



HEGGIES

REPORT 60-1728-DST-R2

Revision 0

**SOUTHERN SYDNEY FREIGHT LINE
MONTHLY AMBIENT AIR QUALITY MONITORING REPORT
March 2009 - April 2009**

PREPARED FOR

Reed Constructions Australia Pty Ltd
PO Box 6395
North Sydney NSW 2060

5 MAY 2009

HEGGIES PTY LTD

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Incorporating

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SOUTHERN SYDNEY FREIGHT LINE

MONTHLY AMBIENT AIR QUALITY MONITORING REPORT

March 2009 - April 2009

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This document has been prepared in accordance with the requirements of that System.

DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
60-1728-DST-R2	Revision 0	5 May 2009	Michael Fernandez	Ryan Heckenberg	Ryan Heckenberg



EXECUTIVE SUMMARY

Reed Constructions Australia Pty Ltd (Reed) has engaged Heggies Pty Ltd (Heggies) to monitor total dust deposition concentrations adjacent the Casula Railway Station in accordance with the Southern Sydney Freight Line Dust Management Sub Plan. Dust monitoring is undertaken to assess compliance of railway construction works with the identified objectives of the sub plan.

No exceedances in the ambient air quality criteria of 4 g/m²/month were recorded at monitoring location 60-1728-DDG-1 during the monitoring period from the 9th March 2009 through 6th April 2009 for total deposited matter (insoluble solids).



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1 SCOPE

Reed Constructions Australia Pty Ltd (Reed) has engaged Heggies Pty Ltd (Heggies) to monitor total dust deposition concentrations adjacent the Casula Railway Station in accordance with the Southern Sydney Freight Line Dust Management Sub Plan. Dust monitoring is undertaken to assess compliance of railway construction works with the identified objectives of the sub plan.

2 LIMITATIONS

Work is 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 Pty Ltd cannot guarantee that all hazards/issues of concern 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 Reed Constructions Australia Pty Ltd.

We are not building consultants or medical professionals. Medical opinion should be sought where appropriate on potential health risks arising airborne contaminants and/or other health hazards and the treatment of any associated sickness.

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. No parties other than the Client should use any information and/or report(s) without first conferring with Heggies.

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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.



3 DUST DEPOSITION MONITORING DETAILS

One Dust Deposition Gauge (DDGs) was installed adjacent the Casula Railway Station at the location provided below in order to assess deposited matter on a continual basis and investigate the potential for fugitive emissions from the railway construction activities on the surrounding environment. The siting of the DDG was selected taking into consideration the criteria contained in AS 2922 1987 "Ambient air - Guide for the siting of sampling units" combined with the constraints of the site locality and direction from the site contact. The following location was chosen:

MONITOR	NORTHING	EASTING	LOCATION
Dust Deposition Gauge 1 (60-1728-DDG-1)	34°57'02.65"S	150°54'41.76"E	Adjacent Casula Train Station

Table 1: Monitoring Location 60-1728-DDG-1

DDG sampling and analysis was undertaken in accordance with AS 3580.10.1 1991 "Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method".

In accordance with the NSW Environment Protection Authority (2001) document "Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales", project-specific criteria have been set as follows:

- Maximum dust deposition of **4 g/m²/month** (assessed as **Insoluble Solids**).

The monitoring location is represented in **Figure 1**.

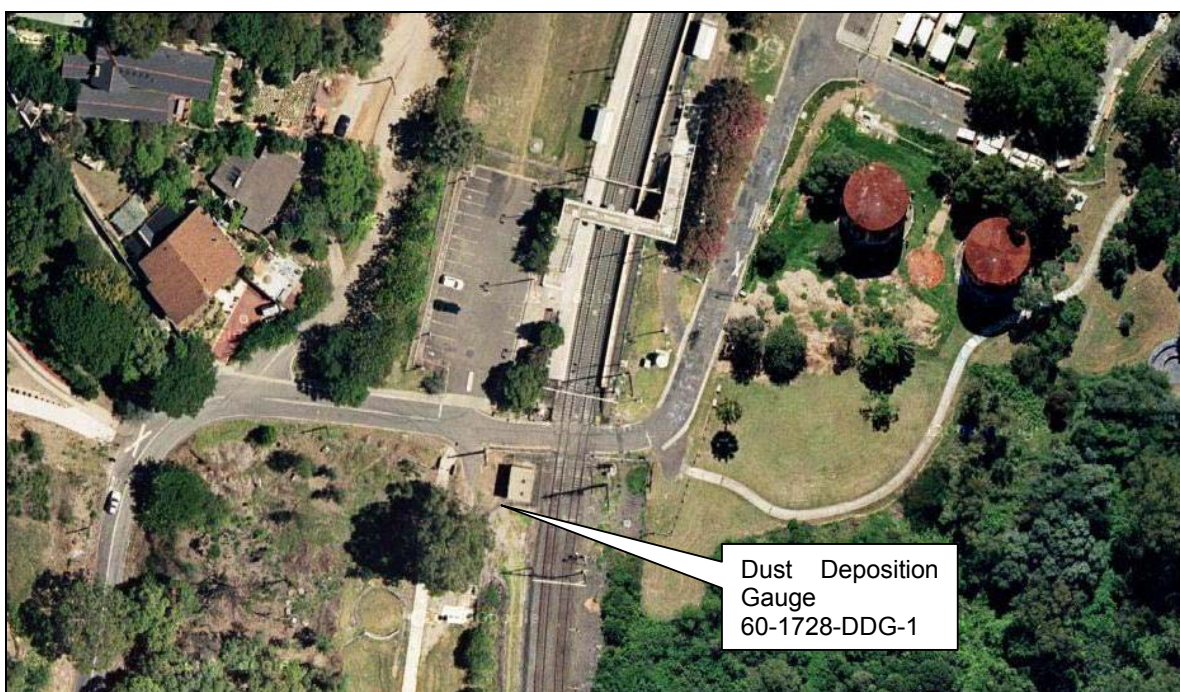


Figure 1: Site Location and Placement of Monitoring Equipment



4 NUISANCE IMPACTS OF FUGITIVE EMISSIONS

Nuisance dust can be expected to impact on residential / commercial areas when annual average dust deposition levels exceed 4 g/m²/month (assessed as insoluble solids).

Table 2 presents the NSW Department of Environment and Climate Change (DECC) impact assessment goals for dust fallout, showing the allowable increase in dust deposition concentrations over the ambient (background) level.

Averaging Period	Maximum Increase in Deposited Dust Level	Maximum Total Deposited Dust Level
Annual	2 g/m ² /month	4 g/m ² /month

Source: "Approved Methods & Guidance for the Modelling and Assessment of Air Pollutants in NSW", NSW EPA 2001.

Table 2: DECC Goals for Allowable Dust Deposition

5 RESULTS

5.1 MONTHLY DUST DEPOSITION

Dust Deposition results for the monthly monitoring period, including data collected from 9th March 2009 through to the 6th April 2009, at the location indicated in **Figure 1** are presented in **Table 3**. The laboratory certificates are attached in **Appendix A**.

Date	Location	Insoluble Solids (g/m ² /month)	Ash Residue (g/m ² /month)	Combustible Matter (g/m ² /month)
05/02/09 – 09/03/09	60-1728-DDG-1/1	1.6	1.2	0.4
09/03/09 – 06/04/09		1.8	1.5	0.3
Annual Average		1.7	1.4	0.3

Table 3: Dust Deposition Results

As indicated in **Table 3** the dust deposition results obtained at monitoring location 60-1728-DDG-1 did not exceed the project criterion of 4g/m²/month in March 2009 to April 2009.

The NSW Department of Environment & Climate Change (DECC) criterion for deposited dust (4 g/m²/month insoluble solids) is an annual average. Therefore, additional monitoring may result in varying dust deposition concentrations.

6 CONCLUSIONS

No exceedances in the ambient air quality criteria were recorded at monitoring location 60-1725-DDG-1 during the monitoring period from the 9th March 2009 through 6th April 2009 for total deposited matter (insoluble solids).

Heggies will continue to monitor total dust deposition at the selected monitoring locations to further investigate the ambient air quality conditions.

Appendix A

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LABORATORY ANALYTICAL RESULTS



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EN0900669	Page	: 1 of 3
Client	: HEGGIES PTY LTD	Laboratory	: Environmental Division Newcastle
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Project	: 60-1725	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 7442	Date Samples Received	: 22-APR-2009
C-O-C number	: ----	Issue Date	: 29-APR-2009
Sampler	: MF	No. of samples received	: 1
Site	: SE SYDNEY TRAIN LINE	No. of samples analysed	: 1
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



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
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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 = 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

- **Samples passed through a 1mm sieve prior to analysis. NATA accreditation is not held for results reported in g/m².mth.**



Analytical Results

Sub-Matrix: AIR

Client sample ID

60-1725-DDG-1/2

9/3/09 - 6/4/09

Client sampling date / time

[22-APR-2009]

Compound	CAS Number	LOR	Unit	EN0900669-001	----	----	----	----
EA120: Ash Content								
Ash Content	----	0.1	g/(m ² month)	1.5	----	----	----	----
Ash Content (mg)	----	0.1	mg	24.6	----	----	----	----
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/(m ² month)	0.3	----	----	----	----
Combustible Matter (mg)	----	0.1	mg	5.6	----	----	----	----
EA139: Total Soluble Matter								
Total Soluble Matter	----	0.1	g/(m ² month)	0.1	----	----	----	----
Total Soluble Matter (mg)	----	0.1	mg	1.2	----	----	----	----
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m ² /month	1.8	----	----	----	----
Total Insoluble Matter (mg)	----	0.1	mg	30.2	----	----	----	----
EA142: Total Solids								
Total Solids	----	0.1	g/(m ² month)	1.9	----	----	----	----
Total Solids (mg)	----	0.1	mg	31.4	----	----	----	----