

RISK MANAGEMENT PLAN IN TERMS OF REGULATION 10 OF THE WASTE EXCLUSION REGULATIONS

File Reference Number: NEAS Reference Number: Date Received: (For official use only) 12/9/11

Risk Assessment for an application for exclusion of waste stream or portion of waste stream in terms of the National Environmental Management: Waste Act, 2008(Act No.59 of 2008), as amended.

Kindly note that:

- 1. This form is current as of 01 April 2021. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
- 2. The information must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. Spaces are provided in tabular format and will extend automatically when each space is filled with typing.
- 3. Incomplete forms (including information as required in the application form may be returned to the applicant for revision and the inclusion of additional information.
- 4. Unless protected by law, all information filled in on this application will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this application on request, during any stage of the application process.

| BACKGROUND INFORMATION | | | |
|------------------------|--|--|--|
| APPLICANT | AECI Plant Health – of which AECI Ltd is the main company. | | |
| CONTACT PERSON | Ms Zodwa Mbizeni – AECI SHEQ Practitioner | | |
| NAME | Zodwa | | |
| | 1st Floor AECI Place | | |
| | 24 The Woodlands | | |
| | Woodlands Drive | | |
| ADDRESS | 2196 | | |
| E-MAIL ADDRESS | zodwa.mbizeni@aeciworld.com | | |
| TELEPHONE | 011 823 8000 | | |
| CELL PHONE | 079 109 7735 | | |

| WASTE FACILITIY OR FACILITIES | | | | |
|------------------------------------|---|---------------------------------|--|--|
| | At AECI Plant Health they produce three types of solutions that | | | |
| | generate waste, namely: | | | |
| | - Calcium nitrate Solution | 50% <i>,</i> | | |
| | - Magnesium Nitrate Solut | tion 35% and | | |
| SOURCE (S) OF WASTE | - Ammonium Nitrate Solut | tion 21%. | | |
| | Three portions are to be exclud | ed at the AECI Ltd's AECI Plant | | |
| | Health plant within the Modderfe | ontein Industrial Complex. | | |
| | These three portions include: | | | |
| | - Thermal Calcium Nitrate Sludge | | | |
| | - Thermal Effluent Sludge | | | |
| WASTE TO BE BENEFICIATED | - Thermal Magnesium Nitr | ate Sludge | | |
| GPS CO-ORDINATES AT CORNERS | LATITUDE | LONGITUDE | | |
| OF WASTE GENERATING FACILITY | | | | |
| OR FACILITIES | 26°05'28.69"S | 28°10'01.50"E | | |
| | | | | |
| | 26°05'29.66"S | 28°10'07.58"E | | |
| | | | | |
| | 26°05'32.51"S | 28°10'07.02"E | | |
| | | | | |
| | 26°05'31.25"S | 28°10'00.89"E | | |
| | The possible uses of waste: | | | |
| | Carrier for organic fertilizer | | | |
| BENEFICIAL USE/S | Filler in brick manufacturing | | | |

| WASTE GENERATING PROCESS | | | | |
|----------------------------|------------------------|---------|--|--|
| | YES | NO | | |
| | Annexure D of the main | | | |
| MSDS ATTACHED IF HAZARDOUS | application document. | | | |
| WASTE GENERATING FACILITY | HAZARDOUS | GENERAL | | |

RISK MANAGEMENT PLAN

| PROCESS | ACTIVITY | RISK DESCRIPTION | ACTION(S) | RESPONSIBILITY |
|-------------|-------------------------------|--|------------------------------|---------------------------|
| AREA | | | то | (Who is responsible to do |
| | | | MINIMIZE/MANAGE RISK | it) |
| Aluminium | Storage of Dangerous | Pipeline leaks during | Spill kits available. MSDS's | Engineering |
| Sulphate | Goods - Corrosive products | filling of storage and from | available, Hazardous | Superintendent/ |
| Plant | - Sulphuric Acid | storage to reactor | Chemical Handling | Responsible |
| Tianc | | | Training | SHEQ/Handler |
| Aluminium | Storage of Dangerous | Spill during | Spill kits available. MSDS's | Engineering |
| Sulphate | Goods - Low hazard - | transportation, loading or | available, Hazardous | Superintendent/ |
| Plant | Aluminium Tri-Hydrate | storage. | Chemical Handling | Responsible |
| Tranc | | | Training | SHEQ/Handler |
| Aluminium | Production and Storage of | Spill during | Spill kits available. MSDS's | Engineering |
| Sulphate | Dangerous Goods - | transportation, loading or | available, Hazardous | Superintendent/ |
| Plant | Corrosive product - | storage. | Chemical Handling | Responsible |
| | Alumium Sulphate Solution | | Training | SHEQ/Handler |
| Aluminium | | Spill during transportation, loading or storage. | Spill kits available. MSDS's | Engineering |
| Sulphate | Waste - Aluminium | | available, Hazardous | Superintendent/ |
| Plant | Sulphate Sludge - Corrosive | | Chemical Handling | Responsible |
| | | | Training | SHEQ/Handler |
| | Waste from Aluminium | | Spill kits available. MSDS's | Engineering |
| Aluminium | production - Empty bulk | | available, Hazardous | Superintendent/ |
| Sulphate | bag and pallets - Low | Contaminated Bulk Bag | Chemical Handling | Responsible SHEQ/Site |
| Plant | Hazard | | Training/Proper | Emloyees/Handler |
| | | | housekeeping | |
| Aluminium | Waste water from washing | | Spill kits available. MSDS's | Engineering |
| Sulphate | filter press (effluent) - Low | Waste water | available, Hazardous | Superintendent/ |
| Plant | hazard | | Chemical Handling | Responsible SHEQ |
| · · · · · · | | | Training | |

| Aluminium Sulphate Plant | Sludge waste from process - Oxidiser - Hazardous | Corrosive sludge | Skip bins with tapoline cover, waste collected by approved and authorised waste service provider | Engineering Superintendent/ Responsible SHEQ |
|--------------------------------|--|--|--|---|
| Aluminium Sulphate Plant | Production and Storage of Dangerous Goods - Corrosive product - Alumium Sulphate Solution - Emission | Emission - COx, NOx and SOx gases | Annual Atmospheric emission survey, PM on extraction system, Atmospheric Emission Licence conditions compliance | Engineering Superintendent/ Responsible SHEQ |
| Ferti Liquid Plant | Offloading of Dangerous Goods - Hazardous - Ammonium Nitrate Solution (88-89.5%) | Spill during off-loading (when received from the tanker) Explosive products | Spill kits available. MSDS's available, Hazardous Chemical Handling Training | Engineering Superintendent/ Responsible SHEQ/Handler |
| Ferti Liquid Plant | Production of Dangerous Goods - Low Hazard - Ammonium Nitrate Solution (21%) | Spill during production in boiling | Spill kits available. MSDS's available, Hazardous Chemical Handling Training | Engineering Superintendent/ Responsible SHEQ/Handler |
| Ferti Liquid Plant | Loading of Dangerous Goods - Low Hazard - Ammonium Nitrate Solution (21%) | Spill during loading | Spill kits available. MSDS's available, Hazardous Chemical Handling Training | Engineering Superintendent/ Responsible SHEQ/Handler |
| Ferti Liquid Plant | Production of Dangerous Goods - Low Hazard - Urea Ammoniam Nitrate Solution (32%) | Spill during production | Spill kits available. MSDS's available, Hazardous Chemical Handling Training | Engineering Superintendent/ Responsible SHEQ |
| Ferti Liquid Plant | Production of Dangerous Goods - Low Hazard - Urea Ammoniam Nitrate | Emission - COx, NOx and Sox gases | Annual Atmospheric emission survey, PM on extraction system, Atmospheric Emission | Engineering Superintendent/ Responsible SHEQ |

| | Solution (21 and 32%) - Emissions | | Licence conditions compliance | |
|--------------------------|---|---|--|---|
| Ferti Liquid Plant | Loading of Dangerous Goods - Low Hazard - Urea Ammoniam Nitrate Solution (32%) | Spill during loading | Spill kits available. MSDS's available, Hazardous Chemical Handling Training | Engineering Superintendent/ Responsible SHEQ/ Handler |
| Calmag Plant | Production of Dangerous Goods - Low Hazard - Calcium Nitrate and Magnesium Nitrate | Spill during loading, off- loading or storage. Low hazard product | Lined bulk bags, MSDS's available, Spill kits, Trained on how to clean spill | Engineering Superintendent/ Responsible SHEQ/Handler |
| Calmag Plant | Storage of Dangerous Goods - Low Hazard - Calcium and Magnesium Carbonate | Spill during off-loading. Low Hazard | Stored in a designated enclosed warehouse, MSDS's available, Spill kits | Engineering Superintendent/ Responsible SHEQ/Handler |
| Calmag Plant | Waste from Calmag production - Empty bulk bag and pallets - Low Hazard | Contaminated Bulk bags | Waste stored in a concrete area and collected by supplier. Propper housekeeping. | Engineering Superintendent/ Responsible SHEQ/Supplier/ Handler |
| Calmag Plant | Waste water from washing plant reactors and filter press (Effluent) - Low hazard | Waste water | Spill kits available. MSDS's available, Hazardous Chemical Handling Training | Engineering Superintendent/ Responsible SHEQ |
| Calmag Plant | Sludge waste from process - Oxidiser - Hazardous | Spill during loading into farmers truck - Oxidiser - Hazardous | Spill kits available. MSDS's available, Hazardous Chemical Handling Training | Engineering Superintendent/ Responsible SHEQ/Handler |
| Calmag Plant | Production of Dangerous Goods - Low Hazard - Calcium Nitrate and | Emission - COx, NOx and SOx gases | Annual Atmospheric emission survey, PM on extraction system, Atmospheric Emission | Engineering Superintendent/ Responsible SHEQ |

| | Magnesium Nitrate Emissions | | Licence conditions compliance | |
|-----------------|--|---|---|--|
| Calmag Plant | Empty Bulk bag and Pallets | Environmental pollution - water and ground | Collected by Supplier - Idwala | Engineering Superintendent/ Responsible SHEQ/Supplier |
| Urea Plant | Production of product - Urea Solution43% - Acetic acid - Corrosive and Low Hazard | Spill during production, loading onto and tanker, tank overflow | Vessel integrity test, PM, MSDS, Spill kit, Training on HCS | Engineering Superintendent/ Responsible SHEQ/Handler |
| Urea Plant | Storage of product - Urea - Pallets Low Hazard | Spill during storage | Trained and competent forklift operators, lined bulk bag, stored on a concrete surface | Engineering Superintendent/ Responsible SHEQ/Handler |
| Urea Plant | Waste from Urea production - Empty bulk bag and pallets - Low Hazard | Contaminated empty bulk bag and used pallets | Stored in a concrete floor storage area, reuse them and also collected by a recycler. Proper housekeeping | Engineering Superintendent/ Responsible SHEQ |
| Urea Plant | Storage of product - Acetic acid - Corrosive and Low Hazard | Spill during storage or transferring from the 210L drum into a 10L drum. | MSDS's, Spill Kit, Training on HCS handling | Engineering Superintendent/ Responsible SHEQ |

I, <u>Quintin Mark Cross</u> (the Applicant) hereby declare that I have read the completed Risk Management Plan form and hereby confirm that the information is, to the best of my knowledge, true and correct

Furthermore, I declare that I am fully aware of my responsibilities in terms of the Waste Exclusion Regulations, and that failure to comply with these Regulations may constitute an offence in terms of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008).

Signature of the applicant¹/ Signature on behalf of the applicant:

Name of Applicant:

Designation

Date:

¹ If the applicant is a juristic person, a signature on behalf of the applicant is required as well as proof of such authority.