|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Client** | **«ClientName»** | | | | | **«JobNumber»** | | |
| Client Manager | «JobManager» | | | | Due Date: | **«JobDueDate»** | | |
| **Report Details** | **«JobName»** | | | | | **Report Writer** | **1st Check** | **2nd Check** |
|
| **Results Data Entry:** Checked by second person. | | | | | |  |  |  |
| **Report number & date:** Correct on all pages? | | | | | |  |  |  |
| **Non NATA report:** NATA logo removed from all pages? | | | | | |  |  |  |
| **Document Information** Correct details, site address and client contact? | | | | | |  |  |  |
| **Non NATA results:** Referenced with a note at the bottom of the page? | | | | | |  |  |  |
| **Test methods table:** Method present for all parameters tested and correct reference to external labs, report numbers and dates? | | | | | |  |  |  |
| **Special Instructions:** All special requirements on the Reporting Brief and in WFM have been met. | | | | | |  |  |  |
| **Field Sheets:** Complete and entries make sense | | | | | |  |  |  |
| **Formulae changes & Manual calculations:** Have been printed out and second checked by a senior client manager? | | | | | |  |  |  |
| **Comparison with previous test report:** Cross check sample plane details, stack diameters | | | | | |  |  |  |
| Flow rates and concentrations and mass rates of key analytes. | | | | | |  |  |  |
| **Report Title:** Correct and relevant | | | | | |  |  |  |
| **Executive Summary:** Clear short summary of testing and results (No opinions!)? Spelling/punctuation. | | | | | |  |  |  |
| **Licence comparison:** Check limits against current EPA licence. | | | | | |  |  |  |
| Check O2/CO2 correction and units match EPA licence | | | | | |  |  |  |
| **Results headings:** Correct DP and date? | | | | | |  |  |  |
| **Results Tables:** Sample plane details correct? All comments accurate (check punctuation)? Relevant gas flow parameters reported? All results reported? | | | | | |  |  |  |
| **Photo:** Correct photo and makes sense with sample plane details? | | | | | |  |  |  |
| **Plant Operating Conditions:** Filled in and correct? | | | | | |  |  |  |
| **Deviations from test methods:** Present for all relevant deviations. Common ones are odour dilution > 9:1 or 1 sample port for flows and isokinetic tests. | | | | | |  |  |  |
| **Quoted testing:** Done and reported? | | | | | |  |  |  |
| **Checked By (initial):** | | | | | |  |  |  |
|
|  |  |  |  |  | **NATA Checker?** |  |  |  |

**Report Number**

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Document Information

Client Name: «ClientName»

Report Number: «JobNumber»

Date of Issue: [Publish Date]

Attention: «ContactName»

Address: «ClientAddress»

«ClientCity» «ClientRegion» «ClientPostCode»

Testing Laboratory: Ektimo (EML) ABN 98 006 878 342 <EML>  
Ektimo (ETC) ABN 74 474 273 172 <ETC>

Report Status

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Format | Document Number | Report Date | Prepared By | Reviewed By (1) | Reviewed By (2) |
| Preliminary Report | - | - | - | - | - |
| Draft Report | - | - | - | - | - |
| Final Report | «JobNumber» | [Publish Date] | JKr |  |  |
| Amend Report | - | - | - | - | - |

*Template Version: 151201*

Amendment Record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Document Number | Initiator | Report Date | Section | Reason |
| Nil | - | - | - | - |

Report Authorisation

|  |  |  |
| --- | --- | --- |
| **XXXXXX**  **Client Manager** | NATA Accredited Laboratory  No. 2732 <EML> No. 14601 <ETC> | **XXXXXX**  **Laboratory Manager** |

Accredited for compliance with ISO/IEC 17025. NATA is a signatory to the ILAC mutual recognition arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports

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Executive Summary

The Executive Summary section is to be filled in by the **Client Manager.**

What did we do? Where there any issues? What are the conclusions? (base this section on the expected outcome)

Ektimo was engaged by «ClientName» to perform <expected outcome>

Monitoring was performed as follows;

|  |  |  |
| --- | --- | --- |
| **Location** | **Test Date** | **Test Parameters\*** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

\* Flow rate, velocity, temperature and moisture were determined unless otherwise stated

<VIC>

The methodologies chosen by Ektimo are those recommended by the Victorian Environment Protection Authority (as specified in A Guide to Sampling and Analysis of Air Emissions and Air Quality, December 2002).

<WA>

The methodologies chosen by Ektimo are those recommended by the WA Department of Environment Regulation.

<WA – Brikmakers>

Unless otherwise stated, the following methods meet the requirements of the Air Emissions Testing for Federal Department of Infrastructure and Regional Development Approval Conditions.

<NSW>

The methodologies chosen by Ektimo are those recommended by the NSW Office of Environment and Heritage (as specified in the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales, January 2007).

<QLD>

The methodologies chosen by Ektimo are those recommended by the Queensland Department of Environment and Heritage Protection (as specified in the Air Quality Sampling Manual, November 1997).

All results are reported on a dry basis at STP. Unless otherwise indicated, the methods cited in this report have been performed without deviation.

Plant operating conditions have been noted in the report.

The following licence comparison table shows that all analytes highlighted in green are below the licence limit set by the <WA Department of Environment Regulation> <NSW EPA> <Vic EPA> <QLD EPA> as per licence XXXXXX (last amended on XXXXXX).

[Link to licence comparison table](https://ektimo.app.box.com/files/0/f/4490516238/1/f_36746883658)

Results

Stack ID XXXXX

Plant Operating Conditions

Unless otherwise stated, the plant operating conditions were normal at the time of testing. See «ClientName»’s records for complete process conditions.

Test Methods

All sampling and analysis was performed by Ektimo unless otherwise specified. Specific details of the methods are available upon request

[Link to Test Method Table](https://ektimo.app.box.com/files/0/f/4490516238/1/f_36746887658)

\* Uncertainty values cited in this table are calculated at the 95% confidence level (coverage factor = 2)

1. Analysis was performed by Envirolab, NATA accreditation number 2901. Results were reported to Ektimo on <date> in report number <report>.

2. Analysis was performed by Australian Government National Measurement Institute, NATA accreditation number 198. Results were reported to Ektimo on <date> in report number <report>.

3. Analysis was performed by HRL Technology using a Malvern Instruments Mastersizer laser particle size analyser. NATA Accreditation does not cover the performance of this service.

4. Analysis was performed by Leeder Consulting, NATA accreditation number 14429. Results were reported to Ektimo on <date> in report number <report>.

5. Analysis was performed by Australian Government National Measurement Institute, NATA accreditation number 198. Results were reported to Ektimo on <date> in report number <report>.

6. Analysis (solid fluoride only) was performed by Australian Laboratory Services Pty Ltd, NATA accreditation number 825. Results were reported to Ektimo on <date> in report number <report>.

7. Analysis was performed by Workcover Techsource, NATA Accreditation Number 3726. Results were reported to Ektimo on   
<date> in Laboratory Reference <report>.

8. Analysis was performed by WorkCover New South Wales. NATA Accreditation does not cover the performance of this service. Results were reported to Ektimo on <date> in Laboratory Reference <report>.

9. Analysis was performed by CSIRO Minerals using a laser particle size analyser. NATA Accreditation does not cover the performance of this service.

10. This method is not covered by EPA Victoria guidelines Publication 440.1.

Quality Assurance/ Quality Control Information

Ektimo (EML) and Ektimo (ETC) are accredited by the National Association of Testing Authorities (NATA) for the sampling and analysis of air pollutants from industrial sources. Unless otherwise stated test methods used are accredited with the National Association of Testing Authorities. For full details, search for Ektimo at NATA’s website [www.nata.com.au](http://www.nata.com.au).

Ektimo (EML) and Ektimo (ETC) are accredited by NATA (National Association of Testing Authorities) to ISO/IEC 17025. – General Requirements for the Competence of Testing and Calibration Laboratories. ISO/IEC 17025 requires that a laboratory have adequate equipment to perform the testing, as well as laboratory personnel with the competence to perform the testing. This quality assurance system is administered and maintained by the Compliance Manager.

NATA is a member of APLAC (Asia Pacific Laboratory Accreditation Co-operation) and of ILAC (International Laboratory Accreditation Co-operation). Through the mutual recognition arrangements with both of these organisations, NATA accreditation is recognised world –wide.

A formal Quality Control program is in place at Ektimo to monitor analyses performed in the laboratory and sampling conducted in the field. The program is designed to check where appropriate; the sampling reproducibility, analytical method, accuracy, precision and the performance of the analyst. The Laboratory Manager is responsible for the administration and maintenance of this program.

Definitions

The following symbols and abbreviations may be used in this test report:

STP Standard temperature and pressure. Gas volumes and concentrations are expressed on a dry basis at 0°C, at discharge oxygen concentration and an absolute pressure of 101.325 kPa, unless otherwise specified.

Disturbance A flow obstruction or instability in the direction of the flow which may impede accurate flow determination. This includes centrifugal fans, axial fans, partially closed or closed dampers, louvres, bends, connections, junctions, direction changes or changes in pipe diameter.

VOC Any chemical compound based on carbon with a vapour pressure of at least 0.010 kPa at 25°C or having a corresponding volatility under the particular conditions of use. These compounds may contain oxygen, nitrogen and other elements, but specifically excluded are carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonate salts.

TOC The sum of all compounds of carbon which contain at least one carbon to carbon bond, plus methane and its derivatives.

OU The number of odour units per unit of volume. The numerical value of the odour concentration is equal to the number of dilutions to arrive at the odour threshold (50% panel response).

PM2.5 Atmospheric suspended particulate matter having an equivalent aerodynamic diameter of less than approximately 2.5 microns (µm).

PM10 Atmospheric suspended particulate matter having an equivalent aerodynamic diameter of less than approximately 10 microns (µm).

BSP British standard pipe

NT Not tested or results not required

NA Not applicable

D50 ‘Cut size’ of a cyclone defined as the particle diameter at which the cyclone achieves a 50% collection efficiency ie. half of the particles are retained by the cyclone and half are not and pass through it to the next stage. The D50 method simplifies the capture efficiency distribution by assuming that a given cyclone stage captures all of the particles with a diameter equal to or greater than the D50 of that cyclone and less than the D50 of the preceding cyclone.

D Duct diameter or equivalent duct diameter for rectangular ducts

< Less than

> Greater than

≥ Greater than or equal to

~ Approximately

CEM Continuous Emission Monitoring

CEMS Continuous Emission Monitoring System

DER WA Department of Environment & Regulation

DECC Department of Environment & Climate Change (NSW)

EPA Environment Protection Authority

FTIR Fourier Transform Infra Red

NATA National Association of Testing Authorities

RATA Relative Accuracy Test Audit

AS Australian Standard

USEPA United States Environmental Protection Agency

Vic EPA Victorian Environment Protection Authority

ISC Intersociety committee, Methods of Air Sampling and Analysis

ISO International Organisation for Standardisation

APHA American public health association, Standard Methods for the Examination of Water and Waste Water

CARB Californian Air Resources Board

TM Test Method

OM Other approved method

CTM Conditional test method

VDI Verein Deutscher Ingenieure (Association of German Engineers)

NIOSH National Institute of Occupational Safety and Health

XRD X-ray Diffractometry

Appendix