National Ceramic Industries Australia

INDEPENDENT MANDATORY ENVIRONMENTAL COMPLIANCE AUDIT

OF

NATIONAL CERAMIC INDUSTRIES AUSTRALIA

FACTORY AT RUTHERFORD NSW

Final Report October 2015

Graham A Brown®
& ASSOCIATES
Environmental & Resource Consultants

Background

National Ceramic Industries Pty Ltd (NCIA) is located in Rutherford in the New South Wales Hunter Valley region and produces ceramic tiles for the Australian market. NCIA produced its first tile in March 2004 and has established a customer network Australia wide. The Company has since expanded its operations to a production capacity of 6 million m^2 per year. Its manufacturing plant is the largest producer of ceramic tiles in Australia.

REPORT OF THE

INDEPENDENT MANDATORY ENVIRONMENTAL COMPLIANCE AUDIT

OF NATIONAL CERAMIC INDUSTRIES AUSTRALIA FACTORY

RUTHERFORD NSW

OCTOBER 2015

Submitted To:

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Managing Director

National Ceramic Industries Australia

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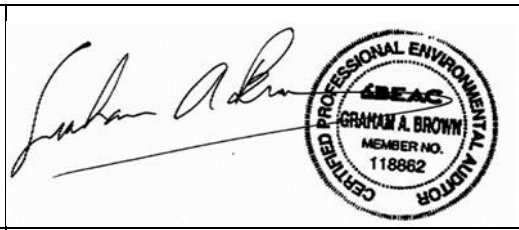
A Division of Archdall Investments Pty Ltd.
ABN 65 001 325 104

Project No. N3520-01

INDEPENDENT AUDIT SUBMISSION FORM	
Development	National Ceramic Industries Australia Tile Manufacturing Facility
Development Consent No.	09_0006
Description of Development	National Ceramic Industries Pty Ltd (NCIA) is located in Rutherford in the New South Wales Hunter Valley region and produces ceramic tiles for the Australian and New Zealand markets. NCIA produced its first tile in March 2004 and has established a customer network Australia wide. The Company has since expanded its operations to a production capacity of 6 million m^2 per year. The NCIA manufacturing plant is the largest
Development Address	175 Racecourse Road, Rutherford NSW
Operator	National Ceramic Industries Pty Ltd
Operator Address	175 Racecourse Road, Rutherford NSW
INDEPENDENT AUDIT	
Title of Audit	Independent Mandatory Environmental Compliance Audit of National Ceramic Industries Australia Factory at Rutherford

I certify that I have undertaken the independent audit and prepared the contents of the attached independent audit report to the best of my knowledge:

- *The audit has been undertaken in accordance with relevant approval condition(s) and in accordance with the auditing standard AS/NZS ISO 19011:2014 and Post Approval Guidelines – Independent Audits*
- *The findings of the audit are reported truthfully, accurately and completely;*
- *I have exercised due diligence and professional judgement in conducting the audit;*
- *I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;*
- *I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;*
- *I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);*
- *Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared to the lead regulator prior to the audit; and*
- *I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.*

Signature	
Name of Lead / Principal Auditor	Graham A Brown
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Email Address	graham@grahamabrown.com.au
Auditor Certification (if relevant)	• Exemplar Global Environmental Lead Auditor No. 14018 and Principal OHS Auditor No.14018 • Board of Environmental Auditor Certifications (USA) Certified Professional Environmental Auditor (CPEA) No. 118862 • Institute of Environmental Management & Assessment (UK) Principal Environmental Auditor No.2843 • International Cyanide Management Institute Lead Auditor • Clean Energy Regulator, Registered Greenhouse and Energy Auditor (RGEA), Category 1, Technical No. 0010/2010
Date:	23 October 2015

1. Table of Contents

Appendices

Tables and Figures

2. Authorisation

This Report is authorised by Graham A Brown M.Sc. FAusIMM, FEIANZ, CPEA, RGEA whose signature appears on Page 4.

3. Limitations

Mandatory Independent Environmental Compliance Audit – Cadia Valley Operations, NSW

This is to certify:-

1. Graham A Brown & Associates (the Auditor) has prepared the accompanying Mandatory Independent Environmental Compliance Audit Report of the National Ceramics Industries Australia (NCIA) operations at Rutherford, NSW as at 23 October 2015 (the Report) from certain information provided to it by NCIA (the Auditee) at the request of and exclusively for the use and benefit of NCIA (the Client) on behalf of the Secretary, Department of Planning and Environment.

2. Under the terms of the Auditor's engagement the Auditor has conducted the audit in accordance with the requirements of Condition 61 of the Planning Approval 09_0006 dated 19 January 2012. The Auditor has relied on information provided by the Auditee/Client. The Auditor expresses no opinion as to the accuracy, truth, sufficiency or legality of the information provided by the Auditee/Client in respect of the Auditee's compliance with the conditions or other requirements set out in Condition 61 of the Planning Approval No. 09_0006 dated 19 January 2012.

3. This Report has been prepared in accordance with generally accepted practices including the standards set out in *AS/NZS ISO 19011:2014 Guidelines for auditing management systems* and *Post-Approval Guidelines – Independent Audits*, DP&E, July 2015 using standards of care and diligence normally practiced by recognised consulting firms performing services of a similar nature.

4. The Lead Auditor, Graham Brown, whose qualifications and experience satisfy the criteria set out in ISO 19011 and the *Post Approval Guidelines*, is a Registered Lead Environmental Auditor (Exemplar Global); a Principal Environmental Auditor (IEMA UK); and a Certified Professional Environmental Auditor (CPEA – BEAC USA). The Auditor is not responsible for the accuracy of information provided by other individuals or entities which is used in this Report. This Report presents the Auditor's professional judgement based upon data and findings identified in this Report and interpretation of such data based upon the Auditor's experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

5. It is a condition of the provision of this Report that any liability of the Auditor to the Client for anything contained or stated herein shall be limited to the amount of the fee actually paid or payable by the Client to the Auditor for this Report. It is a further condition of the provision of this Report that any liability of the Auditor to the Client for anything contained or stated in the Report to the fullest extent permitted by law is hereby excluded unless the claim giving rise to such liability is made in writing to the Auditor within twelve (12) months of the date of this Report.

6. This Report is issued with the understanding that it is the responsibility of the Client, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law.

7. Neither the Auditor nor any member associate or employee of the Auditor undertakes any responsibility for any injury, loss or damage claimed by the Client or the Secretary of the Department of Planning and Environment arising out of a claim by any third party against the Client in connection with this Report.

4. Abbreviations

Abbreviation	Definition
AEMR	Annual Environmental Management Report
AS	Australian Standard
DoPI	Department of Planning and Infrastructure
DP&E	Department of Planning and Environment
EA	Environmental Assessment
EIP	Environment Improvement Plan
EMP	Environmental Management Plan
EMR	Environmental Management Report
EMS	Environmental Management System
EP&A Act	Environmental Planning and Assessment Act, 1979
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
GABA	Graham A Brown & Associates
INP	NSW Industrial Noise Policy
LAeq	Equivalent Continuous Level (Noise)
LGA	Local Government Authority
NGERS	National Greenhouse and Energy Reporting System
NOW	NSW Office of Water
OEH	NSW Office of Environment and Heritage
PIN	Penalty Infringement Notice
PIRMP	Pollution Incident Response Management Plan
POEO Act	Protection of the Environment Operations Act 1997
RGEA	Registered Greenhouse and Energy Auditor
TSP	Total Suspended Particulates

5. Audit Summary

Audit Title:	National Ceramic Industries Australia Independent Environmental Compliance Audit
Site:	National Ceramic Industries Australia, 175 Racecourse Road Rutherford NSW 2320
Client Contact:	Chris Schneider
Position:	Managing Director
Client:	National Ceramic Industries Australia
Client Address:	175 Racecourse Road Rutherford NSW 2320
Client Telephone:	Phone: (02) 4931 8400 Mobile: 0447800028
Client Fax:	(02) 49318499
Client Email:	cschneider@ncia.com.au
Lead Auditor:	Graham A Brown M.Sc., FAusIMM, FEIANZ, CPEA Registered Lead Environmental Auditor (Exemplar Global) Principal Environmental Auditor (IEMA – UK) Certified Professional Environmental Auditor (CPEA) (BEAC – USA) Registered Greenhouse and Energy Auditor (RGEA), Clean Energy Regulator, Australia Lead Auditor, International Cyanide Management Code
Technical Experts approved by Department	Air Quality Management Expert – Aleks Todoroski Noise Expert – Stephen Kozakiewicz
Lead Auditor's Telephone:	(02) 4927 8500
Lead Auditor's Fax:	(02) 4927 8400
Date of Site Visit	1st September 2015
Audit Objective:	Report on compliance by NCIA with Condition 61 of the Planning Approval 09_0006 dated 19 January 2012. This audit must: a) be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Secretary; b) be undertaken in consultation with the OEH and Council; c) include an assessment of the noise and air quality performance of the project; d) assess the environmental performance of the project and undertake any works necessary to determine whether it is complying with the relevant standards, performance measures, and statutory requirements; e) review the adequacy of any strategy/plan/program required under this approval; and, if necessary, f) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval. Condition 62 requires that within 6 weeks of completing this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary with a response to any recommendations contained in the audit report.
Time period audited:	19 January 2012 to 1 September 2015
Date terms of engagement signed:	Purchase Order # 6500015138 advised on 3 September 2015. Auditor confirmed as accepted by DP&E on 16 June 2015.
Date Audit Report signed (the Completion Date):	23 October 2015

6. Engagement Overview and Summary

6.1 Introduction

Graham A Brown & Associates (GABA) was engaged by National Ceramic Industries Australia (NCIA) to undertake a Mandatory Independent Environmental Compliance Audit on compliance by NCIA with the Planning Approval No. 09_0006 dated 19 January 2012 (the Approval). This mandatory audit is carried out to satisfy the requirements of Condition 61 of the Approval and is required to:

(a) be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Director-General;

b) be undertaken in consultation with the OEH and Council;

c) include an assessment of the noise and air quality performance of the project;

d) assess the environmental performance of the project and undertake any works necessary to determine whether it is complying with the relevant standards, performance measures, and statutory requirements;

e) review the adequacy of any strategy/plan/program required under this approval; and, if necessary,

f) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval.

The noise and air quality experts selected and approved by DP&E are listed in Table 6.1:

Table 6.1 Experts Contributing to the Audit

Position	Organisation	Responsibilities
Air Quality Management Expert – Aleks Todoroski	Principal, Todoroski Air Sciences	Expert opinion on air quality management
Noise Expert – Stephen Kozakiewicz	Principal, SLR Consulting Australia Pty Ltd	Expert opinion on noise management

6.2 Audit Completion

It is a requirement of Condition 62 of the Planning Approval that within 6 weeks of the completion of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

For the purpose of this condition, it is considered that the completion of the audit is the date on which the Final Report is signed by the Lead Auditor, on which date an electronic copy was provided to NCIA. The Final Report includes NCIA's response to the recommendation made in this report (Appendix 5).

6.3 Auditor's Responsibility

Our responsibility is to conduct a Mandatory Independent Environmental Compliance Audit in accordance with Condition 61 of the Planning Approval dated 19 January 2012 and to express an opinion on NCIA's compliance with the Approval, within the agreed scope, in all material respects. The procedures selected depend on our judgment, including an assessment of the risks of material non-compliance of the matter being audited. We conducted our engagement in accordance with the international standard AS/NZS ISO 19011:2014 *Guidelines for auditing management systems* and *Post-Approval Guidelines – Independent Audits*, DP&E, July 2015.

We examined other information provided by the client and considered whether it was consistent with the knowledge obtained through our procedures. We considered the implications for our report if we became

aware of any apparent material inconsistencies with the matter being audited. Our responsibilities did not extend to any other information.

An Independent Environmental Compliance Audit involves performing procedures to obtain evidence about the matter being audited. The procedures selected depend on the audit team leader's judgement, including the assessment of material non-compliance of the matter being audited. In making those assessments, we considered internal controls relevant to NCIA's compliance with the Planning Approval dated 19 January 2012, Environmental Protection Licence EPL 11956, and the Consolidated Statement of Commitments in order to design assurance procedures that are appropriate in the circumstances, including for the purpose of expressing an opinion on the effectiveness of NCIA's internal controls. We consulted with relevant government agencies as required by DP&E and nominated by the client, and noted any concerns expressed by them.

We believe that the compliance evidence we have obtained is sufficient and appropriate to provide a basis for our independent opinion in this report, for the defined scope as described above.

6.4 Use of our Independent Environmental Compliance Audit Report

This Independent Environmental Compliance Audit Report has been prepared on behalf of the management of NCIA for the Secretary of DP&E for the sole purpose of reporting on the matter being audited in accordance with Condition 61 of the Planning Approval.

GABA disclaim any assumption of responsibility for any reliance on this report to any persons or users other than the management of NCIA and the Secretary of DP&E, or for any purpose other than that for which this report was prepared.

6.5 Inherent Limitations

There are inherent limitations in performing an Independent Environmental Compliance Audit; for example, compliance audits are based on selective testing of the information being examined. It is possible that non-compliance may occur and not be detected. An Environmental Compliance Audit is not designed to detect all instances of non-compliance with the Approval and other regulatory documents, as it is not performed continuously throughout the audit period and the procedures performed in respect of compliance with the Approval are undertaken on a test basis. The conclusion expressed in this report has been formed based on the above limitations.

7. Statement of the Audit Methodology and Processes

This Independent Environmental Compliance Audit has been carried out based on a site visit to the NCIA ceramic tile factory at Rutherford, NSW on Tuesday 1st September 2015 by Graham Brown, the Lead Auditor, who also conducted a familiarisation visit to the site prior to the commencement of the audit.

Key matters which were audited included a critical review of the factory's environmental performance with respect to:

- Conditions of the Approval (referenced by condition number);
- Management Plans;
- Environment Protection License;
- EA predictions and commitments;
- Statements of Commitments;
- Monitoring results and trends (including against regulatory limits and EA predictions);

- Community complaints;
- Any regulatory action (Letters, Penalty Notices, Prosecutions, etc.) and outcomes;
- Annual Reviews;
- Any other specific matters raised by DP&E or other agencies;
- The adequacy of strategies, plans or programs; whether they are consistent with current best practice (not just standard industry practice); and whether management systems, proposed actions and measures are adequate; and
- Specific expert opinion on noise and air quality.

These requirements were achieved by the audit team through the following activities:

- Reviewing substantiating documentation;
- Testing delineation of facility boundaries;
- Interviewing the Managing Director regarding operational control of activities that may have an adverse impact on the environment;
- Testing management methodologies, systems and processes for data capture from activities;
- Testing methodology and accuracy of air emissions data measured from instrumentation and sampling procedures;
- Testing internal audit methodology and process;
- Testing management methodologies, systems and processes for data and document management and audit trails;
- Assessing the environmental performance of the project and whether it is complying with the relevant requirements in the Approval;
- Assessing whether the project is complying with EPL 11956 (including any assessment, plan or program required under these approvals);
- Reviewing the adequacy of any approved strategies, plans or programs required under these approvals;
- Conducting an expert review of the air quality management of NCIA;
- Conducting an expert review of the noise management of NCIA;
- Testing other matters which came to the attention of the auditor during the planning and execution of the audit.

A summary of the Procedures undertaken as part of the Independent Environmental Compliance Audit is provided in Table 7.1.

Table 7.1 Audit Procedures

Phase	Key Activity	Date(s)
Plan and Prepare	**Plan and Prepare:** • GABA prepared a comprehensive, customised set of audit protocols (collectively called the Audit Protocol) and provided them to NCIA prior to commencement of the audit. The protocols included specific compliance assessment requirements of the Planning Approval dated 19 January 2012, Environmental Protection Licence EPL 11956, and the Consolidated Statement of Commitments. • Initial analysis of documentation provided by NCIA and population of the Audit Protocol. • Analysis of additional data and documents provided by NCIA upon request. • Liaison with Leah Cook of DP&E.	3 – 31 August 2015

Phase	Key Activity	Date(s)
	Output: Audit Protocols	
Site Visit	Drive to Rutherford and Opening Meeting at NCIA Perform audit tasks – 1 day on site at NCIA. • Interview with Chris Schneider, Managing Director. • Site inspection. • Documentation reviewed, requested and received electronically. • Further documentation required identified and listed for NCIA to provide subsequent to site visit. • Photography.	1 September 2015
Data Requests	• Issue data requests and follow up on key items from site visit. • Establish a dedicated Dropbox site for NCIA. • Receive documentation from site via Dropbox and email.	2 – 18 September 2015
Perform	**Review and Reporting** • Review of audit evidence against conditions of the Approval and other related documents. • Draft audit findings completed and recommendations ranked. • Specialist reviews requested based on draft audit findings spreadsheets and associated documentation made available through Dropbox. • Draft audit tables provided to NCIA prior to assembly of the Draft Audit Report and comments received from NCIA.	2 – 18 September 2015
Draft Report	Preparation of Draft Independent Environmental Compliance Audit Report incorporating specialist opinions.	21 – 25 September 2015
Review	Review of Draft Independent Environmental Compliance Audit Report by NCIA.	28 September – 9 October 2015
Final Report	Finalisation of Independent Environmental Compliance Audit Report, including assessment of comments on the Draft Report received from NCIA, and peer review.	23 October 2015

7.1 Basis for Conclusion

The Auditor has made efforts to undertake a full and complete audit for and on behalf of NCIA in accordance with Condition 61 of the Planning Approval. A substantial amount of the information and documentation requested initially was provided by NCIA prior to and during the site visit in September 2015, with supplementary documentation subsequently provided on request. No documentation was publicly available on the NCIA website. Our findings include our reviews of any assessments, plans or programs required under these approvals.

We have presented our findings under the following categories:

- Planning Approval 09_0006 dated 19 January 2012;
- Environmental Protection Licence EPL 11956;
- Consolidated Statement of Commitments;

7.2 Findings

In general, audit evidence will be persuasive rather than conclusive. It is necessary for the auditor to use professional judgment to evaluate the audit evidence and determine whether sufficient inquiry has been undertaken. If firm conclusions cannot be drawn from the evidence available, it may be necessary to qualify the audit report accordingly.

For each compliance requirement, the Auditor has assessed the extent to which the requirement has or has not been met. Compliance is assessed in accordance with Table 7.2 which is adapted from *Post-Approval Guidelines – Independent Audits,* DP&E, July 2015.

Table 7.2 Compliance Assessment

Criteria	Definition
C	**Compliant**: Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory instrument have been complied with within the scope of the audit.
NV	**Not verified:** Where the auditor has not been able to collect sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory instrument have been complied with within the scope of the audit. In the absence of sufficient verification the auditor may in some instances be able to verify by other means (visual inspection, personal communication, etc.) that a condition has been met. In such a situation, the condition should still be assessed as not verified. However, the auditor could note in the report that theyhave no reasons to believe that the operation is non-compliant with that condition.
NC	**Non-compliant:** Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent of one or more specific elements of the regulatory instrument have not been complied with within the scope of the audit.
ANC	**Administrative non-compliance:** A technical non-compliance with a condition of the consent that would not impact on performance and that is considered minor in nature (e.g. report submitted but not on the due date, failed monitor or late monitoring session). This would not apply to performance- related aspects (e.g. exceedance of a noise limit) or where a condition had not been met at all (e.g. noise management plan not prepared and submitted for approval).
NT	**Not triggered:** A condition or requirement has an activation or timing requirement that had not been sufficiently triggered at the time of the audit inspection, therefore a determination of compliance could not be made.
O	**Observation:** Observations are recorded where the audit identified issues of concern which do not strictly relate to the scope of the audit or assessment of compliance. Further observations are considered to be indicators of potential non-compliances or areas where performance may be improved.
Note	A statement or fact, where no assessment of compliance isrequired.

Risk assessment of audit findings

The non-compliances (excluding Administrative Non-Compliances) found by the audit were risk assessed as recommended in DP&E's *Post-Approval Guidelines – Independent Audits*, July 2015 (the *Guidelines*). A qualitative risk assessment was conducted, consistent with AS/NZS ISO 31000:2009 *Risk management - Principles and guidelines*; HB 203:2012 *Managing environment-related risk*; and HB 436:2013 *Risk management guidelines – companion to AS/NZS ISO 31000:2009*.

The overall level of risk is estimated by combining the likelihood of harm occurring with the estimated level of impact associated with each finding, as shown in the risk matrix below (Figure 7.1).

Likelihood of harm

For each non-compliance, the likelihood of harm of occurring was assessed as certain, likely or unlikely.

The likelihood of harm was determined by assessing:

- potential contributing factors;
- past environmental performance;
- current environmental performance; and
- other implemented controls or mitigating actions.

Level of impact

The level of impact was determined by assessing factors such as:

- the nature of any potential impact;
- the scale of any potential impact;
- sensitivity of the receiving environment; and
- the likely level of public concern.

Risk was assessed using the risk matrix shown below, as per the Department's *Guidelines*.

		Likelihood of Environmental Harm or Non-compliance Occurring		
Level of Environ-mental Impact		Certain	Likely	Less Likely
	High	Code Red	Code Red	Code Orange
	Moderate	Code Red	Code Orange	Code Yellow
	Low	Code	Code Yellow	Code Yellow

Figure 7.1 Risk Matrix

7.3 Recommendations

Where appropriate a recommendation has been provided against each non-compliance to achieve compliance or improve performance, including where appropriate against compliances where improvement can be made. These recommendations have been ranked, based on the auditor's opinion. This practical approach highlights those recommendations that are considered by the Auditor to be the most important (Emergency or Urgent) and which must be addressed within an agreed time frame, and to distinguish them from those that can be managed through normal operational practices that do not require a target time for completion (Improvement or Normal), based on the following Environmental Recommendations Ranking (ERR) scheme (Table 7.3).

Table 7.3 Environmental Recommendations Ranking

Environmental Recommendations Ranking	
Ranking	**Proposed Action**
"E" (Emergency)	The defect is severe and poses immediate risk to the plant, the community or the environment, to regulatory compliance or to the reputation of the organisation. This may include organisational (including management) defects that will lead to rapid deterioration of the plant or operations or the inability to securely and safely deal with an incident (i.e. lack of competent staff, failure of a management process, no emergency plan, inadequate equipment to deal with an emergency, lack of environmental security, etc.). *Action: Management should ensure that action is committed to minimise or eliminate the identified risk immediately, or otherwise within a time frame agreed with the auditor, or as required by regulatory requirements or agreement with the appropriate government officials or agencies. In extreme cases, the deficiency must be corrected prior to the auditor departing the site.*
"U" (Urgent)	The defect presents a serious situation, but may not necessarily impact immediately on human health or safety, assets, the environment, property, security or the community. There may be a risk which is not immediate, of regulatory non-compliance or adverse publicity affecting the organisation's public image or business reputation. *Action: A firm deadline should be set by management to correct the deficiency by an agreed date and action plan should be documented.*
"I" (Improvement)	Improvement is required, and can be achieved through regular channels of management, maintenance, capital improvements, or assigned to environmental management staff. *Action: Documented action plans to achieve the recommended outcome should be established, e.g. through setting and reviewing Objectives and Targets or initiating a Work Order. A response of 'Agreed' may be acceptable. Management may decide not to undertake the recommended improvement, and should document the reasons for not doing so.*
"N" (Normal)	No specific action is considered necessary, the recommendation is considered to be covered by the organisation's normal environmental management procedures; however it should be documented through Objectives and Targets or other process, such as a Work Order. A response of 'Agreed' may be acceptable.
"N/A"	Not Applicable to this situation or at this time; there is no perceived risk to the environment or the community, no recommendation is made.

7.4 Format of Table of Findings, Audit Evidence and Recommendations

The detailed analysis contained in this Audit Report is set out in Section 8 – ***Table of Findings, Audit Evidence and Recommendations***. This table is structured as follows:

- **Condition Number** – the number of the condition or item in the regulatory document being addressed.
- **Compliance Requirement** (which is the Audit Criterion against which compliance is assessed) – a requirement of the Planning Approval, Environmental Protection Licence or the Consolidated Statement of Commitments. Where appropriate, compliance requirements arising from other sources including legislation, environmental assessments and Management Plans required as part of the Planning Approval or EPL may be addressed in conjunction with related requirements of the Planning Approval and EPL.
- **Compliance** – the auditor's view of the auditee's compliance with the requirement.
- **Audit Finding** – results of the evaluation of the collected audit evidence against the Audit Criteria.

- **Objective Evidence** – verifiable evidence in support of the audit finding (records, statements of fact, results of inspections or other evidence) that is provided by the auditee or identified by the auditor.
- **Recommendations** – the professional opinion of the auditor in relation to action to achieve compliance or to improve the auditee's environmental management of the site.

The Table of Findings, Audit Evidence and Recommendations is supplemented by an ***Audit Recommendations and Response Table*** (Appendix 5). This table provides a ranking of the recommendations resulting from this audit based on the Environmental Recommendations Ranking (ERR) scheme as shown in Table 7.3. See also section 8.4(b).

8. Executive Summary

8.1 Audit Requirement

The Mandatory Independent Environmental Compliance Audit of NCIA measured compliance against the following criteria:

- Conditions of the Planning Approval dated 09_0006 dated 19 January 2012;
- Conditions of the Environmental Protection Licence EPL 11956;
- Consolidated Statement of Commitments;
- Management Plans;
- Monitoring results and trends (including against regulatory limits and EA predictions);
- Community complaints;
- Any regulatory action (Letters, Penalty Notices, Prosecutions etc.) and outcomes;
- Annual Reviews;
- Any other specific matters raised by DP&E or other agencies;
- The adequacy of strategies, plans or programs; whether they are consistent with current best practice (not just standard industry practice); and whether management systems, proposed actions and measures are adequate; and
- Specific expert opinion on noise and air quality.

A list of 106 documents provided for review is provided in Appendix 1.

8.2 Background

The following description is adapted from the AEMR 2015.

8.2.1 Project Approval

National Ceramic Industries Australia Pty Ltd (NCIA) operates a tile manufacturing facility located in Rutherford, New South Wales. On 19 January 2012 NCIA was granted Project Approval (MP 09_0006), which rationalised and consolidated the development as approved under the previous Development Consent (DA 449-12-2002-i), and the proposed expansion of the facility. Subsequently, NCIA formally relinquished the previous Development Consent (DA 449-12-2002-i) with effect from 19 January 2013.

The NCIA facility is therefore currently operated under the conditions of Project Approval (MP 09_0006), issued by the Department of Planning and Environment (DP&E).

8.2.2 Operations

NCIA manufactures ceramic wall and floor tiles for the Australian market from a mixture of clay, white granite, rhyolite and glazes. The facility is located off Racecourse Road, Rutherford, within the Rutherford Industrial Estate (Figure 1). The facility operates 24 hours per day, 7 days per week, and approximately 330 days per annum.

Figure 8.1. National Ceramic Industries Australia facility at 175 Racecourse Road, Rutherford NSW.
Source: Nearmap - Wed 16th May 2015.

The operation currently comprises one spray drier, a clay mill, two tile production lines and two kilns, representing the first two of eight approved operational stages. The timeline for construction of the remaining stages (i.e. stages three to eight) is dependent upon market demand and remains uncertain.

It is noted that many of the requirements of the current Project Approval are required prior to commencement of construction of the next stage of the approved operation (i.e. stages three to eight). As commencement of construction of the next stage of the approved operation has not yet commenced, these conditions have not yet been activated and are assessed as NT (Not Triggered) in this report – see Table 7.2.

An Operation Environmental Management Plan (OEMP) was prepared in accordance with the previous Development Consent to provide an environmental management framework for the facility. The previous Development Consent has now been relinquished and the new Project Approval does not require an OEMP, but instead requires preparation of an Environmental Management Strategy prior to commencement of construction works as described above. As this condition is not yet triggered, NCIA continues to operate in

accordance with the OEMP. The OEMP is reviewed on a three yearly basis, and the last review was finalised in early 2015.

The NCIA OEMP provides the environmental management framework to guide the operation of the tile manufacturing facility. The OEMP defines the environmental management practices, procedures and personnel responsibilities to ensure compliance with conditions of statutory approvals and licences. Specific environmental standards and performance measures used to assess the achievement of environmental objectives are drawn from requirements, obligations and initiatives listed within:

- The Project Approval (MP 09_0006), granted by the Minister for Planning, which includes NCIA's Statement of Commitments;
- EPL 11956, issued by the NSW Environment Protection Authority (EPA); and
- The National Ceramic Industries Australia Expansion - Environmental Assessment (AECOM, 5 July 2010) hereafter referred to as '2010 EA'.

Commitments made within the 2010 EA have been incorporated into the Project Approval and EPL for the facility as compliance criteria. These compliance criteria are used to assess the environmental performance of the facility and to monitor the environmental impact on the surrounding environment. Compliance criteria and the monitoring results for each reporting period are reported each year in the AEMRs.

8.3 Persons Interviewed

The Managing Director of NCIA, Chris Schneider, was the Auditee and was the only person interviewed for this audit.

8.4 Government Agency Communications

Table 8.1 sets out the responses provided by contacts made with nominated government agencies with regard to the operations of NCIA.

Table 8.1 Summary of Government Agency Responses

Agency	Person Contacted	Response
DP&E	Leah Cook	The Department of Planning and Environment has released a IEA guideline as part of the IMP consultation process that is equally relevant when completing independent audits for industry type projects, such as NCIA. Document: https://majorprojects.affinitylive.com/public/def3ff3ec1fa9948c5e65fa17d973fb7/Independent%20Audit%20Guideline.pdf Please ensure that this guideline is followed. In particular, please risk, rank any non-compliance findings, as per Section 4.1 of this guideline. Please ensure that the time scope of this audit encompasses from the date of the previous audit to the most current reasonable audit date , perhaps 28 August 2015. The previous consents have been surrendered and NICA are operating as per the conditions of the MP 09_0006 (NCIA formally relinquished the previous Development Consent (DA 449-12-2002-i) with effect from 19 January 2013). However they have not progressed to stage three. It is noted that many of the requirements of the current Project Approval are required prior to commencement of construction of the next stage of the approved operation (i.e. stages three to eight). As commencement of construction of the next stage of the approved operation has not yet commenced, these conditions have not yet been activated. An Operation Environmental Management Plan (OEMP) was prepared in accordance with the previous Development Consent to provide an environmental management framework for the facility. The previous Development Consent has now been relinquished and the new Project

Agency	Person Contacted	Response
		Approval does not require an OEMP, but instead requires preparation of an Environmental Management Strategy prior to commencement of construction works as described above. As this condition is not yet activated, NCIA continues to operate in accordance with the OEMP. Please ensure that implementation as per the approved OEMP is assessed. Further, please ensure that all aspects of conditions 61 and 62 of MP09_0006 are met when completing this audit.
EPA	Rebecca Akhurst	I have forwarded your email to be entered into our system and allocated to the appropriate Officer as I am no longer regulating the NCIA premises. No further response received.
OEH	Richard Bath	No response received.
Maitland Council	David Simm	No response received.

8.5 Compliance Summary

a. Compliances

NCIA's compliance with the audit criteria is summarised in Table 8.2.

Table 8.2 Compliance Summary

Compliance Category	Code	Number of Results	Per Cent of Applicable Criteria
Complies	C	60	72%
Non-Compliance	NC	13	16%
Administrative Non-Compliance	ANC	5	6%
Not Verified	NV	5	6%
Observation	O	0	0%
Total Applicable		**83**	**60%**
Not Triggered	NT	47	34%
Note	Note	8	6%
Total Compliance Criteria		**138**	**100%**

Source	C	NC	ANC	NT	NV	O	Note	TOTAL
Approval	23	6	2	29	3	0	1	64
EPL	29	7	2	15	1	0	7	61
Commit-ments	8	0	1	3	1	0	0	13
TOTALS	**60**	**13**	**5**	**47**	**5**	**0**	**8**	**138**

Out of the total 138 compliance requirements audited, NCIA achieved an overall compliance rate of 72% of the applicable compliance requirements.

There were 60 *Compliances* identified (72% of the applicable criteria), five of the requirements were not verified (6%) and 55 of the 138 requirements were not applicable (either not triggered or a Note) at the time of the audit (40% of the total number of conditions assessed). There were five *Administrative Non-Compliances* identified during the audit, amounting to 6% of the overall number of applicable compliance requirements.

The 13 *Non-Compliances* identified during the audit amounted to 16% of the overall number of applicable compliance requirements. The 13 *Non-Compliances* have all been risk assessed, with two Code Red risks; 1 Code Orange risk; and 10 Code Yellow risks.

b. Recommendations

There are 2 *Emergency* recommendation made; there are 4 *Urgent* recommendations; 12 *Improvement* recommendations; and 10 *Normal* recommendations. There is a total of 28 recommendations which are set out in Section 9 *Detailed Findings and Recommendations*, and summarised in Appendix 5 *Audit Recommendations and Response Table*. NCIA may disagree with the auditor's findings and recommendations in its response to Appendix 5, and provide alternative views and accept, alter or reject the recommendations with appropriate reasoning provided.

Table 8.3 Recommendations Summary

Source	Emergency	Urgent	Improvement	Normal	Total
Project Approval 09_0006	2	2	7	5	16
EPL 11956	0	2	5	5	12
Commitments	0	0	0	0	0
TOTALS	**2**	**4**	**12**	**10**	**28**

8.5.1 General

It is a finding of this audit that NCIA is generally in compliance with the conditions of its regulatory documents.

Verification was supported by 106 documents which were provided for review as set out in Appendix 1. A summary of the risk reviews of non-compliances with the regulatory documents is provided in the following sections. The communications from government agencies summarised in Table 8.1 indicated that there were few concerns relating to NCIA's operations, although there were some areas of specific interest to the regulators.

8.5.2 Planning Approval dated 6 January 2010

Table 8.4 Risk Review of Planning Approval Non-Compliances

Condition No.	NCIA Non-Compliances
Code Red Risk Non-Compliances	
S2.14	NCIA has not paid Maitland City Council an annual contribution of 4.1 cents per kilometre per tonne of product trucked from the site along Racecourse Road to its intersection with the New England Highway.
S4.61	No documents are publicly available on the NCIA website, and there is no section at present where these can be placed.
Code Orange Non-Compliances	
	There were no Code Orange Non-Compliances in the Planning Approval
Code Yellow Non-Compliances	
S3.16	The annual total load discharged from the site resulted in an exceedance in sulphur oxides in 2012-2013 and 2013-2014.

Condition No.	NCIA Non-Compliances
S3.38	There are no markings in the car parking area in accordance with the current relevant Australian Standards AS2890.1:2004.
S3.39	No designated disabled car parking spaces are provided.
S3.52	A non-compliance was identified regarding the storage of excessive quantities of waste tiles that led to litigation and mediation in 2012 with the adjacent Victory Parc Pty Ltd (also known as Heritage Green and Heritage Parc) development property owner, the McCloy Group.

8.5.3 Environmental Protection Licence EPL 11956

Table 8.5 Risk Review of EPL 11956 Non-Compliances

Condition No.	NCIA Non-Compliances
Code Red Risk Non-Compliances	
N/A	There were no Code Red non-compliances identified under EPL 11956.
Code Orange Non-Compliances	
M7.2	There is no dedicated complaints line and there has been no notification of the public that the normal telephone number is also a number for making complaints. There is no notification on the sign inside the front gate of the factory or on the NCIA website how to make a complaint.
Code Yellow Non-Compliances	
L2.2	There is no statement in the AEMR to verify that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol.
L3.4	The 2013-2014 Annual Return confirmed that five exceedances of the 24-hour PM10 EPA criterion were recorded at the northwest monitoring location in August 2013 (1), September 2013 (1), October 2013 (1), December 2013 (1) and May 2014 (1). Two exceedances of the 24-hour PM10 EPA criterion were recorded at the southeast monitoring location in September 2013 (1) and October 2013 (1). No other exceedances were recorded during the monitoring period. The 2012-2013 Annual Return confirmed that one exceedance of the 24-hour ground level fluoride concentration EPA criterion (2.9 ug/m3) was recorded at the southeast monitoring station (4.35ug/m3 was recorded on 5th September 2012). Five exceedances of the 24-hour PM10 EPA criterion were recorded at the northwest monitoring location in August 2012 (3) and October 2012 (1) and March 2013 (1). No other exceedances were recorded during the monitoring period.
L5.3	Noise is not measured 1 metre from the dwelling façade of the nearest residential receiver.
M6.2	Historical records of complaints are included in AEMRs. The Annual Returns record the number of complaints for the reporting period. No evidence was provided to verify that for the small number of complaints received, items a) to f) have been recorded.
M7.1	There is no dedicated telephone complaints line.
G1.3	Management asserted that a copy of the OEMP is available in the factory and that this includes the EPL. It is noted that the EPL in the OEMP has been superseded (2008) by this EPL which is dated 2011 and post-dates the OEMP.

8.5.4 Risk Review of Consolidated Statement of Commitments

There were no non-compliances against the Consolidated Statement of Commitments.

8.5.5 Management plans

It was assessed that most management plans required by the Approval have not been triggered, being required "prior to commencement of any subsequent stage" as shown in Table 8.6. Those completed are also shown in Table 8.6. The Auditor has verified the adequacy of the existing management plans required under this approval, all of which with the exception of the PIRMP predate the approval, with the exception of some improvements identified in this audit.

Table 8.6 Management Plans Required

Document Required	Source of Requirement	Reference
Erosion and Sediment Control Plan	Approval Condition 42	to be submitted to the DG prior to commencement of any subsequent stage
Traffic Management Plan	Approval Condition 40	to be submitted to the DG prior to commencement of any subsequent stage
Landscape Management Plan	Approval Condition 30	to be submitted to the DG prior to commencement of any subsequent stage
Noise Management Plan	Approval Condition 27	to be submitted to the DG prior to commencement of any subsequent stage
Energy Savings Action Plan	Approval Condition 24 + Commitments	NCIA enrolled in Commonwealth EEO program with approval from DP&E for satisfaction of this requirement and subsequently deregistered.
Air Quality Management Plan	Approval Condition 19	to be submitted to the DG prior to commencement of any subsequent stage
Stormwater Management Plan	Approval Condition 46	to be submitted to the DG prior to commencement of any subsequent stage
Aboriginal Cultural Education Program	Approval Condition 51	to be submitted to the DG prior to commencement of any subsequent stage
Environmental Management Strategy	Approval Condition 56	to be submitted to the DG prior to commencement of any subsequent stage
CEMP	Approval Condition 57	Construction Environmental Management Plan to be submitted to the DG prior to commencement of any subsequent stage
Site OEMP	Commitments	Operational Environmental Management Plan 1 February 2010 (OEMP 2010)
Site Emergency Plan	Commitments	In OEMP 2010
Acid Sulphate Soils Management Plan	Commitments	In OEMP 2010
Air Quality Mitigation Strategy	EPL Condition U1.1	Air Quality Mitigation Strategy 17 June 2010
PIRMP	Protection of the Environment (General) Amendment (Pollution incident response management plans) Regulation 2012	PIRMP V1

8.5.6 Community Complaints

There are no trends in community complaints received by NCIA. There has been only one complaint received during the period covered by this audit, as shown in the Complaints Register (Table 8.7) below.

Table 8.7 – Complaints Register

Year	Number of Complaints	Issue	Details
2015 (partial)	Nil	Nil	None Received.
2014	Nil	Nil	None Received.
2013	1	Air Quality	Complaint made via email on 24 July 2013 regarding air quality in Rutherford area.
2012-13	Nil	Nil	None Received.
2011-12	Nil	Nil	None Received.

8.5.7 Regulatory Action

NCIA has been subject to no regulatory action during the period covered by this audit.

8.5.8 Annual Reviews

As far as possible the auditors have verified the validity of the annual reviews and have not identified any matters of material non-compliance during the period covered by this audit.

8.5.9 Specific matters raised by relevant agencies or DP&E.

Specific matters raised by relevant agencies are set out in Table 8.1.

9. Tables of Findings, Audit Evidence and Recommendations

9.1 Project Approval 09_0006 dated 19 January 2012

9.2 Environment Protection Licence No 11956

9.3 Consolidated Statement of Commitments

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

NATIONAL CERAMIC INDUSTRIES AUSTRALIA
Mandatory Independent Environmental Compliance Audit for Department of Planning & Environment
Detailed Findings and Recommendations
Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
SCHEDULE 2 - ADMINISTRATIVE CONDITONS					
Obligation to Minimise Harm to the Environment					
S2.1	The Proponent shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, maintenance, decommissioning and/or rehabilitation of the project.	**C**	Many of the requirements of the current Project Approval are required prior to commencement of construction of the next stage of the approved operation (i.e. stages three to eight). As commencement of construction of the next stage of the approved operation has not yet commenced, these conditions have not yet been activated. An Operation Environmental Management Plan (OEMP) was prepared in accordance with the previous Development Consent to provide an environmental management framework for the facility. The previous Development Consent has now been relinquished and the new Project Approval does not require an OEMP, but instead requires preparation of an Environmental Management Strategy prior to commencement of construction works as described above. As this condition is not yet activated, NCIA continues to operate in accordance with the OEMP.	Email from Leah Cook on 07/08/15 (Leah.Cook@planning.nsw.gov.au)	There are no recommendations

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Terms of Approval					
S2.2	The Proponent shall carry out the project generally in accordance with the: a) EA; b) Statement of Commitments; c) Submissions Report; d) MOD 2; and e) conditions of this approval. *Note: The Proponent's Statement of Commitments are included as Appendix 1. The Project Site Plan, Floor Plan and Elevations are included as Appendix 2, 3 and 4 respectively.* *If there is any inconsistency between the above, the conditions of this approval shall prevail to the extent of the inconsistency.*	**C**	Findings of this audit indicate that the operation is generally in accordance with these requirements except for the exceptions identified herein.	This audit	There are no recommendations
S2.3	The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of: a) any reports, plans, strategies or correspondence that are submitted in accordance with this approval; and b) the implementation of any actions or measures contained in these reports, plans, strategies or correspondence submitted by the Proponent.	**NT**	There have been no requests from the Secretary.	Management assertion	
Limits on Approval					
S2.4	The Proponent shall not produce more than 25.6 million m2 of ceramic tiles per annum on site. *Note: The capacity of the ceramic tile manufacturing facility at the completion of each stage of construction shall be consistent with that described in the EA.*	**C**	The current capacity of the plant operating Stages 1 and 2 is 6.4 million m^2 per annum.	Management assertion	There are no recommendations

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S2.5	The Proponent shall ensure that an increase or progression to a Stage represents an increase in production by no more than an additional 3.2 million m2 of tiles.	**NT**	No new stages have been constructed.	Management assertion	
Surrender of Existing Development Consent Rights					
S2.6	Within 12 months of this approval, or as otherwise agreed by the Secretary, surrender all existing development consents and project approvals for the site, apart from this project approval, in accordance with Sections 75YA and 104A of the EP&A Act. *Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of a consent or approval should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.*	**C**	The previous consents have been surrendered and NICA are operating as per the conditions of the MP 09_0006 (NCIA formally relinquished the previous Development Consent (DA 449-12-2002-i) with effect from 19 January 2013).	Email from Leah Cook on 07/08/15 (Leah.Cook@planning.nsw.gov.au). Management assertion.	There are no recommendations

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Structural Adequacy					
S2.7	The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. *Notes:* • *Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.* • *Part 8 of the EP&A Regulation sets out the requirements for the certification of the Project.*	**NT**	No new buildings, structures, alterations or additions to existing buildings and structures, have been constructed.	Management assertion	
Statutory Requirements					
S2.8	The Proponent shall ensure that all necessary licences, permits and approvals are obtained and kept up-to-date as required throughout the life of the project. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such licences, permits or approvals.	**C**	The site holds Development Approval MP 09_0006; EPL 11956; and Registration Certificate 6699 under the National Industrial Chemicals Notification and Assessment Scheme - NICNAS	DA 09_0006 EPL 11956 NICNAS Certificate 6699	There are no recommendations
Protection of Public Infrastructure					
S2.9	The Proponent shall: a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; and b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.	**NT**	No public infrastructure has been damaged by the project or relocated.	Management assertion	

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Utilities					
S2.10	Prior to the construction of any utility works, the Proponent shall obtain the relevant approvals from service providers, including Hunter Water Corporation, Integral Energy and Council.	**NT**	No utility works have been constructed.	Management assertion	
Operation of Plant and Equipment					
S2.11	The Proponent shall ensure that all the plant and equipment used on site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	**C**	(a) Downtime is the main performance KPI at NCIA. Maintenance is a continuous process and 7 out of approx. 50 employees are trained maintenance personnel. There is an expenditure of approx. $200,000 per month on maintenance. A Standard Maintenance Form is used and is included in the OEMP. There is a 4-week shutdown annually for major maintenance purposes. (b) The plant is demonstrated to be operating in a proper and efficient manner as it is generally in compliance with its regulatory requirements.	Management assertion. Maintenance form (revised 24 Feb 2011). AEMRs	There are no recommendations
Staged Submission of Strategies, Plans and Programs					
S2.12	With the written approval of the Secretary, the Proponent may submit any management plan, strategy or monitoring program required by this approval on a progressive basis.	**NT**		Management assertion	
Dispute Resolution					
S2.13	In the event that a dispute arises between the Proponent and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this approval, the matter shall be	**NT**		Management assertion	

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	referred by either party to the Secretary, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding to all parties. For the purpose of this condition, 'public authority' has the same meaning as provided under Section 4 of the Act.				
Section 94 Contributions					
S2.14	During operations, the Proponent shall pay Council an annual contribution of 4.1 cents per kilometre per tonne of product trucked from the site along Racecourse Road to its intersection with the New England Highway (1.7 km). The contribution amount shall be adjusted annually from the date of this approval to account for the effects of inflation (Consumer Price Index).	**NC**	NCIA has not paid Council as required by this condition. **Likelihood of Environmental Harm or Non-compliance Occurring** **Level of Environmental** Certain / Likely / Less Likely High: Code Red / Code Red / Code Orange Moderate: Code Red / Code Orange / Code Yellow Low: Code Orange / Code Yellow / Code Yellow	Management assertion	**2.14.1** NCIA must pay to Council an annual contribution of 4.1 cents per kilometre per tonne of product (adjusted for inflation) trucked from the site along Racecourse Road to its intersection with the New England Highway from the date of DA 09_0006 (19 January 2012). **Ranking: U**

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - AIR QUALITY					
Dust Limits					
S3.15	The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not exceed the criteria listed in Tables 1 or 2 at any residence on privately-owned land. *Table 1: Long term impact assessment criteria for particulate matter* Pollutant / Averaging period / Criterion Total suspended particulate (TSP) matter / Annual / 90 µg/m^3 Particulate matter < 10 µm (PM_{10}) / Annual / 30 µg/m^3 *Table 2: Short term impact assessment criteria for particulate matter* Pollutant / Averaging period / Criterion Particulate matter < 10 µm (PM_{10}) / 24 hour / 50 µg/m^3	**C**	It is noted that the primary purpose of this condition is to ensure that all reasonable and feasible avoidance measures are in place. As it is not practical to conduct monitoring at "any private residence", compliance with these criteria is necessarily inferred, for example by comparing measured with modelled in stack pollutant concentrations or annual loads. Where the measured levels are within those set out in the EIS, it can be inferred that the off-site levels are acceptable. Contrary to the first paragraph in Section 5.3 in the 2014 and 2015 AEMRs, the modelled in-stack emission rates in the 2010 EIS are provided in Table 17 of the EIS, and this allows for comparison of the measured in-stack concentrations with those in the 2010 EIS. Comparison is made between the in-stack concentrations at part L3.4 and the annual loads (L2.2) with the EPL limits. There was no exceedance of the particulate limits which indicates there would be no particulate impacts at the privately owned residences. This condition is therefore inferred to be compliant. This comparison should be extended to compare the measured levels with the modelled levels in the EIS, and in this manner to infer compliance with the dust limits shown here.	Management assertion Environmental Monitoring for National Ceramic Industries Australia – 2012, 2013, 2014, 2015 Section 5.3 2014 and 2015 AEMR 2010 EIS	**3.15.1 It is r**ecommended that future AEMRs include the necessary inferred compliance calculations. **Ranking: I**

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

<table>
<tr><th>Clause</th><th>Requirement</th><th>Compliance</th><th>Audit Finding</th><th>Objective Evidence</th><th>Recommendation</th></tr>
<tr><td colspan="6">Load Limits</td></tr>
<tr>
<td>S3.16</td>
<td>Unless the OEH specifies otherwise, the Proponent shall ensure that the annual total load discharged from the site does not exceed the load limit specified for that pollutant in Table 3.
Table 3: Maximum Allowable Load Limits (Air)
<table>
<tr><th>Assessable Pollutant</th><th>Maximum Allowable Load Limit (kg/yr)</th></tr>
<tr><td>Fine Particulates</td><td>74,210</td></tr>
<tr><td>Coarse Particulates</td><td>32,073</td></tr>
<tr><td>Fluoride</td><td>3,701</td></tr>
<tr><td>Sulfur oxides (as sulphuric acid mist and sulfur trioxide (as SO_3))</td><td>73,657</td></tr>
<tr><td>Nitrogen oxides</td><td>110,000</td></tr>
</table>
Note: The total load of the assessable pollutant shall be calculated in accordance with the relevant load calculation protocol, as defined by OEH guidelines.</td>
<td>NC</td>
<td>It is noted that the annual total load discharged from the site specified by the OEH in EPL 11956 differs from that set out in this condition. As the “OEH specifies otherwise” the limits specified in EPL 11956 prevail. The EPL issued on 7 November 2011 predates the DA which was issued on 19 January 2012. Therefore the period for comparison is from 19 January 2012 to when the latest load calculation data are available, in the 2015 AEMR which covers the period from 19 January 2014 to 18 January 2015. The 2011-2012 AEMR covers the period 1 August 2011 to 31 July 2012, and the 2013 AEMR covers 19 January 2013 – 18 January 2014. The following results were reported, indicating an exceedance in sulphur oxides only in 2012-2013 and 2013-2014. All other pollutants were well within both the EPL and DA limits. The Project Approval Limits in the 2014 and 2015 AEMRs are incorrectly reported for Sulphur oxides and Nitrogen oxides (the values are switched).
<table>
<tr><th rowspan="2">Pollutant</th><th colspan="2">Current Maximum Load Limit (kg)</th><th colspan="3">Actual Load (kg)</th></tr>
<tr><th>EPL</th><th>Project Approval</th><th>2011-2012</th><th>2012-2013 #</th><th>2013-2014</th></tr>
<tr><td>Fine particulates</td><td>26,629</td><td>74,210</td><td>997</td><td>1,249</td><td>5,369</td></tr>
<tr><td>Coarse particulates</td><td>14,338</td><td>32,073</td><td>5,550</td><td>1,640</td><td>3,289</td></tr>
<tr><td>Fluoride</td><td>1,850</td><td>3,701</td><td>91</td><td>1,109</td><td>928</td></tr>
<tr><td>Sulfur oxides</td><td>36,828</td><td>110,000</td><td>26,946</td><td>42,235</td><td>37,974</td></tr>
<tr><td>Nitrogen oxides</td><td>36,828</td><td>73,657</td><td>20,306</td><td>4,704</td><td>25,059</td></tr>
</table></td>
<td>AEMR 2015 Table 13 and Figures 19-23.</td>
<td>S3.16.1 [Repeat of L2.2.1] Future AEMRs should include verification that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol, which should be referenced. Table 13 in the AEMRs should be changed to show the correct Project Approval Limits for Sulfur oxides and Nitrogen oxides.
Ranking: N</td>
</tr>
</table>

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			Likelihood of Environmental Harm or Non-Compliance Occurring Level of Environmental Impact: High / Moderate / Low Certain: Code Red / Code Red / Code Orange Likely: Code Red / Code Orange / Code Yellow Less Likely: Code Orange / Code Yellow / Code Yellow		
Dust Management					
S3.17	The Proponent shall: a) design, construct, operate and maintain the project in a manner that minimises or prevents the emission of dust from the site; b) take all practicable measures to ensure that all vehicles entering or leaving the site and carrying a load that may generate dust are covered at all times, except during loading and unloading. Any such vehicles shall be covered or enclosed in a manner that will prevent emissions of dust from the vehicle at all times; c) maintain all trafficable areas and vehicle manoeuvring areas on the site in a condition that will minimise the generation or emission of wind blown or traffic generated dust from the site; and d) ensure each kiln is fitted with a dust collection system to capture emissions, to the satisfaction of the Secretary.	**C**	(a) In the design criteria and OEMP. (b) All transport is provided by contractors who must comply with NSW road laws. The official "Load Restraint Guide" requires that open vehicles designed for carrying loose bulk material must be fitted with a cover, or the load must be wetted, skinned or otherwise contained, if there is a possibility of any of the load being blown off. Section 9 of the OEMP "Transport Code of Conduct" does not mention loads of bulk granular material having to be covered. (c) All major traffic areas are concrete sealed. There is some unpaved access at the rear of the building but this is not generally utilised. NCIA has its own sweeper which is used mainly on weekends to sweep the sealed roads. (d) There is only one baghouse and filters are fitted in stacks that do not discharge through the baghouse to ensure that a dust collection system is in operation.	Management assertion Site inspection	**3.17.1** It is recommended that when the OEMP is replaced by an Environmental Management Strategy (prior to the commencement of any construction works) as required by Schedule 4 Condition 57 of this Approval, wording in a "Transport Code of Conduct" or similar section includes a requirement for all loads of bulk granular material delivered to the site to be covered in accordance with the "Load Restraint Guide". **Ranking: N**

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Discharge Limits and Stack Discharge Design Requirements					
S3.18	Unless otherwise specified by the Secretary, the Proponent shall: a) comply with all monitoring (points) requirements and pollutant discharge concentrations as specified by the OEH in the EPL; and b) ensure that the stack discharge design requirements comply with the EPL.	**C**	(a) All required stack monitoring points are included in the Emissions Testing Report 2013-14, however it is noted that Point EPL 2 is actually EPL 3 as EPL 2 set out in the Emissions Testing Report 2013-14 matches the description of Point 3 (Pressing and Drying) in EPL 11956 Clause P1.1. The EPL does not require testing of Point 2 in Clause M2.2 Air Monitoring Requirements. It is also noted that in Table 4 of the Emissions Testing Report 2013-14 EPL 10 is listed twice, the second listing actually referring to EPL 12 Spray Dryer (SD1). These errors are consistent in all the reports referenced under "Objective Evidence". Points 22, 23 and 24 are monitored for PM10, HF and weather respectively as required by the EPL. (b) The EPL does not include any stack discharge design requirements.	NCIA Emissions Testing Report 2013-2014; 2012-2013; 2011-2012 (AECOM)	**3.18.1** The terminology in the NCIA Emissions Testing Reports in future should refer to EPL 3, not EPL 2, and the second listing of EPL 10 in Table 4 should reference EPL 12 Spray Dryer (SD1). **Ranking: N**
Air Quality Management Plan					
S3.19	The proponent shall prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Secretary. The Plan must: a) be prepared by suitably qualified expert and submitted to the Secretary for approval prior to commencement of construction of any subsequent stage of the project; b) identify all major sources of particulate and gaseous air pollutants that may be emitted as result of the operation of the project, including	**NT**	Section 5 of the OEMP (2010) which is currently in use is titled "Air Quality Management Plan". The project does not trigger this condition S3.19 until prior to commencement of construction of any subsequent stage of the project. The following compliance with the requirements of this condition by the OEMP is provided below. a. Not triggered b. Included in Table 5 c. Complies d. Does not include continuous dust-leak	OEMP 2011	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	identification of the major components and quantities of these emissions; c) include monitoring of particulate and gaseous emissions from the project, in accordance with any requirements of the EPL; d) include continuous dust-leak detection monitoring of fabric filter discharges; e) include monitoring of the impacts of fluoride on vegetation in accordance with the EPL with sampling/observations designed to assess impacts on sensitive ornamental plants in adjacent residential areas; f) include procedures for the minimisation of particulate and gaseous emissions from the project, and the reduction of these emissions over time, where appropriate; g) include protocols for regular maintenance of process equipment to minimise the potential for dust emissions; h) detail procedures to be undertaken if any non-compliance is detected; i) include mechanisms to consider cumulative air quality impacts in the context of development in the Rutherford industrial area; and j) outline how data from the relocated meteorological station site would be used as part of the validation modelling required under condition 20.		detection monitoring of fabric filter discharges e. Section 5.2.2 of the OEMP f. Section 5.3 of the OEMP g. Section 5.4 of the OEMP h. Section 5.5 of the OEMP i. Section 5.6 of the OEMP j. Not triggered		

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Performance Validation Monitoring					
S3.20	The Proponent shall prepare and implement Air Emissions Validation Reports to the satisfaction of the Secretary and OEH. These reports must: a) be prepared by a suitably qualified expert whose appointment has been endorsed by the Secretary; b) be undertaken within 90 days of the commencement of operation of each stage (stages 1 to 8) of the project and during a period in which the facility is operating under design loads and normal operating conditions; c) be conducted in accordance with the documents "Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales' and " Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales"; and d) include: - a program for point source emission testing on each stack as described in the site EPL; - the results of the stack testing and a validation with the project's air emission limits; - a validation against the predictions made in the EA using both simulated and actual site meteorological data collected in accordance with the EPL and as modified by Condition 19(j) above; - details of any exceedances or non-compliance with the limits in the EPL and approval; and - measures to mitigate the exceedance	**C**	Reports have been provided for Stage 1(2007) and Stage 2 (2009). (a) Stage 1 report was prepared by HLA Envirosciences, and Stage 2 report was prepared by AECOM, both in accordance with the NCIA Consolidated Consent - Mods 1-5 (2003 – surrendered). (b) Complies (c) Both reports reference the "Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (2007)" and "Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (2005)" and used AUSPLUME for modelling. (d) The Stage 1 assessment predicted that no adverse environmental impacts would result from operation of the Stage 2 facility. An Air Quality Mitigation Study was prepared by AECOM in accordance with Condition 5.7 of the Development Consent (2003) for Stage 2 operations following exceedances of the in-stack criteria set out in Condition 5.3 of the Development Consent measured during the Stage 2 performance verification emission testing program.	- NCIA Consolidated Consent - Mods 1-5 (2003 – surrendered). - Predictive Air Quality Assessment, NCIA – HLA Envirosciences (2007). - NCIA Stage 2 Air Emission Performance Verification Monitoring Report – AECOM (2009)	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	or non-compliance. Should any Air Emissions Validation Reports identify an exceedance or non-compliance, then the Proponent shall implement additional mitigation or attenuation to the satisfaction of the OEH and Secretary within the timeframe specified by the Secretary and prior to any progression to the next stage.				
Performance Guarantees					
S3.21	Prior to the commencement of construction of each stage of the project, the Proponent shall provide manufacturer's performance guarantees for all plant and equipment to demonstrate that all sources of air pollutants will comply with the emission concentration limits specified in the EPL, to the satisfaction of the OEH.	**NT**	The Approval refers to activities subsequent to 19 January 2012. No new construction has occurred since that date.	Management assertion Site inspection	There are no recommendations
Odour					
S3.22	The Proponent shall not cause or permit the emission of any offensive odour from the site. Note: Section 129 of the POEO Act provides that the Proponent shall not cause or permit the emission of any offensive odour from the site, but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.	**C**	Since 2008 the EPA has received over 700 complaints from residential areas surrounding the Rutherford Industrial Estate, including Rutherford, Aberglasslyn, Farley, Windella and Telarah. Between 2011 and 2014 a number of studies were commissioned by the EPA as part of the Rutherford Odour Investigation Project. NCIA provided meteorological data for these studies, which did not identify any odours emanating from NCIA.	Rutherford Odour Investigation Project reports. Management assertion.	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Greenhouse Gas Emissions					
S3.23	The Proponent shall implement all reasonable and feasible measures to minimise: a) energy use on site; and b) the scope 1 and 2 greenhouse gas emissions produced on site, to the satisfaction of the Secretary.	**C**	A Level 2 Energy Audit Report was prepared by BCW Carbon and Energy in accordance with the Energy Saver Scope of Work which is based on and exceeds the Australian and New Zealand Standard for Energy Audits - AS/NZS 3598:2000. The scope of work was agreed between NCIA, BCW Carbon and Energy and OEH in accordance with the contractual agreement made between BCW Carbon and Energy and OEH. The recommendations from this audit have been implemented. In addition, NCIA are producing thinner tiles which require less gas to manufacture.	Level 2 Energy Audit Report by BCW Carbon and Energy Management assertion	There are no recommendations
S3.24	The Proponent shall prepare and implement an Energy Savings Action Plan for the project to the satisfaction of the Secretary. The plan shall: a) be submitted to the Secretary for approval within 12 months of this approval; and b) be prepared in accordance with the Guidelines for Energy Savings Action Plans (DEUS 2005).	**ANC**	An Energy Savings Action Plan has not been produced and submitted to the Secretary for approval within 12 months of this Approval, i.e. by 19 January 2013. Opportunities were identified in the Level 2 Energy Audit Report prepared by BCW Carbon and Energy, but there is no action plan to implement the identified opportunities that were accepted (and in many cases implemented) by NCIA, as verified in the site inspection. AECOM on behalf of NCIA approached the Department in 2012 that for NCIA to meet the requirements of condition 24 of their project approval, NCIA will enrol and participate in the federal EEO program and meet its requirements and, on an annual basis commencing January 2013, provide a written update to the Director−General on its progress. The Department approved this approach and requested that NCIA submit a	Level 2 Energy Audit Report (NCBCW Carbon and Energy – 2014) Management assertion Site inspection Letter from AECOM to DoPI dated 14 June 2012 Letter from DoPI to AECOM undated Ref. 10/24110 Email from Christine Chapman DoPI dated Thursday, 17 January 2013 Letter of EEO Deregistration 2 July 2013.	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			copy of the EEO registration once approved. It is noted that NCIA was registered under the Commonwealth Energy Efficiency Opportunities Act 2006 from 2011 to 2013 and was deregistered on 2 July 2013 as NCIA did not trigger the energy use requirements under the Act.		
SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - NOISE					
Construction and Operation Hours					
S3.25	The Proponent shall comply with the hours of operation in Table 4, unless otherwise agreed by the Secretary. Construction activities (with the exception of earthworks and building construction activities) are permitted to occur outside of these hours provided it meets the operational noise criteria as defined in Table 6. *Table 4: Hours of Operation* Activity / Day / Hours Construction / Monday - Saturday / 7 am – 5 pm Sunday & Public Holidays / Nil Operation / Monday - Sunday / No Restriction Truck deliveries to the site and dispatch from the site / Monday - Sunday / 7 am – 10 pm	**C**	From 7 pm to 7 am the clay delivery doors are closed. Night shift starts picking for despatch at 5:00 am ready for pickup at 7:00 am.	Management assertion	There are no recommendations
Noise Limits					
S3.26	The Proponent shall ensure that noise generated from the project does not exceed the noise limits presented in Table 5. Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.	**C**	The results reported in the 2014 AEMR show that the received noise from the NCIA site was audible and measureable at each of the monitoring locations during the evening and night time periods. However the noise from NCIA did not exceed the relevant criterion at any time. Results in the 2013 AEMR show that the received noise from the NCIA site was audible and measureable at each of the monitoring locations during the evening and night time periods. The noise from NCIA	2014 AEMR 2013 AMR 2012 AEMR	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	Table 5: Project Noise Limits, dB(A) Location / Day $L_{Aeq\ (15\ minute)}$ / Evening $L_{Aeq\ (15\ minute)}$ / Night $L_{Aeq\ (15\ minute)}$ / Night L_{Amax} Kenvil Close: 35 / 35 / 35 / 45 Wollombi Road: 35 / 35 / 35 / 45		during these periods did not exceed the criterion of 35 dB(A) Leq(15 min). The results in Table 18 of the 2012 AEMR show that the received noise from the NCIA site was not directly measureable during the monitoring survey. The measurements were inconclusive as the acoustic environment of both sites was dominated by emissions from other industries not related to NCIA.		
Noise Management					
S3.27	The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. The Plan must: a) be prepared by a suitably qualified acoustical expert and submitted to the Secretary for approval prior to commencement of construction of any subsequent stage of the project; b) identify all specific activities that will be carried out during construction and operation and associated noise sources; c) identify all potentially affected sensitive receivers; d) specify noise criteria (reflect the noise limits presented in Table 5); e) describe management methods and procedures and specific noise mitigation treatments that will be implemented to control noise emissions; f) detail an operational noise monitoring program to be prepared by a qualified acoustic consultant and implemented to monitor the effects of the project on the acoustic environment during operation,	**NT**	The Noise Management Plan must be prepared prior to commencement of construction of any subsequent stage of the project. Expansion is approved but not commenced. Currently noise is managed in accordance with Section 8 Noise Management and Monitoring of the OEMP 2010. It is noted that in accordance with condition 2.1 of a Deed of Settlement with McCloy Group (Victory Parc Pty Ltd) regarding the approved Heritage Green development and the approved NCIA facility expansion, NCIA is required to apply for a modification to condition 26 of its consent by adding the following: *"Provided however that upon the commencement of operation of the first of any stages 3-8 in this approval, and the registration with the LPI of a plan of residential subdivision comprising of stage 9 of the Land in lot 100 DP 1091841 pursuant to development consent 08/2357, as amended, table 5 shall be amended by the replacement of the words 'Kenvil Close' with*	Management assertion Site inspection OEMP 2010 Approval Modification Deed Letter 1Feb13	

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	including road traffic noise, with details of procedures to be undertaken if any non-compliance is detected; g) detail procedures to receive, record and respond to complaints; and h) describe the contingencies that would be implemented, and the timing for implementation, should non compliances be detected.		*the words 'the 35dBa acoustic contour (the green line) in the acoustic plan No.TE188-10p01 (rev 0) dated 27 March 2012 by Renzo Tonin and Associates".*		
Validation					
S3.28	The Proponent shall prepare and implement Noise Validation Reports to the satisfaction of the Secretary. These reports must: a) be prepared by a suitably qualified acoustical expert whose appointment has been endorsed by the Secretary; b) be undertaken within 90 days of the commencement of operation of each subsequent stage (stages 1 to 8) of the project and during a period in which the facility is operating under normal operating conditions; c) be conducted in accordance with the NSW Industrial Noise Policy; and d) include: - a validation against the predictions made in the EA including the proposed noise attenuation; - details of any exceedances or non-compliance with the noise limits in this approval; and - measures to mitigate the exceedance or non-compliance. Should any Noise Validation Reports identify an exceedance or non-compliance, then the Proponent shall	**NV**	A Noise Compliance Study Stage 2 Commissioning Report was provided by Spectrum Acoustics in October 2009. a) Spectrum Acoustics are known to be suitably qualified acoustical experts, however there is no indication in their report that their appointment has been endorsed by the Secretary. b) The noise monitoring programme is reported to have been undertaken in accordance with the requirements of the consolidated consent conditions for the operation of the NCIA facility. It is assumed therefore that it was undertaken within 90 days of commencement of operation of Stage 2, however this is not specified in the report. c) The report states that the methodology used in this programme is aimed to most effectively determine compliance with the noise limits in the EPL. It does not refer to the NSW Industrial Noise Policy.	Noise Compliance Study Stage 2 Commissioning Report (Spectrum Acoustics) Management assertion	**3.28.1** NCIA should attempt to locate the Stage 1 Noise Validation Report. **Ranking: N**

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	implement additional mitigation or attenuation to the satisfaction of the OEH and Secretary within the timeframe specified by the Secretary and prior to any progression to the next stage.		d) The results of the study show that received noise from the operation of NCIA is in compliance with the limits set through the EIS process NCIA was not able to provide the Stage 1 Noise Validation Report, which may have been held by a previous consultancy predating NCIA's association with HLA/AECOM.		
SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - DESIGN					
Architectural Design					
S3.29	The Proponent shall construct the facility generally in accordance the elevations shown in Appendix 4 including additional noise attenuation of building sections. Building design shall incorporate the following noise mitigation features: a) increased thickness of metal sheeting to 0.48 BMT on the east façade, south façade and roof (previous assumption in noise model was 0.3 BMT) with 55 mm insulation fixed to underside of roof; b) existing dust extractor to be enclosed; c) alsynite roofing on the proposed main building located only on the west section of the roof. This is assuming the roof is pitched and therefore the alsynite panelling is angled away from Heritage Green receivers to the east; d) no alsynite panels on the east and south walls of the proposed Mill & Spray Dryer section of the building; e) the bag-houses for the proposed kiln stacks shall be located inside the factory	**NT**	Construction has not commenced	Site inspection	

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	building; and f) the dust extraction unit, located on the southern end of the eastern wall of the factory building, shall be enclosed to reduce noise emission to the east and south.				
SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - VISUAL					
Landscape Design					
S3.30	The Proponent shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Secretary. The plan shall; a) be submitted to the Secretary for approval prior to Commencement of construction of any subsequent stage of the project; b) be prepared in consultation with Council; c) detail existing and proposed landscaping on the site; d) maximise the use of flora species endemic to the locality in landscaping the site; e) incorporate weed management for the site; and f) include a schedule for implementation and maintenance.	**NT**	Construction of any subsequent stage of the project has not commenced. The project currently operates under the OEMP 2010 which includes Section 12 "Landscape Management Plan". Items c), d), e) and f) are generally covered in the OEMP.	OEMP 2010	
S3.31	The Proponent shall complete the landscaping along the eastern site boundary within 6 months following the construction of any stage of the new factory building (see figure in Appendix 2).	**NT**	Construction of the new factory building has not commenced.	Site inspection	

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Lighting					
S3.32	The Proponent shall ensure that the lighting associated with the project: a) complies with the latest version of Australian Standard AS 4282(INT) - Control of Obtrusive Effects of Outdoor Lighting; b) is adequate for night time security purposes; and c) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	**NV**	(a) There is no documentation to verify that the lighting associated with the project complies with the latest version of Australian Standard AS 4282:1997, which is listed as current by Standards Australia. (b) On inspection, the lighting appeared to be adequate for night time security purposes (c) On inspection, the lighting appeared to be mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network. It was reported that no complaints from the public have been received regarding outdoor lighting.	Management assertion Site inspection	**3.32.1** NCIA should either review the construction contract for the facility to assess if lighting was required to be installed in accordance with AS 4282:1997; or if this information is not available or is inconclusive, commission a qualified lighting expert to undertake a survey or audit of the outdoor lighting against AS 4282:1997 to verify its compliance. **Ranking: N**
Signage					
S3.33	The Proponent shall not erect any signage and advertising media at the site, with the exception of internal site signage for traffic management and safety purposes. Any proposed signage will be subject to further application and approval by the Secretary.	**C**	There is a sign inside the gate identifying the occupier of the site etc and traffic management and safety signs elsewhere on the property.	Site inspection	There are no recommendations
Fencing					
S3.34	The Proponent shall erect security fencing around the perimeter of the site with lockable gates at each entry point.	**C**	There is only one entry point which has lockable gates installed.	Site inspection	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - TRAFFIC AND ACCESS					
Oversized Transportation					
S3.35	The Proponent shall obtain a permit for an oversized and over mass load from the RTA, if transportation of oversized or over mass materials or machinery is required for the project.	**NT**	No oversized or over mass load is required to be transported to the site.	Management assertion	
Access					
S3.36	The Proponent shall: a) ensure that all vehicles entering and exiting the site do so in a forward direction; and b) install a median strip or similar device on the driveway to ensure that internal two-way traffic is separated.	**C**	(a) Vehicles entering and exiting the site can only do so in a forward direction. (b) a median strip is installed on the driveway at the entrance and at the weighbridge. (Photo 1)	Site Inspection	There are no recommendations
Vehicle Queuing and Parking Access					
S3.37	The Proponent shall ensure that: a) a minimum of 70 parking spaces are provided on site; b) all parking generated by the project is accommodated on site, and that no vehicles associated with the project are parked on the public road system at any stage; c) the project does not result in any vehicles queuing on the public road network; and d) provide direction line marking and signage on site to direct heavy vehicles, staff and visitors to the relevant parking areas, loading docks and exits to ensure safe traffic flow.	**NV**	(a) It was asserted that a minimum of 70 parking spaces are available on site, however they will not be needed until Stage 8 of the project. Currently there is ample parking available for employees and visitors, however as there are no parking spaces marked, it was not possible to assess the number of spaces available (Photo 2). (b) It was asserted that no vehicles associated with the project are parked on the public road system at any stage, however as pickup of product starts at 7:00 am it is not known where trucks arriving at that hour are parked overnight. (c) It does not appear likely that vehicles would queue on the public road network as there is ample space on	Management assertion Site inspection Nearmap aerial photography (Photos 1, 2 and 3)	**3.37.1** NCIA should prepare a written instruction that is issued to each contract driver that no vehicles associated with the project are parked on the public road system at any stage, or that vehicles queue on the public road network. This could be done through the Transport Code of Conduct in Section 9 of the OEMP which should be revised to reflect current site requirements and be provided to all employees, contractors and contract drivers. **Ranking: I**

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			site to accommodate vehicles waiting to be loaded or unloaded. (d) There is no line marking and limited signage on site to direct heavy vehicles, staff and visitors to the relevant parking areas, loading docks and exits, however the roadways on site are simple and easily understood (Photo 3). This requirement is basically set out in Section 9 of the OEMP (2011) Transport Code of Conduct, but has not been implemented.		**3.37.2** A traffic risk assessment should be conducted on site to determine if, and if so where, direction line marking and signage should be provided on site to direct heavy vehicles, staff and visitors to the relevant parking areas, loading docks and exits to ensure safe traffic flow. **Ranking I**
S3.38	The Proponent shall ensure that the parking dimensions, internal circulation, aisle widths, kerb splay corners, head clearance heights, ramp widths and grades of the car parking area in accordance with the current relevant Australian Standards AS2890.1:2004, except where amended by other conditions of this approval.	**NC**	There are no markings in the car parking area. As there is nothing overhead in the car park, head clearance heights are not required. Level of Environmental Impact / Likelihood of Environmental Harm or No: Certain / Like; High: Code Red / Code R; Moderate: Code Red / Code Or; Low: Code Orange / Code Y	Site inspection	**3.38.1** To comply with this condition, NCIA must provide markings in accordance with Australian Standard AS2890.1:2004. **Ranking: I**
S3.39	The Proponent shall ensure that disabled parking and access is provided on-site and shall comply with Australian Standard AS1428.1 (2001) - Design for Access and Mobility - Part 1 General Requirements for Access – Buildings.	**NC**	No designated disabled car parking spaces are provided. Level of Environmental Impact / Likelihood of Environmental Harm or No: Certain / Like; High: Code Red / Code R; Moderate: Code Red / Code Or; Low: Code Orange / Code Y	Site inspection	**3.39.1** To comply with this condition, NCIA must provide markings in accordance with Australian Standard AS1428.1:2001. **Ranking: I**

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Traffic Management					
S3.40	The Proponent shall prepare and implement a Traffic Management Plan for the project to the satisfaction of the Secretary. The plan must: a) be prepared in consultation with the RMS and Council, and be submitted to the Secretary for approval prior to commencement of construction of any subsequent stage of the project; b) be prepared by a suitably qualified expert; c) detail construction and operation vehicle routes, access and parking arrangements, traffic restrictions and traffic control; and d) include a Driver Code of Conduct.	**NT**	Construction of any subsequent stage of the project has not commenced. Section 9.0 of the OEMP is "Transport Code of Conduct".	Management assertion. OEMP 2011	
SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - SOIL AND WATER					
S3.41	Except as may be expressly provided in an EPL for the project, the Proponent shall comply with section 120 of the POEO Act.	**Note**			
Erosion and Sediment Control					
S3.42	The Proponent shall prepare and implement an Erosion and Sediment Control Plan for the project to the satisfaction of the Secretary. This plan must: a) be submitted to the Secretary before the commencement of construction of any subsequent stage of the project; b) be prepared in accordance with Landcom's Managing Urban	**NT**	Construction of any subsequent stage of the project has not commenced. Section 6.1 Erosion and Sedimentation of the OEMP 2011 references the Landscape Management Plan (Section 11 of the OEMP 2011) which defines measures to be implemented to rehabilitate erosion affected areas.	Management assertion Site inspection OEMP 2011	

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	Stormwater: Soils and Construction manual; c) identify the works that could cause soil erosion and generate sediment; d) describe the location, function, and capacity of the erosion and sediment controls that would be implemented; and e) describe the measures that would be implemented to maintain these controls during the construction period				
S3.43	All erosion and sedimentation controls required as part of this approval shall be maintained at design capacity for the duration of the construction works, and until such time as all ground disturbed by the construction works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.	**NT**	Construction works have not commenced.	Site inspection	
Water Demand					
S3.44	Prior to exceeding a water consumption level of 92ML/year, the Proponent shall obtain written approval from HWC that the amount required for each new Stage of the project is within the capacity able to be provided by HWC, to the satisfaction of the Secretary.	**NT**	57ML of water were used last financial year.	Water bill from Hunter Water Corporation	
Alternative Water Source					
S3.45	Prior to the installation of any alternative water supply infrastructure, the Proponent shall consult with, and seek the approval of Hunter Water Corporation and Council.	**NT**	This is not a requirement at this time. It is reviewed in Section 7 of the OEMP.	Management assertion OEMP 2011	

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Stormwater Management					
S3.46	Proponent shall prepare and implement a Stormwater Management Plan for the project to the satisfaction of the Secretary. This plan must: a) be prepared in consultation with Council and be submitted to the Secretary for approval prior to the commencement of construction of any subsequent stage of the project; b) be prepared in accordance with the latest version of Managing Urban Stormwater: Council Handbook (DECC); c) outline measures to manage stormwater to prevent the pollution of waters; d) include a program to monitor stormwater quantity and quality; and e) include detailed plans of the stormwater system.	**NT**	Construction of any subsequent stage of the project has not commenced. Section 6.2 and Figure 6 of the OEMP sets out the program for stormwater management currently implemented on site. This is confirmed in Photos 3, 4, 5 and 6.	Site inspection OEMP 2011	
S3.47	The Proponent shall ensure that the construction and operation of the facility does not concentrate or lead to an increase in the rate of flow of stormwater discharged from the site over and above the predevelopment flow conditions.	**C**	This was set out in the EA for expansion (Parsons Brinkerhoff 2010) Section 12.1 Surface Water, Section 12.4 Mitigation Measures and Appendix G Surface Water Management, and is included in the OEMP 2011 Section 6.2 and Figure 6.	Site inspection OEMP 2011 EA 2010 Nearmap imagery	There are no recommendations
S3.48	The Proponent shall design, construct, operate and maintain all stormwater infrastructure to direct all stormwater runoff to the site's stormwater detention basins. Such stormwater infrastructure shall be capable of handling all stormwater discharges up to	**C**	This is covered in Appendix G General Design Considerations of the EA for expansion (Parsons Brinkerhoff 2010) and Section 6 and Figure 6 of the OEMP. Site inspection confirmed that the principles of stormwater management set out in the referenced documents have generally been	EA 2010 OEMP 2011 Site inspection	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	and including a 1 in 100 year ARI storm event.		implemented.		
SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - HERITAGE					
S3.49	The Proponent shall cease all works on site in the event that any Aboriginal cultural object(s) or human remains are uncovered onsite. The NSW Police, the Aboriginal Community and the OEH are to be notified. Works shall not resume in the designated area until approval in writing from the NSW Police and/or the OEH has been obtained.	**NT**	No construction has been undertaken on site since the issue of this Approval.	Management assertion Site inspection	
S3.50	The Proponent shall ensure all reasonable and feasible measures are made to avoid impacts to Aboriginal Cultural Heritage values for the life of the project. If impacts are unavoidable, mitigation measures are to be negotiated with the Aboriginal community and the OEH.	**NT**	Procedures for the Discovery of Archaeological Deposits and the Discovery of Human Remains are detailed in Section 14.3.1 of the EA 2010 and would be implemented during the project.	EA 2010	
S3.51	The Proponent shall: a) prepare an Aboriginal Cultural Education Program for the induction of personnel and contractors involved in construction and landscaping activities on site, prior to the commencement of construction of any subsequent stage of the project: and b) undertake consultation with Aboriginal stakeholders in the event of the discovery of Aboriginal cultural object(s) throughout the construction of the project, to the satisfaction of the Secretary.	**NT**	No construction has been undertaken on site since the issue of this Approval.	Management assertion Site inspection	

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - WASTE MANAGEMENT					
S3.52	A designated area for the storage and collection of waste and recyclable materials shall be provided at the site and shall be designed, constructed, operated and maintained in a manner so as not to cause a nuisance to adjoining properties.	**NC**	The site is currently generally in compliance with this condition, having separate waste collection facilities for paper, cardboard, steel and general waste. However there has been a non-compliance identified regarding the storage of excessive quantities of waste tiles that led to litigation and mediation in 2012 with the adjacent Victory Parc Pty Ltd (also known as Heritage Green and Heritage Parc) development property owner, McCloy Group. This was reported in a Sworn Affidavit by Brian Swaine to have caused a visual nuisance to the adjoining property and NCIA management asserts that this has been resolved satisfactorily by mediation. Waste tiles are now stored in a designated concrete bunker (Photo 8) and are periodically removed by contractor. It was observed on the day of the site visit, 1 September 2015 that waste tiles were accumulating beyond the confines of the bunker (Photo 8). It was reported that approximately 30t of waste tiles are produced daily. Likelihood of Environmental Harm or No Level of Environ-mental Impact: Certain / Like High: Code Red / Code R Moderate: Code Red / Code Or Low: Code Orange / Code Y	Sworn Affidavit of Brian Swaine sworn 30 July 2012. Site inspection (Photo 8) Nearmap images (Photo 7) Management assertion	**3.52.1** NCIA should ensure that waste tiles are stored within only the designated concrete bunker and that there are procedures in place, including daily inspections, to determine when a contractor should be required to remove waste tiles. Daily inspections should be documented. Ranking: I
S3.53	The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal, or any waste generated at the site to be disposed of	**C**	No waste is imported to this site and there is no disposal of waste on site.	Management assertion Site inspection	There are no recommendations

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	at the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997.				
S3.54	All wastes generated on site during construction and operation of the project shall be classified in accordance with the Waste Classification Guidelines, December 2009 (or later version) and disposed of to a facility that may lawfully accept the waste.	**C**	Certain hazardous wastes may be generated from time to time, including lime, old ink, waste solvents etc. These are removed by licenced contractor on an as needed basis.	Management assertion	There are no recommendations
SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - HAZARDS					
S3.55	The Proponent shall ensure that the fuel storage tank is surrounded by a bund with a capacity to contain 110% of the largest tank within the bund. The bund(s) must be designed and installed in accordance with the requirements of the relevant Australian Standards and/or the OEH's Environmental Protection Manual Technical Bulletin Bunding and Spill Management.	**C**	Diesel fuel is stored on site for use of the front-end-loader(s) and forklifts. A maximum of 5,000 litres per month is used. Diesel is stored in an internal tank which is bunded (Photo 9). The diesel tank is 2400L and the bund is 3500L so the bund will hold 110% of the capacity of the tank. The tank is located too close to the edge of the bund so that any discharge from the tank may project beyond the bund on to the floor of the plant. However the NSW Manual states that locations with a low risk of water pollution or soil contamination include inside a building designed to serve as a secondary containment area so that spills cannot flow out, which is the situation at NCIA.	Management assertion Photo 9 Email re tank and bund capacity 21/09/15.	**3.55.1** The Emergency Plan should be revised if necessary to incorporate the use of any spill prevention measures established for the diesel tank. **Ranking: I**

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
SCHEDULE 4: ENVIRONMENTAL MANAGEMENT, MONITORING AND INCIDENT REPORTING - ENVIRONMENTAL MANAGEMENT					
Environmental Management Strategy					
S4.56	The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must: a) be submitted to the Secretary for approval prior to commencement of any construction works; b) be prepared by a suitably qualified and experienced expert; c) provide the strategic framework for environmental management of the project; d) identify the statutory requirements that apply to the project; e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the project. f) describe in detail the management measures that would be implemented to address environmental issues; g) describe in general how the environmental performance of the project would be monitored and managed; h) describe the procedures that would be implemented to: - keep the local community and relevant agencies informed about the operation and environmental performance of the project; - receive, handle, respond to, and record	**NT**	Commencement of construction works has not occurred, however most of these requirements are currently addressed in the OEMP.	Management assertion Site inspection	

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	complaints; - resolve any disputes that may arise during the course of the project; - respond to any non-compliances; and - respond to emergencies; and i) include copies of the various strategies and plans that are required under the conditions of this approval once they have been approved.				
Construction Environmental Management Plan					
S4.57	The Proponent shall prepare and implement a Construction Environmental Management Plan (CEMP) to outline environmental management practices and procedures to be followed during the construction of the ceramic tile manufacturing facility. The Plan shall include, but not necessarily be limited to: a) a description of all activities to be undertaken on the site during construction of the ceramic tile manufacturing facility, including an indication of stages of construction, where relevant; b) statutory and other obligations that the Proponent is required to fulfil during construction, including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies; c) detailed management measures that would be implemented to address environmental issues (ie, noise, air quality, heritage, water, potential acid sulphate soil);	**NT**	Commencement of construction works has not occurred.	Management assertion Site inspection	

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	d) specific consideration of measures to address any requirements of the Department, Council and the OEH during construction; e) details of how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts; and f) a description of the roles and responsibilities for all relevant employees involved in the construction of the ceramic tile manufacturing facility. The CEMP shall be submitted for the approval of the Secretary prior to the commencement of construction of any subsequent stage of the project.				
SCHEDULE 4: ENVIRONMENTAL MANAGEMENT, MONITORING AND INCIDENT REPORTING - ENVIRONMENTAL REPORTING					
Incident Reporting					
S4.58	Within 24 hours of the occurrence of an incident that causes (or may cause) harm to the environment, the Proponent shall notify the Department and any other relevant agencies of the incident.	**NT**	There have been no notifiable incidents. Procedures are in place to ensure compliance with this requirement. There is an Incident Register maintained in MS Access (for all incidents, not only notifiable environmental ones), and there are notification procedures in the Draft Emergency Plan (Appendix F of the OEMP) but only for neighbours, and in the PIRMP which includes Table 2 "Notification to Relevant Authorities". The PIRMP is not referenced in the Draft Emergency Plan, which does not adequately cover environmental emergencies.	Draft Emergency Plan PIRMP	**4.58.1** It is recommended that the Draft Emergency Plan be finalised and its requirements (e.g. for training) be implemented. The Emergency Plan should reference the PIRMP which could be included as an Appendix. The Notifications in the Emergency Plan should include, or make reference to, Table 2 in the PIRMP. **Ranking: U**

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S4.59	Within 7 days of the detection of the incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident.	**NT**	There have been no incidents triggering this condition. Minor non-compliances have been recorded with discharge conditions, but these have not caused (or may cause) harm to the environment. Relevant agencies are included in Table 2 of the PIRMP.	Management insertion AEMRs PIRMP	
SCHEDULE 4: ENVIRONMENTAL MANAGEMENT, MONITORING AND INCIDENT REPORTING - ANNUAL PERFORMANCE REPORTING					
S4.60	Every year from the date of this approval, unless the Secretary agrees otherwise, the Proponent shall submit an Annual Environmental Management Report (AEMR) to the Secretary and relevant agencies. The AEMR shall: a) be conducted by suitably qualified and experienced team; b) be submitted within 3 months of the period being assessed by the AEMR; c) identify the standards and performance measures that apply to the development; d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years; e) include a summary of the monitoring results for the development during the past year; f) include an analysis of these monitoring results against the relevant: • impact assessment criteria; • monitoring results from previous years; and • predictions in the EA; g) identify any trends in the monitoring	**C**	(a) The AEMR is prepared by AECOM. (b) Evidence provided (c) Section 2 Standards and Performance Measures of the AEMR (2015) sets out the following: The NCIA OEMP provides the environmental management framework to guide the operation of the tile manufacturing facility. The OEMP defines the environmental management practices, procedures and personnel responsibilities to ensure compliance with conditions of statutory approvals and licences. Specific environmental standards and performance measures used to assess the achievement of environmental objectives are drawn from requirements, obligations and initiatives listed within: - The Project Approval (MP 09_0006), granted by the Minister for Planning; - EPL 11956, issued by the NSW Environment Protection Authority (EPA); and - The National Ceramic Industries Australia Expansion - Environmental	AEMRs	There are no recommendations

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	results over the life of the development; h) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; i) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; and j) identify continuous improvement measures, outlining new develop-ments in air quality and noise control, and detailing practices that have been implemented on the site during the previous year, to reduce air quality and noise impacts.		Assessment (AECOM, 5 July 2010) hereafter referred to as '2010 EA'. (d) Section 3. No complaints have been received (e) Section 4 (f) Section 5 (g) Section 5 (h) Section 6 (i) Section 7		
SCHEDULE 4: ENVIRONMENTAL MANAGEMENT, MONITORING AND INCIDENT REPORTING - INDEPENDENT AUDIT					
S4.61	Every 3 years from the date of this approval, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must: a) be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Secretary; b) be undertaken in consultation with the OEH and Council; c) include an assessment of the noise and air quality performance of the project; d) assess the environmental performance of the project and undertake any works necessary to determine whether it is complying with the relevant standards, performance	**ANC**	This report satisfies this requirement of this condition, however it has not been commissioned as required within the time stipulated. It is noted that correspondence regarding a suitably qualified team to undertake the audit dates from 21 August 2014, which resulted in the proposed team from AECOM being rejected by the Department. (a) Graham A Brown & Associates were approved to undertake this audit on 16 June 2015. (b) OEH and Maitland Council were consulted. (c) Complies (d) Complies (e) Complies (f) Complies	Purchase Order No. 6500015138 Letter of approval from Department of Planning signed by Chris Ritchie to Chris Schneider dated 16 June 2015.	There are no recommendations

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	measures, and statutory requirements; e) review the adequacy of any strategy/plan/program required under this approval; and, if necessary, f) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval.				
S4.62	Within 6 weeks of completing this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary with a response to any recommendations contained in the audit report.	**NT**	NCIA intends to submit a copy of the audit report to the Secretary with a response to any recommendations contained in the audit report within 6 weeks of completing this audit. For the purposes of this condition, the completion of the audit is considered to be the date on which NCIA receives the Final Audit Report.		
S4.63	Within 3 months of submitting an audit report to the Secretary, the Proponent shall review and if necessary revise the strategy/plans/ programs and undertake additional mitigation measures as required under this approval to the satisfaction of the Secretary.	**NT**			
SCHEDULE 4: ENVIRONMENTAL MANAGEMENT, MONITORING AND INCIDENT REPORTING - ACCESS TO INFORMATION					
S4.64	Within 3 months of the approval of any strategy/plan/program required under this approval (or any subsequent revision of these strategies/plans/ programs), or the completion of the audits or annual reports required under this approval, the Proponent shall: a) provide a copy of the relevant documents/data to the relevant agencies; and b) make the documents publically	**NC**	(a) NCIA delegates the provision of a copy of the relevant documents/data to the relevant agencies to AECOM. (b) No documents are publicly available on the NCIA website, and there is no section at present where these can be placed. Likelihood of Environmental Harm or Non-compliance Occurring Level of Environmental: Certain / Likely / Less Likely High: Code Red / Code Red / Code Orange Moderate: Code Red / Code Orange / Code Yellow Low: Code Orange / Code Yellow / Code Yellow	NCIA website [http://www.nationalceramicindustries.com.au/] Management assertion	**4.61.1** It is recommended that as a matter of urgency NCIA provide copies on their website of every approved strategy, plan or program required under this approval (or any subsequent revision of these strategies, plans or programs), or the audits or annual reports required under this approval. This

9.1 Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	available in an appropriate electronic format on the Proponent's web site, should one exist. If a web site does not exist, the documents are to be made available upon request.		**NOTE:** In this risk assessment "environmental impact" is taken to include social impact i.e. interested parties are unable to access this information.		should cover the period of this approval, that is, from 19 January 2012 to the present. This information should be kept up to date. **Ranking: E** **4.61.2** A procedure should be prepared and implemented to ensure that this condition is complied with in the future. **Ranking: E**

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

NATIONAL CERAMIC INDUSTRIES AUSTRALIA
Mandatory Independent Environmental Compliance Audit for Department of Planning & Environment
Detailed Findings and Recommendations
Environment Protection Licence No. 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
1. Administrative Conditions					
A1.1	**What the licence authorises and regulates** This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition. **Scheduled Activity** / **Fee Based Activity** Ceramic Works / Ceramics production	**C**	The current capacity of the plant operating Stages 1 and 2 is 6.4 million m^2 per annum. The Annual Return for 2013-2014 assessed the annual production as 72,637 tonnes, for 2012-2013 as 62,935.02 tonnes and for 2011-2012 as 52,912 tonnes.	Management assertion Annual Returns 2013-2014, 2012-2013, 2011-2012.	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
A1.2	The ultimate intended production of the licensed activity is >200 000 tonnes per annum. This licence currently only authorises activity up to 200 000 tonnes per annum. A variation application must be submitted two months prior to the commissioning of each subsequent kiln to allow for the increase in production and the addition of limit and monitoring conditions associated with the operation of each of these kilns.	**NT**			
A2.1	**Premises or plant to which this licence applies** The licence applies to the following premis **Premises Details** NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LTD RACECOURSE ROAD RUTHERFORD NSW 2320 LOT 101 DP 1062820	**C**			There are no recommendations
A3.1	**Information supplied to the EPA** Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to: a) the applications for any licences (including former pollution control approvals) which this licence replaces	**Note**			

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.				
A4.1	**Information supplied to the EPA** Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to: a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.	**Note**			
2. Discharges to Air and Water and Applications to Land					
P1.1	**Location of monitoring/discharge points and areas** The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.	**C**	Locations are provided in the OEMP (2010) Table 5 Air Emission Source Information and Pollutant Discharge Rates; Figure 3 (Stack emission sources); and Figure 4 Ambient Air Quality Monitoring Sites. Figure 6 of the OEMP provides the fluoride vegetation monitoring locations. Verification of	OEMP 2010. Annual Emissions Testing Reports 2011-2012; 2012-2013; 2013-2014. Annual Returns 2011-2012; 2012-2013; 2013-2014.	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			sampling and analysis at these locations is provided in the Annual Emissions Testing Reports and the Annual Returns.		
3. Limit Conditions					
L1.1	**Pollution of waters** Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	**C**	There have been no reportable water pollution incidents. There are no water discharge monitoring points.	Management assertion	There are no recommendations

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Discharge to Air	Discharge to Air	Dust extractor clay preparation CP1 & CP 2 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
2	Discharge to Air	Discharge to Air	Dust extractor clay preparation CP3 & CP4 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
3	Discharge to air	Discharge to air	Pressing and Drying PD1 & PD2 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
4	Discharge to air	Discharge to air	Pressing and drying PD3 & PD4 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
5	Discharge to air	Discharge to air	Drier D1 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
6	Discharge to air	Discharge to air	Drier D2 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
7	Discharge to air	Discharge to air	Drier D3 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
8	Discharge to air	Discharge to air	Drier D4 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
9	Discharge to air	Discharge to air	Glaze line as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
10	Discharge to air	Discharge to air	Selection SL 1234 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
12	Discharge to air	Discharge to air	Spray Drier SD1 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
13	Discharge to air	Discharge to air	Spray Drier SD2 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
14	Discharge to air	Discharge to air	Kiln KP1 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
15	Discharge to air	Discharge to air	Kiln KP2 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
16	Discharge to air	Discharge to air	Kiln KP3 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
17	Discharge to air	Discharge to air	Kiln KP4 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
18	Discharge to air	Discharge to air	Hot air cooling HAC1 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
19	Discharge to air	Discharge to air	Hot air cooling HAC2 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
20	Discharge to air	Discharge to air	Hot air cooling HAC3 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
21	Discharge to air	Discharge to air	Hot air cooling HAC4 as shown on Figure Titled: Plant Emission Locations and Air Quality Controls dated 17 July 2003.
22	Ambient Air Monitoring - PM 10		PM 10 monitoring locations as shown on diagram titled "Proposed ambient air quality monitoring sites - PM 10, HF and meteorological monitoring". Dated 20 January 2004
23	Ambient Air Monitoring - Fluoride compounds		HF monitoring locations as shown on diagram titled "Proposed ambient air quality monitoring sites - PM 10, HF and meteorological monitoring". Dated 20 January 2004.
24	Weather Monitoring		On-site meteorological station located in south east corner of premises.

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

<table>
<tr><th>Clause</th><th>Requirement</th><th>Compliance</th><th>Audit Finding</th><th>Objective Evidence</th><th>Recommendation</th></tr>
<tr><td>L2.1</td><td>The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.</td><td>Note</td><td></td><td></td><td></td></tr>
<tr><td>L2.2</td><td>The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.
<table>
<tr><th>Assessable Pollutant</th><th>Load limit (kg)</th></tr>
<tr><td>Coarse Particulates (Air)</td><td>14338.00</td></tr>
<tr><td>Fine Particulates (Air)</td><td>26629.00</td></tr>
<tr><td>Fluoride (Air)</td><td>1850.00</td></tr>
<tr><td>Nitrogen Oxides (Air)</td><td>36828.00</td></tr>
<tr><td>Sulfur Oxides (Air)</td><td>36828.00</td></tr>
</table>
Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.</td><td>NC</td><td>The following results were reported in the AEMRs, indicating an exceedance in sulphur oxides against the EPL limit only in 2012-2013 and 2013-2014. All other pollutants were well within both the EPL and DA limits, and sulphur oxides were below half the DA limit.
<table>
<tr><th rowspan="2">Pollutant</th><th colspan="2">Current Maximum Load Limit (kg)</th><th colspan="3">Actual Load (kg)</th></tr>
<tr><th>EPL</th><th>Project Approval</th><th>2011-2012</th><th>2012-2013 #</th><th>2013-2014</th></tr>
<tr><td>Fine particulates</td><td>26,629</td><td>74,210</td><td>997</td><td>1,249</td><td>5,369</td></tr>
<tr><td>Coarse particulates</td><td>14,338</td><td>32,073</td><td>5,550</td><td>1,640</td><td>3,289</td></tr>
<tr><td>Fluoride</td><td>1,850</td><td>3,701</td><td>91</td><td>1,109</td><td>928</td></tr>
<tr><td>Sulfur oxides</td><td>36,828</td><td>110,000</td><td>26,946</td><td>42,235</td><td>37,974</td></tr>
<tr><td>Nitrogen oxides</td><td>36,828</td><td>73,657</td><td>20,306</td><td>4,704</td><td>25,059</td></tr>
</table>
<table>
<tr><th rowspan="2">Level of Environ-mental Impact</th><th colspan="4">Likelihood of Environmental Harm or Non-Compliance Occurring</th></tr>
<tr><th></th><th>Certain</th><th>Likely</th><th>Less Likely</th></tr>
<tr><td>High</td><td>Code Red</td><td>Code Red</td><td>Code Orange</td></tr>
<tr><td>Moderate</td><td>Code Red</td><td>Code Orange</td><td>Code Yellow</td></tr>
<tr><td>Low</td><td>Code Orange</td><td>Code Yellow</td><td>Code Yellow</td></tr>
</table>
There is no statement in the AEMR to verify that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol.</td><td>AEMRs 2011-2012; 2012-2013; 2013-2014</td><td>L2.2.1 Future AEMRs should include verification that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol, which should be referenced. Table 13 in the AEMRs should be changed to show the correct Project Approval Limits for Sulfur oxides and Nitrogen oxides
Ranking: N</td></tr>
</table>

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
L3.1	**Concentration Limits** For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	**Note**			
L3.2	**Concentration Limits** Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	**Note**			
L3.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.	**Note**			

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

<table>
<tr><th>Clause</th><th>Requirement</th><th>Compliance</th><th>Audit Finding</th><th>Objective Evidence</th><th>Recommendation</th></tr>
<tr>
<td>L3.4</td>
<td>Air Concentration Limits

POINT 1,2,3,4,5,6,9,10,12,13
<table>
<tr><th>Pollutant</th><th>Units of measure</th><th>100 percentile concentration limit</th><th>Reference conditions</th><th>Oxygen correction</th><th>Averaging period</th></tr>
<tr><td>Solid Particles</td><td>milligrams per cubic metre</td><td>20</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
</table>
POINT 7,8
<table>
<tr><th>Pollutant</th><th>Units of measure</th><th>100 percentile concentration limit</th><th>Reference conditions</th><th>Oxygen correction</th><th>Averaging period</th></tr>
<tr><td>Solid Particles</td><td>milligrams per cubic metre</td><td>20</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
</table>
POINT 14,15
<table>
<tr><th>Pollutant</th><th>Units of measure</th><th>100 percentile concentration limit</th><th>Reference conditions</th><th>Oxygen correction</th><th>Averaging period</th></tr>
<tr><td>Cadmium</td><td>milligrams per cubic metre</td><td>0.1</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
<tr><td>Nitrogen Oxides</td><td>milligrams per cubic metre</td><td>100</td><td>Dry, 273K, 101.3kPa</td><td>18%</td><td></td></tr>
<tr><td>Hydrogen fluoride</td><td>milligrams per cubic metre</td><td>5</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
<tr><td>Sulfuric acid mist and sulfur trioxide (as SO3)</td><td>milligrams per cubic metre</td><td>100</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
</table>
POINT 16,17
<table>
<tr><th>Pollutant</th><th>Units of measure</th><th>100 percentile concentration limit</th><th>Reference conditions</th><th>Oxygen correction</th><th>Averaging period</th></tr>
<tr><td>Nitrogen Oxides</td><td>milligrams per cubic metre</td><td>100</td><td>Dry, 273K, 101.3kPa</td><td>18%</td><td></td></tr>
<tr><td>Sulfuric acid mist and sulfur trioxide (as SO3)</td><td>milligrams per cubic metre</td><td>100</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
<tr><td>Solid Particles</td><td>milligrams per cubic metre</td><td>20</td><td>Dry, 273K, 101.3kPa</td><td>18%</td><td></td></tr>
<tr><td>Hazardous substances</td><td>milligrams per cubic metre</td><td>1</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
<tr><td>Cadmium</td><td>milligrams per cubic metre</td><td>0.1</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
<tr><td>Mercury</td><td>milligrams per cubic metre</td><td>0.1</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
<tr><td>Hydrogen fluoride</td><td>milligrams per cubic metre</td><td>5</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
</table>
POINT 18,19
<table>
<tr><th>Pollutant</th><th>Units of measure</th><th>100 percentile concentration limit</th><th>Reference conditions</th><th>Oxygen correction</th><th>Averaging period</th></tr>
<tr><td>Solid Particles</td><td>milligrams per cubic metre</td><td>5</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
</table>
POINT 20,21
<table>
<tr><th>Pollutant</th><th>Units of measure</th><th>100 percentile concentration limit</th><th>Reference conditions</th><th>Oxygen correction</th><th>Averaging period</th></tr>
<tr><td>Solid Particles</td><td>milligrams per cubic metre</td><td>5</td><td>Dry, 273K, 101.3kPa</td><td></td><td></td></tr>
</table>
</td>
<td>NC</td>
<td>Compliance with air concentration limits is set out in the Annual Returns and AEMRs. Two exceedances were recorded in Section B2 of the 2012-2013 Annual Return, as outlined below.
Discharge and monitoring point 14 had a sulfuric acid mist and sulfur trioxide (as SO3) concentration of 131.5mg/m3, which is greater than the applicable limit of 100mg/m3 (shown to the left).
Discharge and monitoring point 15 has a sulfuric acid mist and sulfur trioxide (as SO3) concentration of 156.5mg/m3, which is greater than the applicable limit of 100mg/m3 (shown to the left).
The stack testing results in the Annual Returns indicate there were no other exceedances of the applicable limits.

<table>
<tr><th rowspan="2">Level of Environ-mental Impact</th><th colspan="3">Likelihood of Environmental Harm or Non-Compliance Occurring</th></tr>
<tr><th>Certain</th><th>Likely</th><th>Less Likely</th></tr>
<tr><td>High</td><td>Code Red</td><td>Code Red</td><td>Code Orange</td></tr>
<tr><td>Moderate</td><td>Code Red</td><td>Code Orange</td><td>Code Yellow</td></tr>
<tr><td>Low</td><td>Code Orange</td><td>Code Yellow</td><td>Code Yellow</td></tr>
</table>
</td>
<td>Annual Returns 2013-2014; 2012-2013; 2011-2012.</td>
<td>L3.4.1 Where the discharge of sulfuric acid mist and sulfur trioxide (as SO3) is associated with a hot moist stack flow, the applicable Australian monitoring standard may require adjustment to avoid misreporting of the actual emission level. This typically involves the use of a heated sampling probe. Future sampling should ensure that the most appropriate sampling procedure is applied to accurately measure the actual emission rates.
Ranking: N</td>
</tr>
<tr>
<td>L3.5</td>
<td>For the purposes of the above table, “hazardous substances” means type 1 and type 2 substances as defined in Part 5 of the Protection of the Environment Operations (Clean Air) Regulation 2010.</td>
<td>Note</td>
<td></td>
<td></td>
<td></td>
</tr>
</table>

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
L4.1	**Waste** The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.	**C**	No waste is imported to this site and there is no disposal of waste on site.	Management assertion Site inspection	There are no recommendations
L5.1	**Noise Limits** Noise from the premises must not exceed: a) 41dB(A) LAeq(15 minute) during the day (7am to 6pm) Monday to Saturday and (8am to 6pm) Sunday and public holidays; and b) 39dB(A) LAeq(15 minute) during the evening (6pm to 10pm) Monday to Sunday and public holidays; and c) at all other times 35dB(A) LAeq (15 minute), except as expressly provided by this licence. Where LAeq means the equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period. *Table 5: Project Noise Limits, dB(A)* Location / Day / Evening / Night Leq (15 min) / Leq (15 min) / Leq (15 min) / Lmax Kenvil Close: 35 / 35 / 35 / 45 Wollombi Road: 35 / 35 / 35 / 45	**C**	Noise monitoring was undertaken by Spectrum Acoustics on 14 May 2014 and reported in the AEMR 2013-2014 Section 4.5. The noise assessment report concluded that noise levels were in compliance with the noise criteria for all time periods. Compliance with the sleep disturbance criterion was also demonstrated. Noise monitoring was undertaken by Spectrum Acoustics on 30 May 2013 and reported in the AEMR 2012-2013 Section 4.4. The noise assessment report concluded that noise levels were in compliance with the noise criteria for all time periods. Compliance with the sleep disturbance criterion was also demonstrated. The AEMR 2011-2012 records that there were no discernible LA1 (1 Min) events from NCIA during any of the measurements of the night time period for 2009, 2010, 2011 and 2012. The Spectrum Acoustics noise study report is provided as Appendix F states: *The noise assessment of emissions from NCIA has been undertaken by measuring noise levels at the most potentially affected*	AEMRs 2011-2012; 2012-2013; 2013-2014 Spectrum Acoustics Noise	**L5.1.1** Spectrum Acoustics should ensure that future Noise Compliance reports reference the correct date for the Project Approval, i.e. 19 January 2012. **Ranking: N**

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			residential area in Kenvil Close, Rutherford and Wollombi Road, Farley to determine compliance with requirements of EPL 11956. The measurements were inconclusive as the acoustic environment of both sites was dominated by emissions from other industries not related to NCIA. *Theoretical calculations were carried out to predict received noise levels under neutral atmospheric conditions. The predicted noise levels were in compliance with the noise criteria for all time periods.* It is noted that the Spectrum Acoustics Noise Compliance Studies of 2014 and 2015 contain a minor typographical error, stating that the NICA Project approval was '…dated January 2102.'		

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
L5.2	Noise from the premises is to be measured at the most affected point on or within the receptor site boundary to determine compliance with this condition.	**ANC**	According to the Noise Compliance Study Stage 2 Commissioning Report by Spectrum Acoustics, the closest and most potentially impacted residential receivers to the site are in Kenvil Close, Rutherford, approximately 1 km from the site. Other residential receivers are located in a rural/residential area along Wollombi Road, Farley to the south of the NCIA site (Photo 10). To avoid undue disturbance to residents all measurements in Kenvil Close were made in the reserve at the western end of the street. This location is approximately in line with the nearest façade of the most potentially affected receivers in Kenvil Close. In Wollombi Road the measurements were made in a clearing adjacent to a residence. The location had line of sight to the NCIA facility. Noise from the premises was therefore not measured at the most affected point on or within the receptor site boundary to determine compliance with this condition. It is noted that a disused golf course adjacent to the NCIA site is to be developed as residential (Heritage Parc, which is identified in Section 10 of the EA), and therefore the closest affected residence will change over time as this development proceeds. This is regarded as an Administrative Non-compliance as the measurements have been made at appropriate locations, but not strictly as required by this condition.	Noise Compliance Study Stage 2 Commissioning Report (Spectrum Acoustics). Annual Noise Reports 2012, 2013, 2014, 2015. EA 2010	**L5.2.1** NCIA should request a variation of Condition L5.2 to obtain approval for the current noise monitoring to be conducted in the reserve at the western end of Kenvil Close and in a clearing adjacent to a residence in Wollombi Road, instead of on or within the receptor site boundary. **Ranking: I**

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
L5.3	Noise from the premises shall not exceed the L A1(1 minute) noise level of 45 dB(A) at the nearest residential receiver most affected by noise from activities at the premises. The noise limit applies 1 metre from the dwelling façade and shall apply during the night period only.	**NC**	Noise is not measured 1 metre from the dwelling façade of the nearest residential receiver. It is assumed that it is calculated but this is not stated in the Spectrum Acoustics reports, only that "Compliance with the sleep disturbance criterion was also shown". It is noted from similar audits conducted by the Auditor that this condition is generally not possible to be complied with due to opposition from the residents having monitoring conducted either on their premises generally or at night specifically, or due to the presence of vegetation within 1 metre of the dwelling façade. **Likelihood of Environmental Harm or Non-Compliance Occurring** **Level of Environmental Impact** **Certain** / **Likely** / **Less Likely** **High**: Code Red / Code Red / Code Orange **Moderate**: Code Red / Code Orange / Code Yellow **Low**: Code Orange / Code Yellow / Code Yellow	Annual Noise Reports 2012, 2013, 2014, 2015 (Spectrum Acoustics).	**L5.3.1** NCIA should request a variation of Condition L5.3 to obtain approval for the noise monitoring to be conducted at a more accessible location, e.g. at the receptor site boundary as required in L5.2, or for a calculation method to be approved. **Ranking: I**
L5.4	The noise emission limits specified above apply under all meteorological conditions except: a) during rain and wind speeds greater than 3 m/s; and b) from 6pm to 7am during intense inversions, which are indicated by cloud cover less than 40 per cent and wind speeds less than 1.0 m/s. Note: Wind data should be collected at 10m height.	**C**	Wind data is recorded at 10m height. The Spectrum Acoustics Noise Compliance Studies of 2014 and 2015 state that, 'No information was available in relation to temperature inversions at night.'	AEMR 2015 Site inspection	**L5.4.1** It is recommended that the validity of meteorological conditions applicable to compliance monitoring be investigated by interrogating the onsite weather station and not from Bureau of Meteorological weather station at Cessnock. **Ranking: I**

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
L6.1	No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997. *Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.*	**C**	There have been no odour complaints received by NCIA during the period of this audit.	AEMR 2015 Complaints Register	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
4. Operating Conditions					
O1.1	**Activities must be carried out in a competent manner** Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	**C**	(a) The processing, handling, movement and storage of materials and substances used to manufacture ceramic tiles is carried out in a competent manner as it is largely automated, including laser-guided forklifts used to stack product. (b) Waste is handled in a competent manner and the site is currently generally in compliance with this condition, having separate waste collection facilities for paper, cardboard, steel and general waste. However there has been a non-compliance identified regarding the storage of excessive quantities of waste tiles that led to litigation and mediation in 2012 with the adjacent Victory Parc Pty Ltd (also known as Heritage Green and Heritage Parc). See also Condition S3.52 in the Detailed Findings and Recommendations for the Project Approval.	Sworn Affidavit of Brian Swaine sworn 30 July 2012. Site inspection (Photo 8) Nearmap images (Photo 7) Management assertion	See S3.52.1 in the Project Approval report.
O2.1	**Maintenance of plant and equipment** All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	**C**	(a) Downtime is the main performance KPI at NCIA. Maintenance is a continuous process and 7 out of approx. 50 employees are trained maintenance personnel. There is an expenditure of approx. $200,000 per month on maintenance. A Standard	Management assertion. Maintenance form (revised 24 Feb 2011). AEMRs. WHS & Housekeeping completed form.	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			Maintenance Form is used and is included in the OEMP. There is a 4-week shutdown annually for major maintenance purposes. A monthly WHS and Housekeeping Audit is undertaken for each Department of the operation which provides a score against the audit criteria. Documents are retained in hard copy. (b) The plant is demonstrated to be operating in a proper and efficient manner as it is generally in compliance with its regulatory requirements.		
O3.1	**Dust** The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	**C**	Complies – see S3.17 in the Detailed Findings and Recommendations for the Project Approval.	Management assertion Site inspection	There are no recommendations
O4.1	**Processes and management** Where complaints of impact upon vegetation are received, the licensee must investigate and submit a written report to the EPA identifying the magnitude of the vegetation damage and potential for fluoride emissions from the plant to have contributed to the damage.	**NT**	There have been no complaints of impact upon vegetation.	Complaints Register	

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
5. Monitoring and Recording Conditions					
M1.1	**Monitoring records** The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	**C**	NCIA retains AECOM to conduct all monitoring on the site and AECOM retains the records.	AEMRs Annual Reports	There are no recommendations
M1.2	**Monitoring records** All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	**C**	(a) All records are kept electronically (b) Monitoring records are retained indefinitely (c) Monitoring records have been produced to authorised officers of the EPA, most recently during an EPA inspection in July 2015.	Management assertion	There are no recommendations
M1.3	**Monitoring records** The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	**C**	An inspection of sampling records provided by AECOM shows that the name of the person who collected the sample is not included, however their initials are provided in the column headed “Name/Initials”.	Air Analysis – HVAS Field Sheet (AECOM).	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
M2.1	**Requirement to monitor concentration of pollutants discharged** For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	**C**	Complies – see M2.2	NCIA Emissions Testing Report 2013-2014; 2012-2013; 2011-2012 (AECOM)	There are no recommendations
M2.2	**Requirement to monitor concentration of pollutants discharged** Air Monitoring Requirements	**C**	All required stack monitoring points are included in the Emissions Testing Report 2013-14, however it is noted that Point EPL 2 is actually EPL 3 as EPL 2 set out in the Emissions Testing Report 2013-14 matches the description of Point 3 (Pressing and Drying) in EPL 11956 Clause P1.1. The EPL does not require testing of Point 2 in Clause M2.2 Air Monitoring Requirements. It is also noted that in Table 4 of the Emissions Testing Report 2013-14 EPL 10 is listed twice, the second listing actually referring to EPL 12 Spray Dryer (SD1). These errors are consistent in all the reports referenced under "Objective Evidence". Points 22 and 23 are monitored for PM10 and HF respectively.	NCIA Emissions Testing Report 2013-2014; 2012-2013; 2011-2012 (AECOM)	**M2.2.1 – (**repeat of Approval Recommendation 3.18.1) The terminology in the NCIA Emissions Testing Reports in future should refer to EPL 3, not EPL 2, and the second listing of EPL 10 in Table 4 should reference EPL 12 Spray Dryer (SD1). **Ranking: N**

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	POINT 1,3,5,6,9,10,12 Pollutant / Units of measure / Frequency / Sampling Method Dry gas density / kilograms per cubic metre / Yearly / TM-23 Moisture content / percent / Yearly / TM-22 Molecular weight of stack gases / grams per gram mole / Yearly / TM-23 Solid Particles / milligrams per cubic metre / Yearly / TM-15 Temperature / degrees Celsius / Yearly / TM-2 Velocity / metres per second / Yearly / TM-2 Volumetric flowrate / cubic metres per second / Yearly / TM-2 POINT 14,15 Pollutant / Units of measure / Frequency / Sampling Method Cadmium / milligrams per cubic metre / Yearly / TM-12, TM-13 & TM-14 Carbon dioxide / percent / Yearly / TM-24 Dry gas density / kilograms per cubic metre / Yearly / TM-23 Hazardous substances / milligrams per cubic metre / Yearly / TM-12, TM-13 & TM-14 Hydrogen fluoride / milligrams per cubic metre / Yearly / TM-9 Mercury / milligrams per cubic metre / Yearly / TM-12, TM-13 & TM-14 Moisture / percent / Yearly / TM-22 Molecular weight of stack gases / grams per gram mole / Yearly / TM-23 Nitrogen Oxides / milligrams per cubic metre / Yearly / TM-11 Oxygen (O2) / percent / Yearly / TM-25 Solid Particles / milligrams per cubic metre / Yearly / TM-15 Sulfuric acid mist and sulfur trioxide (as SO3) / milligrams per cubic metre / Yearly / TM-3 Velocity / metres per second / Yearly / TM-2 Volumetric flowrate / cubic metres per second / Yearly / TM-2 ¤ POINT 18,19 Pollutant / Units of measure / Frequency / Sampling Method Dry gas density / kilograms per cubic metre / Yearly / TM-23 Moisture content / percent / Yearly / TM-22 Molecular weight of stack gases / grams per gram mole / Yearly / TM-23 Solid Particles / milligrams per cubic metre / Yearly / TM-15 Temperature / degrees Celsius / Yearly / TM-2 Velocity / metres per second / Yearly / TM-2 Volumetric flowrate / cubic metres per second / Yearly / TM-2 POINT 22 Pollutant / Units of measure / Frequency / Sampling Method PM10 / micrograms per cubic metre / Every 6 days / AM-18 POINT 23 Pollutant / Units of measure / Frequency / Sampling Method Hydrogen fluoride / micrograms per cubic metre / Special Frequency 1 / Australian Standard 3580.13.2-1991				
M2.3	For the purposes of the table above Special Frequency 1 means: one unit at each location will operate continuously to provide 7 day concentration averages. The second unit at each location will operate continuously for 24 hours on a six day cycle.	**C**	Two fluoride monitoring units (manual, double filter paper samplers) have been sited at each of the two locations identified for monitoring of PM10, and are operated in accordance with AS3580.13.2:2013 Determination of gaseous and acid-soluble particulate fluorides. At each location, one monitor operates continuously over a 7-day period to provide weekly fluoride concentration averages. These units are designated ‘Northwest HF7’ and ‘Southeast	AEMRs Section 4.1	There are no recommendations

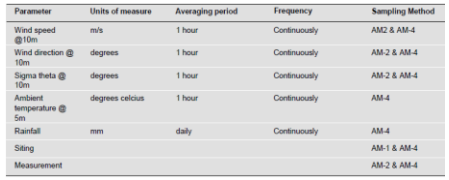
9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			HF7'. The remaining unit at each site operates continuously for discrete 24-hour periods according to the NSW EPA 6-day cycle to provide 24-hour averages for sampler operation days. Units are designated 'Northwest HF' and 'Southeast HF'.		
M3.1	**Testing methods - concentration limits** Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with: a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place. *Note: The Protection of the Environment Operations (Clean Air) Regulation 2010 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".*	**C**	Stack sampling methods are set out in Condition M2.2 of the EPL. Section 3.1 of the NCIA Emissions Testing Reports set out the sampling methods used which comply with the requirements of the EPL. Ambient air sampling is reported in the AEMRs, Section 4.1 and the reported sampling methods comply with Condition M2.2 of the EPL.	NCIA Emissions Testing Reports (AECOM) 2013-2014; 2012-2013; 2011-2012. AEMRs 2015, 2014, 2012, 2011.	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
M4.1	**Environmental monitoring** The licensee must monitor the impact of fluoride on vegetation as follows: a) Annual and quarterly visual assessment of vegetation in the area surrounding the premises as outlined in the document titled Proposed Ambient Air Quality Monitoring Programs – National Ceramic Industries Australia, Rutherford dated January 2004. b) Quarterly monitoring of the fluoride content in vegetation in the area surrounding the premises as outlined in the document titled Proposed Ambient Air Quality Monitoring Programs – National Ceramic Industries Australia, Rutherford dated January 2004. The licensee must maintain a list and a map of the monitoring sites used to assess the impact of the premises on the surrounding environment. Part of each sample analysed must be carefully stored to the satisfaction of the EPA for a period of not less than 12 months and forwarded to the EPA on request.	**C**	Results of fluoride monitoring are set out in AEMR Section 4.2 Fluoride Impact on Vegetation. The potential impact of fluoride emissions on surrounding flora is monitored by undertaking visual inspection for flora condition and by foliage sampling for laboratory analysis of fluoride content. AECOM conducts quarterly assessments as well as an Annual Vegetation Condition Assessment. The quarterly surveys assess the condition of a shortlisted selection of fluoride sensitive species. The annual survey provides an opportunity to undertake a more comprehensive investigation and includes all specimens studied in the background survey. These assessments use the methodology developed by Dr David Doley of the University of Queensland. A list of the monitoring sites used to assess the impact of the premises on the surrounding environment is provided in Table 7 of the AEMR and a map is provided in Figure 6 of the OEMP and Appendix 1 of the Quarterly Vegetation Survey Reports (9 sites). The site numbers in Table 7 do not correlate with the locality numbers in Figure 6 and Appendix 1, however there are similar descriptions of the sites for different numbers. The OEMP 2010 states that part of each sample analysed must be carefully stored for a period of not less than 12 months and forwarded to the EPA on request. The stored survey samples are located in the downstairs laboratory at AECOM .	Quarterly Vegetation Survey Reports (AECOM). OEMP 2010	**M4.1.1** It is recommended that the same numbering system is used for vegetation monitoring sites provided by AECOM in Table 7 of the AEMR and Appendix 1 of the Quarterly Vegetation Survey Reports in future based on the numbers in Appendix 1. **Ranking: N**

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
M5.1	**Weather monitoring** For the monitoring point specified below, the licensee must monitor the parameters specified. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency specified. **Point 24**  Parameter / Units of measure / Averaging period / Frequency / Sampling Method Wind speed @10m / m/s / 1 hour / Continuously / AM2 & AM-4 Wind direction @ 10m / degrees / 1 hour / Continuously / AM-2 & AM-4 Sigma theta @ 10m / degrees / 1 hour / Continuously / AM-2 & AM-4 Ambient temperature @ 5m / degrees celcius / 1 hour / Continuously / AM-4 Rainfall / mm / daily / Continuously / AM-4 Siting / / / / AM-1 & AM-4 Measurement / / / / AM-2 & AM-4	**C**	Meteorological data is recorded at the meteorological station established at the southeast air monitoring site (Photo 11). The station is sited and operated in accordance with approved methodologies (NSW EPA, 2001) for the continuous measurement of wind speed (10 m), wind direction (10 m), sigma theta (10 m) and temperature (5 m). A tipping bucket rain gauge is also located at the site to provide daily average rainfall rates.	AEMR 17Apr2015. OEMP 2010 Site Inspection	There are no recommendations
M6.1	**Recording of pollution complaints** The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	**NV**	It was reported that two complaints had been received during the last five years, and these are recorded in the AEMRs Section 3, Table 2. The Complaints Register is maintained by AECOM on behalf of NCIA, however only the Historical Complaints Register was sighted by the auditor.	Management assertion Historical Complaints Register	
M6.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant;	**NC**	Historical records of complaints are included in AEMRs. The Annual Returns record the number of complaints for the reporting period. No evidence was provided to verify that for the small number of complaints received, items a) to f) have been recorded. Standard Form 3 – Incident Management Report in the OEMP is reportedly used to record and report on complaints and serious incidents, however there was no evidence that this has been used for recording of complaints.	Annual Returns AEMRs Email re Complaints 18/9/15.	**M6.2.1**. A Complaints Register should be established and maintained by NCIA (or AECOM) that includes the details required by Condition 6.2. **Ranking: I**

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	and f) if no action was taken by the licensee, the reasons why no action was taken.		<table><tr><th rowspan="2">Level of Environ-mental Impact</th><th colspan="3">Likelihood of Environmental Harm or Non-Compliance Occurring</th></tr><tr><th>Certain</th><th>Likely</th><th>Less Likely</th></tr><tr><td>High</td><td>Code Red</td><td>Code Red</td><td>Code Orange</td></tr><tr><td>Moderate</td><td>Code Red</td><td>Code Orange</td><td>Code Yellow</td></tr><tr><td>Low</td><td>Code Orange</td><td>Code Yellow</td><td>Code Yellow</td></tr></table>		
M6.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	**C**	Complaints are recorded electronically and retained for an indefinite period.		There are no recommendations
M6.4	The record must be produced to any authorised officer of the EPA who asks to see them.	**NT**	No complaints records have been requested by an authorised officer.	Management assertion	
M7.1	**Telephone complaints line** The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	**NC**	A normal telephone system is maintained during office hours, and a message service is reported to operate after office hours. However, the factory operates 24 hours a day for seven days per week, and so operating hours are 24/7. There is no dedicated telephone complaints line. See also M7.2. <table><tr><th rowspan="2">Level of Environ-mental Impact</th><th colspan="3">Likelihood of Environmental Harm or Non-Compliance Occurring</th></tr><tr><th>Certain</th><th>Likely</th><th>Less Likely</th></tr><tr><td>High</td><td>Code Red</td><td>Code Red</td><td>Code Orange</td></tr><tr><td>Moderate</td><td>Code Red</td><td>Code Orange</td><td>Code Yellow</td></tr><tr><td>Low</td><td>Code Orange</td><td>Code Yellow</td><td>Code Yellow</td></tr></table>	Management assertion	See M7.2.1
M7.2	**Telephone complaints line** The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	**NC**	There is no dedicated complaints line and there has been no notification of the public that the normal telephone number is also a number for making complaints. There is no notification on the sign inside the front gate of the factory or on the NCIA website how to make a complaint.	Site inspection NCIA website	**M7.2.1.** NCIA must decide how it will operate a telephone complaints line for the purpose of receiving any complaints from members of the public during its operating hours (24/7). This information

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			Likelihood of Environmental Harm or Non-compliance Occurring Level of Environmental Impact: High / Moderate / Low Certain: Code Red / Code Red / Code Orange Likely: Code Red / Code Orange / Code Yellow Less Likely: Code Orange / Code Yellow / Code Yellow		must be made available to the public including that it is a complaints line so that the impacted community knows how to make a complaint. **Ranking: U**
M7.3	**Telephone complaints line** The preceding two conditions do not apply until 3 months after: a) the date of the issue of this licence or b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.	**NT**			
			6. Reporting Conditions		
R1.1	**Annual return documents** The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: a) a Statement of Compliance; and b) a Monitoring and Complaints Summary. At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.	**C**	Annual Returns have been sighted and comply with this condition.	Annual Returns 2013-2014; 2012-2013; 2011-2012; 2010-2011.	There are no recommendations
R1.2	**Annual return documents** An Annual Return must be prepared in respect of each reporting period, except as provided below.	**C**	Complies	Annual Returns 2013-2014; 2012-2013; 2011-2012; 2010-2011.	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
R1.3	**Annual return documents** Where this licence is transferred from the licensee to a new licensee: a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.	**NT**			
R1.4	**Annual return documents** Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.	**NT**			

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
R1.5	**Annual return documents** The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	**ANC**	Copies of Annual Returns have been provided. It was reported that Annual Returns were returned to NCIA for the last two years as they had not been signed by two Directors as required on the signature page due to the dates of Board meetings when the signatures could be affixed. As this is likely to be an ongoing problem, a recommendation has been made.	Annual Returns 2013-2014; 2012-2013; 2011-2012; 2010-2011. Management assertion.	**R1.5.1**. NCIA should review the requirements set out in the box in Section G of the Annual Return Form to determine if an alternative form of signature can be provided. **Ranking: I**
R1.6	**Annual return documents** Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify: a) the assessable pollutants for which the actual load could not be calculated; and b) the relevant circumstances that were beyond the control of the licensee.	**NT**			
R1.7	**Annual return documents** The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	**C**	Annual Returns are retained electronically indefinitely.	Management assertion	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
R1.8	**Annual return documents** Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	**C**	Only the 2013-2014 Annual Return requires this signature.	Annual Return 2013-2014	There are no recommendations
R1.9	**Annual return documents** A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence. *Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.* *Note: An application to transfer a licence must be made in the approved form for this purpose.*	**NT**			
R2.1	**Notification of environmental harm** Notifications must be made by telephoning the Environment Line service on 131 555. ***Note:*** *The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the*	**NT**	No incidents requiring the notification of environmental ham have occurred during the period of this audit.	Management assertion Annual Returns AEMRs	

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.				
R2.2	**Notification of environmental harm** The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred. *Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.*	**NT**			
R3.1	**Written report** Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	**NT**			

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
R3.2	**Written report** The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	**NT**			
R3.3	**Written report** The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event; b) the type, volume and concentration of every pollutant discharged as a result of the event; c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and g) any other relevant matters.	**NT**			

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
R3.4	**Written report** The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	**NT**			
7. General Conditions					
G1.1	**Copy of licence kept at the premises or plant** A copy of this licence must be kept at the premises to which the licence applies.	**C**	A hard copy of the licence is available on the premises and electronic copies can be accessed.	Sighted	There are no recommendations
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	**NT**	No request to produce the licence has been made.	Management assertion	
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	**NC**	Management asserted that a copy of the OEMP is available in the factory and that this includes the EPL. It is noted that the EPL in the OEMP has been superseded (2008) by this EPL which is dated 2011 and post-dates the OEMP. **Likelihood of Environmental Harm or Non-Compliance Occurring** **Level of Environmental Impact** Certain / Likely / Less Likely High: Code Red / Code Red / Code Orange Moderate: Code Red / Code Orange / Code Yellow Low: Code Orange / Code Yellow / Code Yellow	Management assertion OEMP 2010	**G1.3.1.** A copy of the latest version of EPL 11956 should be made available in the factory with the OEMP, which should be notated that the included EPL has been superseded. **Ranking: U**

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
8. Pollution Studies and Reduction Programs					
U1.1	**Post Commissioning Air Emission Monitoring** Within ninety (90) days of commissioning of each of the kilns, and when the plant is operating under design loads and normal operating conditions the applicant must conduct point source emission testing on each stack as specified in Condition M2.2. A dispersion modelling based air quality impact assessment must also be carried out strictly in accordance with the methodologies set out in "Approved Methods and Guidance for the Modelling and assessment of Air Pollutants in New South Wales". A validation report containing the monitoring results and the dispersion modelling must be submitted to the EPA's Regional Manager, Hunter within twenty-eight days (28) of the testing being completed. If the point source emissions recorded or the predicted ground level concentrations of pollutants do not comply with the values specified in the Air Quality Assessment contained within the Environmental Impact Statement, the limits set in this licence and the EPA's Impact Assessment Criteria described in "Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW" an	**C**	No new kilns have been commissioned. This condition was addressed in the previous audit in 2008 by ENSR/AECOM with regard to the original kiln and NCIA was found to be in compliance at that time. A Stage 2 Air Emission Performance Verification Monitoring Report was prepared by AECOM dated November 2009. The purpose of this assessment was to confirm the air emission performance of the facility as set out in the NCIA Development Consent (DC). A program of point source emission testing was undertaken for each stack and pollutant associated with Stage 2 operations as listed in condition 5.3 of the DC. The results of the emission testing program were used to undertake air dispersion modelling for all air pollutants identified in condition 5.2 to confirm the air emission performance of the facility. The modelling indicated that some relatively minor exceedances were predicted. An Air Quality Mitigation Study was commissioned in accordance with this condition (see U1.2).	NCIA Audit Report 12 June 2008 (ENSR/ AECOM). Stage 2 Air Emission Performance Verification Monitoring Report 19 Nov 2009 (AECOM).	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	Air Quality Mitigation Study must be completed and submitted within 60 days of the submission of the validation report.				
U1.2	**Post Commissioning Air Emission Monitoring** The air quality mitigation study must address the following: a) Using the results obtained in U1.1, a technical review of all practicable mitigation options must be carried out and the potential reduction in air quality impacts associated with each air quality mitigation option must be quantitatively evaluated; b) The technical review referred to in U1.2 (a) must indicate whether there are air quality mitigation options available which would allow the premises to meet the appropriate impact assessment criteria detailed in U1.1 (taking into account factors such as meteorology, topography or whether the nearest sensitive receptor lies within the affected zone) and the extent of any difficulty in meeting the appropriate impact assessment criteria; c) A cost/benefit analysis of a range of air quality mitigation options must be carried out; and d) Using the results of U1.1 and U1.2 (a), (b) and (c), emission concentration limits (point sources only) and management practices (point and diffuse sources)	**C**	No new kilns have been commissioned. An Air Quality Mitigation Study was completed by AECOM dated 17 June 2010 for Stage 2 operations. It concluded that on the basis of the mitigation works undertaken and recent emission testing results, NCIA is compliant with particulate and HF emission limits in the DC and EPL. The remaining exception is with NOx from the kiln stacks, which do not comply with the limits imposed due to a difference between the manufacturers' performance specifications, written at stack conditions and the consent and licence conditions, written at standard conditions and corrected for oxygen. The Stage 2 Air Emission Performance Verification Monitoring Report (AECOM 2009) showed that the operation of Stage 2 of the NCIA facility is not predicted to adversely impact existing sensitive receptors based on the modelled GLC for TSP, PM_{10} and HF. Based on the verification monitoring and recent demonstration of stack emission compliance, AECOM considered that the existing pollutant concentration limits (DC Condition 4.5 & EPL Condition L3 3) specified for the NCIA facility are appropriate and are able to be satisfied.	Stage 2 Air Quality Mitigation Study (AECOM 17 June 2010). NCIA Audit Report 12 June 2008 (ENSR/ AECOM).	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 11956

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	must be identified for the most cost effective air quality mitigation option to ensure the appropriate impact assessment criteria detailed in U1.1 can be met; e) It must specify a timetable to implement all recommendations of the report.				
U1.3	**Post Commissioning Noise Monitoring** Within ninety (90) days of commissioning of the first kiln, and when the plant is operating under design loads and normal operating conditions the licensee must conduct a noise study to assess compliance with the noise levels predicted in the EIS and specified in Condition L5.1. The report must be submitted to the EPA's Regional Manager, Hunter within twenty-eight days (28) of the testing being completed. If the noise levels do not comply with the specified limits the report must identify measures to be implemented and a timetable to achieve compliance.	**C**	No new kilns have been commissioned. This condition was addressed in the previous audit in 2008 by ENSR/AECOM with regard to the original kiln and NCIA was found to be in compliance at that time. A Noise Compliance Study - Stage 2 Commissioning was completed in 2009 by Spectrum Acoustics. The measurements showed that noise emissions from NCIA complied with the day and evening and night time noise criteria in EPL 11956. Theoretical calculations were carried out to predict received noise levels under neutral atmospheric conditions. The predicted noise levels were in compliance with the noise criteria for all time periods. A comparison was also made with the noise levels predicted in the EIS for the operation of the NCIA facility. This comparison showed a reasonable correlation between predicted levels. Due to the prevailing atmospheric conditions at the time of the monitoring it was not possible for Spectrum Acoustics to directly compare measured and predicted noise levels.	NCIA Audit Report 12 June 2008 (ENSR/ AECOM). Noise Compliance Study - Stage 2 Commissioning (Spectrum Acoustics)	There are no recommendations

9.3 Detailed Findings and Recommendations – NCIA Statement of Commitments

NATIONAL CERAMIC INDUSTRIES AUSTRALIA
Mandatory Independent Environmental Compliance Audit for Department of Planning & Environment
Detailed Findings and Recommendations
Statement of Commitments

NOTE: Commitments made within the 2010 EA have been incorporated into the Project Approval and EPL for the facility as compliance criteria. These compliance criteria are used to assess the environmental performance of the facility and to monitor the environmental impact on the surrounding environment (2014 Annual Environmental Management Report).

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Air Quality					
Construction					
1	A Construction Environmental Management Plan (CEMP) would be prepared prior to commencement of construction of the project. The CEMP would include as a minimum: • Control of access via sealed roadways; • Vehicle speed limits on site; • Avoid dust-generating activities during undesirable conditions; • Minimisation of areas of disturbed soils during construction; • Dust suppression with water sprays or other media during windy periods (as required); • Stockpiling of soils on site kept to a practical minimum; • Construction equipment idling time minimisation and appropriate engine tuning and servicing to minimise exhaust emissions; & • Procedures to address any complaints received.	**C**	Verified in the ENSR/AECOM Audit Report June 2008.	Construction Environmental Management Plan, July 2003 (Parsons Brinckerhoff). ENSR/AECOM Audit Report June 2008	There are no recommendations

9.3 Detailed Findings and Recommendations – NCIA Statement of Commitments

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			Operation		
2	NCIA commits to the stringent air emissions concentration limits required of the approved facility for the project as detailed in the existing development consent as modified. Additionally: • Dust extraction baghouses would be integrated with the kiln stacks; • Fluoride emissions would be managed within the kiln baghouses by implementing a mechanism where a fine spray of lime is injected into the kiln exhaust flow to scrub the HF emissions; - Lime used in the baghouse would have a high percentage of Calcium available for scrubbing of HF; - Installation of additional monitoring points to monitor baghouse operational parameters e.g. pressure drop to allow more efficient tracking of the performance of the baghouses; and - All new production lines will have kiln stack filtration systems positioned internally to	**C**	Verified in the Approval and EPL audit Reports, except for last two dot points which have not been triggered.	Approval Audit Report. EPL Audit Report.	There are no recommendations

9.3 Detailed Findings and Recommendations – NCIA Statement of Commitments

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	the buildings. The aim of this is to ensure more efficient management of the emissions. • Dust extraction baghouses would be integrated with the spray dryers; • Fabric filters would also be implemented on the extraction fans located adjacent to the selection line; • NCIA would continue their vegetation monitoring program as required by their existing consent and Environment Protection Licence; and • The clay preparation area would be located inside the factory building.				
Greenhouse Gas and Energy Efficiency					
3	• An Energy Savings Action Plan would be prepared; • New generation kilns would be installed that incorporate new energy recovery systems; and • The project would be designed to allow for the addition of electricity cogeneration facilities by way of leaving space and allowing for easy connection and integration at a later date.	**ANC**	See Approval S3.34 – an Energy Savings Action Plan has not been prepared	Approval Audit Report S3.34	See Approval Audit Report S3.34.1

9.3 Detailed Findings and Recommendations – NCIA Statement of Commitments

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Noise					
4	• The project would commit to and adopt the operational noise criteria outlined in this EA; • No truck deliveries of raw products or final product despatch would occur during the night time period (night-time 10.00 pm to 7.00 am); • Electric, laser guided forklifts would be utilised to transport final product from the proposed factory building to the product despatch area of the existing building; • The transport route for both forklifts and delivery/product despatch truck would be designed to minimise the need for reversing and, as such, the use of reversing alarms; • The bag-houses for the proposed kiln stacks would be located inside the proposed factory building; and • The proposed dust extraction unit, located on the southern end of the eastern wall of the proposed factory building, would be enclosed to reduce noise emission to the east and south.	**C**	Site inspection has verified that these commitments are in place.	Site inspection EPL Condition L5.1	There are no recommendations

9.3 Detailed Findings and Recommendations – NCIA Statement of Commitments

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Traffic and Parking					
5	• The onsite car parking would be increased to 70 spaces to ensure adequate provision is provided for all staff and visitors and all new spaces would be provided in accordance with AS2890.	**NV**	See Approval Audit Report S3.37.		
Hazard and Risk					
6	• The existing site emergency plan would be updated as required to include potential incidents at the expanded facility, including gas releases/fires and diesel releases/fires; and • Fuel handling management procedures would be included in the revised site Operational Environmental Management Plan.	**NT**	This commitment is not triggered as there are no expanded facilities. See Approval S4.58.		See Approval Audit Report S3.55.2; and S4.58.1.
Soil and Water					
7	• Wet detention basins would be provided with the dual function of reducing peak stormwater flows and improving water quality by settling of sediment prior to discharge; • Rainwater tanks would be provided with the function of reducing peak stormwater flows;	**C**	The project is generally in compliance with these commitments. There are two rainwater tanks that can be seen on Photos 1 and 3. The last dot point has not been triggered.	Site inspection.	There are no recommendations

9.3 Detailed Findings and Recommendations – NCIA Statement of Commitments

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	• Grass swales to collect runoff from beside roadways, to connect between the wet detention basins, to reduce runoff velocities, to provide some infiltration of water, and for water quality improvement; • Ground area disturbed would be minimised at any one time during construction and progressive rehabilitation/ landscaping of completed areas; • The volume of water required to be handled would be minimised by diverting clean water around all disturbed areas; • The surface of all areas required for construction traffic, parking, storage and amenities would be treated to provide adequate drainage and prevent soil loss; • Provision of sedimentation traps and fencing to capture and treat runoff from all disturbed areas would be provided, including a regime for inspection and removal of accumulated sediment; • Storage of potential contaminants (i.e. fuels, oils or chemicals) would occur offsite or within bunded, covered and				

9.3 Detailed Findings and Recommendations – NCIA Statement of Commitments

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	lined areas; • The construction and operation of the project would not concentrate or lead to an increase in the rate of flow of stormwater discharged from the site over and above the predevelopment flow conditions, and • An Acid Sulfate Soils Management Plan (ASSMP) would be prepared in accordance with the Acid Sulfate Soil Planning Guidelines (NSW Acid Sulfate Soils Management Advisory Committee, 1998) prior to the construction of Stages Five - Eight.				
Visual					
8	• Planting of native vegetation around the perimeter of the site would be undertaken in locations unaffected by buildings, internal road ways or infrastructure easements to assist in screening outside views; • The use of appropriate building materials and colours to blend with the surrounding environment and reduce the visual dominance of the building;	**C**	The project is generally in compliance with these commitments. However it is noted that in the Sworn Affidavit mentioned in Approval Audit Report S3.52, concern was expressed regarding the colour of the buildings, which were considered intrusive. It is reported that the issues relating to this Affidavit were satisfactorily resolved through mediation. See also Approval Audit Report S3.32.	Site inspection	See Approval Audit Report S3.32.1.

9.3 Detailed Findings and Recommendations – NCIA Statement of Commitments

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	• Lights would be placed and designed to avoid causing glare or excessive light spillage on neighbouring sites; • Lighting near adjoining properties where appropriate would be shielded with cut off luminaries; • Building illumination would be discrete; and • Lighting to car park areas and for security purposes would be low intensity.				
Ecology					
9	• NCIA would continue its vegetation monitoring program for fluoride as required by their existing consent and EPL; and • NCIA would finalise their onsite revegetation generally in accordance with Figure 4 and as described in Section 14.1.3.	**C**	The site is in compliance with the first dot point as set out in the 2015 AEMR and other documents referenced in this audit. The 2015 AEMR reports Vegetation planting: Native vegetation planting and maintenance as per the proposed landscape vegetation planting plan in the 2010 EA – Ongoing for care and maintenance.	2015 AEMR	There are no recommendations
Aboriginal Heritage					
10	• Even though no areas or objects of Aboriginal cultural heritage significance have been identified within the project site, there still remains the potential (albeit very low) that there may be Aboriginal cultural objects below the ground surface. Agreed management procedures for unexpected finds will provide	**NT**	This commitment is not triggered as there are no expanded facilities.		

9.3 Detailed Findings and Recommendations – NCIA Statement of Commitments

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	an effective way to minimise project impacts on unrecorded Aboriginal cultural heritage. Procedures for the Discovery of Archaeological Deposits and the Discovery of Human Remains are detailed in Section 14.3.1 of this EA and would be implemented during the project.				
Environmental Monitoring					
11	• NCIA would continue their vegetation monitoring program as required by their existing consent and EPL; and • NCIA would negotiate with DECCW and DOP an appropriate Environmental Monitoring program.	**C**	Vegetation, air, meteorological and water monitoring is conducted by AECOM and reported monthly in a letter from AECOM entitled "Environmental Monitoring for National Ceramic Industries Australia" with attachments.	AECOM monthly letters for 2012, 2013, 2014 and 2015.	There are no recommendations
Environmental Management and Reporting					
12	• The existing site OEMP and environmental management plans would be reviewed, modified and updated to include the project; and	**NT**	The OEMP 2010 has not been updated as no new construction has been undertaken, and the project is therefore operating under the 2010 OEMP.	OEMP 2010	
	• NCIA would continue with its environmental reporting and auditing requirements as specified in the existing development consent (where possible).	**C**	NCIA undertakes environmental reporting and auditing as required by the Approval 09_0006 dated 19 January 2012 and EPL 11956 7 November 2011.		There are no recommendations

Appendix 1 – Documents Provided for Review

DOCUMENT CLASS	DOCUMENTS PROVIDED
AEMR	AEMR_10Apr14.pdf AEMR_17Apr15.pdf AEMR_25Sept12.pdf AEMR_30Sept11.pdf
AEMR SUBMITTAL EVIDENCE	150716 NCIA to DPE_ AEMR and Fl veg rpt request to amend timing.pdf 60329408_DPE letter_15July15.pdf 60329408_EPA letter_20July15.pdf DPE NCIA AEMR Response letter 16July2015.pdf
AIR	10_NCIA August Field Sheets.pdf Air_Quality_Mitigation_Strategy_17June10.pdf N5011215_RPT_FINAL_19Sep07.pdf N5011268_Air RPT_19Nov2009.pdf Rutherford Odour Project NSW EPA.pdf
STACKTESTING	NCIA Emissions Testing Report 2011_2012.pdf NCIA Emissions Testing Report 2012_2013.pdf NCIA Emissions Testing Report 2013_2014.pdf
AMBIENT ENVIRONMENTAL MONITORING MONTHLY REPORTS	**2012**
	60274108_LTR_1212_22JAN13.pdf 60274108_LTR_1112_19DEC12.pdf 60274108_LTR_0912_22OCT12.pdf 60274108_LTR_0912_22OCT12.pdf
	2013
	60274108_LTR_0113_27FEB13.pdf 60274108_LTR_0313_15APR13.pdf 60274108_LTR_0413_16MAY13.pdf 60274108_LTR_0513_20June13.pdf 60274108_LTR_0613_24JUL13.pdf 60274108_LTR_0713_15AUG13.pdf 60305580_LTR_0813_16SEP13.pdf 60305580_LTR_0913_22OCT13.pdf 60305580_LTR_1013_25NOV13.pdf 60305580_LTR_1113_11DEC13.pdf 60305580_LTR_1213_20JAN14.pdf

	2014
	60305580_LTR_0114_13Feb14.pdf 60305580_LTR_0214_20Mar14.pdf 60305580_LTR_0314_29Apr14.pdf 60305580_LTR_0414_29May14.pdf 60305580_LTR_0514_24Jun14.pdf 60305580_LTR_0614_23Jul14.pdf 60305580_LTR_0714_1Sept14.pdf 60329408 - LTR-1114_17Dec14.pdf 60329408_LTR_0714_30Sept14.pdf 60329408_LTR_0914_28Oct14.pdf 60329408_LTR_1014_14Now14.pdf 60329408_LTR_1214_29Jan15.pdf
	2015
	60329408_LTR_0115_20150218.pdf 60329408_LTR_0215_20150330.pdf 60329408_LTR_0315_20150430.pdf 60329408_LTR_0415_20150602.pdf
ANNUAL RETURNS	NCIA Annual return 2009-2010.pdf NCIA Annual Return 2010-2011.pdf NCIA Annual Return 2011-2012.pdf NCIA Annual Return 2012-2013.pdf NCIA Annual Return 2013-14.pdf
AUDIT REPORTS	13026-003-Rev0-OEH NCIA Energy Saver Audit Draft Final Report.pdf Audit Action Plan_09Sep08.pdf Audit Report 12Jun08.pdf
ENVIRONMENTAL ASSESSMENT	EA RptFinal_5July2010.docx National Ceramic Industries Expansion at Rutherford.html NCIA EIS (Rev D 2002).pdf
EMERGENCY PLAN	Appendix H_Emergency Plan_18Sept14.pdf
NOISE	08397_3970_Proposalfax_5May11.doc 08397_4405_Rpt_19Jun12.doc 08397_5192_Rpt_May14.doc 08397_5199_inv_16May14.pdf 08397_5801_Rpt_18May15.pdf 08397_Noise 3312_Rpt_20Oct09_final.doc 08397_point calc 5Jun13.doc

STATUTORY	9_60274108_Approval modification_No Deed_Ltr_1Feb13.docx 2015 Audit team approval.pdf 13026-002-RevB-OEH NCIA Energy Saver Audit Draft Interim Report.pdf 6016818_NCIA_OEMP_Securefile_28June11.pdf 20120119 Signed final Approval_NCIA - Original.pdf 20120119 Signed final Approval_NCIA.PDF AEMR team approval 150112.pdf Approval Modification Deed Letter 1Feb13.pdf DPI Consent Surrender Letter_DFT_18Jan13.pdf EA_5July2010.pdf EEO deregistration.pdf NCIA_Consolidated Consent - Mods 1-5 surrendered.pdf NICNAS registration.pdf Notice of Mod Signed.pdf OEMP_1Feb10.pdf PIRMP_V1.pdf POEO Licence 11956.pdf Statement of Commitments in Word.docx Summary Licence No 11956.docx
VEGETATION SURVEY	**2012**
	60221951_NCIA_2011 Annual Veg Survey_ 2Feb2012_Final.pdf 60221951_Q12012_02May12.pdf 60221951_Q22012_27Jul12_FNL.pdf 60221951_Q32011_Veg Report_14Nov12.pdf
	2013
	60274108_NCIA_2012 Annual Veg Survey_4Dec12.pdf 60274108_Q2-2013_4Jul13_Final.pdf 60274108_Q12013_15Feb13_Final.pdf 60274108_Q32012_22Oct12_FNL.pdf
	2014
	60305580_NCIA_2013 Annual Veg Survey_Final_14Jan14.pdf 60305580_Q1 2014_Final_17Apr14.pdf 60305580_Q2 2014_Final_14Jul14.pdf 60305580_Q3 2013_Final_15Oct13.pdf
	2015
	60329408_NCIA_2014 Annual Veg Survey_Final_23Jan15.pdf 60329408_Q1 2015_Final_09Apr15.pdf 60329408_Q2 2015_FINAL_28May15.pdf 60329408_Q3 2014_Final_11Sep14.pdf
WASTE REMOVAL	Cleanaway Invoice.pdf Lime Scrubber Waste Disposal.pdf Toxfree Quote.pdf Waste Consignment Authorisation.pdf
SUPPLEMENTARY INFORMATION	Email from Leah Cook on 07/08/15 (Leah.Cook@planning.nsw.gov.au) NICNAS Certificate 6699 Maintenance form (revised 24 Feb 2011). Letter from AECOM to DoPI dated 14 June 2012 Letter from DoPI to AECOM undated Ref. 10/24110

	Email from Christine Chapman DoPI dated Thursday, 17 January 2013 Letter of EEO Deregistration 2 July 2013. Water bill from Hunter Water Corporation Sworn Affidavit of Brian Swaine sworn 30 July 2012. Email re tank and bund capacity 21/09/15. Draft Emergency Plan PIRMP Letter of approval from Department of Planning signed by Chris Ritchie to Chris Schneider dated 16 June 2015. NCIA website [http://www.nationalceramicindustries.com.au/] Complaints Register WHS and Housekeeping Audit Report July 2015

APPENDIX 2 – EXPERT OPINION ON AIR QUALITY MANAGEMENT

TODOROSKI AIR SCIENCES
Suite 2B, 14 Glen Street Eastwood, NSW 2122
Phone: 02 9874 2123
Fax: 02 9874 2125
Email: info@airsciences.com.au
Web: www.airsciences.com.au
ACN: 151 202 765 | ABN: 74 955 076 914

9 October 2015

Graham Brown
Principal
Graham A Brown & Associates
Via email: Graham@grahamabrown.com.au

RE: Review of National Ceramic Industries Australia Independent Compliance Audit

Dear Graham,
Thank you for engaging Todoroski Air Sciences (TAS) to conduct this review of the National Ceramic Industries Australia (NCIA) independent compliance audit.

Todoroski Air Sciences (TAS) has reviewed the audit findings relating to air quality as prepared by Graham A Brown and Associates and the supporting air quality management documentation.

The review found that:

- Compliance with impact assessment criteria (**Approval Audit S3.15**) should be inferred by comparing the annually measured stack pollutant concentrations with those in the EIS.
- Project Approval Limits in the 2014 and 2015 AEMRs are incorrectly reported for Sulfur oxides and Nitrogen oxides (appears to be a transcription error where the values are switched) (**Approval Audit S3.16** and **EPL Audit L2.2**).
- The in-stack air concentration limits were compared with the measured in-stack air concentrations and two exceedences were found for sulfuric acid mist and sulfur trioxide (as SO3) in Section B2 of the 2012-2013 Annual Return. (**EPL Audit L3.4**).

  Where the discharge of sulfuric acid mist and sulfur trioxide (as SO3) is associated with a hot moist stack flow, the applicable Australian monitoring standard may require adjustment to avoid misreporting of the actual emission level. This typically involves the use of a heated sampling probe. Future sampling should ensure that the most appropriate sampling procedure is applied to accurately measure the actual emission rates.

Further details are provided in the attached **Appendix A** and **Appendix B**.

Yours faithfully,
Todoroski Air Sciences

Aleks Todoroski

NATIONAL CERAMIC INDUSTRIES AUSTRALIA
Mandatory Independent Environmental Compliance Audit for Department of Planning & Environment
Detailed Findings and Recommendations
Environment Protection Licence No 11956

<table>
<tr><th>Clause</th><th>Requirement</th><th>Compliance</th><th>Audit Finding</th><th>Objective Evidence</th><th>Recommendation</th></tr>
<tr><td colspan="6">1. Administrative Conditions</td></tr>
<tr><td>L2.2</td><td>The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.
<table><tr><th>Assessable Pollutant</th><th>Load limit (kg)</th></tr><tr><td>Coarse Particulates (Air)</td><td>14338.00</td></tr><tr><td>Fine Particulates (Air)</td><td>26629.00</td></tr><tr><td>Fluoride (Air)</td><td>1850.00</td></tr><tr><td>Nitrogen Oxides (Air)</td><td>36828.00</td></tr><tr><td>Sulfur Oxides (Air)</td><td>36828.00</td></tr></table>Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.</td><td>NC</td><td>The following results were reported in the AEMRs, indicating an exceedance in sulphur oxides against the EPL limit only in 2012-2013 and 2013-2014. All other pollutants were well within both the EPL and DA limits, and sulphur oxides were below half the DA limit.
The Project Approval Limits in the 2014 and 2015 AEMRs are incorrectly reported for Sulfur oxides and Nitrogen oxides (the values are switched).
<table><tr><th rowspan="2">Pollutant</th><th colspan="2">Current Maximum Load Limit (kg)</th><th colspan="3">Actual Load (kg)</th></tr><tr><th>EPL</th><th>Project Approval</th><th>2011-2012</th><th>2012-2013 #</th><th>2013-2014</th></tr><tr><td>Fine particulates</td><td>26,629</td><td>74,210</td><td>997</td><td>1,249</td><td>5,369</td></tr><tr><td>Coarse particulates</td><td>14,338</td><td>32,073</td><td>5,550</td><td>1,640</td><td>3,289</td></tr><tr><td>Fluoride</td><td>1,850</td><td>3,701</td><td>91</td><td>1,109</td><td>928</td></tr><tr><td>Sulfur oxides</td><td>36,828</td><td>110,000</td><td>26,946</td><td>42,235</td><td>37,974</td></tr><tr><td>Nitrogen oxides</td><td>36,828</td><td>73,657</td><td>20,306</td><td>4,704</td><td>25,059</td></tr></table>
<table><tr><th rowspan="2">Level of Environ-mental Impact</th><th colspan="3">Likelihood of Environmental Harm or Non-compliance Occurring</th></tr><tr><th>Certain</th><th>Likely</th><th>Less Likely</th></tr><tr><td>High</td><td>Code Red</td><td>Code Red</td><td>Code Orange</td></tr><tr><td>Moderate</td><td>Code Red</td><td>Code Orange</td><td>Code Yellow</td></tr><tr><td>Low</td><td>Code Orange</td><td>Code Yellow</td><td>Code Yellow</td></tr></table>
There is no statement in the AEMR that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol.</td><td>AEMRs 2011-2012; 2012-2013; 2013-2014</td><td>L2.2.1 Future AEMRs should include verification that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol, which should be referenced.
Ranking: N

Table 13 in the AEMRs should be changed where necessary to show the correct Project Approval Limits for Sulfur oxides and Nitrogen oxides</td></tr>
<tr><td>L3.1</td><td>Concentration Limits
For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.</td><td>Note</td><td></td><td></td><td></td></tr>
<tr><td>L3.2</td><td>Concentration Limits
Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.</td><td>Note</td><td></td><td></td><td></td></tr>
<tr><td>L3.3</td><td>To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.</td><td>Note</td><td></td><td></td><td></td></tr>
</table>

L3.4

Air Concentration Limits

POINT 1,2,3,4,5,6,9,10,12,13

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	20	Dry, 273K, 101.3kPa		

POINT 7,8

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	20	Dry, 273K, 101.3kPa		

POINT 14,15

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Cadmium	milligrams per cubic metre	0.1	Dry, 273K, 101.3kPa		
Nitrogen Oxides	milligrams per cubic metre	100	Dry, 273K, 101.3kPa	18%	
Hydrogen fluoride	milligrams per cubic metre	5	Dry, 273K, 101.3kPa		
Sulfuric acid mist and sulfur trioxide (as SO3)	milligrams per cubic metre	100	Dry, 273K, 101.3kPa		

POINT 16,17

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Nitrogen Oxides	milligrams per cubic metre	100	Dry, 273K, 101.3kPa	18%	
Sulfuric acid mist and sulfur trioxide (as SO3)	milligrams per cubic metre	100	Dry, 273K, 101.3kPa		
Solid Particles	milligrams per cubic metre	20	Dry, 273K, 101.3kPa	18%	
Hazardous substances	milligrams per cubic metre	1	Dry, 273K, 101.3kPa		
Cadmium	milligrams per cubic metre	0.1	Dry, 273K, 101.3kPa		
Mercury	milligrams per cubic metre	0.1	Dry, 273K, 101.3kPa		
Hydrogen fluoride	milligrams per cubic metre	5	Dry, 273K, 101.3kPa		

POINT 18,19

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	5	Dry, 273K, 101.3kPa		

POINT 20,21

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	5	Dry, 273K, 101.3kPa		

NC

Compliance with air concentration limits is set out in the Annual Returns and AEMRs.

Two exceedances were recorded in Section B2 of the 2012-2013 Annual Return, as outlined below.
Discharge and monitoring point 14 had a sulfuric acid mist and sulfur trioxide (as SO3) concentration of 131.5mg/m^3, which is greater than the applicable limit of 100mg/m^3 (shown to the left).
Discharge and monitoring point 15 has a sulfuric acid mist and sulfur trioxide (as SO3) concentration of 156.5mg/m^3, which is greater than the applicable limit of 100mg/m^3 (shown to the left).
The stack testing results in the Annual Returns indicate there were no other exceedances of the applicable limits.

Level of Environ-mental Impact	Likelihood of Environmental Harm or Non-compliance Occurring		
	Certain	Likely	Less Likely
High	Code Red	Code Red	Code Orange
Moderate	Code Red	Code Orange	Code Yellow
Low	Code Orange	Code Yellow	Code Yellow

Annual Returns 2013-2014; 2012-2013; 2011-2012.

Where the discharge of sulfuric acid mist and sulfur trioxide (as SO3) is associated with a hot moist stack flow, the applicable Australian monitoring standard may require adjustment to avoid misreporting of the actual emission level. This typically involves the use of a heated sampling probe.
Future sampling should ensure that the most appropriate sampling procedure is applied to accurately measure the actual emission rates.

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation

NATIONAL CERAMIC INDUSTRIES AUSTRALIA
Mandatory Independent Environmental Compliance Audit for Department of Planning & Environment
Detailed Findings and Recommendations
Project Approval 09_0006 dated 19 January 2012

SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS - AIR QUALITY

Dust Limits

S3.15

The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not exceed the criteria listed in Tables 1 or 2 at any residence on privately-owned land.

Table 1: Long term impact assessment criteria for particulate matter

Pollutant	Averaging period	Criterion
Total suspended particulate (TSP) matter	Annual	90 µg/m^3
Particulate matter < 10 µm (PM_{10})	Annual	30 µg/m^3

Table 2: Short term impact assessment criteria for particulate matter

Pollutant	Averaging period	Criterion
Particulate matter < 10 µm (PM_{10})	24 hour	50 µg/m^3

ANC

It is noted that the primary purpose of this condition is to ensure that all reasonable and feasible avoidance measures are in place. As it is not practical to conduct monitoring at "any private residence", compliance with these criteria is necessarily inferred, for example by comparing measured with modelled in stack pollutant concentrations or annual loads. Where the measured levels are within those set out in the EIS, it can be inferred that the off-site levels are acceptable.
Contrary to the first paragraph in Section 5.3 in the 2014 and 2015 AEMRs, the modelled in-stack emission rates in the 2010 EIS are provided in Table 17 of the EIS, and this allows for comparison of the measured in-stack concentrations with those in the 2010 EIS.
Comparison is made between the in-stack concentrations at part L3.4 and the annual loads (L2.2) with the EPL limits. There was no exceedance of the particulate limits which indicates there would be no particulate impacts at the privately owned residences.
This comparison should be extended to compare the measured levels with the modelled levels in the EIS, and in this manner to infer compliance with the dust limits shown here.

Section 5.3 2014 and 2015 AEMR
2010 EIS

Recommend that future AEMRs include the necessary inferred compliance calculations.

Load Limits

S3.16

Unless the OEH specifies otherwise, the Proponent shall ensure that the annual total load discharged from the site does not exceed the load limit specified for that pollutant in Table 3.

Table 3: Maximum Allowable Load Limits (Air)

Assessable Pollutant	Maximum Allowable Load Limit (kg/yr)
Fine Particulates	74,210
Coarse Particulates	32,073
Fluoride	3,701
Sulfur oxides (as sulphuric acid mist and sulfur trioxide (as SO_3))	73,657
Nitrogen oxides	110,000

Note: The total load of the assessable pollutant shall be calculated in accordance with the relevant load calculation protocol, as defined by OEH guidelines.

NC

It is noted that the annual total load discharged from the site specified by the OEH in EPL 11956 differs from that set out in this condition. As the "OEH specifies otherwise" the limits specified in EPL 11956 prevail.
The EPL issued on 7 November 2011 predates the DA which was issued on 19 January 2012. Therefore the period for comparison is from 19 January 2012 to when the latest load calculation data are available, in the 2015 AEMR which covers the period from 19 January 2014 to 18 January 2015. The 2011-2012 AEMR covers the period 1 August 2011 to 31 July 2012, and the 2013 AEMR covers 19 January 2013 – 18 January 2014.
The following results were reported, indicating an exceedance in sulphur oxides only in 2012-2013 and 2013-2014.
All other pollutants were well within both the EPL and DA limits..
The Project Approval Limits in the 2014 and 2015 AEMRs are incorrectly reported for Sulfur oxides and Nitrogen oxides (the values are switched).

AEMR 2015 Table 13 and Figures 19-23.
AEMR 2014 Table 13

L2.2.1 Future AEMRs should include verification that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol, which should be referenced.
Ranking: N

Table 13 in the AEMRs should be changed to show the correct Project Approval Limits for Sulfur oxides and Nitrogen oxides

Detailed Findings and Recommendations - Project Approval 09_0006 dated 19 January 2012

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation

Pollutant	Current Maximum Load Limit (kg)		Actual Load (kg)		
	EPL	Project Approval	2011-2012	2012-2013 #	2013-2014
Fine particulates	26,629	74,210	997	1,249	5,369
Coarse particulates	14,338	32,073	5,550	1,640	3,289
Fluoride	1,850	3,701	91	1,109	928
Sulfur oxides	36,828	110,000	26,946	42,235	37,974
Nitrogen oxides	36,828	73,657	20,306	4,704	25,059

Level of Environmental Impact	Likelihood of Environmental Harm or Compliance Occurring		
	Certain	Likely	Less Likely
High	Code Red	Code Red	Code Orange
Moderate	Code Red	Code Orange	Code Yellow
Low	Code Orange	Code Yellow	Code Yellow

L2.2.1 Future AEMRs should include verification that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol, which should be referenced.
Ranking: N

APPENDIX 3 – EXPERT OPINION ON NOISE MANAGEMENT

2 October 2015

630.11453-LR1 20151002.docx

Graham A Brown & Associates
Level 1, 7 Newcomen Street
NEWCASTLE NSW 2300

Attention: Graham A Brown

Dear Graham

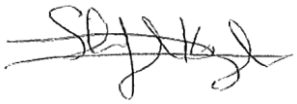
National Ceramic Industries Australia
Mandatory Independent Compliance Audit 2015
Specialist Acoustic and Vibration Component

Body Text

Please find attached the Specialist Acoustic and Vibration Component of the 2015 Independent Environmental Audit prepared by Graham A Brown & Associates (GABA) for the National Ceramic Industries Australia Pty Limited, Rutherford, New South Wales (NSW).

I trust the following meets your requirements. Should you have any questions or need anything further please do not hesitate to contact me on 02 4037 3200 or email skozakiewicz@slrconsulting.com.

Yours sincerely



STEPHEN KOZAKIEWICZ
Principal

SLR Consulting Australia Pty Ltd 10 Kings Road New Lambton NSW 2305 Australia
(PO Box 447 New Lambton NSW 2305 Australia) T: +61 2 4037 3200 F: +61 2 4037 3201
E: newcastleau@slrconsulting.com www.slrconsulting.com
ABN 29 001 584 612

1 Introduction and Scope of Works

SLR Consulting Australia Pty Ltd (SLR) has been commissioned by Graham A Brown and Associates (GABA) to undertake the Specialist Noise and Vibration Audit Component for the National Ceramic Industries Australia Pty Limited (NCIA) 2015 Independent Environmental Audit conducted in accordance with Project Approval (PA) 09_0006 as modified.

This letter report provides a summary of the documents reviewed by SLR along with any additional comments and endorsements to supplement GABA's conclusions and recommendations.

2 AUDIT METHODOLOGY

2.1 Audit Methodology

The noise audit methodology consisted of the following key step:

- Review of GABA provided supporting information including reports, correspondence, spreadsheets, forms and draft audit tables.

3 Noise Audit References

3.1 Reference Documents

Reference documents sighted and/or referred to the noise audit report are presented in **Table 1**.

Table 1 Noise Audit Reference Documents

Title	Document	Date	Reference
STATUTORY			
Pollution Incident Response Management Plan	PIRMP_V1	23 august 2012	PIRMP
Statement of Commitments	Statement of Commitments	-	SOC
Environmental Protection Licence (EPL) - 11956	POEO Licence 11956	POEO Licence 11956	EPL
National Ceramic Industries Australia, Approval Modification MP 09-0006 [AECOM]	modification_ltr_1feb13	1 February 2013	Approved Modification
NCIA Operational Environmental Management Plan	6016818_NCIA_OEMP_Securefile_28June11	28 June 2011	OEMP
Project Approval 09_0006	20120119 Signed final Approval_NCIA - Original	19 January 2012	PA 09_0006
National Ceramic Intustries Australia, Surrender of Existing Development Consent and Post Surrender Environmental Management	DPI Consent Surrender Letter_DFT_18Jan13	18 January 2013	Dev. Consent Surrender
Environmental Assessment [AECOM]	N6050103_RptFinal_5July2010	5 July 2010	EA
NCIA Consolidated Consent - Mods 1-5 surrendered	NCIA_Consolidated Consent - Mods 1-5 surrendered	2003	Con Con Mods 1-5
2011 -2012 Annual Environmental Management Report	AEMR_25Sept12	25 September 2012	AEMR 2012

2013 Annual Environmental Management Report	AEMR_10Apr14	10 April 2014	AEMR 2013
2014 Annual Environmental Management Report	AEMR_17Apr15	17 April 2015	AEMR 2014
NOISE MONITORING			
Noise Compliance Study, Stage 2 Commissioning	08397_Noise 3312_Rpt_20Oct09_final	October 2009	08397/3312
Proposal – NCIA Rutherford, Acoustic Monitoring	08397_3970_Proposalfax_5May11	5 May 2011	08397/3970
Noise Compliance Study	08397_4405_Rpt_19Jun12	June 2012	08397/4405
NCIA – Noise Point Calculations	08397_point calc 5Jun13	5 June 2013	8397_point calc
Noise Compliance Study	08397_5192_Rpt_May14	May 2014	08397/5192
Noise Compliance Study	08397_5801_Rpt_18May15	May 2015	08397/5801
GABA AUDIT Documentation			
NCIA Project Approval 09_0006 Audit (Draft)	NCIA Approval Audit Draft.docx	September 2015	Audit findings
NCIA EPL 11956 Audit (Draft)	NCIA EPL 11956 Audit Draft	September 2015	Audit findings
NCIA Commitments (Draft)	NCIA Commitments Audit Draft	September 2015	Audit findings

4 Peer Review and Recommendations

A brief review of the above documents has been conducted by SLR. In general, we concur with the findings and recommendations of GABA documented in the draft compliance tables and 2015 Independent Environmental Audit Extracts and make the following additional comments and recommendations.

4.1 Environment Protection Licence (EPL) No 11956, Condition L5.4

Condition L5.4 relates to the meteorological conditions where the noise emission limits apply.

The Spectrum Acoustics Noise Compliance Studies of 2014 and 2015 state that, *'No information was available in relation to temperature inversions at night.*'

It is recommended that the validity of meteorological conditions applicable to compliance monitoring be investigated by interrogating the onsite weather station and not from Bureau of Meteorological weather station at Cessnock.

4.2 Noise Compliance Studies

4.2.1 Criteria

In comparison to the operational noise requirements defined in Development Consent (Condition 4.14) and the Environmental Protection Licence (Condition L6.1), it is noted that the site noise impact is being conservatively assessed against and in compliance with the Project Approval noise limits that correspond to the strictest industrial noise conditions applicable under the NSW *Industrial Noise* Policy.

4.2.2 Project Approval

The *Spectrum Acoustics* Noise Compliance Studies of 2014 and 2015 contains a minor typographical error, stating that the NICA Project approval was '…*dated January 2102.'*

The NCIA was granted project approval (MP 09_0006) under section 75J of the *Environmental Planning and Assessment Act 1979*, by the Planning and Assessment Commission on **19 January 2012**. The project approval, MP 09_0006, rationalised and consolidated the development as already approved under NCIA's development consent (DA No. 449-12-2002-I, now surrendered) and that of a proposed expansion of NCIA's ceramic tile facility based in Rutherford, NSW.

5 Summary

SLR has conducted the Specialist Acoustics and Vibration Component review of the 2015 Independent Environmental Audit prepared by GABA for the National Ceramic Industries Australia Pty Limited, Rutherford, New South Wales (NSW). In general, SLR concurs with the findings of GABA. Where appropriate, SLR has made additional comments and endorsements to supplement GABA's conclusions and recommendations.

APPENDIX 4 – AUDIT PHOTOGRAPHS

Photo 1. Separation of traffic shown at the entrance to the NCIA site.

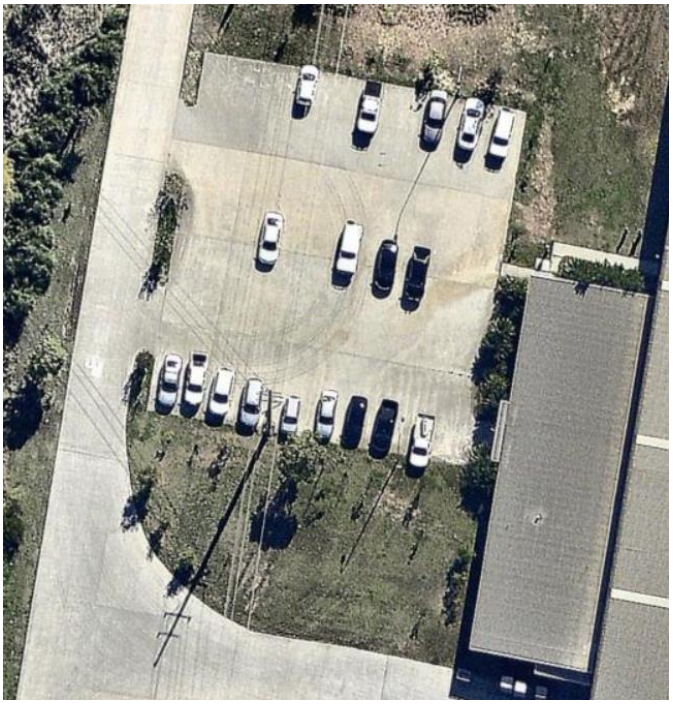


Photo 2. Parking currently available on the NCIA site.

Photo 3. Simple road layout on the NCIA site.

Photo 4. Wet detention basin WDB4.

Photo 5. Wet detention basin WDB1.

Photo 6. Wet detention basin WDB2.

Photo 7. Excessive quantities of waste tiles were considered to be accumulating by the neighbouring land owner McCloy Group who are developing the large adjacent residential Heritage Parc on a former golf course (Photo 10). The photo above is from a Nearmap image on 25 June 2011 and shows much larger quantities of waste tiles than are currently stored on site (inset 6 May 2015 and Photo 8) in a dedicated bunker.

Photo 8. Storage of waste tiles in a concrete bunker on 1 September 2015.

Photo 9. Bunded internal diesel storage tank.

Photo 10. Noise monitoring locations shown by red pins. The red star is the location of the former golf course which is to be developed as the Heritage Parc residential estate.
(Source: Spectrum Acoustics Noise Compliance Study June 2012)

Photo 11. Meteorological station on NCIA site.

Appendix 5 – Audit Recommendations and Response Table

Appendix 5 – Audit Recommendations and Response Table

Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
Recommendations - Project Approval 09_0006							
S2.14	During operations, the Proponent shall pay Council an annual contribution of 4.1 cents per kilometre per tonne of product trucked from the site along Racecourse Road to its intersection with the New England Highway (1.7 km). The contribution amount shall be adjusted annually from the date of this approval to account for the effects of inflation (Consumer Price Index).	**NC**	**2.14.1** NCIA must pay to Council an annual contribution of 4.1 cents per kilometre per tonne of product (adjusted for inflation) trucked from the site along Racecourse Road to its intersection with the New England Highway from the date of DA 09_0006 (19 January 2012). **Ranking: U**	Agree that the amounts remain outstanding however do not agree that this is an "Emergency" item. No contact has been made to NCIA from Maitland Council in regards to this clause or any other matters.	NCIA has made contact with Maitland Council in regards to the contribution and how/when Maitland Council would like this calculated and remitted. This was acknowledged by Anne Humphries of Maitland Council by email on 20 October 2015, which included a formal request for the audited statements of the company's operations.	January 2016	NCIA / Maitland Council
S3.15	The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not exceed the criteria listed in Tables 1 or 2 at any residence on privately-owned land. *Table 1: Long term impact assessment criteria for particulate matter* Pollutant / Averaging period / Criterion Total suspended particulate (TSP) matter / Annual / 90 µg/m³ Particulate matter < 10 µm (PM_{10}) / Annual / 30 µg/m³ *Table 2: Short term impact assessment criteria for particulate matter* Pollutant / Averaging period / Criterion Particulate matter < 10 µm (PM_{10}) / 24 hour / 50 µg/m³	**C**	**3.15.1 It is r**ecommended that future AEMRs include the necessary inferred compliance calculations. **Ranking: I**	Agree	Apply recommendation in next AEMR.	Next AEMR October 30 2016	NCIA / AECOM

Appendix 5 – Audit Recommendations and Response Table

Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
S3.16	Unless the OEH specifies otherwise, the Proponent shall ensure that the annual total load discharged from the site does not exceed the load limit specified for that pollutant in Table 3. *Table 3: Maximum Allowable Load Limits (Air)* Assessable Pollutant / Maximum Allowable Load Limit (kg/yr) Fine Particulates: 74,210 Coarse Particulates: 32,073 Fluoride: 3,701 Sulfur oxides (as sulphuric acid mist and sulfur trioxide (as SO_3)): 73,657 Nitrogen oxides: 110,000 *Note: The total load of the assessable pollutant shall be calculated in accordance with the relevant load calculation protocol, as defined by OEH guidelines*.	**NC**	**S3.16.1** [Repeat of L2.2.1] Future AEMRs should include verification that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol, which should be referenced. Table 13 in the AEMRs should be changed to show the correct Project Approval Limits for Sulfur oxides and Nitrogen oxides. **Ranking: N**	Agree	Apply recommendation in next AEMR.	Next AEMR October 30 2016	NCIA / AECOM
S3.17	The Proponent shall: a) design, construct, operate and maintain the project in a manner that minimises or prevents the emission of dust from the site; b) take all practicable measures to ensure that all vehicles entering or leaving the site and carrying a load that may generate dust are covered at all times, except during loading and unloading. Any such vehicles shall be covered or enclosed in a manner that will prevent emissions of dust from the	**C**	**3.17.1** It is recommended that when the OEMP is replaced by an Environmental Management Strategy (prior to the commencement of any construction works) as required by Schedule 4 Condition 57 of this Approval, wording in a "Transport Code of Conduct" or similar	Agree	Apply when OEMP is replaced by an Environmental Management Strategy	Prior to commencement of any construction works	NCIA / AECOM

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
	vehicle at all times; c) maintain all trafficable areas and vehicle manoeuvring areas on the site in a condition that will minimise the generation or emission of wind blown or traffic generated dust from the site; and d) ensure each kiln is fitted with a dust collection system to capture emissions, to the satisfaction of the Secretary		section includes a requirement for all loads of bulk granular material delivered to the site to be covered in accordance with the "Load Restraint Guide". **Ranking: N**				
S3.18	Unless otherwise specified by the Secretary, the Proponent shall: a) comply with all monitoring (points) requirements and pollutant discharge concentrations as specified by the OEH in the EPL; and b) ensure that the stack discharge design requirements comply with the EPL. **Also applies to EPL Cond. M2.2.**	**C**	**3.18.1** The terminology in the NCIA Emissions Testing Reports in future should refer to EPL 3, not EPL 2, and the second listing of EPL 10 in Table 4 should reference EPL 12 Spray Dryer (SD1). **Ranking: N** **Repeated as EPL M2.2.1.**	Agree	To be updated in next emissions testing report.	Emissions testing report due no later than 31 July 2016.	NCIA / AECOM
S3.28	The Proponent shall prepare and implement Noise Validation Reports to the satisfaction of the Secretary. These reports must: a) be prepared by a suitably qualified acoustical expert whose appointment has been endorsed by the Secretary; b) be undertaken within 90 days of the commencement of operation of each subsequent stage (stages 1 to 8) of the	**NV**	**3.28.1** NCIA should attempt to locate the Stage 1 Noise Validation Report. **Ranking: N**	Current NCIA management have not been able to locate the Reports as indicated in Section 3.28 but are satisfied with current compliance	On-going monitoring and compliance with Noise Criteria	N/a	N/a

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
	project and during a period in which the facility is operating under normal operating conditions; c) be conducted in accordance with the NSW Industrial Noise Policy; and d) include: - a validation against the predictions made in the EA including the proposed noise attenuation; - details of any exceedances or non-compliance with the noise limits in this approval; and - measures to mitigate the exceedance or non-compliance. Should any Noise Validation Reports identify an exceedance or non-compliance, then the Proponent shall implement additional mitigation or attenuation to the satisfaction of the OEH and Secretary within the timeframe specified by the Secretary and prior to any progression to the next stage.						
S3.32	The Proponent shall ensure that the lighting associated with the project: a) complies with the latest version of Australian Standard AS 4282(INT) - Control of Obtrusive Effects of Outdoor Lighting; b) is adequate for night time security purposes; and c) is mounted, screened and directed	**NV**	**3.32.1** NCIA should either review the construction contract for the facility to assess if lighting was required to be installed in accordance with AS 4282:1997; or if this information is not available or is	Current NCIA management have not been able to locate the Reports as indicated in Section 3.32 but are satisfied with current	Management are satisfied that a, b and c are considered and complied with.	N/a	N/a

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
	in such a manner that it does not create a nuisance to surrounding properties or the public road network.		inconclusive, commission a qualified lighting expert to undertake a survey or audit of the outdoor lighting against AS 4282:1997 to verify its compliance. **Ranking: N**	compliance			
S3.37	The Proponent shall ensure that: a) a minimum of 70 parking spaces are provided on site; b) all parking generated by the project is accommodated on site, and that no vehicles associated with the project are parked on the public road system at any stage; c) the project does not result in any vehicles queuing on the public road network; and d) provide direction line marking and signage on site to direct heavy vehicles, staff and visitors to the relevant parking areas, loading docks and exits to ensure safe traffic flow.	**NV**	**3.37.1** NCIA should prepare a written instruction that is issued to each contract driver that no vehicles associated with the project are parked on the public road system at any stage, or that vehicles queue on the public road network. This could be done through the Transport Code of Conduct in Section 9 of the OEMP which should be revised to reflect current site requirements and be provided to all employees, contractors and contract drivers. **Ranking: I** **3.37.2** A traffic risk assessment should be conducted on site to determine if, and if so	Agree with recommendation for points 3.37.1 and 3.37.2	3.37.1 Management will finalise and issue written instructions to all contract drivers. 3.37.2 Management will conduct a traffic risk assessment and consider further line markings and signage if appropriate.	January 2016	NCIA

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
			where, direction line marking and signage should be provided on site to direct heavy vehicles, staff and visitors to the relevant parking areas, loading docks and exits to ensure safe traffic flow. **Ranking I**				
S3.38	The Proponent shall ensure that the parking dimensions, internal circulation, aisle widths, kerb splay corners, head clearance heights, ramp widths and grades of the car parking area in accordance with the current relevant Australian Standards AS2890.1:2004, except where amended by other conditions of this approval.	**NC**	**3.38.1** To comply with this condition, NCIA must provide markings in accordance with Australian Standard AS2890.1:2004. **Ranking: I**	Agree	Work has commenced to improve compliance with 3.38.1	January 2016	NCIA
S3.39	The Proponent shall ensure that disabled parking and access is provided on-site and shall comply with Australian Standard AS1428.1 (2001) - Design for Access and Mobility - Part 1 General Requirements for Access – Buildings.	**NC**	**3.39.1** To comply with this condition, NCIA must provide markings in accordance with Australian Standard AS1428.1:2001. **Ranking: I**	Agree	Work has commenced to improve compliance with 3.39.1	January 2016	NCIA

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
S3.52	A designated area for the storage and collection of waste and recyclable materials shall be provided at the site and shall be designed, constructed, operated and maintained in a manner so as not to cause a nuisance to adjoining properties.	**NC**	**3.52.1** NCIA should ensure that waste tiles are stored within only the designated concrete bunker and that there are procedures in place, including daily inspections, to determine when a contractor should be required to remove waste tiles. Daily inspections should be documented. **Ranking: I**	Agree - NCIA maintains a designated area however there have been instances of tile waste being stored outside of this designated area due to the volume on site. When this has been done NCIA have been conscious of maintaining this as neat as possible and also of any impacts to the environment minimised	Documentation of inspections will be performed.	Ongoing	NCIA

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
S3.55	The Proponent shall ensure that the fuel storage tank is surrounded by a bund with a capacity to contain 110% of the largest tank within the bund. The bund(s) must be designed and installed in accordance with the requirements of the relevant Australian Standards and/or the OEH's Environmental Protection Manual Technical Bulletin Bunding and Spill Management.	**C**	**3.55.1** The Emergency Plan should be revised if necessary to incorporate the use of any spill prevention measures established for the diesel tank. **Ranking: I**	NCIA maintains a bund that is well in excess of the 110% diesel tank storage that is required in 3.55.	Consideration will be given to amending the Emergency Plan the next time an update is performed	N/A	N/A
S4.58	Within 24 hours of the occurrence of an incident that causes (or may cause) harm to the environment, the Proponent shall notify the Department and any other relevant agencies of the incident.	**NT**	**4.58.1** It is recommended that the Draft Emergency Plan be finalised and its requirements (e.g. for training) be implemented. The Emergency Plan should reference the PIRMP which could be included as an Appendix. The Notifications in the Emergency Plan should include, or make reference to, Table 2 in the PIRMP. **Ranking: U**	Agree - There have been no instances requiring notification and management believe they have appropriate systems in place for notifying the Department should an incident occur.	The recommended amendments to the Emergency Plan will be actioned	January 2016	NCIA

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
S4.64	Within 3 months of the approval of any strategy/plan/program required under this approval (or any subsequent revision of these strategies/plans/ programs), or the completion of the audits or annual reports required under this approval, the Proponent shall: a) provide a copy of the relevant documents/data to the relevant agencies; and b) make the documents publically available in an appropriate electronic format on the Proponent's web site, should one exist. If a web site does not exist, the documents are to be made available upon request.	**NC**	**4.61.1** It is recommended that as a matter of urgency NCIA provide copies on their website of every approved strategy, plan or program required under this approval (or any subsequent revision of these strategies, plans or programs), or the audits or annual reports required under this approval. This should cover the period of this approval, that is, from 19 January 2012 to the present. This information should be kept up to date. **Ranking: E** **4.61.2** A procedure should be prepared and implemented to ensure that this condition is complied with in the future. **Ranking: E**	Agree - All appropriate documents were previously maintained on NCIA's website. www.nationalceramicindustries.com.au. During the last 6-12 months the website has been renewed and remains under construction.	Management will engage with Redback Solutions to ensure these documents are available as per 4.64B	January 2016	NCIA

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
Recommendations - Environment Protection Licence No 11956							
L2.2	The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol. **Assessable Pollutant** / **Load limit (kg)** Coarse Particulates (Air) 14338.00 Fine Particulates (Air) 26629.00 Fluoride (Air) 1850.00 Nitrogen Oxides (Air) 36828.00 Sulfur Oxides (Air) 36828.00 Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.	**NC**	**L2.2.1** Future AEMRs should include verification that the actual load of an assessable pollutant has been calculated in accordance with the relevant load calculation protocol, which should be referenced. Table 13 in the AEMRs should be changed to show the correct Project Approval Limits for Sulfur oxides and Nitrogen oxides **Ranking: N**	Agree	Apply recommendation in next AEMR.	Next AEMR October 30 2016	NCIA / AECOM
L3.4	**Air Concentration Limits**	**NC**	**L3.4.1** Where the discharge of sulfuric acid mist and sulfur trioxide (as SO3) is associated with a hot moist stack flow, the applicable Australian monitoring standard may require adjustment to avoid misreporting of the actual emission level. This typically involves the use of a heated sampling	Agree – however we note that: *As per AECOMs NATA Accredited Methods (NSW EPA TM – 8/USEPA Method 8), AECOM use a glass lined heated probe for the sampling of*	No Action required as appropriate testing methods used.	Emissions testing report due no later than 31 July 2016. Annual compliance emission testing not yet scheduled.	NCIA / AECOM

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
			probe. Future sampling should ensure that the most appropriate sampling procedure is applied to accurately measure the actual emission rates. **Ranking: N**	*sulfuric acid mist and sulfur trioxide (as SO3).*			
L5.1	**Noise Limits**	**C**	**L5.1.1** Spectrum Acoustics should ensure that future Noise Compliance reports reference the correct date for the Project Approval, i.e. 19 January 2012. **Ranking: N**	Agree	Apply recommendation in next noise monitoring report.	Noise compliance monitoring due April 2016.	NCIA / AECOM
L5.2	Noise from the premises is to be measured at the most affected point on or within the receptor site boundary to determine compliance with this condition.	**ANC**	**L5.2.1** NCIA should request a variation of Condition L5.2 to obtain approval for the current noise monitoring to be conducted in the reserve at the western end of Kenvil Close and in a clearing adjacent to a residence in Wollombi Road, instead of on or within the receptor site boundary. **Ranking: I**	Agree	Variation to EPL to be submitted to the NSW EPA.	Prior to 1 month before end of current reporting period, being 31 July 2016.	NCIA / AECOM

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
L5.3	Noise from the premises shall not exceed the L A1(1 minute) noise level of 45 dB(A) at the nearest residential receiver most affected by noise from activities at the premises. The noise limit applies 1 metre from the dwelling façade and shall apply during the night period only.	**NC**	**L5.3.1** NCIA should request a variation of Condition L5.3 to obtain approval for the noise monitoring to be conducted at a more accessible location, e.g. at the receptor site boundary as required in L5.2, or for a calculation method to be approved. **Ranking: I**	Agree	Variation to EPL to be submitted to the NSW EPA.	Prior to 1 month before end of current reporting period, being 31 July 2016.	NCIA / AECOM
M2.2	Requirement to monitor concentration of pollutants discharged	**C**	**M2.2.1 – (**repeat of Approval Recommendation 3.18.1) **Ranking N**	Agree	To be updated in next emissions testing report. *"The terminology in the NCIA Emissions Testing Reports in future should refer to EPL 3, not EPL 2, and the second listing of EPL 10 in Table 4 should reference EPL 12 Spray Dryer (SD1)"*	Emissions testing report due no later than 31 July 2016. Annual compliance emission testing not yet scheduled.	NCIA / AECOM

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
M4.1	**Environmental monitoring** The licensee must monitor the impact of fluoride on vegetation as follows: a) Annual and quarterly visual assessment of vegetation in the area surrounding the premises as outlined in the document titled Proposed Ambient Air Quality Monitoring Programs – National Ceramic Industries Australia, Rutherford dated January 2004. b) Quarterly monitoring of the fluoride content in vegetation in the area surrounding the premises as outlined in the document titled Proposed Ambient Air Quality Monitoring Programs – National Ceramic Industries Australia, Rutherford dated January 2004. The licensee must maintain a list and a map of the monitoring sites used to assess the impact of the premises on the surrounding environment. Part of each sample analysed must be carefully stored to the satisfaction of the EPA for a period of not less than 12 months and forwarded to the EPA on request.	**C**	**M4.1.1** It is recommended that the same numbering system is used for vegetation monitoring sites provided by AECOM in Table 7 of the AEMR and Appendix 1 of the Quarterly Vegetation Survey Reports in future based on the numbers in Appendix 1. **Ranking: N**	Agree	Recommendation to be adopted in AECOM reports		NCIA/AECOM

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
M6.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	**NC**	**M6.2.1** A Complaints Register should be established and maintained by NCIA (or AECOM) that includes the details required by Condition 6.2. **Ranking: I**	Agree – all complaints received have historically been forwarded to AECOM for inclusion in the AEMR. It is noted that all complaints received during the period were readily available and producible for this audit.	Management will formalise a complaints register in accordance with M6.2 in conjunction with providing information to AECOM for inclusion in the AEMR.	January 2016	NCIA
M7.2	**Telephone complaints line** The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	**NC**	**M7.2.1.** NCIA must decide how it will operate a telephone complaints line for the purpose of receiving any complaints from members of the public during its operating hours (24/7). This information must be made available to the public including that it is a complaints line so that the impacted community	Agree	Management to consider an appropriate solution for a complaints line outside of office hours. Communication of the number via the website and by signage to be implemented.	January 2016	NCIA

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Clause	Requirement	Compliance	Recommendation	NCIA Response	Proposed Action	Target Completion Date	Responsibility
			knows how to make a complaint. **Ranking: U**				
R1.5	**Annual return documents** The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	**ANC**	**R1.5.1**. NCIA should review the requirements set out in the box in Section G of the Annual Return Form to determine if an alternative form of signature can be provided. **Ranking: I**	Agree – Management emailed the 2015 Annual Return to the Department and followed later with the hard copy document with two directors having signed at the NCIA board meeting	Management to consider process	Prior to submitting the 2016 Annual Return	NCIA
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	**NC**	**G1.3.1.** A copy of the latest version of EPL 11956 should be made available in the factory with the OEMP, which should be notated that the included EPL has been superseded. **Ranking: U**	Agree – The license and the OEMP are readily available in the factory office.	Works are underway on a new factory office and lunchroom where copies of all required documents will be maintained	January 2016	NCIA