Contact: Andrew Hartcher
Phone: 02 9228 6503
Fax: 02 9228 6466
Email: andrew.hartcher@planning.nsw.gov.au

Mrs Jacinta Coulin
Environmental Resources Management (ERM) Pty Ltd
PO Box 3071
THORNTON NSW 2322

Our ref: SSD-5119
File: 12/02330

Dear Mrs Coulin

State Significant Development - Director General's Requirements
Ammonium Nitrate Distribution and Storage Facility, Sandgate (SSD-5119)

I have attached the Director General's environmental assessment requirements (DGRs) for the preparation of an Environmental Impact Statement (EIS) for the abovementioned development.

These requirements are based on the information you have provided to date and have been prepared in consultation with Newcastle City Council, the Environment Protection Authority, WorkCover NSW, Roads and Maritime Services and the NSW Office of Water (see attachment 2). Please note that the Department may alter these requirements at any time, and that you must consult further with the Department if you do not lodge a development application and EIS for the development within two years of the date of issue of these DGRs. The Department will review the EIS for the development carefully before putting it on public exhibition, and will require you to submit an amended EIS if it does not adequately address the DGRs.

If the development is likely to have a significant impact on matters of National Environmental Significance, it will require an approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval would be in addition to any approvals required under NSW legislation and it is your responsibility to contact the Department of Sustainability, Environment, Water, Population and Communities to determine if an approval under the EPBC Act is required for your development (http://www.environment.gov.au or 6274 1111).

I would appreciate it if you would contact the Department at least two week before you propose to submit the DA and EIS for the development. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of copies (hard-copy and CD-ROM) of the EIS required for review.

If you have any enquiries about these requirements, please contact Andrew Hartcher on 02 9228 6503 or via email at andrew.hartcher@planning.nsw.gov.au.

Yours sincerely

17.2.12

Chris Wilson
Executive Director
Major Projects Assessment
as delegate of the Director-General

Director General's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act*

State Significant Development

Application Number	SSD-5119
Development	Use of an existing warehouse and site facilities to store and distribute Ammonium Nitrate.
Location	158 Maitland Road, Sandgate, NSW (Lot 12 DP 625053) Sandgate in the Newcastle local government area
Applicant	Crawfords Freightlines Pty Ltd
Date of Issue	16 February 2012
General Requirements	The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. In addition, the EIS must include a: • detailed description of the development, including: – need for the proposed development; – justification for the proposed development; – likely staging of the development; – likely interactions between the development and existing, approved and proposed operations in the vicinity of the site; – plans of any proposed building works; • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments; • risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; • detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: – a description of the existing environment, using sufficient baseline data; – an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and – a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment; and • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.
Key issues	The EIS must address the following specific matters: • **Hazards and Risks** – including an assessment of the hazards and risks associated with the existing and proposed operations on site (and the potential for off site impacts) including details of

	hazardous materials used or kept on the premises. The EIS shall also include a screening of potential hazards on and off site to determine the potential for off site impacts and any requirement for a Preliminary Hazard Analysis (PHA). Should potential off-site impacts be identified, a PHA must be prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 6 Hazard analysis and Multi-level Risk Assessment*. The PHA should: – consider the risks from the facility; and – demonstrate that the proposal would comply with the criteria set out in *Hazardous Industry Planning Advisory Paper No 4 Risk Criteria for Land Use Safety Planning.* • **Strategic and Statutory Context** – including: – detailed justification for the proposal and suitability of the site to be developed; and – demonstration that the proposal is generally consistent with all relevant environmental planning instruments, development control plans (DCPs), and justification for any inconsistencies. • **Infrastructure** – demonstrating that suitable arrangements are in place to provide the necessary local and regional infrastructure for the proposal; • **Soil and Water** – including: – an assessment of soil contamination including acid sulphate soils and their management; – measures to minimise the potential for leakage of ammonium nitrate and other chemicals stored on-site; – details of proposed erosion and sedimentation controls; – a detailed assessment of potential soil, surface and groundwater impacts, particularly on nearby sensitive water sources/bodies; and – details of water supply, wastewater management and disposal (if any), stormwater management and flooding impacts. • **Air** – including odour during construction and operation and measures to reduce greenhouse gas emissions on-site; • **Noise** – during construction and operation including traffic noise; • **Waste** – including: – identification of the quantity and type of waste that would be handled, stored, processed or disposed of at the facility; and – a description of how this waste would be stored and handled on site in accordance with the relevant guidelines and standards, and transported to and from the site. • **Transport, Access and Parking** – including: – details of all traffic types and volumes likely to be generated during construction and operation; – assessment of predicted impacts on road safety and the capacity of the road network to accommodate the facility including current traffic counts, details of truck routes and modelling of key intersections; – assessment of where off site infrastructure works are required as a result of traffic impacts including detailed plans of any proposed road upgrades; – access, including detailed consideration of various access options and justification for the proposed location of the main access points; and – parking. • **Heritage** – including Aboriginal cultural heritage;

	• **Design** – including details of building design and fit-out for handling of chemicals and spill containment (e.g. bunding and vehicle loading/unloading areas); • **Fire and incident management** – including technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill cleanup equipment and fire management and containment measures; and **Cumulative impacts** – particularly in relation to air, noise and traffic associated with other nearby industrial operations.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. These documents should be included as part of the EIS rather than as separate documents.
Consultation	During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with: • Newcastle City Council; • Environment Protection Authority; • NSW Office of Water; • Roads and Maritime Services; • Hunter Water Corporation; • WorkCover NSW; and • Newcastle Ports Authority. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.
Further consultation after 2 years	If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director General in relation to the requirements for lodgement.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, the following attachment contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development.

ATTACHMENT 1
Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:
http://www.planning.nsw.gov.au
http://www.bookshop.nsw.gov.au
http://www.publications.gov.au
http://www.newcastle.nsw.gov.au

Policies, Guidelines and Plans

Aspect	Policy /Methodology
Hazard and Risk	
	AS/NZS 4360:2004 Risk Management
	HB 203:2006 Environmental Risk Management – Principals and Process
	State Environmental Planning Policy No 33– Hazardous and Offensive Development (SEPP 33)
	Planning Advisory Paper No. 6 – Guidelines for Hazardous Analysis (DUAP)
	Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning (DUAP)
	Newcastle and Kooragang Island Area Risk Assessment Study, 1992
Soil and Water	
Soil	Acid Sulfate Soil Manual (ASSMAC)
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC & NHMRC)
	National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC)
	State Environmental Planning Policy No. 55 – Remediation of Land
	Managing Land Contamination - Planning Guidelines SEPP 55 – Remediation of Land (DUAP and EPA)
	Rural Land Capability Mapping
	Agricultural Land Classification
Surface Water	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems - Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems - Use of Reclaimed Water (ARMCANZ/ANZECC)
	National Water Quality Management Strategy - Guidelines For Water Recycling: Managing Health And Environmental Risks (Phase1) (EPHC, NRMMC & AHMC)
	National Water Quality Management Strategy - Guidelines For Water Recycling: Managing Health And Environmental Risks (Phase1) (EPHC, NRMMC & AHMC)
	Managing Urban Stormwater: Council Handbook. Draft (EPA)

	Managing Urban Stormwater: Treatment Techniques (EPA)
	Managing Urban Stormwater: Source Control. Draft (EPA)
	Managing Urban Stormwater: Soils & Construction (Landcom)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	Floodplain Risk Management Guideline: Practical Consideration of Climate Change (DECC)
Groundwater	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	NSW State Groundwater Policy Framework Document (DLWC)
	NSW State Groundwater Quality Protection Policy (DLWC)
	NSW State Groundwater Quantity Management Policy (DLWC) Draft
	The NSW State Groundwater Dependent Ecosystem Policy (DLWC)
	Guidelines for the Assessment and Management of Groundwater Contamination (DECC) Draft
Air Quality	
	Protection of the Environment Operations (Clean Air) Regulations 2010
	Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
Odour	
	Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW (DEC)
	Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (DEC)
Greenhouse Gas	
	National Greenhouse Accounts (NGA) Factors
	Guidelines for Energy Savings Action Plans (DEUS)
Noise	
	NSW Industrial Noise Policy (DECC)
	NSW Road Noise Policy (OEH)
	Environmental Noise Control Manual (DECC)
Waste	
	Waste Avoidance and Resource Recovery Strategy (Resource NSW)
	Waste Classification Guidelines (DECC)
	Protection of the Environment Operations (Waste) Regulations 2005
Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
	Road and Related Facilities, EIS Guidline (DoPI)
Heritage	
	Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC)
Non-Indigenous	NSW Heritage Manual (NSW Heritage Office & DUAP)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)

ATTACHMENT 2

Public Authority Responses to Request for Key Issues

EPA
ENVIRONMENT PROTECTION AUTHORITY

PCU030477

Department of Planning
Received
8 FEB 2012
Scanning Room

Our reference: DOC12/3422,
File No. LIC12/62
Contact: Hamish Rutherford
(02) 4908 6824

Department of Planning and Infrastructure
GPO Box 39
SYNDEY NSW 2001

Attention: Mr Chris Ritchie

Dear Sir/Madam

REQUEST FOR KEY ISSUES AND ASSESSMENT REQUIREMENTS
STATE SIGNIFICANT DEVELOPMENT –
AMMONIUM NITRATE STORAGE AND DISTRIBUTION FACILITY
CRAWFORDS FREIGHTLINES – LOT 12, DP 625053, 158 OLD MAITLAND ROAD, SANDGATE

Reference is made to your letter dated 19 January 2012 inviting the Environment Protection Authority ("the EPA") provide details of key issues and its assessment requirements to be included in the Director-General's Requirements ("DGRs") for the preparation of an Environmental Impact Statement ("EIS") in respect of above State Significant Development application, pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* ("EP&A Act").

The EPA has reviewed the details of the project provided in the background documentation prepared by Environmental Resources Management Australia Pty Ltd ("ERM"), on behalf of Crawfords Freightlines Pty Ltd, dated 12 January 2012. The EPA has identified the information it requires to be covered in the EIS. In summary the EPA considers that the key environmental aspects of this proposal are:

- impacts on water quality;
- chemicals and hazardous materials;
- Impacts on aboriginal cultural heritage;
- impacts on air quality,
- impacts on noise amenity,

The proponent should ensure that the EIS is sufficiently comprehensive and detailed to allow the EPA to determine the extent of the impacts of the proposal. In particular, the requirements of Section 45 of the *Protection of the Environment Operations Act 1997* ("POEO Act") must be addressed.

The EPA has identified the information it requires to assess the proposal in Attachment A. In carrying out the assessment the applicant should refer to the relevant guidelines in Attachment B and also any industry codes of practice and best environmental management practice guidelines.

The EPA requests 2 hard and 4 electronic (CD) copies of the EIS for assessment be delivered to the EPA's Regional Manager – Hunter at PO Box 488G, Newcastle 2300. The electronic copies should be provided in sections, or parts of each section, of not greater than 10 megabytes per section.

PO Box 488G Newcastle NSW 2300
117 Bull Street, Newcastle West NSW 2302
Tel: (02) 4908 6800 Fax: (02) 4908 6810
ABN 30 841 387 271
www.environment.nsw.gov.au

The proponent should be aware that any commitments made in the EIS may be formalised as licence or approval conditions. Consequently, pollution control or conservation measures should not be proposed if they are impractical, unrealistic or beyond the financial viability of the development. It is important that all conclusions are supported by adequate data.

If you require any further information regarding this matter please contact Hamish Rutherford on (02) 4908 6824.

Yours sincerely

3 FEB 2012

MARK HARTWELL
Head Regional Operations Unit – Hunter
Environment Protection Authority

Encl: "Attachment A – Recommended Director General's Requirements for Crawfords Freightliners AN Storage and Distribution Facility."
"Attachment B – Guidance Material"

Attachment A

NSW Environment Protection Authority
Recommended Director General's Requirements (DGRs)
For
Crawfords Freightlines –
Ammonium Nitrate Storage and Distribution Facility
Environmental Impact Statement (EIS)

Environmental impacts of the project

1. Impacts related to the following environmental issues need to be assessed, quantified and reported on:
   - Water and Soils
     - Acid sulphate soils
     - Contaminated sites
     - Flooding and coastal erosion
     - Soils - general
     - Water quality and discharges
   - Chemicals and Hazardous materials
   - Aboriginal cultural heritage
   - Air Issues
     - air quality
     - greenhouse gas
   - Noise and vibration
   - Waste including:
     - General waste – any proposal

Environmental Impact Statements (EIS's) should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant legislative requirements and guidelines mentioned. A list of guidelines is provided in **Attachment B** to assist the proponent.

Licensing requirements

1. On the basis of the information submitted to date, it appears the proposal is a scheduled activity in respect of "Chemical Storage – General Chemicals Storage" under the *Protection of the Environment Operations Act 1997* (POEO Act) and will therefore require an Environment Protection Licence (EPL) if approval is granted. The EIS should address the requirements of Section 45 of the POEO Act determining the extent of each impact and providing sufficient information to enable the EPA to determine appropriate limits for the EPL.

2. Should project approval be granted, the proponent will need to make a separate application to the EPA for an EPL for the proposed facility prior to undertaking any on site works. Additional information is available through the EPA's *Guide to Licensing* document : (www.environment.nsw.gov.au/licensing/licenceguide.htm).

SPECIFIC ISSUES

Water and soils

Acid sulphate soils

1. The potential impacts of the development on acid sulfate soils must be assessed in accordance with the relevant guidelines in the *Acid Sulphate Soils Manual* (Stone *et al.* 1998) and the *Acid Sulphate Soils Laboratory Methods Guidelines* (Ahern *et al.* 2004).

2. Describe mitigation and management options that will be used to prevent, control, abate or minimise potential impacts from the disturbance of acid sulfate soils associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

Contaminated sites assessment and remediation

1. The EIS should include an assessment of the contaminated site that is conducted in accordance with the guidelines made or approved under section 105 of the *Contaminated Land Management Act 1997*, for example: *Guidelines for Consultants Reporting on Contaminated Sites (EPA, 2000), Guidelines for the NSW Site Auditor Scheme - 2nd edition (DEC, 2006), Sampling Design Guidelines (EPA, 1995), National Environment Protection (Assessment of Site Contamination) Measure 1999* (or update).

2. The EIS should provide the details on how the site contamination will be remediated and/or managed so that the site is, or can be, made suitable for the proposed use.

3. All reports should be prepared in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites* (EPA, 2000).

4. The EIS should specify whether or not a site auditor, accredited under the *Contaminated Land Management Act 1997*, has been or will be engaged to issue a site audit statement to certify on the suitability of the current or proposed uses.

Flooding and coastal erosion

The EIS should include an assessment of the following referring to the relevant guidelines in Attachment 2:

1. Whether the proposal is consistent with any floodplain risk management plans.

2. Whether the proposal is compatible with the flood hazard of the land.

3. Whether the proposal will significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties.

4. Whether the proposal will significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.

5. Whether the proposal incorporates appropriate measures to manage risk to life from flood.

6. Whether the proposal is likely to result in unsustainable social and economic costs to the community as a consequence of flooding.

Soil issues - general

The EIS should include:

1. An assessment of potential impacts on soil and land resources should be undertaken, being guided by *Soil and Landscape Issues in Environmental Impact Assessment* (DLWC 2000). The nature and extent of any significant impacts should be identified. Particular attention should be given to:
   a. Soil erosion and sediment transport - in accordance with *Managing urban stormwater: soils and construction*, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008).
   b. Mass movement (landslides) – in accordance with *Landslide risk management* guidelines presented in Australian Geomechanics Society (2007).
   c. Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets which includes *Site Investigations for Urban Salinity* (DLWC, 2002).

2. A description of the mitigation and management options that will be used to prevent, control, abate or minimise identified soil and land resource impacts associated with the project. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

Water

Describe Proposal

1. Describe the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.

2. Demonstrate that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.

3. Where relevant include a water balance for the development including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

Background Conditions

4. Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the proposal.

   Proponents are generally only expected to source available data and information. However, proponents of relatively large and/or high risk developments may be required to collect some ambient water quality / river flow / groundwater data to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could also include, for example:

   - water chemistry
   - a description of receiving water processes, circulation and mixing characteristics and hydrodynamic regimes
   - lake or estuary flushing characteristics
   - sensitive ecosystems or species conservation values
   - specific human uses (e.g. fishing, proximity to recreation areas)
   - a description of any impacts from existing industry or activities on water quality

- a description of the condition of the local catchment e.g. erosion, soils, vegetation cover, etc.
- an outline of baseline groundwater information, including, for example, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment
- historic river flow data

5. State the Water Quality Objectives for the receiving waters relevant to the proposal. These refer to the community's agreed environmental values and human uses endorsed by the NSW Government as goals for ambient waters (http://www.environment.nsw.gov.au/ieo/index.htm). Where groundwater may be impacted the assessment should identify appropriate groundwater environmental values.

6. State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC (2000) Guidelines for Fresh and Marine Water Quality (http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality).

7. State any locally specific objectives, criteria or targets which have been endorsed by the NSW Government.

Impact Assessment

8. Describe the nature and degree of impact that any proposed discharges will have on the receiving environment.

   - Depending on the nature, scale and/or risk of the proposal, this could include specific requirements to consider impacts on, for example:
     - water circulation, current patterns, water chemistry and other appropriate characteristics such as clarity, temperature, nutrient and toxicants
     - changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, and groundwater)
     - disturbance of acid sulphate soils and potential acid sulphate soils
     - stream bank stability and impacts on macro invertebrates
   - Depending on the nature, scale and/or risk of the proposal, modelling, monitoring, or both, may need to be undertaken to assess the potential impact of discharges on the receiving environment. If modelling is required to assess the potential impact of any discharge(s), this could include, for example:
     - a range of scenarios that encompass any variations in discharge quality and quantity as well as the relevant range of environmental conditions of the receiving waters. The scenarios could describe a set of worst-case conditions and typical conditions to ensure that both acute and chronic impacts are assessed
     - assumptions used in the modelling, including identification and discussion of the limitations and assumptions to ensure full consideration of all factors, including uncertainty in predictions.

9. Assess impacts against the relevant ambient water quality outcomes. Demonstrate how the proposal will be designed and operated to:
   - protect the Water Quality Objectives for receiving waters where they are currently being achieved; and
   - contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.

10. Where a discharge is proposed that includes a mixing zone, the proposal should demonstrate how wastewater discharged to waterways will ensure the ANZECC (2000) water quality criteria for relevant chemical and non-chemical parameters are met at the edge of the initial mixing zone of the discharge, and that any impacts in the initial mixing zone are demonstrated to be reversible.

11. Assess impacts on groundwater and groundwater dependent ecosystems.

12. Describe how stormwater will be managed both during and after construction.

Monitoring

13. Describe how predicted impacts will be monitored and assessed over time.

- For relatively large and/or high risk developments, proponents should develop a water quality and aquatic ecosystem monitoring program to monitor the responses for each component or process that affects the Water Quality Objectives that includes, for example:
  - adequate data for evaluating compliance with water quality standards and/or Water Quality Objectives
  - measurement of pollutants identified or expected to be present in any discharge
- Water quality monitoring should be undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutant in NSW* (2004) (http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf).

Waste, chemicals and hazardous materials

General waste – any proposal

The EIS should:

1. Include a detailed plan for in-situ classification of waste material, including the sampling locations and sampling regime that will be employed to classify the waste, particularly with regards to the identification of contamination hotspots.

2. Identify, characterise and classify all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste.
   Note: All waste must be classified in accordance with the EPA's *Waste Classification Guidelines*.

3. Identify, characterise and classify all waste that is proposed to be disposed of to an offsite location, including proposed quantities of the waste and the disposal locations for the waste. This includes waste that is intended for re-use or recycling.
   Note: All waste must be classified in accordance with the EPA's *Classification Guidelines*.

4. Include a commitment to retaining all sampling and classification results for the life of the project to demonstrate compliance with the EPA's *Waste Classification Guidelines*.

5. Provide details of how waste will be handled and managed onsite to minimise pollution, including:

   a) Stockpile location and management

- Labelling of stockpiles for identification, ensuring that all waste is clearly identified and stockpiled separately from other types of material (especially the separation of any contaminated and non-contaminated waste).
- Proposed height limits for all waste to reduce the potential for dust and odour.
- Procedures for minimising the movement of waste around the site and double handling.
- Measures to minimise leaching from stockpiles into the surrounding environment, such as sediment fencing, geofabric liners etc.

b) Erosion, sediment and leachate control including measures to be implemented to minimise erosion, leachate and sediment mobilisation at the site during works. The EIS should show the location of each measure to be implemented. The Proponent should consider measures such as:

- Sediment traps
- Diversion banks
- Sediment fences
- Bunds (earth, hay, mulch)
- Geofabric liners
- Other control measures as appropriate

The Proponent should also provide details of:

- how leachate from stockpiled waste material will be kept separate from stormwater runoff;
- treatment of leachate through a wastewater treatment plant (if applicable); and
- any proposed transport and disposal of leachate off-site.

6. Provide details of how the waste will be handled and managed during transport to a lawful facility. If the waste possesses hazardous characteristics, the Proponent must provide details of how the waste will be treated or immobilised to render it suitable for transport and disposal.

7. Include details of all procedures and protocols to be implemented to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment.

8. Include a statement demonstrating that the Proponent is aware of the EPA's requirements with respect to notification and tracking of waste.

9. Include a statement demonstrating that the Proponent is aware of the relevant legislative requirements for disposal of the waste, including any relevant Resource Recovery Exemptions, as gazetted by the EPA from time to time.

10. Outline contingency plans for any event that affects operations at the site that may result in environmental harm, including: excessive stockpiling of waste, volume of leachate generated exceeds the storage capacity available on-site etc.

Chemicals and Hazardous Materials

The EIS should detail the handling, storage and management of all chemicals, in particular dangerous goods, at the premises in accordance with the relevant Australian Standards or codes.

Aboriginal cultural heritage

The EPA recommends that the following key issues be addressed by the proponent in preparing the EA.

Existing Aboriginal cultural heritage values

The EPA notes the existence of numerous registered Aboriginal sites in the regional locality. It is recommended that the proponent consider any potential impacts of the proposal on these known sites, the sensitivity and significance of these sites to the traditional Aboriginal knowledge holders and any relationship that may exist between these sites and any Aboriginal cultural heritage values of the project area.

Impacts of the project on Aboriginal cultural heritage values

Standard requirements:

1. The EIS must address and document the information requirements set out in the draft '*Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*' (Department of Environment and Conservation, 2005). This document is available from DP&I upon request.

2. The EIS must include surveys by suitably qualified archaeological consultants in consultation with all of the local Aboriginal knowledge holders.

3. The EIS should identify the nature and extent of impacts on Aboriginal cultural heritage values across the project area and clearly articulate strategies proposed to avoid/minimise these impacts. If impacts are proposed as part of the final development, clear justification for such impacts should be provided.

4. The EIS must assess and document the archaeological and Aboriginal significance of the site's Aboriginal cultural heritage values.

5. Describe the actions that will be taken to avoid or mitigate impacts of the project on Aboriginal cultural heritage values. This must include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented. Any proposed methodology for Aboriginal cultural heritage investigation should reflect best practice standards recommended by the EPA in the '*Code of Practice for Archaeological Investigations of Objects in New South Wales (2010)*'. This Code or Practice is available online at:
   http://www.environment.nsw.gov.au/licences/archinvestigations.htm

6. The EIS must provide documentary evidence to demonstrate that effective community consultation with Aboriginal communities has been undertaken in assessing impacts, developing protection and mitigation options and making final recommendations. The EPA supports broad-based Aboriginal community consultation and as a guide the EPA's '*Aboriginal cultural heritage consultation requirements for proponents 2010*' provides a useful model to follow. This requirement is available on the EPA's website at:
   http://www.environment.nsw.gov.au/licences/consultation.htm

7. If impacts on Aboriginal cultural heritage values are proposed as part of the final development, an assessment of the proposed impacts in the context of '*inter generational equity*' and cumulative impact must be undertaken. This assessment must examine both cultural and archaeological perspectives equally at both the local and regional levels, with consideration given to the site level and broader landscape level.

Note: If the EIS is relying on past surveys it is critical to confirm that the surveys are consistent with the requirements of the above State Significant Development guidelines. Further, whilst there may be no requirement for obtaining an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974* (NPW Act) for projects approved under the State Significant Development

requirements of the *Environmental Planning and Assessment Act 1979*, there are other sections of the NPW Act which remain valid. This includes the requirement to obtain a Care Agreement for salvaged objects (Section 85) and reporting to the EPA on the status of new or impacted Aboriginal sites (Section 89A).

Notes:

1. An Aboriginal Site Impact Recording Form (http://www.environment.nsw.gov.au/licences/DECCAHIMSSiteRecordingForm.htm) must be completed and submitted to the Aboriginal Heritage Information Management System (AHIMS) Registrar, for each AHIMS site that is harmed through archaeological investigations required or permitted through these environmental assessment requirements.

2. Under section 89A of the *National Parks and Wildlife Act* 1974, it is an offence for a person not to notify the EPA of the location of any Aboriginal object the person becomes aware of, not already recorded on the Aboriginal Heritage Information Management System (AHIMS). An AHIMS Site Recording Form should be completed and submitted to the AHIMS Registrar (http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm), for each Aboriginal site found during investigations.

Air issues

Air quality

The EIS should include a detailed air quality impact assessment (AQIA). The AQIA should:

1. Assess the risk associated with potential discharges of fugitive and point source emissions for all stages of the proposal. Assessment of risk relates to environmental harm, risk to human heath and amenity.

2. Justify the level of assessment undertaken on the basis of risk factors, including but not limited to:
    a. proposal location;
    b. characteristics of the receiving environment; and
    c. type and quantity of pollutants emitted.

3. Describe the receiving environment in detail. The proposal must be contextualised within the receiving environment (local, regional and inter-regional as appropriate). The description must include but need not be limited to:
    a. meteorology and climate;
    b. topography;
    c. surrounding land-use; receptors; and
    d. ambient air quality.

4. Include a detailed description of the proposal. All processes that could result in air emissions must be identified and described. Sufficient detail to accurately communicate the characteristics and quantity of all emissions must be provided.

5. Include a consideration of 'worst case' emission scenarios and impacts at proposed emission limits.

6. Account for cumulative impacts associated with existing emission sources as well as any currently approved developments linked to the receiving environment.

7. Include air dispersion modelling where there is a risk of adverse air quality impacts, or where there is sufficient uncertainty to warrant a rigorous numerical impact assessment. Air dispersion modelling must be conducted in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (2005) http://www.environment.nsw.gov.au/resources/air/ammodelling05361.pdf.

8. Demonstrate the proposal's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations Act 1997* and the Protection of the Environment Operations (Clean Air) Regulation 2010.

9. Provide an assessment of the project in terms of the priorities and targets adopted under the NSW State Plan 2010 and its implementation plan 'Action for Air'.

10. Detail emission control techniques/practices that will be employed by the proposal.

Greenhouse gas emissions

1. The EIS should include a comprehensive assessment of, and report on, the project's predicted greenhouse gas emissions (tCO2e). Emissions should be reported broken down by:
   a) direct emissions (scope 1 as defined by the Greenhouse Gas Protocol – see reference below),
   b) indirect emissions from electricity (scope 2), and
   c) upstream and downstream emissions (scope 3)

   before and after implementation of the project, including annual emissions for each year of the project (construction, operation and decommissioning).

2. The EIS should include an estimate of the greenhouse emissions intensity (per unit of production). Emissions intensity should be compared with best practice if possible.

3. The emissions should be estimated using an appropriate methodology, in accordance with NSW, Australian and international guidelines (see below).

4. The proponent should also evaluate and report on the feasibility of measures to reduce greenhouse gas emissions associated with the project. This could include a consideration of energy efficiency opportunities or undertaking an energy use audit for the site.

Guidance Material

- The Greenhouse Gas Protocol: Corporate Standard, World Council for Sustainable Business Development & World Resources Institute http://www.ghgprotocol.org/standards/corporate-standard
- National Greenhouse Accounts (NGA) Factors, Australian Department of Climate Change (Latest release), http://www.climatechange.gov.au/publications/greenhouse-acctg/national-greenhouse-factors.aspx
- National Greenhouse and Energy Reporting System, Technical Guidelines (latest release) http://www.climatechange.gov.au/en/government/initiatives/national-greenhouse-energy-reporting/tools-resources.aspx
- National Carbon Accounting Toolbox http://www.climatechange.gov.au/government/initiatives/ncat.aspx
- Australian Greenhouse Emissions Information System (AGEIS) http://ageis.climatechange.gov.au/

Noise and vibration

1. In relation to noise, the following matters should be addressed (where relevant) as part of the EIS.

General

2. Construction noise associated with the proposed development should be assessed using the *Interim Construction Noise Guideline* (DECC, 2009). http://www.environment.nsw.gov.au/noise/constructnoise.htm

3. Vibration from all activities (including construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (DEC, 2006). http://www.environment.nsw.gov.au/noise/vibrationguide.htm

4. If blasting is required for any reasons during the construction or operational stage of the proposed development, blast impacts should be demonstrated to be capable of complying with the guidelines contained in *Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration* (ANZECC, 1990). http://www.environment.nsw.gov.au/noise/blasting.htm

Industry

5. Operational noise from all industrial activities (including private haul roads and private railway lines) to be undertaken on the premises should be assessed using the guidelines contained in the *NSW Industrial Noise Policy* (EPA, 2000) and *Industrial Noise Policy Application Notes*. http://www.environment.nsw.gov.au/noise/industrial.htm

Road

6. Noise on public roads from increased road traffic generated by land use developments should be assessed using the guidelines contained in the *Environmental Criteria for Road Traffic Noise* (EPA, 1999). http://www.environment.nsw.gov.au/noise/traffic.htm

7. Noise from new or upgraded public roads should be assessed using the *Environmental Criteria for Road Traffic Noise* (EPA, 1999). http://www.environment.nsw.gov.au/noise/traffic.htm

Railway

8. Noise from increased rail traffic on the NSW Rail Network resulting from rail traffic generating development (e.g. an extractive industry) should be assessed using the environmental assessment requirements for rail traffic-generating developments available at http://www.environment.nsw.gov.au/noise/railnoise.htm

Attachment B – Guidance Material

Title	Web address
Relevant Legislation	
Contaminated Land Management Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+140+1997+cd+0+N
Environmentally Hazardous Chemicals Act 1985	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+14+1985+cd+0+N
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N

Title	Web address
National Parks and Wildlife Act 1974	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
	Licensing
OEH Guide to Licensing	www.environment.nsw.gov.au/licensing/licenceguide.htm
	Aboriginal Cultural Heritage
Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (2005)	Available from DoPI.
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	http://www.environment.nsw.gov.au/licences/consultation.htm
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	http://www.environment.nsw.gov.au/licences/archinvestigations.htm
Aboriginal Site Impact Recording Form	http://www.environment.nsw.gov.au/licences/DECCAHIMSSiteRecordingForm.htm
	Air Issues
Air Quality	
Approved methods for modelling and assessment of air pollutants in NSW (2005)	http://www.environment.nsw.gov.au/resources/air/ammodelling05361.pdf
POEO (Clean Air) Regulation 2010	http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+642+2002+cd+0+N
Greenhouse Gas	
The Greenhouse Gas Protocol: Corporate Standard, World Council for Sustainable Business Development & World Resources Institute	http://www.ghgprotocol.org/standards/corporate-standard
National Greenhouse Accounts (NGA) Factors, Australian Department of Climate Change (Latest release),	http://www.climatechange.gov.au/publications/greenhouse-acctg/national-greenhouse-factors.aspx
National Greenhouse and Energy Reporting System, Technical Guidelines (latest release)	http://www.climatechange.gov.au/en/government/initiatives/national-greenhouse-energy-reporting/tools-resources.aspx
National Carbon Accounting Toolbox	http://www.climatechange.gov.au/government/initiatives/ncat.aspx
Australian Greenhouse Emissions Information System (AGEIS)	http://ageis.climatechange.gov.au/
	Noise and Vibration
Interim Construction Noise Guideline (DECC, 2009)	http://www.environment.nsw.gov.au/noise/constructnoise.htm
Assessing Vibration: a technical	http://www.environment.nsw.gov.au/noise/vibrationguide.htm

Title	Web address
guideline (DEC, 2006)	
Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990)	http://www.environment.nsw.gov.au/noise/blasting.htm
NSW Industrial Noise Policy (EPA 2000)	http://www.environment.nsw.gov.au/noise/industrial.htm
Industrial Noise Policy Application Notes	http://www.environment.nsw.gov.au/noise/applicnotesindustnoise.htm
Environmental Criteria for Road Traffic Noise (EPA, 1999)	http://www.environment.nsw.gov.au/noise/traffic.htm
Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (DECC, 2007)	http://www.environment.nsw.gov.au/noise/railinfranoise.htm
Environmental assessment requirements for rail traffic-generating developments	http://www.environment.nsw.gov.au/noise/railnoise.htm

Waste, Chemicals and Hazardous Materials and Radiation

Waste

Waste Classification Guidelines (DECC, 2008)	http://www.environment.nsw.gov.au/waste/envguidlns/index.htm
DECCW Resource recovery exemption	http://www.environment.nsw.gov.au/waste/RRecoveryExemptions.htm
POEO (Waste) Regulations 2005	http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+497+2005+cd+0+N

Water and Soils

Acid sulphate soils

Acid Sulphate Soils Planning Maps	http://canri.nsw.gov.au/download/
Acid Sulphate Soils Manual (Stone *et al.* 1998)	Manual available for purchase from: http://www.landcom.com.au/whats-new/the-blue-book.aspx Chapters 1 and 2 are on DoP's Guidelines Register at: Chapter 1 Acid Sulphate Soils Planning Guidelines: http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Planning%20Guidelines.pdf Chapter 2 Acid Sulphate Soils Assessment Guidelines: http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Assessment%20Guidelines.pdf
Acid Sulphate Soils Laboratory Methods Guidelines (Ahern *et al.* 2004)	http://www.derm.qld.gov.au/land/ass/pdfs/lmg.pdf This replaces Chapter 4 of the Acid Sulphate Soils Manual above.

Contaminated Sites Assessment and Remediation

Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land	http://www.planning.nsw.gov.au/DevelopmentAssessments/RegisterofDevelopmentAssessmentGuidelines/tabid/207/language/en-US/Default.aspx
Guidelines for Consultants Reporting on	http://www.environment.nsw.gov.au/resources/clm/97104consulta

From: David Paine <dpaine@ncc.nsw.gov.au>
To: '"andrew.hartcher@planning.nsw.gov.au"' <andrew.hartcher@planning.nsw...
Date: 2/16/2012 8:39 am
Subject: FW: Request for Key Issues and Assessment requirements - Ammonium Nitrate Storage and Distribution facility

Hi Andrew,
I refer to your letter dated 19/1/12 re: the above proposed development and the request for DGRs requirements from Crawfords Freightlines Pty Ltd. Council believe that the key environmental issues for assessment in relation to the proposed facility have been covered by the various correspondence included in the information attached to the DoP letter including the issues raised by Council in our previous comments and the subsequent audit and notice\order served by Council on Crawfords.

In summary they are:

* Stormwater and wastewater management - to prevent contamination of nearby waters including SEPP14 wetland from contamination by spilt ammonium nitrate

* Contamination - previous contaminating activities have been carried out on the site. An assessment of the suitability of the site for the proposed use should be made in accordance with SEPP55 and Element 4.02 of the NDCP 2005.

* Material handling - appropriate handling of ammonium nitrate to ensure that spills or dust emissions are minimized.

* Sealing of the site - appropriate sealing of all vehicle traffic and storage areas of the site to prevent dust and sediment and erosion control impacts and allow appropriate stormwater management to occur.

* Noise - hours of operation and traffic and transport noise including rail and road transport. Although the premises is fairly isolated, there are some residential properties that may be affected by transport noise

* Traffic - Assess the likely impact of traffic movements generated by the proposal on the safety and efficiency of the local road network. In this regard, the application is be supported by a Traffic Impact Statement.

I also note that the premises may be affected by acid sulfate soils for works below ground level. Appropriate consideration and assessment will be required in relation to any proposed earthworks.

regards

David Paine Senior Development Officer (Planning) | The City of Newcastle
City Administration Centre, 282 King Street | PO Box 489, Newcastle NSW 2300
Phone 4974 2747 | Fax +61 2 4974 2701 | Email
dpaine@ncc.nsw.gov.au<mailto:dpaine@ncc.nsw.gov.au>

The City of Newcastle
Web: http://www.newcastle.nsw.gov.au
E-mail: mail@ncc.nsw.gov.au

From: "Fernando, Sohan" <Sohan.Fernando@workcover.nsw.gov.au>
To: "Chris.ritchie@planning.nsw.gov.au" <Chris.ritchie@planning.nsw.gov.au>,...
CC: Lilia Donkova <Lilia.Donkova@planning.nsw.gov.au>
Date: 1/31/2012 4:51 pm
Subject: Ammonium Nitrate Storage & distribution facility - Crawfords Sandgate

Hi Chris/Andrew,

I have had a look at the documents sent by you and my comments are:

1. All three toxic combustion products identified are heavier than air. If the hazard analysis has not taken this into consideration, the matter must be addressed.
2. The behaviour of the toxic combustion products should be discussed/addressed in conditions when a temperature or atmospheric inversion occurs. Under such conditions, it is known that combustion products (even though they may be assumed to be buoyant due to a temperature above ambient) can slump to ground level at distances greater than those estimated under no inversion conditions.
3. Dispersion results on page 26 show values in ppm and mg/m3. The equivalent value or conversion should be included.

Regards

Sohan Fernando
Senior Safety Analyst
Major Hazard Facilities Team
WorkCover NSW
Tel: 8281 6485 Fax:9271 6485

Transport
Roads & Maritime
Services

6 February 2012

SF2012/001554
CR2012/000733
BK

Director, Mining and Industry Projects
GPO Box 39
SYDNEY NSW 2001

Attention: Mr Andrew Hartcher

Dear Mr Hartcher,

MAITLAND ROAD (HW10) AND INNER CITY BY-PASS (HW23): AMMONIUM NITRATE STORAGE AND DISTRIBUTION FACILITY, LOT 12 DP625053, OLD MAITLAND ROAD, SANDGATE – DIRECTOR GENERAL REQUIREMENTS

I refer to your letter dated 19 January 2012, received on 27 January 2012, requesting the provision of key issues which Roads and Maritime Services (RMS) believes should form part of the Director-Generals Environmental Assessment Requirements (DGR's) for the subject proposal.

The Environmental Assessment (EA) should refer to the following guidelines with regard to the traffic and transport impacts of the proposed development:

- Department of Planning EIS Guidelines
    - Road and Related Facilities
- RTA's *Guide to Traffic Generating Developments 2002*
    - Section 2 Traffic Impact Studies

A traffic and transport study shall be prepared in accordance with the RTA's *Guide to Traffic Generating Developments 2002* and is to include (but not be limited to) the following:

- Assessment of all relevant vehicular traffic routes and intersections for access to / from the subject area.
- Current traffic counts for all of the traffic routes and intersections.
- The anticipated additional vehicular traffic generated from both the construction and operational stages.

- The distribution on the road network of the trips generated by the proposed development. It is requested that the predicted traffic flows are shown diagrammatically to a level of detail sufficient for easy interpretation.

- Consideration of the traffic impacts on existing and proposed intersections and the capacity of the local and classified road network to safely and efficiently cater for the additional vehicular traffic generated by the proposed development during the construction and operational stages. The traffic impact shall also include the cumulative traffic impact of any other proposed developments in the area.

  Comment: As a minimum, RMS will require the study to include an assessment of the impacts of the proposed development on the intersection of Maitland Road and Old Maitland Road.

- Identify the necessary road network infrastructure upgrades that are required to maintain existing levels of service on both the local and classified road network for the development. In this regard, preliminary concept drawings shall be submitted with the EA for any identified road infrastructure upgrades. However, it should be noted that any identified road infrastructure upgrades will need to be to the satisfaction of RMS and Council.

- Intersection analysis (such as SIDRA) shall be submitted to determine the need for intersection and road capacity upgrades. The analysis shall include, but not be limited to the following:

  - Current traffic counts and 10 year traffic growth projections
  - With and without development scenarios
  - 95th percentile back of queue lengths
  - Delays and level of service on all legs for the relevant intersections
  - Electronic data for RMS review.

- Any other impacts on the local and classified road network including consideration of pedestrian, cyclist and public transport facilities and provision for service vehicles.

In addition to the above, RMS requests that the proponent undertake an analysis / risk assessment of the buffer zone required around the proposed facility to eliminate potential explosive impacts on the classified road network. Any proposals for storage and transport of explosive material must not compromise the safe and efficient operation of the classified road network, in particular, the extension of SH23 from Shortland to Sandgate, which is currently under construction. A review of Australian Standard AS2187.1 Table 3.2.3.2 indicates that:

  - Note 10 states that *"However, full Class B protected work distances should be used for roads if the nature of the traffic is e.g. constant, dense or fast, so that the reaction of drivers to a sudden blast would result in unacceptable damage or injury."*

RMS would not support a facility that requires the any closure of classified roads because of the storage or transport of explosive material.

It is recommended that the proponent discuss the project with RMS prior to commencing the preparation of the traffic and transport study and explosive risk assessment.

Newcastle City Council and the appropriate rail authority should also be consulted regarding requirements.

Yours sincerely,

Dave Young
Manager, Land Use Development
Infrastructure Services
Hunter Region

CC General Manager
Newcastle City Council

Department of Primary Industries
Office of Water

Contact Elizabeth Cala
Phone 02 4904 2533
Mobile 0459 807 128
Fax 02 4904 2503
Email elizabeth.cala@water.nsw.gov.au

Our ref ER 21774
Your ref SSD-5119

Mining and Industry Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Chris Ritchie

Dear Chris

Request for Key Issues and Assessment Requirements

State Significant Development Proposal – Ammonium Nitrate Storage and Distribution Facility

I refer to your letter of 19 January 2012 requesting details of key issues and assessment requirements for the above proposed project.

A summary of the NSW Office of Water's key issues and assessment requirements is set out below. Detailed advice on the Office of Water's assessment requirements is provided in the **Attachment A**, which should be read in full.

Water licensing – A water licence from the Office of Water is generally required to take water from a water source.[1] This licensing requirement is fundamental to sustainable water management as it facilitates water accounting, which ensures the total volume of water taken from a water source remains within defined extraction limits.

The Office of Water advises that the EIS should include a detailed assessment of water requirements for the proposed project. In particular, the EIS should demonstrate the following:

- An adequate and secure water supply is available for the life of the proposed project.
- Water supplies will be taken from an appropriately authorised and reliable supply.
- Any water licences required to authorise the taking of water can be obtained through application and/or trade.

To demonstrate the above, the following information is essential for inclusion in the EIS:

- Identification of water requirements for the life of the proposed project in terms of both volume and timing; identification of the water sources that water will be taken from; and identification of which water sources are the subject of a water sharing plan.

[1] Some exemptions apply, such as for basic landholder rights.

- Identification of any requirements (including potential requirements) to intercept groundwater; identification of the groundwater sources that may/will be intercepted; identification of which water sources are the subject of a water sharing plan; and details of predicted dewatering volumes.

Impacts on water sources – Water is a limited and precious resource and must be managed in a sustainable and integrated manner for the benefit of both present and future generations.[2]

The Office of Water advises that the EIS should include a detailed assessment of the potential impact of the proposed project on the water sources of the State. In particular, the EIS should include a detailed analysis of the following:

- the water sources, floodplains and dependent ecosystems likely to be affected by the proposed project, together with a detailed description of those water sources, floodplains and dependent ecosystems that are likely to be significantly affected,
- the likely impact on water sources, floodplains and dependent ecosystems of the proposed project, and
- a full description of the measures proposed to mitigate any adverse effects of the proposed project on water sources, floodplains and dependent ecosystems.

The above analysis should include the following:

- Description of the regional environment including surface water catchment, groundwater system, and dependent ecosystems.
- Predictive assessments of the impact of the proposed project on surface and groundwater sources, floodplains, dependent ecosystems, basic landholder rights to water and adjacent/downstream licensed water users, in particular with respect to:
    - water quality,
    - high priority groundwater dependent ecosystems identified in relevant water sharing plans, and
    - areas which are sensitive because of physical or biological factors such as acid sulphate soils and conservation areas.
- A commitment to adequate ongoing monitoring of surface and groundwater sources and dependent ecosystems within and adjacent to the proposed project area to verify predictive assessments.
- Analysis of options for the proposed project in terms of avoiding impacts on surface and groundwater sources, floodplains, dependent ecosystems, basic landholder rights to water and adjacent/downstream licensed water users. If the options analysis cannot demonstrate avoidance, then mitigation, remediation and rehabilitation options must be examined.
- Mitigation strategies to address unavoidable impacts on surface and groundwater sources, floodplains and dependent ecosystems, for the operational and post-operational phases of the proposed project.
- A commitment to restore any land, water sources and dependent ecosystems which are degraded by the proposed project.
- Justification of criteria regarding completion of any rehabilitation program.
- Contingency strategies linked to monitoring results and rehabilitation programs.

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[2] *Water Management Act 2000*, section 3.

If you require further information please contact Elizabeth Cala, Planning and Assessment Coordinator on (02) 4904 2533 at the Newcastle office.

Yours sincerely

Mark Mignanelli
Manager Major Projects, Mines and Assessment
9 February 2012

Key Issues and Assessment Requirements

State Significant Development Proposal – Ammonium Nitrate Storage and Distribution Facility

1. Legislation

The EIS is required to demonstrate that the proposed project is consistent with the objects of the *Water Management Act 2000*, and the water management principles prescribed in section 5 of that Act.

The EIS is required to demonstrate that the proposed project complies with the relevant requirements of applicable NSW water legislation, in particular:

- *Water Management Act 2000*, and
- *Water Act 1912*.

For further information, see http://www.water.nsw.gov.au/Water-management/Law-and-Policy/default.aspx

2. Water Sharing Plans

Water sharing plans (WSPs) are legally enforceable statutory plans under the *Water Management Act 2000*. WSPs provide rules for the sharing of water between the environment and water users, and also between different types of water users such as town water supply, rural domestic supply, stock watering, industry and irrigation.

The proposed project is located within the Newcastle Water Source under the *Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009*.

The EIS is required to demonstrate how the proposed project is consistent with the rules in this WSP.

3. Orders

The EIS is required to demonstrate that the proposed project complies with the relevant requirements of applicable orders made pursuant to NSW water legislation.

The following orders may be relevant to the proposed project:

- Harvestable Rights Orders – see http://www.water.nsw.gov.au/Water-licensing/Basic-water-rights/Harvesting-runoff/default.aspx, and
- embargo orders applying to coastal alluvial groundwater outside water sharing plan areas - see http://www.water.nsw.gov.au/Water-management/Water-availability/Groundwater/avail_ground_embago/default.aspx.

4. Policies and Guidelines

The EIS is required to identify state and federal water management policies and guidelines that are relevant to the proposed project. The EIS must detail the extent to which the proposed project is consistent with relevant policies and guidelines, and justify any inconsistencies.

The following water management policies and guidelines may be relevant to the proposed project:

- *The NSW State Rivers and Estuaries Policy* (1993),
- *The NSW State Groundwater Policy Framework Document* (1997) and its component policies, consisting of:

- *The NSW Groundwater Quality Protection Policy* (1998), and
- *The NSW State Groundwater Dependent Ecosystems Policy* (2002),

- *NSW Wetlands Policy* (2010),
- *NSW Coastal Policy* (1997),
- *NSW Water Extraction Monitoring Policy* (2007),
- *NSW Guidelines for Controlled Activities*, consisting of:
  - *Guidelines for in-stream works* (2010),
  - *Guidelines for laying pipes and cables in watercourses* (2010),
  - *Guidelines for outlet structures* (2010),
  - *Guidelines for riparian corridors* (2011),
  - *Guidelines for vegetation management plans* (2010), and
  - *Guidelines for water crossings* (2010),
- *National Water Quality Management Strategy*, including:
  - *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (2000),
  - *Australian and New Zealand Guidelines for Water Quality Monitoring and Reporting* (2000), and
  - *Guidelines for Groundwater Protection in Australia* (1995).

These water management policies and guidelines are available at: http://www.water.nsw.gov.au/Water-Management/Law-and-Policy/Key-policies/default.aspx.

Water management policies and guidelines which are relevant to specific assessment requirements are also cited below.

5. Strategies

The EIS is required to demonstrate that the proposed project is consistent with the following strategies:

- *NSW Water Conservation Strategy* (2000), and
- *NSW Salinity Strategy* (2000).

These strategies are available at: http://www.water.nsw.gov.au/Water-Management/Law-and-Policy/Key-policies/default.aspx.

6. Surface water

6.1 Water licences to take surface water

The EIS must identify all proposed surface water extraction.

The EIS must provide details of the purpose, location and expected annual extraction volumes of all proposed surface water extraction.

The EIS must detail the extent to which all proposed surface water extraction is consistent with *NSW Water Extraction Monitoring Policy* (2007).

The EIS must provide analysis of the proposed water supply arrangements against the rules for access licences and other applicable requirements of the *Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009*.

6.2 Water supply works

For water supply works which are proposed to be constructed or used for the purpose of taking water from a surface water source (such as a water pump[3]), the EIS must provide details regarding purpose, location, construction and expected annual extraction volumes.

For flood works,[4] drainage works[5] and water supply works which capture, store, convey, divert or impound water (such as a tank, dam, water pipe, irrigation channel, bank, levee, or weir),[6] the EIS must provide the following details:

- purpose, location, and construction,
- whether the work is on a watercourse,
- size, storage capacity and expected annual extraction volumes,
- whether the work is affected by flood flows,
- details of any proposal for shared use, rights and entitlement of the work, and
- for existing works:
    - date of construction,
    - legal status (i.e. approval status),
    - details of any proposal to change the purpose of the work,
    - whether the work may be affected by any changes in the hydraulic and/or energy regime occurring as a consequence of the proposed project, and
    - details of any remedial work required to maintain integrity.

If the proposed project involves the use of new or existing dams, the EIS must include a calculation of the maximum harvestable right dam capacity for the site - see http://www.water.nsw.gov.au/Water-licensing/Basic-water-rights/Harvesting-runoff/default.aspx.

Although State Significant Development does not require a water supply work approval (section 89J of the *Environmental Planning and Assessment Act 1979*), if the proposed project includes water supply works then the EIS must detail the extent to which the proposed project is consistent with the approval requirements for water supply works prescribed in section 97 of the *Water Management Act 2000*.

6.3 Surface water protection

The EIS must include an assessment of the impact of the proposed project on surface water sources.

In particular, the EIS should provide the following:

- Identification of all surface water sources within and adjacent to the proposed project area, including watercourses and wetlands, and details of conservation status (for example, SEPP 14 wetland, Ramsar wetland).
- Baseline monitoring of surface water quality and quantity for all watercourses within and adjacent to the proposed project area (minimum fortnightly data).
- Detailed description of any proposed development on watercourses including construction, clearing, draining, excavation, diversion and filling; an evaluation of the proposed methods

[3] As defined in the *Water Management Act 2000*, Dictionary section, paragraph (a).
[4] As defined in the *Water Management Act 2000*, Dictionary section.
[5] As defined in the *Water Management Act 2000*, Dictionary section.
[6] As defined in the *Water Management Act 2000*, Dictionary section, paragraphs (b)-(e).

of development; and detailed assessment of potential impacts in terms of vegetation, sediment movement, channel stability, water quality and hydraulic regime.

- Detailed description of surface water dependent ecosystems and existing surface water users within the area, and detailed assessment of any potential impacts on surface water dependent ecosystems and existing surface water users.
- Details of ongoing monitoring programs for surface water quality and quantity.
- Details of critical thresholds for negligible impacts to surface water sources.
- Detailed description of any measures to be incorporated into the proposed project to avoid or minimise long-term actual and potential impacts, particularly in respect of the natural hydrological regime, sediment movement patterns, riparian buffers and stormwater management.
- Contingency strategies to remediate, reduce or manage potential impacts, in particular:
    - reporting procedures for ongoing monitoring programs, including mechanism for transfer of information to the Office of Water,
    - identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency strategies would be initiated,
    - detailed description of the remedial measures or contingency strategies proposed, and
    - any funding assurances covering the anticipated post development maintenance cost, for example, stream rehabilitation maintenance, ongoing monitoring.
- Details of the extent to which the proposed project is consistent with *The NSW State Rivers and Estuaries Policy* (1993), *NSW Wetlands Policy* (2010) and the *Guidelines for Controlled Activities*.

Although State Significant Development does not require a controlled activity approval (section 89J of the *Environmental Planning and Assessment Act 1979*), if the proposed project involves controlled activities then the EIS must detail the extent to which the proposed project is consistent with the water management principles and approval requirements for controlled activities prescribed in section 5(7) and 97(4) respectively of the *Water Management Act 2000*.

7. Groundwater

7.1 Water licences to take groundwater

The EIS must identify all proposed groundwater extraction.

The EIS must provide details of the purpose, location and expected annual extraction volumes of all proposed groundwater extraction.

The EIS must detail the extent to which all proposed groundwater extraction is consistent with *NSW Water Extraction Monitoring Policy* (2007).

7.2 Water supply works to take groundwater

For all water supply works which are proposed to be constructed or used for the purpose of taking water from a groundwater source (such as water bores for the purpose of investigation, testing, extraction, dewatering and monitoring), the EIS must provide details regarding purpose, location, construction and expected annual extraction volumes.

Although State Significant Development does not require a water supply work approval (section 89J of the *Environmental Planning and Assessment Act 1979*), if the proposed project includes water supply works then the EIS must detail the extent to which the proposed project is consistent

with the approval requirements for water supply works prescribed in section 97 of the *Water Management Act 2000*.

7.3 Aquifer interference activities which intercept groundwater

For all proposed aquifer interference activities which may intercept groundwater (including activities which involve the penetration of an aquifer (such as an excavation) or the interference with water in an aquifer), the EIS must provide details regarding purpose, location, construction and expected annual extraction volumes.

The EIS must also detail the extent to which the proposed project is consistent with the water management principles and approval requirements for aquifer interference activities prescribed in section 5(8) and 97(6) respectively of the *Water Management Act 2000*.

7.4 Groundwater protection

The EIS must include an assessment of the impact of the proposed project on groundwater sources.

In particular, the EIS should provide the following:

- Identification of all groundwater sources which will be intersected or connected with as part of the proposed project.
- Baseline monitoring of groundwater quality and quantity within and adjacent to the proposed project area (minimum fortnightly data).
- Description of flow directions and rates, physical and chemical characteristics, and highest predicted groundwater table for aquifers within and adjacent to the proposed project area.
- Extent of alluvium within the proposed project area and details on the connectivity of aquifers to watercourses within the proposed project area.
- Details of any potential works likely to result in pollutants infiltrating into the groundwater.
- Details of proposed methods of waste water disposal and approval from the relevant authority.
- Identification of any groundwater source or aquifer that may be sterilised as a consequence of the proposed project.
- Detailed description of existing groundwater users within the area, and detailed assessment of any potential impacts on existing groundwater users.
- Detailed description of any measures to be incorporated into the proposed project to avoid or minimise long-term actual and potential environmental impacts, particularly in respect of groundwater pollution.
- Details of ongoing monitoring programs for groundwater quality and quantity.
- Details of critical thresholds for negligible impacts to groundwater sources.
- Contingency strategies to remediate, reduce or manage potential impacts, in particular:
    - reporting procedures for ongoing monitoring programs, including mechanism for transfer of information to the Office of Water,
    - identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency strategies would be initiated,
    - detailed description of the remedial measures or contingency strategies proposed, and
    - any funding assurances covering the anticipated post development maintenance cost, for example, ongoing groundwater monitoring.

- Details of the extent to which the proposed project is consistent with *The NSW State Groundwater Policy Framework Document* (1997) and *The NSW Groundwater Quality Protection Policy* (1998).

7.5 Groundwater Dependent Ecosystems

Groundwater dependent ecosystems (GDEs) rely on groundwater for their species composition and their natural ecological processes. Examples of ecosystems which depend on groundwater are wetlands, terrestrial vegetation such as red gum forests, ecosystems in streams fed by groundwater (gaining streams), limestone cave systems, springs, and hanging valleys and swamps.

The EIS should provide the following:

- Identification of GDEs (including potential GDEs) within and adjacent to the proposed project area, and details of conservation status (for example, high priority listing in WSP, SEPP 14 wetland, Ramsar wetland).
- Details of current GDE condition.
- Details of groundwater quality and quantity requirements for all GDEs.
- Details of a flora and fauna assessment for all GDEs, including macroinvertebrate and macrophyte diversity and abundance assessments.
- Detailed assessment of any potential impacts on GDEs.
- Detailed description of any measures to be incorporated into the proposed project to avoid or minimise adverse impacts on GDEs, including measures to:
    - avoid pollution or causing adverse changes in groundwater quality, and
    - rehabilitate degraded groundwater systems where practical.
- Details of ongoing monitoring and protection programs for potential offset areas.
- Critical thresholds for negligible impacts.
- Contingency strategies to remediate, reduce or manage potential impacts, in particular:
    - reporting procedures for ongoing monitoring programs, including mechanism for transfer of information to the Office of Water,
    - identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency strategies would be initiated,
    - detailed description of the remedial measures or contingency strategies proposed, and
    - any funding assurances covering the anticipated post development maintenance cost, for example, ongoing groundwater monitoring.
- Details of the extent to which the proposed project is consistent with *The NSW State Groundwater Dependent Ecosystems Policy* (2002) and *NSW Wetlands Policy* (2010).

8. Rehabilitation

The EIS must provide the following:

- Details of proposed rehabilitation measures to restore any land, water sources and dependent ecosystems which are degraded by the proposed project.
- Justification of criteria regarding completion of any rehabilitation program.

- Details of the measures to be undertaken to ensure that sufficient resources are available to implement the proposed rehabilitation program.
- Details of measures for the ongoing management of the site following the cessation of the proposed project.

END ATTACHMENT A

9 February 2012