



## Environmental Division

### CERTIFICATE OF ANALYSIS

Work Order	: <b>ES0810742</b>	Page	: 1 of 5
Client	: <b>DELTA ELECTRICITY</b>	Laboratory	: Environmental Division Sydney
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Project	: METALS ANALYSIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----	Date Samples Received	: 24-JUL-2008
C-O-C number	: ----	Issue Date	: 04-AUG-2008
Sampler	: SL	No. of samples received	: 6
Site	: VALES POINT ASH DAM WATER	No. of samples analysed	: 6
Quote number	: ----		

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



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#### 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
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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 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 = Chemistry Abstract Services number

LOR = Limit of reporting

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

- **EG020A-C: LOR raised for Chromium due to matrix interference.**
- **EG093: LCS recovery for Pb falls outside ALS Dynamic Control Limit. However, it is within the acceptance criteria based on ALS DQO. No further action is required.**



Analytical Results

Sub-Matrix: SLUDGE

Client sample ID

				TROUGH 1 OUTLET SLUDGE	TROUGH 2 OUTLET SLUDGE	TROUGH 3 OUTLET SLUDGE	----	----
Client sampling date / time				11-MAR-2004 16:00	11-MAR-2004 16:00	11-MAR-2004 16:00	----	----
Compound	CAS Number	LOR	Unit	ES0810742-001	ES0810742-002	ES0810742-003	----	----
EN33: TCLP Leach								
Initial pH	----	0.1	pH Unit	6.1	6.2	6.2	----	----
After HCl pH	----	0.1	pH Unit	1.5	1.5	1.6	----	----
Extraction Fluid Number	----	1	-	1	1	1	----	----
Final pH	----	0.1	pH Unit	4.7	5.0	4.9	----	----



## Analytical Results

Sub-Matrix: TCLP LEACHATE

Client sample ID

Client sampling date / time

Sub-Matrix: TCLP LEACHATE				Client sample ID	TROUGH 1 OUTLET SLUDGE	TROUGH 2 OUTLET SLUDGE	TROUGH 3 OUTLET SLUDGE	----	----
Client sampling date / time					01-AUG-2008 12:00	01-AUG-2008 12:00	01-AUG-2008 12:00	----	----
Compound	CAS Number	LOR	Unit		ES0810742-001	ES0810742-002	ES0810742-003	----	----
EG020C: Leachable Metals by ICPMS									
Aluminium	7429-90-5	0.1	mg/L		0.6	0.8	0.1	----	----
Arsenic	7440-38-2	0.005	mg/L		<0.005	<0.005	<0.005	----	----
Boron	7440-42-8	0.1	mg/L		0.7	0.4	0.3	----	----
Cadmium	7440-43-9	0.001	mg/L		0.003	0.006	<0.001	----	----
Cobalt	7440-48-4	0.01	mg/L		0.01	0.02	0.02	----	----
Chromium	7440-47-3	0.01	mg/L		<0.10	<0.10	<0.10	----	----
Manganese	7439-96-5	0.01	mg/L		1.30	6.16	5.38	----	----
Molybdenum	7439-98-7	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Nickel	7440-02-0	0.01	mg/L		0.10	0.14	0.06	----	----
Lead	7439-92-1	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Antimony	7440-36-0	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Zinc	7440-66-6	0.1	mg/L		0.7	0.5	0.3	----	----
Iron	7439-89-6	0.05	mg/L		84.6	100	130	----	----



## Analytical Results

Sub-Matrix: **WATER**

Client sample ID

Client sampling date / time

				TROUGH 1 OUTLET WATER	TROUGH 2 OUTLET WATER	TROUGH 3 OUTLET WATER	----	----
				11-MAR-2004 16:00	11-MAR-2004 16:00	11-MAR-2004 16:00	----	----
Compound	CAS Number	LOR	Unit	ES0810742-004	ES0810742-005	ES0810742-006	----	----
<b>EG093F: Dissolved Metals in Saline Water by ORC-ICPMS</b>								
Aluminium	7429-90-5	10	µg/L	<10	<10	<10	----	----
Selenium	7782-49-2	2	µg/L	<2	<2	<2	----	----
Antimony	7440-36-0	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Iron	7439-89-6	5	µg/L	<b>34200</b>	<b>150</b>	<b>55300</b>	----	----
Arsenic	7440-38-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Boron	7440-42-8	100	µg/L	<b>11600</b>	<b>4800</b>	<b>4700</b>	----	----
Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	<0.2	----	----
Chromium	7440-47-3	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Cobalt	7440-48-4	0.2	µg/L	<b>5.7</b>	<0.2	<b>4.3</b>	----	----
Lead	7439-92-1	0.2	µg/L	<b>1.6</b>	<0.2	<0.2	----	----
Manganese	7439-96-5	0.5	µg/L	<b>8230</b>	<b>201</b>	<b>9230</b>	----	----
Molybdenum	7439-98-7	0.1	µg/L	<b>2.2</b>	<b>54.6</b>	<b>4.8</b>	----	----
Nickel	7440-02-0	0.5	µg/L	<b>6.7</b>	<b>3.1</b>	<b>1.7</b>	----	----
Vanadium	7440-62-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Zinc	7440-66-6	5	µg/L	<b>54</b>	<5	<b>9</b>	----	----