



VDM
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EcOz

Water and Sediment Monitoring

Cobar II



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1 Introduction

NuPower Resources Ltd has contracted VDM Consulting EcOz (EcOz) to undertake basic environmental reporting on the results of surface water and stream sediment samples taken within the Cobar II mineral lease (MLN 578). Water and sediment samples were collected within the lease both before and after exploration drilling took place in September 2010. Exploration drilling was undertaken to determine the uranium resource located at the site. Exploration drilling of uranium ore carries an increased environmental risk and strict drilling procedures were put in place to limit the movement of heavy metals and radioactive materials potentially contained within the drilling fines.

This area has an extensive history of exploration and mining dating back to the 1950's. These activities included the development of pits, shafts, an adit and ore dumps which are still in existence. It is therefore the purpose of this report is to ascertain the background levels of metals prior to exploration activity. Sampling after completion of exploration activities has also been undertaken to ensure that there has been no contamination or movement of metals or radioactive material as a result of the activities carried out by NuPower.

A Baseline Environmental Assessment was completed EcOz in 2009 which included two water samples taken upstream and downstream of the exploration lease (Site C06 and Site E07). These results have been included in this report for discussion

1.1 Location

The Cobar II mineral lease (MLN 578) is located within the Wollongorang pastoral station in the southeast Gulf region of the Northern Territory (Latitude – 17.516°, Longitude 137.898°) (**Figure 1**). Cobar II covers a total area of 7.2 hectares and is located on an east facing hillside. A spring located to the south feeds a perennial creek system that passes along the valley floor in a northerly direction running through the entire length of the lease. It was noted during a previous site visit undertaken by EcOz in 2009 that the deposition of flood debris within the confines of the valley indicated a flood height of approximately 1.4m.

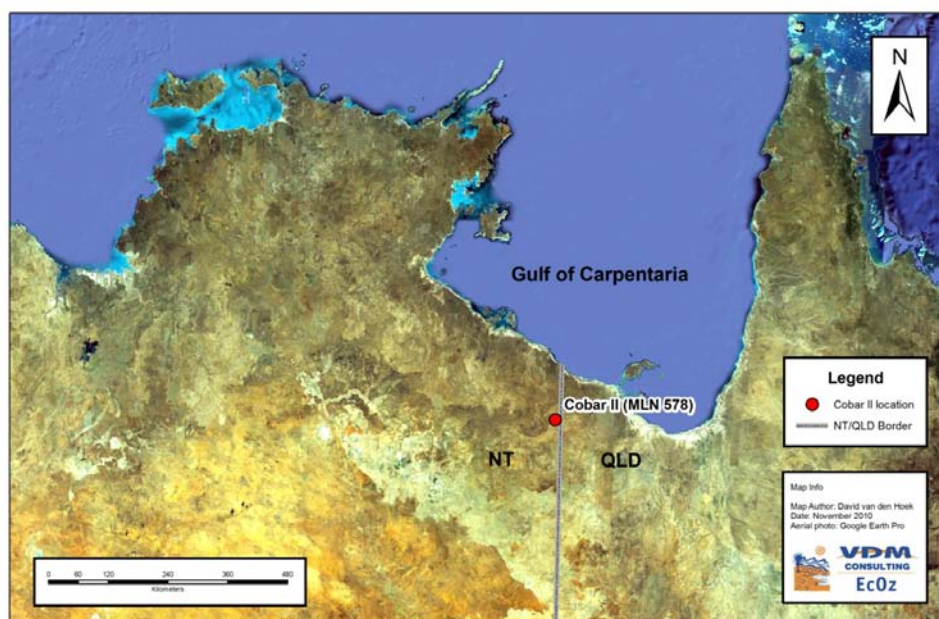


Figure 1 - Location of Cobar II Mineral Lease (MLN578)

1.2 Climate

Cobar II is situated in the monsoon tropics of northern Australia, where the majority of rainfall falls between November and April in the annual wet season (**Figure 2**). High temperatures and humidity also characterise this time of year (**Figure 3**). Outside this period is known as the dry season characterised by low rainfall and a drop in temperature and relative humidity between the months of May till October. Baseline surface water and stream sediment samples were taken in late August 2010 before exploration drilling took place. Surface water samples were also collected after drilling commenced in early October 2010. Sediment samples were only taken prior to drilling as no significant rain events had occurred prior to the October sampling run. Sampling later in the season was not possible as the area was inaccessible.

The closest weather station to the site is located approximately 34km northeast at Wollogorang pastoral station. **Figure 2** presents the rainfall data recorded at the Wollogorang weather station during 2010 while **Figure 3** shows the mean highest and lowest temperatures (BOM, 2010).

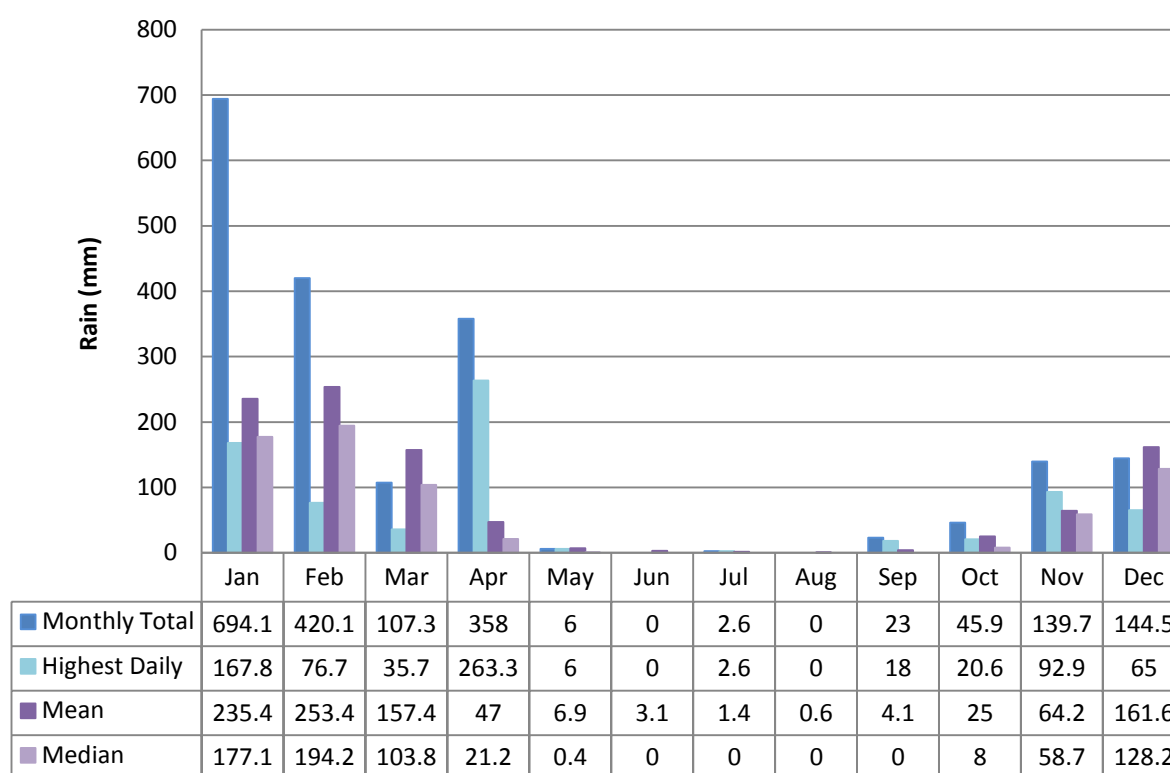


Figure 2 - Rainfall Data (2010) for Wollogorang Weather Station (# 014707)

The creek that runs through Cobar II contains permanent water year round. The creek flows in the wet season with water retained in water holes during the dry. Observations suggest that this creek is spring fed with water travelling through the gravel layer during the dry season.

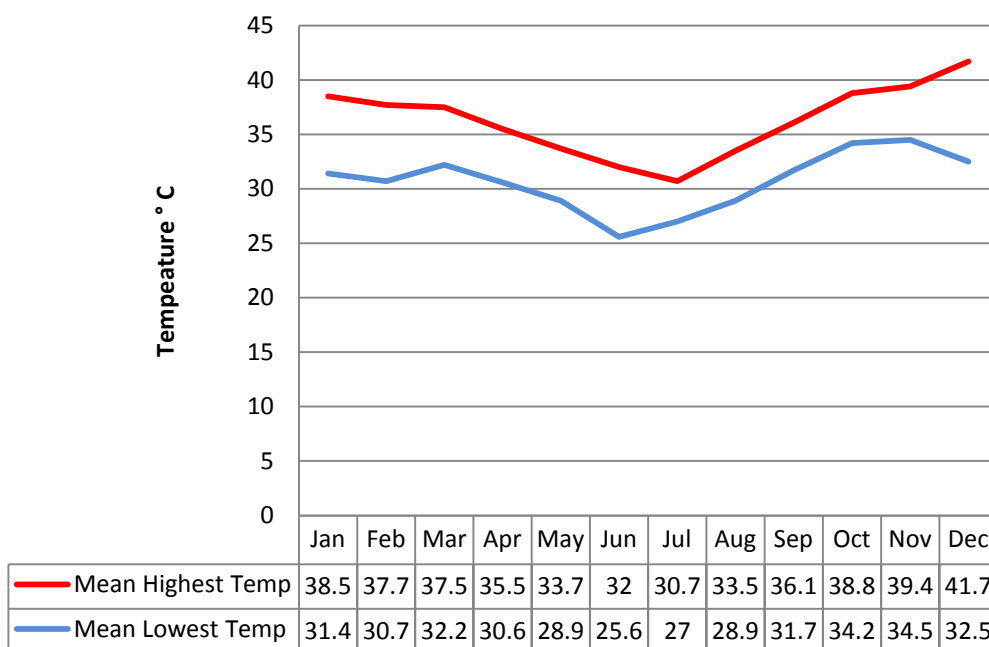


Figure 3 - Mean Temperature Data (2010) for Wollogorang Weather Station (# 014707)

1.3 Methodology

Post exploration, 2010, sediment and water samples were collected by NuPower employees. EcOz sampling procedures were sent to NuPower prior to sampling to be followed by NuPower employees. These procedures have been developed using the following guidelines and standards.

- AS/NZS 5667.1:1998 Water Quality – Sampling. Part 1. Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
- AS/NZS 5667.10:1998. Water Quality-Sampling Part 10 Guidance on Sampling of Waste Waters. Water Quality – Sampling. Part 1. Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
- AS 4482.1-2005 - Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds
- ANZECC Guidelines for the Assessment and Management of Contaminated Sites - 1992;

As samples were not taken by an EcOz Environmental Scientist the report has been written on the assumption that all above standards and procedures were followed. Quality control reports from the laboratory do state that eight of the water samples were received outside of recommended holding times and four which were also outside the recommended holding time for Mercury. This was due to the remote nature of the site and associated length of time required to travel to and from site.

An EcOz Environmental Scientist who has visited the site, then identified which samples were to be analysed by a NATA accredited laboratory. The locations of these samples are illustrated in **Figure 4**. Section 2 discusses the analysis of these results. **Appendix C** contains the Chain of Custody, Laboratory Certificate of Analysis and Quality Control Report.

All sediment results have been assessed against the sediment assessment levels extracted from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000). The Interim Sediment Quality Guidelines (ISQG) is presented in **Appendix A** and is used as an initial assessment of contaminant concentration. All water quality results have been compared against the ANZECC guideline for protection of aquatic ecosystems (80% and 95% level of protection) (**Appendix A**).

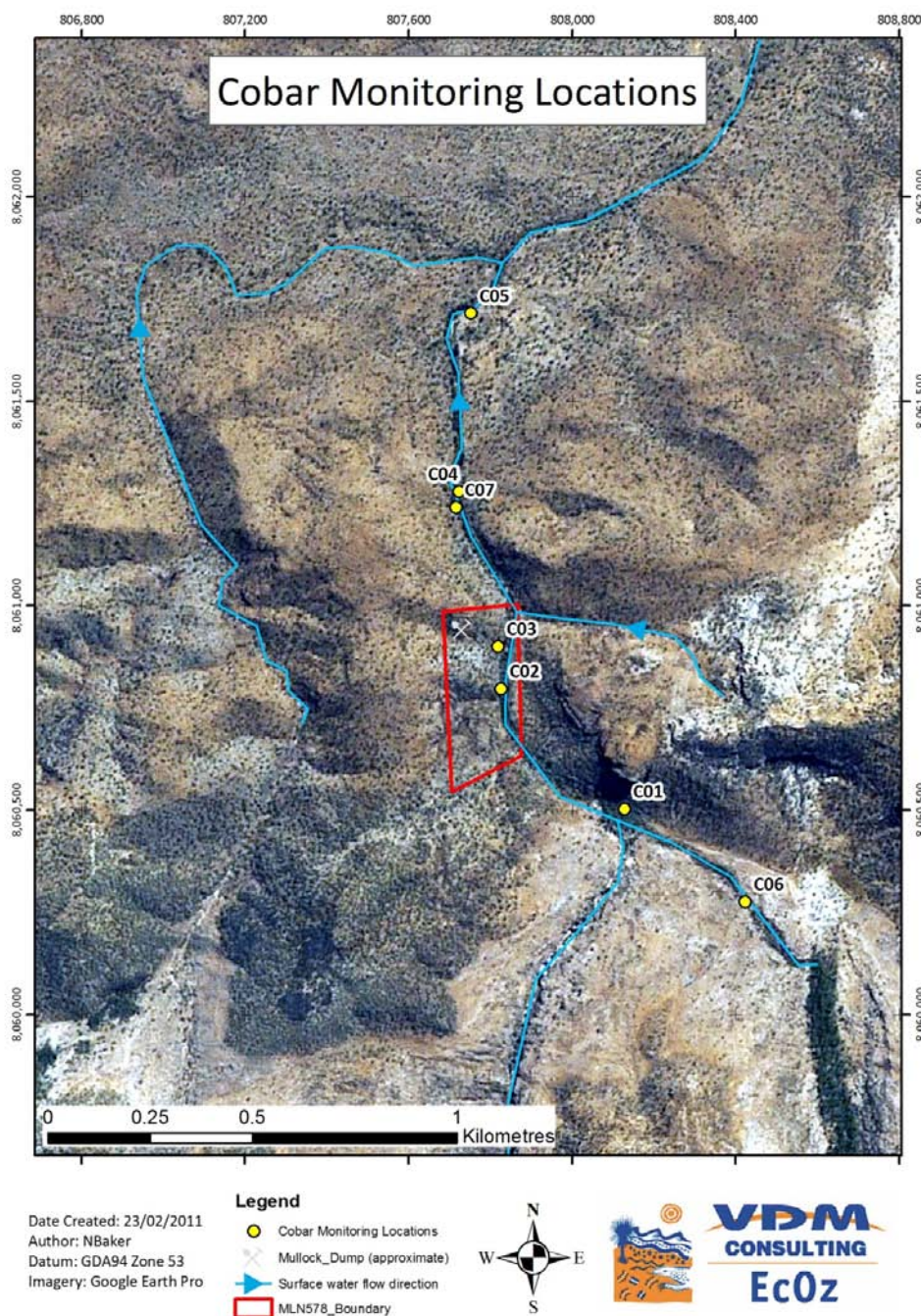


Figure 4 - Cobar II Monitoring Locations

2 Monitoring Results

2.1 Water Quality

Water quality samples were taken from four separate locations during August and October 2010. All results have been compared against the ANZECC Guidelines for the Protection of Aquatic Ecosystems. All results were assessed against the trigger values for 95% and 80% level of protection (**Appendix A**).

2.1.1 Pre-Disturbance

Two water samples were taken in 2009 upstream and downstream of the mining lease (Sites C06 and C07 respectively). Most analytes recorded values below the the limit of reporting (LOR) which is the lowest detectable level for a parameter given the sensitivity of the test. and no analytes recorded levels that triggered the 95% level of protection. Zinc recorded a level of 0.007 mg/L upstream (Site C06) which decreased to below the LOR downstream (Site C07) of the mineral lease. Site 6 (C06) recorded Barium levels of 0.001 mg/L which increased slightly to 0.003 mg/L downstream. There is no trigger value for Barium under the ANZECC guidelines.

Most metals recorded concentrations below the LOR No site recorded metal concentrations that triggered the 80% level of protection. With the exception of Zinc, no site triggered the 95% protection level. Zinc concentrations at Site C01 and C04 triggered the 95% level of protection recording concentrations of 0.012 and 0.013 mg/L respectively.

2.1.2 Post Disturbance

Site 2 (C02) recorded a value of 0.008 mg/L of Zinc prior to drilling which slightly increased to 0.012 mg/L after drilling and rehabilitation. Site 4 (C04) recorded a value of 0.013 mg/L of Zinc prior to drilling which decreased to below the LOR after drilling and rehabilitation. Site 2 is within the exploration lease while Site 4 is downstream of the lease.

Barium increased at two sites after drilling and rehabilitation. Site 4 (C04) recorded 0.004 mg/L of Barium prior to earthworks which slightly increased to 0.019 mg/L after drilling and rehabilitation. Similarly, Site 5 (C05) recorded a value of 0.011 mg/L prior to earthworks which increased slightly to 0.017 mg/L after drilling and rehabilitation. Site 1 (C01) showed no change in barium concentration pre or post drilling. Site 2 (C02) showed a decreased in Barium from 0.004 to 0.002 mg/L. There is no trigger value for Barium under the ANZECC guidelines.

There was a slight increase in Uranium concentration at Site 4 (C04) and Site 5 (C05). Total Uranium concentration at Site 4 was below the LOR prior to drilling which increased slightly to 0.022 mg/L after drilling and rehabilitation. Similarly, Site 5 increase slightly from 0.001 mg/L to 0.002 mg/L post drilling. Both these sites are downstream from the exploration lease.

2.2 Sediment Quality

Sediment samples for metal content were taken from 5 locations prior to the commencement of drilling activities (**Figure 4**). Metal concentrations of sediment samples were analysed from samples taken prior to earthworks for drilling (**Appendix A**). All samples have been compared against the Interim Sediment Quality

Guidelines (ISQG) (ANZECC, 2000). Sediment samples were only taken prior to disturbance and indicate the sediment quality prior to activities being undertaken by NuPower.

Site 3 (C03) was the only site to exceed either of the ISQG trigger values. Copper at Site 3 exceeded the ISQG High trigger value recording a concentration of 308 mg/kg. Similarly, Arsenic, Chromium, Lead, Nickel and Zinc concentrations exceeded the ISQG Low trigger values.

Although there is no trigger value for Uranium, the recorded concentration at Site 3 was 9,840 mg/kg which considerably higher than all other sites that recorded levels that varied from 2.9 mg/kg – 10.9 mg/kg. Similarly, Site 3 also recorded concentrations of Potassium, Barium, Cobalt, Manganese, Vanadium and Thorium at levels substantially greater than those recorded at other sites.

All other sites were below the ISQG Low trigger values. Site 3 is located downstream of old workings where a visibly contaminated mullock dump is located in the drainage channel. The approximate location of the dump is shown in **Figure 4** and photos in **Figure 5**.

3 Conclusion

3.1 Water Quality

The data did not show any significant trends in the water quality either before or after exploration activities. The water quality prior to disturbance was of good quality with only Zinc exceeding the 95% level of protection at Site 1 and Site 4. These sites are upstream (C01) and downstream (C04) of the exploration lease with both sites showing a decrease in Zinc concentration following drilling and rehabilitation. Water quality remained good following drilling and rehabilitation by NuPower with no significant change in water quality either upstream or downstream of the exploration activities. The results suggest that there has been no negative impact to surface water quality resulting from the NuPower activities.

3.2 Sediment Quality

Sediment samples at all but one location did not show elevated metal concentrations prior to drilling activities by NuPower. The only site to show signs of elevated metal concentrations was Site 3 (C03). As all sediment samples were taken prior to exploration activities and represent the background metal concentrations prior to NuPower undertaking drilling activities. The elevated results at Site 3 may be attributed to the outcropping uranium mineralisation however, the elevated concentrations are more likely to be attributed to the old workings upstream from this site. Figure 5 shows where the old shaft used to be and the contaminated mullock dump in creek. These workings are legacies that existed prior to NuPower acquiring this exploration lease. As sites downstream from Site 3 do not show elevated levels of metals, contamination appears to be contained to this tributary.

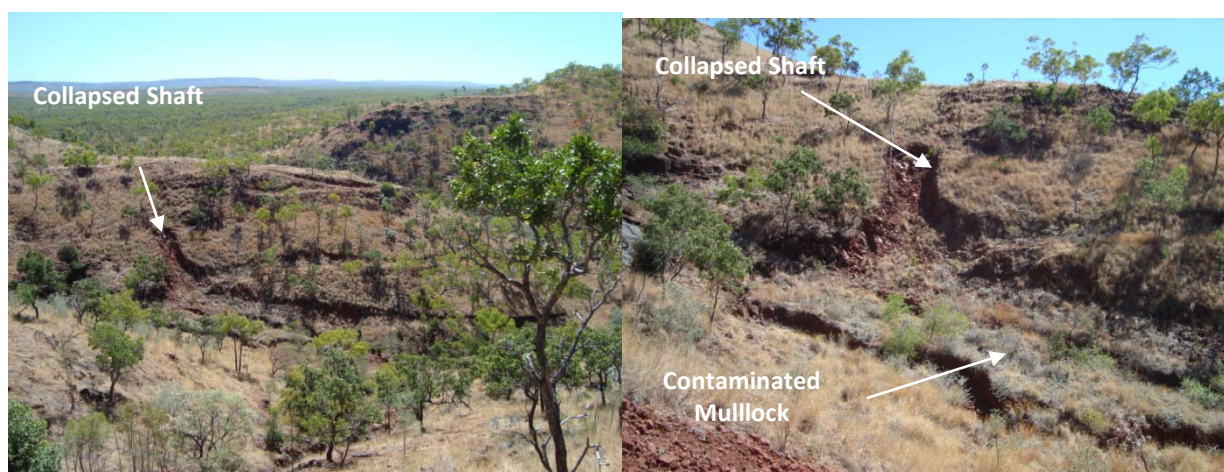


Figure 5 - Old Workings and Contaminated Mullock in Drainage Channel upstream from Site 3 (C03)

To date, sediment samples have only been taken prior to disturbance as there had been no runoff at the time of the last sample run and therefore no additional sediment had been added to the sites since drilling began. NuPower have advised that they will perform follow up sampling during 2011.

Due to the remoteness of the site a recommendation for future monitoring would be to ensure that all samples are collected, stored and transported in accordance (or as close to as is possible) with Australian Standards to ensure integrity of the data.

Rehabilitation of sites has occurred at all drilling sites (**Figure 6 and 7**). To date natural regeneration of flora species has been successful without the need for seeding. NuPower will continue to monitor the success of rehabilitation at these sites including sediment samples.



Figure 6 - Site 3 (C03) Before Drilling (24/08/10)



Figure 7 - Site 3 (C03) after Rehabilitation (11/10/10)

4 Definitions

Analyte	A chemical substance that is the subject of a chemical analysis
ANZECC	Australian and New Zealand Environment and Conservation Council
BOM	Bureau of Meteorology
ISQG	Interim Sediment Quality Guidelines
LOR	Limit of reporting - the lowest detectable level for a parameter given the sensitivity of the test.
NATA	National Association of Testing Authorities

5 References

ANZECC, 2000. Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Environment Conservation Council, October 2000.

EcOz, (2009). Cobar II (MLN 578) – Baseline Environmental Assessment. Prepared for NuPower Resources Limited, Unpublished.

Appendix A – Water and Sediment Sampling Results

Cobar Water Samples

* indicates analyte tested outside of holding time.

Site ID	Lab ID	Easting	Northing	Sample Type	Date Sampled	Comments	Cation	Dissolved Metals												Total Metals		Dissolved		
							Potassium mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Cobalt mg/L	Chromium mg/L	Copper mg/L	Manganese mg/L	Nickel mg/L	Lead mg/L	Vanadium mg/L	Zinc mg/L	Thorium mg/L	Uranium mg/L	Thorium mg/L	Uranium mg/L	Mercury mg/L
						ANZECC 80%		0.042	n/a	n/a	0.0008	n/a	n/a	0.0025	3.6	0.017	0.0094	n/a	0.031	n/a	n/a			
						ANZECC 95%		0.013	n/a	n/a	0.0002	n/a	n/a	0.0014	1.9	0.011	0.0034	n/a	0.008	n/a	n/a			
C01-SW	20112	808127	8060504	SW	22-Aug-10	sampled before earthworks for drilling	<1	<0.001	0.003	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	0.012	<0.001	<0.001	<0.001	<0.001	<0.0001*
	20022	808127	8060504	SW	10-Oct-10	sampled after drilling and rehabilitation	<1*	<0.001	0.003	<0.001	<0.0001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.0001
C02-SW	20113	807831	8060794	SW	22-Aug-10	sampled before earthworks for drilling	<1	<0.001	0.004	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	0.005	<0.001	<0.001	<0.001	<0.001	<0.0001*
	20023	807831	8060794	SW	10-Oct-10	sampled after drilling and rehabilitation	<1*	<0.001	0.002	<0.001	<0.0001	<0.001	<0.001	0.001	<0.001	<0.001	<0.01	0.008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
C04-SW	20114	807723	8061280	SW	22-Aug-10	sampled before earthworks for drilling	1	<0.001	0.004	<0.001	<0.0001	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.01	0.013	<0.001	<0.001	<0.001	<0.001	<0.0001*
	20024	807723	8061280	SW	10-Oct-10	sampled after drilling and rehabilitation	1*	<0.001	0.019	<0.001	<0.0001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.001	0.012	<0.001	0.022	<0.0001
C05-SW	20115	807752	8061716	SW	22-Aug-10	sampled before earthworks for drilling	1	<0.001	0.011	<0.001	<0.0001	<0.001	<0.001	0.001	0.005	<0.001	<0.001	<0.01	<0.005	<0.001	0.001	<0.001	0.001	<0.0001*
	20025	807752	8061716	SW	10-Oct-10	sampled after drilling and rehabilitation	<1*	<0.001	0.017	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.001	0.001	<0.001	0.002	<0.0001
C06-SW	MLN578-1	808423	8060277	SW	1-Jul-09	2009	<1	<0.001	0.001	<0.001	<0.0001	<0.001	0.002	<0.001	0.002	<0.001	<0.001	<0.01	0.007	<0.001	<0.001	<0.001	<0.001	<0.0001
C07-SW	MLN578-2	807716	8061241	SW	1-Jul-09	2009	<1	<0.001	0.003	<0.001	<0.0001	<0.001	0.002	0.001	0.010	<0.001	<0.001	<0.01	<0.005	<0.001	<0.001	<0.001	0.001	<0.0001

Cobar Sediment Samples

Site ID	Lab ID	Easting	Northing	Sample Type	Date Sampled	Comments	Cation	Total Metals														Total Recoverable Mercury
							Potassium mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Lead mg/kg	Manganese mg/kg	Nickel mg/kg	Vanadium mg/kg	Zinc mg/kg	Uranium mg/kg	Thorium mg/kg	Mercury mg/kg
						ISQG-High	70			10	370		270	220		52		410			1	
						ISQG-Low	20			1.5	80		65	50		21		200			0.15	
C01-SED	20017	808127	8060504	Sediment	21-Aug-10	sampled before earthworks for drilling	100	<5	10	<1	<1	14	4	11	<5	122	7	21	19	2.9	0.6	<0.1
C02-SED	20018	807826	8060797	Sediment	21-Aug-10	sampled before earthworks for drilling	130	<5	10	<1	<1	20	6	7	<5	93	10	29	16	2.8	0.6	<0.1
C03-SED	20019	807818	8060901	Sediment	21-Aug-10	sampled before earthworks for drilling	1,900	30	80	1	<1	88	49	308	103	565	95	939	190	9,840	5.6	<0.1
C04-SED	20020	807723	8061280	Sediment	21-Aug-10	sampled before earthworks for drilling	130	<5	<10	<1	<1	11	3	6	<5	59	5	33	98	10.9	0.5	<0.1
C05-SED	20021	807752	8061716	Sediment	21-Aug-10	sampled before earthworks for drilling	190	<5	20	<1	<1	25	6	12	<5	121	14	49	15	10.4	0.8	<0.1

Appendix B – Monitoring Location List

Cobar II Monitoring Locations

Site ID - Sediment	Site ID - Water	Easting	Northing
C01-SED	C01-SW	808127	8060504
C02-SED	C02-SW	807826	8060797
C03-SED	-	807818	8060901
C04-SED	C04-SW	807723	8061280
C05-SED	C05-SW	807752	8061716
-	C06-SW	808423	8060277
-	C07-SW	807716	8061241

Appendix C – Chain of Custody, Laboratory Analysis Certificate and Quality Control Report



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB1100125	Page	: 1 of 8
Client	: ECOZ ENVIRONMENTAL SERVICES	Laboratory	: Environmental Division Brisbane
Contact	: MR DAVID VAN DEN HOEK	Contact	: Carsten Emrich
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Telephone	: +61 08 89811100	Telephone	: +61 7 3243 7123
Facsimile	: +61 08 89811102	Facsimile	: +61 7 3243 7218
Project	: DW100077	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 01-JAN-2011
Sampler	: NuPower	Issue Date	: 25-JAN-2011
Site	: Eva and Cobar 2		
Quote number	: BN/308/10	No. of samples received	: 45
		No. of samples analysed	: 29

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 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.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Kim McCabe	Senior Inorganic Chemist	Inorganics

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General Comments

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

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

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

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

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

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

LOR = Limit of reporting

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

- **ALS Environmental is not NATA accredited to report the elements listed under method codes EG020E, EG020G, EG020R and EG020W.**
- **EG005T (Total Metals) Samples EB1100125-003 (20019), EB1100125-008 (12219) & EB1100125-028 (20110) show poor duplicate results due to sample heterogeneity. Confirmed by re-extraction and re-analysis.**
- **EG020T (Total Metals) Samples EB1100125-001 (20017) & EB1100125-028 (20110) show poor duplicate results due to sample heterogeneity. Confirmed by re-extraction and re-analysis.**



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL				Client sample ID	20017 <1mm	20018 <1mm	20019 <1mm	20020 <1mm	20021 <1mm
Client sampling date / time				05-JAN-2011 15:00	05-JAN-2011 15:00		05-JAN-2011 15:00	05-JAN-2011 15:00	
Compound	CAS Number	LOR	Unit	EB1100125-001	EB1100125-002	EB1100125-003	EB1100125-004	EB1100125-005	
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	<5	<5	30	<5	<5	
Barium	7440-39-3	10	mg/kg	10	10	80	<10	20	
Beryllium	7440-41-7	1	mg/kg	<1	<1	1	<1	<1	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	
Chromium	7440-47-3	2	mg/kg	14	20	88	11	25	
Cobalt	7440-48-4	2	mg/kg	4	6	49	3	6	
Copper	7440-50-8	5	mg/kg	11	7	308	6	12	
Lead	7439-92-1	5	mg/kg	<5	<5	103	<5	<5	
Manganese	7439-96-5	5	mg/kg	122	93	565	59	121	
Nickel	7440-02-0	2	mg/kg	7	10	95	5	14	
Vanadium	7440-62-2	5	mg/kg	21	29	939	33	49	
Zinc	7440-66-6	5	mg/kg	19	16	190	98	15	
Potassium	7440-09-7	50	mg/kg	100	130	1900	130	190	
EG020T: Total Metals by ICP-MS									
Uranium	7440-61-1	0.1	mg/kg	2.9	2.8	9840	10.9	10.4	
Thorium	7440-29-1	0.1	mg/kg	0.6	0.6	5.6	0.5	0.8	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				12213 <1mm	12216 <1mm	12219 <1mm	12220 <1mm	12221 <1mm
				05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00
Compound	CAS Number	LOR	Unit	EB1100125-006	EB1100125-007	EB1100125-008	EB1100125-009	EB1100125-010
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	6	6	7	<5
Barium	7440-39-3	10	mg/kg	30	50	50	70	40
Beryllium	7440-41-7	1	mg/kg	<1	2	1	2	<1
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	5	16	10	11	5
Cobalt	7440-48-4	2	mg/kg	3	11	5	21	<2
Copper	7440-50-8	5	mg/kg	21	44	245	204	9
Lead	7439-92-1	5	mg/kg	6	36	16	46	<5
Manganese	7439-96-5	5	mg/kg	42	208	253	365	31
Nickel	7440-02-0	2	mg/kg	2	5	3	4	<2
Vanadium	7440-62-2	5	mg/kg	24	53	19	23	11
Zinc	7440-66-6	5	mg/kg	14	50	13	21	<5
Potassium	7440-09-7	50	mg/kg	390	690	630	1190	370
EG020T: Total Metals by ICP-MS								
Uranium	7440-61-1	0.1	mg/kg	37.3	287	103	28.0	5.1
Thorium	7440-29-1	0.1	mg/kg	1.8	1.3	1.8	1.8	1.1
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				12222 <1mm	12223 <1mm	12203 <1mm	12205 <1mm	12212 <1mm
				05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00
Compound	CAS Number	LOR	Unit	EB1100125-011	EB1100125-012	EB1100125-013	EB1100125-014	EB1100125-015
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	6
Barium	7440-39-3	10	mg/kg	170	20	30	60	50
Beryllium	7440-41-7	1	mg/kg	6	<1	<1	1	1
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	11	3	6	10	11
Cobalt	7440-48-4	2	mg/kg	16	<2	4	7	5
Copper	7440-50-8	5	mg/kg	154	6	23	47	142
Lead	7439-92-1	5	mg/kg	9	<5	6	17	<5
Manganese	7439-96-5	5	mg/kg	844	14	42	138	215
Nickel	7440-02-0	2	mg/kg	6	<2	3	4	3
Vanadium	7440-62-2	5	mg/kg	32	9	24	34	12
Zinc	7440-66-6	5	mg/kg	50	<5	13	27	13
Potassium	7440-09-7	50	mg/kg	2800	250	430	620	610
EG020T: Total Metals by ICP-MS								
Uranium	7440-61-1	0.1	mg/kg	1.5	0.4	31.4	66.8	24.4
Thorium	7440-29-1	0.1	mg/kg	1.7	1.3	1.9	2.8	1.7
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				20012 <1mm	20013 <1mm	20014 <1mm	20015 <1mm	20016 <1mm
				05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00
Compound	CAS Number	LOR	Unit	EB1100125-016	EB1100125-017	EB1100125-018	EB1100125-019	EB1100125-020
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	22	20	9	9
Barium	7440-39-3	10	mg/kg	140	120	90	30	80
Beryllium	7440-41-7	1	mg/kg	2	2	2	<1	2
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	13	21	15	7	10
Cobalt	7440-48-4	2	mg/kg	10	19	20	7	11
Copper	7440-50-8	5	mg/kg	110	101	436	241	224
Lead	7439-92-1	5	mg/kg	5	174	70	14	12
Manganese	7439-96-5	5	mg/kg	358	238	243	173	412
Nickel	7440-02-0	2	mg/kg	3	7	5	2	6
Vanadium	7440-62-2	5	mg/kg	31	140	68	22	23
Zinc	7440-66-6	5	mg/kg	41	22	15	12	20
Potassium	7440-09-7	50	mg/kg	1730	980	770	540	970
EG020T: Total Metals by ICP-MS								
Uranium	7440-61-1	0.1	mg/kg	8.1	445000	578	46.5	38.8
Thorium	7440-29-1	0.1	mg/kg	2.6	4.3	5.5	3.3	3.2
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				20101 <1mm	20104 <1mm	20105 <1mm	20106 <1mm	20107 <1mm
				05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00
Compound	CAS Number	LOR	Unit	EB1100125-021	EB1100125-022	EB1100125-023	EB1100125-024	EB1100125-025
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	90	60	<10	10	30
Beryllium	7440-41-7	1	mg/kg	2	1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	13	10	<2	2	6
Cobalt	7440-48-4	2	mg/kg	18	7	<2	<2	5
Copper	7440-50-8	5	mg/kg	53	56	<5	<5	20
Lead	7439-92-1	5	mg/kg	34	21	<5	<5	7
Manganese	7439-96-5	5	mg/kg	457	162	7	21	82
Nickel	7440-02-0	2	mg/kg	4	3	<2	<2	2
Vanadium	7440-62-2	5	mg/kg	65	36	6	8	21
Zinc	7440-66-6	5	mg/kg	23	27	<5	<5	10
Potassium	7440-09-7	50	mg/kg	1250	770	120	160	410
EG020T: Total Metals by ICP-MS								
Uranium	7440-61-1	0.1	mg/kg	295	94.8	0.4	0.5	27.3
Thorium	7440-29-1	0.1	mg/kg	3.3	2.7	1.3	1.0	1.1
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1



Analytical Results

Sub-Matrix: SOIL

Client sample ID

Client sampling date / time

				20108 <1mm	20109 <1mm	20110 <1mm	20111 <1mm	----
				05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	05-JAN-2011 15:00	----
Compound	CAS Number	LOR	Unit	EB1100125-026	EB1100125-027	EB1100125-028	EB1100125-029	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	6	8	10	<5	----
Barium	7440-39-3	10	mg/kg	60	40	40	160	----
Beryllium	7440-41-7	1	mg/kg	2	1	1	5	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg	9	12	9	14	----
Cobalt	7440-48-4	2	mg/kg	8	5	9	13	----
Copper	7440-50-8	5	mg/kg	239	169	290	164	----
Lead	7439-92-1	5	mg/kg	8	11	13	8	----
Manganese	7439-96-5	5	mg/kg	297	214	201	687	----
Nickel	7440-02-0	2	mg/kg	3	3	3	7	----
Vanadium	7440-62-2	5	mg/kg	25	15	29	32	----
Zinc	7440-66-6	5	mg/kg	21	12	14	56	----
Potassium	7440-09-7	50	mg/kg	990	640	660	2810	----
EG020T: Total Metals by ICP-MS								
Uranium	7440-61-1	0.1	mg/kg	19.0	116	66.0	1.4	----
Thorium	7440-29-1	0.1	mg/kg	3.2	2.4	3.4	3.2	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----

CHAIN OF CUSTODY DOCUMENTATION						 Australian Laboratory Services Pty Ltd	
CLIENT: EcOz VDM				SAMPLER: NuPower			
ADDRESS / OFFICE: PO Box 381 Darwin, NT 0800				MOBILE:			
PROJECT MANAGER (PM): David van den Hoek				PHONE: 889811100			
PROJECT ID: DW100077				EMAIL REPORT TO: david.vandenhoek@ecoz.com.au			
SITE: Eva and Cobar II				P.O. NO.: EMAIL INVOICE TO: (if different to report) ecoz@ecoz.com.au			
RESULTS REQUIRED (Date): QUOTE NO.: 88				ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)			
FOR LABORATORY USE ONLY		COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:					
COOLER SEAL (circle appropriate)		Steam sediment samples stored at ALS Mt Isa.					
Intact: Yes No N/A							
SAMPLE TEMPERATURE							
CHILLED: Yes No							
SAMPLE INFORMATION (note: S = Soil, W=Water)						CONTAINER INFORMATION	
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	Sieve to 1mm Metal tested on <1mm fraction (As, Ba, Be, Cd, Cr, Co, Mn, Ni, Pb, Th, U, V, Zn, Hg, Cu) Potassium.
1	20017	S	21-Aug-10				x x
2	20018	S	21-Aug-10				x x
3	20019	S	21-Aug-10				x x
4	20020	S	21-Aug-10				x x
5	20021	S	21-Aug-10				x x
6	12213	S	2/11/2009				x x
7	12216	S	2/11/2009				x x
8	12219	S	2/11/2009				x x
9	12220	S	2/11/2009				x x
10	12221	S	2/11/2009				x x
11	12222	S	2/11/2009				x x
12	12223	S	2/11/2009				x x
13	12203	S	5/12/2009				x x
14	12205	S	5/12/2009				x x
15	12212	S	5/12/2009				x x
16	20012	S	24/08/2010				x x
17	20013	S	24/08/2010				x x
18	20014	S	24/08/2010				x x
19	20015	S	24/08/2010				x x
20	20016	S	24/08/2010				x x
21	20101	S	15/09/2010				x x
22	20104	S	15/09/2010				x x
23	20105	S	15/09/2010				x x
24	20106	S	15/09/2010				x x
25	20107	S	15/09/2010				x x
26	20108	S	15/09/2010				x x
27	20109	S	15/09/2010				x x
28	20110	S	15/09/2010				x x
29	20111	S	15/09/2010				x x
RELINQUISHED BY:				RECEIVED BY:			
Name: ALS Mt Isa				Name:			
Of: ALS Mt Isa				Of:			
Name:				Name:			
Date:				Date:			
Time:				Time:			
Date:				Date:			
Time:				Time:			
Method of Shipment:				Transport Co:			

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved 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.

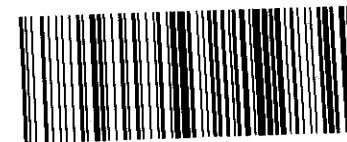


Australian Laboratory Services Pty Ltd

Environmental Division
Brisbane

Work Order

EB1100125



Telephone : + 61-7-3243 7222



Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB1100125	Page	: 1 of 6
Client	: ECOZ ENVIRONMENTAL SERVICES	Laboratory	: Environmental Division Brisbane
Contact	: MR DAVID VAN DEN HOEK	Contact	: Carsten Emrich
Address	: PO BOX 381 DARWIN NT, AUSTRALIA 0801	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: david.vandenhoeck@ecoz.com.au	E-mail	: carsten.emrich@alsenviro.com
Telephone	: +61 08 89811100	Telephone	: +61 7 3243 7123
Facsimile	: +61 08 89811102	Facsimile	: +61 7 3243 7218
Project	: DW100077	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Eva and Cobar 2		
C-O-C number	: ----	Date Samples Received	: 01-JAN-2011
Sampler	: NuPower	Issue Date	: 25-JAN-2011
Order number	: ----		
Quote number	: BN/308/10	No. of samples received	: 45
		No. of samples analysed	: 29

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

Environmental Division Brisbane

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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	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005T: Total Metals by ICP-AES							
Pulp Bag (-1000µm) 20019 - <1mm		17-JAN-2011	---	----	20-JAN-2011	----	----
Pulp Bag (-1000µm) 20017 - <1mm, 20020 - <1mm, 12213 - <1mm, 12219 - <1mm, 12221 - <1mm, 12223 - <1mm, 12205 - <1mm, 20012 - <1mm, 20014 - <1mm, 20016 - <1mm, 20104 - <1mm, 20106 - <1mm, 20108 - <1mm, 20110 - <1mm, 20018 - <1mm, 20021 - <1mm, 12216 - <1mm, 12220 - <1mm, 12222 - <1mm, 12203 - <1mm, 12212 - <1mm, 20013 - <1mm, 20015 - <1mm, 20101 - <1mm, 20105 - <1mm, 20107 - <1mm, 20109 - <1mm, 20111 - <1mm	05-JAN-2011	17-JAN-2011	04-JUL-2011	✓	20-JAN-2011	04-JUL-2011	✓



Matrix: SOIL

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

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Pulp Bag (-1000µm) 20019 - <1mm		17-JAN-2011	---	----	20-JAN-2011	----	----
Pulp Bag (-1000µm) 20017 - <1mm, 20018 - <1mm, 20020 - <1mm, 20021 - <1mm, 12213 - <1mm, 12216 - <1mm, 12219 - <1mm, 12220 - <1mm, 12221 - <1mm, 12222 - <1mm, 12223 - <1mm, 12203 - <1mm, 12205 - <1mm, 12212 - <1mm, 20012 - <1mm, 20013 - <1mm, 20014 - <1mm, 20015 - <1mm, 20016 - <1mm, 20101 - <1mm, 20104 - <1mm, 20105 - <1mm, 20106 - <1mm, 20107 - <1mm, 20108 - <1mm, 20109 - <1mm, 20110 - <1mm, 20111 - <1mm	05-JAN-2011	17-JAN-2011	04-JUL-2011	✓	21-JAN-2011	04-JUL-2011	✓
EG035T: Total Recoverable Mercury by FIMS							
Pulp Bag (-1000µm) 20019 - <1mm		17-JAN-2011	---	----	20-JAN-2011	----	----
Pulp Bag (-1000µm) 20017 - <1mm, 20018 - <1mm, 20020 - <1mm, 20021 - <1mm, 12213 - <1mm, 12216 - <1mm, 12219 - <1mm, 12220 - <1mm, 12221 - <1mm, 12222 - <1mm, 12223 - <1mm, 12203 - <1mm, 12205 - <1mm, 12212 - <1mm, 20012 - <1mm, 20013 - <1mm, 20014 - <1mm, 20015 - <1mm, 20016 - <1mm, 20101 - <1mm, 20104 - <1mm, 20105 - <1mm, 20106 - <1mm, 20107 - <1mm, 20108 - <1mm, 20109 - <1mm, 20110 - <1mm, 20111 - <1mm	05-JAN-2011	17-JAN-2011	02-FEB-2011	✓	20-JAN-2011	02-FEB-2011	✓



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)							
Total Metals by ICP-MS - Suite R	EG020R-T	4	28	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	6	59	10.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	6	59	10.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite X	EG020X-T	3	26	11.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	3	59	5.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	3	59	5.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite X	EG020X-T	2	26	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Total Metals by ICP-MS - Suite R	EG020R-T	3	28	10.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	3	59	5.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	3	59	5.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite X	EG020X-T	2	26	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	3	59	5.1	5.0	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	3	59	5.1	5.0	✓	ALS QCS3 requirement
Total Metals by ICP-MS - Suite X	EG020X-T	2	26	7.7	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
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 Metals by ICP-MS - Suite R	EG020R-T	SOIL	(APHA 21st ed., 3125; USEPA SW846 - 6020) (ICPMS) Metals in solids are determined following an appropriate acid digestion. The ICPMS technique ionizes selected elements. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass / charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3)
Total Metals by ICP-MS - Suite X	EG020X-T	SOIL	(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	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl ₂)(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 SnCl ₂ 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)
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)
Sizing (sieving 1000µm to 45µm)	GEO26B	SOIL	In-house



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	EB1100125-008	12219 <1mm	Manganese	7439-96-5	44.1 %	0-20%	RPD exceeds LOR based limits
EG005T: Total Metals by ICP-AES	EB1100125-028	20110 <1mm	Manganese	7439-96-5	21.4 %	0-20%	RPD exceeds LOR based limits
EG020T: Total Metals by ICP-MS	EB1100125-001	20017 <1mm	Uranium	7440-61-1	29.2 %	0-20%	RPD exceeds LOR based limits
Matrix Spike (MS) Recoveries							
EG005T: Total Metals by ICP-AES	EB1100125-019	20015 <1mm	Copper	7440-50-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005T: Total Metals by ICP-AES	EB1023900-014	Anonymous	Manganese	7439-96-5	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

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

- No Analysis Holding Time Outliers exist.

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.



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB1019195	Page	: 1 of 4
Client	: ECOZ ENVIRONMENTAL SERVICES	Laboratory	: Environmental Division Brisbane
Contact	: Jyoti Choudhary	Contact	: Carsten Emrich
Address	: PO BOX 381 DARWIN NT, AUSTRALIA 0801	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: jyoti.choudhary@vdmgroup.com.au	E-mail	: carsten.emrich@alsenviro.com
Telephone	: +61 08 89811100	Telephone	: +61 7 3243 7123
Facsimile	: +61 08 89811102	Facsimile	: +61 7 3243 7218
Project	: Nu Power Site	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----	Date Samples Received	: 27-OCT-2010
C-O-C number	: ----	Issue Date	: 03-NOV-2010
Sampler	: Nu Power	No. of samples received	: 8
Site	: Nu Power Site	No. of samples analysed	: 8
Quote number	: BN/308/10		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results



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.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Kim McCabe	Senior Inorganic Chemist	Inorganics

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General Comments

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

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

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

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

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

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

LOR = Limit of reporting

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



Analytical Results

Sub-Matrix: **WATER**

Client sample ID

Client sampling date / time

				20112	20113	20114	20115	20022
				22-AUG-2010 15:00	22-AUG-2010 15:00	22-AUG-2010 15:00	22-AUG-2010 15:00	10-OCT-2010 15:00
Compound	CAS Number	LOR	Unit	EB1019195-001	EB1019195-002	EB1019195-003	EB1019195-004	EB1019195-005
ED093F: Dissolved Major Cations								
Potassium	7440-09-7	1	mg/L	<1	<1	1	<1	<1
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	0.003	0.002	0.019	0.017	0.003
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	0.001	0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	0.002	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	0.008	<0.005	<0.005	0.012
Thorium	7440-29-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Uranium	7440-61-1	0.001	mg/L	<0.001	<0.001	0.012	0.001	<0.001
EG020T: Total Metals by ICP-MS								
Thorium	7440-29-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Uranium	7440-61-1	0.001	mg/L	<0.001	<0.001	0.022	0.002	<0.001
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001



Analytical Results

Sub-Matrix: **WATER**

Client sample ID

Client sampling date / time

				20023	20024	20025	----	----
				10-OCT-2010 15:00	10-OCT-2010 15:00	10-OCT-2010 15:00	----	----
Compound	CAS Number	LOR	Unit	EB1019195-006	EB1019195-007	EB1019195-008	----	----
ED093F: Dissolved Major Cations								
Potassium	7440-09-7	1	mg/L	<1	1	1	----	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Barium	7440-39-3	0.001	mg/L	0.004	0.004	0.011	----	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	----	----
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	----	----
Manganese	7439-96-5	0.001	mg/L	<0.001	0.001	0.005	----	----
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	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	----	----
Zinc	7440-66-6	0.005	mg/L	0.005	0.013	<0.005	----	----
Thorium	7440-29-1	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Uranium	7440-61-1	0.001	mg/L	<0.001	<0.001	0.001	----	----
EG020T: Total Metals by ICP-MS								
Thorium	7440-29-1	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Uranium	7440-61-1	0.001	mg/L	<0.001	<0.001	0.001	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐ **Townsville:** 14-15 Desma Ct, Bohle QLD 4818
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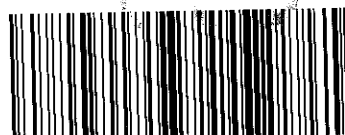
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☐ **Launceston:** 27 Wellington St, Launceston TAS 7250
 Ph: 03 6331 2158 E: launceston@alsenviro.com

CLIENT: EcoZ Environmental Services		TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)		<input type="checkbox"/> Standard TAT (List due date): <input type="checkbox"/> Non Standard or urgent TAT (List due date):	
OFFICE: GPO Box 381, Darwin NT 0801		ALS QUOTE NO.:		COC SEQUENCE NUMBER (Circle)	
PROJECT: Nu Power Site				COC: 1	
ORDER NUMBER:				OF: 1	
PROJECT MANAGER: Ray Hall		CONTACT PH: (08) 8981 1100			
SAMPLER: Nu power		SAMPLER MOBILE: 0404 270 302		RELINQUISHED BY:	
COC emailed to Enviro Lab? NO		EDD FORMAT (or default):		Jyoti Choudhary	
Email Reports to (will default to PM if no other addresses are listed): Jyoti.Choudhary@vdmgroup.com.au				DATE/TIME: 26th October 2010	
Email Invoice to (will default to PM if no other addresses are listed):				RECEIVED BY:	
				OTTO 21	
				DATE/TIME: 27/10/10 09:10	
				RELINQUISHED BY:	
				DATE/TIME:	
				RECEIVED BY:	
				DATE/TIME:	
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:					

SAMPLE DETAILS MATRIX: Solid(S) Water(W)				CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	W-3 (13 metals)	Potassium	EG020T(Uranium and Thorium)	EG020F (Uranium and Thorium)					Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	20112	22/08/2010	SW	AP, P	3	/	/	/	/					
2	20113	22/08/2010	SW	AP, P	3	/	/	/	/					
3	20114	22/08/2010	SW	AP, P	3	/	/	/	/					
4	20115	22/08/2010	SW	AP, P	3	/	/	/	/					
5	20022	10/10/2010	SW	AP, P	3	/	/	/	/					
6	20023	10/10/2010	SW	AP, P	3	/	/	/	/					
F00	20024	10/10/2010	SW	AP, P	3	/	/	/	/					
	20025	10/10/2010	SW	AP, P	3	/	/	/	/					
TOTAL					24									

Environmental Division
Brisbane
Work Order
EB1019195



Telephone : +61-7-3243 7222

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial 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 Bag for Acid Sulphate Soils; B = Unpreserved Bag.



Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB1019195	Page	: 1 of 5
Client	: ECOZ ENVIRONMENTAL SERVICES	Laboratory	: Environmental Division Brisbane
Contact	: Jyoti Choudhary	Contact	: Carsten Emrich
Address	: PO BOX 381 DARWIN NT, AUSTRALIA 0801	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: jyoti.choudhary@vdmgroup.com.au	E-mail	: carsten.emrich@alsenviro.com
Telephone	: +61 08 89811100	Telephone	: +61 7 3243 7123
Facsimile	: +61 08 89811102	Facsimile	: +61 7 3243 7218
Project	: Nu Power Site	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Nu Power Site		
C-O-C number	: ----	Date Samples Received	: 27-OCT-2010
Sampler	: Nu Power	Issue Date	: 03-NOV-2010
Order number	: ----		
Quote number	: BN/308/10	No. of samples received	: 8
		No. of samples analysed	: 8

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

This Interpretive Quality Control Report contains the following information:

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

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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: **WATER**

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

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural 20022, 20024,	20023, 20025	10-OCT-2010	---	17-OCT-2010	----	28-OCT-2010	17-OCT-2010	✖
Clear Plastic Bottle - Natural 20112, 20114,	20113, 20115	22-AUG-2010	---	29-AUG-2010	----	28-OCT-2010	29-AUG-2010	✖
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Filtered; Lab-acidified 20024,	20025	10-OCT-2010	---	08-APR-2011	----	02-NOV-2010	08-APR-2011	✔
Clear Plastic Bottle - Filtered; Lab-acidified 20022,	20023	10-OCT-2010	---	08-APR-2011	----	29-OCT-2010	08-APR-2011	✔
Clear Plastic Bottle - Filtered; Lab-acidified 20112, 20114,	20113, 20115	22-AUG-2010	---	18-FEB-2011	----	28-OCT-2010	18-FEB-2011	✔
EG020T: Total Metals by ICP-MS								
Clear Plastic Bottle - Unfiltered; Lab-acidified 20022, 20024,	20023, 20025	10-OCT-2010	01-NOV-2010	08-APR-2011	✔	01-NOV-2010	08-APR-2011	✔
Clear Plastic Bottle - Unfiltered; Lab-acidified 20112, 20114,	20113, 20115	22-AUG-2010	01-NOV-2010	18-FEB-2011	✔	01-NOV-2010	18-FEB-2011	✔
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Filtered; Lab-acidified 20022, 20024,	20023, 20025	10-OCT-2010	---	07-NOV-2010	----	29-OCT-2010	07-NOV-2010	✔
Clear Plastic Bottle - Filtered; Lab-acidified 20112, 20114,	20113, 20115	22-AUG-2010	---	19-SEP-2010	----	28-OCT-2010	19-SEP-2010	✖



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(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: **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)							
Dissolved Mercury by FIMS	EG035F	4	37	10.8	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	4	30	13.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite B	EG020B-F	4	30	13.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite B	EG020B-T	1	8	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	2	37	5.4	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	3	30	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite B	EG020B-F	3	30	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite B	EG020B-T	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	2	37	5.4	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	3	30	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite B	EG020B-F	3	30	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite B	EG020B-T	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	2	37	5.4	5.0	✓	ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	3	30	10.0	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
Major Cations - Dissolved	ED093F	WATER	APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises the 0.45um filtered sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): Samples are 0.45 um filtered prior to analysis. 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.
Dissolved Metals by ICP-MS - Suite B	EG020B-F	WATER	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): Samples are 0.45 um filtered prior to analysis. 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 Metals by ICP-MS - Suite B	EG020B-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.
Dissolved Mercury by FIMS	EG035F	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ 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)
Preparation Methods	Method	Matrix	Method Descriptions
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)



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: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG020F: Dissolved Metals by ICP-MS	EB1019048-004	Anonymous	Manganese	7439-96-5	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control 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: **WATER**

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Natural							
20022, 20024,	20023, 20025	----	----	----	28-OCT-2010	17-OCT-2010	11
Clear Plastic Bottle - Natural							
20112, 20114,	20113, 20115	----	----	----	28-OCT-2010	29-AUG-2010	60
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Filtered; Lab-acidified							
20112, 20114,	20113, 20115	----	----	----	28-OCT-2010	19-SEP-2010	39

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.