								
Fluoride	16984-48-8	1	mg/kg	1	<1	<1	<1	1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	0.2	<0.1	0.2	0.3	<0.5
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	850	220	80	260	660
EK062: Total Nitrogen as N (TKN + NOx)								
^ Total Nitrogen as N	----	20	mg/kg	850	220	80	260	660
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	140	65	40	131	61
EK080: Bicarbonate Extractable Phosphorus (Colwell)								
Bicarbonate Ext. P (Colwell)	----	2	mg/kg	2	3	<2	4	<2
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	1.14	0.42	0.18	1.00	0.37

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(13A)_SOIL_S	NAR_WTP(13B)_SOIL_S	NAR_WTP(14A)_SOIL_S	NAR_WTP(14B)_SOIL_S	NAR_WTP(15A)_SOIL_S
				Client sampling date / time	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-021	EB1201577-022	EB1201577-023	EB1201577-024	EB1201577-025
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	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ Sum of polycyclic aromatic hydrocarbons	----	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		**110**	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		**130**	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		**240**	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		**110**	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		**140**	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		**250**	<50	<50	<50	<50
EP080: BTEXN									
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

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(13A)_SOIL_S	NAR_WTP(13B)_SOIL_S	NAR_WTP(14A)_SOIL_S	NAR_WTP(14B)_SOIL_S	NAR_WTP(15A)_SOIL_S
				Client sampling date / time: 14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-021	EB1201577-022	EB1201577-023	EB1201577-024	EB1201577-025
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)								
Depth/Depth Range	----	-	mm	0-50	200-300	0-100	100-200	0-50
Santos Suite	----	-	-	Suite W	Suite W	Suite W	Suite W	Suite W
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	78.8	62.7	59.1	57.6	63.8
2-Chlorophenol-D4	93951-73-6	0.1	%	94.1	83.5	86.0	78.2	85.6
2.4.6-Tribromophenol	118-79-6	0.1	%	89.4	60.1	60.0	64.8	60.4
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	112	98.9	105	94.2	104
Anthracene-d10	1719-06-8	0.1	%	102	75.3	89.1	76.4	83.4
4-Terphenyl-d14	1718-51-0	0.1	%	105	91.5	103	95.9	102
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	82.7	95.7	86.4	82.9	91.8
Toluene-D8	2037-26-5	0.1	%	108	125	117	105	123
4-Bromofluorobenzene	460-00-4	0.1	%	110	125	115	103	117

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(15B)_SOIL_S	NAR_WTP(16A)_SOIL_S	NAR_WTP(16B)_SOIL_S	NAR_WTP(17A)_SOIL_S	NAR_WTP(17B)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00
				EB1201577-026	EB1201577-027	EB1201577-028	EB1201577-029	EB1201577-030
EA150: Particle Sizing								
+75µm	----	1	%	78	66	51	2	61
+150µm	----	1	%	68	56	44	2	54
+300µm	----	1	%	44	34	26	2	33
+425µm	----	1	%	30	21	17	1	21
+600µm	----	1	%	18	11	10	1	12
+1180µm	----	1	%	4	3	4	<1	4
+2.36mm	----	1	%	<1	<1	2	<1	1
+4.75mm	----	1	%	<1	<1	1	<1	<1
+9.5mm	----	1	%	<1	<1	<1	<1	<1
+19.0mm	----	1	%	<1	<1	<1	<1	<1
+37.5mm	----	1	%	<1	<1	<1	<1	<1
+75.0mm	----	1	%	<1	<1	<1	<1	<1
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	6.6	5.1	6.1	9.0	9.2
EA010: Conductivity								
Electrical Conductivity @ 25°C	----	1	µS/cm	69	10	68	742	353
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	17.4	19.7	18.3	29.7	14.8
EA150: Soil Classification based on Particle Size								
Fines (<75 µm)	----	1	%	22	34	49	98	39
Sand (>75 µm)	----	1	%	77	65	49	1	60
Gravel (>2mm)	----	1	%	<1	<1	2	1	1
Cobbles (>6cm)	----	1	%	<1	<1	<1	<1	<1
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	0.8	1.5	<0.2	16.2	14.9
Exchangeable Magnesium	----	0.1	meq/100g	5.9	6.2	40.8	34.3	21.2
Exchangeable Potassium	----	0.1	meq/100g	1.6	0.8	0.4	4.0	1.7
Exchangeable Sodium	----	0.1	meq/100g	4.9	<0.2	3.4	35.8	14.6
Exchangeable Aluminium	----	0.1	meq/100g	0.8	6.1	0.4	<0.2	<0.2
Exchangeable Sodium Percent	----	0.1	%	37.5	2.5	7.6	39.7	27.8
Cation Exchange Capacity	----	0.1	meq/100g	13.2	8.8	44.8	90.2	52.4
ED021: Bicarbonate Extractable Potassium (Colwell)								
Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	<200	<200	460	<200
ED092: DTPA Extractable Metals								
Copper	7440-50-8	1.00	mg/kg	<1.00	<1.00	<1.00	1.91	<1.00

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(15B)_SOIL_S	NAR_WTP(16A)_SOIL_S	NAR_WTP(16B)_SOIL_S	NAR_WTP(17A)_SOIL_S	NAR_WTP(17B)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00
				EB1201577-026	EB1201577-027	EB1201577-028	EB1201577-029	EB1201577-030
ED092: DTPA Extractable Metals - Continued								
Iron	7439-89-6	1.00	mg/kg	348	45.3	54.3	174	38.5
Manganese	7439-96-5	1.00	mg/kg	<1.00	13.5	<1.00	51.3	17.7
Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	20	60	40	440	90
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	6	9	12	22	11
Cobalt	7440-48-4	2	mg/kg	<2	<2	2	14	8
Copper	7440-50-8	5	mg/kg	<5	<5	<5	8	<5
Lead	7439-92-1	5	mg/kg	<5	5	7	11	6
Manganese	7439-96-5	5	mg/kg	<5	29	<5	128	216
Nickel	7440-02-0	2	mg/kg	<2	2	2	10	6
Strontium	7440-24-6	2	mg/kg	<2	4	<2	18	13
Vanadium	7440-62-2	5	mg/kg	19	24	30	52	27
Zinc	7440-66-6	5	mg/kg	<5	<5	<5	12	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride								
Fluoride	16984-48-8	1	mg/kg	<1	<1	<1	<1	2
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.1	0.5	0.2	<0.1	3.3
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	300	600	270	1260	620
EK062: Total Nitrogen as N (TKN + NOx)								
^ Total Nitrogen as N	----	20	mg/kg	300	600	270	1260	620
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	62	96	42	233	176
EK080: Bicarbonate Extractable Phosphorus (Colwell)								
Bicarbonate Ext. P (Colwell)	----	2	mg/kg	2	<2	<2	11	7
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	0.76	1.27	0.39	3.03	1.52

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(15B)_SOIL_S	NAR_WTP(16A)_SOIL_S	NAR_WTP(16B)_SOIL_S	NAR_WTP(17A)_SOIL_S	NAR_WTP(17B)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00
				EB1201577-026	EB1201577-027	EB1201577-028	EB1201577-029	EB1201577-030
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	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ Sum of polycyclic aromatic hydrocarbons	----	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	**160**	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**160**	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	**180**	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	**180**	<50	<50	<50	<50
EP080: BTEXN								
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

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(15B)_SOIL_S	NAR_WTP(16A)_SOIL_S	NAR_WTP(16B)_SOIL_S	NAR_WTP(17A)_SOIL_S	NAR_WTP(17B)_SOIL_S
			Client sampling date / time	14-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00
				EB1201577-026	EB1201577-027	EB1201577-028	EB1201577-029	EB1201577-030
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)								
Depth/Depth Range	----	-	mm	200-300	0-100	300-400	0-50	50-100
Santos Suite	----	-	-	Suite W	Suite W	Suite W	Suite W	Suite W
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	59.6	60.7	60.7	59.1	57.9
2-Chlorophenol-D4	93951-73-6	0.1	%	78.3	81.0	81.9	82.4	83.2
2.4.6-Tribromophenol	118-79-6	0.1	%	67.0	70.9	59.0	63.6	56.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	96.0	101	101	102	99.3
Anthracene-d10	1719-06-8	0.1	%	78.8	90.1	97.0	88.4	87.5
4-Terphenyl-d14	1718-51-0	0.1	%	95.7	107	106	102	98.8
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	84.0	93.0	73.8	87.3	90.0
Toluene-D8	2037-26-5	0.1	%	115	124	109	113	120
4-Bromofluorobenzene	460-00-4	0.1	%	110	119	107	118	113

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(17C)_SOIL_S	NAR_WTP(18A)_SOIL_S	NAR_WTP(18B)_SOIL_S	NAR_WTP(19A)_SOIL_S	NAR_WTP(19B)_SOIL_S
			Client sampling date / time	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00
				EB1201577-031	EB1201577-032	EB1201577-033	EB1201577-034	EB1201577-035
EA150: Particle Sizing								
+75µm	----	1	%	46	86	86	90	89
+150µm	----	1	%	40	69	74	78	76
+300µm	----	1	%	23	38	45	36	42
+425µm	----	1	%	14	22	29	19	26
+600µm	----	1	%	7	10	18	10	16
+1180µm	----	1	%	2	1	5	2	5
+2.36mm	----	1	%	<1	<1	<1	<1	2
+4.75mm	----	1	%	<1	<1	<1	<1	<1
+9.5mm	----	1	%	<1	<1	<1	<1	<1
+19.0mm	----	1	%	<1	<1	<1	<1	<1
+37.5mm	----	1	%	<1	<1	<1	<1	<1
+75.0mm	----	1	%	<1	<1	<1	<1	<1
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	5.6	6.9	6.7	6.0	4.8
EA010: Conductivity								
Electrical Conductivity @ 25°C	----	1	µS/cm	335	93	14	14	14
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	22.8	21.0	17.4	13.8	13.2
EA150: Soil Classification based on Particle Size								
Fines (<75 µm)	----	1	%	54	14	14	10	11
Sand (>75 µm)	----	1	%	46	86	86	89	87
Gravel (>2mm)	----	1	%	<1	<1	1	<1	2
Cobbles (>6cm)	----	1	%	<1	<1	<1	<1	<1
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	0.8	1.9	0.6	3.6	<0.2
Exchangeable Magnesium	----	0.1	meq/100g	41.2	2.1	1.0	1.9	0.3
Exchangeable Potassium	----	0.1	meq/100g	0.8	0.6	0.5	0.9	0.4
Exchangeable Sodium	----	0.1	meq/100g	4.6	0.5	<0.2	<0.2	<0.2
Exchangeable Aluminium	----	0.1	meq/100g	0.5	<0.2	<0.2	<0.2	1.7
Exchangeable Sodium Percent	----	0.1	%	9.7	9.5	4.6	<0.2	5.1
Cation Exchange Capacity	----	0.1	meq/100g	47.4	5.2	2.2	6.4	1.0
ED021: Bicarbonate Extractable Potassium (Colwell)								
Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	<200	<200	<200	<200
ED092: DTPA Extractable Metals								
Copper	7440-50-8	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(17C)_SOIL_S	NAR_WTP(18A)_SOIL_S	NAR_WTP(18B)_SOIL_S	NAR_WTP(19A)_SOIL_S	NAR_WTP(19B)_SOIL_S
			Client sampling date / time	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00
				EB1201577-031	EB1201577-032	EB1201577-033	EB1201577-034	EB1201577-035
ED092: DTPA Extractable Metals - Continued								
Iron	7439-89-6	1.00	mg/kg	**32.2**	**22.2**	**9.09**	**34.2**	**99.8**
Manganese	7439-96-5	1.00	mg/kg	<1.00	**11.3**	<1.00	**2.32**	<1.00
Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	**60**	**10**	<10	**20**	<10
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**17**	**2**	**2**	**2**	**2**
Cobalt	7440-48-4	2	mg/kg	**9**	<2	<2	<2	<2
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg	**7**	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**7**	**13**	<5	**23**	<5
Nickel	7440-02-0	2	mg/kg	**6**	<2	<2	<2	<2
Strontium	7440-24-6	2	mg/kg	**4**	<2	<2	**4**	<2
Vanadium	7440-62-2	5	mg/kg	**42**	**11**	**10**	**11**	**11**
Zinc	7440-66-6	5	mg/kg	**5**	<5	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride								
Fluoride	16984-48-8	1	mg/kg	<1	<1	<1	<1	<1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	**0.5**	**0.1**	**0.4**	**1.3**	**0.6**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	**310**	**150**	**70**	**170**	**110**
EK062: Total Nitrogen as N (TKN + NOx)								
^ **Total Nitrogen as N**	----	20	mg/kg	**310**	**150**	**70**	**170**	**110**
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	**67**	**28**	**36**	**36**	**26**
EK080: Bicarbonate Extractable Phosphorus (Colwell)								
Bicarbonate Ext. P (Colwell)	----	2	mg/kg	<2	<2	<2	<2	**2**
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	**1.68**	**1.56**	**0.18**	**0.56**	**0.20**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(17C)_SOIL_S	NAR_WTP(18A)_SOIL_S	NAR_WTP(18B)_SOIL_S	NAR_WTP(19A)_SOIL_S	NAR_WTP(19B)_SOIL_S
			Client sampling date / time	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00
				EB1201577-031	EB1201577-032	EB1201577-033	EB1201577-034	EB1201577-035
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	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ Sum of polycyclic aromatic hydrocarbons	----	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	**17**	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	**17**	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
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

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(17C)_SOIL_S	NAR_WTP(18A)_SOIL_S	NAR_WTP(18B)_SOIL_S	NAR_WTP(19A)_SOIL_S	NAR_WTP(19B)_SOIL_S
			Client sampling date / time	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00	15-JAN-2012 15:00
				EB1201577-031	EB1201577-032	EB1201577-033	EB1201577-034	EB1201577-035
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)								
Depth/Depth Range	----	-	mm	**300-400**	**0-50**	**100-200**	**0-100**	**300-400**
Santos Suite	----	-	-	**Suite W**	**Suite W**	**Suite W**	**Suite W**	**Suite W**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**43.2**	**52.8**	**105**	**67.2**	**64.0**
2-Chlorophenol-D4	93951-73-6	0.1	%	**72.6**	**80.2**	**104**	**61.6**	**77.8**
2.4.6-Tribromophenol	118-79-6	0.1	%	**50.9**	**60.5**	**78.7**	**52.9**	**35.2**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**93.5**	**101**	**98.2**	**81.4**	**88.8**
Anthracene-d10	1719-06-8	0.1	%	**88.6**	**86.7**	**76.8**	**66.6**	**84.9**
4-Terphenyl-d14	1718-51-0	0.1	%	**87.2**	**97.4**	**97.6**	**77.5**	**65.2**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**83.0**	**85.4**	**88.1**	**104**	**89.7**
Toluene-D8	2037-26-5	0.1	%	**108**	**125**	**109**	**117**	**121**
4-Bromofluorobenzene	460-00-4	0.1	%	**112**	**116**	**109**	**107**	**113**

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(D1)_SOIL_S	NAR_WTP(D2)_SOIL_S	NAR_WTP(D3)_SOIL_S	NAR_WTP(D4)_SOIL_S	NAR_WTP(D5)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201577-036	EB1201577-037	EB1201577-038	EB1201577-039	EB1201577-040
EA150: Particle Sizing								
+75µm	----	1	%	62	47	63	73	92
+150µm	----	1	%	56	40	56	60	79
+300µm	----	1	%	35	25	36	35	30
+425µm	----	1	%	22	16	25	22	19
+600µm	----	1	%	11	9	16	12	13
+1180µm	----	1	%	2	3	5	3	7
+2.36mm	----	1	%	<1	<1	2	<1	5
+4.75mm	----	1	%	<1	<1	<1	<1	3
+9.5mm	----	1	%	<1	<1	<1	<1	<1
+19.0mm	----	1	%	<1	<1	<1	<1	<1
+37.5mm	----	1	%	<1	<1	<1	<1	<1
+75.0mm	----	1	%	<1	<1	<1	<1	<1
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	9.4	9.4	9.2	5.6	8.7
EA010: Conductivity								
Electrical Conductivity @ 25°C	----	1	µS/cm	470	1160	831	18	125
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	5.2	29.8	21.8	16.1	13.5
EA150: Soil Classification based on Particle Size								
Fines (<75 µm)	----	1	%	38	53	37	27	8
Sand (>75 µm)	----	1	%	62	46	61	72	87
Gravel (>2mm)	----	1	%	1	1	1	1	5
Cobbles (>6cm)	----	1	%	<1	<1	<1	<1	<1
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	4.9	7.4	25.7	9.8	1.2
Exchangeable Magnesium	----	0.1	meq/100g	6.0	7.4	11.4	4.8	1.6
Exchangeable Potassium	----	0.1	meq/100g	2.4	3.5	4.1	1.4	0.7
Exchangeable Sodium	----	0.1	meq/100g	15.6	34.9	21.4	<0.2	1.2
Exchangeable Aluminium	----	0.1	meq/100g	0.3	<0.2	<0.2	0.8	0.3
Exchangeable Sodium Percent	----	0.1	%	54.0	65.6	34.1	<0.2	26.0
Cation Exchange Capacity	----	0.1	meq/100g	28.9	53.2	62.6	16.0	4.7
ED021: Bicarbonate Extractable Potassium (Colwell)								
Bicarbonate Extractable K (Colwell)	----	10	mg/kg	290	410	340	<200	<200
ED092: DTPA Extractable Metals								
Copper	7440-50-8	1.00	mg/kg	<1.00	1.53	1.11	<1.00	<1.00

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(D1)_SOIL_S	NAR_WTP(D2)_SOIL_S	NAR_WTP(D3)_SOIL_S	NAR_WTP(D4)_SOIL_S	NAR_WTP(D5)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-036	EB1201577-037	EB1201577-038	EB1201577-039	EB1201577-040
ED092: DTPA Extractable Metals - Continued									
Iron	7439-89-6	1.00	mg/kg		**453**	**763**	**169**	**27.7**	**10.7**
Manganese	7439-96-5	1.00	mg/kg		**79.5**	**45.0**	**284**	**21.8**	**2.48**
Zinc	7440-66-6	1.00	mg/kg		<1.00	**1.06**	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		**110**	**150**	**120**	**40**	**10**
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg		<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**10**	**11**	**9**	**9**	**4**
Cobalt	7440-48-4	2	mg/kg		**3**	**4**	**3**	<2	<2
Copper	7440-50-8	5	mg/kg		<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg		<5	**5**	<5	<5	<5
Manganese	7439-96-5	5	mg/kg		**163**	**85**	**414**	**141**	**18**
Nickel	7440-02-0	2	mg/kg		**4**	**4**	**5**	**3**	<2
Strontium	7440-24-6	2	mg/kg		**10**	**15**	**22**	**9**	**2**
Vanadium	7440-62-2	5	mg/kg		**20**	**26**	**23**	**25**	**12**
Zinc	7440-66-6	5	mg/kg		<5	**7**	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride									
Fluoride	16984-48-8	1	mg/kg		**1**	**2**	**3**	<1	<1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg		**0.6**	<0.5	**3.6**	**2.1**	<0.1
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	20	mg/kg		**610**	**780**	**1030**	**610**	**60**
EK062: Total Nitrogen as N (TKN + NOx)									
^ **Total Nitrogen as N**	----	20	mg/kg		**610**	**780**	**1030**	**610**	**60**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	2	mg/kg		**112**	**130**	**157**	**99**	**44**
EK080: Bicarbonate Extractable Phosphorus (Colwell)									
Bicarbonate Ext. P (Colwell)	----	2	mg/kg		**2**	**3**	**3**	<2	<2
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%		**1.17**	**1.94**	**3.47**	**1.26**	**0.31**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(D1)_SOIL_S	NAR_WTP(D2)_SOIL_S	NAR_WTP(D3)_SOIL_S	NAR_WTP(D4)_SOIL_S	NAR_WTP(D5)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-036	EB1201577-037	EB1201577-038	EB1201577-039	EB1201577-040
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	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ Sum of polycyclic aromatic hydrocarbons	----	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		**140**	**140**	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	**100**	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		**140**	**140**	**100**	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	**50**	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		**190**	**210**	**160**	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		**190**	**210**	**210**	<50	<50
EP080: BTEXN									
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

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(D1)_SOIL_S	NAR_WTP(D2)_SOIL_S	NAR_WTP(D3)_SOIL_S	NAR_WTP(D4)_SOIL_S	NAR_WTP(D5)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201577-036	EB1201577-037	EB1201577-038	EB1201577-039	EB1201577-040
EP080: BTEXN - Continued									
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**93.6**	**130**	**82.9**	**92.5**	**103**
2-Chlorophenol-D4	93951-73-6	0.1	%		**98.9**	**122**	**89.8**	**99.5**	**103**
2.4.6-Tribromophenol	118-79-6	0.1	%		**83.3**	**146**	**79.0**	**86.5**	**83.5**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**90.5**	**133**	**80.0**	**87.6**	**94.6**
Anthracene-d10	1719-06-8	0.1	%		**92.5**	**115**	**85.1**	**91.0**	**73.0**
4-Terphenyl-d14	1718-51-0	0.1	%		**106**	**133**	**98.0**	**110**	**96.1**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**102**	**82.9**	**91.2**	**92.6**	**79.3**
Toluene-D8	2037-26-5	0.1	%		**124**	**119**	**116**	**119**	**116**
4-Bromofluorobenzene	460-00-4	0.1	%		**114**	**106**	**108**	**112**	**113**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(D6)_SOIL_S	----	----	----	----
				Client sampling date / time: 15-JAN-2012 15:00	----	----	----	----
				EB1201577-041	----	----	----	----
EA150: Particle Sizing								
+75µm	----	1	%	**89**	----	----	----	----
+150µm	----	1	%	**76**	----	----	----	----
+300µm	----	1	%	**31**	----	----	----	----
+425µm	----	1	%	**15**	----	----	----	----
+600µm	----	1	%	**7**	----	----	----	----
+1180µm	----	1	%	**2**	----	----	----	----
+2.36mm	----	1	%	<1	----	----	----	----
+4.75mm	----	1	%	<1	----	----	----	----
+9.5mm	----	1	%	<1	----	----	----	----
+19.0mm	----	1	%	<1	----	----	----	----
+37.5mm	----	1	%	<1	----	----	----	----
+75.0mm	----	1	%	<1	----	----	----	----
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	**5.8**	----	----	----	----
EA010: Conductivity								
Electrical Conductivity @ 25°C	----	1	µS/cm	**13**	----	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**13.1**	----	----	----	----
EA150: Soil Classification based on Particle Size								
Fines (<75 µm)	----	1	%	**11**	----	----	----	----
Sand (>75 µm)	----	1	%	**89**	----	----	----	----
Gravel (>2mm)	----	1	%	<1	----	----	----	----
Cobbles (>6cm)	----	1	%	<1	----	----	----	----
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	**4.7**	----	----	----	----
Exchangeable Magnesium	----	0.1	meq/100g	**2.2**	----	----	----	----
Exchangeable Potassium	----	0.1	meq/100g	**1.0**	----	----	----	----
Exchangeable Sodium	----	0.1	meq/100g	<0.2	----	----	----	----
Exchangeable Aluminium	----	0.1	meq/100g	<0.2	----	----	----	----
Exchangeable Sodium Percent	----	0.1	%	<0.2	----	----	----	----
Cation Exchange Capacity	----	0.1	meq/100g	**7.9**	----	----	----	----
ED021: Bicarbonate Extractable Potassium (Colwell)								
Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<120	----	----	----	----
ED092: DTPA Extractable Metals								
Copper	7440-50-8	1.00	mg/kg	<1.00	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(D6)_SOIL_S	----	----	----	----
				Client sampling date / time: 15-JAN-2012 15:00	----	----	----	----
				EB1201577-041	----	----	----	----
ED092: DTPA Extractable Metals - Continued								
Iron	7439-89-6	1.00	mg/kg	**32.7**	----	----	----	----
Manganese	7439-96-5	1.00	mg/kg	**4.07**	----	----	----	----
Zinc	7440-66-6	1.00	mg/kg	<1.00	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Barium	7440-39-3	10	mg/kg	**20**	----	----	----	----
Beryllium	7440-41-7	1	mg/kg	<1	----	----	----	----
Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	**3**	----	----	----	----
Cobalt	7440-48-4	2	mg/kg	**2**	----	----	----	----
Copper	7440-50-8	5	mg/kg	<5	----	----	----	----
Lead	7439-92-1	5	mg/kg	<5	----	----	----	----
Manganese	7439-96-5	5	mg/kg	**68**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	<2	----	----	----	----
Strontium	7440-24-6	2	mg/kg	**5**	----	----	----	----
Vanadium	7440-62-2	5	mg/kg	**12**	----	----	----	----
Zinc	7440-66-6	5	mg/kg	<5	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EK040: Fluoride								
Fluoride	16984-48-8	1	mg/kg	<1	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	**1.4**	----	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	**240**	----	----	----	----
EK062: Total Nitrogen as N (TKN + NOx)								
^ **Total Nitrogen as N**	----	20	mg/kg	**240**	----	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	**58**	----	----	----	----
EK080: Bicarbonate Extractable Phosphorus (Colwell)								
Bicarbonate Ext. P (Colwell)	----	2	mg/kg	**2**	----	----	----	----
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	**0.63**	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(D6)_SOIL_S	----	----	----	----
				Client sampling date / time: 15-JAN-2012 15:00	----	----	----	----
				EB1201577-041	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	----	10	mg/kg	<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(D6)_SOIL_S	----	----	----	----
				Client sampling date / time: 15-JAN-2012 15:00	----	----	----	----
				EB1201577-041	----	----	----	----
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	----	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**74.6**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**90.8**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**83.2**	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**104**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%	**67.4**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**95.8**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**88.5**	----	----	----	----
Toluene-D8	2037-26-5	0.1	%	**92.0**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	**88.2**	----	----	----	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID: Rinsate_13/1/12	Rinsate_14/1/12	Rinsate_15/1/13	----	----
				Client sampling date / time: 13-JAN-2012 15:00	14-JAN-2012 15:00	15-JAN-2012 15:00	----	----
				EB1201577-042	EB1201577-043	EB1201577-044	----	----
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	**0.001**	<0.001	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	**0.505**	<0.005	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	<1.0	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	µg/L	<0.5	<0.5	<0.5	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	----	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	----	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L	<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	20	µg/L	<20	<20	<20	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	----	20	µg/L	<20	<20	<20	----	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID: Rinsate_13/1/12	Rinsate_14/1/12	Rinsate_15/1/13	----	----
				Client sampling date / time: 13-JAN-2012 15:00	14-JAN-2012 15:00	15-JAN-2012 15:00	----	----
				EB1201577-042	EB1201577-043	EB1201577-044	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft - Continued								
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L	<100	<100	<100	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	----	----
Toluene	108-88-3	2	µg/L	<2	<2	<2	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	----	----
^ **Total Xylenes**	1330-20-7	2	µg/L	<2	<2	<2	----	----
^ **Sum of BTEX**	----	1	µg/L	<1	<1	<1	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**26.8**	**24.5**	**23.6**	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**65.1**	**60.8**	**63.0**	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**69.6**	**67.5**	**68.6**	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**93.6**	**91.2**	**85.8**	----	----
Anthracene-d10	1719-06-8	0.1	%	**90.7**	**90.9**	**90.7**	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**96.9**	**96.5**	**90.1**	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**90.2**	**89.0**	**95.6**	----	----
Toluene-D8	2037-26-5	0.1	%	**82.0**	**87.6**	**83.0**	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	**86.1**	**87.0**	**86.8**	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
SAMP02: Observations (performed by external sampler)		
SAMP-02: Dominant Horizon	NAR_WTP(6A)_SOIL_S - 14-JAN-2012 15:00	0
SAMP-02: Dominant Horizon	NAR_WTP(6B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(6C)_SOIL_S - 14-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(7A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(7B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(7C)_SOIL_S - 14-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(8A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(8B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(8C)_SOIL_S - 14-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(9A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(9B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(9C)_SOIL_S - 14-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(10A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(10B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(10C)_SOIL_S - 14-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(11A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(11B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(11C)_SOIL_S - 14-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(12A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(12B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(13A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(13B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(14A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(14B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(15A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(15B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(16A)_SOIL_S - 15-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(16B)_SOIL_S - 15-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(17A)_SOIL_S - 15-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(17B)_SOIL_S - 15-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(17C)_SOIL_S - 15-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(18A)_SOIL_S - 15-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(18B)_SOIL_S - 15-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(19A)_SOIL_S - 15-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(19B)_SOIL_S - 15-JAN-2012 15:00	A
SAMP-02: Sampling Method	NAR_WTP(6A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(6B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(6C)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(7A)_SOIL_S - 14-JAN-2012 15:00	H Auger

Sub-Matrix: **SOIL**

Method: Compound	*Client sample ID - Client sampling date / time*	*Analytical Results*
SAMP-02: Sampling Method	NAR_WTP(7B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(7C)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(8A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(8B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(8C)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(9A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(9B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(9C)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(10A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(10B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(10C)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(11A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(11B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(11C)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(12A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(12B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(13A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(13B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(14A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(14B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(15A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(15B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(16A)_SOIL_S - 15-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(16B)_SOIL_S - 15-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(17A)_SOIL_S - 15-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(17B)_SOIL_S - 15-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(17C)_SOIL_S - 15-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(18A)_SOIL_S - 15-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(18B)_SOIL_S - 15-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(19A)_SOIL_S - 15-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(19B)_SOIL_S - 15-JAN-2012 15:00	H Auger
SAMP-02: Colour	NAR_WTP(6A)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(6B)_SOIL_S - 14-JAN-2012 15:00	Orange
SAMP-02: Colour	NAR_WTP(6C)_SOIL_S - 14-JAN-2012 15:00	Orange
SAMP-02: Colour	NAR_WTP(7A)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(7B)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(7C)_SOIL_S - 14-JAN-2012 15:00	Orange
SAMP-02: Colour	NAR_WTP(8A)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(8B)_SOIL_S - 14-JAN-2012 15:00	Orange
SAMP-02: Colour	NAR_WTP(8C)_SOIL_S - 14-JAN-2012 15:00	Orange
SAMP-02: Colour	NAR_WTP(9A)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(9B)_SOIL_S - 14-JAN-2012 15:00	Brown

Sub-Matrix: **SOIL**

Method: Compound	*Client sample ID - Client sampling date / time*	*Analytical Results*
SAMP-02: Colour	NAR_WTP(9C)_SOIL_S - 14-JAN-2012 15:00	Orange
SAMP-02: Colour	NAR_WTP(10A)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(10B)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(10C)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(11A)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(11B)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(11C)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(12A)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(12B)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(13A)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(13B)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(14A)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(14B)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(15A)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(15B)_SOIL_S - 14-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(16A)_SOIL_S - 15-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(16B)_SOIL_S - 15-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(17A)_SOIL_S - 15-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(17B)_SOIL_S - 15-JAN-2012 15:00	Grey
SAMP-02: Colour	NAR_WTP(17C)_SOIL_S - 15-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(18A)_SOIL_S - 15-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(18B)_SOIL_S - 15-JAN-2012 15:00	Orange
SAMP-02: Colour	NAR_WTP(19A)_SOIL_S - 15-JAN-2012 15:00	Orange
SAMP-02: Colour	NAR_WTP(19B)_SOIL_S - 15-JAN-2012 15:00	Orange
SAMP-02: Moisture	NAR_WTP(6A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(6B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(6C)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(7A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(7B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(7C)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(8A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(8B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(8C)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(9A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(9B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(9C)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(10A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(10B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(10C)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(11A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(11B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(11C)_SOIL_S - 14-JAN-2012 15:00	DRY

Sub-Matrix: **SOIL**

Method: Compound	*Client sample ID - Client sampling date / time*	*Analytical Results*
SAMP-02: Moisture	NAR_WTP(12A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(12B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(13A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(13B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(14A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(14B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(15A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(15B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(16A)_SOIL_S - 15-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(16B)_SOIL_S - 15-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(17A)_SOIL_S - 15-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(17B)_SOIL_S - 15-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(17C)_SOIL_S - 15-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(18A)_SOIL_S - 15-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(18B)_SOIL_S - 15-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(19A)_SOIL_S - 15-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(19B)_SOIL_S - 15-JAN-2012 15:00	MOIST
SAMP-02: Odour	NAR_WTP(6A)_SOIL_S - 14-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(6B)_SOIL_S - 14-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(6C)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(7A)_SOIL_S - 14-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(7B)_SOIL_S - 14-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(7C)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(8A)_SOIL_S - 14-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(8B)_SOIL_S - 14-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(8C)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(9A)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(9B)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(9C)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(10A)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(10B)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(10C)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(11A)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(11B)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(11C)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(12A)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(12B)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(13A)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(13B)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(14A)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(14B)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(15A)_SOIL_S - 14-JAN-2012 15:00	NONE

Sub-Matrix: **SOIL**

Method: Compound	*Client sample ID - Client sampling date / time*	*Analytical Results*
SAMP-02: Odour	NAR_WTP(15B)_SOIL_S - 14-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(16A)_SOIL_S - 15-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(16B)_SOIL_S - 15-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(17A)_SOIL_S - 15-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(17B)_SOIL_S - 15-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(17C)_SOIL_S - 15-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(18A)_SOIL_S - 15-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(18B)_SOIL_S - 15-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(19A)_SOIL_S - 15-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(19B)_SOIL_S - 15-JAN-2012 15:00	NONE

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	34.8	154.5
2-Chlorophenol-D4	93951-73-6	41.9	152.8
2.4.6-Tribromophenol	118-79-6	26.0	156.8
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	33.8	156.5
Anthracene-d10	1719-06-8	36.9	153.1
4-Terphenyl-d14	1718-51-0	41.8	172.2
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	52.7	133.7
Toluene-D8	2037-26-5	60.3	131.1
4-Bromofluorobenzene	460-00-4	59.2	126.6

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10.0	71.9
2-Chlorophenol-D4	93951-73-6	26.8	130.2
2.4.6-Tribromophenol	118-79-6	19.3	180.8
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	13.9	146.1
Anthracene-d10	1719-06-8	34.6	137.4
4-Terphenyl-d14	1718-51-0	36.2	154.2
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	70	130
Toluene-D8	2037-26-5	70	130
4-Bromofluorobenzene	460-00-4	70	130

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

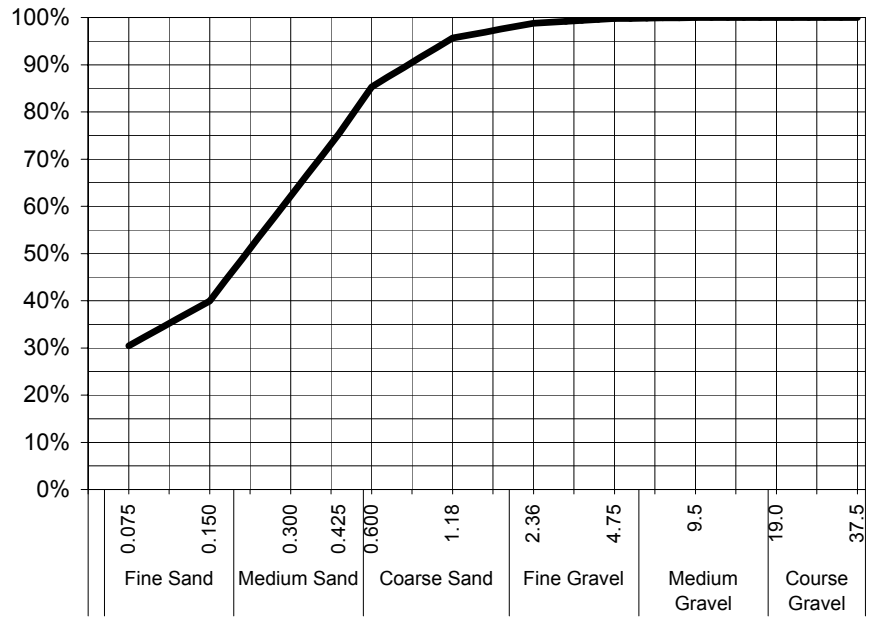
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-001 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(6A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	96%
0.600	85%
0.425	75%
0.300	62%
0.150	40%
0.075	30%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006. Typical sediment SPD values used for calculations*

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

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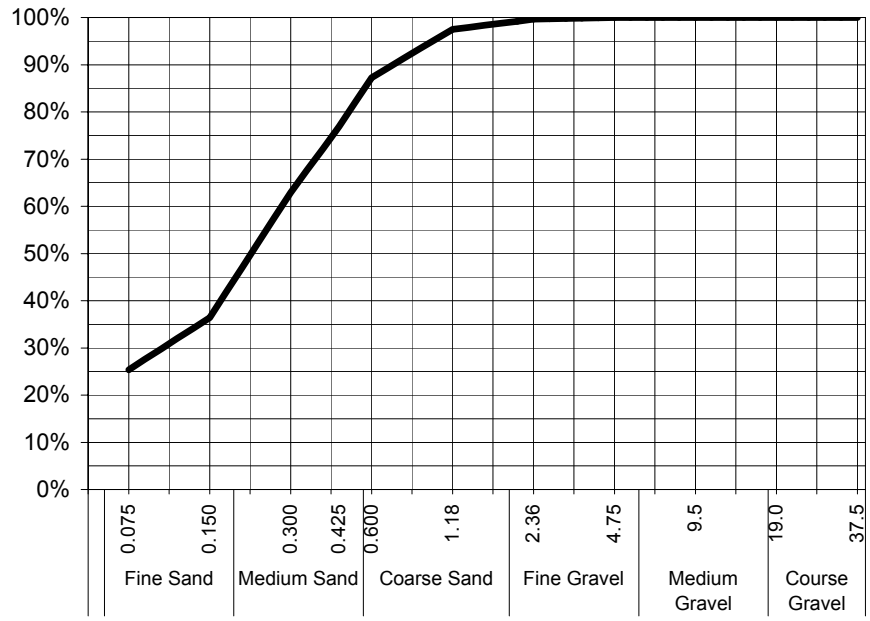
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-002 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(6B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	97%
0.600	87%
0.425	77%
0.300	63%
0.150	36%
0.075	25%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006. Typical sediment SPD values used for calculations*

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

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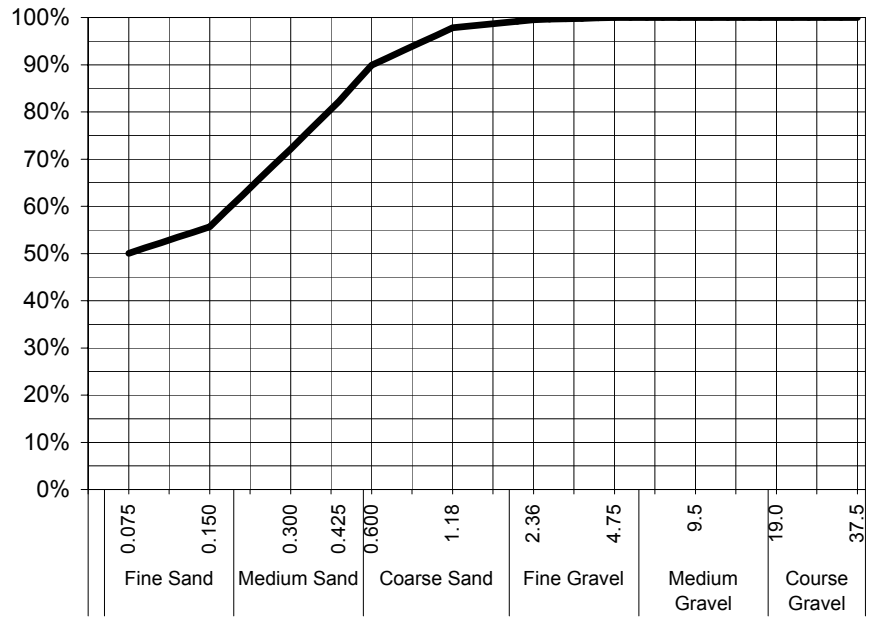
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-003 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(6C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	90%
0.425	82%
0.300	72%
0.150	56%
0.075	50%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

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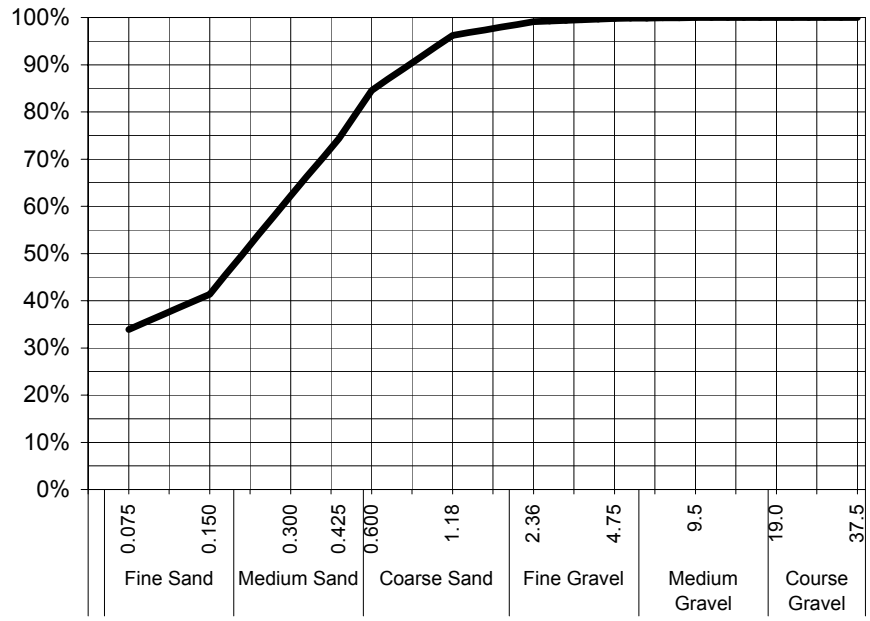
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-004 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(7A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	96%
0.600	85%
0.425	74%
0.300	62%
0.150	41%
0.075	34%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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COMPANY: Santos Ltd

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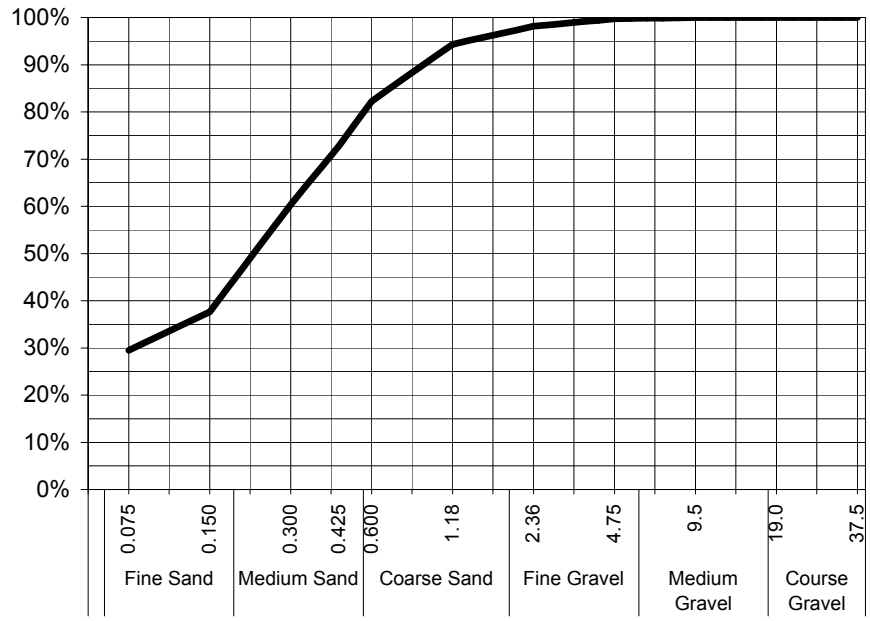
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-005 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(7B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	98%
1.18	94%
0.600	82%
0.425	73%
0.300	60%
0.150	38%
0.075	30%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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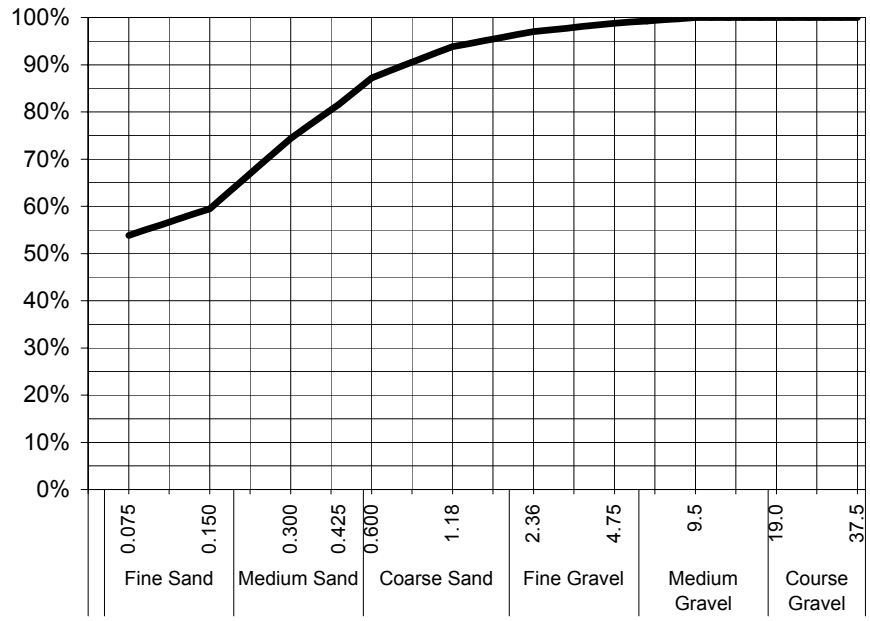
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-006 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(7C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	97%
1.18	94%
0.600	87%
0.425	82%
0.300	74%
0.150	59%
0.075	54%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

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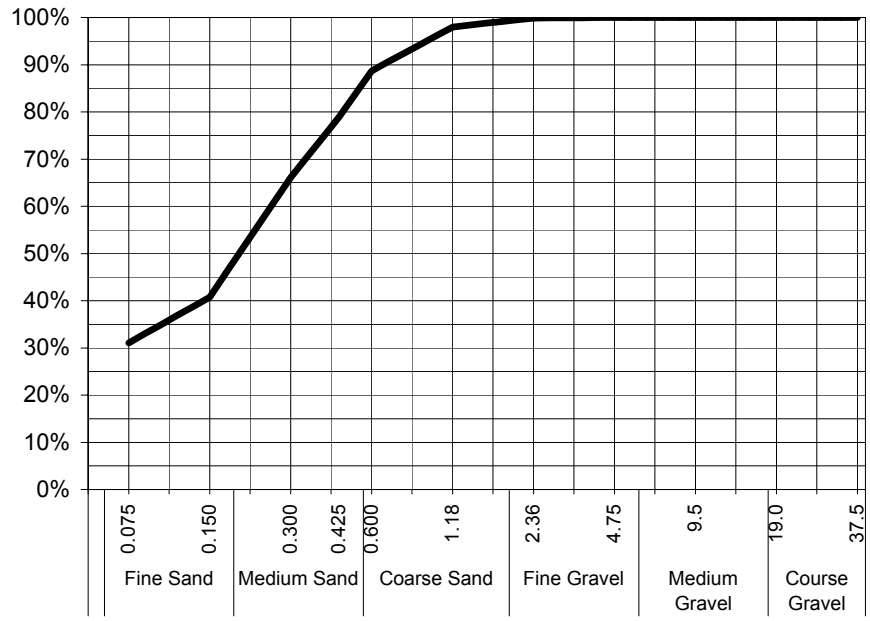
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-007 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(8A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	89%
0.425	79%
0.300	66%
0.150	41%
0.075	31%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

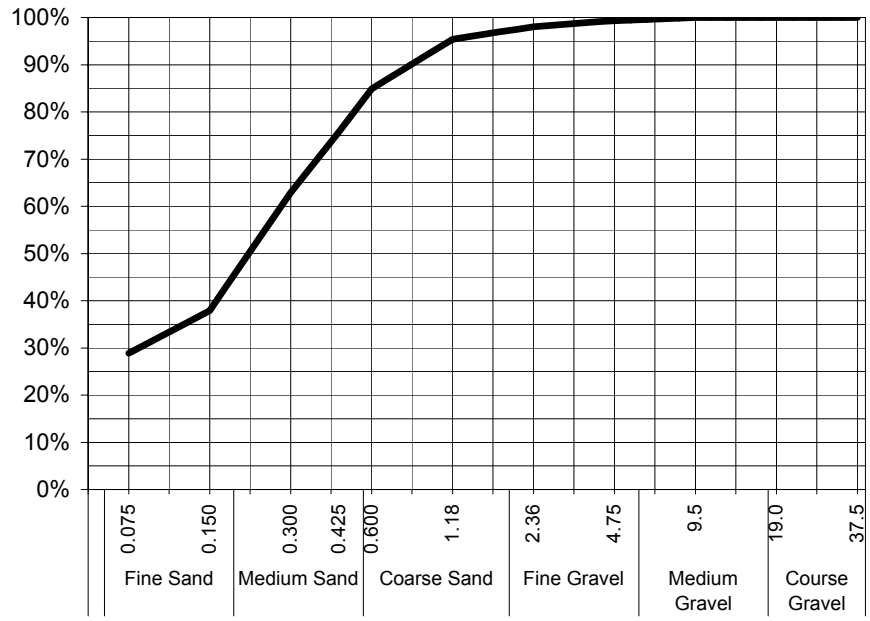
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-008 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(8B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	98%
1.18	95%
0.600	85%
0.425	76%
0.300	63%
0.150	38%
0.075	29%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

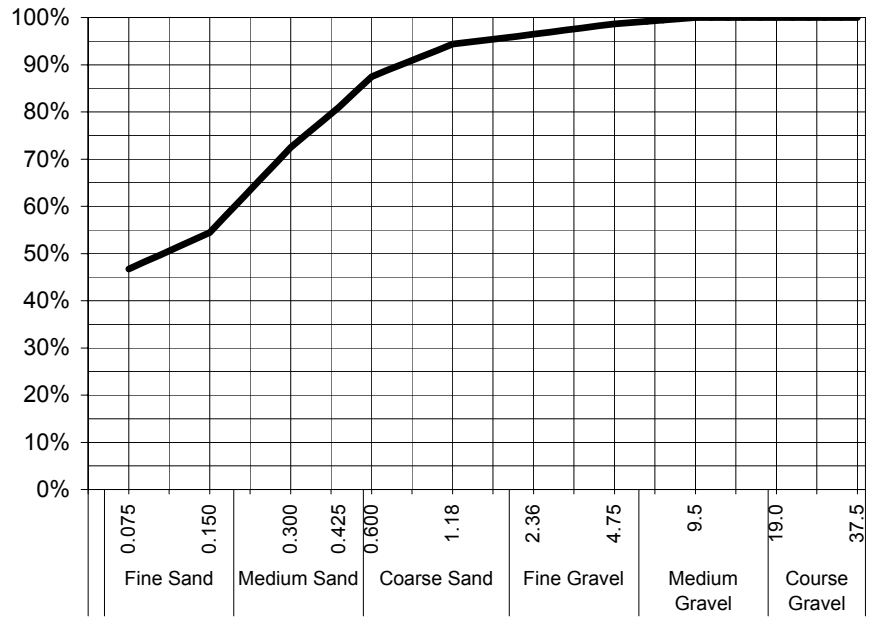
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-009 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(8C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	96%
1.18	94%
0.600	87%
0.425	81%
0.300	72%
0.150	54%
0.075	47%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.075

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

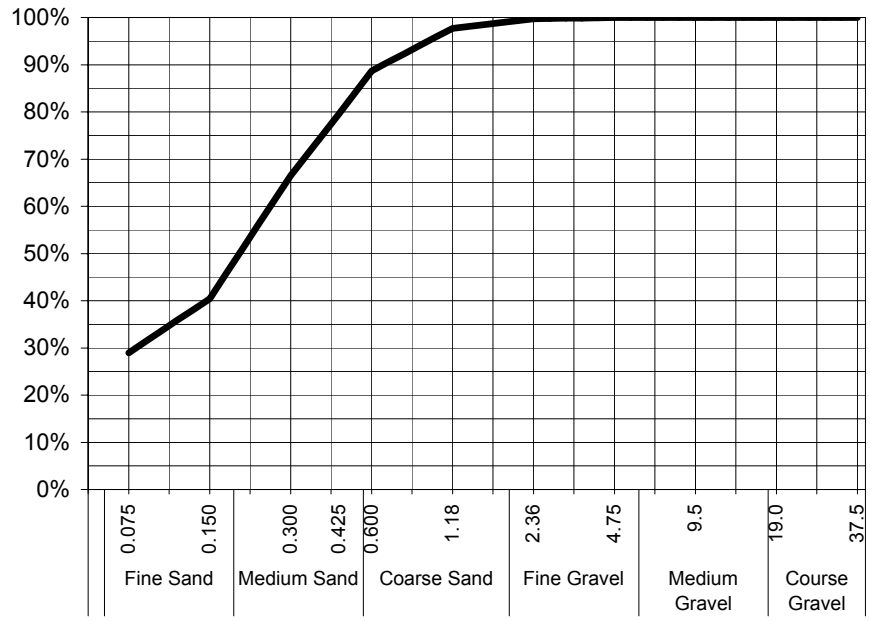
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-010 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(9A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	89%
0.425	80%
0.300	67%
0.150	40%
0.075	29%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

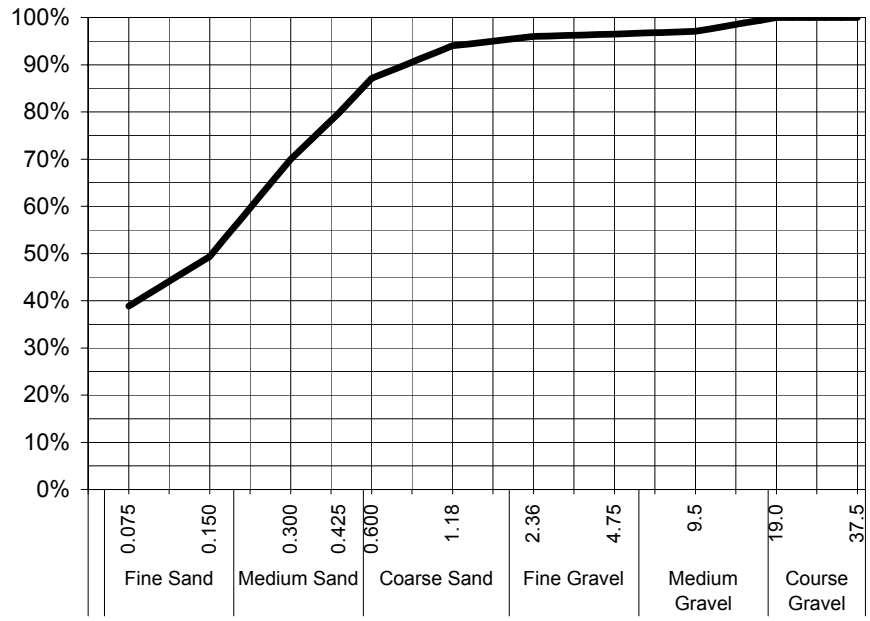
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-011 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(9B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	97%
4.75	97%
2.36	96%
1.18	94%
0.600	87%
0.425	80%
0.300	70%
0.150	49%
0.075	39%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

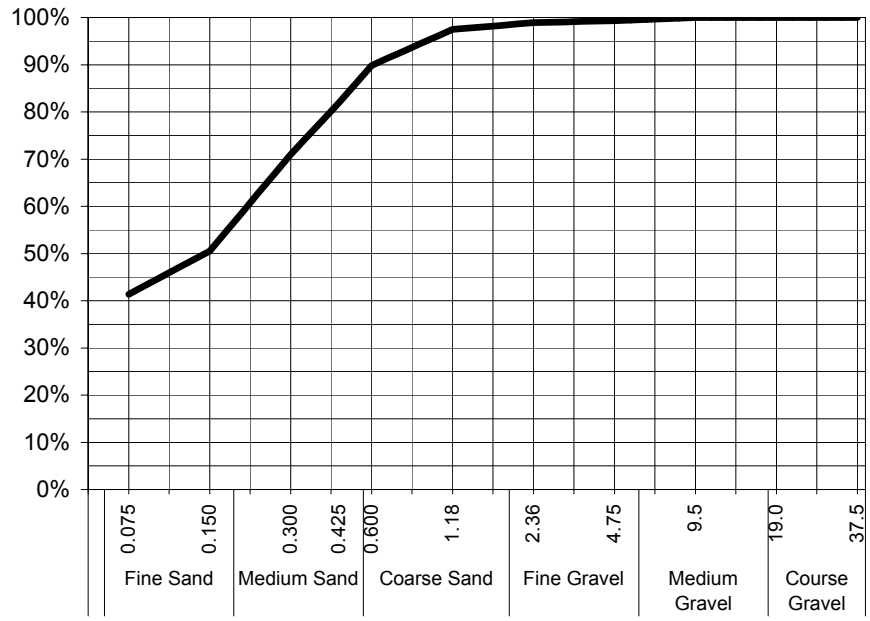
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-012 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(9C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	99%
1.18	97%
0.600	90%
0.425	82%
0.300	71%
0.150	50%
0.075	41%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006. Typical sediment SPD values used for calculations*

Median Particle Size (mm)	0.113

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

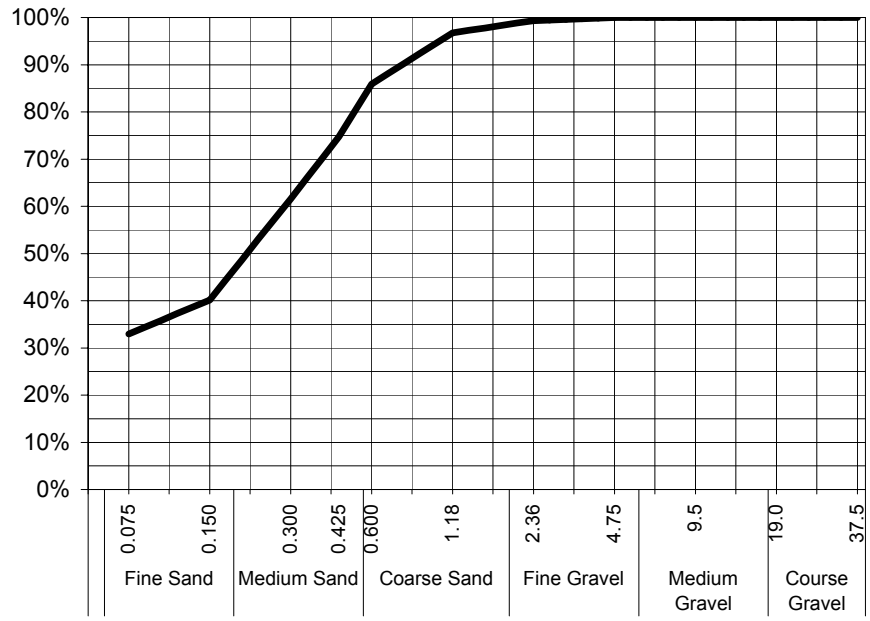
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-013 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(10A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	97%
0.600	86%
0.425	75%
0.300	62%
0.150	40%
0.075	33%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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DATE RECEIVED: 19-Jan-2012

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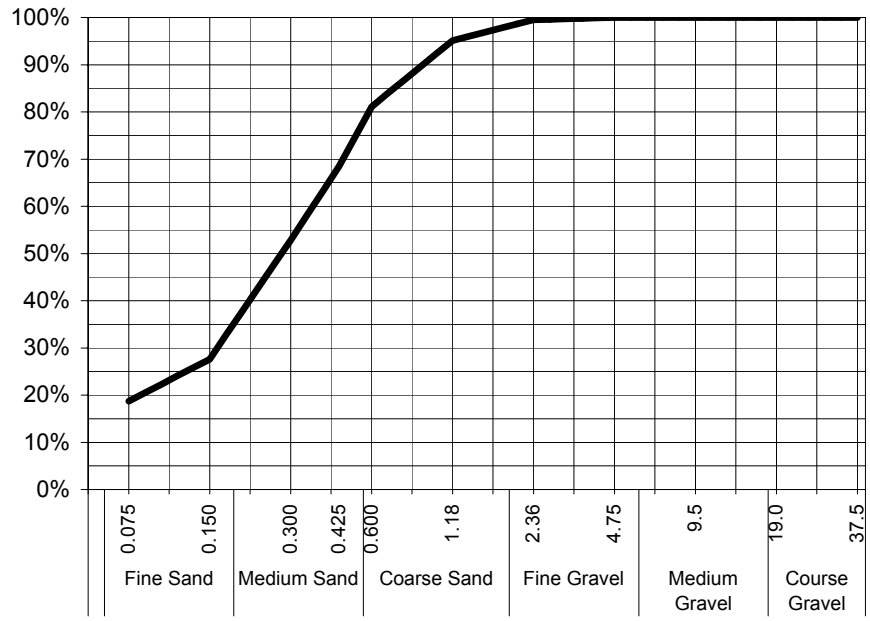
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-014 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(10B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	95%
0.600	81%
0.425	68%
0.300	53%
0.150	28%
0.075	19%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.225

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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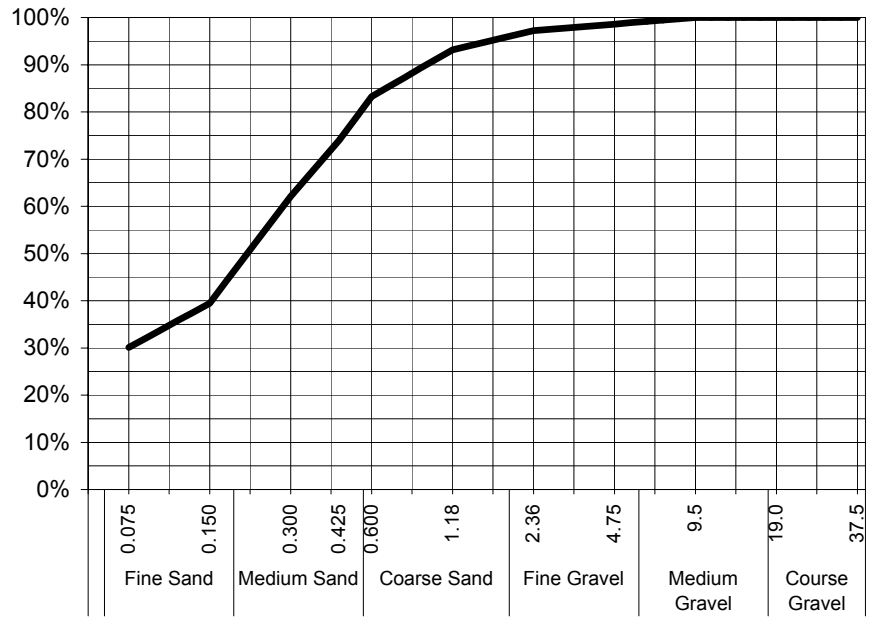
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-015 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(10C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	97%
1.18	93%
0.600	83%
0.425	74%
0.300	62%
0.150	39%
0.075	30%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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COMPANY: Santos Ltd

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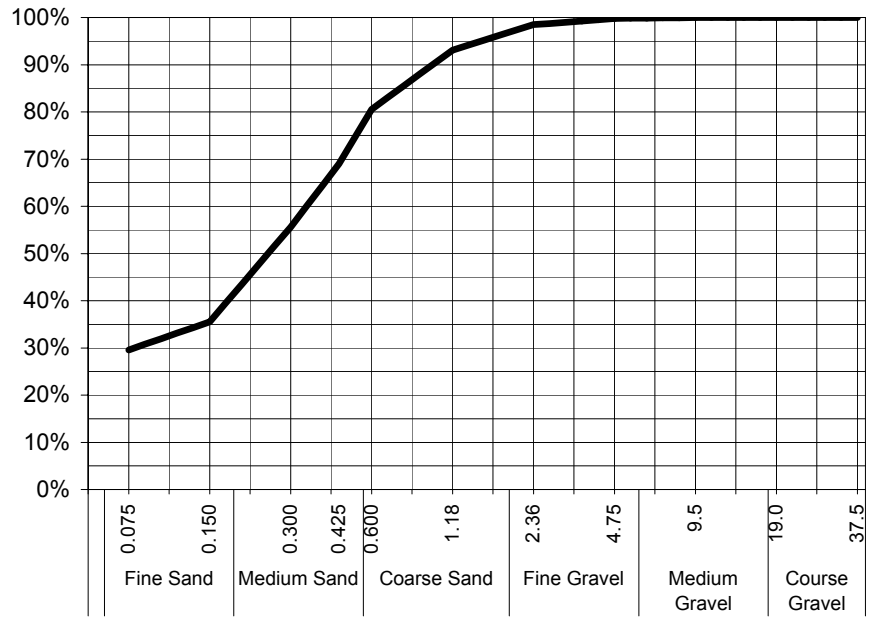
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-016 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(11A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	98%
1.18	93%
0.600	81%
0.425	69%
0.300	56%
0.150	36%
0.075	30%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006. Typical sediment SPD values used for calculations*

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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COMPANY: Santos Ltd

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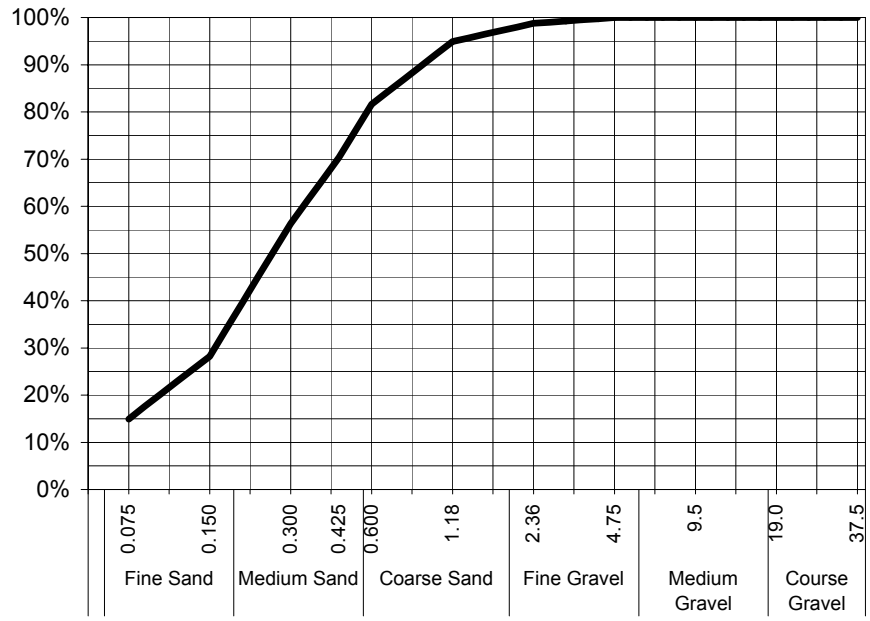
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-017 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(11B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	95%
0.600	82%
0.425	70%
0.300	56%
0.150	28%
0.075	15%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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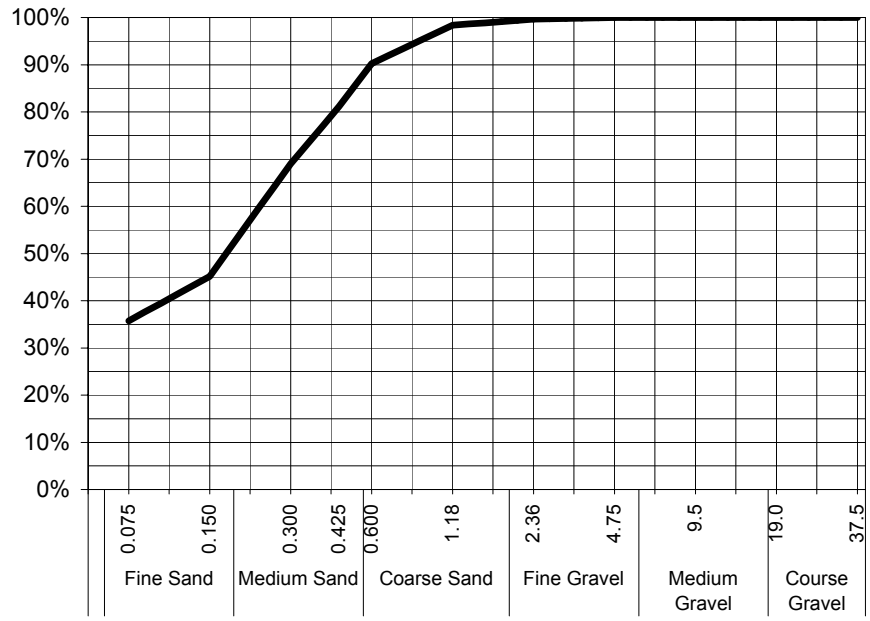
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-018 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(11C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	90%
0.425	81%
0.300	69%
0.150	45%
0.075	36%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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COMPANY: Santos Ltd

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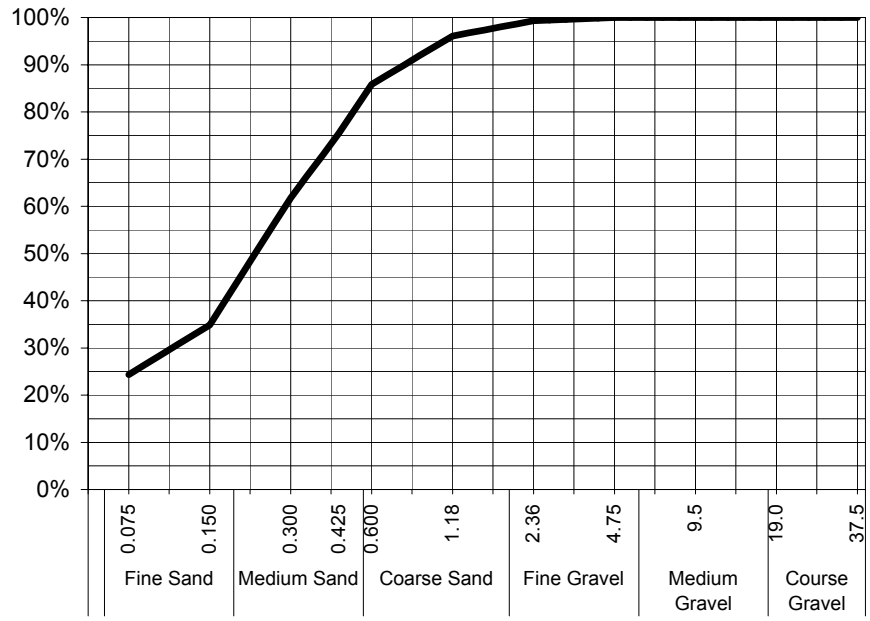
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-019 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(12A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	96%
0.600	86%
0.425	76%
0.300	62%
0.150	35%
0.075	24%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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Level 22, 32 Turbot Street,
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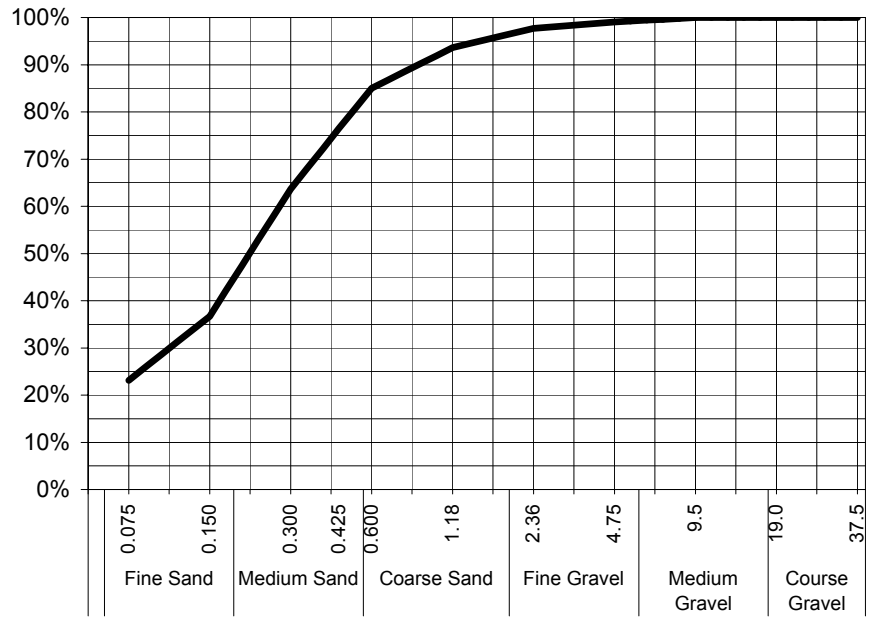
REPORT NO: EB1201577-020 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(12B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	98%
1.18	94%
0.600	85%
0.425	77%
0.300	64%
0.150	37%
0.075	23%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

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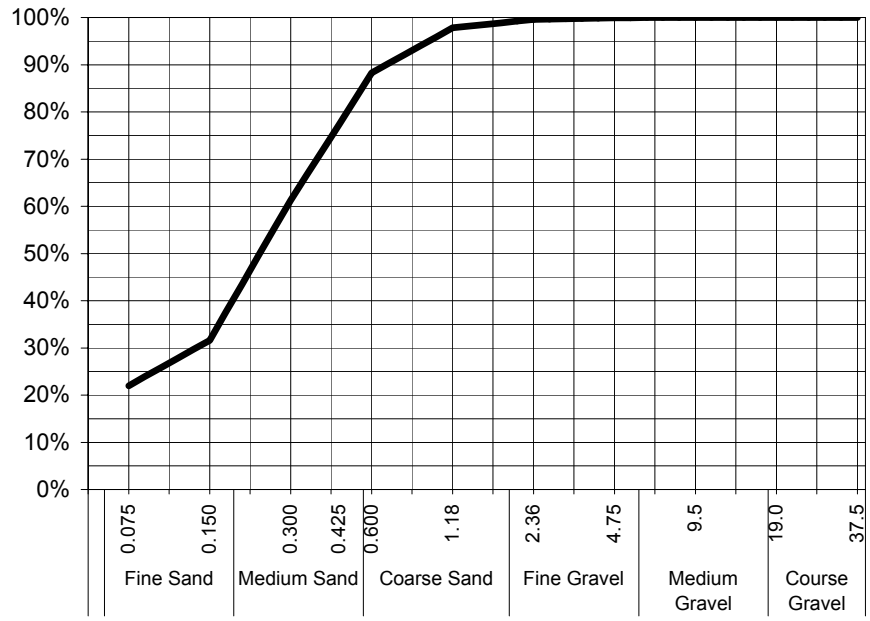
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-021 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(13A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	88%
0.425	77%
0.300	61%
0.150	32%
0.075	22%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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Level 22, 32 Turbot Street,
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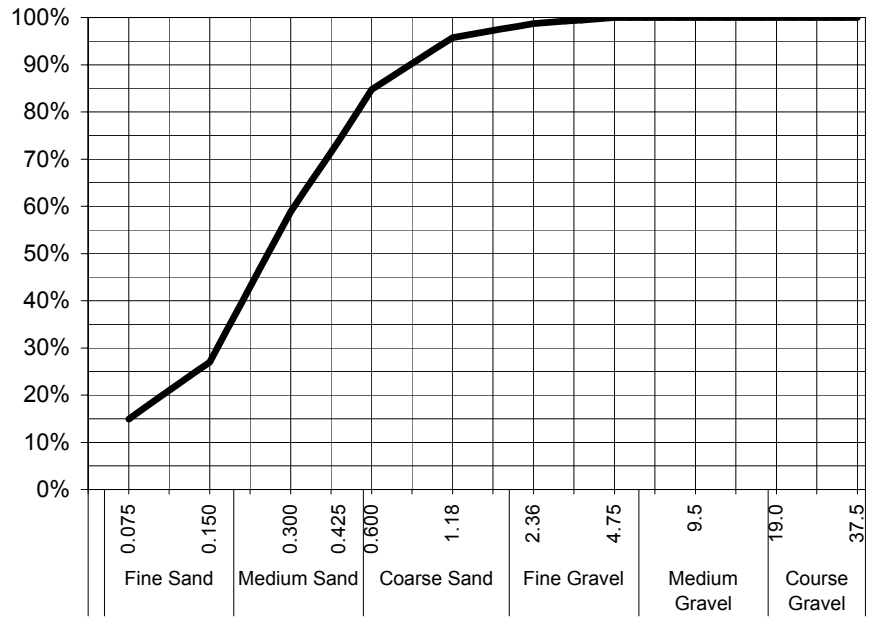
REPORT NO: EB1201577-022 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(13B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	96%
0.600	85%
0.425	74%
0.300	59%
0.150	27%
0.075	15%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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Level 22, 32 Turbot Street,
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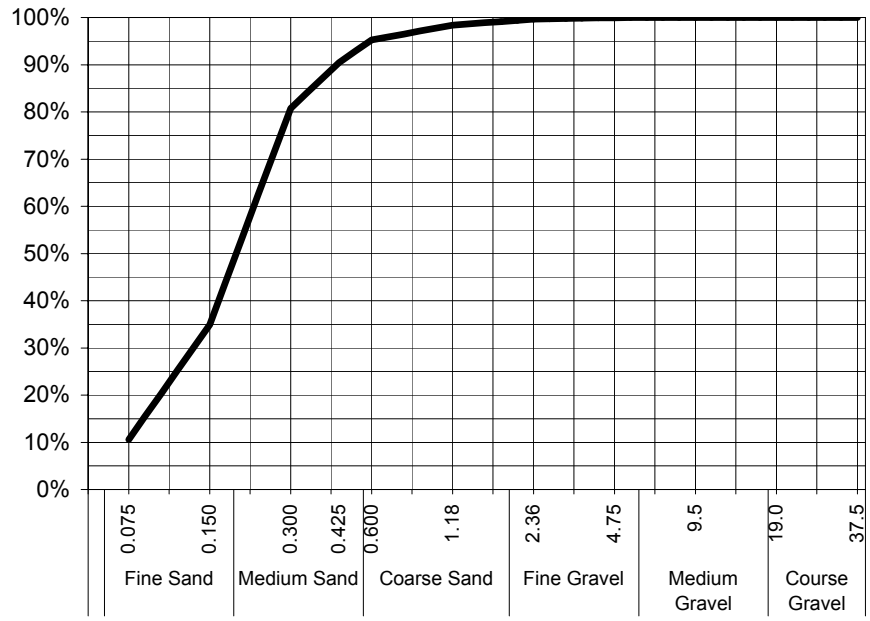
REPORT NO: EB1201577-023 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(14A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	95%
0.425	90%
0.300	81%
0.150	35%
0.075	11%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

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Level 22, 32 Turbot Street,
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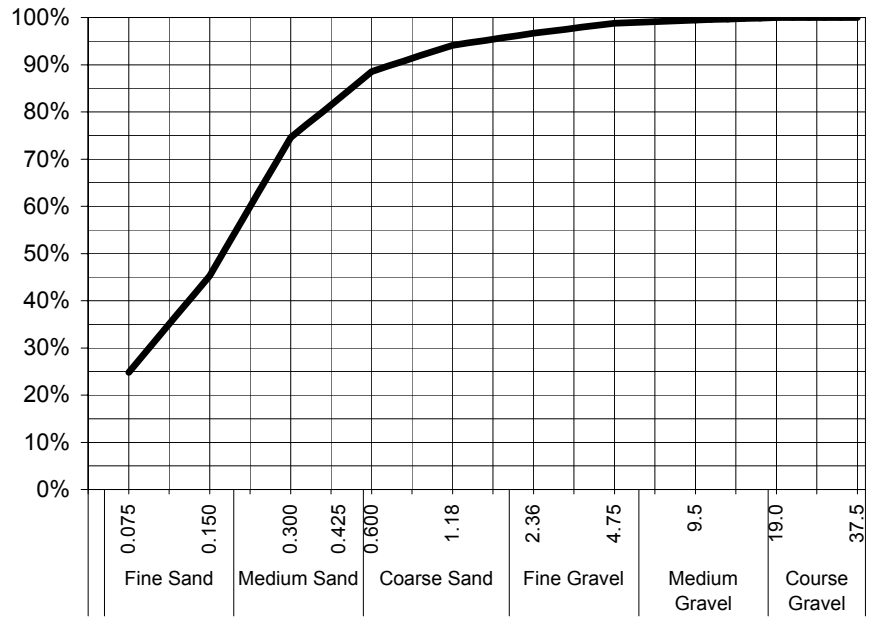
REPORT NO: EB1201577-024 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(14B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	99%
4.75	99%
2.36	97%
1.18	94%
0.600	89%
0.425	83%
0.300	75%
0.150	45%
0.075	25%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

ADDRESS: GPO Box 1010
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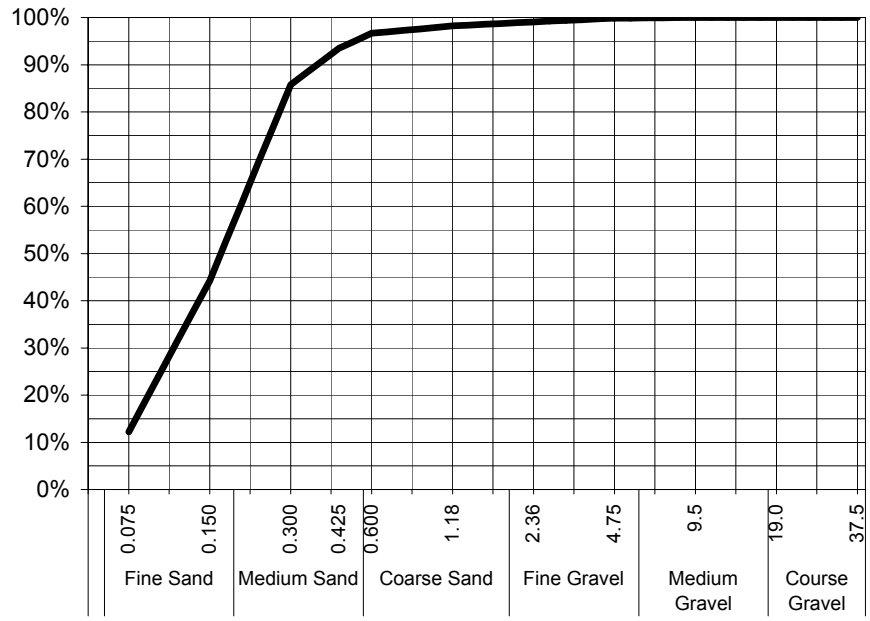
Brisbane, Qld 4001

REPORT NO: EB1201577-025 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(15A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	98%
0.600	97%
0.425	93%
0.300	86%
0.150	44%
0.075	12%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

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Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

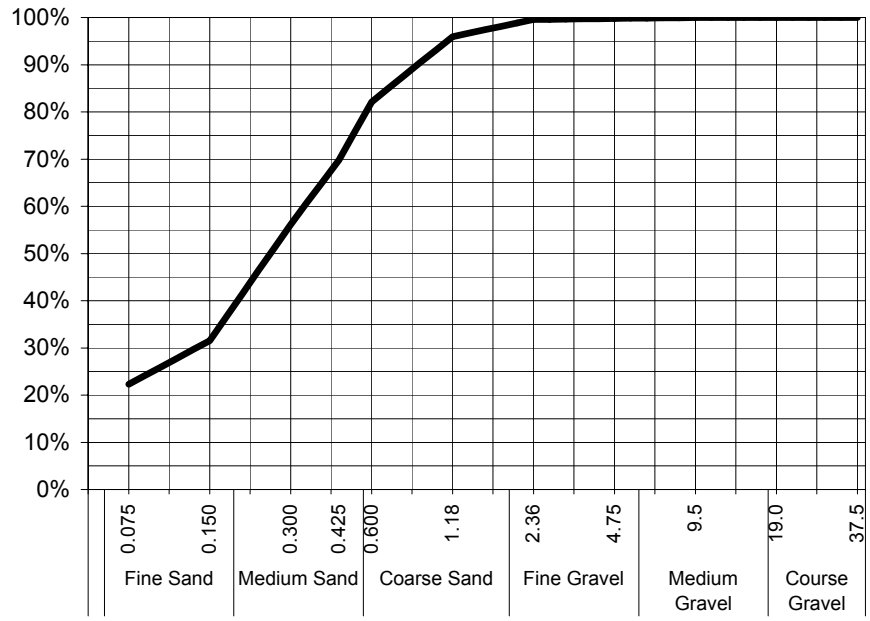
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-026 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(15B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	96%
0.600	82%
0.425	70%
0.300	56%
0.150	31%
0.075	22%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

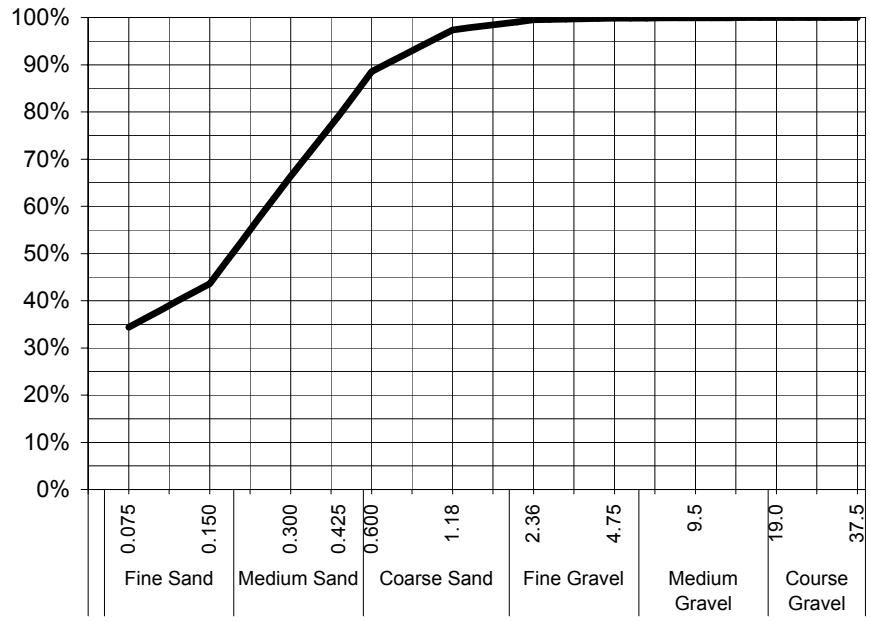
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-027 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(16A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	97%
0.600	89%
0.425	79%
0.300	66%
0.150	44%
0.075	34%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

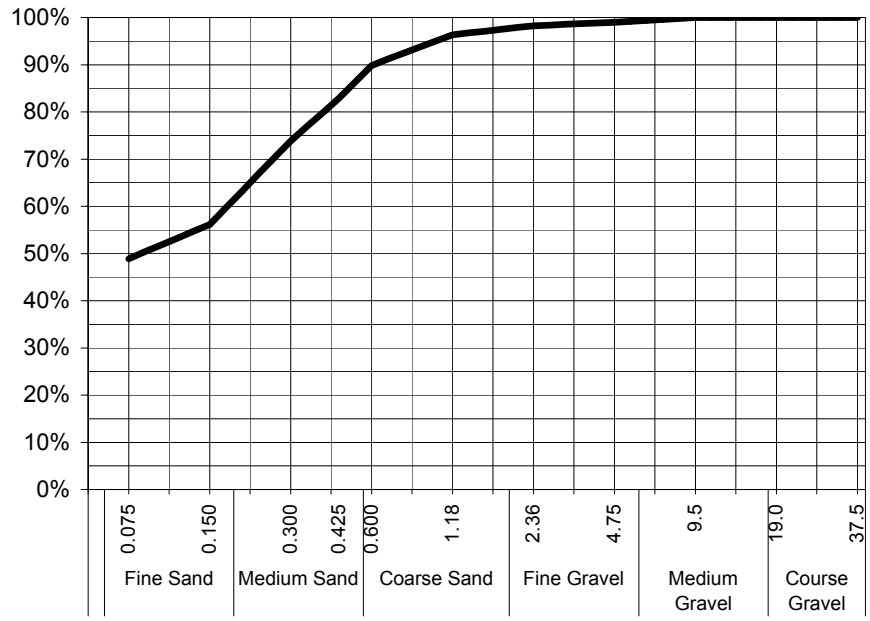
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-028 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(16B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	98%
1.18	96%
0.600	90%
0.425	83%
0.300	74%
0.150	56%
0.075	49%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.075

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

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Newcastle, NSW

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COMPANY: Santos Ltd

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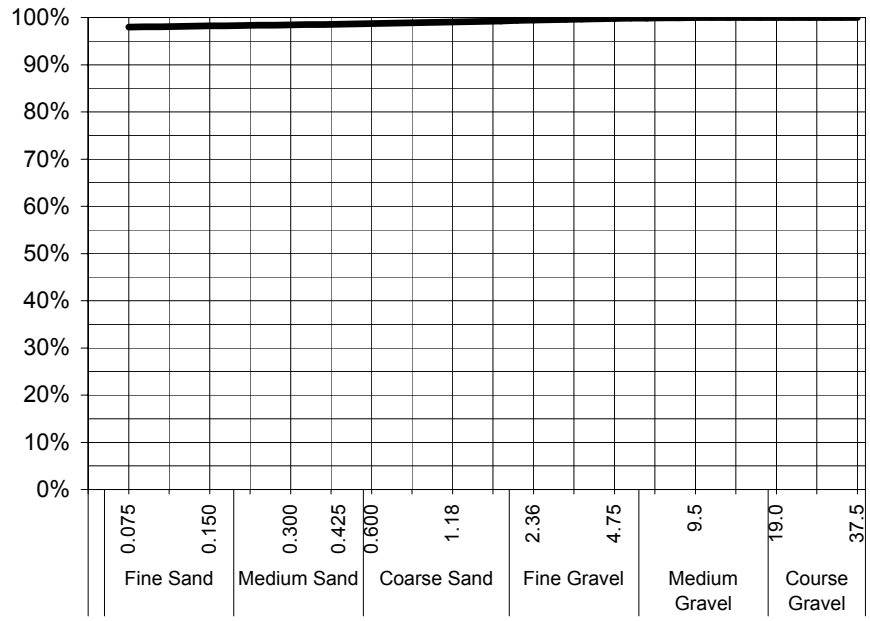
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-029 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(17A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	99%
0.600	99%
0.425	99%
0.300	98%
0.150	98%
0.075	98%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines and vegetation

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

ADDRESS: GPO Box 1010
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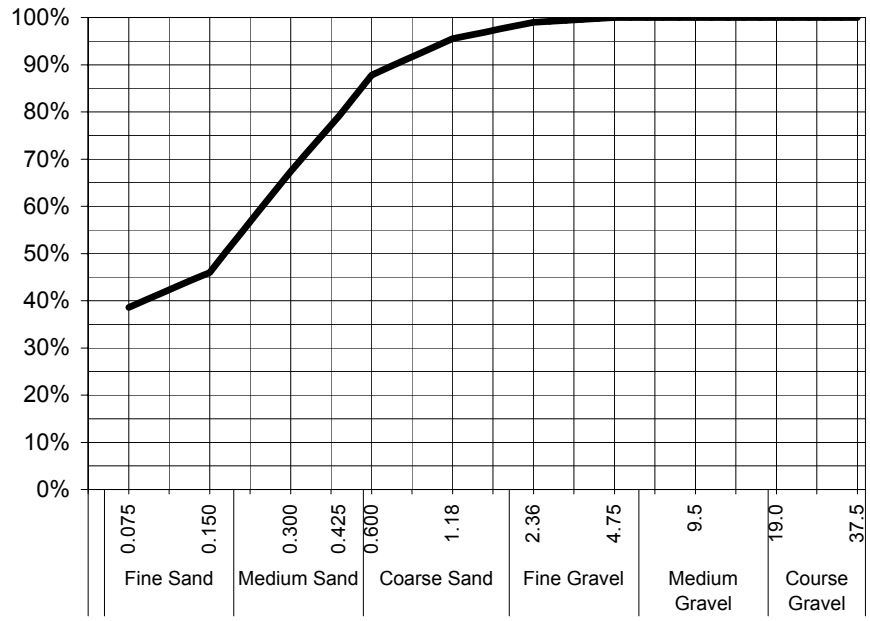
Brisbane, Qld 4001

REPORT NO: EB1201577-030 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(17B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	96%
0.600	88%
0.425	79%
0.300	67%
0.150	46%
0.075	39%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

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Newcastle, NSW

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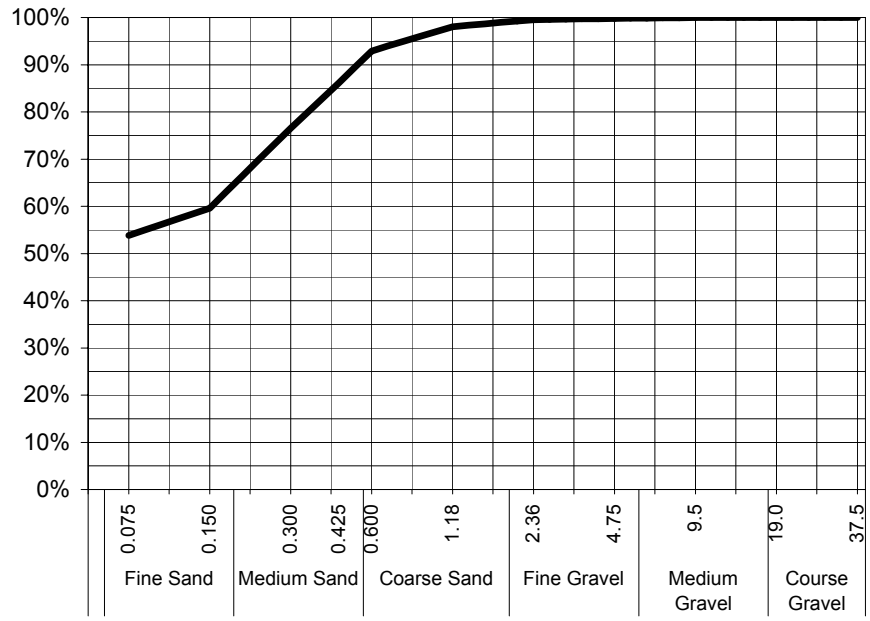
Brisbane, Qld 4001

REPORT NO: EB1201577-031 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(17C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	93%
0.425	86%
0.300	77%
0.150	60%
0.075	54%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

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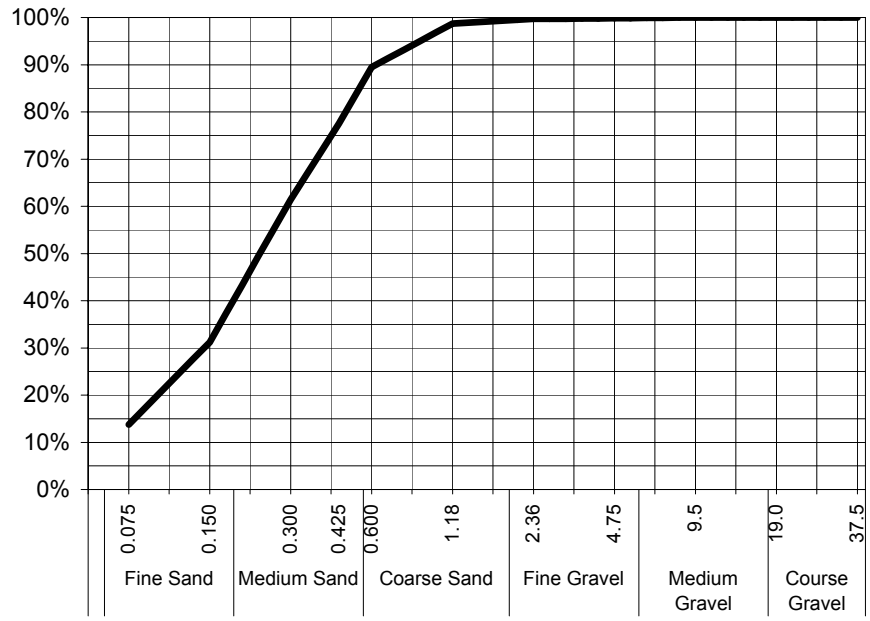
Brisbane, Qld 4001

REPORT NO: EB1201577-032 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(18A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	99%
0.600	89%
0.425	78%
0.300	61%
0.150	31%
0.075	14%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

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Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

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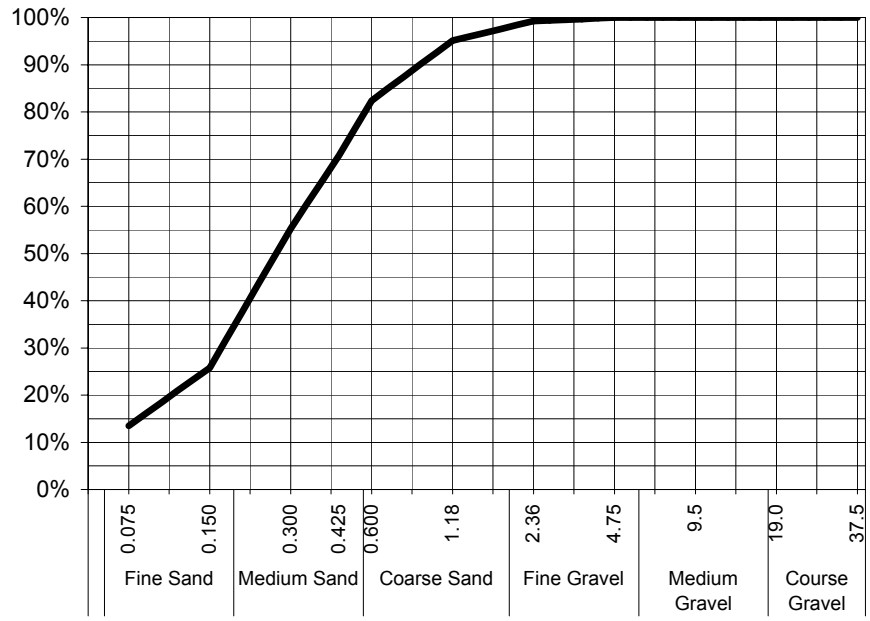
Brisbane, Qld 4001

REPORT NO: EB1201577-033 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(18B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	95%
0.600	82%
0.425	71%
0.300	55%
0.150	26%
0.075	14%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.225

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

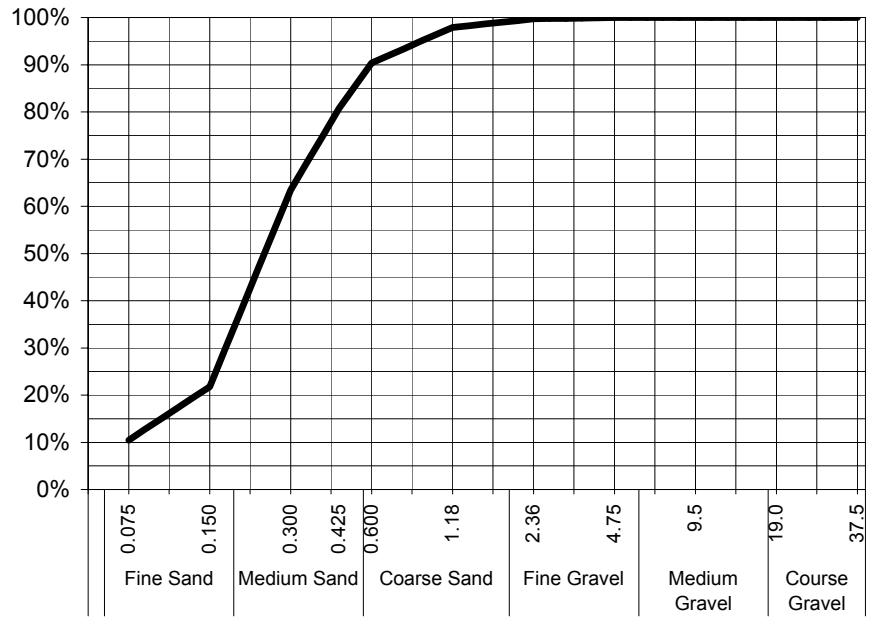
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-034 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(19A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	90%
0.425	81%
0.300	63%
0.150	22%
0.075	10%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

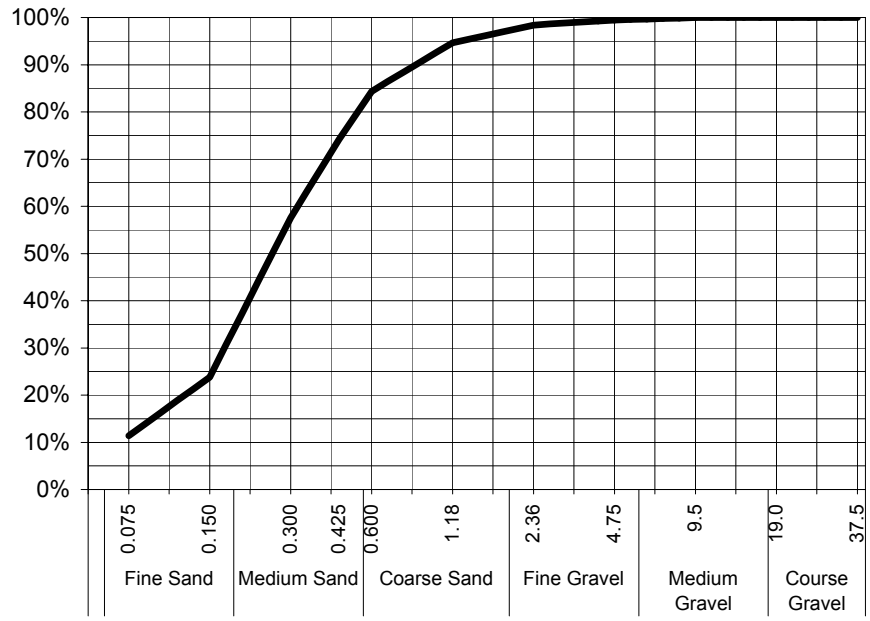
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-035 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(19B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	98%
1.18	95%
0.600	84%
0.425	74%
0.300	58%
0.150	24%
0.075	11%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

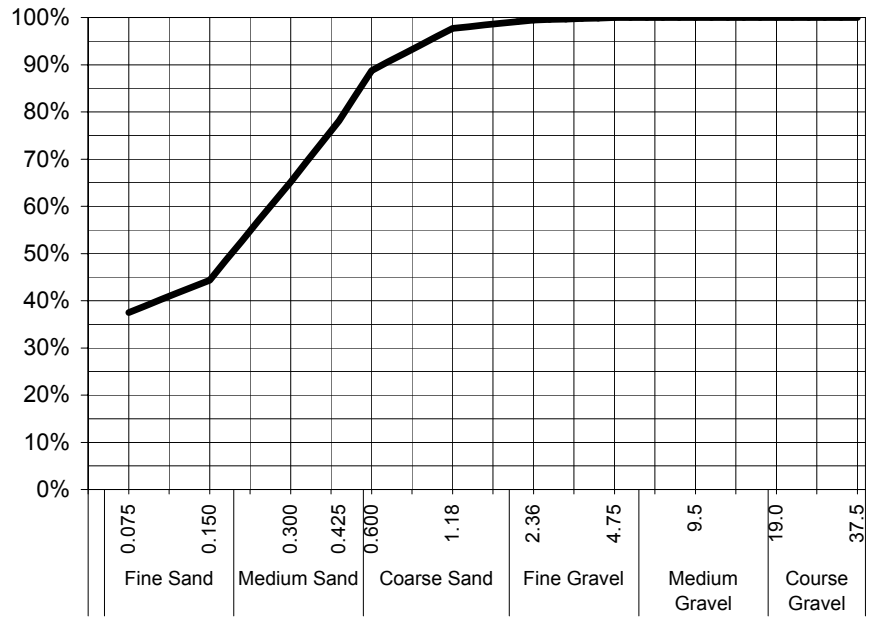
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-036 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(D1)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	98%
0.600	89%
0.425	78%
0.300	65%
0.150	44%
0.075	37%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

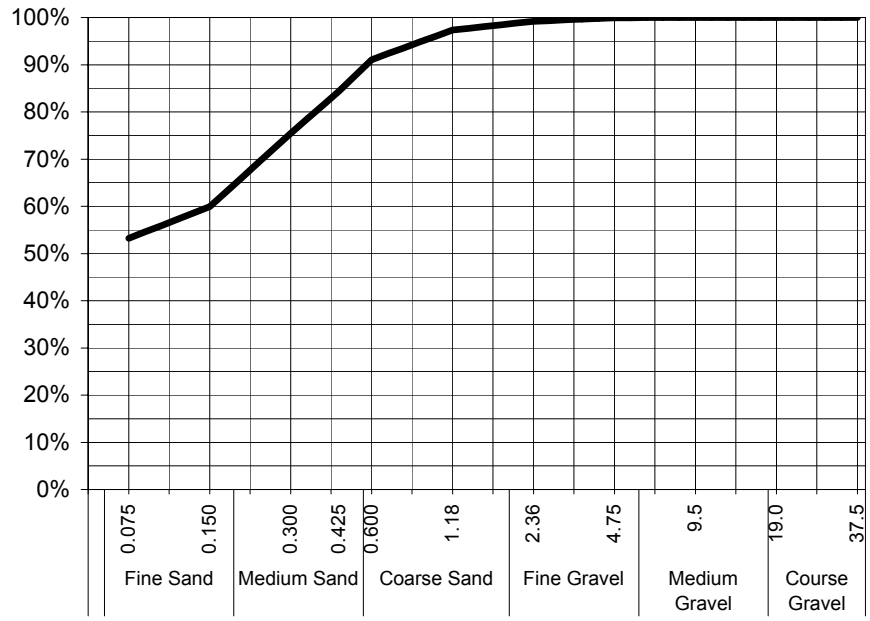
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-037 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(D2)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	97%
0.600	91%
0.425	84%
0.300	75%
0.150	60%
0.075	53%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

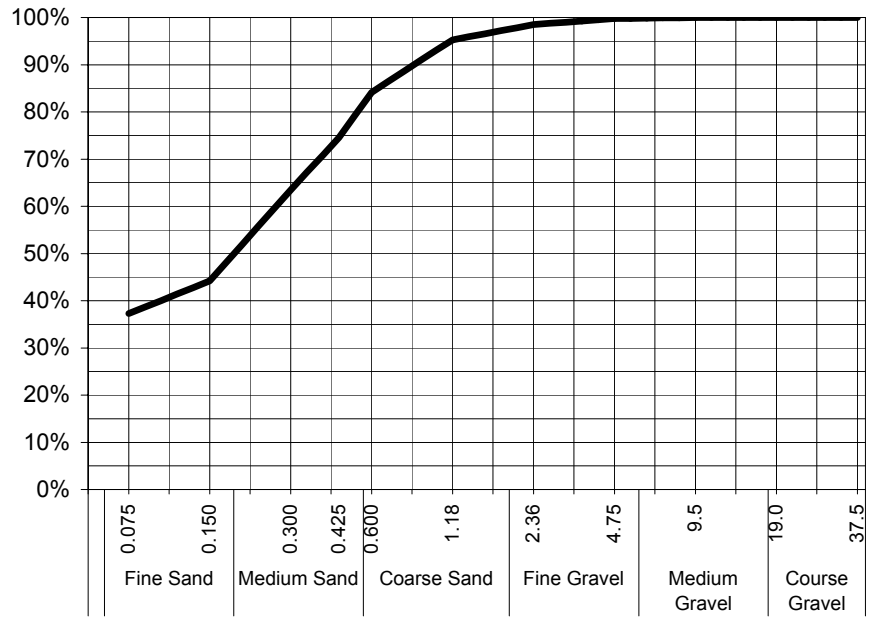
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-038 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(D3)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	95%
0.600	84%
0.425	75%
0.300	63%
0.150	44%
0.075	37%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

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Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

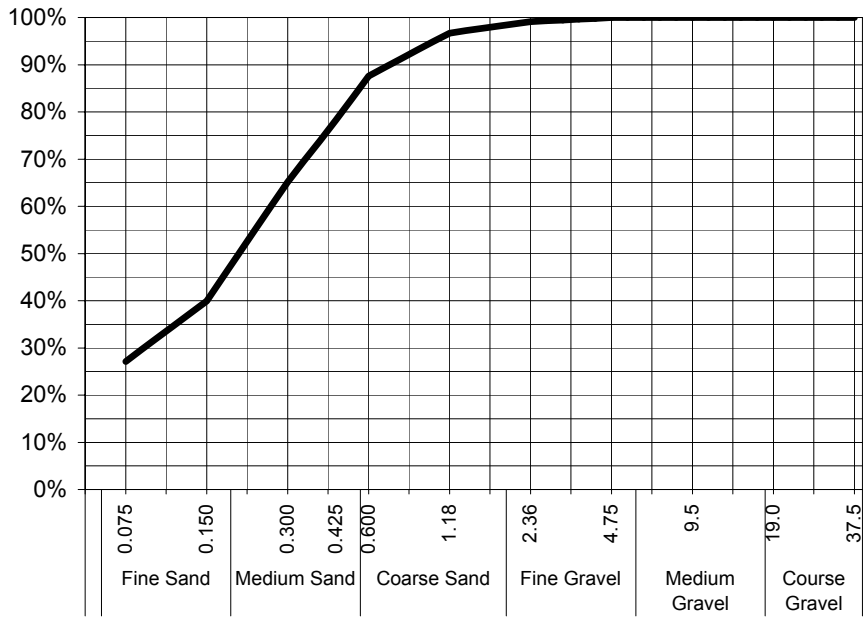
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-039 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(D4)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	97%
0.600	88%
0.425	78%
0.300	65%
0.150	40%
0.075	27%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.

Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

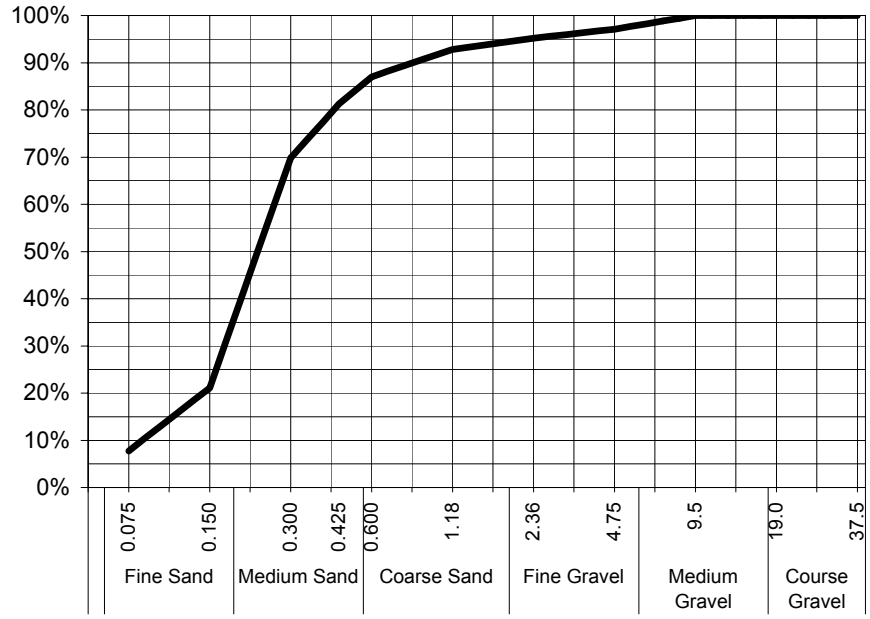
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-040 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(D5)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	97%
2.36	95%
1.18	93%
0.600	87%
0.425	81%
0.300	70%
0.150	21%
0.075	8%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

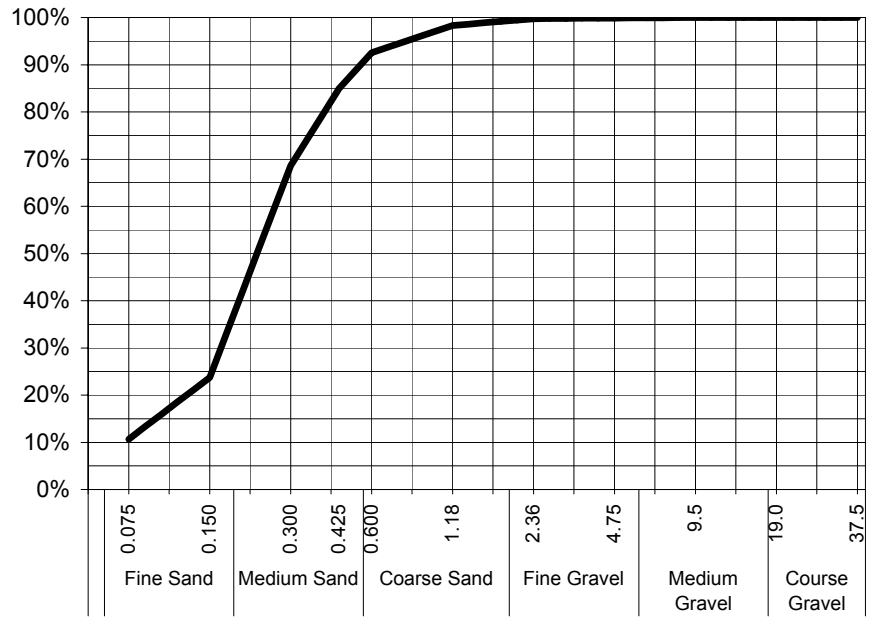
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-041 / PSD

PROJECT: 117626001

SAMPLE ID: NAR_WTP(D6)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	93%
0.425	85%
0.300	69%
0.150	24%
0.075	11%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand and fines

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

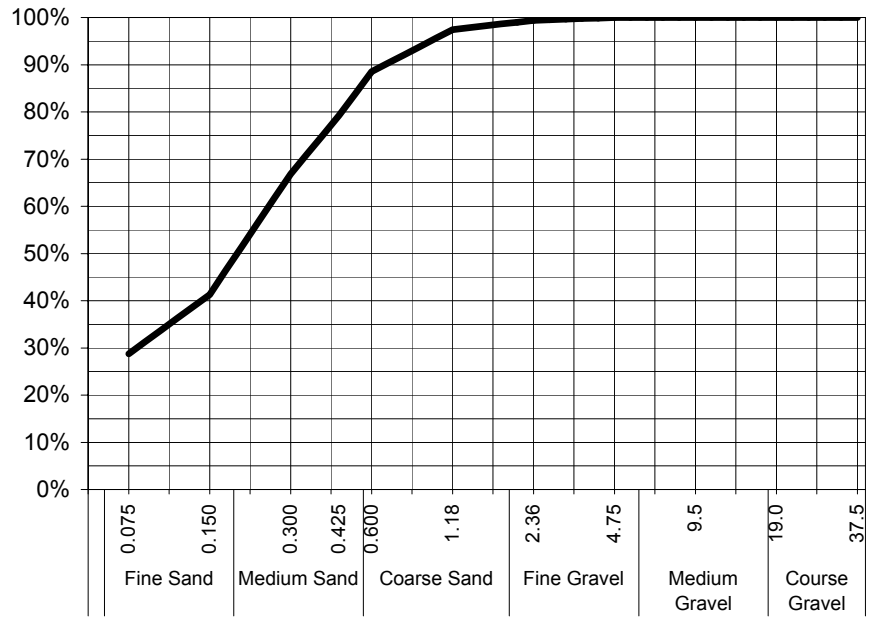
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-010Dup / PSD

PROJECT: 117626001

SAMPLE ID: 0

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	97%
0.600	89%
0.425	79%
0.300	67%
0.150	41%
0.075	29%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

Certificate of Analysis

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5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:

DATE REPORTED: 2-Feb-2012

COMPANY: Santos Ltd

DATE RECEIVED: 19-Jan-2012

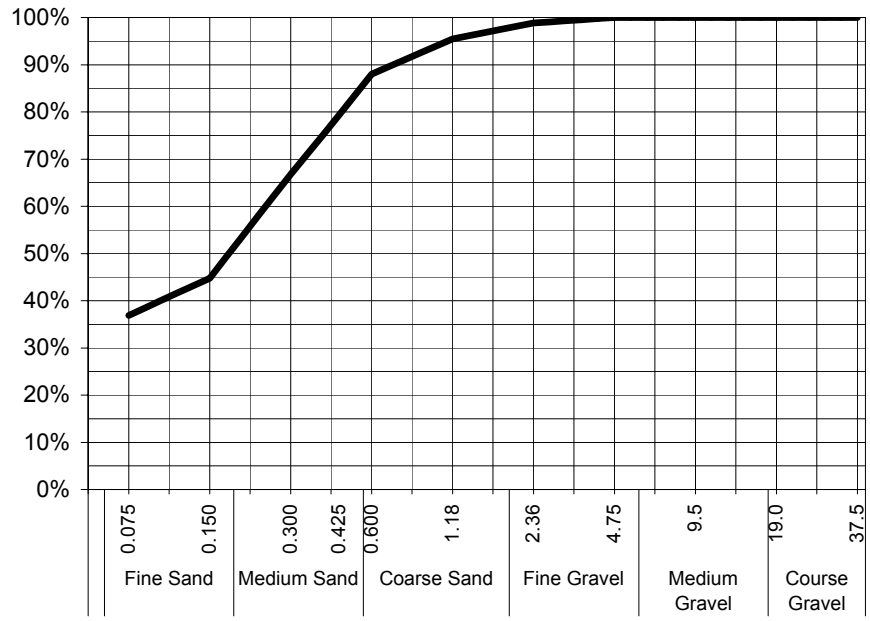
ADDRESS: GPO Box 1010
Level 22, 32 Turbot Street,
Brisbane, Qld 4001

REPORT NO: EB1201577-030Dup / PSD

PROJECT: 117626001

SAMPLE ID: 0

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	95%
0.600	88%
0.425	79%
0.300	67%
0.150	45%
0.075	37%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 31-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Sand, fines and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.

Dianne Blane
Laboratory Supervisor, Newcastle
Authorised Signatory

27/1 15

CHAIN OF CUSTODY DOCUMENTATION

Santos
We have the energy.

CLIENT:	Santos Ltd	SAMPLER:	Rita Bonetti
ADDRESS / OFFICE:	Santos Place, Level 22, 32 Turbot Street, Brisbane QLD 4000	MOBILE:	0437 039 929
PROJECT MANAGER (PM):	Remalia Sharplin	PHONE:	02 9478 3906
PROJECT ID:	117626001	EMAIL INVOICE TO:	accounts.payable@santos.com
SITE:	Narrabri	EMAIL REPORT TO:	enviro_data@santos.com rbonetti@golder.com.au and rsharplin@golder.com.au
RESULTS REQUIRED:	Standard Turn Around QUOTE: EN/039/10 Addendum	**Notes:**	Samples frozen for Acid Sulfate Soil Analysis

Note: Please provide results in SRAENVT SANTOS format

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE
CHILLED: Yes No

COMMENTS / HANDLING / STORAGE OR DISPOSAL:
Please store samples for 3 weeks prior to disposal

URGENT TAT

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFO		**Field Observations** (ALS Code SAMP02) Soil parameters										**Lab Analysis** (ALS SAMP2)			
ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	#Jars	Depth/Depth Range (mm)	Soil Colour	Mottled	Dominant Horizon	Field Texture	Moisture	Odour	Rainfall	Sample Method	Sample Type	Suite W - Drill Soil	PAHS	BTEX	
1	NAR_WTP(1A)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
2	NAR_WTP(1B)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	50-100	Gry		A		Moist	SULF		H Auger		x	x	x	
3	NAR_WTP(1C)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	300-400	Bwn		B		Moist	No		H Auger		x	x	x	
4	NAR_WTP(2A)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
5	NAR_WTP(2B)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	50-100	Gry		A		Moist	SULF		H Auger		x	x	x	
6	NAR_WTP(2C)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	400-500	Bwn		B		Moist	No		H Auger		x	x	x	
7	NAR_WTP(3A)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
8	NAR_WTP(3B)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	50-100	Gry		A		Moist	SULF		H Auger		x	x	x	
9	NAR_WTP(3C)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	300-400	Bwn		B		Moist	No		H Auger		x	x	x	
10	NAR_WTP(4A)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
11	NAR_WTP(4B)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	50-100	Gry		A		Moist	SULF		H Auger		x	x	x	
12	NAR_WTP(4C)_SOIL_S	S	13/01/2012	########	250ML JAR,2 BA	3	400-500	Bwn		B		Moist	No		H Auger		x	x	x	

Environmental Division
Brisbane
Work Order
EB1201573

Telephone : +61-7-3243 7222

RELINQUISHED BY:			RECEIVED BY			METHOD OF SHIPMENT
Name: Rita Bonetti	Date: 15/01/2012		Name: Josh ALS	Date: 19.1.12		Con' Note No:
Of: Golder Associates	Time: 4:00 PM		Of:	Time: 1400		Transport Co:
Name:	Date:		Name:	Date:		
Of:	Time:		Of:	Time:		

Soil Container Codes:

AIN OF CUSTODY DOCUMENTATION

Santos
We have the energy.

CLIENT: Santos Ltd	SAMPLER: Rita Bonetti
ADDRESS / OFFICE: Santos Place, Level 22, 32 Turbot Street, Brisbane QLD 4000	MOBILE: 0437 039 929
PROJECT MANAGER (PM): Remalia Sharplin	PHONE: 02 9478 3906
PROJECT ID: 117626001	EMAIL INVOICE TO: accounts.payable@santos.com
SITE: Narrabri	EMAIL REPORT TO: enviro_data@santos.com rbonetti@golder.com.au and rsharplin@golder.com.au
RESULTS REQUIRED: Standard Turn Around QUOTE: EN/039/10 Addendum	Note: Please provide results in SRAENVT SANTOS format

Notes: Samples frozen for Acid Sulfate Soil Analysis

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE
CHILLED: Yes No

COMMENTS / HANDLING / STORAGE OR DISPOSAL:
Please store samples for 3 weeks prior to disposal

SAMPLE INFORMATION (note: S = Soil, W=Water) | CONTAINER INFO | **Field Observations** (ALS Code SAMP02) | Soil parameters | **Lab Analysis** (ALS SAMP2)

ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	#Jars	Depth/Depth Range (mm)	Soil Colour	Mottled	Dominant Horizon	Field Texture	Moisture	Odour	Rainfall	Sample Method	Sample Type	Suite W - Drill Soil	PAHS	BTEX	
13	NAR_WTP(5A)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	0-100	Blk		O		Dry	SULF		H Auger		x	x	x	
14	NAR_WTP(5B)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	100-200	Blk		A		Moist	SULF		H Auger		x	x	x	
15	NAR_WTP(5C)_SOIL_S	S	14/01/2012	#######	250ML JAR,2 BA	3	400-500	Org		B		Moist	No		H Auger		x	x	x	
	[redacted]						0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
	[redacted]	S	14/01/2012	#######	250ML JAR,2 BA	3	100-200	Org		A		Moist	SULF		H Auger		x	x	x	
	[redacted]	S	14/01/2012	#######	250ML JAR,2 BA	3	400-500	Org		B		Dry	No		H Auger		x	x	x	
	[redacted]	S	14/01/2012	#######	250ML JAR,2 BA	3	0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
	[redacted]	S	14/01/2012	#######	250ML JAR,2 BA	3	50-100	Bw		A		Moist	SULF		H Auger		x	x	x	
	[redacted]	S	14/01/2012	#######	250ML JAR,2 BA	3	300-400	Org		B		Dry	No		H Auger		x	x	x	
	[redacted]	S	14/01/2012	#######	250ML JAR,2 BA	3	0-50	Blk		O		Dry	SULF		H Auger		x	x	x	
	[redacted]	S	14/01/2012	#######	250ML JAR,2 BA	3	50-150	Org		A		Moist	SULF		H Auger		x	x	x	
	[redacted]	S	14/01/2012	#######	250ML JAR,2 BA	3											x	x	x	

RELINQUISHED BY:

Name: Rita Bonetti	Date: 15/01/2012	Name: Josh	Date: 19.1.12
Of: Golder Associates	Time: 4:00 PM	Of: ALS	Time: 1400
Name:	Date:	Name:	Date:
Of:	Time:	Of:	Time:

RECEIVED BY

METHOD OF SHIPMENT
Con' Note No:
Transport Co:

Soil Container Codes:

AIN OF CUSTODY DOCUMENTATION

Santos
We have the energy.

CLIENT: Santos Ltd	SAMPLER: Rita Bonetti
ADDRESS / OFFICE: Santos Place, Level 22, 32 Turbot Street, Brisbane QLD 4000	MOBILE: 0437 039 929
PROJECT MANAGER (PM): Remalia Sharplin	PHONE: 02 9478 3906
PROJECT ID: 117626001	EMAIL INVOICE TO: accounts.payable@santos.com
SITE: Narrabri	EMAIL REPORT TO: enviro_data@santos.com rbonetti@golder.com.au and rsharplin@golder.com.au
RESULTS REQUIRED: Standard Turn Around QUOTE: EN/039/10 Addendum	**Notes:** Samples frozen for Acid Sulfate Soil Analysis

Note: Please provide results in SRAENVT SANTOS format

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE
CHILLED: Yes No

COMMENTS / HANDLING / STORAGE OR DIPOSAL:
Please store samples for 3 weeks prior to disposal

Field Observations (ALS Code SAMP02) — Soil parameters

Lab Analysis (ALS SAMP2)

ID	SAMPLE ID	MATRIX	DATE	Time	CONTAINER INFO Type / Code	#Jars	Depth/Depth Range (mm)	Soil Colour	Mottled	Dominant Horizon	Field Texture	Moisture	Odour	Rainfall	Sample Method	Sample Type	Suite W - Drill Soil	PAHS	BTEX
	[redacted]	S	14/01/2012	########	250ML JAR,2 BA	3													
	[redacted]	S	14/01/2012	########	250ML JAR,2 BA	3	0-100	Blk		O		Dry	No		H Auger		x	x	x
	[redacted]	S	14/01/2012	########	250ML JAR,2 BA	3	100-200	Bwn		A		Moist	No		H Auger		x	x	x
	[redacted]	S	14/01/2012	########	250ML JAR,2 BA	3	0-50	Blk		O		Dry	No		H Auger		x	x	x
	[redacted]	S	14/01/2012	########	250ML JAR,2 BA	3	200-300	Bwn		A		Moist	No		H Auger		x	x	x
SNR 16	NAR_WTP(16A)_SOIL_S	S	15/01/2012	########	250ML JAR,2 BA	3	0-100	Bwn		O		Moist	SULF		H Auger		x	x	x
SNR 17	NAR_WTP(16B)_SOIL_S	S	15/01/2012	########	250ML JAR,2 BA	3	300-400	Bwn		A		Dry	SULF		H Auger		x	x	x
SNR 18	NAR_WTP(17A)_SOIL_S	S	15/01/2012	########	250ML JAR,2 BA	3	0-50	Blk		O		Dry	No		H Auger		x	x	x
SNR 19	NAR_WTP(17B)_SOIL_S	S	15/01/2012	########	250ML JAR,2 BA	3	50-100	Gry		A		Moist	No		H Auger		x	x	x
SNR 20	NAR_WTP(17C)_SOIL_S	S	15/01/2012	########	250ML JAR,2 BA	3	300-400	Bwn		B		Dry	No		H Auger		x	x	x
	[redacted]	S	15/01/2012	########	250ML JAR,2 BA	3													
	[redacted]	S	15/01/2012	########	250ML JAR,2 BA	3	100-200	Org		A		Moist	No		H Auger		x	x	x

RELINQUISHED BY:			RECEIVED BY			METHOD OF SHIPMENT	
Name: Rita Bonetti	Date: 15/01/2012		Name: OSLD	Date: 19.1.12		Con' Note No:	
Of: Golder Associates	Time: 4:00 PM		Of: ALS	Time: 1400		Transport Co:	
Name:	Date:		Name:	Date:			
Of:	Time:		Of:	Time:			

Soil Container Codes:

ALS Group
Environmental Division

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EB1201573**

Client	: **SANTOS LTD**	Laboratory	: Environmental Division Brisbane
Contact	: REMALIA SHARPLIN	Contact	: Jodie Hancock
Address	: GPO BOX 1010 LEVEL 22, 32 TURBOT STREET BRISBANE QLD, AUSTRALIA 4001	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rsharplin@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3838 3000	Telephone	: +61 7 3243 7128
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: 117626001	Page	: 1 of 3
Order number	: ----		
C-O-C number	: ----	Quote number	: EB2011SANTOS0313 (BN/107/11 V3)
Site	: Narrabri		
Sampler	: Rita Bonetti	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 19-JAN-2012	Issue Date	: 20-JAN-2012 22:50
Client Requested Due Date	: 27-JAN-2012	Scheduled Reporting Date	: **27-JAN-2012**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 27.1°C<->28.5°C
No. of coolers/boxes	: 9 MEDIUM	No. of samples received	: 15
Security Seal	: Intact.	No. of samples analysed	: 15

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- **VOC and SVOC analysis added to samples "NAR_WTP(1A)_SOIL_S" and "NAR_WTP(3A)_SOIL_S" as requested by Rita Bonetti via email on 17/01/11**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Matt Goodwin.
- Analytical work for this work order will be conducted at ALS Brisbane and ALS Newcastle.
- 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 neccessary 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.
If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EP074 (solids) Volatile Organic Compounds	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - EP075 without K SVOCs with no miscellaneous compounds	SOIL - EP080 BTEXN	SOIL - SAMP-02 Field Observations (Soil Sampling)	SOIL - Santos Suite W SUITE W - Drill Soil
EB1201573-001	13-JAN-2012 15:00	NAR_WTP(1A)_SOIL_S	✓	✓	✓	✓	✓	✓
EB1201573-002	13-JAN-2012 15:00	NAR_WTP(1B)_SOIL_S		✓		✓	✓	✓
EB1201573-003	13-JAN-2012 15:00	NAR_WTP(1C)_SOIL_S		✓		✓	✓	✓
EB1201573-004	13-JAN-2012 15:00	NAR_WTP(2A)_SOIL_S		✓		✓	✓	✓
EB1201573-005	13-JAN-2012 15:00	NAR_WTP(2B)_SOIL_S		✓		✓	✓	✓
EB1201573-006	13-JAN-2012 15:00	NAR_WTP(2C)_SOIL_S		✓		✓	✓	✓
EB1201573-007	13-JAN-2012 15:00	NAR_WTP(3A)_SOIL_S	✓	✓	✓	✓	✓	✓
EB1201573-008	13-JAN-2012 15:00	NAR_WTP(3B)_SOIL_S		✓		✓	✓	✓
EB1201573-009	13-JAN-2012 15:00	NAR_WTP(3C)_SOIL_S		✓		✓	✓	✓
EB1201573-010	13-JAN-2012 15:00	NAR_WTP(4A)_SOIL_S		✓		✓	✓	✓
EB1201573-011	13-JAN-2012 15:00	NAR_WTP(4B)_SOIL_S		✓		✓	✓	✓
EB1201573-012	13-JAN-2012 15:00	NAR_WTP(4C)_SOIL_S		✓		✓	✓	✓
EB1201573-013	14-JAN-2012 15:00	NAR_WTP(5A)_SOIL_S		✓		✓	✓	✓
EB1201573-014	14-JAN-2012 15:00	NAR_WTP(5B)_SOIL_S		✓		✓	✓	✓
EB1201573-015	14-JAN-2012 15:00	NAR_WTP(5C)_SOIL_S		✓		✓	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

MS JODIE HANCOCK		
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jodie.hancock@alsenviro.com
- Chain of Custody (CoC) (COC)	Email	jodie.hancock@alsenviro.com
MS RITA BONETTI		
- *AU Certificate of Analysis - NATA	Email	rbonetti@golder.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	rbonetti@golder.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	rbonetti@golder.com.au
- A4 - AU Sample Receipt Notification - Environmental HT	Email	rbonetti@golder.com.au
- Attachment - Report	Email	rbonetti@golder.com.au
- Chain of Custody (CoC)	Email	rbonetti@golder.com.au
- EDI Format - SRAENVT_SANTOS	Email	rbonetti@golder.com.au
REMALIA SHARPLIN		
- *AU Certificate of Analysis - NATA	Email	rsharplin@golder.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	rsharplin@golder.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	rsharplin@golder.com.au
- A4 - AU Sample Receipt Notification - Environmental HT	Email	rsharplin@golder.com.au
- Attachment - Report	Email	rsharplin@golder.com.au
- Chain of Custody (CoC)	Email	rsharplin@golder.com.au
- EDI Format - SRAENVT_SANTOS	Email	rsharplin@golder.com.au
THE ACCOUNTS PAYABLE		
- A4 - AU Tax Invoice (INV)	Email	accounts.payable@santos.com
THE RESULTS ADDRESS		
- *AU Certificate of Analysis - NATA (COA)	Email	enviro_data@santos.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	enviro_data@santos.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	enviro_data@santos.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	enviro_data@santos.com
- Attachment - Report (SUBCO)	Email	enviro_data@santos.com
- Chain of Custody (CoC) (COC)	Email	enviro_data@santos.com
- EDI Format - SRAENVT_SANTOS (SRAENVT_SANTOS)	Email	enviro_data@santos.com

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EB1201573**	Page	: 1 of 15
Client	: SANTOS LTD	Laboratory	: Environmental Division Brisbane
Contact	: REMALIA SHARPLIN	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rsharplin@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Narrabri		
C-O-C number	: ----	Date Samples Received	: 19-JAN-2012
Sampler	: Rita Bonetti	Issue Date	: 30-JAN-2012
Order number	: 117626001		
		No. of samples received	: 15
Quote number	: BN/107/11 V3	No. of samples analysed	: 15

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

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 aliquot was taken. Elapsed period to 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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA002 : pH (Soils)							
Soil Glass Jar - Unpreserved (EA002) NAR_WTP(1A)_SOIL_S, NAR_WTP(1B)_SOIL_S, NAR_WTP(1C)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(2B)_SOIL_S, NAR_WTP(2C)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(3B)_SOIL_S, NAR_WTP(3C)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S, NAR_WTP(4C)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	20-JAN-2012	×	**27-JAN-2012**	24-JAN-2012	×
Soil Glass Jar - Unpreserved (EA002) NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S, NAR_WTP(5C)_SOIL_S	**14-JAN-2012**	**24-JAN-2012**	21-JAN-2012	×	**27-JAN-2012**	24-JAN-2012	×
EA010: Conductivity							
Soil Glass Jar - Unpreserved (EA010) NAR_WTP(1A)_SOIL_S, NAR_WTP(1B)_SOIL_S, NAR_WTP(1C)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(2B)_SOIL_S, NAR_WTP(2C)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(3B)_SOIL_S, NAR_WTP(3C)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S, NAR_WTP(4C)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	20-JAN-2012	×	**27-JAN-2012**	21-FEB-2012	✓
Soil Glass Jar - Unpreserved (EA010) NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S, NAR_WTP(5C)_SOIL_S	**14-JAN-2012**	**24-JAN-2012**	21-JAN-2012	×	**27-JAN-2012**	21-FEB-2012	✓
EA029-C: Sulfur Trail							
Snap Lock Bag - frozen on receipt at ALS (EA029) NAR_WTP(1A)_SOIL_S, NAR_WTP(1B)_SOIL_S, NAR_WTP(1C)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(2B)_SOIL_S, NAR_WTP(2C)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(3B)_SOIL_S, NAR_WTP(3C)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S, NAR_WTP(4C)_SOIL_S	**13-JAN-2012**	**23-JAN-2012**	12-JAN-2013	✓	**24-JAN-2012**	22-APR-2012	✓
Snap Lock Bag - frozen on receipt at ALS (EA029) NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S, NAR_WTP(5C)_SOIL_S	**14-JAN-2012**	**23-JAN-2012**	13-JAN-2013	✓	**24-JAN-2012**	22-APR-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content								
Soil Glass Jar - Unpreserved (EA055-103)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**----**	----	----	**23-JAN-2012**	27-JAN-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (EA055-103)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**----**	----	----	**23-JAN-2012**	28-JAN-2012	✓
NAR_WTP(5C)_SOIL_S								
EA150: Particle Sizing								
Snap Lock Bag (EA150)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**---**	11-JUL-2012	----	**27-JAN-2012**	25-JUL-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Snap Lock Bag (EA150)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**---**	12-JUL-2012	----	**27-JAN-2012**	25-JUL-2012	✓
NAR_WTP(5C)_SOIL_S								
EA150: Soil Classification based on Particle Size								
Snap Lock Bag (EA150)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**---**	11-JUL-2012	----	**27-JAN-2012**	25-JUL-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Snap Lock Bag (EA150)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**---**	12-JUL-2012	----	**27-JAN-2012**	25-JUL-2012	✓
NAR_WTP(5C)_SOIL_S								
ED008: Exchangeable Cations								
Soil Glass Jar - Unpreserved (ED008)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**27-JAN-2012**	11-JUL-2012	✓	**28-JAN-2012**	11-JUL-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (ED008)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**27-JAN-2012**	12-JUL-2012	✓	**28-JAN-2012**	12-JUL-2012	✓
NAR_WTP(5C)_SOIL_S								

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED021: Bicarbonate Extractable Potassium (Colwell)								
Soil Glass Jar - Unpreserved (ED021)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**27-JAN-2012**	11-JUL-2012	✓	**30-JAN-2012**	11-JUL-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (ED021)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**27-JAN-2012**	12-JUL-2012	✓	**30-JAN-2012**	12-JUL-2012	✓
NAR_WTP(5C)_SOIL_S								
ED092: DTPA Extractable Metals								
Soil Glass Jar - Unpreserved (ED092)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**27-JAN-2012**	11-JUL-2012	✓	**28-JAN-2012**	11-JUL-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (ED092)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**27-JAN-2012**	12-JUL-2012	✓	**28-JAN-2012**	12-JUL-2012	✓
NAR_WTP(5C)_SOIL_S								
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**24-JAN-2012**	11-JUL-2012	✓	**25-JAN-2012**	11-JUL-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (EG005T)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**24-JAN-2012**	12-JUL-2012	✓	**25-JAN-2012**	12-JUL-2012	✓
NAR_WTP(5C)_SOIL_S								
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**24-JAN-2012**	10-FEB-2012	✓	**25-JAN-2012**	10-FEB-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (EG035T)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**24-JAN-2012**	11-FEB-2012	✓	**25-JAN-2012**	11-FEB-2012	✓
NAR_WTP(5C)_SOIL_S								

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK040: Fluoride							
Soil Glass Jar - Unpreserved (EK040S)							
NAR_WTP(1A)_SOIL_S, NAR_WTP(1B)_SOIL_S, NAR_WTP(1C)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(2B)_SOIL_S, NAR_WTP(2C)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(3B)_SOIL_S, NAR_WTP(3C)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S, NAR_WTP(4C)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	20-JAN-2012	×	**27-JAN-2012**	21-FEB-2012	✓
Soil Glass Jar - Unpreserved (EK040S)							
NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S, NAR_WTP(5C)_SOIL_S	**14-JAN-2012**	**24-JAN-2012**	21-JAN-2012	×	**27-JAN-2012**	21-FEB-2012	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Soil Glass Jar - Unpreserved (EK059G)							
NAR_WTP(1A)_SOIL_S, NAR_WTP(1B)_SOIL_S, NAR_WTP(1C)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(2B)_SOIL_S, NAR_WTP(2C)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(3B)_SOIL_S, NAR_WTP(3C)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S, NAR_WTP(4C)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	11-JUL-2012	✓	**27-JAN-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK059G)							
NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S, NAR_WTP(5C)_SOIL_S	**14-JAN-2012**	**24-JAN-2012**	12-JUL-2012	✓	**27-JAN-2012**	12-JUL-2012	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Soil Glass Jar - Unpreserved (EK061G)							
NAR_WTP(1A)_SOIL_S, NAR_WTP(1B)_SOIL_S, NAR_WTP(1C)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(2B)_SOIL_S, NAR_WTP(2C)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(3B)_SOIL_S, NAR_WTP(3C)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S, NAR_WTP(4C)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	11-JUL-2012	✓	**27-JAN-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK061G)							
NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S, NAR_WTP(5C)_SOIL_S	**14-JAN-2012**	**24-JAN-2012**	12-JUL-2012	✓	**27-JAN-2012**	12-JUL-2012	✓
EK067G: Total Phosphorus as P by Discrete Analyser							
Soil Glass Jar - Unpreserved (EK067G)							
NAR_WTP(1A)_SOIL_S, NAR_WTP(1B)_SOIL_S, NAR_WTP(1C)_SOIL_S, NAR_WTP(2A)_SOIL_S, NAR_WTP(2B)_SOIL_S, NAR_WTP(2C)_SOIL_S, NAR_WTP(3A)_SOIL_S, NAR_WTP(3B)_SOIL_S, NAR_WTP(3C)_SOIL_S, NAR_WTP(4A)_SOIL_S, NAR_WTP(4B)_SOIL_S, NAR_WTP(4C)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	11-JUL-2012	✓	**27-JAN-2012**	11-JUL-2012	✓
Soil Glass Jar - Unpreserved (EK067G)							
NAR_WTP(5A)_SOIL_S, NAR_WTP(5B)_SOIL_S, NAR_WTP(5C)_SOIL_S	**14-JAN-2012**	**24-JAN-2012**	12-JUL-2012	✓	**27-JAN-2012**	12-JUL-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK080: Bicarbonate Extractable Phosphorus (Colwell)								
Soil Glass Jar - Unpreserved (EK080)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**----**	----	----	**27-JAN-2012**	11-JUL-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (EK080)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**----**	----	----	**27-JAN-2012**	12-JUL-2012	✓
NAR_WTP(5C)_SOIL_S								
EP003: Total Organic Carbon (TOC) in Soil								
Pulp Bag (EP003)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**24-JAN-2012**	20-JAN-2012	×	**24-JAN-2012**	21-FEB-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Pulp Bag (EP003)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**24-JAN-2012**	21-JAN-2012	×	**24-JAN-2012**	21-FEB-2012	✓
NAR_WTP(5C)_SOIL_S								
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
Soil Glass Jar - Unpreserved (EP071)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**24-JAN-2012**	03-MAR-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (EP071)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**23-JAN-2012**	28-JAN-2012	✓	**24-JAN-2012**	03-MAR-2012	✓
NAR_WTP(5C)_SOIL_S								
EP074D: Fumigants								
Soil Glass Jar - Unpreserved (EP074)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓
EP074E: Halogenated Aliphatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓
EP074F: Halogenated Aromatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074H: Naphthalene								
Soil Glass Jar - Unpreserved (EP074)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓
EP074B: Oxygenated Compounds								
Soil Glass Jar - Unpreserved (EP074)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓
EP074C: Sulfonated Compounds								
Soil Glass Jar - Unpreserved (EP074)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓
EP074G: Trihalomethanes								
Soil Glass Jar - Unpreserved (EP074)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**24-JAN-2012**	03-MAR-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (EP075(SIM))								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**23-JAN-2012**	28-JAN-2012	✓	**24-JAN-2012**	03-MAR-2012	✓
NAR_WTP(5C)_SOIL_S								
EP075H: Anilines and Benzidines								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓
EP075G: Chlorinated Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓
EP075F: Haloethers								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓
EP075E: Nitroaromatics and Ketones								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓
EP075D: Nitrosamines								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓
EP075I: Organochlorine Pesticides								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓
EP075J: Organophosphorus Pesticides								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓
EP075C: Phthalate Esters								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓
EP075B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(3A)_SOIL_S	**13-JAN-2012**	**24-JAN-2012**	27-JAN-2012	✓	**25-JAN-2012**	04-MAR-2012	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (EP080)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**23-JAN-2012**	28-JAN-2012	✓	**23-JAN-2012**	28-JAN-2012	✓
NAR_WTP(5C)_SOIL_S								
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
Soil Glass Jar - Unpreserved (EP080)								
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	**13-JAN-2012**	**23-JAN-2012**	27-JAN-2012	✓	**23-JAN-2012**	27-JAN-2012	✓
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,							
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,							
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,							
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,							
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S							
Soil Glass Jar - Unpreserved (EP080)								
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	**14-JAN-2012**	**23-JAN-2012**	28-JAN-2012	✓	**23-JAN-2012**	28-JAN-2012	✓
NAR_WTP(5C)_SOIL_S								

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(where) 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		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Bicarbonate Extractable K (Colwell)	ED021	2	15	**13.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Bicarbonate Extractable P (Colwell)	EK080	2	15	**13.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
DTPA Extractable Metals	ED092	2	15	**13.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Electrical Conductivity (1:5)	EA010	2	15	**13.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Exchangeable Cations with pre-treatment	ED008	2	15	**13.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride - Soluble	EK040S	2	15	**13.3**	**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
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	2	15	**13.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	2	18	**11.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
pH (1:5)	EA002	2	15	**13.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	2	**50.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	2	15	**13.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TKN as N By Discrete Analyser	EK061G	2	20	**10.0**	**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
Total Organic Carbon	EP003	2	15	**13.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosporus By Discrete Analyser	EK067G	2	20	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	18	**11.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	3	15	**20.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	2	**50.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
DTPA Extractable Metals	ED092	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Electrical Conductivity (1:5)	EA010	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Exchangeable Cations with pre-treatment	ED008	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride - Soluble	EK040S	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	1	18	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
pH (1:5)	EA002	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	2	**50.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TKN as N By Discrete Analyser	EK061G	1	20	**5.0**	**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
Total Organic Carbon	EP003	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosporus By Discrete Analyser	EK067G	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	18	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Control Samples (LCS) - Continued							
TPH Volatiles/BTEX	EP080	2	15	**13.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	2	**50.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Bicarbonate Extractable K (Colwell)	ED021	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Bicarbonate Extractable P (Colwell)	EK080	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
DTPA Extractable Metals	ED092	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Electrical Conductivity (1:5)	EA010	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Exchangeable Cations with pre-treatment	ED008	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride - Soluble	EK040S	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	1	18	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	2	**50.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TKN as N By Discrete Analyser	EK061G	1	20	**5.0**	**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
Total Organic Carbon	EP003	1	15	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosporus By Discrete Analyser	EK067G	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	18	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	15	**13.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	2	**50.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	1	15	**6.7**	**5.0**	✓	ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	1	18	**5.6**	**5.0**	✓	ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	2	**50.0**	**5.0**	✓	ALS QCS3 requirement
TKN as N By Discrete Analyser	EK061G	1	20	**5.0**	**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
Total Phosporus By Discrete Analyser	EK067G	1	20	**5.0**	**5.0**	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	18	**5.6**	**5.0**	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	15	**13.3**	**5.0**	✓	ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	2	**50.0**	**5.0**	✓	ALS QCS3 requirement

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)
Electrical Conductivity (1:5)	EA010	SOIL	(APHA 21st ed., 2510) Conductivity is determined on soil samples using a 1:5 soil/water leach. This method is compliant with NEPM (1999) Schedule B(3) (Method 104)
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	SOIL	Ahern et al 2004 - a suspension peroxide oxidation method following the 'sulfur trail' by determining the level of 1M KCL extractable sulfur and the sulfur level after oxidation of soil sulphides. The 'acidity trail' is followed by measurement of TAA, TPA and TSA. Liming Rate is based on results for samples as submitted and incorporates a minimum safety factor of 1.5.
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 (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Particle Size Analysis (Sieving)	EA150	SOIL	Particle Size Analysis by Sieving according to AS1289.3.6.1 - 1995
Exchangeable Cations with pre-treatment	ED008	SOIL	Rayment & Higginson (1992) Method 15A2. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. This method is compliant with NEPM (1999) Schedule B(3) (Method 301)
Bicarbonate Extractable K (Colwell)	ED021	SOIL	Rayment & Higginson (1992) Method 18A1 Potassium is extracted from the soil using 0.5M NaHCO3 at a 1:100 soil:solution ratio and determined by ICP.
DTPA Extractable Metals	ED092	SOIL	Rayment and Higginson 12A1
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)
Fluoride - Soluble	EK040S	SOIL	APHA 21st ed., 4500 F--C Soluble Fluoride is determined after a 1:5 soil/water extract using an ion selective electrode.
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	SOIL	APHA 21st ed., 4500 NO3- F. Combined oxidised Nitrogen (NO2+NO3) in a water extract is determined by Cadmium Reduction, and direct colourimetry by Discrete Analyser.
TKN as N By Discrete Analyser	EK061G	SOIL	APHA 21st ed., 4500-Norg-D Soil samples are digested using Kjeldahl digestion followed by determination by Discrete Analyser.
Total Nitrogen as N (TKN + NOx) By Discrete Analyser	EK062G	SOIL	APHA 21st ed., 4500 Norg/NO3- Total Nitrogen is determined as the sum of TKN and Oxidised Nitrrogen, each determined seperately as N.
Total Phosporus By Discrete Analyser	EK067G	SOIL	APHA 21st ed., 4500 P-B&F This procedure involves sulfuric acid digestion and quantification using Discrete Analyser.
Bicarbonate Extractable P (Colwell)	EK080	SOIL	Rayment & Higginson (1992) Method 9B1 Phosphorus is extracted from the soil using 0.5M NaHCO3 at a 1:100 soil:solution ratio and determined by FIA.

Analytical Methods	Method	Matrix	Method Descriptions
Total Organic Carbon	EP003	SOIL	In-house C-IR17. Dried and pulverised sample is reacted with acid to remove inorganic Carbonates, then combusted in a LECO furnace in the presence of strong oxidants / catalysts. The evolved (Organic) Carbon (as CO2) is automaticaly measured by infra-red detector.
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)
Volatile Organic Compounds	EP074	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)
Semivolatile Organic Compounds	EP075	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 502)
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)
Field Observations (Provided by Client)	SAMP-02	SOIL	Field Conditions, Sample Physical Description, Colour and Texture as provided by Sampler. ALS NATA Accreditation does not cover the reporting of these observations.

Preparation Methods	Method	Matrix	Method Descriptions
Exchangeable Cations Preparation Method	ED007PR	SOIL	Rayment & Higginson (1992) method 15A1. A 1M NH4Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
Bicarbonate Extractable K (Colwell)	ED021PR	SOIL	Rayment & Higginson (1992) Method 18A1 Potassium is extracted from the soil using 0.5M NaHCO3 at a 1:100 soil:solution ratio and determined by ICP.
DTPA Extraction for Cu, Zn, Mn, Fe (2 hour leach)	ED092PR	SOIL	Rayment & Higginson (1992) Method 12A1 2 hour end over end tumbler extraction with 0.005M DTPA at a ratio of 1:2. Extracts can be run by ICP for metals.
TKN/TP Digestion	EK061/EK067	SOIL	APHA 21st ed., 4500 Norg- D; APHA 21st ed., 4500 P - H. Macro Kjeldahl digestion.
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house
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)
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.

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-QWI/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

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005T: Total Metals by ICP-AES	EB1201573-001	NAR_WTP(1A)_SOIL_S	**Barium**	7440-39-3	29.3 %	0-20%	**RPD exceeds LOR based limits**
EG005T: Total Metals by ICP-AES	EB1201573-001	NAR_WTP(1A)_SOIL_S	**Manganese**	7439-96-5	20.0 %	0-20%	**RPD exceeds LOR based limits**
EP080/071: Total Petroleum Hydrocarbons	EB1201573-001	NAR_WTP(1A)_SOIL_S	**C10 - C36 Fraction (sum)**	----	89.4 %	0-50%	**RPD exceeds LOR based limits**
Laboratory Control Spike (LCS) Recoveries							
EP074E: Halogenated Aliphatic Compounds	2529588-006	----	**Chloroethane**	75-00-3	128 %	71.5-120.75 %	**Recovery greater than upper control limit**
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	2529602-006	----	**Phenanthrene**	85-01-8	122 %	60-112%	**Recovery greater than upper control limit**
EP075E: Nitroaromatics and Ketones	2529656-002	----	**4-Aminobiphenyl**	92-67-1	35.4 %	42-110%	**Recovery less than lower control limit**
Matrix Spike (MS) Recoveries							
EP075A: Phenolic Compounds	EB1201573-007	NAR_WTP(3A)_SOIL_S	**2-Chlorophenol**	95-57-8	68.7 %	70-130%	**Recovery less than lower data quality objective**
EP075E: Nitroaromatics and Ketones	EB1201573-007	NAR_WTP(3A)_SOIL_S	**2.4-Dinitrotoluene**	121-14-2	66.3 %	70-130%	**Recovery less than lower data quality objective**
EP075G: Chlorinated Hydrocarbons	EB1201573-007	NAR_WTP(3A)_SOIL_S	**1.4-Dichlorobenzene**	106-46-7	57.8 %	70-130%	**Recovery less than lower data quality objective**
EP075G: Chlorinated Hydrocarbons	EB1201573-007	NAR_WTP(3A)_SOIL_S	**1.2.4-Trichlorobenzene**	120-82-1	67.0 %	70-130%	**Recovery less than lower data quality objective**

- **For all matrices, no Method Blank value 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*		
Container / Client Sample ID(s)	*Date extracted*	*Due for extraction*	***Days overdue***	*Date analysed*	*Due for analysis*	***Days overdue***
EA002 : pH (Soils)						

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA002 : pH (Soils) - Analysis Holding Time Compliance							
Soil Glass Jar - Unpreserved							
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	24-JAN-2012	20-JAN-2012	**4**	27-JAN-2012	24-JAN-2012	**3**
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,						
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,						
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,						
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,						
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S						
Soil Glass Jar - Unpreserved							
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	24-JAN-2012	21-JAN-2012	**3**	27-JAN-2012	24-JAN-2012	**3**
NAR_WTP(5C)_SOIL_S							
EA010: Conductivity							
Soil Glass Jar - Unpreserved							
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	24-JAN-2012	20-JAN-2012	**4**	----	----	----
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,						
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,						
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,						
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,						
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S						
Soil Glass Jar - Unpreserved							
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	24-JAN-2012	21-JAN-2012	**3**	----	----	----
NAR_WTP(5C)_SOIL_S							
EK040: Fluoride							
Soil Glass Jar - Unpreserved							
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	24-JAN-2012	20-JAN-2012	**4**	----	----	----
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,						
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,						
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,						
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,						
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S						
Soil Glass Jar - Unpreserved							
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	24-JAN-2012	21-JAN-2012	**3**	----	----	----
NAR_WTP(5C)_SOIL_S							
EP003: Total Organic Carbon (TOC) in Soil							
Pulp Bag							
NAR_WTP(1A)_SOIL_S,	NAR_WTP(1B)_SOIL_S,	24-JAN-2012	20-JAN-2012	**4**	----	----	----
NAR_WTP(1C)_SOIL_S,	NAR_WTP(2A)_SOIL_S,						
NAR_WTP(2B)_SOIL_S,	NAR_WTP(2C)_SOIL_S,						
NAR_WTP(3A)_SOIL_S,	NAR_WTP(3B)_SOIL_S,						
NAR_WTP(3C)_SOIL_S,	NAR_WTP(4A)_SOIL_S,						
NAR_WTP(4B)_SOIL_S,	NAR_WTP(4C)_SOIL_S						
Pulp Bag							
NAR_WTP(5A)_SOIL_S,	NAR_WTP(5B)_SOIL_S,	24-JAN-2012	21-JAN-2012	**3**	----	----	----
NAR_WTP(5C)_SOIL_S							

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.**

ALS Group
Environmental Division

QUALITY CONTROL REPORT

Work Order	: **EB1201573**	Page	: 1 of 22
Client	: **SANTOS LTD**	Laboratory	: Environmental Division Brisbane
Contact	: REMALIA SHARPLIN	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rsharplin@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Narrabri		
C-O-C number	: ----	Date Samples Received	: 19-JAN-2012
Sampler	: Rita Bonetti	Issue Date	: 30-JAN-2012
Order number	: 117626001	No. of samples received	: 15
Quote number	: BN/107/11 V3	No. of samples analysed	: 15

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
WORLD RECOGNISED ACCREDITATION

NATA Accredited Laboratory 825

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*
		Newcastle
Andrew Matheson	Senior Organic Instrument Chemist	Brisbane Inorganics
Andrew Matheson	Senior Organic Instrument Chemist	Brisbane Organics
Jonathon Angell	Inorganic Coordinator	Stafford Minerals - AY
Matt Frost	Senior Organic Chemist	Brisbane Organics
Myles.Clark	Acid Sulfate Soils Supervisor	Brisbane Acid Sulphate Soils
Stephen Hislop	Senior Inorganic Chemist	Brisbane External Subcontracting
Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics

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 insuffient 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: 2137327)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EA002: pH Value	----	0.1	pH Unit	9.5	9.4	0.0	0% - 20%
EB1201573-010	NAR_WTP(4A)_SOIL_S	EA002: pH Value	----	0.1	pH Unit	9.5	9.5	0.0	0% - 20%
EA010: Conductivity (QC Lot: 2137328)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	824	800	3.0	0% - 20%
EB1201573-010	NAR_WTP(4A)_SOIL_S	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	1270	1380	7.7	0% - 20%
EA029-C: Sulfur Trail (QC Lot: 2137259)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.02	<0.02	0.0	No Limit
EB1201573-011	NAR_WTP(4B)_SOIL_S	EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.02	<0.02	0.0	No Limit
EA055: Moisture Content (QC Lot: 2136959)									
EB1201573-004	NAR_WTP(2A)_SOIL_S	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	9.5	9.6	0.0	No Limit
EB1201573-011	NAR_WTP(4B)_SOIL_S	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	33.6	33.6	0.0	0% - 20%
ED008: Exchangeable Cations (QC Lot: 2137370)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	ED008: Exchangeable Sodium Percent	----	0.1	%	46.2	46.6	0.9	0% - 20%
		ED008: Exchangeable Calcium	----	0.1	meq/100g	15.7	16.5	4.9	0% - 20%
		ED008: Exchangeable Magnesium	----	0.1	meq/100g	10.6	11.2	5.8	0% - 20%
		ED008: Exchangeable Potassium	----	0.1	meq/100g	5.9	6.2	4.7	0% - 20%
		ED008: Exchangeable Sodium	----	0.1	meq/100g	27.7	29.6	6.8	0% - 20%
		ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	<0.2	0.0	No Limit
		ED008: Cation Exchange Capacity	----	0.1	meq/100g	59.9	63.5	5.9	0% - 20%
EB1201573-009	NAR_WTP(3C)_SOIL_S	ED008: Exchangeable Sodium Percent	----	0.1	%	58.8	59.1	0.5	0% - 20%
		ED008: Exchangeable Calcium	----	0.1	meq/100g	0.8	0.8	0.0	No Limit
		ED008: Exchangeable Magnesium	----	0.1	meq/100g	11.2	10.8	3.0	0% - 20%
		ED008: Exchangeable Potassium	----	0.1	meq/100g	0.5	0.5	0.0	No Limit
		ED008: Exchangeable Sodium	----	0.1	meq/100g	17.8	17.5	1.5	0% - 20%
		ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	<0.2	0.0	No Limit
		ED008: Cation Exchange Capacity	----	0.1	meq/100g	30.2	29.6	2.1	0% - 20%
ED021: Bicarbonate Extractable Potassium (Colwell) (QC Lot: 2137373)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	700	730	3.8	0% - 20%
EB1201573-009	NAR_WTP(3C)_SOIL_S	ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	<200	0.0	No Limit
ED092: DTPA Extractable Metals (QC Lot: 2137374)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	ED092: Copper	7440-50-8	1.00	mg/kg	1.87	1.88	0.0	No Limit
		ED092: Iron	7439-89-6	1.00	mg/kg	231	231	0.02	0% - 20%
		ED092: Manganese	7439-96-5	1.00	mg/kg	100	100	0.4	0% - 20%
		ED092: Zinc	7440-66-6	1.00	mg/kg	<1.00	<1.00	0.0	No Limit
EB1201573-010	NAR_WTP(4A)_SOIL_S	ED092: Copper	7440-50-8	1.00	mg/kg	2.34	2.46	4.7	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 (%)*
ED092: DTPA Extractable Metals (QC Lot: 2137374) - continued									
EB1201573-010	NAR_WTP(4A)_SOIL_S	ED092: Iron	7439-89-6	1.00	mg/kg	439	404	8.3	0% - 20%
		ED092: Manganese	7439-96-5	1.00	mg/kg	38.8	40.5	4.4	0% - 20%
		ED092: Zinc	7440-66-6	1.00	mg/kg	1.67	1.74	4.2	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2136948)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	290	220	# 29.3	0% - 20%
		EG005T: Chromium	7440-47-3	2	mg/kg	18	14	23.6	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	8	6	33.2	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	8	6	27.6	No Limit
		EG005T: Strontium	7440-24-6	2	mg/kg	22	17	22.2	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7	<5	39.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	8	6	18.7	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	314	256	# 20.0	0% - 20%
		EG005T: Vanadium	7440-62-2	5	mg/kg	33	28	19.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	14	10	34.8	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EB1201573-011	NAR_WTP(4B)_SOIL_S	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	150	130	11.0	0% - 50%
		EG005T: Chromium	7440-47-3	2	mg/kg	12	10	22.4	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	3	3	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	3	3	0.0	No Limit
		EG005T: Strontium	7440-24-6	2	mg/kg	15	14	12.2	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
		EG005T: Lead	7439-92-1	5	mg/kg	5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	72	59	19.9	0% - 50%
		EG005T: Vanadium	7440-62-2	5	mg/kg	29	24	17.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2136949)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EB1201573-011	NAR_WTP(4B)_SOIL_S	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EK040S: Fluoride Soluble (QC Lot: 2137329)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EK040S: Fluoride	16984-48-8	1	mg/kg	<1	<1	0.0	No Limit
EB1201573-010	NAR_WTP(4A)_SOIL_S	EK040S: Fluoride	16984-48-8	1	mg/kg	<1	<1	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 2137330)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	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 (%)*
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 2137330) - continued									
EB1201573-010	NAR_WTP(4A)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.5	<0.5	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 2137385)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	1130	950	17.5	0% - 20%
EB1201573-011	NAR_WTP(4B)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	760	710	7.7	0% - 20%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 2137387)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EK067G: Total Phosphorus as P	----	2	mg/kg	169	177	4.4	0% - 20%
EB1201573-011	NAR_WTP(4B)_SOIL_S	EK067G: Total Phosphorus as P	----	2	mg/kg	129	134	4.4	0% - 20%
EK080: Bicarbonate Extractable Phosphorus (Colwell) (QC Lot: 2136856)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EK080: Bicarbonate Ext. P (Colwell)	----	2	mg/kg	9	9	0.0	No Limit
EB1201573-010	NAR_WTP(4A)_SOIL_S	EK080: Bicarbonate Ext. P (Colwell)	----	2	mg/kg	4	4	0.0	No Limit
EP003: Total Organic Carbon (TOC) in Soil (QC Lot: 2139361)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP003: Total Organic Carbon	----	0.02	%	1.84	1.94	5.0	0% - 20%
EB1201573-011	NAR_WTP(4B)_SOIL_S	EP003: Total Organic Carbon	----	0.02	%	1.59	1.59	0.0	0% - 20%
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2136880)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 2136880)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 2136880)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 2136880)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	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 (%)*
EP074D: Fumigants (QC Lot: 2136880) - continued									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2136880)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 2136880)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	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 (%)*
EP074F: Halogenated Aromatic Compounds (QC Lot: 2136880) - continued									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 2136880)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074H: Naphthalene (QC Lot: 2136880)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP074: Naphthalene	91-20-3	5	mg/kg	<5	<5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2136896)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	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
		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
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EB1201573-011	NAR_WTP(4B)_SOIL_S	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

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: 2136896) - continued									
EB1201573-011	NAR_WTP(4B)_SOIL_S	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
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075A: Phenolic Compounds (QC Lot: 2136971)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2136971)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Benzo(g.h.i)perylene	191-24-2	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 (%)*
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2136971) - continued									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.0	No Limit
EP075C: Phthalate Esters (QC Lot: 2136971)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0	<5.0	0.0	No Limit
EP075D: Nitrosamines (QC Lot: 2136971)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 2136971)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075: 2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
EP075F: Haloethers (QC Lot: 2136971)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: Bis(2-chloroethyl) ether	111-44-4	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 (%)*
EP075F: Haloethers (QC Lot: 2136971) - continued									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 2136971)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.0	No Limit
EP075H: Anilines and Benzidines (QC Lot: 2136971)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 2136971)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4.4`-DDT	50-29-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
EP075J: Organophosphorus Pesticides (QC Lot: 2136971)									

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 (%)*
EP075J: Organophosphorus Pesticides (QC Lot: 2136971) - continued									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2136879)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2136882)									
EB1201573-002	NAR_WTP(1B)_SOIL_S	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EB1201573-013	NAR_WTP(5A)_SOIL_S	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2136895)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP071: C15 - C28 Fraction	----	100	mg/kg	160	330	71.7	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	100	260	85.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	90	60.5	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	260	680	# 89.4	0% - 50%
EB1201573-011	NAR_WTP(4B)_SOIL_S	EP071: C15 - C28 Fraction	----	100	mg/kg	120	<100	14.1	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: C10 - C36 Fraction (sum)	----	50	mg/kg	120	<50	82.4	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2136879)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2136882)									
EB1201573-002	NAR_WTP(1B)_SOIL_S	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	0.0	No Limit
EB1201573-013	NAR_WTP(5A)_SOIL_S	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
		EP080: C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2136895)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP071: >C16 - C34 Fraction	----	100	mg/kg	220	500	76.5	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	140	35.4	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	120	79.1	No Limit
EB1201573-011	NAR_WTP(4B)_SOIL_S	EP071: >C16 - C34 Fraction	----	100	mg/kg	170	<100	51.2	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	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 (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2136895) - continued									
EB1201573-011	NAR_WTP(4B)_SOIL_S	EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 2136879)									
EB1201573-001	NAR_WTP(1A)_SOIL_S	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	----	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 2136882)									
EB1201573-002	NAR_WTP(1B)_SOIL_S	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	----	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EB1201573-013	NAR_WTP(5A)_SOIL_S	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Sum of BTEX	----	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA002 : pH (Soils) (QCLot: 2137327)								
EA002: pH Value	----	0.1	pH Unit	----	5.2 pH Unit	99.2	94	103
EA010: Conductivity (QCLot: 2137328)								
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	196 µS/cm	98.0	83	110
EA029-C: Sulfur Trail (QCLot: 2137259)								
EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.02	.038 % S	117	80	120
ED008: Exchangeable Cations (QCLot: 2137370)								
ED008: Exchangeable Calcium	----	0.1	meq/100g	<0.2	1.4 meq/100g	108	70	130
ED008: Exchangeable Magnesium	----	0.1	meq/100g	<0.2	0.66 meq/100g	93.8	70	130
ED008: Exchangeable Potassium	----	0.1	meq/100g	<0.2	0.2 meq/100g	99.7	70	130
ED008: Exchangeable Sodium	----	0.1	meq/100g	<0.2	0.15 meq/100g	99.3	70	130
ED008: Exchangeable Aluminium	----	0.1	meq/100g	<0.2	----	----	----	----
ED008: Exchangeable Sodium Percent	----	0.1	%	<0.2	----	----	----	----
ED008: Cation Exchange Capacity	----	0.1	meq/100g	<0.2	2.4 meq/100g	103	70	130
ED021: Bicarbonate Extractable Potassium (Colwell) (QCLot: 2137373)								
ED021: Bicarbonate Extractable K (Colwell)	----	10	mg/kg	<200	----	----	----	----
ED092: DTPA Extractable Metals (QCLot: 2137374)								
ED092: Copper	7440-50-8	1	mg/kg	<1.00	6.758 mg/kg	76.8	70	130
ED092: Iron	7439-89-6	1	mg/kg	<1.00	0.937 mg/kg	87.3	70	130
ED092: Manganese	7439-96-5	1	mg/kg	<1.00	1 mg/kg	75.7	70	130
ED092: Zinc	7440-66-6	1	mg/kg	<1.00	31.948 mg/kg	77.2	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2136948)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.11 mg/kg	96.8	90	130
EG005T: Barium	7440-39-3	10	mg/kg	<10	137.41 mg/kg	92.4	91	127
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.51 mg/kg	97.3	94	125
EG005T: Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.76 mg/kg	99.6	82	124
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.93 mg/kg	95.4	89	126
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	24.49 mg/kg	115	87	125
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.68 mg/kg	96.5	89	125
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.76 mg/kg	93.8	83	123
EG005T: Manganese	7439-96-5	5	mg/kg	<5	135.6 mg/kg	90.3	88	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	98.0	86	123
EG005T: Strontium	7440-24-6	2	mg/kg	<2	60.42 mg/kg	95.2	90	122
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	34.03 mg/kg	96.6	92	130

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005T: Total Metals by ICP-AES (QCLot: 2136948) - continued								
EG005T: Zinc	7440-66-6	5	mg/kg	<5	103.88 mg/kg	94.9	86	124
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2136949)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	1.34 mg/kg	88.3	73	127
EK040S: Fluoride Soluble (QCLot: 2137329)								
EK040S: Fluoride	16984-48-8	1.0	mg/kg	<1	50 mg/kg	101	85	115
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 2137330)								
EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.1	2.5 mg/kg	106	72	124
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 2137385)								
EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	<20	534 mg/kg	77.5	70	118
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 2137387)								
EK067G: Total Phosphorus as P	----	2	mg/kg	<2	75 mg/kg	81.2	74	130
EK080: Bicarbonate Extractable Phosphorus (Colwell) (QCLot: 2136856)								
EK080: Bicarbonate Ext. P (Colwell)	----	100	mg/kg	<100	----	----	----	----
EP003: Total Organic Carbon (TOC) in Soil (QCLot: 2139361)								
EP003: Total Organic Carbon	----	0.02	%	<0.02	100 %	101	70	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2136880)								
EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	106	64.5	114.25
EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	98.3	65.5	114.75
EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	114	62.5	114.25
EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	107	58.5	117.25
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	101	62	110
EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	106	62	114
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	94.5	66.5	113.25
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	82.5	61.5	113.25
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	83.2	68.5	110.25
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	83.7	67	111.5
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	85.7	68	110.5
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	82.9	66.5	110.25
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	87.1	66.5	112.25
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	83.8	66	109.5
EP074B: Oxygenated Compounds (QCLot: 2136880)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	80.6	64	130
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	102	60	130
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	93.1	55.5	111.75
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	70.4	57	115.5
EP074C: Sulfonated Compounds (QCLot: 2136880)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074C: Sulfonated Compounds (QCLot: 2136880) - continued								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	75.6	61.5	126.75
EP074D: Fumigants (QCLot: 2136880)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	84.7	51	129.5
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	88.2	59	116
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	2 mg/kg	78.2	57.5	113.75
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	2 mg/kg	86.7	55	117
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	93.0	58	117.5
EP074E: Halogenated Aliphatic Compounds (QCLot: 2136880)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	116	84.5	126.75
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	125	67	128.5
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	124	66.5	131.75
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	65.3	56.5	133.25
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	# 128	71.5	120.75
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	76.2	62.5	132.25
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	81.8	67	125.5
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	123	56.5	132.75
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	89.5	57	123.5
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	84.2	54.5	124.75
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	84.8	57	123.5
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	86.9	63.5	117.75
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	82.3	63.5	115.75
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	91.3	59.5	121.75
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	88.7	61.5	118.75
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	94.3	66.5	112.75
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	85.0	62	116
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	82.6	63	116
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	103	64	114
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	101	74	125.5
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	94.4	65	111.5
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	66.6	48	131
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	122	49	130.5
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	86.1	62	116
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	71.2	49	127.5
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	68.6	42.5	115.75
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	96.7	53.5	134.75
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	81.7	34	144
EP074F: Halogenated Aromatic Compounds (QCLot: 2136880)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	86.2	50	124
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	91.8	68	109.5

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074F: Halogenated Aromatic Compounds (QCLot: 2136880) - continued								
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	85.2	63	113
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	81.8	61	113
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	86.3	65	110.5
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	86.8	64	110
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	82.3	66	109.5
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	83.5	60	118.5
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	91.9	58	119
EP074G: Trihalomethanes (QCLot: 2136880)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	91.4	66	112
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	95.6	56	116.5
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	92.2	62	113.5
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	111	53	122.5
EP074H: Naphthalene (QCLot: 2136880)								
EP074: Naphthalene	91-20-3	5	mg/kg	<5	1 mg/kg	89.0	62.5	108.75
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2136896)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	111	66	114
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	103	58	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	114	60	114
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	94.8	61	111
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	# 122	60	112
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	104	65	110
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	108	64	111
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	115	64	136
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	109	56	115
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	103	57	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	107	44	124
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	104	48	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	108	50	116
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	110	47	130
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	111	41	129
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	109	45	128
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
EP075A: Phenolic Compounds (QCLot: 2136971)								
EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	0.25 mg/kg	75.8	44	105
EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	0.25 mg/kg	78.7	44	115
EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	0.25 mg/kg	83.7	47.8	104
EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	0.5 mg/kg	65.3	42	118
EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	0.25 mg/kg	84.6	48.8	112

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report		
					Spike	Spike Recovery (%)	Recovery Limits (%)
				Result	Concentration	LCS	Low	High
EP075A: Phenolic Compounds (QCLot: 2136971) - continued								
EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	0.25 mg/kg	74.0	20	104
EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	0.25 mg/kg	80.4	58.2	104
EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	0.25 mg/kg	78.4	56.4	109
EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	0.25 mg/kg	82.2	68.8	115
EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	0.25 mg/kg	82.6	59.6	112
EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	0.25 mg/kg	76.3	61.8	113
EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	0.5 mg/kg	34.6	12.8	100
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2136971)								
EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	76.8	50	105
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	0.25 mg/kg	78.9	56.7	105
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	0.25 mg/kg	80.9	57.3	108
EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	80.1	55	106
EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	82.5	56	111
EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	86.9	63	115
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	84.2	60	102
EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	83.4	59	106
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	83.5	57	110
EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	82.2	61	121
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	0.25 mg/kg	83.1	65.8	110
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	75.5	57.9	116
EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	76.8	59.4	114
EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	0.5 mg/kg	83.7	57.7	127
EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	0.25 mg/kg	77.0	30	115
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	83.0	53.5	109
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	0.25 mg/kg	75.9	45.6	102
EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	102	50	121
EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	101	43	121
EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	105	50	121
EP075C: Phthalate Esters (QCLot: 2136971)								
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	0.25 mg/kg	82.0	58	109
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	0.25 mg/kg	87.3	60.1	108
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	0.25 mg/kg	91.1	62.6	107
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	0.25 mg/kg	78.0	64.3	98
EP075: bis(2-ethylhexyl) phthalate	117-81-7	2	mg/kg	<2.0	----	----	----	----
		5	mg/kg	----	0.25 mg/kg	82.4	56.9	126
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	0.25 mg/kg	79.4	52	106
EP075D: Nitrosamines (QCLot: 2136971)								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	0.25 mg/kg	57.4	42	109

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075D: Nitrosamines (QCLot: 2136971) - continued								
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	0.25 mg/kg	75.6	44	114
EP075: N-Nitrosopyrrolidine	930-55-2	1	mg/kg	<1.0	0.25 mg/kg	81.5	55.6	113
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	0.25 mg/kg	80.2	55	112
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.9	58.1	101
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	0.25 mg/kg	80.9	58.4	104
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	0.25 mg/kg	81.2	59.3	107
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1	mg/kg	<1.0	0.5 mg/kg	85.1	51.8	108
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	0.25 mg/kg	44.9	10	130
EP075E: Nitroaromatics and Ketones (QCLot: 2136971)								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	0.25 mg/kg	88.0	47	108
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	0.25 mg/kg	76.5	48	104
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	0.25 mg/kg	76.5	51	109
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	0.25 mg/kg	80.0	56	102
EP075: 2.6-Dinitrotoluene	606-20-2	1	mg/kg	<1.0	0.25 mg/kg	82.6	58	109
EP075: 2.4-Dinitrotoluene	121-14-2	1	mg/kg	<1.0	0.25 mg/kg	86.1	55	109
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	0.25 mg/kg	20.8	14.9	100
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	0.25 mg/kg	122	35.5	130
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	0.25 mg/kg	73.4	38.1	108
EP075: Azobenzene	103-33-3	0.5	mg/kg	<0.5	----	----	----	----
		1	mg/kg	----	0.25 mg/kg	84.0	61.3	103
EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	0.25 mg/kg	81.2	37	113
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	0.25 mg/kg	86.5	52.7	112
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	0.25 mg/kg	# 35.4	42	110
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	0.25 mg/kg	76.7	55.6	114
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	0.25 mg/kg	84.6	57.3	93
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	0.25 mg/kg	74.7	55.2	108
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	0.25 mg/kg	80.5	55	105
EP075F: Haloethers (QCLot: 2136971)								
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	0.25 mg/kg	77.2	42	106
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	0.25 mg/kg	80.0	58.4	101
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	0.25 mg/kg	86.0	58.9	102
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	85.4	60.6	109
EP075G: Chlorinated Hydrocarbons (QCLot: 2136971)								
EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	0.25 mg/kg	64.1	47.8	101
EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	0.25 mg/kg	65.2	48.7	100
EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	0.25 mg/kg	65.8	37	109
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	0.25 mg/kg	61.4	43.9	107
EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	0.25 mg/kg	74.7	48	104

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075G: Chlorinated Hydrocarbons (QCLot: 2136971) - continued								
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	0.25 mg/kg	70.2	40	115
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	0.25 mg/kg	73.8	44	111
EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	0.25 mg/kg	68.8	33	118
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	0.25 mg/kg	76.1	55	107
EP075: Hexachlorobenzene (HCB)	118-74-1	1	mg/kg	<1.0	0.25 mg/kg	81.8	59.2	99.1
EP075H: Anilines and Benzidines (QCLot: 2136971)								
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	0.25 mg/kg	41.1	21	104
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	0.25 mg/kg	34.2	20.3	84
EP075: 2-Nitroaniline	88-74-4	1	mg/kg	<1.0	0.25 mg/kg	87.2	57.4	101
EP075: 3-Nitroaniline	99-09-2	1	mg/kg	<1.0	0.25 mg/kg	59.0	20	103
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	0.25 mg/kg	85.4	57	103
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	0.25 mg/kg	88.4	37.7	121
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	0.25 mg/kg	83.0	59.1	97
EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	0.25 mg/kg	62.0	26.5	86
EP075I: Organochlorine Pesticides (QCLot: 2136971)								
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	0.25 mg/kg	65.1	58.7	109
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	0.25 mg/kg	83.6	59.5	107
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	0.25 mg/kg	79.6	50	102
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	0.25 mg/kg	86.0	52	98.9
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	0.25 mg/kg	82.5	46	97
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	0.25 mg/kg	98.2	59.2	101
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	0.25 mg/kg	86.6	60	89.6
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	0.25 mg/kg	83.4	59.9	99
EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	0.25 mg/kg	82.2	54	92.7
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	0.25 mg/kg	78.1	51	104
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	0.25 mg/kg	85.5	53	100
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	0.25 mg/kg	80.0	65.6	88.4
EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	0.25 mg/kg	82.4	55	97
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	0.25 mg/kg	85.9	47.8	98
EP075: 4.4`-DDT	50-29-3	1	mg/kg	<1.0	0.25 mg/kg	81.2	44	110
EP075J: Organophosphorus Pesticides (QCLot: 2136971)								
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.0	54.5	104
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	0.25 mg/kg	82.6	57	114
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	0.25 mg/kg	84.9	60.5	98.2
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	0.25 mg/kg	87.6	60	93.3
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	0.25 mg/kg	85.7	56.7	103
EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	0.25 mg/kg	89.2	59.3	108
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	0.25 mg/kg	84.3	58	101
EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	0.25 mg/kg	84.5	60.1	99

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075J: Organophosphorus Pesticides (QCLot: 2136971) - continued								
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	0.25 mg/kg	89.1	60.9	95.6
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	0.25 mg/kg	79.0	61	96
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	0.25 mg/kg	77.0	53	115
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2136879)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	16 mg/kg	93.6	71	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2136882)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	16 mg/kg	86.9	71	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2136895)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	312 mg/kg	87.2	65	112
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	500 mg/kg	77.3	76.2	122
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2136879)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	18.5 mg/kg	91.9	71	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2136882)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	18.5 mg/kg	85.3	71	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2136895)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	413 mg/kg	90.9	63	112
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	360 mg/kg	87.9	74	122
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080: BTEXN (QCLot: 2136879)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	91.8	78	121
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	95.4	78	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	101	72	119
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	97.5	61	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	93.8	70	118
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	78.8	77.1	117
EP080: BTEXN (QCLot: 2136882)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	88.0	78	121
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	89.2	78	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	84.6	72	119
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	85.9	61	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	85.0	70	118
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	84.1	77.1	117

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**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2136948)							
EB1201573-002	NAR_WTP(1B)_SOIL_S	EG005T: Arsenic	7440-38-2	50 mg/kg	76.3	70	130
		EG005T: Barium	7440-39-3	50 mg/kg	104	70	130
		EG005T: Beryllium	7440-41-7	5 mg/kg	85.9	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	87.4	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	85.8	70	130
		EG005T: Cobalt	7440-48-4	50 mg/kg	89.8	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	84.4	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	83.2	70	130
		EG005T: Manganese	7439-96-5	50 mg/kg	101	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	87.0	70	130
		EG005T: Vanadium	7440-62-2	50 mg/kg	85.9	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	85.0	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2136949)							
EB1201573-002	NAR_WTP(1B)_SOIL_S	EG035T: Mercury	7439-97-6	5.0 mg/kg	78.9	70	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 2137330)							
EB1201573-002	NAR_WTP(1B)_SOIL_S	EK059G: Nitrite + Nitrate as N (Sol.)	----	10 mg/kg	72.5	70	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 2137385)							
EB1201573-002	NAR_WTP(1B)_SOIL_S	EK061G: Total Kjeldahl Nitrogen as N	----	500 mg/kg	81.8	70	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 2137387)							
EB1201573-002	NAR_WTP(1B)_SOIL_S	EK067G: Total Phosphorus as P	----	100 mg/kg	89.9	70	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2136880)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP074: Benzene	71-43-2	2 mg/kg	96.6	70	130
		EP074: Toluene	108-88-3	2 mg/kg	84.2	70	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 2136880)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP074: 1.1-Dichloroethene	75-35-4	2 mg/kg	93.1	70	130
		EP074: Trichloroethene	79-01-6	2 mg/kg	97.2	70	130
EP074F: Halogenated Aromatic Compounds (QCLot: 2136880)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP074: Chlorobenzene	108-90-7	2 mg/kg	97.3	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2136896)							
EB1201573-002	NAR_WTP(1B)_SOIL_S	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	107	70	130
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	106	70	130
EP075A: Phenolic Compounds (QCLot: 2136971)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP075: Phenol	108-95-2	0.25 mg/kg	76.4	70	130
		EP075: 2-Chlorophenol	95-57-8	0.25 mg/kg	# 68.7	70	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075A: Phenolic Compounds (QCLot: 2136971) - continued							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP075: 2-Nitrophenol	88-75-5	0.25 mg/kg	73.8	70	130
		EP075: 4-Chloro-3-Methylphenol	59-50-7	0.25 mg/kg	74.8	70	130
		EP075: Pentachlorophenol	87-86-5	0.25 mg/kg	65.2	40	130
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2136971)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP075: Acenaphthene	83-32-9	0.25 mg/kg	81.6	70	130
		EP075: Pyrene	129-00-0	0.25 mg/kg	81.2	70	130
EP075D: Nitrosamines (QCLot: 2136971)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP075: N-Nitrosodi-n-propylamine	621-64-7	0.25 mg/kg	80.9	70	130
EP075E: Nitroaromatics and Ketones (QCLot: 2136971)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP075: 2.4-Dinitrotoluene	121-14-2	0.25 mg/kg	# 66.3	70	130
EP075G: Chlorinated Hydrocarbons (QCLot: 2136971)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP075: 1.4-Dichlorobenzene	106-46-7	0.25 mg/kg	# 57.8	70	130
		EP075: 1.2.4-Trichlorobenzene	120-82-1	0.25 mg/kg	# 67.0	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2136879)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP080: C6 - C9 Fraction	----	8 mg/kg	97.2	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2136882)							
EB1201573-003	NAR_WTP(1C)_SOIL_S	EP080: C6 - C9 Fraction	----	8 mg/kg	74.6	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2136895)							
EB1201573-002	NAR_WTP(1B)_SOIL_S	EP071: C10 - C14 Fraction	----	312 mg/kg	85.4	70	130
		EP071: C15 - C28 Fraction	----	500 mg/kg	81.2	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2136879)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP080: C6 - C10 Fraction	----	8 mg/kg	99.9	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2136882)							
EB1201573-003	NAR_WTP(1C)_SOIL_S	EP080: C6 - C10 Fraction	----	8 mg/kg	80.6	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2136895)							
EB1201573-002	NAR_WTP(1B)_SOIL_S	EP071: >C10 - C16 Fraction	----	413 mg/kg	90.1	70	130
		EP071: >C16 - C34 Fraction	----	360 mg/kg	70.8	70	130
EP080: BTEXN (QCLot: 2136879)							
EB1201573-007	NAR_WTP(3A)_SOIL_S	EP080: Benzene	71-43-2	2 mg/kg	92.3	70	130
		EP080: Toluene	108-88-3	2 mg/kg	89.5	70	130
EP080: BTEXN (QCLot: 2136882)							
EB1201573-003	NAR_WTP(1C)_SOIL_S	EP080: Benzene	71-43-2	2 mg/kg	101	70	130
		EP080: Toluene	108-88-3	2 mg/kg	103	70	130

ALS Group
Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EB1201573**	Page	: 1 of 30
Client	: **SANTOS LTD**	Laboratory	: Environmental Division Brisbane
Contact	: REMALIA SHARPLIN	Contact	: Jodie Hancock
Address	: C/- GOLDER ASSOCIATES PO BOX 1734 MILTON QLD AUSTRALIA 4064	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: rsharplin@golder.com.au	E-mail	: Jodie.Hancock@alsenviro.com
Telephone	: +61 07 3721 5400	Telephone	: +61 7 3243 7128
Facsimile	: +61 07 3721 5401	Facsimile	: +61 7 3243 7218
Project	: 117626001	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 117626001		
C-O-C number	: ----	Date Samples Received	: 19-JAN-2012
Sampler	: Rita Bonetti	Issue Date	: 30-JAN-2012
Site	: Narrabri		
		No. of samples received	: 15
Quote number	: BN/107/11 V3	No. of samples analysed	: 15

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
- Descriptive Results
- Surrogate Control Limits

NATA
WORLD RECOGNISED ACCREDITATION

NATA Accredited Laboratory 825

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*
		Newcastle
Andrew Matheson	Senior Organic Instrument Chemist	Brisbane Inorganics
Andrew Matheson	Senior Organic Instrument Chemist	Brisbane Organics
Jonathon Angell	Inorganic Coordinator	Stafford Minerals - AY
Matt Frost	Senior Organic Chemist	Brisbane Organics
Myles.Clark	Acid Sulfate Soils Supervisor	Brisbane Acid Sulphate Soils
Stephen Hislop	Senior Inorganic Chemist	Brisbane External Subcontracting
Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics

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 insuffient 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

- **ASS: EA029 (SPOCAS): Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from kg/t dry weight to kg/m3 in-situ soil, multiply reported results x wet bulk density of soil in t/m3.**
- **ED021 (Bicarbonate Extractable K - Colwell) - The LOR for samples in workorder EB1201573 has been raised due to matrix interference.**
- **EG005T (Total Metals) Sample EB1201573-001(NAR_WTP(1A)_SOIL_S) shows poor duplicate results due to sample heterogeneity. Confirmed by visual inspection.**
- **EK059G(Nitrite and Nitrate as NOx):The LOR for some samples have been raised due to matrix interference.**
- **EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs**
- **Field Observations and Measurements submitted to the laboratory by external samplers and appearing in this report are not covered by ALS' NATA Accreditation.**
- **SVOC: Sample 'NAR_WTP(3A)_SOIL_S' shows poor matrix spike recovery due to matrix interference.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
EA150: Particle Sizing									
+75µm	----	1	%		56	67	50	67	70
+150µm	----	1	%		50	58	43	60	60
+300µm	----	1	%		32	37	29	38	36
+425µm	----	1	%		21	26	21	24	23
+600µm	----	1	%		13	17	14	12	13
+1180µm	----	1	%		4	7	7	2	3
+2.36mm	----	1	%		2	4	4	<1	<1
+4.75mm	----	1	%		<1	2	1	<1	<1
+9.5mm	----	1	%		<1	<1	<1	<1	<1
+19.0mm	----	1	%		<1	<1	<1	<1	<1
+37.5mm	----	1	%		<1	<1	<1	<1	<1
+75.0mm	----	1	%		<1	<1	<1	<1	<1
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		9.5	9.1	7.8	9.5	9.1
EA010: Conductivity									
Electrical Conductivity @ 25°C	----	1	µS/cm		824	292	265	433	360
EA029-C: Sulfur Trail									
KCl Extractable Sulfur (23Ce)	----	0.02	% S		<0.02	<0.02	<0.02	<0.02	<0.02
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		27.3	16.4	9.6	9.5	11.8
EA150: Soil Classification based on Particle Size									
Fines (<75 µm)	----	1	%		44	33	50	33	30
Sand (>75 µm)	----	1	%		55	63	46	66	69
Gravel (>2mm)	----	1	%		2	4	3	1	<1
Cobbles (>6cm)	----	1	%		<1	<1	<1	<1	<1
ED008: Exchangeable Cations									
Exchangeable Calcium	----	0.1	meq/100g		15.7	1.9	<0.2	7.0	1.2
Exchangeable Magnesium	----	0.1	meq/100g		10.6	6.0	38.2	7.0	4.6
Exchangeable Potassium	----	0.1	meq/100g		5.9	1.6	0.4	1.7	0.9
Exchangeable Sodium	----	0.1	meq/100g		27.7	9.9	7.7	17.9	11.9
Exchangeable Aluminium	----	0.1	meq/100g		<0.2	<0.2	<0.2	<0.2	<0.2
Exchangeable Sodium Percent	----	0.1	%		46.2	51.1	16.5	53.3	63.8
Cation Exchange Capacity	----	0.1	meq/100g		59.9	19.4	46.4	33.6	18.6
ED021: Bicarbonate Extractable Potassium (Colwell)									
Bicarbonate Extractable K (Colwell)	----	10	mg/kg		700	<200	<200	<200	<200

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
ED092: DTPA Extractable Metals									
Copper	7440-50-8	1.00	mg/kg		**1.87**	<1.00	<1.00	<1.00	<1.00
Iron	7439-89-6	1.00	mg/kg		**231**	**90.4**	**47.2**	**200**	**208**
Manganese	7439-96-5	1.00	mg/kg		**100**	**9.97**	<1.00	**105**	**5.68**
Zinc	7440-66-6	1.00	mg/kg		<1.00	<1.00	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		**290**	**40**	**50**	**220**	**40**
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg		<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**18**	**8**	**14**	**10**	**11**
Cobalt	7440-48-4	2	mg/kg		**8**	<2	<2	**5**	<2
Copper	7440-50-8	5	mg/kg		**7**	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg		**8**	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg		**314**	**27**	**12**	**299**	**19**
Nickel	7440-02-0	2	mg/kg		**8**	**2**	**3**	**4**	<2
Strontium	7440-24-6	2	mg/kg		**22**	**3**	<2	**20**	**2**
Vanadium	7440-62-2	5	mg/kg		**33**	**21**	**31**	**20**	**31**
Zinc	7440-66-6	5	mg/kg		**14**	<5	<5	**7**	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride									
Fluoride	16984-48-8	1	mg/kg		<1	<1	<1	<1	<1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg		<0.5	<0.5	**0.6**	**0.9**	<0.5
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	20	mg/kg		**1130**	**420**	**280**	**1220**	**300**
EK062: Total Nitrogen as N (TKN + NOx)									
^ **Total Nitrogen as N**	----	20	mg/kg		**1130**	**420**	**280**	**1220**	**300**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	2	mg/kg		**169**	**80**	**48**	**130**	**81**
EK080: Bicarbonate Extractable Phosphorus (Colwell)									
Bicarbonate Ext. P (Colwell)	----	2	mg/kg		**9**	**3**	<2	**9**	**6**
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%		**1.84**	**0.50**	**0.34**	**1.64**	**0.38**

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
EP003: Total Organic Carbon (TOC) in Soil - Continued									
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
Styrene	100-42-5	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg		<0.5	----	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg		<0.5	----	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg		<0.5	----	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg		<0.5	----	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg		<0.5	----	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg		<0.5	----	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg		<0.5	----	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg		<0.5	----	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg		<5	----	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg		<5	----	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg		<5	----	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg		<5	----	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg		<0.5	----	----	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg		<0.5	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg		<0.5	----	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg		<0.5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg		<5	----	----	----	----
Chloromethane	74-87-3	5	mg/kg		<5	----	----	----	----
Vinyl chloride	75-01-4	5	mg/kg		<5	----	----	----	----
Bromomethane	74-83-9	5	mg/kg		<5	----	----	----	----
Chloroethane	75-00-3	5	mg/kg		<5	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg		<5	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1-Dichloroethene	75-35-4	0.5	mg/kg		<0.5	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg		<0.5	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		<0.5	----	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg		<0.5	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		<0.5	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		<0.5	----	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		<0.5	----	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg		<0.5	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg		<0.5	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg		<0.5	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		<0.5	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg		<0.5	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg		<0.5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<0.5	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<0.5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<0.5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<0.5	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	----	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<0.5	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg		<0.5	----	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg		<0.5	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	----	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		<0.5	----	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		<0.5	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
				EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
EP074G: Trihalomethanes - Continued								
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	----	----	----	----
EP074H: Naphthalene								
Naphthalene	91-20-3	5	mg/kg	<5	----	----	----	----
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	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachlorophenol	87-86-5	1	mg/kg	<1	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
				EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	----	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of PAHs	----	0.5	mg/kg	<0.5	----	----	----	----
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	----	----	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	----	----	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	----	----	----	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	----	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0	----	----	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	----	----	----	----
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0	----	----	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
				EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
EP075D: Nitrosamines - Continued								
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	<1.0	----	----	----	----
Methapyrilene	91-80-5	0.5	mg/kg	<0.5	----	----	----	----
EP075E: Nitroaromatics and Ketones								
2-Picoline	109-06-8	0.5	mg/kg	<0.5	----	----	----	----
Acetophenone	98-86-2	0.5	mg/kg	<0.5	----	----	----	----
Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	----	----	----	----
Isophorone	78-59-1	0.5	mg/kg	<0.5	----	----	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	<1.0	----	----	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	<1.0	----	----	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	----	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	----	----	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	----	----	----	----
Azobenzene	103-33-3	1	mg/kg	<1	----	----	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	----	----	----	----
Phenacetin	62-44-2	0.5	mg/kg	<0.5	----	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	----	----	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	----	----	----	----
Pronamide	23950-58-5	0.5	mg/kg	<0.5	----	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	----	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	----	----	----	----
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	----	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	----	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	----	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	----	----	----	----
EP075G: Chlorinated Hydrocarbons								
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	----	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	----	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
EP075G: Chlorinated Hydrocarbons - Continued									
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg		<2.5	----	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg		<1.0	----	----	----	----
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5	mg/kg		<0.5	----	----	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg		<0.5	----	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg		<1.0	----	----	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg		<1.0	----	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg		<0.5	----	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg		<0.5	----	----	----	----
Carbazole	86-74-8	0.5	mg/kg		<0.5	----	----	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg		<0.5	----	----	----	----
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5	mg/kg		<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	mg/kg		<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg		<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	mg/kg		<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	mg/kg		<0.5	----	----	----	----
Aldrin	309-00-2	0.5	mg/kg		<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg		<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg		<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	mg/kg		<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	mg/kg		<0.5	----	----	----	----
Endrin	72-20-8	0.5	mg/kg		<0.5	----	----	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg		<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	mg/kg		<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg		<0.5	----	----	----	----
4.4`-DDT	50-29-3	1.0	mg/kg		<1.0	----	----	----	----
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5	mg/kg		<0.5	----	----	----	----
Dimethoate	60-51-5	0.5	mg/kg		<0.5	----	----	----	----
Diazinon	333-41-5	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg		<0.5	----	----	----	----
Malathion	121-75-5	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
EP075J: Organophosphorus Pesticides - Continued									
Fenthion	55-38-9	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg		<0.5	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg		<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg		<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg		<0.5	----	----	----	----
Ethion	563-12-2	0.5	mg/kg		<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	**90**	<50
C15 - C28 Fraction	----	100	mg/kg		**160**	<100	<100	**280**	<100
C29 - C36 Fraction	----	100	mg/kg		**100**	<100	<100	**160**	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		**260**	<50	<50	**530**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	**110**	<50
>C16 - C34 Fraction	----	100	mg/kg		**220**	<100	<100	**380**	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		**220**	<50	<50	**490**	<50
EP080: BTEXN									
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
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)									
Depth/Depth Range	----	-	mm		**0-50**	**50-100**	**300-400**	**0-50**	**50-100**
Santos Suite	----	-	-		**Suite W**	**Suite W**	**Suite W**	**Suite W**	**Suite W**
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**92.5**	----	----	----	----
Toluene-D8	2037-26-5	0.1	%		**101**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		**104**	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(1A)_SOIL_S	NAR_WTP(1B)_SOIL_S	NAR_WTP(1C)_SOIL_S	NAR_WTP(2A)_SOIL_S	NAR_WTP(2B)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
				EB1201573-001	EB1201573-002	EB1201573-003	EB1201573-004	EB1201573-005
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**87.4**	**73.0**	**81.1**	**84.6**	**78.9**
2-Chlorophenol-D4	93951-73-6	0.1	%	**99.9**	**78.3**	**94.9**	**88.0**	**96.9**
2.4.6-Tribromophenol	118-79-6	0.1	%	**133**	**108**	**96.0**	**121**	**90.5**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**116**	**101**	**106**	**111**	**106**
Anthracene-d10	1719-06-8	0.1	%	**110**	**91.0**	**86.4**	**103**	**80.4**
4-Terphenyl-d14	1718-51-0	0.1	%	**133**	**112**	**112**	**122**	**118**
EP075S: Acid Extractable Surrogates								
2-Fluorophenol	367-12-4	0.1	%	**45.8**	----	----	----	----
Phenol-d6	13127-88-3	0.1	%	**41.7**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**44.8**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**44.4**	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates								
Nitrobenzene-D5	4165-60-0	0.1	%	**41.3**	----	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.1	%	**49.8**	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.1	%	**44.9**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%	**47.1**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**44.1**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**90.6**	**112**	**116**	**113**	**114**
Toluene-D8	2037-26-5	0.1	%	**105**	**118**	**120**	**120**	**122**
4-Bromofluorobenzene	460-00-4	0.1	%	**104**	**110**	**115**	**116**	**111**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
EA150: Particle Sizing									
+75µm	----	1	%		50	17	45	55	26
+150µm	----	1	%		43	16	40	49	22
+300µm	----	1	%		26	11	25	31	15
+425µm	----	1	%		16	8	17	21	10
+600µm	----	1	%		8	5	10	14	6
+1180µm	----	1	%		1	3	3	7	2
+2.36mm	----	1	%		<1	1	1	4	<1
+4.75mm	----	1	%		<1	<1	<1	2	<1
+9.5mm	----	1	%		<1	<1	<1	<1	<1
+19.0mm	----	1	%		<1	<1	<1	<1	<1
+37.5mm	----	1	%		<1	<1	<1	<1	<1
+75.0mm	----	1	%		<1	<1	<1	<1	<1
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		8.8	9.7	9.8	9.2	9.5
EA010: Conductivity									
Electrical Conductivity @ 25°C	----	1	µS/cm		424	1450	837	352	1270
EA029-C: Sulfur Trail									
KCl Extractable Sulfur (23Ce)	----	0.02	% S		<0.02	<0.02	<0.02	<0.02	<0.02
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		26.2	29.3	34.9	12.8	25.1
EA150: Soil Classification based on Particle Size									
Fines (<75 µm)	----	1	%		50	83	55	45	74
Sand (>75 µm)	----	1	%		50	16	44	51	25
Gravel (>2mm)	----	1	%		<1	1	1	4	1
Cobbles (>6cm)	----	1	%		<1	<1	<1	<1	<1
ED008: Exchangeable Cations									
Exchangeable Calcium	----	0.1	meq/100g		<0.2	23.6	13.4	0.8	8.7
Exchangeable Magnesium	----	0.1	meq/100g		17.0	8.9	7.3	11.2	6.5
Exchangeable Potassium	----	0.1	meq/100g		0.5	5.7	3.9	0.5	2.8
Exchangeable Sodium	----	0.1	meq/100g		9.2	57.5	37.5	17.8	47.4
Exchangeable Aluminium	----	0.1	meq/100g		<0.2	<0.2	<0.2	<0.2	<0.2
Exchangeable Sodium Percent	----	0.1	%		34.1	60.1	60.4	58.8	72.5
Cation Exchange Capacity	----	0.1	meq/100g		26.9	95.6	62.1	30.2	65.3
ED021: Bicarbonate Extractable Potassium (Colwell)									
Bicarbonate Extractable K (Colwell)	----	10	mg/kg		<200	840	800	<200	310

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
				EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
ED092: DTPA Extractable Metals								
Copper	7440-50-8	1.00	mg/kg	<1.00	**2.21**	**1.40**	<1.00	**2.34**
Iron	7439-89-6	1.00	mg/kg	**68.6**	**322**	**186**	**77.3**	**439**
Manganese	7439-96-5	1.00	mg/kg	<1.00	**48.3**	**32.7**	<1.00	**38.8**
Zinc	7440-66-6	1.00	mg/kg	<1.00	**1.09**	<1.00	<1.00	**1.67**
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	**30**	**510**	**360**	**30**	**210**
Beryllium	7440-41-7	1	mg/kg	<1	**1**	<1	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**13**	**25**	**23**	**13**	**14**
Cobalt	7440-48-4	2	mg/kg	**3**	**13**	**6**	**2**	**6**
Copper	7440-50-8	5	mg/kg	<5	**6**	<5	<5	<5
Lead	7439-92-1	5	mg/kg	**6**	**10**	**9**	**5**	**6**
Manganese	7439-96-5	5	mg/kg	<5	**204**	**114**	<5	**101**
Nickel	7440-02-0	2	mg/kg	**3**	**10**	**5**	**4**	**5**
Strontium	7440-24-6	2	mg/kg	<2	**55**	**40**	<2	**19**
Vanadium	7440-62-2	5	mg/kg	**42**	**44**	**68**	**31**	**30**
Zinc	7440-66-6	5	mg/kg	<5	**22**	**8**	<5	**13**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride								
Fluoride	16984-48-8	1	mg/kg	<1	<1	<1	<1	<1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.1	<0.5	<0.5	**0.6**	<0.5
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	**330**	**1340**	**730**	**280**	**890**
EK062: Total Nitrogen as N (TKN + NOx)								
^ **Total Nitrogen as N**	----	20	mg/kg	**330**	**1340**	**730**	**280**	**890**
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	**39**	**226**	**148**	**66**	**119**
EK080: Bicarbonate Extractable Phosphorus (Colwell)								
Bicarbonate Ext. P (Colwell)	----	2	mg/kg	<2	**5**	**12**	<2	**4**
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	**0.40**	**2.14**	**1.70**	**0.51**	**2.72**

Analytical Results

Sub-Matrix: SOIL

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
EP003: Total Organic Carbon (TOC) in Soil - Continued									
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		----	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	<0.5	----	----	----
Styrene	100-42-5	0.5	mg/kg		----	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	<0.5	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg		----	<0.5	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg		----	<0.5	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg		----	<0.5	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg		----	<0.5	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg		----	<0.5	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg		----	<0.5	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg		----	<0.5	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg		----	<0.5	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg		----	<5	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg		----	<5	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg		----	<5	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg		----	<5	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg		----	<0.5	----	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg		----	<0.5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg		----	<0.5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg		----	<0.5	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg		----	<5	----	----	----
Chloromethane	74-87-3	5	mg/kg		----	<5	----	----	----
Vinyl chloride	75-01-4	5	mg/kg		----	<5	----	----	----
Bromomethane	74-83-9	5	mg/kg		----	<5	----	----	----
Chloroethane	75-00-3	5	mg/kg		----	<5	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg		----	<5	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
				EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	<0.5	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	----	<0.5	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	<0.5	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	<0.5	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	<0.5	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	<0.5	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	<0.5	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	<0.5	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	----	<0.5	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	----	<0.5	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	<0.5	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	<0.5	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	<0.5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	<0.5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	<0.5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	<0.5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	<0.5	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	<0.5	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	<0.5	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	<0.5	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	<0.5	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	----	<0.5	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	<0.5	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	<0.5	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	<0.5	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	<0.5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	<0.5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	<0.5	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	<0.5	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
EP074G: Trihalomethanes - Continued									
Dibromochloromethane	124-48-1	0.5	mg/kg		----	<0.5	----	----	----
Bromoform	75-25-2	0.5	mg/kg		----	<0.5	----	----	----
EP074H: Naphthalene									
Naphthalene	91-20-3	5	mg/kg		----	<5	----	----	----
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	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP075A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		----	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		----	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		----	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg		----	<0.5	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		----	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		----	<0.5	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		----	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		----	<0.5	----	----	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		----	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		----	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		----	<0.5	----	----	----
Pentachlorophenol	87-86-5	1	mg/kg		----	<1	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
				EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	----	<0.5	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	----	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	----	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	----	----
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	----	<1	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	----	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg	----	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	----	----	----
^ **Sum of PAHs**	----	0.5	mg/kg	----	<0.5	----	----	----
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	----	<0.5	----	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg	----	<0.5	----	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	----	<0.5	----	----	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	----	<0.5	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	----	<5.0	----	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg	----	<0.5	----	----	----
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	----	<0.5	----	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	----	<0.5	----	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	----	<1.0	----	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	----	<0.5	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
EP075D: Nitrosamines - Continued									
N-Nitrosopiperidine	100-75-4	0.5	mg/kg		----	<0.5	----	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg		----	<0.5	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg		----	<1.0	----	----	----
Methapyrilene	91-80-5	0.5	mg/kg		----	<0.5	----	----	----
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5	mg/kg		----	<0.5	----	----	----
Acetophenone	98-86-2	0.5	mg/kg		----	<0.5	----	----	----
Nitrobenzene	98-95-3	0.5	mg/kg		----	<0.5	----	----	----
Isophorone	78-59-1	0.5	mg/kg		----	<0.5	----	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg		----	<1.0	----	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg		----	<1.0	----	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg		----	<0.5	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg		----	<0.5	----	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg		----	<0.5	----	----	----
Azobenzene	103-33-3	1	mg/kg		----	<1	----	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg		----	<0.5	----	----	----
Phenacetin	62-44-2	0.5	mg/kg		----	<0.5	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg		----	<0.5	----	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg		----	<0.5	----	----	----
Pronamide	23950-58-5	0.5	mg/kg		----	<0.5	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg		----	<0.5	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg		----	<0.5	----	----	----
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg		----	<0.5	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg		----	<0.5	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg		----	<0.5	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg		----	<0.5	----	----	----
EP075G: Chlorinated Hydrocarbons									
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		----	<0.5	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		----	<0.5	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg		----	<0.5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		----	<0.5	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg		----	<0.5	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
				EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
EP075G: Chlorinated Hydrocarbons - Continued								
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	<0.5	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	----	<2.5	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg	----	<0.5	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	----	<1.0	----	----	----
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	----	<0.5	----	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg	----	<0.5	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg	----	<1.0	----	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg	----	<1.0	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg	----	<0.5	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg	----	<0.5	----	----	----
Carbazole	86-74-8	0.5	mg/kg	----	<0.5	----	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	----	<0.5	----	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	----	<0.5	----	----	----
beta-BHC	319-85-7	0.5	mg/kg	----	<0.5	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg	----	<0.5	----	----	----
delta-BHC	319-86-8	0.5	mg/kg	----	<0.5	----	----	----
Heptachlor	76-44-8	0.5	mg/kg	----	<0.5	----	----	----
Aldrin	309-00-2	0.5	mg/kg	----	<0.5	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	----	<0.5	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	----	<0.5	----	----	----
4.4`-DDE	72-55-9	0.5	mg/kg	----	<0.5	----	----	----
Dieldrin	60-57-1	0.5	mg/kg	----	<0.5	----	----	----
Endrin	72-20-8	0.5	mg/kg	----	<0.5	----	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg	----	<0.5	----	----	----
4.4`-DDD	72-54-8	0.5	mg/kg	----	<0.5	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg	----	<0.5	----	----	----
4.4`-DDT	50-29-3	1.0	mg/kg	----	<1.0	----	----	----
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	----	<0.5	----	----	----
Dimethoate	60-51-5	0.5	mg/kg	----	<0.5	----	----	----
Diazinon	333-41-5	0.5	mg/kg	----	<0.5	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	----	<0.5	----	----	----
Malathion	121-75-5	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
					EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
EP075J: Organophosphorus Pesticides - Continued									
Fenthion	55-38-9	0.5	mg/kg		----	<0.5	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg		----	<0.5	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg		----	<0.5	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg		----	<0.5	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg		----	<0.5	----	----	----
Ethion	563-12-2	0.5	mg/kg		----	<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	**140**	<100	<100	**150**
C29 - C36 Fraction	----	100	mg/kg		<100	**130**	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	**270**	<50	<50	**150**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	**240**	<100	<100	**210**
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	**240**	<50	<50	**210**
EP080: BTEXN									
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
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)									
Depth/Depth Range	----	-	mm		**400-500**	**0-50**	**50-100**	**300-400**	**0-50**
Santos Suite	----	-	-		**Suite W**	**Suite W**	**Suite W**	**Suite W**	**Suite W**
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		----	**104**	----	----	----
Toluene-D8	2037-26-5	0.1	%		----	**111**	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		----	**114**	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(2C)_SOIL_S	NAR_WTP(3A)_SOIL_S	NAR_WTP(3B)_SOIL_S	NAR_WTP(3C)_SOIL_S	NAR_WTP(4A)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00	13-JAN-2012 15:00
				EB1201573-006	EB1201573-007	EB1201573-008	EB1201573-009	EB1201573-010
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**72.8**	**70.4**	**67.1**	**63.8**	**51.4**
2-Chlorophenol-D4	93951-73-6	0.1	%	**95.0**	**85.7**	**80.7**	**78.4**	**78.1**
2.4.6-Tribromophenol	118-79-6	0.1	%	**68.8**	**86.2**	**67.8**	**44.2**	**55.1**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**100**	**105**	**97.2**	**94.1**	**89.5**
Anthracene-d10	1719-06-8	0.1	%	**63.5**	**85.5**	**65.8**	**40.2**	**61.4**
4-Terphenyl-d14	1718-51-0	0.1	%	**111**	**124**	**106**	**92.3**	**113**
EP075S: Acid Extractable Surrogates								
2-Fluorophenol	367-12-4	0.1	%	----	**46.5**	----	----	----
Phenol-d6	13127-88-3	0.1	%	----	**45.2**	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	----	**45.2**	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	----	**46.2**	----	----	----
EP075T: Base/Neutral Extractable Surrogates								
Nitrobenzene-D5	4165-60-0	0.1	%	----	**40.9**	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.1	%	----	**50.8**	----	----	----
2-Fluorobiphenyl	321-60-8	0.1	%	----	**42.9**	----	----	----
Anthracene-d10	1719-06-8	0.1	%	----	**46.0**	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	----	**41.5**	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**104**	**103**	**112**	**109**	**108**
Toluene-D8	2037-26-5	0.1	%	**113**	**116**	**125**	**116**	**106**
4-Bromofluorobenzene	460-00-4	0.1	%	**107**	**115**	**115**	**107**	**104**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(4B)_SOIL_S	NAR_WTP(4C)_SOIL_S	NAR_WTP(5A)_SOIL_S	NAR_WTP(5B)_SOIL_S	NAR_WTP(5C)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201573-011	EB1201573-012	EB1201573-013	EB1201573-014	EB1201573-015
EA150: Particle Sizing									
+75µm	----	1	%		49	53	50	66	47
+150µm	----	1	%		42	46	46	59	42
+300µm	----	1	%		25	28	32	39	25
+425µm	----	1	%		16	18	22	26	16
+600µm	----	1	%		9	10	14	14	9
+1180µm	----	1	%		2	3	5	2	2
+2.36mm	----	1	%		<1	<1	2	<1	<1
+4.75mm	----	1	%		<1	<1	<1	<1	<1
+9.5mm	----	1	%		<1	<1	<1	<1	<1
+19.0mm	----	1	%		<1	<1	<1	<1	<1
+37.5mm	----	1	%		<1	<1	<1	<1	<1
+75.0mm	----	1	%		<1	<1	<1	<1	<1
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		9.5	5.7	8.9	8.3	5.6
EA010: Conductivity									
Electrical Conductivity @ 25°C	----	1	µS/cm		715	179	421	275	148
EA029-C: Sulfur Trail									
KCl Extractable Sulfur (23Ce)	----	0.02	% S		<0.02	<0.02	<0.02	<0.02	<0.02
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		33.6	16.9	20.4	21.3	16.0
EA150: Soil Classification based on Particle Size									
Fines (<75 µm)	----	1	%		51	47	50	34	53
Sand (>75 µm)	----	1	%		49	53	48	65	47
Gravel (>2mm)	----	1	%		<1	1	2	1	1
Cobbles (>6cm)	----	1	%		<1	<1	<1	<1	<1
ED008: Exchangeable Cations									
Exchangeable Calcium	----	0.1	meq/100g		5.9	<0.2	11.2	2.5	<0.2
Exchangeable Magnesium	----	0.1	meq/100g		5.6	37.9	13.8	10.2	25.7
Exchangeable Potassium	----	0.1	meq/100g		2.3	0.3	2.9	1.4	0.5
Exchangeable Sodium	----	0.1	meq/100g		35.8	8.8	36.8	26.2	6.1
Exchangeable Aluminium	----	0.1	meq/100g		<0.2	1.3	<0.2	<0.2	4.5
Exchangeable Sodium Percent	----	0.1	%		72.2	18.7	56.9	65.0	18.9
Cation Exchange Capacity	----	0.1	meq/100g		49.6	47.1	64.8	40.3	32.4
ED021: Bicarbonate Extractable Potassium (Colwell)									
Bicarbonate Extractable K (Colwell)	----	10	mg/kg		230	<200	270	<200	<200

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(4B)_SOIL_S	NAR_WTP(4C)_SOIL_S	NAR_WTP(5A)_SOIL_S	NAR_WTP(5B)_SOIL_S	NAR_WTP(5C)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201573-011	EB1201573-012	EB1201573-013	EB1201573-014	EB1201573-015
ED092: DTPA Extractable Metals									
Copper	7440-50-8	1.00	mg/kg		**1.89**	<1.00	**1.23**	<1.00	<1.00
Iron	7439-89-6	1.00	mg/kg		**687**	**206**	**371**	**409**	**197**
Manganese	7439-96-5	1.00	mg/kg		**33.4**	<1.00	**104**	**15.5**	<1.00
Zinc	7440-66-6	1.00	mg/kg		<1.00	<1.00	<1.00	<1.00	<1.00
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		**150**	**30**	**220**	**90**	**70**
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg		<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**12**	**12**	**11**	**8**	**13**
Cobalt	7440-48-4	2	mg/kg		**3**	**2**	**4**	**2**	**3**
Copper	7440-50-8	5	mg/kg		<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg		**5**	**6**	**6**	**5**	**5**
Manganese	7439-96-5	5	mg/kg		**72**	<5	**168**	**31**	<5
Nickel	7440-02-0	2	mg/kg		**3**	**2**	**4**	**3**	**3**
Strontium	7440-24-6	2	mg/kg		**15**	<2	**19**	**5**	<2
Vanadium	7440-62-2	5	mg/kg		**29**	**31**	**24**	**22**	**32**
Zinc	7440-66-6	5	mg/kg		**5**	<5	**8**	<5	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK040: Fluoride									
Fluoride	16984-48-8	1	mg/kg		<1	<1	<1	<1	<1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg		<0.5	**0.1**	**3.0**	<0.5	**0.1**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	20	mg/kg		**760**	**280**	**1720**	**760**	**480**
EK062: Total Nitrogen as N (TKN + NOx)									
^ **Total Nitrogen as N**	----	20	mg/kg		**760**	**280**	**1720**	**760**	**480**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	2	mg/kg		**129**	**32**	**140**	**78**	**58**
EK080: Bicarbonate Extractable Phosphorus (Colwell)									
Bicarbonate Ext. P (Colwell)	----	2	mg/kg		**6**	<2	**8**	<2	**2**
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%		**1.59**	**0.72**	**2.86**	**1.82**	**0.52**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NAR_WTP(4B)_SOIL_S	NAR_WTP(4C)_SOIL_S	NAR_WTP(5A)_SOIL_S	NAR_WTP(5B)_SOIL_S	NAR_WTP(5C)_SOIL_S
				Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
					EB1201573-011	EB1201573-012	EB1201573-013	EB1201573-014	EB1201573-015
EP003: Total Organic Carbon (TOC) in Soil - Continued									
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	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(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	<0.5
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
Dibenz(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
^ **Sum of polycyclic aromatic hydrocarbons**	----	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	**110**	**70**	<50
C15 - C28 Fraction	----	100	mg/kg		**120**	<100	**490**	**380**	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	**290**	**130**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**120**	<50	**890**	**580**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	**130**	**100**	<50
>C16 - C34 Fraction	----	100	mg/kg		**170**	<100	**700**	**430**	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	**100**	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		**170**	<50	**930**	**530**	<50
EP080: BTEXN									
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

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NAR_WTP(4B)_SOIL_S	NAR_WTP(4C)_SOIL_S	NAR_WTP(5A)_SOIL_S	NAR_WTP(5B)_SOIL_S	NAR_WTP(5C)_SOIL_S
			Client sampling date / time	13-JAN-2012 15:00	13-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00	14-JAN-2012 15:00
				EB1201573-011	EB1201573-012	EB1201573-013	EB1201573-014	EB1201573-015
EP080: BTEXN - Continued								
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
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
SAMP02: Observations (performed by external sampler)								
Depth/Depth Range	----	-	mm	50-100	400-500	0-50	100-200	400-500
Santos Suite	----	-	-	Suite W	Suite W	Suite W	Suite W	Suite W
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	47.6	48.2	68.2	50.6	39.2
2-Chlorophenol-D4	93951-73-6	0.1	%	76.4	78.0	84.0	68.1	45.2
2.4.6-Tribromophenol	118-79-6	0.1	%	37.0	53.7	108	81.9	35.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	89.6	88.0	100	79.3	43.2
Anthracene-d10	1719-06-8	0.1	%	115	93.7	82.5	59.8	74.5
4-Terphenyl-d14	1718-51-0	0.1	%	101	82.8	126	97.1	42.2
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	114	111	119	106	105
Toluene-D8	2037-26-5	0.1	%	117	118	121	104	111
4-Bromofluorobenzene	460-00-4	0.1	%	113	109	118	103	104

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
SAMP02: Observations (performed by external sampler)		
SAMP-02: Dominant Horizon	NAR_WTP(1A)_SOIL_S - 13-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(1B)_SOIL_S - 13-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(1C)_SOIL_S - 13-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(2A)_SOIL_S - 13-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(2B)_SOIL_S - 13-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(2C)_SOIL_S - 13-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(3A)_SOIL_S - 13-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(3B)_SOIL_S - 13-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(3C)_SOIL_S - 13-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(4A)_SOIL_S - 13-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(4B)_SOIL_S - 13-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(4C)_SOIL_S - 13-JAN-2012 15:00	B
SAMP-02: Dominant Horizon	NAR_WTP(5A)_SOIL_S - 14-JAN-2012 15:00	O
SAMP-02: Dominant Horizon	NAR_WTP(5B)_SOIL_S - 14-JAN-2012 15:00	A
SAMP-02: Dominant Horizon	NAR_WTP(5C)_SOIL_S - 14-JAN-2012 15:00	B
SAMP-02: Sampling Method	NAR_WTP(1A)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(1B)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(1C)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(2A)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(2B)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(2C)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(3A)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(3B)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(3C)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(4A)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(4B)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(4C)_SOIL_S - 13-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(5A)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(5B)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Sampling Method	NAR_WTP(5C)_SOIL_S - 14-JAN-2012 15:00	H Auger
SAMP-02: Colour	NAR_WTP(1A)_SOIL_S - 13-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(1B)_SOIL_S - 13-JAN-2012 15:00	Grey
SAMP-02: Colour	NAR_WTP(1C)_SOIL_S - 13-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(2A)_SOIL_S - 13-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(2B)_SOIL_S - 13-JAN-2012 15:00	Grey
SAMP-02: Colour	NAR_WTP(2C)_SOIL_S - 13-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(3A)_SOIL_S - 13-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(3B)_SOIL_S - 13-JAN-2012 15:00	Grey
SAMP-02: Colour	NAR_WTP(3C)_SOIL_S - 13-JAN-2012 15:00	Brown

Sub-Matrix: **SOIL**

Method: Compound	*Client sample ID - Client sampling date / time*	*Analytical Results*
SAMP-02: Colour	NAR_WTP(4A)_SOIL_S - 13-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(4B)_SOIL_S - 13-JAN-2012 15:00	Grey
SAMP-02: Colour	NAR_WTP(4C)_SOIL_S - 13-JAN-2012 15:00	Brown
SAMP-02: Colour	NAR_WTP(5A)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(5B)_SOIL_S - 14-JAN-2012 15:00	Black
SAMP-02: Colour	NAR_WTP(5C)_SOIL_S - 14-JAN-2012 15:00	Orange
SAMP-02: Moisture	NAR_WTP(1A)_SOIL_S - 13-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(1B)_SOIL_S - 13-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(1C)_SOIL_S - 13-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(2A)_SOIL_S - 13-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(2B)_SOIL_S - 13-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(2C)_SOIL_S - 13-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(3A)_SOIL_S - 13-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(3B)_SOIL_S - 13-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(3C)_SOIL_S - 13-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(4A)_SOIL_S - 13-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(4B)_SOIL_S - 13-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(4C)_SOIL_S - 13-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(5A)_SOIL_S - 14-JAN-2012 15:00	DRY
SAMP-02: Moisture	NAR_WTP(5B)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Moisture	NAR_WTP(5C)_SOIL_S - 14-JAN-2012 15:00	MOIST
SAMP-02: Odour	NAR_WTP(1A)_SOIL_S - 13-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(1B)_SOIL_S - 13-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(1C)_SOIL_S - 13-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(2A)_SOIL_S - 13-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(2B)_SOIL_S - 13-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(2C)_SOIL_S - 13-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(3A)_SOIL_S - 13-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(3B)_SOIL_S - 13-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(3C)_SOIL_S - 13-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(4A)_SOIL_S - 13-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(4B)_SOIL_S - 13-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(4C)_SOIL_S - 13-JAN-2012 15:00	NONE
SAMP-02: Odour	NAR_WTP(5A)_SOIL_S - 14-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(5B)_SOIL_S - 14-JAN-2012 15:00	SULF
SAMP-02: Odour	NAR_WTP(5C)_SOIL_S - 14-JAN-2012 15:00	NONE

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	52.7	133.7
Toluene-D8	2037-26-5	60.3	131.1
4-Bromofluorobenzene	460-00-4	59.2	126.6
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	34.8	154.5
2-Chlorophenol-D4	93951-73-6	41.9	152.8
2.4.6-Tribromophenol	118-79-6	26.0	156.8
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	33.8	156.5
Anthracene-d10	1719-06-8	36.9	153.1
4-Terphenyl-d14	1718-51-0	41.8	172.2
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	10.0	149.5
Phenol-d6	13127-88-3	18.7	133.6
2-Chlorophenol-D4	93951-73-6	20.8	127.0
2.4.6-Tribromophenol	118-79-6	16.5	143.2
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	10.0	146.8
1.2-Dichlorobenzene-D4	2199-69-1	10.0	153.9
2-Fluorobiphenyl	321-60-8	10.0	128.5
Anthracene-d10	1719-06-8	10.0	136.9
4-Terphenyl-d14	1718-51-0	10.0	156.9
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	52.7	133.7
Toluene-D8	2037-26-5	60.3	131.1
4-Bromofluorobenzene	460-00-4	59.2	126.6

Certificate of Analysis

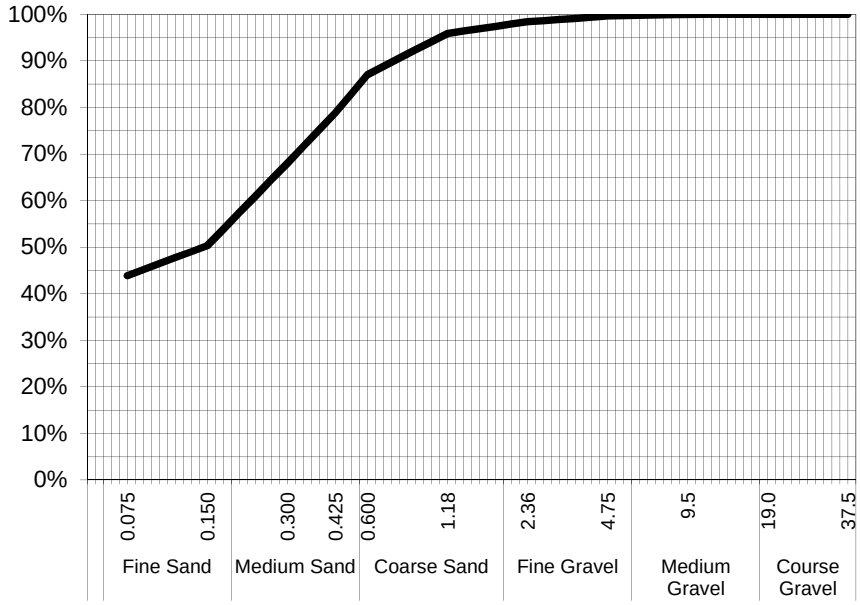
ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-001 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(1A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	98%
1.18	96%
0.600	87%
0.425	79%
0.300	68%
0.150	50%
0.075	44%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.113

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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Hamish Murray
Laboratory Technician, Newcastle
Authorised Signatory

Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

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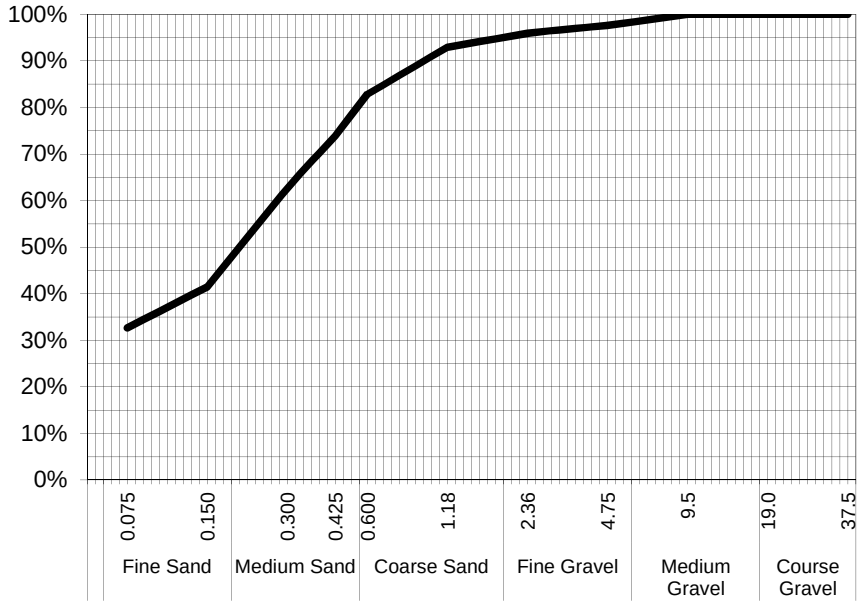
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-002 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(1B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	98%
2.36	96%
1.18	93%
0.600	83%
0.425	74%
0.300	63%
0.150	41%
0.075	33%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

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Hamish Murray
Laboratory Technician, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

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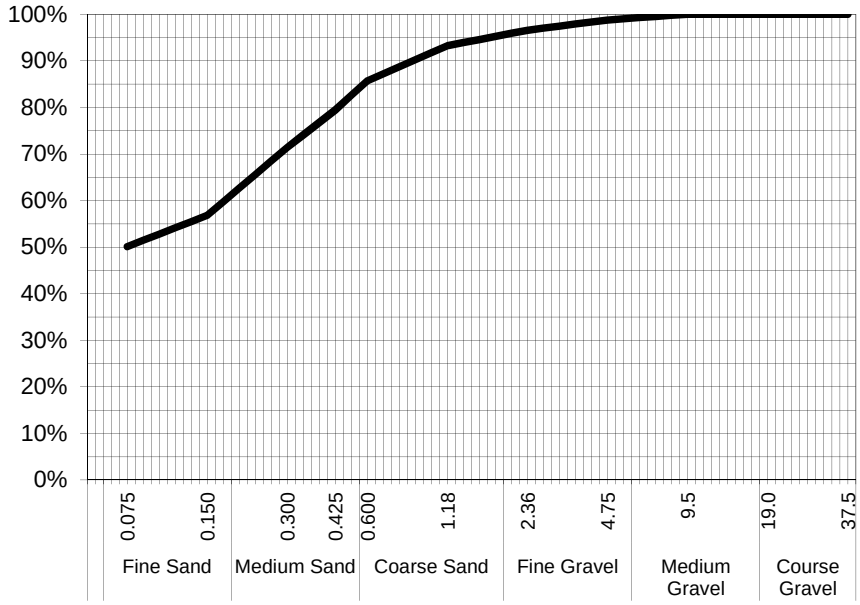
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-003 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(1C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	97%
1.18	93%
0.600	86%
0.425	79%
0.300	71%
0.150	57%
0.075	50%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

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Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

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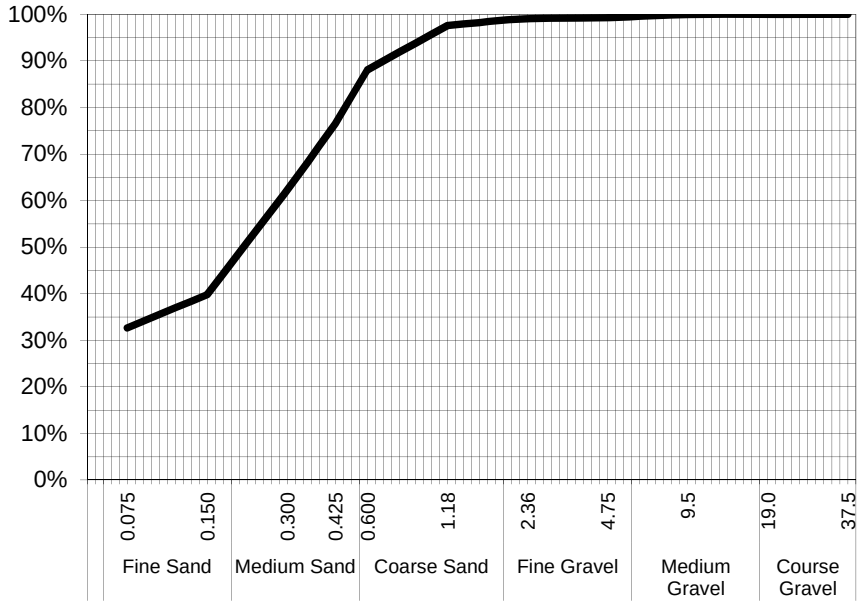
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-004 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(2A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	99%
2.36	99%
1.18	98%
0.600	88%
0.425	76%
0.300	62%
0.150	40%
0.075	33%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

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Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

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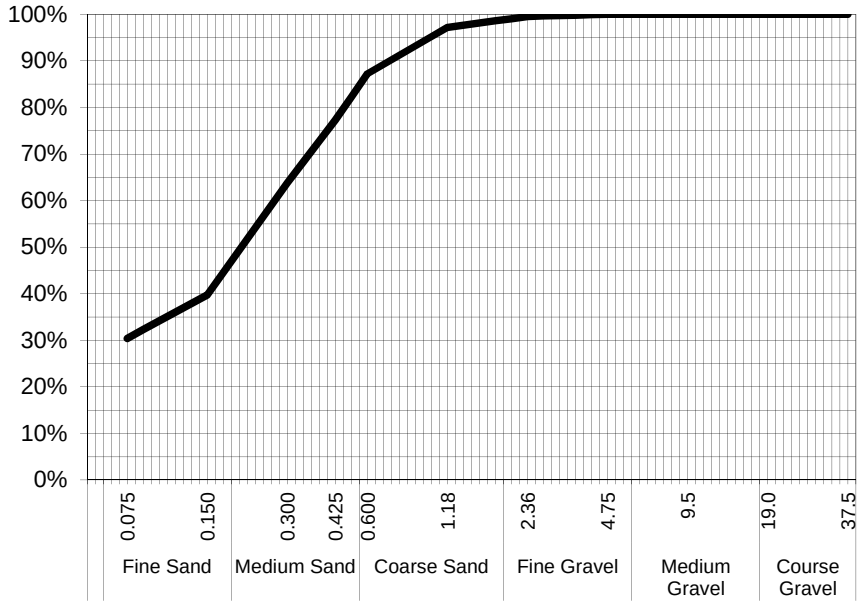
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-005 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(2B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	97%
0.600	87%
0.425	77%
0.300	64%
0.150	40%
0.075	30%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

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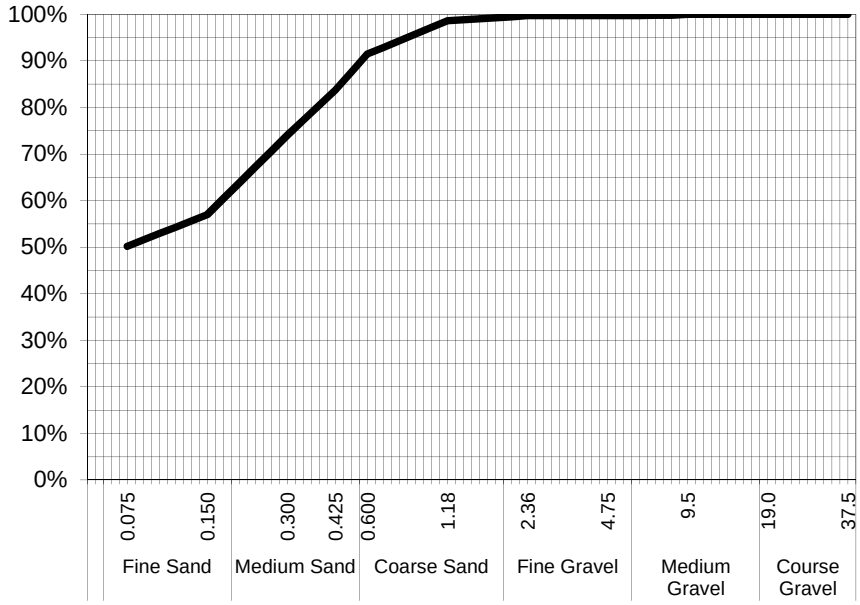
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-006 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(2C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	99%
0.600	91%
0.425	84%
0.300	74%
0.150	57%
0.075	50%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

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Hamish Murray
Laboratory Technician, Newcastle
Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

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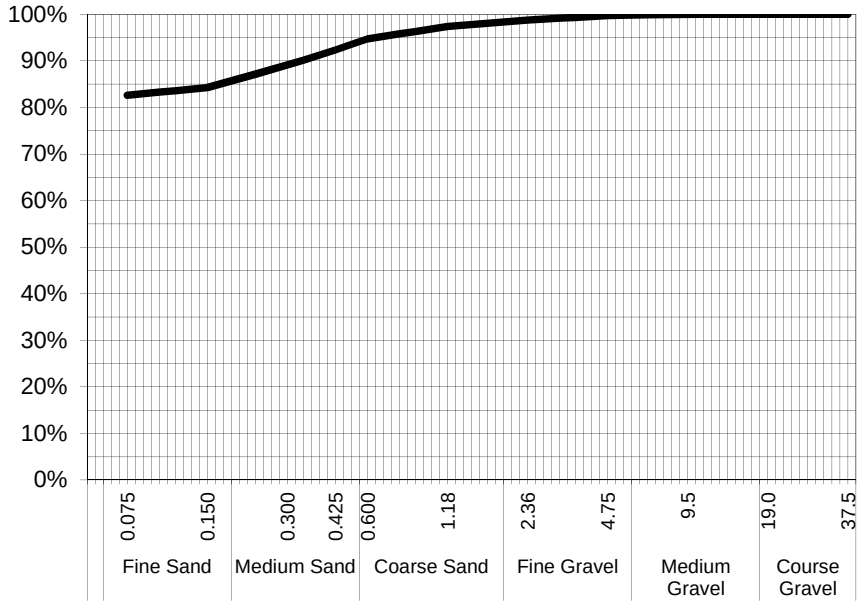
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(3A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	97%
0.600	95%
0.425	92%
0.300	89%
0.150	84%
0.075	83%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, medium fine sand and vegetation

Test Method: AS1289.3.6.1

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Authorised Signatory

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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

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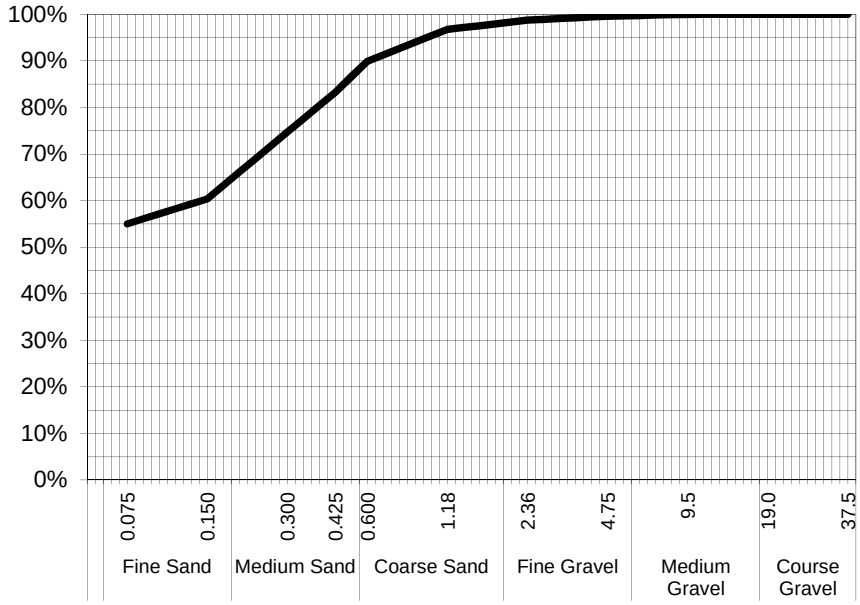
CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-008 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(3B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	97%
0.600	90%
0.425	83%
0.300	75%
0.150	60%
0.075	55%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

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Hamish Murray
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ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

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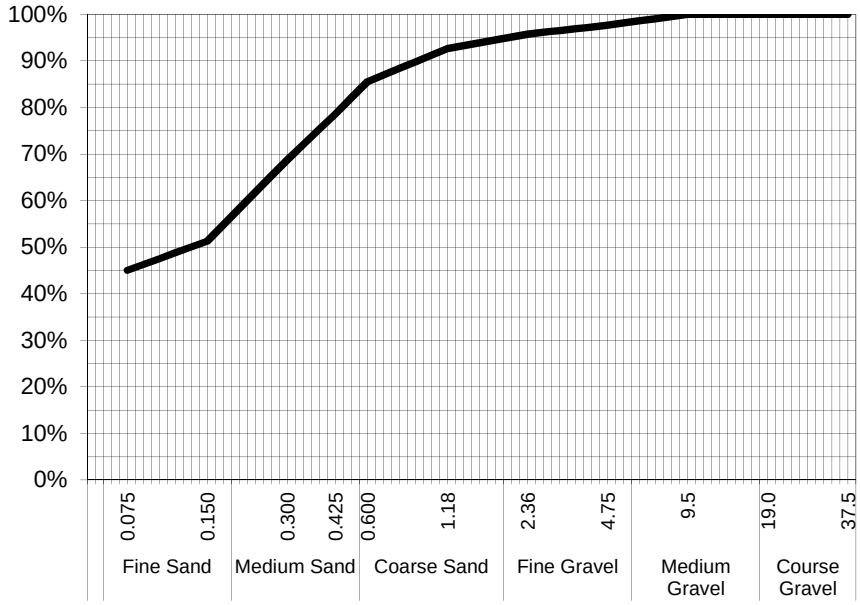
CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-009 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(3C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	98%
2.36	96%
1.18	93%
0.600	85%
0.425	79%
0.300	69%
0.150	51%
0.075	45%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.075

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

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Hamish Murray
Laboratory Technician, Newcastle
Authorised Signatory

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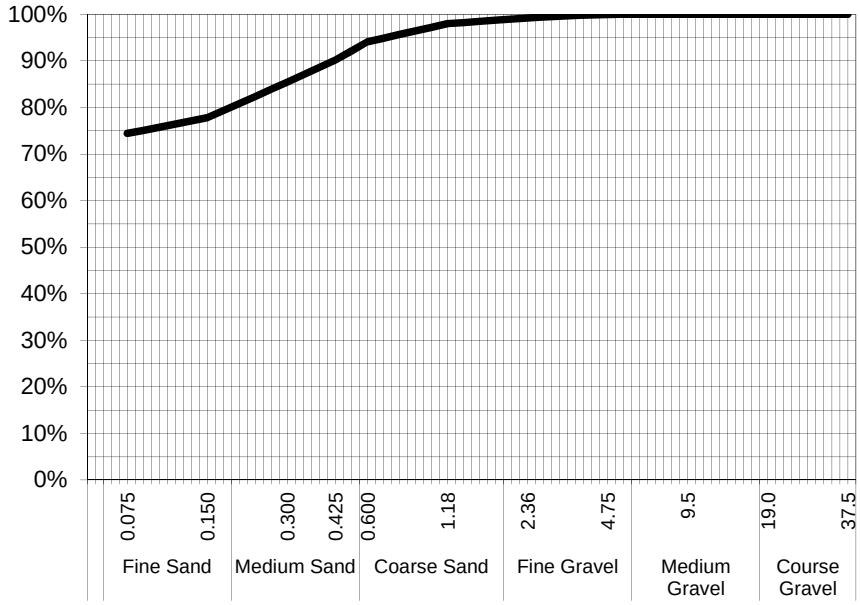
ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-010 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(4A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	98%
0.600	94%
0.425	90%
0.300	85%
0.150	78%
0.075	74%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, medium fine sand and vegetation

Test Method: AS1289.3.6.1

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Certificate of Analysis

ALS Laboratory Group Pty Ltd
5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-011 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(4B)_SOIL_S

Particle Size Distribution

Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	98%
0.600	91%
0.425	84%
0.300	75%
0.150	58%
0.075	51%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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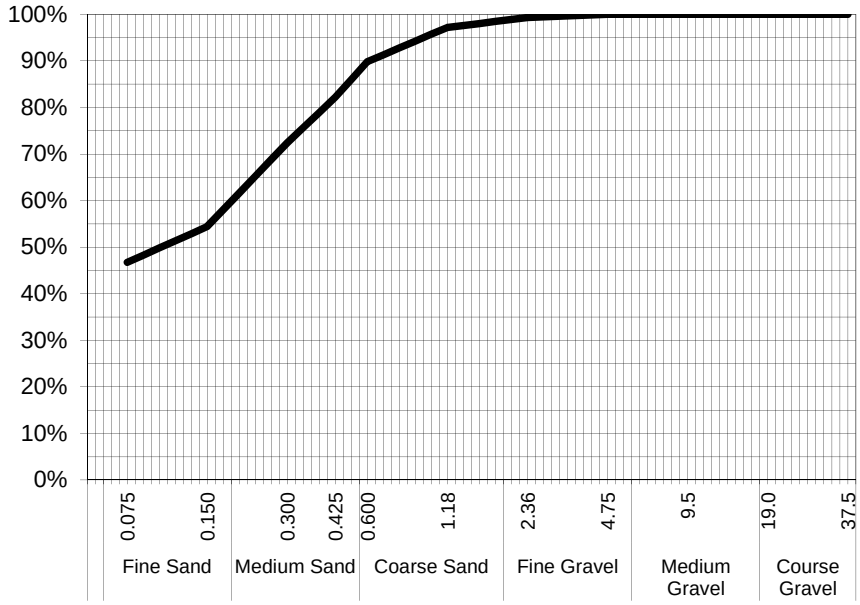
CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-012 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(4C)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	97%
0.600	90%
0.425	82%
0.300	72%
0.150	54%
0.075	47%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.075

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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pH 02 4968 9433
fax 02 4968 0349
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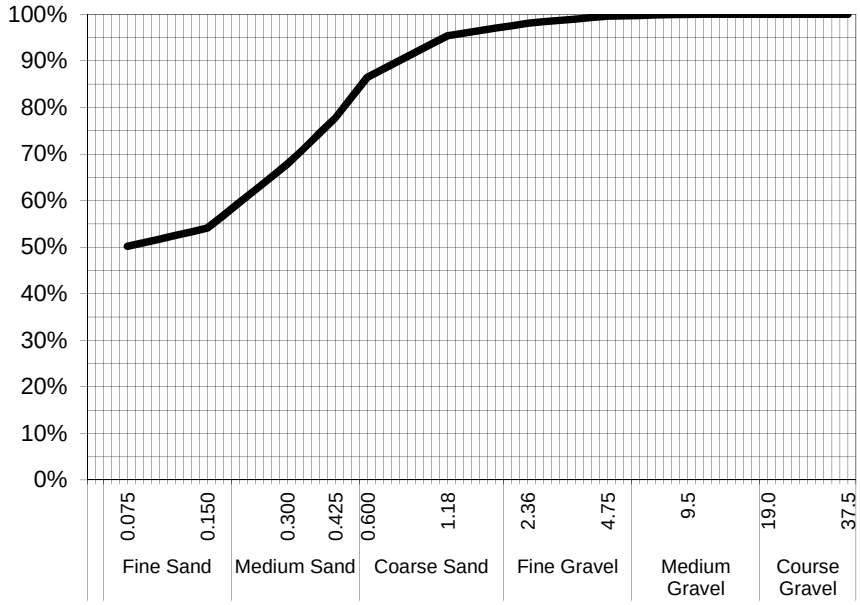
ALS Environmental

Newcastle, NSW

CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-013 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(5A)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	98%
1.18	95%
0.600	86%
0.425	78%
0.300	68%
0.150	54%
0.075	50%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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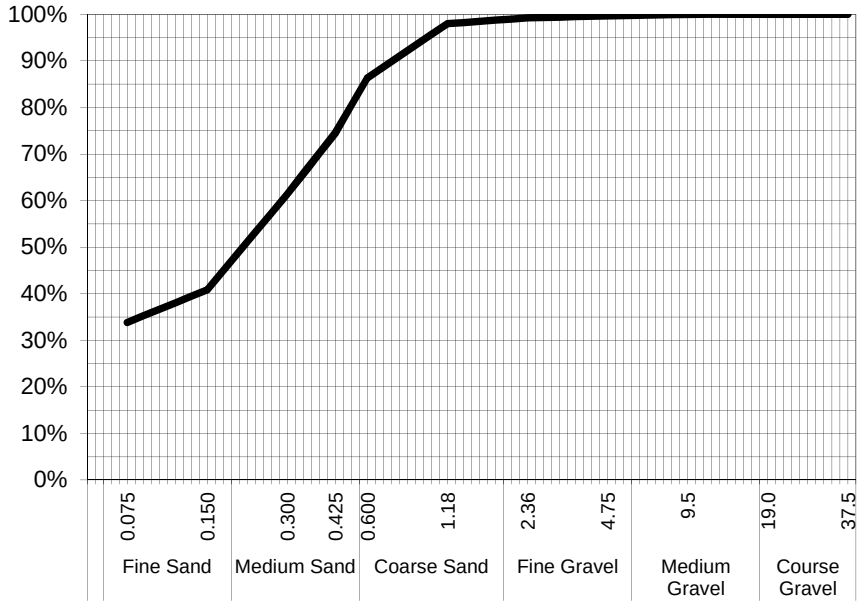
ALS Environmental

Newcastle, NSW

CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-014 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(5B)_SOIL_S

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	98%
0.600	86%
0.425	75%
0.300	61%
0.150	41%
0.075	34%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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5 Rosegum Road
Warabrook, NSW 2304
pH 02 4968 9433
fax 02 4968 0349
samples.newcastle@alsenviro.com

ALS Environmental

Newcastle, NSW

CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-015 / PSD
PROJECT:	117626001	**SAMPLE ID:**	NAR_WTP(5C)_SOIL_S

Particle Size Distribution

Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	99%
1.18	98%
0.600	91%
0.425	84%
0.300	75%
0.150	58%
0.075	53%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	#N/A

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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pH 02 4968 9433
fax 02 4968 0349
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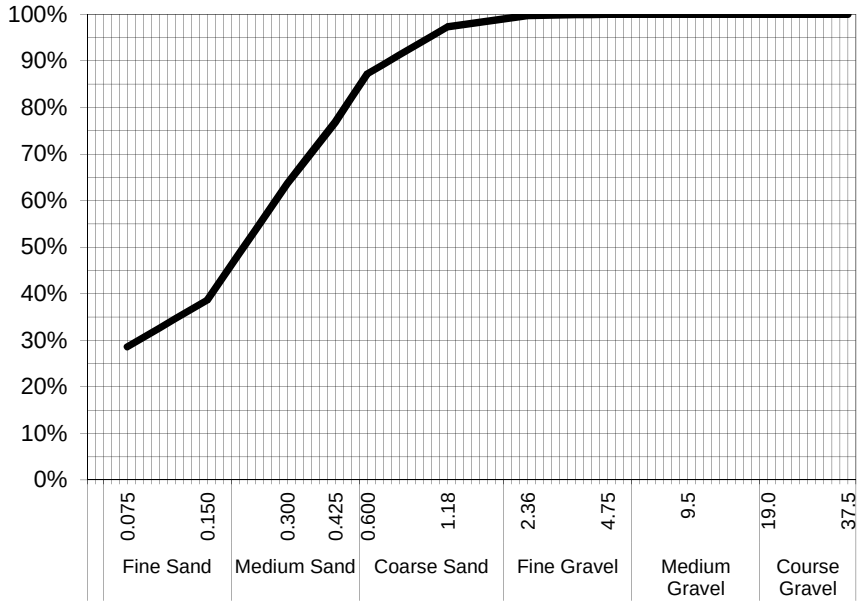
ALS Environmental

Newcastle, NSW

CLIENT:	Rita Bonetti	**DATE REPORTED:**	27-Jan-2012
COMPANY:	Santos Ltd	**DATE RECEIVED:**	19-Jan-2012
ADDRESS:	GPO Box 1010 Level 22, 32 Turbot Street, Brisbane, Qld 4001	**REPORT NO:**	EB1201573-005Dup / PSD
PROJECT:	117626001	**SAMPLE ID:**	0

Particle Size Distribution



Particle Size (mm)	Percent Passing
19.0	100%
9.5	100%
4.75	100%
2.36	100%
1.18	97%
0.600	87%
0.425	77%
0.300	64%
0.150	39%
0.075	29%

Samples analysed as received.
** Insufficient sample provided for Soil Particle Density analysis according to AS 1289.3.5.1—2006.*
Typical sediment SPD values used for calculations

Median Particle Size (mm)	0.150

Sample Comments:

Analysed: 25-Jan-12

Loss on Pretreatment NA

Limit of Reporting: 1%

Sample Description: Fines, sand and vegetation

Test Method: AS1289.3.6.1

NATA Accreditation: 825 Site: Newcastle
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Hamish Murray
Laboratory Technician, Newcastle
Authorised Signatory

CHAIN OF CUSTODY DOCUMENTATION

Santos
We have the energy.

CLIENT: Santos Ltd		SAMPLER: Rita Bonetti	
ADDRESS / OFFICE: Santos Place, Level 22, 32 Turbot Street, Brisbane QLD 4000		MOBILE: 0437 039 929	
PROJECT MANAGER (PM): Remalia Sharplin		PHONE: 02 9478 3906	
PROJECT ID: 117626001		EMAIL INVOICE TO: accounts.payable@santos.com	Note: Please provide results in SRAENVT SANTOS format
SITE: Narrabri		EMAIL REPORT TO: enviro_data@santos.com rbonetti@golder.com.au and rsharplin@golder.com.au	
RESULTS REQUIRED: Standard Turn Around QUOTE: EN/039/10 Addendum		**Notes:** Samples frozen for Acid Sulfate Soil Analysis	

[redacted]

COMMENTS / HANDLING / STORAGE OR DIPOSAL:
Please store samples for 3 weeks prior to disposal

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFO		**Field Observations** (ALS Code SAMP02)										**Lab Analysis** (ALS SAMP2)			
							Soil parameters													
ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	#Jars	Depth/Depth Range (mm)	Soil Colour	Mottled	Dominant Horizon	Field Texture	Moisture	Odour	Rainfall	Sample Method	Sample Type	Suite W - Drill Soil	PAHS	BTEX	
1	NAR_WTP(T3)_SOIL_S	S	14-01-12		250ML JAR,2 BA	3											X	X	X	
2	NAR_WTP(T5)_SOIL_S	S	14-01-12		250ML JAR,2 BA	3											↓	↓	↓	
3	NAR_WTP(T6)_SOIL_S	S	15-01-12		250ML JAR,2 BA	3											↓	↓	↓	

RELINQUISHED BY:			RECEIVED BY			METHOD OF SHIPMENT	
Name: Rita Bonetti	Date: 15-01-12		Name:	Date:		Con' Note No:	
Of: Golder Associates	Time: 4:00 PM		Of:	Time:		Transport Co:	
Name:	Date:		Name:	Date:			
Of:	Time:		Of:	Time:			

Soil Container Codes:

[redacted]
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 67728

Date Received: 18/01
Time Received: 1130
Received by: BS
Temp: Cool/Ambient
Cooling: Ice/Ice pack
Security: Intact/Broken/None

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

SAMPLE RECEIPT ADVICE

Client:

Golder Associates Pty Ltd
124 Pacific Highway
St Leonards NSW 2065

ph: 9478 3900
Fax: 9478 3901

Attention: Rite Bonetti

Sample log in details:

Your reference:	**Narrabri**
Envirolab Reference:	**67728**
Date received:	18/01/12
Date results expected to be reported:	**25/01/12**

Samples received in appropriate condition for analysis:	YES
No. of samples provided	3 soils
Turnaround time requested:	Standard
Temperature on receipt	Cool
Cooling Method:	Ice

Comments:

Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples.

Contact details:

Please direct any queries to Aileen Hie or Jacinta Hurst
ph: 02 9910 6200 fax: 02 9910 6201
email: ahie@envirolabservices.com.au or jhurst@envirolabservices.com.au

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 67728

Client:
Golder Associates Pty Ltd
124 Pacific Highway
St Leonards
NSW 2065

Attention: Rita Bonetti

Sample log in details:

Your Reference:	**Narrabri**		
No. of samples:	3 soils		
Date samples received / completed instructions received	18/01/12	/	18/01/12

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	25/01/12	/	30/01/12
Date of Preliminary Report:	Not Issued		

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Results Approved By:

Jacinta Hurst
Laboratory Manager

Nancy Zhang
Chemist

Rhian Morgan
Reporting Supervisor

Nick Sarlamis
Inorganics Supervisor

Simon Mills
Group R&D/Quality Manager

VOCs in soil		
Our Reference:	UNITS	67728-1
Your Reference	----------	NAR_WTP (T3)SOIL_S
Date Sampled	----------	14/01/2012
Type of sample		soil
Date extracted	-	20/01/2012
Date analysed	-	22/01/2012
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1
Ethylbenzene	mg/kg	<1
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1

VOCs in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	67728-1 NAR_WTP (T3)SOIL_S 14/01/2012 soil
1,2,3-trichloropropane	mg/kg	<1
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	98
Surrogate aaa-Trifluorotoluene	%	94
Surrogate Toluene-d_8	%	96
Surrogate 4-Bromofluorobenzene	%	87

SVOCs in Soil		
Our Reference:	UNITS	67728-1
Your Reference	----------	NAR_WTP (T3)SOIL_S
Date Sampled	----------	14/01/2012
Type of sample		soil
Date extracted	-	20/01/2012
Date analysed	-	21/01/2012
Phenol	mg/kg	<1
Bis-(2-chloroethyl) ether	mg/kg	<1
2-Chlorophenol	mg/kg	<1
1,3-Dichlorobenzene	mg/kg	<1
1,4-Dichlorobenzene	mg/kg	<1
2-Methylphenol	mg/kg	<1
1,2-Dichlorobenzene	mg/kg	<1
Bis (2-chloroisopropyl) ether	mg/kg	<1
3/4-Methylphenol	mg/kg	<2
N-nitrosodi-n-propylamine	mg/kg	<1
Hexachloroethane	mg/kg	<1
Nitrobenzene	mg/kg	<1
Isophorone	mg/kg	<1
2,4-Dimethylphenol	mg/kg	<1
2-Nitrophenol	mg/kg	<1
Bis(2-chloroethoxy)methane	mg/kg	<1
2,4-Dichlorophenol	mg/kg	<1
1,2,4-Trichlorobenzene	mg/kg	<1
Naphthalene	mg/kg	<1
4-Chloroaniline	mg/kg	<1
Hexachlorobutadiene	mg/kg	<1
2-Methylnaphthalene	mg/kg	<1
Hexachlorocyclopentadiene	mg/kg	<1
2,4,6-trichlorophenol	mg/kg	<1
2,4,5-trichlorophenol	mg/kg	<1
2-Chloronaphthalene	mg/kg	<1
2-nitroaniline	mg/kg	<1
Dimethylphthalate	mg/kg	<1
2,6-Dinitrotoluene	mg/kg	<1
Acenaphthylene	mg/kg	<1
3-Nitroaniline	mg/kg	<1
Acenaphthene	mg/kg	<1
2,4-dinitrophenol	mg/kg	<10
4-nitrophenol	mg/kg	<10
Dibenzofuran	mg/kg	<1
diethylphthalate	mg/kg	<1
4-chlorophenylphenylether	mg/kg	<1
4-nitroaniline	mg/kg	<1
Fluorene	mg/kg	<1
2-methyl-4,6-dinitrophenol	mg/kg	<10

SVOCs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	67728-1 NAR_WTP (T3)SOIL_S 14/01/2012 soil
azobenzene	mg/kg	<1
4-bromophenylphenylether	mg/kg	<1
hexachlorobenzene	mg/kg	<1
pentachlorophenol	mg/kg	<10
Phenanthrene	mg/kg	<1
Anthracene	mg/kg	<1
carbazole	mg/kg	<1
di-n-butylphthalate	mg/kg	<1
Fluoranthene	mg/kg	<1
Pyrene	mg/kg	<1
butylbenzylphthalate	mg/kg	<1
bis(2-ethylhexyl)phthalate	mg/kg	<1
Benzo(a)anthracene	mg/kg	<1
Chrysene	mg/kg	<1
di-n-octylphthalate	mg/kg	<1
Benzo(b)fluoranthene	mg/kg	<1
Benzo(k)fluoranthene	mg/kg	<1
Benzo(a)pyrene	mg/kg	<1
Indeno(1,2,3-c,d)pyrene	mg/kg	<1
Dibenzo(a,h)anthracene	mg/kg	<1
Benzo(g,h,i)perylene	mg/kg	<1
ethylmethanesulfonate	mg/kg	<1
aniline	mg/kg	<1
pentachloroethane	mg/kg	<1
benzyl alcohol	mg/kg	<1
acetophenone	mg/kg	<1
N-nitrosomorpholine	mg/kg	<1
N-nitrosopiperidine	mg/kg	<1
2,6-dichlorophenol	mg/kg	<1
hexachloropropene-1	mg/kg	<1
N-nitroso-n-butylamine	mg/kg	<1
safrole	mg/kg	<1
1,2,4,5-tetrachlorobenzene	mg/kg	<1
cis and trans iso-safrole	mg/kg	<1
1,3-dinitrobenzene	mg/kg	<1
pentachlorobenzene	mg/kg	<1
1-naphthylamine	mg/kg	<1
2,3,4,6-tetrachlorophenol	mg/kg	<1
2-naphthylamine	mg/kg	<1
5-nitro-o-toluidine	mg/kg	<1
diphenylamine	mg/kg	<1
phenacetin	mg/kg	<1

SVOCs in Soil		
Our Reference:	UNITS	67728-1
Your Reference	----------	NAR_WTP (T3)SOIL_S
Date Sampled	----------	14/01/2012
Type of sample		soil
pentachloronitrobenzene	mg/kg	<1
dinoseb	mg/kg	<1
methapyrilene	mg/kg	<1
p-dimethylaminoazobenzene	mg/kg	<1
2-acetylaminofluorene	mg/kg	<1
7,12-dimethylbenz(a)anthracene	mg/kg	<1
3-methylcholanthrene	mg/kg	<1
a-BHC	mg/kg	<1
b-BHC	mg/kg	<1
g-BHC	mg/kg	<1
d-BHC	mg/kg	<1
Heptachlor	mg/kg	<1
Aldrin	mg/kg	<1
Heptachlor Epoxide	mg/kg	<1
g-Chlordane	mg/kg	<1
a-Chlordane	mg/kg	<1
Endosulfan I	mg/kg	<1
p,p'-DDE	mg/kg	<1
Dieldrin	mg/kg	<1
Endrin	mg/kg	<1
p,p'-DDD	mg/kg	<1
Endosulfan II	mg/kg	<1
p,p'-DDT	mg/kg	<1
Endosulfan Sulphate	mg/kg	<1
Methoxychlor	mg/kg	<1
Surrogate 2-fluorophenol	%	106
Surrogate Phenol-d_6	%	103
Surrogate Nitrobenzene-d_5	%	108
Surrogate 2-fluorobiphenyl	%	107
Surrogate 2,4,6-Tribromophenol	%	113
Surrogate p-Terphenyl-d_{14}	%	115

vTRH & BTEX in Soil				
Our Reference:	UNITS	67728-1	67728-2	67728-3
Your Reference	----------	NAR_WTP (T3)SOIL_S	NAR_WTP (T5)SOIL_S	NAR_WTP (T6)SOIL_S
Date Sampled	----------	14/01/2012	14/01/2012	15/01/2012
Type of sample		soil	soil	soil
Date extracted	-	20/01/2012	20/01/2012	20/01/2012
Date analysed	-	22/01/2012	22/01/2012	22/01/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	92	91

sTRH in Soil (C10-C36)				
Our Reference:	UNITS	67728-1	67728-2	67728-3
Your Reference	----------	NAR_WTP (T3)SOIL_S	NAR_WTP (T5)SOIL_S	NAR_WTP (T6)SOIL_S
Date Sampled	----------	14/01/2012	14/01/2012	15/01/2012
Type of sample		soil	soil	soil
Date extracted	-	20/01/2012	20/01/2012	20/01/2012
Date analysed	-	21/01/2012	21/01/2012	21/01/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100
Surrogate o-Terphenyl	%	102	94	98

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	67728-1 NAR_WTP (T3)SOIL_S 14/01/2012 soil	67728-2 NAR_WTP (T5)SOIL_S 14/01/2012 soil	67728-3 NAR_WTP (T6)SOIL_S 15/01/2012 soil
Date extracted	-	20/01/2012	20/01/2012	20/01/2012
Date analysed	-	22/01/2012	22/01/2012	22/01/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	85	103	105

Acid Extractable metals in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	67728-1 NAR_WTP (T3)SOIL_S 14/01/2012 soil	67728-2 NAR_WTP (T5)SOIL_S 14/01/2012 soil	67728-3 NAR_WTP (T6)SOIL_S 15/01/2012 soil
Date digested	-	20/01/2012	20/01/2012	20/01/2012
Date analysed	-	20/01/2012	20/01/2012	20/01/2012
Arsenic	mg/kg	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5
Chromium	mg/kg	11	10	3
Copper	mg/kg	4	<1	<1
Lead	mg/kg	7	3	2
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	4	<1	<1
Zinc	mg/kg	5	1	1
Barium	mg/kg	180	18	28
Beryllium	mg/kg	<1	<1	<1
Cobalt	mg/kg	3	<1	3
Manganese	mg/kg	450	24	76
Boron	mg/kg	<3	<3	<3
Strontium*	mg/kg	34	3	8
Phosphorus	mg/kg	140	30	32
Water Extractable Sulphur	mg/kg	11	<10	65
Vanadium	mg/kg	27	24	13

Miscellaneous Inorg - soil				
Our Reference:	UNITS	67728-1	67728-2	67728-3
Your Reference	----------	NAR_WTP (T3)SOIL_S	NAR_WTP (T5)SOIL_S	NAR_WTP (T6)SOIL_S
Date Sampled	----------	14/01/2012	14/01/2012	15/01/2012
Type of sample		soil	soil	soil
Date prepared	-	20/01/2012	20/01/2012	20/01/2012
Date analysed	-	20/01/2012	20/01/2012	20/01/2012
pH 1:5 soil:water	pH Units	8.7	8.2	6.1
Electrical Conductivity 1:5 soil:water	µS/cm	1000	320	55
Chloride, Cl 1:5 soil:water	mg/kg	190	120	5
Fluoride (1:5 soil:water)	mg/kg	2.2	0.5	<0.5
Total Nitrogen in soil	mg/kg	820	180	430
Total Organic Carbon (Walkley Black)	mg/kg	20,000	3,800	10,000

ESP/CEC Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	67728-1 NAR_WTP (T3)SOIL_S 14/01/2012 soil	67728-2 NAR_WTP (T5)SOIL_S 14/01/2012 soil	67728-3 NAR_WTP (T6)SOIL_S 15/01/2012 soil
Exchangeable Ca	meq/100g	5.9	0.24	0.74
Exchangeable K	meq/100g	0.77	0.11	0.12
Exchangeable Mg	meq/100g	2.7	0.31	0.33
Exchangeable Na	meq/100g	7.4	0.73	0.018
Exchangeable Al	meq/100g	<0.01	<0.01	<0.01
Cation Exchange Capacity	meq/100g	17	1.4	1.2

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	67728-1 NAR_WTP (T3)SOIL_S 14/01/2012 soil	67728-2 NAR_WTP (T5)SOIL_S 14/01/2012 soil	67728-3 NAR_WTP (T6)SOIL_S 15/01/2012 soil
Date prepared	-	20/01/2012	20/01/2012	20/01/2012
Date analysed	-	23/01/2012	23/01/2012	23/01/2012
Moisture	%	20	7.1	8.6

Particle Size Analysis Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	67728-1 NAR_WTP (T3)SOIL_S 14/01/2012 soil	67728-2 NAR_WTP (T5)SOIL_S 14/01/2012 soil	67728-3 NAR_WTP (T6)SOIL_S 15/01/2012 soil
>0.425mm*	%	#	#	#
<0.425mm*	%	#	#	#

Drill soil suite Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	67728-1 NAR_WTP (T3)SOIL_S 14/01/2012 soil	67728-2 NAR_WTP (T5)SOIL_S 14/01/2012 soil	67728-3 NAR_WTP (T6)SOIL_S 15/01/2012 soil
Date prepared	-	19/1/2012	19/1/2012	19/1/2012
Date analysed	-	20/1/2012	20/1/2012	20/1/2012
DTPA Extractable Cu*	mg/kg	<1	<1	<1
DTPA Extractable Fe*	mg/kg	130	30	30
DTPA Extractable Mn*	mg/kg	190	7	17
DTPA Extractable Zn*	mg/kg	<1	<1	<1
Bicarbonate Extractable K*	mg/kg	350	90	120
Bicarbonate Extractable P*	mg/kg	30	<10	<10

Method ID	Methodology Summary
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA 21st ED, 4500-H+.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell and dedicated meter, in accordance with APHA 21st ED 2510 and Rayment & Higginson.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA 21st ED, 4110 -B.
Inorg-026	Fluoride determined by ion selective electrode (ISE) in accordance with APHA 21st ED, 4500-F-C.
Inorg-055/062	Total Nitrogen - Calculation sum of TKN and oxidised Nitrogen.
Inorg-036	Total Organic Matter - A titrimetric method that measures the oxidisable organic content of soils. Based upon Rayment and Lyons 2011.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soil based on Rayment and Lyons 2011.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
Ext-037	Analysed by Sydney Environmental & Soil Laboratory
Metals-020 ICP-AES	DTPA extractable metals using ICP-AES, based on Rayment and Lyons 12A1.
Inorg-060	Bicarbonate Extractable Elements, based on Rayment and Lyons, using 0.5M NaHCO3 at pH 8.5.

QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			20/01/2012	67728-1	20/01/2012 || 20/01/2012	LCS-5	20/01/2012
Date analysed	-			22/01/2012	67728-1	22/01/2012 || 22/01/2012	LCS-5	22/01/2012
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Chloromethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Vinyl Chloride	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Bromomethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Chloroethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	LCS-5	80%
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
bromochloromethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
chloroform	mg/kg	1	Org-014	<1	67728-1	<1 || <1	LCS-5	89%
2,2-dichloropropane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	LCS-5	81%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	LCS-5	79%
1,1-dichloropropene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Cyclohexane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
carbon tetrachloride	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Benzene	mg/kg	0.2	Org-014	<0.2	67728-1	<0.2 || <0.2	[NR]	[NR]
dibromomethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
trichloroethene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	LCS-5	75%
bromodichloromethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	LCS-5	91%
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Toluene	mg/kg	0.5	Org-014	<0.5	67728-1	<0.5 || <0.5	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
dibromochloromethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	LCS-5	97%
1,2-dibromoethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	LCS-5	86%
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
chlorobenzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Ethylbenzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
bromoform	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
m+p-xylene	mg/kg	2	Org-014	<2	67728-1	<2 || <2	[NR]	[NR]
styrene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
o-Xylene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]

QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
isopropylbenzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
bromobenzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
n-propyl benzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
2-chlorotoluene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
4-chlorotoluene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
tert-butyl benzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
sec-butyl benzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
n-butyl benzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	67728-1	<1 || <1	[NR]	[NR]
Surrogate Dibromofluorometha	%		Org-014	96	67728-1	98 || 97 || RPD: 1	LCS-5	98%
Surrogate aaa-Trifluorotoluene	%		Org-014	98	67728-1	94 || 95 || RPD: 1	LCS-5	95%
Surrogate Toluene-d_8	%		Org-014	96	67728-1	96 || 95 || RPD: 1	LCS-5	96%
Surrogate 4-Bromofluorobenzene	%		Org-014	84	67728-1	87 || 83 || RPD: 5	LCS-5	83%

QUALITY CONTROL SVOCs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			20/01/2012	67728-1	20/01/2012 || 20/01/2012	LCS-5	20/01/2012
Date analysed	-			21/01/2012	67728-1	21/01/2012 || 21/01/2012	LCS-5	21/01/2012
Phenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	LCS-5	112%
Bis-(2-chloroethyl) ether	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2-Chlorophenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	LCS-5	116%
1,3-Dichlorobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
1,4-Dichlorobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	LCS-5	118%
2-Methylphenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
1,2-Dichlorobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Bis (2-chloroisopropyl) ether	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
3/4-Methylphenol	mg/kg	2	Org-012	<2	67728-1	<2 || <2	[NR]	[NR]
N-nitrosodi-n-propylamine	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Hexachloroethane	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Nitrobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Isophorone	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2,4-Dimethylphenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2-Nitrophenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Bis(2-chloroethoxy) methane	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2,4-Dichlorophenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
1,2,4-Trichlorobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Naphthalene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
4-Chloroaniline	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Hexachlorobutadiene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2-Methylnaphthalene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Hexachlorocyclopentadiene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2,4,6-trichlorophenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2,4,5-trichlorophenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2-Chloronaphthalene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2-nitroaniline	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Dimethylphthalate	mg/kg	1	Org-012	<1	67728-1	<1 || <1	LCS-5	122%
2,6-Dinitrotoluene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Acenaphthylene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
3-Nitroaniline	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Acenaphthene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	LCS-5	127%
2,4-dinitrophenol	mg/kg	10	Org-012	<10	67728-1	<10 || <10	[NR]	[NR]
4-nitrophenol	mg/kg	10	Org-012	<10	67728-1	<10 || <10	LCS-5	121%
Dibenzofuran	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
diethylphthalate	mg/kg	1	Org-012	<1	67728-1	<1 || <1	LCS-5	131%
4-chlorophenylphenylether	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
4-nitroaniline	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]

QUALITY CONTROL SVOCs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Fluorene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2-methyl-4,6-dinitrophenol	mg/kg	10	Org-012	<10	67728-1	<10 || <10	[NR]	[NR]
azobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
4-bromophenylphenylether	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
hexachlorobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
pentachlorophenol	mg/kg	10	Org-012	<10	67728-1	<10 || <10	[NR]	[NR]
Phenanthrene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Anthracene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
carbazole	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
di-n-butylphthalate	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Fluoranthene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Pyrene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	LCS-5	123%
butylbenzylphthalate	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
bis(2-ethylhexyl) phthalate	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Benzo(a)anthracene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Chrysene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
di-n-octylphthalate	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Benzo(b)fluoranthene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Benzo(k)fluoranthene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Benzo(a)pyrene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Indeno(1,2,3-c,d)pyrene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
ethylmethanesulfonate	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
aniline	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
pentachloroethane	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
benzyl alcohol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
acetophenone	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
N-nitrosomorpholine	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
N-nitrosopiperidine	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2,6-dichlorophenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
hexachloropropene-1	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
N-nitroso-n-butylamine	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
safrole	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
1,2,4,5-tetrachlorobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
cis and trans iso-safrole	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
1,3-dinitrobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
pentachlorobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
1-naphthylamine	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2,3,4,6-tetrachlorophenol	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2-naphthylamine	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
5-nitro-o-toluidine	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]

QUALITY CONTROL SVOCs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
diphenylamine	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
phenacetin	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
pentachloronitrobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
dinoseb	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
methapyrilene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
p-dimethylaminoazobenzene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
2-acetylaminofluorene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
7,12-dimethylbenz(a) anthracene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
3-methylcholanthrene	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
a-BHC	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
b-BHC	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
g-BHC	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
d-BHC	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Heptachlor	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Aldrin	mg/kg	1	Org-012	<1	67728-1	<1 || <1	LCS-5	108%
Heptachlor Epoxide	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
g-Chlordane	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
a-Chlordane	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Endosulfan I	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
p,p'-DDE	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Dieldrin	mg/kg	1	Org-012	<1	67728-1	<1 || <1	LCS-5	102%
Endrin	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
p,p'-DDD	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Endosulfan II	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
p,p'-DDT	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Methoxychlor	mg/kg	1	Org-012	<1	67728-1	<1 || <1	[NR]	[NR]
Surrogate 2-fluorophenol	%		Org-012	110	67728-1	106 || 110 || RPD: 4	LCS-5	110%
Surrogate Phenol-d_6	%		Org-012	111	67728-1	103 || 107 || RPD: 4	LCS-5	116%
Surrogate Nitrobenzene-d_5	%		Org-012	113	67728-1	108 || 117 || RPD: 8	LCS-5	118%
Surrogate 2-fluorobiphenyl	%		Org-012	102	67728-1	107 || 112 || RPD: 5	LCS-5	109%
Surrogate 2,4,6-Tribromophenol	%		Org-012	100	67728-1	113 || 109 || RPD: 4	LCS-5	112%
Surrogate p-Terphenyl-d_{14}	%		Org-012	100	67728-1	115 || 105 || RPD: 9	LCS-5	113%

QUALITY CONTROL vTRH & BTEX in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base || Duplicate || %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			20/01/2012	67728-1	20/01/2012 || 20/01/2012	LCS-5	20/01/2012
Date analysed	-			22/01/2012	67728-1	22/01/2012 || 22/01/2012	LCS-5	22/01/2012
vTRH C_6 - C_9	mg/kg	25	Org-016	<25	67728-1	<25 || <25	LCS-5	99%
Benzene	mg/kg	0.2	Org-016	<0.2	67728-1	<0.2 || <0.2	LCS-5	110%
Toluene	mg/kg	0.5	Org-016	<0.5	67728-1	<0.5 || <0.5	LCS-5	106%
Ethylbenzene	mg/kg	1	Org-016	<1	67728-1	<1 || <1	LCS-5	93%
m+p-xylene	mg/kg	2	Org-016	<2	67728-1	<2 || <2	LCS-5	92%
o-Xylene	mg/kg	1	Org-016	<1	67728-1	<1 || <1	LCS-5	87%
Surrogate aaa-Trifluorotoluene	%		Org-016	98	67728-1	94 || 95 || RPD: 1	LCS-5	88%
QUALITY CONTROL sTRH in Soil (C10-C36)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base || Duplicate || %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			20/01/2012	67728-1	20/01/2012 || 20/01/2012	LCS-5	20/01/2012
Date analysed	-			21/01/2012	67728-1	21/01/2012 || 21/01/2012	LCS-5	21/01/2012
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	67728-1	<50 || <50	LCS-5	102%
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	67728-1	<100 || <100	LCS-5	111%
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	67728-1	<100 || <100	LCS-5	91%
Surrogate o-Terphenyl	%		Org-003	95	67728-1	102 || 102 || RPD: 0	LCS-5	112%
QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base || Duplicate || %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			20/01/2012	67728-1	20/01/2012 || 20/01/2012	LCS-5	20/01/2012
Date analysed	-			22/01/2012	67728-1	22/01/2012 || 22/01/2012	LCS-5	22/01/2012
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	LCS-5	102%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	LCS-5	110%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	LCS-5	120%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	LCS-5	121%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	LCS-5	134%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	LCS-5	92%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base || Duplicate || %RPD	Spike Sm#	Spike % Recovery
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	67728-1	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	67728-1	<0.05 || <0.05	LCS-5	112%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	67728-1	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	85	67728-1	85 || 88 || RPD: 3	LCS-5	100%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base || Duplicate || %RPD	Spike Sm#	Spike % Recovery
Date digested	-			20/01/2012	67728-1	20/01/2012 || 20/01/2012	LCS-1	20/01/2012
Date analysed	-			20/01/2012	67728-1	20/01/2012 || 20/01/2012	LCS-1	20/01/2012
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	67728-1	<4 || <4	LCS-1	99%
Cadmium	mg/kg	0.5	Metals-020 ICP-AES	<0.5	67728-1	<0.5 || <0.5	LCS-1	104%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	11 || 11 || RPD: 0	LCS-1	104%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	4 || 3 || RPD: 29	LCS-1	103%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	7 || 6 || RPD: 15	LCS-1	100%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	67728-1	<0.1 || <0.1	LCS-1	119%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	4 || 4 || RPD: 0	LCS-1	103%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	5 || 5 || RPD: 0	LCS-1	101%
Barium	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	180 || 160 || RPD: 12	LCS-1	110%
Beryllium	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	<1 || <1	LCS-1	110%
Cobalt	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	3 || 3 || RPD: 0	LCS-1	103%
Manganese	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	450 || 400 || RPD: 12	LCS-1	106%
Boron	mg/kg	3	Metals-020 ICP-AES	<3	67728-1	<3 || <3	LCS-1	95%
Strontium*	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	34 || 31 || RPD: 9	LCS-1	102%
Phosphorus	mg/kg	10	Metals-020 ICP-AES	<10	67728-1	140 || 130 || RPD: 7	LCS-1	90%
Water Extractable Sulphur	mg/kg	10	Metals-020 ICP-AES	<10	67728-1	11 || [N/T]	LCS-1	91%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Vanadium	mg/kg	1	Metals-020 ICP-AES	<1	67728-1	27 || 26 || RPD: 4	LCS-1	102%
QUALITY CONTROL Miscellaneous Inorg - soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			20/01/2012	67728-1	20/01/2012 || 20/01/2012	LCS-1	20/01/2012
Date analysed	-			20/01/2012	67728-1	20/01/2012 || 20/01/2012	LCS-1	20/01/2012
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	67728-1	8.7 || [N/T]	LCS-1	102%
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	67728-1	1000 || [N/T]	LCS-1	109%
Chloride, Cl 1:5 soil:water	mg/kg	2	Inorg-081	<2	67728-1	190 || [N/T]	LCS-1	88%
Fluoride (1:5 soil:water)	mg/kg	0.5	Inorg-026	<0.5	67728-1	2.2 || [N/T]	LCS-1	93%
Total Nitrogen in soil	mg/kg	10	Inorg-055/062	<10	67728-1	820 || [N/T]	LCS-1	99%
Total Organic Carbon (Walkley Black)	mg/kg	1000	Inorg-036	<1000	67728-1	20000 || 19000 || RPD: 5	LCS-1	99%
QUALITY CONTROL ESP/CEC	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Exchangeable Ca	meq/100g	0.01	Metals-009	<0.01	[NT]	[NT]	LCS-1	93%
Exchangeable K	meq/100g	0.01	Metals-009	<0.01	[NT]	[NT]	LCS-1	105%
Exchangeable Mg	meq/100g	0.01	Metals-009	<0.01	[NT]	[NT]	LCS-1	102%
Exchangeable Na	meq/100g	0.01	Metals-009	<0.01	[NT]	[NT]	LCS-1	102%
Exchangeable Al	meq/100g	0.01	Metals-009	<0.01	[NT]	[NT]	[NR]	[NR]
Cation Exchange Capacity	meq/100g	1	Metals-009	<1.0	[NT]	[NT]	LCS-1	98%
QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank				
Date prepared	-			[NT]				
Date analysed	-			[NT]				
Moisture	%	0.1	Inorg-008	[NT]				
QUALITY CONTROL Particle Size Analysis	UNITS	PQL	METHOD	Blank				
>0.425mm*	%	0.01	Ext-037	<0.01				
<0.425mm*	%	0.01	Ext-037	<0.01				
QUALITY CONTROL Drill soil suite	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			19/1/2012	67728-3	19/1/2012 || 19/1/2012	LCS-1	19/1/2012

QUALITY CONTROL Drill soil suite	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date analysed	-			20/1/2012	67728-3	20/1/2012 II 20/1/2012	LCS-1	20/1/2012
DTPA Extractable Cu*	mg/kg	1	Metals-020 ICP-AES	<1	67728-3	<1 II <1	LCS-1	99%
DTPA Extractable Fe*	mg/kg	5	Metals-020 ICP-AES	<5	67728-3	30 II 30 II RPD: 0	LCS-1	95%
DTPA Extractable Mn*	mg/kg	1	Metals-020 ICP-AES	<1	67728-3	17 II 18 II RPD: 6	LCS-1	98%
DTPA Extractable Zn*	mg/kg	1	Metals-020 ICP-AES	<1	67728-3	<1 II <1	LCS-1	100%
Bicarbonate Extractable K*	mg/kg	10	Inorg-060	<10	67728-3	120 II 120 II RPD: 0	LCS-1	123%
Bicarbonate Extractable P*	mg/kg	10	Inorg-060	<10	67728-3	<10 II <10	LCS-1	101%

QUALITY CONTROL SVOCs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	67728-1	20/01/2012
Date analysed	-	[NT]	[NT]	67728-1	21/01/2012
Phenol	mg/kg	[NT]	[NT]	67728-1	107%
Bis-(2-chloroethyl) ether	mg/kg	[NT]	[NT]	[NR]	[NR]
2-Chlorophenol	mg/kg	[NT]	[NT]	67728-1	114%
1,3-Dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,4-Dichlorobenzene	mg/kg	[NT]	[NT]	67728-1	116%
2-Methylphenol	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-Dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
Bis (2-chloroisopropyl) ether	mg/kg	[NT]	[NT]	[NR]	[NR]
3/4-Methylphenol	mg/kg	[NT]	[NT]	[NR]	[NR]
N-nitrosodi-n-propylamine	mg/kg	[NT]	[NT]	[NR]	[NR]
Hexachloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Nitrobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
Isophorone	mg/kg	[NT]	[NT]	[NR]	[NR]
2,4-Dimethylphenol	mg/kg	[NT]	[NT]	[NR]	[NR]
2-Nitrophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
Bis(2-chloroethoxy) methane	mg/kg	[NT]	[NT]	[NR]	[NR]
2,4-Dichlorophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,4-Trichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
Naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
4-Chloroaniline	mg/kg	[NT]	[NT]	[NR]	[NR]
Hexachlorobutadiene	mg/kg	[NT]	[NT]	[NR]	[NR]
2-Methylnaphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Hexachlorocyclopentadiene	mg/kg	[NT]	[NT]	[NR]	[NR]
2,4,6-trichlorophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
2,4,5-trichlorophenol	mg/kg	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL SVOCs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
2-Chloronaphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
2-nitroaniline	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethylphthalate	mg/kg	[NT]	[NT]	67728-1	120%
2,6-Dinitrotoluene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
3-Nitroaniline	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	67728-1	127%
2,4-dinitrophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
4-nitrophenol	mg/kg	[NT]	[NT]	67728-1	111%
Dibenzofuran	mg/kg	[NT]	[NT]	[NR]	[NR]
diethylphthalate	mg/kg	[NT]	[NT]	67728-1	129%
4-chlorophenylphenylether	mg/kg	[NT]	[NT]	[NR]	[NR]
4-nitroaniline	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	[NR]	[NR]
2-methyl-4,6-dinitrophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
azobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
4-bromophenylphenylether	mg/kg	[NT]	[NT]	[NR]	[NR]
hexachlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
pentachlorophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
Phenanthrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
carbazole	mg/kg	[NT]	[NT]	[NR]	[NR]
di-n-butylphthalate	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Pyrene	mg/kg	[NT]	[NT]	67728-1	121%
butylbenzylphthalate	mg/kg	[NT]	[NT]	[NR]	[NR]
bis(2-ethylhexyl)phthalate	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	[NR]	[NR]
di-n-octylphthalate	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(b)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
ethylmethanesulfonate	mg/kg	[NT]	[NT]	[NR]	[NR]
aniline	mg/kg	[NT]	[NT]	[NR]	[NR]
pentachloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
benzyl alcohol	mg/kg	[NT]	[NT]	[NR]	[NR]
acetophenone	mg/kg	[NT]	[NT]	[NR]	[NR]
N-nitrosomorpholine	mg/kg	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL SVOCs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
N-nitrosopiperidine	mg/kg	[NT]	[NT]	[NR]	[NR]
2,6-dichlorophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
hexachloropropene-1	mg/kg	[NT]	[NT]	[NR]	[NR]
N-nitroso-n-butylamine	mg/kg	[NT]	[NT]	[NR]	[NR]
safrole	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,4,5-tetrachlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
cis and trans iso-safrole	mg/kg	[NT]	[NT]	[NR]	[NR]
1,3-dinitrobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
pentachlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1-naphthylamine	mg/kg	[NT]	[NT]	[NR]	[NR]
2,3,4,6-tetrachlorophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
2-naphthylamine	mg/kg	[NT]	[NT]	[NR]	[NR]
5-nitro-o-toluidine	mg/kg	[NT]	[NT]	[NR]	[NR]
diphenylamine	mg/kg	[NT]	[NT]	[NR]	[NR]
phenacetin	mg/kg	[NT]	[NT]	[NR]	[NR]
pentachloronitrobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
dinoseb	mg/kg	[NT]	[NT]	[NR]	[NR]
methapyrilene	mg/kg	[NT]	[NT]	[NR]	[NR]
p-dimethylaminoazobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
2-acetylaminofluorene	mg/kg	[NT]	[NT]	[NR]	[NR]
7,12-dimethylbenz(a) anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
3-methylcholanthrene	mg/kg	[NT]	[NT]	[NR]	[NR]
a-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
b-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
g-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
d-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Heptachlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	67728-1	105%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	[NR]	[NR]
g-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
a-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
p,p'-DDE	mg/kg	[NT]	[NT]	[NR]	[NR]
Dieldrin	mg/kg	[NT]	[NT]	67728-1	101%
Endrin	mg/kg	[NT]	[NT]	[NR]	[NR]
p,p'-DDD	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
p,p'-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	[NR]	[NR]
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL SVOCs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Surrogate 2-fluorophenol	%	[NT]	[NT]	67728-1	110%
Surrogate Phenol-d_6	%	[NT]	[NT]	67728-1	108%
Surrogate Nitrobenzene-d_5	%	[NT]	[NT]	67728-1	115%
Surrogate 2-fluorobiphenyl	%	[NT]	[NT]	67728-1	109%
Surrogate 2,4,6-Tribromophenol	%	[NT]	[NT]	67728-1	121%
Surrogate p-Terphenyl-d_{14}	%	[NT]	[NT]	67728-1	111%

Report Comments:

Particle size was analysed by SESL. See attached report

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

APPENDIX G

Limitations

LIMITATIONS

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Africa	+ 27 11 254 4800
Asia	+ 86 21 6258 5522
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 55 21 3095 9500

solutions@golder.com
www.golder.com

Golder Associates Pty Ltd
124 Pacific Highway
St. Leonards, New South Wales 2065
Australia
T: +61 2 9478 3900

Golder Associates