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REVISION CONTROL PAGE

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ATTACHMENTS

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2-250-329-PRO-TRE-0122-att 01	Hazardous Material Register	00

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1. PURPOSE

The purpose of this Construction Hazardous Materials Management Plan is to identify all hazardous materials, including goods and/or substances, to be used during TAN Burrup Project execution so as to prevent adverse environmental impact and to minimise risk to public health due to handling, use, storing and transporting of such substances. The main aim of this Plan is to ensure hazardous materials are handled, used, stored, transported and removed from the site in an appropriate manner that minimizes environmental impact generated on workers and, especially, on the surrounding community, sensitive habitants, terrestrial fauna and vegetation and rock art.

This document is issued following the Public Environmental Review commitments and in compliance with the requirements set forth in the Commonwealth Approval, condition 7(c) and all applicable statutory laws and regulations, COMPANY Corporate and Project requirements and CONTRACTOR requirements. This Plan needs to be read together with the Construction Environmental Management Plan (2-250-329-PRO-TRE-0111), in which general issues such as roles, responsibilities, environmental monitoring, inspection, auditing and reporting are described.

2. SCOPE

This Construction Hazardous Materials Management Plan shall be applied to product, chemical or material with hazardous properties to be introduced in the site to perform any activity by CONTRACTOR or any of its SUBCONTRACTORS during the execution of the TAN Burrup Project.

This Project will be performed by means of modular construction and therefore, this Construction Hazardous Materials Management Plan is applicable to all hazardous materials and/or chemicals used, stored and handled by CONTRACTOR and its SUBCONTRACTORS as part of the Construction phase of the TAN Burrup Project in the Construction Site at the

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Burrup Peninsula where the modules are going to be installed, erected and hooked up. Any hazardous material issue related to yard(s) where modules are being constructed is not subject to this document's requirements unless it forms part of the final object being shipped to Site.

3. DEFINITIONS AND ACRONYMS

3.1 DEFINITIONS

COMPANY	Burrup Nitrates Pty Ltd
CONTRACTOR	Técnicas Reunidas S.A. (TR)
HAZARDOUS MATERIAL	Any substance or material that could adversely impact or is capable of posing an unreasonable risk to health, safety, environment and property when stored, used, handled or transported.
LABEL	Any information on a container which identifies the substance in the container and provides basic information about its safe use and handling.
RISK PHRASE	Group of words or sentence which convey a general description of the hazard present with the normal or reasonably foreseeable handling or use of the substance.
SITE	Area within the disturbance boundary.
SUBCONTRACTOR	Organizations which, under the co-ordination of CONTRACTOR, perform construction and erection activities for the project.

3.2 ACRONYMS

AN	Ammonium Nitrate
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BNPL	Burrup Nitrates Proprietary Limited
CEMP	Construction Environmental Management Plan
DEC	Department of Environment and Conservation
DoE	Department of Environment
EPA	Environmental Protection Agency
HO	Home Office
MSDS	Material Safety Data Sheet
PPE	Personal Protective Equipment
TAN	Technical Ammonium Nitrate
TANFP	Technical Ammonium Nitrate Production Facility
TR	Técnicas Reunidas S.A.
WA	Western Australia
YPFPL	Yara Pilbara Fertilizers Proprietary Limited

4. PROCEDURE

Hazardous materials to be transported, stored and handled during construction of the TAN Burrup Project have to be properly managed both to minimise risk to health and to avoid environmental impact on the surrounding community.

Hazardous materials are sometimes called dangerous goods according to definitions stated in regulatory texts but they shall be referred to as “hazardous material” along the whole document.

4.1 HAZARDOUS SUBSTANCES / MATERIALS

Foreseen hazardous materials required to be used during Project activities to be carried out on site can be summarized and classified as follows:

Hazardous material	Class (as per WA Dangerous Goods safety legislation)	Phase
Detonators, explosives, emulsion explosives.	Class 1 & Goods too dangerous to be transported	Site Preparation
Radioactive material (gamma rays)	Class 7	Site Preparation & Civil works (compact testing) Mechanical erection (welding test)
Diesel fuel	C1 Combustible liquids	Overall (engines)
Acetylene	Division 2.1 Flammable gases	Mechanical erection (Oxy – cutting)
Argon, Nitrogen	Division 2.2 non-flammable, non-toxic gases	Mechanical Erection (Welding)
Paintings & solvents	Class 3 Flammable liquids	Mechanical erection
Polyurethane foam	Non-hazardous	Mechanical erection (insulation)
Stone wool / rockwool	Non-hazardous	Mechanical erection (insulation)
Cellular glass	Non-hazardous	Mechanical erection (insulation)

Note. This is a proposed list that may be modified according to Subcontractors' procedures or activities.

4.2 ENVIRONMENTAL IMPACTS

None of the above chemicals is extremely dangerous or hazardous in normal working conditions and they are all used in small quantities in site. Some materials may be used in

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large quantities for PROJECT scope of work but, due to prefabrication and modularisation strategy, all of them will be used in small quantities in site. Therefore, the environmental impact due to the use, storing, transport and handling of hazardous materials during construction activities may be considered not significant.

In any case, impacts that may affect the surrounding environment are mainly:

- Air pollution because of gases and vapours' generation during engines operation.
- Ground and soil contamination due to accidental spill or leak.
- Health impact when long term exposed to some of the chemicals.
- Fire or explosion involving hazardous materials use and storage.

The worst scenario which will be responsible for a moderate impact would be a non-expected spill of stored material such as painting or diesel fuel or an accidental fire or explosion. Such events have already been analysed and assessed and shall be dealt with as per Construction Emergency Response Management Plan (2-250-329-PRO-TRE-0113).

4.3 MITIGATION MEASURES

The most important of all mitigation measures is to minimise the number of workers exposed to the hazardous material effect and impact by means of signalling affected areas, identifying very clearly any hazardous container, barricading areas for especially hazardous activities' or materials, promoting awareness campaigns, ensuring appropriate training is undertaken by all involved personnel and selecting least hazardous material that can be used for the same purpose. All these measures are described in detail in the Project Construction HSE Plan (2-250-329-PRO-TRE-0110)

In addition to these, the following mitigation measures will be implemented on site in order to minimise environmental and health impact due to hazardous materials use:

- All hazardous materials have to be approved by CONTRACTOR prior to being allowed access to the site.

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- A complete and updated Hazardous Register shall be kept in site and made available for all workers to consult.
- A full set of MSDS will be available for all workers and kept updated and in force at all times.
- All containers where hazardous materials are will be clearly marked and identified so that no mistake is possible.
- Labelling shall be clear and visible, including all required information.
- Appropriate storing and handling will be ensured at any time.
- Awareness and training will be undertaken by all involved personnel.
- Monitoring and inspection activities will be carried out by CONTRACTOR and its SUBCONTRACTORS HSE Teams in order to ensure compliance with these measures.
- Site assessments shall be performed followed by reports' issuance and results' distributed amongst the whole workforce.
- Health surveillance controls will be undertaken as deemed necessary by Site Management team.

General safety provisions are included in the Construction HSE Plan (2-250-329-PRO-TRE-0110) and summarized below:

- CONTRACTOR approval of hazardous material use.
- No hazardous material will be introduced in the site without prior providing full information and recommendation on handling, using and storing the product as per Material Safety Data Sheets (MSDS).
- Required PPE shall be made available prior to starting operations which involve the handling and use of the chemical.
- Appropriate training has been provided to all affected personnel.

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4.3.1 Hazardous Material Register

A hazardous material register shall be prepared and issued by CONTRACTOR HSE Team to provide accurate information on existing hazardous materials to all affected workers. Main information included in this register will be provided by each SUBCONTRACTOR while requesting approval to introduce a hazardous material or chemical on site. This hazardous material register will consist of a list of all hazardous materials and chemicals in the site, reference to where it is stored and used, reference to its MSDS and information on responsible person for such product (it shall be either the HSE representative of the worker using it or its foreman, as designated).

The Register will be reviewed and updated on a weekly basis and whenever changes occur.

4.3.2 MSDS and Labelling

Hazardous materials use, handling, storing and transport can be performed safely if products are correctly identified and hazards known and understood. Therefore, an appropriate labelling and identification is as important as the correct handling of the product.

All approved hazardous materials entering the site will be identified on the container or package or any containment device in which the product is presented by means of an appropriate label. Minimum information that shall be contained in such a label is:

- ✓ Complete product commercial name
- ✓ Chemical composition / name
- ✓ Risk phrase
- ✓ First aid basics
- ✓ Reference to MSDS
- ✓ Expiry date (if applicable).

All products labelling shall be according to WA statutory regulations and standards. Any hazardous material found to be non-identified or incorrectly labelled will be removed from the site until deviation corrected and verified.

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In addition to containers' labelling, MSDS of all hazardous materials (and non-hazardous chemicals) shall be provided prior to introducing the product on site and made available to all workers for consulting and use.

MSDS complete information shall include:

- ✓ complete product identification and composition;
- ✓ hazard degree and classification;
- ✓ main risks and hazards;
- ✓ physical, chemical and toxicological properties;
- ✓ precautions for use and safe handling;
- ✓ storage procedures and conditions;
- ✓ exposure controls and personal protection;
- ✓ emergency measures: fire fighting and spilling;
- ✓ transportation measures and criteria;
- ✓ applicable regulation.

MSDS will be filed and kept and CONTRACTOR HSE department, first aid station and where stored.

MSDS provided by manufacturers shall never be modified at site. Additional information may be attached if deemed necessary but original MSDS cannot be altered in any way.

4.3.3 Handling, Storing and Transporting

Handling of all hazardous chemicals will be carried out by properly trained workers and supervisors. No handling will be allowed prior to undertaking the appropriate training or induction session. All manufacturers' recommendations, directions for use and safe practices shall be followed according to provided information. No material will be used for a different purpose than the one for which it was designed and manufactured.

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Required PPE as per MSDS information will be worn at all times by workers using and handling hazardous materials.

Where spills or leaks can happen, storing area will be designed taking into account this environmental risk. Storing area will be provided with a second container that may consist of a double container for the hazardous material, drip tray prepared to contain the whole quantity of hazardous material or an isolating material used to protect the ground and to prevent soil contamination due to an accidental leak or spill.

In case a minor spill takes place while handling, using or being stored, action will be taken by using remediate spill kits available, always following MSDS recommendations while dealing with the chemical and using proper PPE as required. The source shall be isolated as soon as possible and affected area contained immediately to avoid bigger impact. Further detailed response action shall be performed as per Construction Emergency Response Management Plan (2-250-329-PRO-TRE-0113).

Especially dangerous or hazardous activities due to the materials involved such as radiographic testing, welding activities or refuelling of small machinery and equipment, will be performed taking into account specific mitigation measures:

- Radiographic testing will be performed outside normal working hours, in barricaded areas with only authorised personnel present and provided previous notification to CONTRACTOR. Affected areas will be signalled and properly protected so that non-authorised personnel cannot access the area.
- Welding activities will be carried out in an isolated area as far as reasonably practicable. Whenever this is not possible, safety devices will be put in place to ensure no hazards are posed on affected workers.
- Refuelling of small equipment shall be performed protecting the ground soil from accidental spills by means of drip trays and provided with spill remediation kits and fire fighting equipment in the vicinity.

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- Drip trays will be located under any stationary rotating machinery together with firefighting equipment where spills can occur, such as generators, generator driven welding machines etc.
- Blasting operations have already been described and dealt with in the Construction Blasting Management Plan (2-250-329-PRO-TRE-0123).

Fire fighting equipment will be provided and available at storing and use areas as required. This fire fighting equipment will be inspected as per general equipment inspection program (addressed in Construction HSE Plan, 2-250-329-PRO-TRE-0110).

4.3.4 Training and Awareness

All workers and supervisors with potential for exposure to hazardous materials, that is, involved in the use, storing, transport and handling of any hazardous material present on the construction site of the TAN Burrup Project will be trained on the identification and use of such material, risks and hazards and, especially, on what to do in case of abnormal conditions or emergency situation of any kind.

As part of the Hazard Communication Program to be put in place by CONTRACTOR for construction activities, training sessions including hazardous materials information will be organized by CONTRACTOR to ensure awareness of all workforce. Minimum issues addressed during training sessions shall include:

- ✓ Information on what hazardous materials can a worker or supervisor be exposed to while performing their tasks and duties.
- ✓ Hazardous material identification.
- ✓ Labelling → what information is explained on each part of the label, what pictures mean, what critical information has to be searched for and why each piece of information is provided in any container's label.

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- ✓ Procedure to be followed in the normal use, handling, storing and transport of hazardous materials.
- ✓ General materials' hazardous properties.
- ✓ Procedure to be followed in the cleaning up and disposal of the hazardous material.
- ✓ MSDS → availability, location, information contained therein.
- ✓ Personal protective equipment to be used.

All training sessions shall be recorded in writing and an attendance list signed by all participants. The record of such training will be kept at CONTRACTOR HSE department and made available upon request.

Hazardous materials issues shall also be raised during toolbox meetings in which employees' will be given the opportunity to share past experiences and suggestions in the best use and handling of the hazardous material for all workforce to be aware.

4.4 MONITORING AND REPORTING

The correct implementation of all provisions described in this Hazardous Materials Management Plan will lead to minimum impact due to chemicals handling. This performance will be monitored by the site HSE team as part of periodic HSE inspections.

Monitoring on hazardous materials conditions, such as:

- ✓ Labelling conditions (legible, clearly visible, according to contained product).
- ✓ Hazardous materials' use, handling and storing.
- ✓ Conditions of storing areas.
- ✓ Availability of MSDS.

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✓ Training records.

Identified deviations will be reported to all affected and involved personnel and actions follow up will ensure appropriate corrective actions are implemented. Serious deviations or incidents will be reported in writing and included in the Monthly HSE Report.

4.5 AUDIT

As part of Project Environmental Management system, compliance of this Construction Hazardous Materials Management Plan will be audited during internal HSE Audits performed on a periodic basis by CONTRACTOR HO HSE Team. HSE Internal Audits procedure is described in the Project Construction HSE Plan (2-250-329-PRO-TRE-0110).

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5. REFERENCES

5.1 COMPANY SPECIFICATIONS AND PROCEDURES

- Public Environmental Review for Burrup Nitrates Pty Ltd. (PER)
- BNPL Works approval (15/07/2011)
- State of WA Statement No. 870 (07/07/2011)
- Commonwealth Approval letter from DEC (14/09/2011)
- Appendix D-6 - HES Requirements during Construction & Fabrication

5.2 LEGISLATION

- Environmental Protection Act 1986
- Occupational Safety and Health Regulations, 1996, version 07-f0-00 of 26 may 2010 (WA)
- Dangerous Goods Safety Act 2004 (WA)
- Dangerous Goods Safety Regulations 2007 (WA)
- National Code of Practice for the Labelling of Workplace Substances (NOHSC:2012 (1994))
- Water Quality Protection note 65
- Occupational Health and Safety Act, 1984

5.3 PROJECT RELEVANT HSE DOCUMENTATION

2-250-329-PRO-TRE-0110	Construction HSE Plan
2-250-329-PRO-TRE-0111	Construction Environmental Management Plan
2-250-329-PRO-TRE-0113	Construction Emergency Response Management Plan
2-250-329-PRO-TRE-0123	Construction Blasting Management Plan

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0086269 BNPL TANPF
CAQMP

Construction Air Quality Management Plan (issued by
COMPANY)

6. ATTACHMENTS

Attachment 01. Hazardous Register (example form)

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Attachment 01. HAZARDOUS REGISTER

Product name	Date of entry	Date of exit	Storing location	Use location	MSDS reference	Responsible contact info