HEGGIES

REPORT 10-7840-ESR-R1

Revision 0

LIMITED PRELIMINARY SITE INVESTIGATION
NEPEAN HOSPITAL EAST BLOCK
PENRITH NSW 2751

PREPARED FOR

NSW Department of Commerce
Level 5, 2 Burbank Place
Norwest Business Park
Baulkham Hills NSW 2153

15 MAY 2009

HEGGIES PTY LTD
ABN 29 001 584 612

Incorporating New Environment Graeme E. Harding & Associates Eric Taylor Acoustics

LIMITED PRELIMINARY SITE INVESTIGATION
NEPEAN HOSPITAL EAST BLOCK
PENRITH NSW 2751

PREPARED BY:

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DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
10-7840-ESR-R1	Revision 0	15 May 2009	Ryan Heckenberg	Michael Fernandez	Ryan Heckenberg

EXECUTIVE SUMMARY

Heggies Pty Ltd (Heggies) was commissioned by Mr Rami Adadir (the Client Contact) of the NSW Department of Commerce (the Client) to conduct a Limited Stage 1 Preliminary Contamination Assessment of the Nepean Hospital, East Block vicinity (refer to figures 1A & 1B), Lot 1 DP 1114090, Between Derby and Somerset Steets, Penrith (hereafter referred to as the Site).

It is Heggies' understanding that the Client is project managing Stage 3 of the Penrith Health Campus Redevelopment (the Development). The development comprises demolition of the existing main eastern building (the Main Site), and the construction of a new multi level East Block, as well as an expansion of the existing ICU.

This assessment is subsequent to, and relies on the accuracy of prior Golder Associates *Preliminary Contamination and Geotechnical Investigation Report, 29th January 2009*. The present assessment was designed in response to negotiations with the Client Contact, to provide a limited understanding of potential ground contamination within the vicinity of the proposed East Block prior to the proposed demolition and excavation. This assessment includes:

- A review of the site history study conducted by Golder Associates (Golder, 2009).
- A site inspection;
- Limited soil sampling and laboratory analyses.

The laboratory analyses included the following contaminants of concern:

- Heavy metals inclusive of arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc;
- Total petroleum hydrocarbons (TPHs);
- Benzene, toluene, ethylbenzene and xylenes (BTEX);
- Polycyclic aromatic hydrocarbons (PAHs);
- Organochlorine pesticides (OCPs), organophosphate pesticides (OPPs) and polychlorinated biphenyls (PCBs); and
- Asbestos.

The findings of the assessment are presented in this report in partial compliance with the EPA Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA, 1997) within the above-mentioned scope of works.

Laboratory analytical data for the soil samples collected during this investigation has indicated that the contaminants of concern did not exceed the adopted assessment criteria within the eight (8) sampling points.

Heggies is of the opinion that a detailed environmental investigation should be undertaken in order to adequately characterise the site in full compliance with DECC Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA, 1997). Notwithstanding the above, within the scope and limitations of this preliminary assessment, soils within the sampling areas appear unlikely to contain the environmental contaminants of concern at concentrations exceeding the assessment criteria.

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1 SCOPE

Heggies Pty Ltd (Heggies) was commissioned by Mr Rami Adadir (the Client Contact) of the NSW Department of Commerce (the Client) to conduct a Limited Stage 1 Preliminary Contamination Assessment of the Nepean Hospital, East Block vicinity (refer to figures 1A & 1B), Lot 1 DP 1114090, Between Derby and Somerset Steets, Penrith (hereafter referred to as the Site).

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The findings of the assessment are presented in this report in partial compliance with the EPA Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA, 1997), within the above-mentioned scope of works.

2 LIMITATIONS

The following information will assist in understanding the uncertainties relating to the interpretation of the data obtained during this investigation and the recommendations presented in the report, and help with assessment and interpretation of the report.

The current assessment is intended to provide a preliminary indication of likely contamination issues at the site. As such this report does not meet all necessary requirements of a contaminated site assessment report.

Analysis results presented in this report represent actual conditions only at the Site from which the samples were obtained by Heggies and at the time at which the sampling occurred.

A limited number of soil samples were analysed for selected analytes only.

Contaminants in the environment are able to migrate and therefore could in the future migrate to locations on the site that previously showed no signs of contamination.

Heggies assumes no responsibility for the quality of data obtained from external sources, or for occurrences outside the scope of works defined in this report.

It is assumed that the use of the information presented in Council Documents does not create any commercial, financial or legal conflicts. Heggies takes no responsibility for any losses or damages associated with these conflicts.

All work conducted and reports produced by Heggies are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between Heggies and the Client. Information and/or report(s) prepared by Heggies may therefore not be suitable for any use other than the intended objective.

Before passing on to a third party any information and/or report(s) prepared by Heggies, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by Heggies.

It is the responsibility of third parties to investigate fully to their satisfaction if any information and/or report(s) prepared by Heggies is suitable for a specific objective.

Investigations are conducted in a conscientious and professional manner. The nature of the task, however, and the likely disproportion between any damage or loss which might arise from the work and any report prepared as a result and the cost of our services is such that Heggies cannot guarantee that all issues of concern/contamination have been identified.

Thus while we carry out the work to the best of our ability, we totally exclude any loss or damages which may arise from services provided to the Client and/or any other parties.

The report(s) and/or information produced by Heggies should not be reproduced and/or presented/reviewed except in full.

3 SITE IDENTIFICATION

The site location is presented in **Figures 1A and 1B**. The site is located on Lot 1 DP 1114090, Between Derby and Somerset Steets, Penrith.

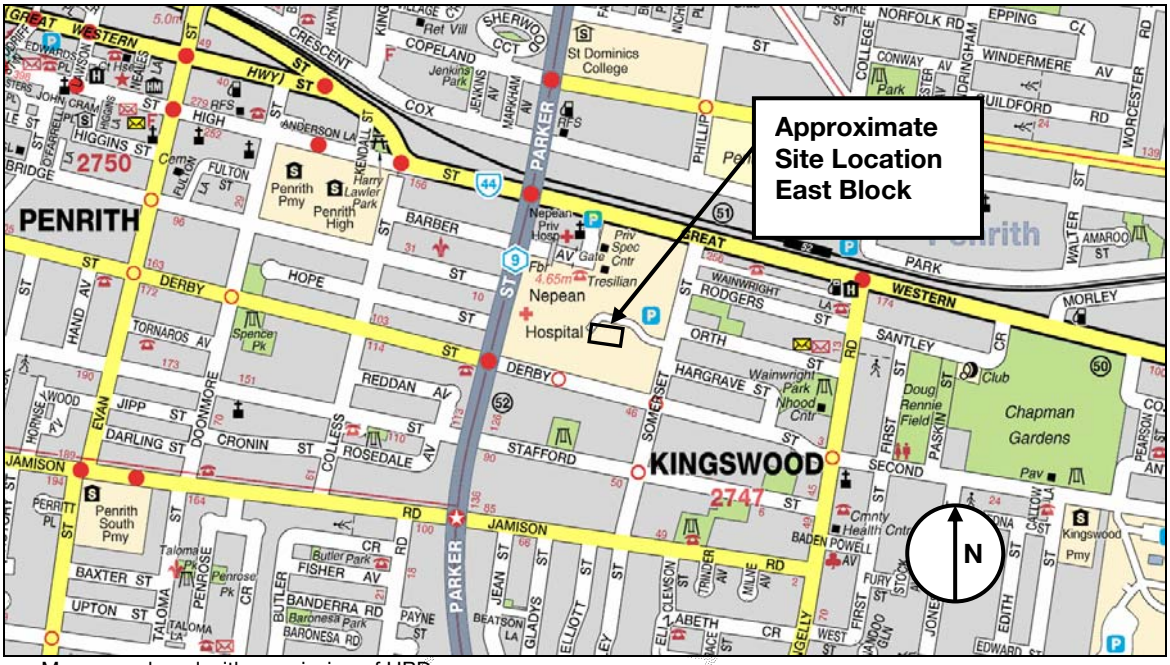

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Figure 1A – Site Location

Figure 1B – Site Location

4 SITE INSPECTION

A site inspection with limited soil sampling was performed on 5th May 2009. The Site is bound by other hospital buildings to the northwest and south, and hospital carparks and roadways to the remaining sides. The Site comprises the existing East Block and adjacent prefabricated buildings, carpark, access road and landscaped areas. The site was estimated to have an area of approximately 10,000 m^2. No unusual soil discoloration, stains, or phytotoxicological stresses were observed at the time of sampling. On-site groundwater use was not apparent. The site topography appeared to slope-down gently to the south. Surface waters are expected to run in a north west to south east direction. Local topography suggests that groundwater would flow predominantly in a north west to south east direction.

The existing East Block comprises a three (3) storey building of double brick construction with a tile roof. The building runs along an east-west axis. Some minor evidence of foundation settlement was recorded by Golder Associates (2009). Some local cutting and filling of <1m depth was observed. A boiler room is located at the eastern end of the East Block. The boilers are purported to be fired by main supplied natural gas. Asbestos cement products where observed on the exterior of the building.

5 GEOLOGY AND HYDROGEOLOGY

The Geological Series 1:100 000 Sheet Penrith 9030 maps the underlying geology as mid Triassic Bringelly Shale which includes undifferentiated shale, carbonaceous claystone, laminate, fine to medium grained lithic sandstone, rare coal and tuff.

The Soil Landscape Series 1:100 000 Sheet Penrith 9030 Maps the underlying soils as the Luddenham Group. They are characterised by shallow (<1m) dark podsolic soils or earthy massive clays on crests, moderately deep (0.7-1.5m) red podsolic soils on upper slopes and moderately deep (>1.5m) yellow podsolic soils and prairie soils on lower slopes and drainage lines.

6 SITE HISTORY

The following site history details have been compiled by Golder Associates *Preliminary Contamination and Geotechnical Investigation Report, 29th January 2009*:

- Penrith City Council – Section 149 (2) and (5) Planning Certificates;
- NSW Department of Lands: Historical Titles Search;
- WorkCover NSW Dangerous Goods Section – Stored Chemical Information Database; and
- NSW Department of Lands - Aerial photographs.

6.1 Section 149 Certificate

According to the Section 149 (2 & 5) Planning Certificates, the site has not been declared an investigation or remediation area under Part 3 of the Contaminated Land Management (CLM) Act 1997. The land is not the subject of a voluntary investigation proposal or site audit statement as defined by the CLM Act 1997.

6.2 Historical Land Titles Search

A review of the historic land titles has identified that the site had been owned by the Nepean Hospital, Penrith since the early 1940s.

Prior to this, part of the adjacent land was partly owned by a Frederick Nepean Jones, Master Tanner.

Current title lists leases granted to Health Care of Australia, Telstra Corporation and the Australian Red Cross Blood Service. Prior title indicates leases previously granted to the State Bank of NSW, and Christensen's Complete Catering Service Pty Ltd.

6.3 Aerial Photographs

A total of six (6) aerial photographs were reviewed by Golder Associates (2009). These photographs were taken in 1947, 1961, 1970, 1982, 1994, and 2007. A review of these photographs is summarised in **Table 1**.

Table 1 –Aerial Photograph Review (Golder, 2009)

Year	Interpretation
1947	The Site comprises grazing land with evident livestock tracks. The surrounding area is characterised by grazing parcels with occasional dwellings
1961	The East Block appears as one of the earlist buildings within the Hospital Compound. The Main Hospital Building (South Block) is evident, roads surrounding the Hospital are metalled, and multiple residential dwellings are evident to the northwest. The northeast of the Hospital Compound remains undeveloped. A small channel is evident in the northeast corner.
1970	The East Block building has been extended at the eastern end. Extensions to the Main Hospital Building to the east and south. Car parks are evident within the Hospital Compound. Residential development is continuing to the east, south and west. Industrial development is visible to the north beyond the Great Western Highway.
1982	No evident changes to the East Block. Car parks have been developed to the north and south.
1994	The East Block remains unchanged. A new prefabricated building has been erected directly adjacent to the southeast.
2007	The East Block appears in its present condition. The Hospital has been extended to the northwest replacing former residential buildings. The central area of the hospital has undergone redevelopment with former building being replaced by new construction and car parking.

6.4 WorkCover Records

A Search of the WorkCover Dangerous Goods Stored Chemical Information Database (SCID) and microfiche records did not locate any records pertaining to the East Block building or adjacent buildings.

The search did identify a number of locations at the Hospital where dangerous goods are or have been stored. These occur at locations downslope to the south and west of the East Block and are therefore unlikely to impact on the proposed development.

6.5 Indication of Soil Contamination Inferred from Site History Materials

Activities involving the generation, storage and disposal of hospital wastes are the most probably cause of any present day site contamination. Waste types could include clinical, general domestic, construction or demolition waste. A coal fired boiler at the eastern End of the East block cannot be ruled out.

Potential contaminants of concern (PCoC) which may be associated with the abovementioned land uses include: Heavy metals (inclusive of arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc); Total petroleum hydrocarbons (TPHs); Benzene, toluene, ethylbenzene and xylenes (BTEX); Polycyclic aromatic hydrocarbons (PAHs); Organochlorine pesticides (OCPs), organophosphate pesticides (OPPs) and polychlorinated biphenyls (PCBs). Additionally ACM may be present within fill materials.

The potential human health exposure pathways associated with the PCoC during the demolition and construction proposed include:

- Direct soil / dust ingestion;
- Direct soil / dust inhalation;
- Inhalation of fibres / vapours;
- Dermal ad/absorption.

Migration pathways may include diffuse migration through a shallow groundwater table or surface runoff. Potential receptors include construction workers, hospital employees, ground maintenance staff, groundwater or surface water.

6.5.1 Potential Risks

A potential risk from contamination may exist where there is a link connecting a potential receptor to a potential source via a potential pathway. The proposed development involves demolition and excavation, and the construction of a new East Block. Human health exposure pathways can be divided into short term (construction workers) and long term (hospital staff and grounds staff).

Exposure to the PCoC in the short term is unlikely to be at significant concentrations and therefore the risk is considered to be low. Precautions involving the use of PPE, and work practices minising dust generation and dermal contact may be required.

Exposure to the PCoC in the long term is unlikely to be at significant concentrations and therefore the risk is also considered to be low.

Surface water is likely to be considerably diffused by the storm water system and therefore will be diluted prior to discharge. Erosion and sediment control should be utilised during site construction activities.

Groundwater is likely to occur within water bearing zones at depths greater than 5m below surface level. The groundwater table is likely to be segregated by a relatively impermeable sequence of clay and shale and therefore the risk of groundwater contamination is considered to be negligible.

7 LIMITED SOIL SAMPLING

Limited soil sampling using a hand auger was conducted during the site inspection on 5th May 2009, and together with the Site History Information forms the basis for the findings of this assessment.

7.1 Data Quality Objective

The data quality objective of this assessment was to acquire data to allow an limited assessment to be made of:

- The soil quality at the sampling locations;
- The likely existence and extent of ground contamination with the following contaminants of concern:
  - Heavy metals (As Cd Cr Ni Hg Pb Zn Cu);
  - TPH/BTEX;
  - PAHs;
  - OCPs, OPPs and PCBs; and
  - Asbestos Containing Material (ACM);
- Make inferences as to the likely or possible extent of contamination and subsequently assess the risk posed to human health and the environment.

7.2 Soil Sampling

Soil sampling was performed by a Heggies' field representative with a hand auger at eight (8) locations (boreholes BH1 – BH8 shown in **Figure 2** in **Appendix A**). The investigation area size was restricted to the perimeter of the existing East Block which is scheduled for demolition. As it was understood that no environmental sampling and analysis had hitherto been performed at the site and the objective of the current assessment is to develop a preliminary understanding of the current status of potential soil contamination, sampling at eight (8) locations of depths of approximately 0.2m to 1m was considered to be adequate by the Client for the current intentions.

A total of eight (8) primary soil samples were sent for laboratory analysis from the sampling locations. These samples were labelled and placed in an iced insulated box for transport to a NATA accredited laboratory, under appropriate chains of custody (**Appendix E**). A further two (2) soil samples were transported under the same conditions and analysed as QA/QC replicate samples.

An aesthetical assessment of each bagged sample was performed to check whether the samples collected presented any olfactory and/or visual indication of contamination, based on field soil descriptors summarised in **Table 2**. The assessment is stated as part of borehole log description (**Appendix B**). All samples collected had no olfactory indication of contamination (0-A).

Table 2 - Field Soil Descriptors for Olfactory and Visual Indications of Contamination

Visual Feature		Olfactory Feature	
Rank	**Description**	**Rank**	**Description**
0	No visible evidence	**A**	Natural odour (soil like odour or no odour)
1	Slightly visible evidence (trace quantities)	**B**	Slightly offensive odour
2	Visible evidence (e.g. more than trace)	**C**	Moderately offensive odour
3	Obviously contaminated (eg. significantly unusual colour and staining)	**D**	Strongly offensive odour

Table 3 - Field QA/QC Sample Details

Test Pit No.	Primary Sample No.	QA/QC Sample Category	Blind and Split Replicate Sample No.	Target Analytes
BH8	10-7840-0505-8	Soil	10-7840-0505-9 10-7840-0505-10	Heavy Metals

7.3 Field Quality Assurance and Quality Control

Quality Assurance and Quality Control (QA/QC) protocols were used in the fieldwork conducted for this investigation and are summarised as below.

- Experienced and professionally qualified consultants undertook all fieldwork in general accordance with relevant NSW Department of Environmental and Climate Change (DECC – formerly DEC and NSW EPA) guidelines. The fieldwork was conducted in accordance with Heggies Soil Sampling Procedures;
- Field QA/QC procedures were applied to all stages of sample collection, preparation and equipment decontamination. Field methods were conducted in accordance with industry-accepted standards and Heggies' standard operating and quality field procedures;
- Samples were labelled and chain of custody forms were completed (**Appendix E**);
- Samples collected were stored in insulated boxes packed with ice bricks and were transferred to ALS Environmental (ALS) and Ecowise Environmental (Ecowise) within appropriate holding times (Standards Australia, 1997 & 2005). Both laboratories are NATA accredited;
- The primary and blind samples were analysed by ALS while the split sample was analysed by Ecowise Environmental (**Appendix D**); and
- NATA certified asbestos analysis was undertaken by Heggies Pty Ltd Towradgi Laboratory (refer to Heggies report 10-7840/01/ANA – **Appendix D**).

7.4 QA/QC Data Evaluation

The precision of the field QC data for the blind and split replicate samples were assessed by determining the relative percentage difference (RPD) between the primary and replicate samples. RPDs are calculated according to the following formula:

$$\%RPD = \left| \frac{A - B}{A + B} \times 200 \right|$$

where:

A is the concentration of the primary laboratory result per analyte; and
B is the corresponding replicate results.

Laboratory QA/QC data was also collected and this included those for internal duplicates and internal spike recoveries. Acceptance criteria for Laboratory QA/QC vary depending on the analyte concentration and are stated within the laboratory reports (**Appendix D**).

The QA/QC results for soil samples that meet the acceptance criteria include all RPDs less than 50%, spike recoveries falling in the range of 75% to 125% and blanks below detection limits. The overall assessment of the program for the soil sampling was made in term of completeness. The completeness is equal to the percentage of valid QA/QC results and is considered to be satisfactory if the value is greater than 95%.

The overall summary of QA/QC programs are summarised in **Table 4**. The overall completeness is 97% and is considered to be satisfactory for the purpose of this assessment.

Table 4 - QA/QC Data Summary

QA/QC Sample Type	No. of Results Not Meeting Data Quality	Total Number of Results (Individual Analytes)	Percentages Meeting Quality Objectives (%)
Blind Replicate	0	8	100
Split Replicate	0	8	100
Internal Duplicates	3	109	97
Internal Spike Recovery	6	128	95
Method Blanks	0	91	100
Overall Completeness	9	344	97

8 ASSESSMENT CRITERIA

Based on the proposed land use comprising a commercial development, the NEHF F guideline (Commercial / Industrial) provided by NSW DEC (2006) Contaminated Sites, Guidelines for the NSW Site Auditor Scheme (2nd Edition) has been used to assess potential or actual soil contamination at the site (Table 5).

Asbestos is regulated by WorkCover NSW under the *Occupational Health and Safety Act* (NSW) 2000, the *Occupational Health and Safety Regulation* (NSW) 2001 and National Occupation Health and Safety Committee (NOHSC) Asbestos Codes of Practice. To Heggies' knowledge, asbestos is not adequately referred to in any EPA/DECC documentation. However, land is included in the definition of premises covered by the *Occupational Health and Safety Regulation* (NSW) 2001. According to this regulation, the established method of determining the presence of asbestos products is visual inspection conducted by a skilled and competent person, assisted by analysis of samples, including soil samples, for asbestos. Hence the criterion of no visible asbestos, supported by analysis of samples for asbestos, has been adopted.

Table 5 – Adopted Assessment Criteria for Soil

Contaminant	Assessment Criteria (mg/kg)
Asbestos	No Asbestos Detected
Arsenic	500[a]
Cadmium	100[a]
Total Chromium	60% [a]
Hexavalent Chromium	500 [a]
Copper	5000 [a]
Lead	1500 [a]
Mercury	75 [a]
Nickel	3000 [a]
Zinc	35000 [a]
TPH: C6-C9	65 [b]
TPH: C10-C40	1 000 [b]
Benzene	1 [b]
Toluene	1.4 [b]
Ethyl Benzene	3.1 [b]
Xylene	14 [b]
Poly Aromatic Hydrocarbons (total) (PAH)	100[a]
Benzo(A)pyrene	5 [a]
Phenols – total	42500 [a]
PCBs – total	50 [a]
Aldrin + Dieldrin	50 [a]
Chlordane	250 [a]
DDT + DDD + DDE	1000 [a]
Heptachlor	50 [a]

a NSW DEC (2006) Contaminated Sites, Guidelines for the NSW Site Auditor Scheme (2nd Addition), Soil Investigation Levels for Urban Redevelopment Sites in NSW, Health Based Investigation Levels, NEHF F (Commercial / Industrial).

b NSW DECC (1994) Contaminated Sites: Guidelines for Assessing Service Station Sites, Threshold values for sensitive site use.

9 ANALYTICAL RESULTS

9.1 Laboratory Sample Analysis

9.1.1 General

The analytical results were compared to the assessment criteria listed in **Table 5**. The results are detailed in **Table 6** (**Appendix C**). Laboratory reports, and completed chains of custody and sample receipt notifications are presented in **Appendices D and E**, respectively.

9.1.2 Heavy Metals

Heavy metal species analysed were below the assessment criteria.

9.1.3 Total Petroleum Hydrocarbons (TPH)

All samples analysed indicated that the concentrations were below the detection limit

9.1.4 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

All samples analysed indicated that the concentrations were below the detection limit.

9.1.5 Polycyclic Aromatic Hydrocarbons (PAHs)

PAH sample results were below the assessment criteria.

9.1.6 Organochlorine Pesticides (OCPs)/Organophosphate Pesticides (OPPs)/Polychlorinated Biphenyls (PCBs)

All samples analysed indicated that the concentrations were below the assessment criteria.

9.1.7 Asbestos

No Asbestos was detected within the samples analysed.

10 CONCLUSIONS

The findings of this limited preliminary assessment are presented in this report in partial compliance with the EPA Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA, 1997) within the above-mentioned scope of works.

Laboratory analytical data for the soil samples collected during this investigation has indicated that the contaminants of concern did not exceed the adopted assessment criteria within the eight (8) sampling points.

Heggies is of the opinion that a detailed environmental investigation should be undertaken in order to adequately characterise the site in full compliance with DECC Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA, 1997). Notwithstanding the above, within the scope and limitations of this preliminary assessment, soils within the sampling areas appear unlikely to contain the environmental contaminants of concern at concentrations exceeding the assessment criteria.

11 CLOSURE

Should there be any queries regarding this report, please contact the undersigned by telephone on 02-4284-3933.

Yours sincerely,

Ryan Heckenberg
BSc. MEnvSc. MAIEH.
Manager - Illawarra

12 REFERENCES

NEPC (1999) National Environment Protection Measure: Guidelines on the Investigation Levels for Soil and Groundwater Schedule B. National Environment Protection Council.

NSW DEC (2006) Contaminated Sites, Guidelines for the NSW Site Auditor Scheme (2nd Edition). NSW Department of Environment and Conservation, Sydney, NSW.

NSW EPA (1994) Guidelines for assessing Service Station Sites. NSW Environment Protection Authority, Chatswood, NSW.

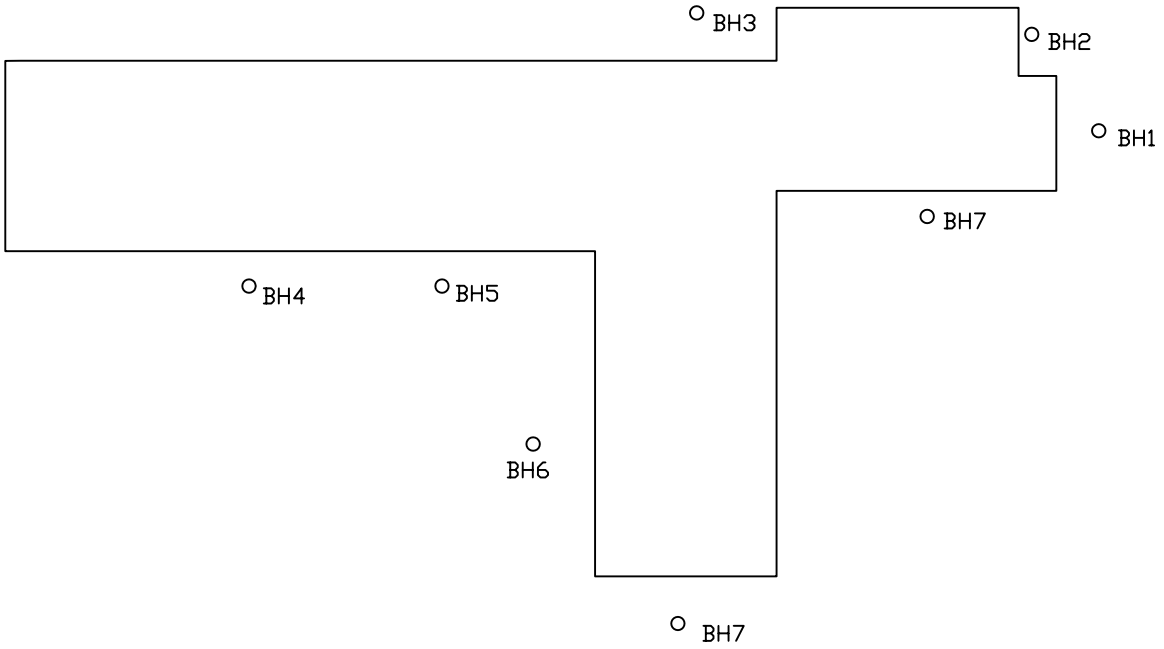
NSW EPA (1995) Contaminated Sites, Sampling Design Guidelines. NSW Environmental Protection Authority, Chatswood, NSW.

NSW EPA (1997) Contaminated Sites, Guidelines for Consultants Reporting on Contaminated Sites. NSW Environment Protection Authority, Chatswood, NSW.

Standards Australia (1997) Australian Standard, AS4482 Guide to the Sampling and Investigation of Potentially Contaminated soil, Part 1: Non-Volatile and Semi-Volatile Compounds (AS4482.1) and; Part 2 Volatile Substances (AS4482.2, 1999). Standards Australia, Homebush, NSW.

Golder Associates (2009) Preliminary Contamination and Geotechnical Investigation Report, Penrith Health Campus Redevelopment Stage 3. Golder Associates.

Appendix A
Indicative Sampling Plan



50 mm ON ORIGINAL

REV	DATE	AMENDMENT / ISSUE DESCRIPTION	PREPARED	CHECKED
0				

Heggies Pty Ltd
160 Pioneer Road
Towradgi NSW 2518
Email address wollongong@heggies.com.au
Telephone 02 4284 3933

Nepean Hospital - East Block
Client: NSW Department of Commerce
NOT TO SCALE

FILE NAME: 10-7840-DWG1.dwg

DRAWING No. ----

REVISION 0

Appendix B
Test Pit Logs

HEGGIES PTY LTD
REPORT OF TEST PIT: 1

SHEET : 1 OF 1

CLIENT :	NSW Department Of Commerce	SURFACE RL :	0	DRILL METHOD :	HA
PROJECT :		DATUM :		DRILL RIG :	
LOCATION :	Nepean Hospital	INCLINATION :	-90	DRILLER :	
JOB NUMBER :	10-7840	HOLE DIAMETER :	100	LOGGED : RJH	DATE : 5/05/209
POSITION :	See Site Plan	HOLE DEPTH :	0.2 m	CHECKED : RJH	DATE : 19-5-009

DRILLING					SAMPLING		FIELD MATERIAL DESCRIPTION					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH SCALE (METRES)	DEPTH [RL]	SAMPLE	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
				SURFACE								
HA	High		0	[0.00]						D	H	
			0.1									
				0.15 m	10-7840-1-S-01-01: 0.15-0.20m 0A PID = 0ppm				hard, light orange, low moisture, low plastidty			
			0.2						End of Test Plt 0.2m. Groundwater not encoutered			
			0.3									
			0.4									
			0.5									
			0.6									
			0.7									
			0.8									
			0.9									

HEGGIES PTY LTD
2 LINCOLN STREET
LANE COVE, NSW, 2066

HEGGIES PTY LTD
REPORT OF TEST PIT: 2

CLIENT :	NSW Department Of Commerce	SURFACE RL :	0	DRILL METHOD :	HA
PROJECT :		DATUM :		DRILL RIG :	
LOCATION :	Nepean Hospital	INCLINATION :	-90	DRILLER :	
JOB NUMBER :	10-7840	HOLE DIAMETER :	100	LOGGED : RJH	DATE : 5/05/209
POSITION :	See Site Plan	HOLE DEPTH :	0.2 m	CHECKED : RJH	DATE : 19-5-009

DRILLING					SAMPLING		FIELD MATERIAL DESCRIPTION					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH SCALE (METRES)	DEPTH (RL)	SAMPLE	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
				SURFACE								
HA	High		0	[0.00]						D	H	
			0.1									
				0.15 m	10-7840-2-S-01-01; 0.15-0.20m 0A PID = 0ppm				hard, light orange, low moisture, low plasticity			
			0.2						End of Test Pit 0.2m. Groundwater not encoutered			
			0.3									
			0.4									
			0.5									
			0.6									
			0.7									
			0.8									
			0.9									

HEGGIES PTY LTD
REPORT OF TEST PIT: 3

CLIENT :	NSW Department Of Commerce	SURFACE RL :	0	DRILL METHOD :	HA
PROJECT :		DATUM :		DRILL RIG :	
LOCATION :	Nepean Hospital	INCLINATION :	-90	DRILLER :	
JOB NUMBER :	10-7840	HOLE DIAMETER :	100	LOGGED : RJH	DATE : 5/05/209
POSITION :	See Site Plan	HOLE DEPTH :	0.2 m	CHECKED : RJH	DATE : 19-5-009

DRILLING					SAMPLING		FIELD MATERIAL DESCRIPTION					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH SCALE (METRES)	DEPTH (RL)	SAMPLE	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
	SURFACE		0	[0.00]								
HA	High		0.1							D	H	
				0.15 m	10-7840-3-S-01-01; 0.15-0.20m 0A PID = 0ppm				hard, light orange, low moisture, low plasticity			
			0.2						End of Test Pit 0.2m. Groundwater not encoutered			
			0.3									
			0.4									
			0.5									
			0.6									
			0.7									
			0.8									
			0.9									

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2 LINCOLN STREET
LANE COVE, NSW, 2066

HEGGIES PTY LTD
REPORT OF TEST PIT: 4

CLIENT :	NSW Department Of Commerce	SURFACE RL :	0	DRILL METHOD :	HA
PROJECT :		DATUM :		DRILL RIG :	
LOCATION :	Nepean Hospital	INCLINATION :	-90	DRILLER :	
JOB NUMBER :	10-7840	HOLE DIAMETER :	100	LOGGED : RJH	DATE : 5/05/209
POSITION :	See Site Plan	HOLE DEPTH :	0.2 m	CHECKED : RJH	DATE : 19-5-009

DRILLING					SAMPLING		FIELD MATERIAL DESCRIPTION					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH SCALE (METRES)	DEPTH (RL)	SAMPLE	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
				SURFACE								
			0	[0.00]								
			0.1									
			0.2									
			0.3									
			0.4									
HA	Low		0.5						End of Test Pit 0.9m. Groundwater not encoutered	M	S	
			0.6									
			0.7									
			0.8									
				0.85 m	10-7840-4-S-01-01; 0.85-0.90m DA PID = 0ppm				soft dark brown clay, moist with med-high plasticity			
			0.9									

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HEGGIES PTY LTD
REPORT OF TEST PIT: 5

SHEET : 1 OF 1

CLIENT :	NSW Department Of Commerce	SURFACE RL :	0	DRILL METHOD :	HA
PROJECT :		DATUM :		DRILL RIG :	
LOCATION :	Nepean Hospital	INCLINATION :	-90	DRILLER :	
JOB NUMBER :	10-7840	HOLE DIAMETER :	100	LOGGED : RJH	DATE : 5/05/209
POSITION :	See Site Plan	HOLE DEPTH :	0.2 m	CHECKED : RJH	DATE : 19-5-009

DRILLING					SAMPLING		FIELD MATERIAL DESCRIPTION					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH SCALE (METRES)	DEPTH (RL)	SAMPLE	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
				SURFACE								
			0	[0.00]								
			0.1									
			0.2									
HA	Low		0.3							M	S	
			0.4									
			0.5									
				0.55 m	10-7840-5-S-01-01; 0.55-0.60m DA PID = 0ppm				soft dark brown clay, moist with med-high plasticity			
			0.6									
			0.7						End of Test Pit 0.6m. Groundwater not encoutered			
			0.8									
			0.9									

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LANE COVE, NSW, 2066

HEGGIES PTY LTD
REPORT OF TEST PIT: 6

CLIENT :	NSW Department Of Commerce	SURFACE RL :	0	DRILL METHOD :	HA
PROJECT :		DATUM :		DRILL RIG :	
LOCATION :	Nepean Hospital	INCLINATION :	-90	DRILLER :	
JOB NUMBER :	10-7840	HOLE DIAMETER :	100	LOGGED : RJH	DATE : 5/05/209
POSITION :	See Site Plan	HOLE DEPTH :	0.2 m	CHECKED : RJH	DATE : 19-5-009

DRILLING					SAMPLING		FIELD MATERIAL DESCRIPTION					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH SCALE (METRES)	DEPTH (RL)	SAMPLE	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
	SURFACE		0	[0.00]								
HA	High		0.1							D	H	
				0.15 m	10-7840-6-S-01-01; 0.15-0.20m 0A PID = 0ppm				hard, light orange, low moisture, low plasticity			
			0.2						End of Test Pit 0.2m. Groundwater not encoutered			
			0.3									
			0.4									
			0.5									
			0.6									
			0.7									
			0.8									
			0.9									

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LANE COVE, NSW, 2066

HEGGIES PTY LTD
REPORT OF TEST PIT: 7

CLIENT :	NSW Department Of Commerce	SURFACE RL :	0	DRILL METHOD :	HA
PROJECT :		DATUM :		DRILL RIG :	
LOCATION :	Nepean Hospital	INCLINATION :	-90	DRILLER :	
JOB NUMBER :	10-7840	HOLE DIAMETER :	100	LOGGED : RJH	DATE : 5/05/209
POSITION :	See Site Plan	HOLE DEPTH :	0.2 m	CHECKED : RJH	DATE : 19-5-009

DRILLING					SAMPLING		FIELD MATERIAL DESCRIPTION					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH SCALE (METRES)	DEPTH (RL)	SAMPLE	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
				SURFACE								
			0	[0.00]								
HA	High		0.1							D	H	
				0.15 m	10-7840-7-S-01-01; 0.15-0.20m 0A PID = 0ppm				hard, light orange, low moisture, low plasticity			
			0.2						End of Test Pit 0.2m. Groundwater not encoutered			
			0.3									
			0.4									
			0.5									
			0.6									
			0.7									
			0.8									
			0.9									

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2 LINCOLN STREET
LANE COVE, NSW, 2066

HEGGIES PTY LTD
REPORT OF TEST PIT: 8

CLIENT :	NSW Department Of Commerce	SURFACE RL :	0	DRILL METHOD :	HA
PROJECT :		DATUM :		DRILL RIG :	
LOCATION :	Nepean Hospital	INCLINATION :	-90	DRILLER :	
JOB NUMBER :	10-7840	HOLE DIAMETER :	100	LOGGED : RJH	DATE : 05-May09
POSITION :	See Site Plan	HOLE DEPTH :	0.2 m	CHECKED : RJH	DATE : 19-5-009

DRILLING					SAMPLING		FIELD MATERIAL DESCRIPTION					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH SCALE (METRES)	DEPTH (RL)	SAMPLE	RECOVERED	GRAPHIC LOG	USC SYMBOL	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
				SURFACE								
			0	[0.00]								
HA	High		0.1							D	H	
				0.15 m	10-7840-8-S-01-01; 0.15-0.20m 0A PID = 0ppm				hard, light orange, low moisture, low plasticity			
			0.2						End of Test Pit 0.2m. Groundwater not encoutered			
			0.3									
			0.4									
			0.5									
			0.6									
			0.7									
			0.8									
			0.9									

HEGGIES PTY LTD
2 LINCOLN STREET
LANE COVE, NSW, 2066

Appendix C
Laboratory Analysis Summary

	Sample	10-7840-0405-1	10-7840-0405-2	10-7840-0405-3	10-7840-0405-4	10-7840-0405-5	10-7840-0405-6	10-7840-0405-7	10-7840-0405-8	10-7840-0405-9	10-7840-0405-10
Analyte	**Units**	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Arsenic	mg/kg	7	6	<5	5	<5	<5	5	<5	5	<1
Cadmium	mg/kg	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.8
Chromium	mg/kg	19	18	15	16	17	16	15	13	16	18
Copper	mg/kg	22	33	13	27	30	14	23	26	30	24
Lead	mg/kg	22	21	16	22	9	452	50	26	25	24
Nickel	mg/kg	8	7	7	7	7	6	12	9	10	9.7
Zinc	mg/kg	41	123	32	61	50	1400	90	56	54	58
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<1
Total Polychlorinated biphenyls	mg/kg	-	-	<0.10	-	<0.10	-	<0.10	-	-	-
alpha-BHC	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Hexachlorobenzene (HCB)	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
beta-BHC	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
gamma-BHC	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
delta-BHC	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Heptachlor	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Aldrin	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Heptachlor epoxide	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
trans-Chlordane	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
alpha-Endosulfan	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
cis-Chlordane	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Dieldrin	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
4.4`-DDE	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Endrin	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
beta-Endosulfan	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
4.4`-DDD	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Endrin aldehyde	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Endosulfan sulfate	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
4.4`-DDT	mg/kg	-	-	<0.2	-	<0.2	-	<0.2	-	-	-
Endrin ketone	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Methoxychlor	mg/kg	-	-	<0.2	-	<0.2	-	<0.2	-	-	-
Dichlorvos	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Demeton-S-methyl	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Monocrotophos	mg/kg	-	-	<0.2	-	<0.2	-	<0.2	-	-	-
Dimethoate	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Diazinon	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Chlorpyrifos-methyl	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Parathion-methyl	mg/kg	-	-	<0.2	-	<0.2	-	<0.2	-	-	-
Malathion	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Fenthion	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Chlorpyrifos	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Parathion	mg/kg	-	-	<0.2	-	<0.2	-	<0.2	-	-	-
Pirimphos-ethyl	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Chlorfenvinphos	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Bromophos-ethyl	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Fenamiphos	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Prothiofos	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Ethion	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Carbophenothion	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Azinphos Methyl	mg/kg	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Phenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2-Chlorophenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2-Methylphenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
3- & 4-Methylphenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2-Nitrophenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2.4-Dimethylphenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2.4-Dichlorophenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2.6-Dichlorophenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
4-Chloro-3-Methylphenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2.4.6-Trichlorophenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2.4.5-Trichlorophenol	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Pentachlorophenol	mg/kg	-	<1	-	<1	-	<1	-	-	-	-
Naphthalene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2-Methylnaphthalene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
2-Chloronaphthalene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Acenaphthylene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Acenaphthene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Fluorene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Phenanthrene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Anthracene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Fluoranthene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Pyrene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
N-2-Fluorenyl Acetamide	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Benz(a)anthracene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Chrysene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Benzo(b) & Benzo(k)fluoranthene	mg/kg	-	<1	-	<1	-	<1	-	-	-	-
7.12-Dimethylbenz(a)anthracene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Benzo(a)pyrene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
3-Methylcholanthrene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Indeno(1.2.3.cd)pyrene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Dibenz(a.h)anthracene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
Benzo(g.h.i)perylene	mg/kg	-	<0.5	-	<0.5	-	<0.5	-	-	-	-
C6 - C9 Fraction	mg/kg	<10	-	<10	<10	<10	<10	<10	-	-	-
C10 - C14 Fraction	mg/kg	<50	-	<50	<50	<50	<50	<50	-	-	-
C15 - C28 Fraction	mg/kg	<100	-	<100	<100	<100	<100	<100	-	-	-
C29 - C36 Fraction	mg/kg	<100	-	<100	<100	<100	<100	<100	-	-	-
Benzene	mg/kg	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	-	-	-
Toluene	mg/kg	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
Ethylbenzene	mg/kg	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
meta- & para-Xylene	mg/kg	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
ortho-Xylene	mg/kg	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
Asbestos	Qual.	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD		

NAD – No Asbestos Detected

Table 6: Laboratory Analysis Summary

Appendix D
Laboratory Reports

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES0906537**	Page	: 1 of 12
Client	: **HEGGIES PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR RYAN HECKENBERG	Contact	: Charlie Pierce
Address	: 160 PIONEER ROAD TOWRADGI NSW, AUSTRALIA 2518	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: ryan.heckenberg@heggies.com	E-mail	: charlie.pierce@alsenviro.com
Telephone	: 4284 3933	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 10-7840	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 7512		
C-O-C number	: ----	Date Samples Received	: 06-MAY-2009
Sampler	: RH	Issue Date	: 13-MAY-2009
Site	: PENRITH		
		No. of samples received	: 9
Quote number	: EN/032/08	No. of samples analysed	: 9

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Spectroscopist	Inorganics
Hoa Nguyen	Inorganic Chemist	Inorganics
Nanthini Coilparampil	Senior Inorganic Chemist	Inorganics
Pabi Subba	Senior Organic Chemist (Semi-Volatile)	Organics
Sanjeshni Jyoti Mala	Senior Chemist Volatile	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 date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

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

- **EG005T: Poor precision was obtained for some elements on sample ES0906504-004 due to sample heterogeneity. Results have been confirmed by re-extraction and reanalysis.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	10-7840-0405-1	10-7840-0405-2	10-7840-0405-3	10-7840-0405-4	10-7840-0405-5
				Client sampling date / time	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00
					ES0906537-001	ES0906537-002	ES0906537-003	ES0906537-004	ES0906537-005
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	----	1.0	%		10.2	9.8	6.0	17.6	17.7
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		7	6	<5	5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		19	18	15	16	17
Copper	7440-50-8	5	mg/kg		22	33	13	27	30
Lead	7439-92-1	5	mg/kg		22	21	16	22	9
Nickel	7440-02-0	2	mg/kg		8	7	7	7	7
Zinc	7440-66-6	5	mg/kg		41	123	32	61	50
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.10	mg/kg		----	----	<0.10	----	<0.10
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		----	----	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	----	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg		----	----	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		----	----	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg		----	----	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg		----	----	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg		----	----	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		----	----	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		----	----	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	----	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		----	----	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg		----	----	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		----	----	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg		----	----	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	----	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		----	----	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	----	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	----	<0.05	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		----	----	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		----	----	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		----	----	<0.2	----	<0.2
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		----	----	<0.05	----	<0.05

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: 10-7840-0405-1	10-7840-0405-2	10-7840-0405-3	10-7840-0405-4	10-7840-0405-5
				Client sampling date / time: 05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00
				ES0906537-001	ES0906537-002	ES0906537-003	ES0906537-004	ES0906537-005
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	----	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	----	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	----	----	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	----	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	----	----	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	----	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	----	----	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	----	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	<0.05	----	<0.05
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	<0.5	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	<0.5	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	<0.5	----
Pentachlorophenol	87-86-5	1	mg/kg	----	<1	----	<1	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	<0.5	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	10-7840-0405-1	10-7840-0405-2	10-7840-0405-3	10-7840-0405-4	10-7840-0405-5
				Client sampling date / time	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00
					ES0906537-001	ES0906537-002	ES0906537-003	ES0906537-004	ES0906537-005
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
Phenanthrene	85-01-8	0.5	mg/kg		----	<0.5	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg		----	<0.5	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg		----	<0.5	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg		----	<0.5	----	<0.5	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg		----	<0.5	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	<0.5	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		----	<0.5	----	<0.5	----
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg		----	<1	----	<1	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg		----	<0.5	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	<0.5	----	<0.5	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg		----	<0.5	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	<0.5	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	<0.5	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	<0.5	----	<0.5	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	----	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	----	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	----	<100	<100	<100
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	----	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<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
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	<0.5	<0.5	<0.5
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	**100**	----	**106**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		----	----	**123**	----	**125**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		----	----	**115**	----	**98.3**
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.1	%		----	**126**	----	**106**	----
Phenol-d6	13127-88-3	0.1	%		----	**58.7**	----	**66.7**	----
2-Chlorophenol-D4	93951-73-6	0.1	%		----	**79.6**	----	**88.6**	----
2.4.6-Tribromophenol	118-79-6	0.1	%		----	**44.6**	----	**43.5**	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	10-7840-0405-1	10-7840-0405-2	10-7840-0405-3	10-7840-0405-4	10-7840-0405-5
				Client sampling date / time	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00
					ES0906537-001	ES0906537-002	ES0906537-003	ES0906537-004	ES0906537-005
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.1	%		----	**57.2**	----	**65.6**	----
1.2-Dichlorobenzene-D4	2199-69-1	0.1	%		----	**54.7**	----	**63.6**	----
2-Fluorobiphenyl	321-60-8	0.1	%		----	**64.2**	----	**75.5**	----
Anthracene-d10	1719-06-8	0.1	%		----	**78.8**	----	**91.3**	----
4-Terphenyl-d14	1718-51-0	0.1	%		----	**68.3**	----	**80.5**	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**89.6**	----	**88.1**	**89.3**	**85.5**
Toluene-D8	2037-26-5	0.1	%		**92.9**	----	**90.2**	**89.6**	**84.4**
4-Bromofluorobenzene	460-00-4	0.1	%		**103**	----	**103**	**101**	**93.8**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	10-7840-0405-6	10-7840-0405-7	10-7840-0405-8	10-7840-0405-9	----
				Client sampling date / time	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	----
					ES0906537-006	ES0906537-007	ES0906537-008	ES0906537-009	----
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	----	1.0	%		**26.7**	**8.3**	**9.6**	**8.9**	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	**5**	<5	**5**	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg		**16**	**15**	**13**	**16**	----
Copper	7440-50-8	5	mg/kg		**14**	**23**	**26**	**30**	----
Lead	7439-92-1	5	mg/kg		**452**	**50**	**26**	**25**	----
Nickel	7440-02-0	2	mg/kg		**6**	**12**	**9**	**10**	----
Zinc	7440-66-6	5	mg/kg		**1400**	**90**	**56**	**54**	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.3**	<0.1	<0.1	<0.1	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.10	mg/kg		----	<0.10	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		----	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		----	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		----	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		----	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		----	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		----	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		----	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		----	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		----	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg		----	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		----	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		----	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		----	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		----	<0.2	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		----	<0.05	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: 10-7840-0405-6	10-7840-0405-7	10-7840-0405-8	10-7840-0405-9	----
				Client sampling date / time: 05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	----
				ES0906537-006	ES0906537-007	ES0906537-008	ES0906537-009	----
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	----
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	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	10-7840-0405-6	10-7840-0405-7	10-7840-0405-8	10-7840-0405-9	----
				Client sampling date / time	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	----
					ES0906537-006	ES0906537-007	ES0906537-008	ES0906537-009	----
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
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	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	----	----	----
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	**99.0**	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		----	**122**	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		----	**113**	----	----	----
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.1	%		**113**	----	----	----	----
Phenol-d6	13127-88-3	0.1	%		**61.7**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%		**81.5**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%		**40.6**	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	10-7840-0405-6	10-7840-0405-7	10-7840-0405-8	10-7840-0405-9	----
				Client sampling date / time	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	05-MAY-2009 15:00	----
					ES0906537-006	ES0906537-007	ES0906537-008	ES0906537-009	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.1	%		**57.2**	----	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.1	%		**61.4**	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.1	%		**65.5**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%		**73.7**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**67.9**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**94.1**	**97.5**	----	----	----
Toluene-D8	2037-26-5	0.1	%		**84.9**	**87.4**	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		**93.7**	**100**	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	10	164
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	10	136
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	10	136
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	25	121
Phenol-d6	13127-88-3	24	113
2-Chlorophenol-D4	93951-73-6	23	134
2.4.6-Tribromophenol	118-79-6	19	122
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	23	120
1.2-Dichlorobenzene-D4	2199-69-1	32	129
2-Fluorobiphenyl	321-60-8	30	115
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	18	137
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121

Ecowise Environmental

73 Military Road Port Kembla NSW 2505 Australia
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Brisbane • Canberra • Melbourne • Sydney • Regional offices

Analytical Report

Heggies Pty Ltd
160 Pioneer Road
Towradgi
NSW, 2518

Phone: **02 4284 3933**
Fax: **02 4284 7405**

Contact Name: **Ryan Heckenberg**

Report Number: **W09/1207**

Sample(s) Received: **5/05/2009**
Client Reference: **10-7840**
Batch Number: **W29825**

Notes:

Purchase Order No. 7513.

Solid/Soil results expressed on dry weight basis unless specified otherwise.
The results stated in this report relate only to the sample(s) as submitted by the client.
Samples analysed as received.

Results Approved By:

Glenn Davies
Laboratory Manager

NATA Accredited Laboratory
No: 992

NATA
WORLD RECOGNISED
ACCREDITATION

This document is issued in accordance with NATA 's accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Results:

Client Id		**10-7840-0405-1**				
Laboratory Id		**W29825/001**				
Arsenic						
Method: WCM073C	*Units: mg/kg*	<1.0				
Cadmium						
Method: WCM073C	*Units: mg/kg*	1.8				
Chromium						
Method: WCM073C	*Units: mg/kg*	18				

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Analytical Report — *Report No: W09/1207*

Results:						
Client Id		**10-7840-0405-1**				
Laboratory Id		**W29825/001**				
Copper						
Method: WCM073C	*Units: mg/kg*	24				
Lead						
Method: WCM073C	*Units: mg/kg*	24				
Mercury						
Method: WCM073C	*Units: mg/kg*	<1.0				
Nickel						
Method: WCM073C	*Units: mg/kg*	9.7				
Zinc						
Method: WCM073C	*Units: mg/kg*	58				

Method(s):

WCM073C	Arsenic
WCM073C	Cadmium
WCM073C	Chromium
WCM073C	Copper
WCM073C	Lead
WCM073C	Mercury
WCM073C	Nickel
WCM073C	Zinc

Appendix E
Chains of Custody and Sample Receipt Notifications

ALS Newcastle 5 Rosegum Close Warabrook NSW 2304

CHAIN OF CUSTODY DOCUMENTATION

CLIENT: Reggies Pty Ltd
ADDRESS / OFFICE: Wollongong Office
PROJECT MANAGER (PM): Ryan Heckenberg
PROJECT ID: 10-7840
SITE: Penrith
P.O. NO.: 7512
RESULTS REQUIRED (Date):
QUOTE NO.: EN/032/09

SAMPLER: Ryan Heckenberg
MOBILE: 0412494989
PHONE
EMAIL REPORT TO: ryan.heckenberg@reggies.com
EMAIL INVOICE TO: (if different to report)

Australian Laboratory Services Pty Ltd

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

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:
3 DAY TAT

ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)

Notes: e.g. Highly contaminated samples
e.g. "High PAHs expected".
Extra volume for QC or trace LORs etc.

Environmental Division
Sydney
Work Order
ES0906537

Telephone : +61-2-8784 8555

URGENT

ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	S2	S13	S14	S4
1	10-7840-0405-1	S	5/4/09		60ml Jar		x			x
2	2						x		x	
3	3						x	x		x
4	4						x		x	x
5	5						x	x		x
6	6						x		x	x
7	7						x	x		x
8	8						x			
9	9						x			

RELINQUISHED BY:

Name:	Ryan Heckenberg	Date:	
Of:	Reggies Pty Ltd.	Time:	
Name:		Date:	
Of:		Time:	

RECEIVED BY

Name:	SARADA	Date:	6.05.09
Of:	ALS	Time:	10:45 A.M
Name:		Date:	
Of:		Time:	

METHOD OF SHIPMENT

Con' Note No:
Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserveed Plastic; AG = Amber Glass Unpreserved; V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bad for Acid Sulphate Soils; B = Unpreserved Bag.

AUSTRALIAN LABORATORY SERVICES P/L

COC Page ___ of ___