

Mataranka Environmental Management Plan

2015-
2018

NCL Mataranka has developed a comprehensive environmental management plan which covers both plant and has some information regarding quarrying activities. The Mataranka Mine Management Plan provides detailed information regarding quarrying activities

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1 MATARANKA LIME AND QUARRY OPERATIONS

1.1 Description of Operations

Northern Cement Limited (NCL) operates a quicklime operation known as Mataranka Lime, located on the outskirts of Mataranka in the Northern Territory.

NCL is a wholly owned division of Adelaide Brighton Ltd.

Adelaide Brighton is a publicly listed Australian company. ABN 008673470. Adelaide Brighton is a leading integrated construction materials and industrial lime producer which supplies a range of products into building, construction, infrastructure and mineral processing markets throughout Australia.

The Company's principal activities include the production, importation, distribution and marketing of clinker, cement, industrial lime, premixed concrete, construction aggregates and concrete products.

Adelaide Brighton originated in 1882 and is now an S&P/ASX100 company with 1,300 employees, and operations in all Australian states and territories.

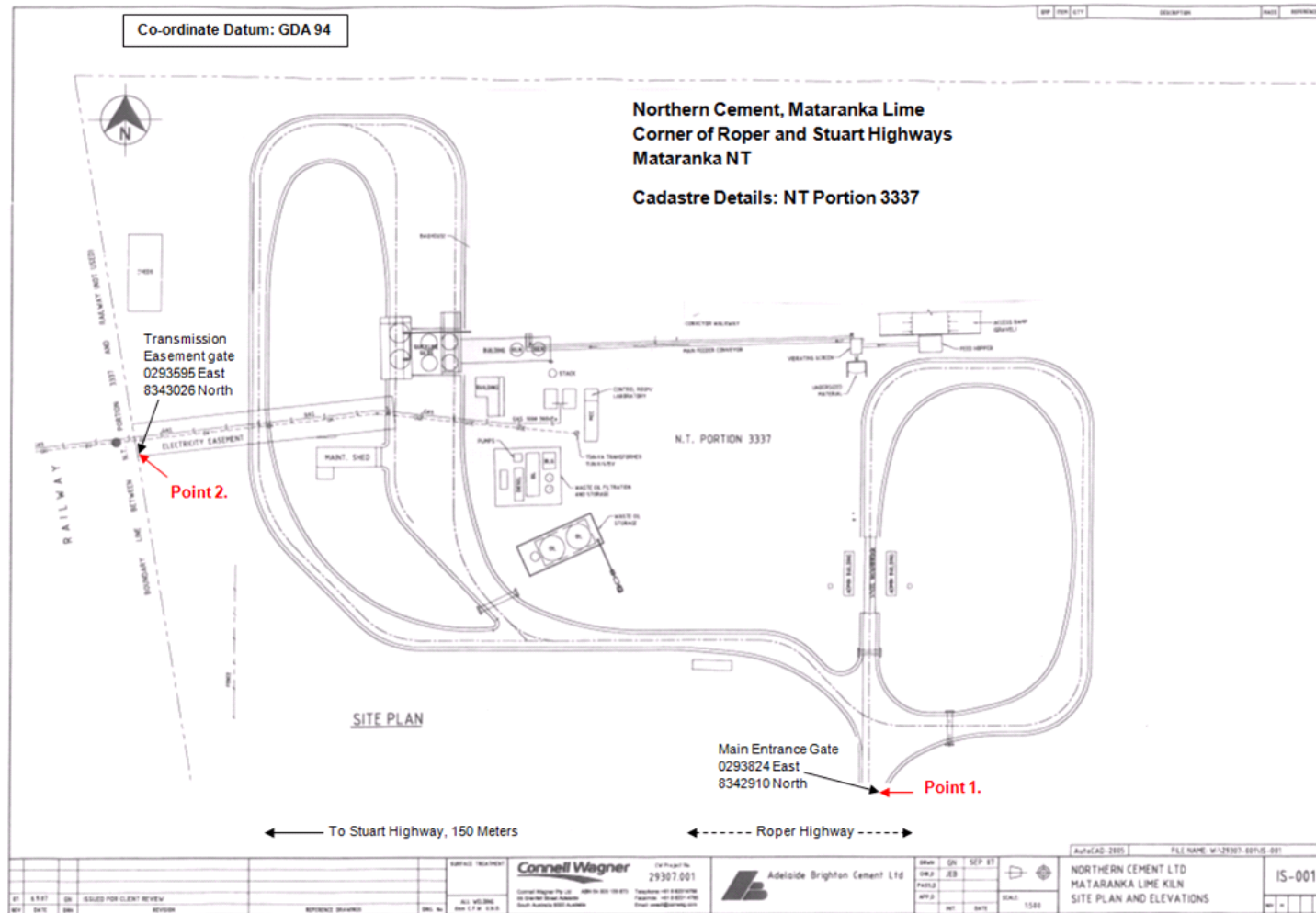
Mataranka Lime

NCL owns and operates a quicklime operation at Mataranka to supply customers in the Northern regions of Australia, predominantly Northern Territory and the northern part of Western Australia.

The quicklime process, conducted at the Mataranka Lime plant, includes:

- Screening process – Remove undersize rock and fines, dry screen during dry season, wet screen (water sprays) during wet season.
- Fuel processing – Filter, and if necessary, dewater waste oil to render suitable for kiln fuel.
- Burning process – Via two static vertical kilns, convert calcium carbonate to calcium oxide.
- Milling process – Via enclosed hammer mill to create final product 3mm minus.
- Storage process – Final product elevated to storage silos x 6, total storage capacity 2,200 tonne.
- Dispatch process – Gravity feed from silo outlet via covered loading to pneumatic road transport tanker.

Figure 1: Northern Cement Mataranka Lime Facility Site Plan



2 SCOPE OF ENVIRONMENTAL MANAGEMENT PLAN

This Environmental Management Plan has been developed to address the potential environmental impacts from the Mataranka Lime Plant.

3 KEY ENVIRONMENTAL ISSUES

The lime plant has the potential to impact on the existing environmental features of the area. Environmental Factors relevant include:

- Fire Control and Response
- Water Management
- Waste Management
- Visual Amenity
- Flora and Threatened Fauna and Feral Animal Management
- Weed Control
- Hazardous Substances and Chemical Management
- Dust Control
- Noise Control
- Air Emissions

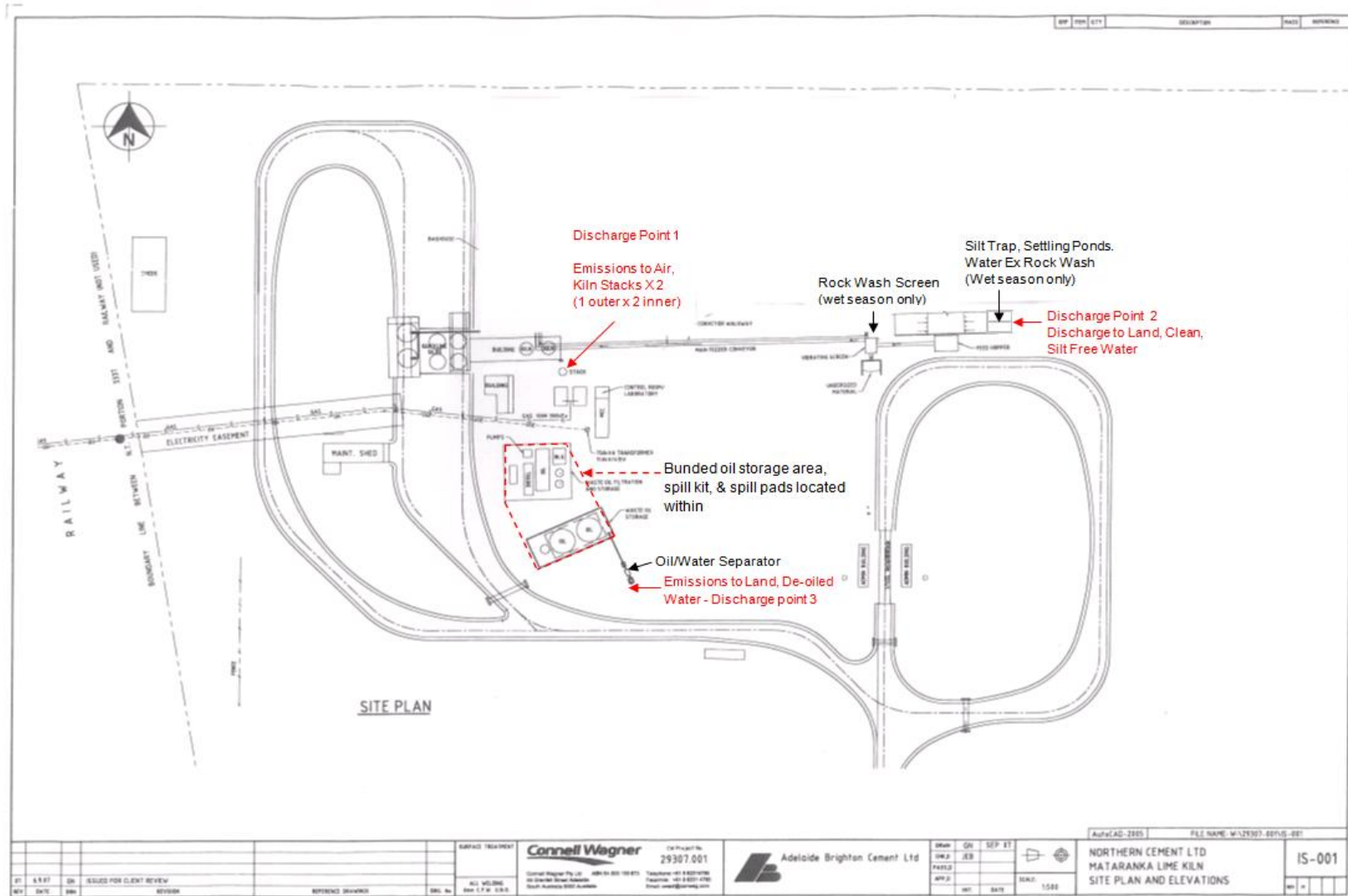
3.1 Discharge Points

There are three discharge points on the Mataranka Plant

- One discharge to air- kiln stack gaseous emissions
- Two discharges to land:(a)Clean silt water from rock washing in wet season
(b) Oil/Water separator

Figure 2 indicates location of the discharge points on the plant

Figure 2: Discharge Points 1,2 and 3



4 ENVIRONMENTAL MANAGEMENT PLAN OBJECTIVES

This Environmental Management Plan has been developed with the overall objective of minimising the impact to the environment. It is designed to meet the following aims:

- Comply with the Adelaide Brighton Ltd environmental commitments
- To ensure that environmental impacts are prevented or minimised in plant activities
- To protect 'at risk' flora and fauna
- To maintain effective communication with all stakeholders

5 ENVIRONMENTAL MANAGEMENT AND IMPLEMENTATION STRATEGIES

5.1 Environmental Aspects and Impacts Register

The aspects and impacts register includes plant aspects and impacts Refer to Mataranka Environmental Aspects and Impacts Register.

5.2 Environmental Improvement Plans.

Mataranka operations will develop an environmental Improvement plan which will outline improvements, responsibilities and timeframes.

5.3 Environmental Management Plans

5.3.1 Fire Control and Response Management Plan

Existing Environment	Vegetation within the plant may be susceptible to fire in the dry season Area is relatively remote
Potential Impacts	Increased risk of ignition during periods of high or extreme fire danger when plant is operating
Objectives	Reduce risk of ignition from plant activities
Management	<p>This plan covers risk of fire from plant activities on the environment. Emergency response is covered under the HSE system and plant procedures.</p> <ul style="list-style-type: none"> • In case of wildfire contact Mataranka Police 89754511 or Emergency Response call Des 0427880819 • Induction includes evacuation procedures, location of fire fighting equipment • Hot work permits required for hot work • Visual inspection of ignition sources and high fuel loads • Ensure all visitors, employees and contractors are aware of fire warnings and bans. • Smoking in designated areas only • Fire break in place and maintained • Use of dedicated waste/recycle bins or areas • Bunded storage for high volumes of flammable liquids • Refer Use, Storage and Disposal of Fuels, Oils and Other Hazardous Substances Management Plan • Plant maintenance • Employees trained in use of fire fighting equipment • All recyclable refuse is to be placed in the appropriate recycle area at the Mataranka waste dump, or any other waste recycle facility.
Reporting, Monitoring	Regular inspections for ignition sources and high fuel loads
Location	Plant
Timing	Dry Season
Responsibilities	<p>Plant Manager</p> <ul style="list-style-type: none"> • Where practicable, fire control and response • Ensure inductions and procedures are implemented • Fire Fighting equipment is kept serviceable • Daily checks for fire danger warnings and alerts and providing information to personnel on plant • Ensuring fire breaks are maintained

5.3.2 Water Management Plan

Existing Environment	There are two registered ground water bores within the plant, RN 24615, and RN 35467. Majority of ground water is drawn from RN 24615. NCL are licensed to draw 25 M litres of ground water per year (License TLAM10). Ground water is utilised all year for amenities, dry season only for grounds maintenance, and removing fines from kiln feed limestone.
Potential Impacts	Depletion or declination of natural resource, usage above license, or restrictions. Low risk of groundwater contamination (no contaminates in the vicinity of bores, no chemicals or contaminates used in the washing process)
Objectives	Prevent contamination of ground water Maintain water usage within licence entitlement
Management	<ul style="list-style-type: none"> • Refer to Waste Management Plan • Monthly water usage monitoring • Monthly water usage reporting • Hydrocarbon management
Reporting, Monitoring	Monthly water usage monitoring Monthly water usage reporting
Location	Plant
Timing	During operation/Seasonal
Responsibilities	Plant Manager <ul style="list-style-type: none"> • Responsible for overall operations • Sampling and monitoring of settling ponds seepage (seasonal) • Liaison with regulatory authorities

5.3.3 Waste Management Plan

Existing Environment	There are two settling ponds 50m x 10m located on the plant to contain water from the rock wash screens. This processing occurs in the wet season only. General rubbish is contained in dedicated bins. Recycling of separated waste oil from bunded areas into process if required. Waste oil (fuel source) is burnt at reasonably high temperature
Potential Impacts	Waste of resources Inappropriate disposal may lead to potential impact to environment Low potential for ground water quality changes (no bores)
Objectives	Encourage responsible removal of waste from site Encourage recycling, reuse and reduction of waste Minimise the risk of contamination from waste Responsible use of waste
Management	<ul style="list-style-type: none"> • Clay lined settlings ponds only during the wet season. • pH testing of settling ponds monthly during wet season if pond water seeps • Waste oils from vehicle maintenance, etc, is to be placed in the IBC bunds only. NCL supply the empty IBC's, and arrange for disposal. • Water accumulated in waste oil bund during wet season that has not evaporated is drained out to an oil and water separator. The Separator is pumped out into IBC's for disposal. • Only water is to be released onto the ground or in drains, no hydrocarbons or other chemicals. • All waste generated by contractors is to be removed from site • Cleaning contractors to remove general rubbish from bins located at offices and crib areas • Human waste to be managed via septic systems pumped by contract companies as required • Integrity of holding tanks and bunds inspected as required • Training of site personnel in waste management • Refer to Use, Handling, Storage and Disposal of Fuels, Oil and other Hazardous Substances Management Plan
Reporting, Monitoring	Quarterly area checklist
Location	Plant
Timing	During operation
Responsibilities	Plant Manager <ul style="list-style-type: none"> • Responsible for overall operations • Sampling and monitoring of water ex settling ponds • Bi-annual environmental checklist • Liaison with Dept Land Resource Management (Water)

5.3.4 Weed Management Plan

Existing Environment	Limited weeds present
Potential Impacts	Change natural diversity and balance of ecological communities
Objective	Stop the spread of weeds
Management	<ul style="list-style-type: none"> • On-going weed control program conducted by external contractor or Roper River Landcare • Vehicle hygiene - all plant and heavy equipment, with the exception of light vehicles, and general local transport vehicles are to be free of any spores/seeds prior to mobilisation to the site and prior to mobilisation from the site.
Reporting, Monitoring	Visual monitoring Weed Control Register Bi-annual environmental checklist
Location	Plant
Timing	On-going
Responsibilities	Plant Manager: <ul style="list-style-type: none"> • Monitoring • Managing weed control program • Bi-annual environmental checklist • Weed Control Register

5.3.5 Flora, Fauna and Feral Animal Management Plan

Existing Environment	<p>The dominant vegetation communities are eucalypt woodlands with hummock grass or tussock grass understorey.</p> <p>There are a variety of different fauna species that are considered to be threatened in the bioregion.</p> <p>Feral animals that inhabit the local area include wild pigs, wild donkey and buffalo. Rarely seen on the site.</p>
Potential Impacts	<p>Loss of habitat</p> <p>Introduction of exotic species</p> <p>Clearing</p>
Objectives	<p>To protect native fauna</p> <p>To protect native flora</p>
Management	<ul style="list-style-type: none"> • No animals are to be intentionally harmed or killed by plant or contract personnel unless there is a real and imminent threat to human life. • Animals (in particular snakes) should be allowed to move on if there is no threat to human safety. • If a snake will not move on a suitable qualified reptile handler shall be called to remove it. • If a sick or injured animal is encountered contact Parks and Wildlife (8975 4560 AH 0429 999 372). • No pets, traps or firearms are permitted on site • Speed restrictions on site –10kph plant • Vehicle hygiene -to minimise the spread of weeds, all plant and heavy equipment, with the exception of light vehicles, and general local transport vehicles are to be free of any spores/seeds prior to mobilisation to the site, and prior to mobilisation from the site. • If feral animals are found on site they are reported to Parks and Wildlife Commission • General waste is to be placed in the appropriate receptacle . All recyclable material is to be placed in the appropriate recycle area at the Mataranka waste dump, or any other waste recycle facility.
Reporting, Monitoring	<p>Log sheet for identification of threatened species</p> <p>Contact Plant Manager or Parks and Wildlife if sighting of threatened species</p> <p>Reporting environmental incidents involving fauna encounters in Cintellate</p> <p>Bi-annual inspections using environment checklist</p>
Location	Plant
Timing	During operation
Responsibilities	<p>Plant Manager</p> <ul style="list-style-type: none"> • Monitoring and reporting sighting of threatened species • Reporting feral animals on site to Parks and Wildlife Commission • Bi-annual environmental checklist <p>Employees</p> <ul style="list-style-type: none"> • Monitoring and reporting sighting of threatened species; • Monitoring and reporting of fauna encounters

5.3.6 Visual Amenity

Existing Environment	Entrance to site are kept neat and tidy
Potential Impacts	Loss of visual amenity Loss of landscape values
Objectives	<ul style="list-style-type: none"> • Ensure plant upgrades do not adversely impact visual amenity • Maximise visual amenity at entrance to plant and quarry
Management	<ul style="list-style-type: none"> • Maintain good housekeeping practices • Prevent litter • Adherence to Weed Management Plan • Signage and markers to meet WHS legislation and traffic management however not adversely impact visual amenity • Dedicated roads and access ways are used
Reporting, Monitoring	Bi-annual environmental inspection checklist Weekly inspection Each campaign conduct HSE Audit of Quarry Contractor
Location	Plant
Timing	At all times
Responsibilities	Plant Manager <ul style="list-style-type: none"> • Ensure disruption to visual amenity is minimised by design features and on site activities • Site inductions are undertaken

5.3.7 Noise Management Plan

Existing Environment	There are no residential areas likely to be impacted by noise from the plant activities.
Potential Impacts	Impact local amenity
Objective	Minimise plant noise
Management	Maintenance of plant Maintenance of mobile plant – heavy vehicles Conduct 5 yearly boundary noise survey or as required. Outcome of noise survey determines noise plan if required and frequency of subsequent noise surveys
Reporting, Monitoring	Bi-annual environmental inspection checklist Weekly walk and drive around Coordinate noise surveys
Location	Plant
Timing	Ongoing
Responsibilities	Plant Manager <ul style="list-style-type: none"> • Coordinate noise survey and report results • Inductions completed and procedures are followed • Ensure maintenance of plant and equipment

5.3.8 Dust Management Plan

Existing Environment	There are no residential areas likely to be impacted by dust from the plant activities.
Potential Impacts	Impact local amenity
Objective	Minimise dust discharge beyond plant boundary
Management	<ul style="list-style-type: none"> • Water cart • Closed plant systems where practicable • Dust collectors- fabric filters to silos • Maintenance of dust collectors • Conduct 5 yearly dust monitoring survey with noise survey or as required. Determine and implement appropriate controls to mitigate risk identified.
Reporting, Monitoring	Bi-annual environmental inspection checklist Weekly walk and drive around
Location	Plant
Timing	Dry months
Responsibilities	Plant Manager <ul style="list-style-type: none"> • Visual inspection • Coordinate dust emissions survey and report results • Inductions completed and procedures are followed • Coordinate maintenance activities

5.3.9 Use, Handling, Storage and Disposal of Fuels, Oil and other Hazardous Substances Management Plan

Existing Environment	Designated depot area contains waste products, fuel and any potentially hazardous substances.
Potential Impacts	Land, air and water contamination
Objectives	<ul style="list-style-type: none"> • Reduce risk of contamination from fuels, oils and hazardous wastes • Respond effectively to incidents such as spills and leaks
Management	<ul style="list-style-type: none"> • All storage and handling of fuels, oils and other hazardous material in the plant is to be done in accordance with AS 1940, legislative procedures and company procedures. • Toxic and hazardous substances are stored in secure containers, bunds • Storage areas for fuel, oil or other hazardous substances are bunded • Waste oils from vehicle maintenance, etc, is to be placed in the IBC bunds only. • Diesel fuel storage within the bund area, all other hydrocarbons within the bund area, or on fit for purpose storage bunds • Bund must have a holding capacity of 110% of the container within the bund • Waste oil bund must have a holding capacity of 135% of the containers within the bund • All mobile plant is to be refuelled on the plant at the dedicated location • Spills kits and fire fighting equipment is to be readily available, in good working order and close to sources • Any spills are to be contained immediately and remediated within one week <p>Emergency Response</p> <p>Any hydrocarbon spill (or other chemical spill) will be actioned according to the below hierarchy:</p> <ol style="list-style-type: none"> 1. Stop the flow- if it safe and practical to do so 2. Contain the spill- use of spill kits to dam spill 3. Remediate spill –assess, may require remove and backfill. Large spills contact EPA
Reporting, Monitoring	Spills reported and documented immediately Large spills notify EPA
Location	Plant
Timing	On-going
Responsibilities	Plant Manager <ul style="list-style-type: none"> • Ensure procedures are followed and incidents reported • Ensure bunding • Ensure site inductions

5.3.10 Air Emissions Management Plan

Existing Environment	Plant burns waste oil and fuels obtained from other industry.
Potential Impacts	Hazardous air emissions
Objectives	Comply with all available air emissions standards
Management	<ul style="list-style-type: none"> • Burner Management Plan • Trained employees in Burner Management • Kiln maintenance • Biennial stack emission testing to determine effluent stack gases emitted. Testing to be conducted by independent qualified company with current NATA accreditation for methods and analysis.
Reporting, Monitoring	Biennial stack testing
Location	Plant
Timing	Ongoing
Responsibilities	<p>Plant Manager</p> <ul style="list-style-type: none"> • Ensure employees are trained and procedures are followed • Coordinate stack testing • Maintenance of kiln • Report results