Yara Pilbara

Ammonia Plant & Technical Ammonium Nitrate Production Facility

Emergency Management Plan

Person to be contacted in relation to Emergency Management:

Ty Hibberd –Health, Safety, Environment & Quality Manager

Yara Pilbara

Lot 564 Village Rd

Burrup Peninsula, Karratha

WA 6714

Telephone: +61 8 9183 4000 / 4100

Facsimile: +61 8 9185 6776

Distribution List

No.	Location / Recipient	
1	Yara Pilbara Ammonia Plant Control Room	Hardcopy
2	Yara Pilbara TAN Control Room	Hardcopy
3	Yara Pilbara Karratha SRT Control Room	Hardcopy
4	Yara Pilbara Perth Office (CRT)	Hardcopy
5	Yara Pilbara HESQ Manager	Hardcopy
6	Yara Pilbara Emergency Response Coordinator	Hardcopy
7	Yara Pilbara Emergency Centre	Hardcopy
8	Yara Pilbara Site Document Control	Electronic
9	Yara Pilbara Security Control	Hardcopy
10	Yara Pilbara TAN Project Office	Hardcopy
11	Yara Pilbara SharePoint	Electronic
12	DFES - Karratha Regional office	Electronic
13	Police - Officer in Charge Karratha	Electronic
14	Department of Mines, Industry Regulation and Safety (DMIRS)	Electronic
15	Pilbara Ports – Dampier BLB Control Room	Electronic
16	Department of Environment and Energy	Electronic
17	EMQNet	Electronic

Revision Record

This plan shall be reviewed / revised:

- ❒ Where a Risk Assessment identifies a need to review the plant during the Management of Change (MOC) process;
- ❒ Following a MHF Major Accident Event;
- ❒ Where a deficiency is identified following an exercise or audit; or
- ❒ At least every 2 years.

The following shall be consulted for major reviews of this plan. For minor reviews the following shall be notified of amendments to this plan:

- ❒ Plant Manager
- ❒ HESQ Manager
- ❒ Emergency Response Coordinator
- ❒ Production Manager, Ammonia
- ❒ Production Manager, TAN
- ❒ Maintenance & Reliability Manager

Document Approval

Rev	Custodian	Approver	Signature	Date
21	As above	Chris Rijksen	CR	14-03-2017
	Review Team	**Plant Manager**		
22	Willie Bezuidenhout	Brian Howarth	BH	29-10-2018
	Security & ER Coordinator	**HESQ Manager**		
23	Willie Bezuidenhout	Brian Howarth	BH	28-01-2019
	Security & ER Coordinator	**HESQ Manager**		
24	Willie Bezuidenhout	Justin Zis	JZ	02-08-2019
	Security & ER Coordinator	**Acting HESQ Manager**		
25	Willie Bezuidenhout	Ty Hibberd	TH	04-05-2020
	Security & ER Coordinator	**HESQ Manager**		
26	Willie Bezuidenhout	Ty Hibberd	Ty Hibberd Digitally signed by Ty Hibberd Date: 2021.01.27 09:10:50 +08'00'	25-01-2021
	Security & ER Coordinator	**HESQ Manager**		

Document Revision History

Rev	Date	Description	Author
21	18-01-2017	Update to reflect new Refuge Chambers as Muster Points/Building and remove EAP3 and update Appendix D Remove reference to PIPS 15 and 18. Remove CRT from Crisis Management Plan.	N Corker / Dynamiq
22	04-09-2018	Periodic review, update references and nomenclature throughout – refer to DCRF 1757 for details. Change of custodian and approver.	W. Bezuidenhout
23	15-01-2019	Revised as per 1860 - DMIRS review & comments. Update to include TAN Project Office, updated muster and assembly points and maps, re-introduction of CRT.	W. Bezuidenhout
24	30-08-2019	Reviewed and removed Chlorine Duty card and PIP from the EMP, Changed Quadrant Energy to Santos Ltd. Addition of PIP No. 20 for Earthquake and Flooding. Update of Emergency Radio Communications. Temporary Addition of muster points for TAN Remediation Project. Refer to DCRF 3172 for detail.	W. Bezuidenhout
25	03-01-2020	Update with additional DG inventory (temporary diesel storage) and locations. Include reference to transport pipeline. Remove additional TRP muster buildings. Update to reflect findings from Synergi Case 20995040. Grammar and syntax fixes.	W. Bezuidenhout
26	25-01-2021	Update to include comments from DAWE, including additional information on record keeping and environmental related emergency response measures. Updated Muster points to reflect temporary muster buildings and reflect refuge chambers and EAA points in Section 20 S17.7 added Synergi Case 21016983	C. Price W. Bezuidenhout C Mott

TABLE OF CONTENTS

DISTRIBUTION LIST 2
REVISION RECORD 3
DOCUMENT APPROVAL 3
DOCUMENT REVISION HISTORY 4
1 ANNEXURE 1 9
2 PURPOSE 10
3 SCOPE AND OBJECTIVE 11
4 DEFINITIONS AND ABBREVIATIONS 12
5 REFERENCES 15
6 YARA PILBARA EMERGENCY RESPONSE OVERVIEW 16
6.1 SHIFT SUPERINTENDENT RESPONSIBILITY 16
6.2 EMERGENCY NOTIFICATION FLOW CHART 16
6.3 PRE-INCIDENT PLANS (PIP) 16
6.4 PLANT OPERATIONS 16
6.5 PLANT POPULATIONS DURING NORMAL OPERATIONS 16
6.6 INFORMATION ON PLANT & EMERGENCY ESCAPE, EVACUATION, FIRST AID & MEDICAL INFORMATION 16
6.7 MAP OF SURROUNDING AREAS 17
6.8 INVENTORY OF DANGEROUS GOODS ON EACH SITE 17
6.9 ENVIRONMENTAL RESPONSE 17
7 EMERGENCY SCENARIOS 18
7.1 MAJOR HAZARDS & EMERGENCY SCENARIOS 18
8 EMERGENCY PREPAREDNESS AND RESPONSE TRAINING 20
8.1 PRE-INCIDENT PLANS 20
8.1.1 Flammable Releases 20
8.1.2 Toxic Releases 20
8.1.3 Others 21
9 PLANT SAFETY FEATURES 22
9.1 AMMONIA PLANT 22
9.2 TECHNICAL AMMONIUM NITRATE PRODUCTION FACILITY 23
10 EMERGENCY NOTIFICATION 25

10.1 Raising the Alarm on Site (Ammonia Plant and TANPF) 25
10.2 Raising the Alarm Off Site 25
10.3 Notification to the Emergency Services 26
10.4 Notification by Third Parties 26
10.5 Site Fire Alarm 26
10.6 Control Room Alarms – Ammonia Plant 26
10.7 Control Room Alarms – TAN Plant 27

11 EMERGENCY / CRISIS RESPONSE STRUCTURE 28

11.1 Corporate Response Team (CRT) 28
11.2 Site Response Team (SRT) 29
11.3 Emergency Response Team (ERT) 30
11.3.1 ERT Duty Cards 30
11.3.2 Incident Controller Duty Cards 30
11.4 Muster Warden Structure 32
11.5 Primary and Alternate Team Roles 32
11.6 Links with External Emergency Services Incident Control System (ICS) 32

12 DETERMINATION OF EMERGENCY LEVEL 33

12.1 Level One Emergency – Local Alert 33
12.2 Level Two Emergency – Site Alert 34
12.3 Level Three Emergency – External Alert 35

13 EMERGENCY WARNING SYSTEMS 36

13.1 On Site Warning System 36
13.2 Off Site Communication System 37

14 EMERGENCY COORDINATION 38

14.1 Emergencies within the Site Boundaries 38
14.2 Emergencies within the Pipeline Corridor 38
14.3 Emergencies within the Dampier Port at the Ship Loading Facility 38

15 ACTION ON HEARING THE ALARM – ON-SITE 39

15.1 All Clear and Re-Entry 41

16 ROLES & RESPONSIBILITIES 42

17 NOTIFICATION AND LIAISON 47

17.1 Department of Fire and Emergency Services (DFES) Notification 47
17.2 Statutory Notification 48

17.2.1 Department of Mines, Industry Regulation and Safety (DMIRS) Critical Risks Section 48
17.2.2 Western Australian Police (WAPOL) 48
17.2.3 Department of Water and Environmental Regulation (DWER) 48
17.2.4 Department of Agriculture, Water and Environment (DAWE) 49
17.3 The TAN Plant operates under the requirements of the EPBC Act Approval EPBC 2008/4546. Condition 8(e) of this approval requires that any impact on the heritage values of the Dampier Archipelago (including Burrup Peninsula) National Heritage Place must be reported to the Department (DAWE) in writing within 72 hours. Notification to Gas Supplier (Santos Ltd) 49
17.4 Notification to Pilbara Ports Authority (PPA) 49
17.5 Notification to Pipeline Corridor Owner (Landcorp) 49
17.6 Notification to Neighbouring Facilities 49
17.7 Notification to Yara Maritime Logistics 50
18 COMMUNICATION SYSTEMS 51
18.1 Fixed Communication System 51
18.2 Intrinsically Safe Portable Communication Systems 51
19 EMERGENCY POWER SUPPLY 52
20 MUSTER BUILDINGS, EVACUATION ASSEMBLY AREAS AND REFUGE CHAMBERS 53
20.1 Ammonia Plant 53
20.2 Technical Ammonium Nitrate (TAN) Plant 54
20.3 TAN Remediation Project 54
20.4 Off-Site Evacuation Assembly Area 55
21 PROTECTIVE EQUIPMENT 56
22 FIRST AID & MEDICAL FACILITIES 57
23 CHEMICAL SPILL KITS 58
24 GAS MONITORS 59
24.1 Handheld Gas Monitors 59
24.2 Fixed Plant Gas Monitors 59
24.2.1 Ammonia Plant Control Room 59
24.2.2 Technical Ammonium Nitrate (TAN) Plant Control Room 59
25 SITE INGRESS / EGRESS 60
25.1 Common to both Ammonia and TAN Plant 60
25.2 Ammonia Plant Only 60
26 OFF-SITE MIGRATORY ACTION 61

27 TRAINING & COMPETENCY 62

28 EXERCISES, TESTING, AUDITING AND REVIEW 64

29 INCIDENT INVESTIGATIONS 65

30 DEBRIEFING 66

APPENDIX A – Emergency Notification Flow Chart 67

APPENDIX B – Pre-Incident Plans 68

APPENDIX C – Location of Emergency Fire Equipment 69

APPENDIX D – Overview of Plant Locations and Operations 86

APPENDIX E – Hazardous Inventories Adjacent to the Plants 91

APPENDIX F – Plant Population During Normal Operations (Indicative Only) 92

APPENDIX G – Protective Equipment 94

APPENDIX H – First Aid Equipment 95

APPENDIX I – Emergency Escape & Evacuation 96

APPENDIX J – Indicative Population of Surrounding Area 98

APPENDIX K – Inventory & Location of Dangerous Goods 99

APPENDIX L – Emergency Response Team Duty Cards 108

APPENDIX M – Incident Controller Duty Cards 115

1 Annexure 1

YARA PILBARA CONTACT LIST		
General Enquires Only:	Yara Pilbara Ammonia Plant Reception	08 9183 4000 / 4100 (Mon - Fri 0715 -1530)
24hr Emergency Line:	Ammonia Plant Control Room	**1800 117 506**
	TAN Plant Control Room	
Emergency only	Yara Pilbara Radio Channel	Channel 4
Security Enquires	Security Gate	08 9183 4111

Hardcopies of Yara Pilbara's internal and external emergency contact lists are available in the Ammonia Plant Control Room, Technical Ammonium Nitrate (TAN) Plant Control Room, the SRT Control Room and Perth Head Office. An electronic version is also available from Yara Pilbara Intranet / SharePoint page Emergency Response and in the online Yara Crisis Management system (EMQNet) at www.emqnet.com

2 Purpose

This Emergency Management Plan (EMP) has been prepared to meet the on-site and off-site emergency planning and response requirements for Yara Pilbara's Ammonia Plant (YPF) and Yara Pilbara Nitrates Technical Ammonium Nitrate Production Facility (TANPF).

Please note:

- Yara Pilbara Fertilisers (YPF) Ammonia Plant will hereafter be referred to as Ammonia Plant
- Yara Pilbara Nitrates (YPN) Technical Ammonium Nitrate Production Facility will hereafter be referred to as TAN Plant

Both Ammonia Plant and TAN Plant are classified as a Major Hazard Facility (MHF) under the Dangerous Goods Safety (MHF) Regulations 2007.

The purpose of this EMP is to establish the organisational structure and identify procedures and available resources to enable Yara Pilbara and Emergency Service personnel to manage an emergency within Yara Pilbara's operations by providing a safe and practicable response.

This EMP will provide generic guidelines to initiate actions to achieve a safe and desired response. This EMP covers emergency preparedness and response in the following areas:

- Ammonia & TAN Plant – Inside Battery Limits (ISBL);
- Ammonia & TAN Plant – Outside Battery Limits (OSBL);
- Ammonia Transfer Pipeline – 879mtr above ground pipeline
- Ammonia Export Pipeline Corridor – 5.2 km above ground pipeline;
- Ammonia Ship Loading Operations – Dampier Bulk Liquids Berth (BLB) Jetty; and
- TAN Remediation Project Temporary Office (OSBL)

This EMP also outlines the procedures to notify and communicate with emergency services, neighbouring facilities, regulators and local administration/community.

3 Scope and Objective

This EMP is intended to function as a guideline for emergency preparedness and response to incidents at Yara Pilbara's;

- Ammonia Plant
- Technical Ammonium Nitrate Production Facility (TAN Plant)
- Ammonia Shipping & Transfer Pipelines
- Dampier Bulk Liquids Berth (DBLB) Ship Loading Facilities
- TAN Remediation Project Temporary Office (OSBL)

The objectives of this EMP are to:

1. Provide awareness about emergency events that can occur at Yara Pilbara;
2. Demonstrate emergency response capability & preparedness;
3. Identify Yara Pilbara's emergency response personnel, their roles and methodology to safely and effectively mitigate or manage an emergency; and
4. Ensure a continuous improvement process is applied through auditing, exercises and reviews to this EMP.

This EMP is seen as a dynamic document subject to changes, updates and revisions which are recorded as per Yara Pilbara's Document Control System.

4 Definitions and Abbreviations

Term	Definition
AEGL	Acute Exposure Guideline Levels
AIIMS	Australasian Inter-Service Incident Management System
AN	Ammonium Nitrate
ANSOL	Ammonium Nitrate Solution
AS	Australian Standards
ASDS	Aspirating Smoke Detection Systems
BIC	British Instantaneous Coupling
BIEMC	Burrup Industries Emergency Management Committee
BLB	Bulk Liquids Berth
CCM	Critical Control Module
CCR	Central Control Room
CCTV	Closed Circuit Television
CEMS	Continuous Emissions Monitoring
CMP	Crisis Management Plan
CRT	Crisis Response Team
CO	Carbon monoxide
CO2	Carbon Dioxide
DCS	Distributed Control Systems
DFES	Department of Fire & Emergency Services
DGSA	Dangerous Goods Safety Act
DGSR	Dangerous Goods Safety (Major Hazard Facility) Regulations
DMIRS	Department of Mines, Industry Regulation and Safety
DPI	Department of Primary Industry
EAA	Evacuation Assembly Area
EAC	Electronic Access Card
ECM	Engineered Construction Maintenance

Term	Definition
EMA	Emergency Management Act
Emergency	An emergency is defined as “an event or situation, due to an actual or imminent occurrence, that endangers or threatens to endanger the safety or health of persons, destroys/ damages or threatens to destroy/damage the environment or property”.
EMP	Emergency Management Plan
EMQNet	Crisis Management System
EMR	Emergency Management Regulations
EPA	Environmental Protection Act
EPABX	Electronic Private Automatic Branch Exchange
EPR	Environmental Protection Regulations
ERT	Emergency Response Team
ERTL	Emergency Response Team Leader
ESD	Emergency Shut Down
ESO	Emergency Services Officer
FACP	Fire Alarm Control Panel
FM 200	Factory Mutual 200 Fire Suppression System
H2S	Hydrogen sulphide
HESQ	Health, Environment, Safety and Quality
HMA	Hazard Management Agency
HSE	Health Safety & Environment
I/O cards	Input / Output cards
IC	Incident Controller
ICS	Incident Control System
INCIDENT	An event or issue that can have the potential to seriously threaten Yara's operations, reputation and the safety and well-being of its employees. Such an incident might attract intense public, shareholder and customer scrutiny; create financial, legal and governmental impacts on the business; and threaten Yara’s reputation, or even its survival
IR	Infrared

Term	Definition
ISBL	Inside Battery Limits
kPa	Kilopascal
LEL	Lower Explosive Limit
m3	Cubic Meter(s)
MAE	Major Accident Event
MHF	Major Hazard Facility
MP	Muster Point
N2O / NOX	NITROUS OXIDE
NA	Nitric Acid
NFPA	National Fire Protection Association
NH3	Ammonia
O2	Oxygen
OEMP	Operations Environmental Management Plan
OSHA	Occupational Safety and Health Act
OSHR	Occupational Safety and Health Regulations
PA	Public Address
PES	Process Electronic System
PIP	Pre-Incident Plan
PLC	Programmable Logic Controller
PM	Plant Manager
PO	Panel Operator
PPA	Pilbara Ports Authority
PVC	Plastic Polyvinyl Chloride
SCBA	Self-contained breathing apparatus
SIS	Safety Instrumented System
SMS	Safety Management System
SOP	Standard Operating Procedures

Term	Definition
SRT	Site Response Team
SRTCR	Site Response Team Control Room
SRTL	Site Response Team Leader
TAN	Technical Ammonium Nitrate
TANPF	Technical Ammonium Nitrate Production Facility
UPS	Un interruptible Power Supply
VESDA	Very Early Smoke Detection Apparatus
VNET	Virtual Network
VNET/IP	Virtual Network /Internet Protocol
WAPOL	Western Australian Police
YPF	Yara Pilbara Fertilisers
YPN	Yara Pilbara Nitrates

5 References

- Dangerous Goods Safety (Major Hazard Facility) Regulations 2007.
- *Dangerous Goods Safety Act 2004* (WA).
- AS 3745-2010 Planning for Emergencies in Facilities
- Guidelines for the Preparation of an Emergency Plan and Manifests: Guidance Note s310 Rev 5.
- Occupational Safety and Health Act 1984.
- Occupational Safety and Health Regulations 1996.
- Emergency Management Act 2005.
- Emergency Management Regulations 2006.
- Environmental Protection Act 1986
- Environmental Protection Regulations 1987
- Environmental Protection (Unauthorised Discharges) Regulations 2004
- Environmental Protection and Biodiversity Conservation Act 1999

6 Yara Pilbara Emergency Response Overview

6.1 Shift Superintendent Responsibility

In the event of an emergency at the Technical Ammonium Nitrate Production Facility (TAN Plant) including the Remediation Project Office, the Shift Superintendent of the TAN Plant will assume the role of the Incident Controller (IC).

In the event of an emergency at the Ammonia Plant or Shipping Pipeline the Shift Superintendent of the Ammonia Plant will assume the role of the Incident Controller (IC).

In the event of an emergency at the Dampier Bulk Liquids Berth, the Ship Loading Officer at the Berth will assume the role of the Incident Controller (IC).

The Incident Controller will command the Emergency Response Team with support from the Site Response Team and Corporate Response Team (crisis management).

6.2 Emergency Notification Flow Chart

Emergency Notification Flow Chart is contained in Appendix A.

6.3 Pre-Incident Plans (PIP)

Pre-Incident Plans (PIPs) provide guidelines to manage various foreseeable emergency scenarios and are listed in Appendix B. These PIPs provide initial guidance to response organisations in terms of potential impacts, response requirements and notifications. The PIPs must be reviewed in alignment with this EMP.

6.4 Plant Operations

An overview of the plant, including general operations of both the Ammonia Plant and TAN Plant is contained in Appendix D.

6.5 Plant Populations During Normal Operations

Populations of the Ammonia Plant, TAN Plant & TAN Remediation Project Office during normal hours in tabulated in Appendix F.

6.6 Information on Plant & Emergency Escape, Evacuation, First Aid & Medical Information

Appendices G, H & I contain information on the respective plants and outlines the emergency escape evacuation routes, first aid and medical information.

6.7 Map of Surrounding Areas

A map of the surrounding areas showing the built and natural environment and the neighbouring facilities that may be affected in the event of a major accident is contained in Appendix J.

6.8 Inventory of Dangerous Goods on Each Site

An inventory of dangerous goods and a description of the hazardous properties of those goods located at both the Ammonia Plant and the TAN Plant are contained in Appendix K.

6.9 Environmental Response

Where relevant, the individual Pre-Incident Plans (PIP's), referenced in Appendix B address the environmental hazards and immediate actions that need to occur to prevent/minimise environmental impact.

A specific Ammonia Spill - Environmental Work Instruction (250-200-WIN-YPF-0048) is in place to address Ammonia Spill scenarios. This document includes instructions and accountabilities required to manage the environmental aspects of an off-site terrestrial ammonia spill, an on-site terrestrial ammonia spill and a marine ammonia spill.

The response required is dependent on serval factors including:

- the sources of the spill, i.e. pipeline, ammonia tank, jetty;
- the receiving environment, i.e on-site or off-site terrestrial or marine; and
- the volume of the spill

In each scenario the response is broken down in to the following steps:

- immediate response;
- containment;
- treatment;
- disposal;
- monitoring; and
- reporting.

7 Emergency Scenarios

The development of this EMP included identifying major hazards using risk assessments and in consultation with employees, external consultants, BIEMC & regulatory agencies etc.

7.1 Major Hazards & Emergency Scenarios

The major hazards at the Ammonia Plant are:

- Natural Gas;
- Hydrogen Enriched Process Stream;
- Sulphuric Acid;
- Anhydrous Ammonia; and
- Catalyst Fires

The major hazards at the TAN Plant are:

- Ammonium Nitrate (solution & Prill form)
- Anhydrous Ammonia;
- Nitric Acid;
- Hydrogen; and
- Nitrogen Oxides (NO_x)

These hazards can give rise to a range of emergencies including flash fires, jet fires, explosions and toxic releases. These events can occur in various parts of each plant including:

- Ammonia Plant
    - Natural Gas Feed & Conditioning;
    - Primary and Secondary Reformer, Shift Converter;
    - CO_2 Absorber/ Methanator;
    - Purification, Compression, Synthesis and Refrigeration;
    - Ammonia Storage Tanks and Export Pumps; and
    - Utilities.

- TAN Plant
    - Ammonia Supply Transfer Pipeline (units 20, 61 & 63);
    - NA Process (Unit 12);
    - ANSOL Process (Unit 31);
    - TAN Process (unit 32);
    - Storage, loading & transport facilities (units 35, 52, 71, 72, 73, 74. 75*);
    - Utilities; and
    - Buildings

In addition, emergencies may arise both onsite and offsite:

- Onsite Emergency Scenarios:
    - Medical emergency;
    - Ammonia spill (both on & offsite);
    - Ammonium Nitrate spill (both on & offsite);
    - ANSOL spill;
    - Saline Water (both on & offsite);
    - Collisions and impacts from 3rd party activities inside the plant;
    - Bomb threats;
    - Security breaches;
    - Bush fires;
    - Vehicle collisions etc.
- Offsite Emergency Scenarios:
    - Loss of containment within the Quadrant Energy Natural Gas Metering Station;
    - Loss of containment within the Ammonia Export and Recirculation Lines;
    - Loss of containment within the Ammonia Ship Loading Facilities; and
    - Loss of containment within the Ammonia Transfer pipeline.
- External Events
    - Natural disasters (cyclones, earthquake, flooding etc.);
    - Localised bush fires;
    - Collisions and impacts from 3rd party activities to the ammonia export and recirculation line; and
    - Catastrophic events at Pilbara Ports Authority Lease Port that may damage Yara Pilbara ship-loading facilities.

8 Emergency Preparedness and Response Training

Yara Pilbara employs an Emergency Response Coordinator with necessary skills, experience, training, and knowledge necessary to:

- Train and coach Yara Pilbara's Emergency Response Team regarding the EMP, PIPs and SOPs;
- Maintain Yara Pilbara's EMP and emergency response equipment;
- Conduct audits and emergency management reviews as part of continuous improvement process and Yara Pilbara's Safety Management System (SMS);
- Coordinate any necessary external training as per emergency preparedness and response planning; and
- Plan and execute emergency drills and exercises with on-site and external agencies.

All employees and visitors shall receive relevant training and awareness as part of the site induction program. This includes necessary knowledge and awareness in emergency systems, evacuation procedures and preparedness.

8.1 Pre-Incident Plans

Pre-incident plans have been prepared to provide specific guidance on the appropriate response to emergency scenarios that may occur as a result of the Major Accident Events identified in the Formal Safety Assessment during operational design. These plans also advise on the potential escalation scenarios and the equipment (including clean-up disposal) and resources available onsite and elsewhere that can be deployed. Potential scenarios are identified as follows.

8.1.1 Flammable Releases

- Natural gas unignited release (potential for explosion, flash fire);
- Natural gas ignited release (jet fire); and
- Process stream (auto-ignited) release (jet fire).
- Non-Process Fires (Catalyst)

8.1.2 Toxic Releases

- Ammonia Release - loss of ammonia containment from process plant, loss of containment from ammonia storage, loss of ammonia containment from export pipeline;
- Loss of containment from Acid Storage area;
- Loss of ammonia containment from ship loader (Ship Loading and Jetty);
- Natural Gas release; and
- Process Stream release.

8.1.3 Others

- Major injury or fatality (plant, pipeline or port);
- Non-Process Fires (electrical, bush, building fire, oil, diesel);
- Cyclone Contingency Planning;
- Bomb & Terrorist Threats;
- Substation, Transformer Bay or Generator Fire;
- Ammonium Nitrate Prill incident;
- ANSOL incident; and
- Nitric Acid incident.
- Vehicle Interaction and/or Roll Over
- Security Breach
- Earthquake & Flooding Contingency

9 Plant Safety Features

9.1 Ammonia Plant

The Yara Pilbara Ammonia Plant, pipeline and ship loading facilities are provided with several risk control features designed to prevent a major accidental event or mitigate the consequences of such an event.

These features include:

- Ammonia Plant Control Room - this facility monitors and controls all aspects of the plant's operation including the pipeline;
- Emergency Isolation & Shutdown Systems - the shutdown is initiated either automatically through instrument logic on detection of upset condition without the Operator's intervention or manually by the personnel in the Control Room on visual detection through process upset condition;
- Process Electronic System (PES) – the main component of the system is the ProSafe-PLC CCM (Critical Control Module), which provides basic logic solving capabilities. The shutdown systems are aimed at equipment protection and isolation of a section of the plant during an emergency;
- Emergency Manual Trips – actuation of these buttons will shut down each machine leading to a partial trip of that area, plant shutdown will be initiated by the Emergency Shut Down (ESD) system. All main pumps and motors have local shut down buttons;
- Bunded areas;
- Isolation valves;
- Interface communication with Ammonia Plant via router which connects the existing plant network (Vnet) and the new plant network (Vnet/IP)
- Plant Fire Protection Systems – this includes fire alarm system, fire water network, double fire hydrants, fire monitors, dry chemical, portable extinguishers including portable CO2 extinguishers, and FM 200 flooding agent for the Control Room;
- Emergency Communications – this includes an emergency siren and an all clear alarm (common between the Ammonia and TAN Plants), EPABX system, and portable communications systems (radio & telephones);
- Closed Circuit Television (CCTV) coverage of entrances, process areas and over watch of the Bulk Loading Berth;
- Fire and Gas Detection – fire, flammable gas and toxic gas detection systems are provided at the plant; and
- A Weather Station - to measure precise wind speed and indicate wind direction across the plant. The weather station also gives information on ambient temperature, relative humidity etc. The weather station information is available in the Control Room and will assist in determining if any neighbouring facilities could be affected in the event of a major accidental event.

9.2 Technical Ammonium Nitrate Production Facility

The TAN Plant is provided with several risk control features designed to prevent a major accidental event or mitigate the consequences.

These features include:

- Plant Control Room - this facility monitors and controls all aspects of the plant's operation and includes Distributed Control Systems (DCS) and Safety Instrumented System (SIS);
- Continuous Emissions Monitoring (CEMS) in U-12 stack and De-NOx system;
- Online emission analysers have been implemented in U12 stack for monitoring and measuring N2O, NOx, oxygen and ammonia during operation.
- Closed Circuit Television (CCTV) in process areas, storage areas the fence line and infrared (IR) cameras in the AN Bulk Storage Building;
- Emergency Isolation & Shutdown Systems - shutdown is initiated either automatically through instrument logic on detection of upset condition without the Operator's intervention or manually by the personnel at Control Room on visual detection through process upset condition;
- Process Electronic System (PES) – the main component of the system is the ProSafe-PLC CCM (Critical Control Module), which provides basic logic solving capabilities. The shutdown systems are aimed at equipment protection and isolation of a section of the plant during an emergency; The SIS system consists principally of system cabinets for ProSafe-RS (Yokogawa Safety System) including the following internal equipment:
    - Redundant configuration (1oo2D) ProSafe-RS completely programmed, which provides the basic logic solving capabilities;
    - Necessary I/O cards, cards of interface and wires;
    - Redundant feeding sources;
    - Isolators and equipment of interconnection; and
    - SIS Matrix console.
- Emergency Manual Trips – actuation of these buttons will shut down each machine leading to a partial trip of that area plant will be initiated by the Emergency Shut Down (ESD) system. All main pumps and motors have local shut down buttons;

- Bunded areas;
- Isolation valves;
- Interface communication with Ammonia Plant via router which connects the existing plant network (Vnet) and the new plant network (Vnet/IP);
- Plant Fire Protection Systems – this includes fire alarm system, fire water network, double fire hydrants, fire monitors, dry chemical portable extinguishers and CO_2 portable extinguishers;
- Emergency Communications – this includes emergency siren and all clear alarm (common between the Ammonia Plant and TAN Plant), EPABX system and Portable communications system (radio), beacons, horns, IP PBX based digital and analogue telephone systems, radio communications system digital mobile radio, public address system, CCTV and security (CCTV and Access Control System);
- Fire and Gas Detection – fire, thermal detectors and gas detection (hydrogen detectors, ammonia detectors, NOx detectors) are provided at the plant. In addition, the bulk storage is equipped with N_2O detectors as an early warning of AN decomposition; and
- A weather station - to measure precise wind speed and indicate wind direction across the plant. The weather station also gives information on ambient temperature, relative humidity etc. The weather station information is available in the Control Room and will assist in determining if any neighbouring facilities could be affected in the event of a major accidental event.

10 Emergency Notification

10.1 Raising the Alarm on Site (Ammonia Plant and TANPF)

Personnel, contractors and visitors on site must report all emergencies immediately to the respective Control Room or Site Security. This notification can be via:

Site	Emergency No.	Control Room	Security (direct)	2 Way Radio Channel	Manual Call Points
Ammonia Plant	1800 117 506 (directed to Security)	08 9183 4165	Extension: 4111 External: 08 9183 4111	Channel 4 clearly announcing "emergency, emergency, emergency"	Red break glass alarm devices located throughout both facilities.
TAN Plant/TAN Remediation Project Office		08 9183 4007 / 4008	Extension: 4111 External: 08 9183 4111		

The relevant person, on receiving the notification, shall document the name of the caller, details of the incident, location of incident, injuries and chemicals involved. The person shall immediately report the incident to the Shift Superintendent who will commence management of the incident.

Where the emergency call is received by a Control Room Operator, they shall also notify Security Control.

10.2 Raising the Alarm Off Site

Personnel, contractors, the public and visitors off-site must report all emergencies immediately via:

- Yara Pilbara's Two-Way Radio: Channel 6 analogue or 26 Digital Yara Emergency number 1800 117 506 or Security 08 91 834 111

The person receiving the call shall document the name of the caller, details of the incident, location of incident, injuries and chemicals involved. The person receiving the call shall immediately report the incident to the Shift Superintendent and Security Control.

10.3 Notification to the Emergency Services

DFES & Police should be contacted through the following means:

- Telephone: Dampier and Karratha dial 000 (preferred method of contact)
- Dedicated Radio: Channel 136 (DFES channel) on the four dedicated radios located in the following:
    - Scania Fire Truck;
    - Ammonia Plant Control Room;
    - TAN Plant Control Room; and
    - The Security Gatehouse.

10.4 Notification by Third Parties

State Emergency Services (WA Police, DFES etc), contractors, PPA, members of the public, police or neighbouring facilities may contact Yara Pilbara Security to report an emergency by dialling 1800 117 506.

10.5 Site Fire Alarm

The site fire alarms can be activated manually by an individual or automatically by the activation of a fire detector. The Control Room of the respective facility will receive immediate notification on activation of these alarms.

10.6 Control Room Alarms – Ammonia Plant

The Ammonia Plants Control Room contains facilities to monitor and control plant operation including the export pipeline (except loading arm operation). The plant has been provided with

- Isolation valves at strategic locations which can be operated remotely from the Control Room depending upon their criticality and role in process safety.
- Gas detectors for ammonia, chlorine and flammable gas.
- Smoke & flame detectors are located across the plant.
- Manual call points installed at different locations.

When activated, detectors and manual call points send signal directly to the Ammonia Plant Control Room and automatically sound the emergency siren.

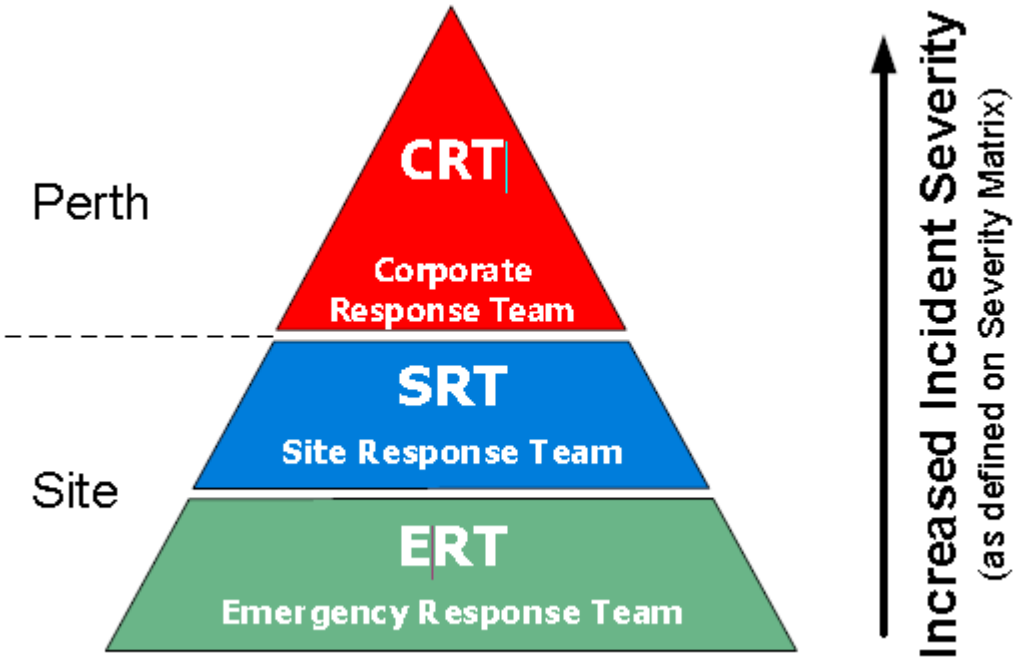
10.7 Control Room Alarms – TAN Plant

The TAN plant is provided with a Central Control Room that contains facilities to monitor and control plant operation. The plant has been provided with:

- Toxic Gas Detection: point ammonia detectors and nitric oxide gas detectors;
- Flammable Gas Detection: hydrogen/ hydrocarbon flammable gas detectors;
- Smoke detectors are installed in local instrument rooms, switchgear/electrical equipment rooms, cable trenches inside substation and occupied buildings;
- Manual Call Points strategically located indoors and outdoors around escape routes, exits, walkways and roads;
- Aspirating Smoke Detection Systems (ASDS) installed in buildings producing, storing or transporting ammonium nitrate;
- Thermal detectors are provided in areas where smoke detection is inappropriate;
- Duct smoke detectors - in the compressor shelter, shift Laboratory, bulk TAN storage, conveyor galleries, Control Room building, Transporter Workshop and Emergency Centre; Duct N_2O detectors in bulk TAN storage as an early warning of ammonium nitrate decomposition; and
- Signals from fire and smoke detectors will be connected to the fire detection signal processing control unit (FACP) at the TAN Control Room. A ‘low alarm’ will be activated if a low alarm is triggered from one detector. A ‘confirmed fire’ alarm will be activated from a manual call point or if a high alarm is triggered from one detector.

11 Emergency / Crisis Response Structure

The Emergency and Crisis Management System structure consists of the following elements, some or all of which may be mobilised to deal with an Incident:



Yara have a three-tier structure in place to manage and respond to incidents affecting the site. The structure and function of the Corporate Response Team (CRT) and Site Response Team (SRT) is detailed in the Crisis Management System, with the structure of the Emergency Response Team (ERT) at site being the subject of the Yara Pilbara Emergency Management Plan (this document).

11.1 Corporate Response Team (CRT)

The CRT is based in Perth and its primary role is to minimize the financial impact on the Company by assessing the consequences of any incident or issue and managing those with potential enterprise-wide impact whilst supporting and advising any response at site.

Its focus will be on strategic issues which may affect the company's future operability, business continuity, profitability and reputation. The CRT will also investigate legal issues associated with the incident, communication and liaising with Government.

The structure and function of the CRT is detailed in this Crisis Management System document. The CRT is made up of the following members:

- CRT Leader
- CRT Spokesperson
- CRT Coordinator
- CRT Log Keeper

- CRT Human Resources
- CRT External Relations
- CRT Legal
- CRT Finance
- CRT Commercial Services

11.2 Site Response Team (SRT)

The primary role of the SRT is to oversee the operational emergency response and the wellbeing of people involved in, or affected by, an incident or issue. This is achieved by providing shelter, support and advice to any response on site and developing plans to get operations back to normal as quickly as possible whilst liaising with the CRT.

The SRT makes operational plans to mitigate the effects of the emergency as well as identifying and communicating strategic issues (which affect the company's future operability, business continuity, profitability and reputation) arising from the event to the CRT. Elements of the SRT will also assist in the investigate legal issues associated with the incident, conduct communications and liaise with Government.

The structure and function of the SRT is detailed in this Crisis Management System document. The SRT includes the following roles:

- SRT Leader
- SRT Spokesperson
- SRT Coordinator
- SRT Log Keeper
- SRT Human Resources
- SRT Operations
- SRT Safety
- SRT Environmental
- SRT Governance and Compliance
- SRT Emergency Services
- SRT Recovery
- SRT Security
- SRT Legal
- SRT Finance
- SRT Commercial Services
- SRT External Relations

The SRT Leader (SRTL), as required by the Incident Controller will coordinate the planning, logistics, resource, plant, community, and regulator liaison functions and shall give technical and services support to the Incident Controller as required.

All personnel who are qualified to be a part of the SRT are trained in the use of the EMQNet application, which is used to maintain a log for emergency events. The Log Keeper within the SRT is responsible for maintaining an accurate record of events.

The SRT Control Room for both the Ammonia and TAN Plant is in the Administration building within the Ammonia Plant boundaries, and alternative location is the SRT TAN room in the TAN Security Gatehouse.

The SRTL will consider locating the SRT to an offsite location if or when the need arises.

11.3 Emergency Response Team (ERT)

The primary role of the ERT is to organise and carry out the tactical response operations at the incident scene. The ERT is made up of the first responders from each plant who undertake the physical response to an incident with support from the SRT.

The ERT will consist of the Incident Controller (Shift Superintendent / Senior Control Room Operator), ERT Leader , a minimum of five (5) additional trained members and an ESO (Emergency Services Officer). This will allow appropriate numbers to maintain a fire team operating under self-contained breathing apparatus (SCBA), a backup team under SCBA, and operation of pumps and the fire appliance.

11.3.1 ERT Duty Cards

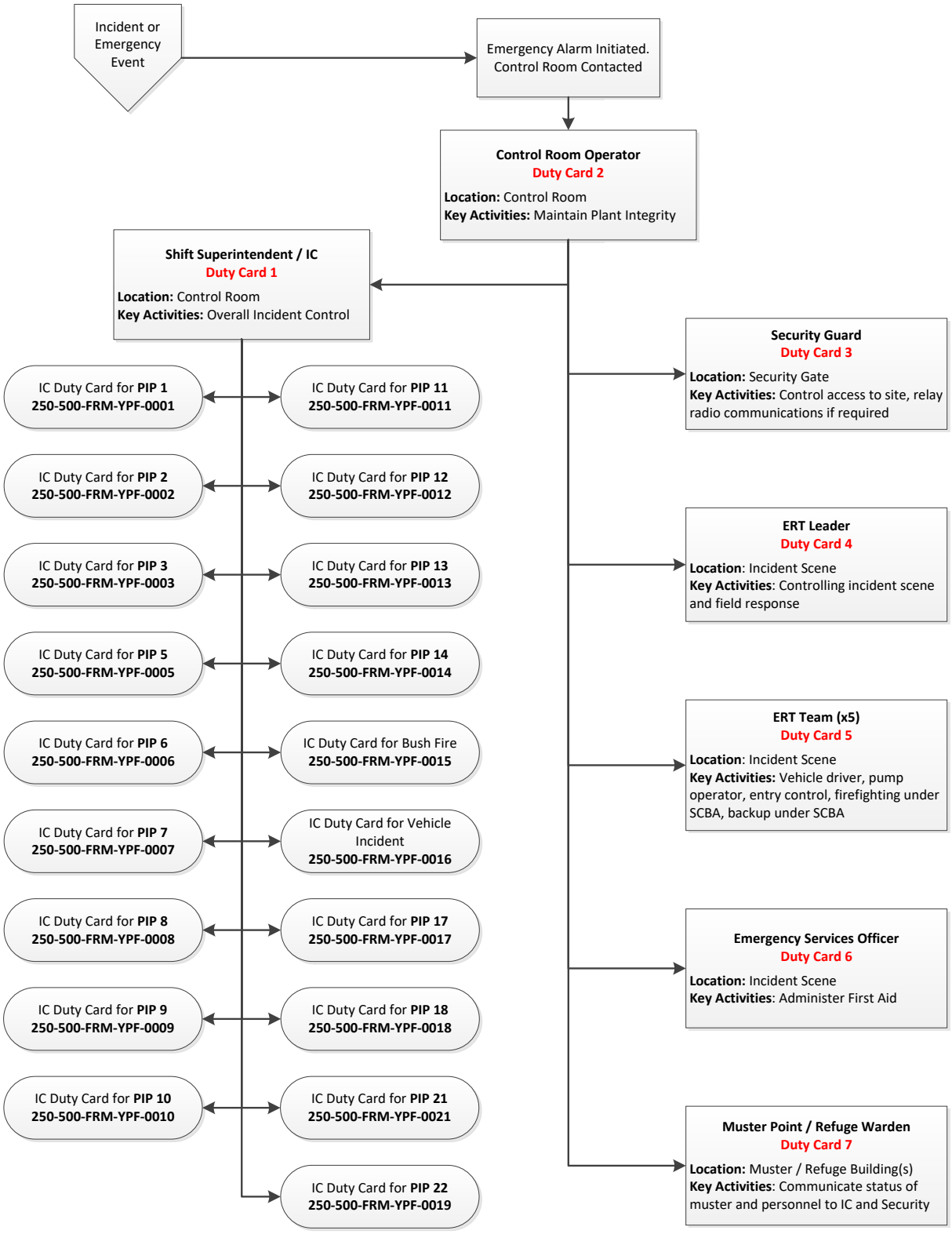
In the event of an emergency the roles of key personnel are vital to ensure a successful response. Duty cards summarising the process to be followed by key personnel listed below are outlined in Appendix L.

The ERT leader, under the direction of the Incident Controller, coordinates the team members, and any support personnel including ESO etc. as required. Any further resources required by the ERT will be determined by the Incident Controller based on their assessment of the specific incident response requirements and passed through the SRT Emergency Response Coordinator.

To allow the Shift Superintendent to maintain the required team strength, the names of ERT Members from both plants on shift are placed on the ERT board in each Plant Control Room’s, SRT Room and TAN Gatehouse. Security personnel will provide the Shift Superintendent with the names of available ERT Members who have entered site using their EAC card.

11.3.2 Incident Controller Duty Cards

The Incident Controller is required to coordinate the ERT Team dependent upon the type of emergency. Individual PIP dependent Incident Controller Duty Cards summarising the process for different types of emergencies are contained in Appendix M. This process is designed to be flexible and requires the Incident Controller to adapt to the changing circumstances of the emergency.


Incident or Emergency Event
Emergency Alarm Initiated. Control Room Contacted
Control Room Operator
Duty Card 2
Location: Control Room
Key Activities: Maintain Plant Integrity
Shift Superintendent / IC
Duty Card 1
Location: Control Room
Key Activities: Overall Incident Control
IC Duty Card for PIP 1 250-500-FRM-YPF-0001
IC Duty Card for PIP 2 250-500-FRM-YPF-0002
IC Duty Card for PIP 3 250-500-FRM-YPF-0003
IC Duty Card for PIP 5 250-500-FRM-YPF-0005
IC Duty Card for PIP 6 250-500-FRM-YPF-0006
IC Duty Card for PIP 7 250-500-FRM-YPF-0007
IC Duty Card for PIP 8 250-500-FRM-YPF-0008
IC Duty Card for PIP 9 250-500-FRM-YPF-0009
IC Duty Card for PIP 10 250-500-FRM-YPF-0010
IC Duty Card for PIP 11 250-500-FRM-YPF-0011
IC Duty Card for PIP 12 250-500-FRM-YPF-0012
IC Duty Card for PIP 13 250-500-FRM-YPF-0013
IC Duty Card for PIP 14 250-500-FRM-YPF-0014
IC Duty Card for Bush Fire 250-500-FRM-YPF-0015
IC Duty Card for Vehicle Incident 250-500-FRM-YPF-0016
IC Duty Card for PIP 17 250-500-FRM-YPF-0017
IC Duty Card for PIP 18 250-500-FRM-YPF-0018
IC Duty Card for PIP 21 250-500-FRM-YPF-0021
IC Duty Card for PIP 22 250-500-FRM-YPF-0019
Security Guard
Duty Card 3
Location: Security Gate
Key Activities: Control access to site, relay radio communications if required
ERT Leader
Duty Card 4
Location: Incident Scene
Key Activities: Controlling incident scene and field response
ERT Team (x5)
Duty Card 5
Location: Incident Scene
Key Activities: Vehicle driver, pump operator, entry control, firefighting under SCBA, backup under SCBA
Emergency Services Officer
Duty Card 6
Location: Incident Scene
Key Activities: Administer First Aid
Muster Point / Refuge Warden
Duty Card 7
Location: Muster / Refuge Building(s)
Key Activities: Communicate status of muster and personnel to IC and Security

11.4 Muster Warden Structure

The current warden structure includes nominated Muster Warden who account for persons at their muster point or refuge chamber and pass the information to Security via radio or phone on channel 5. Wardens then remain on standby to receive further instruction.

Each muster building /refuge chamber has multiple nominated personnel to assist in completing designated tasks. Muster building point/refuge chambersare identified in Section 20.

11.5 Primary and Alternate Team Roles

The ‘primary’ person is the first choice for each role (IC, ERT TL).

If this person is not available, the ‘alternate’ position will fill the role.

If the ‘primary’ person is available, the ‘alternate’ may be required to act in a ‘support’ role.

11.6 Links with External Emergency Services Incident Control System (ICS)

The ERT has been structured to facilitate the interface with Australasian Inter-Service Incident Management System (AIIMS). This allows for liaison and support between Yara Pilbara Incident Controller and external emergency services / other 3rd parties in the local area.

12 Determination of Emergency Level

Emergency events do not always require the same level of response. The level of response is dictated by the severity of the event and its potential effect on health and safety, as well as community perception and risk or potential threat.

On notification of an incident or alarm the Shift Superintendent of the respective plant shall determine the emergency level. In the case of control alarms, the Duty Panel Operator shall comply with the requirements of the “Yara Pilbara Fertilisers Process Operations Alarm “Philosophy” in order to confirm if any process alarm is spurious.

Whilst emergencies are categorised as on-site and off-site, they are further defined as Levels 1 through 3, and once the emergency or incident has been escalated to the SRT, the Severity Matrix will be used to identify relevant incident issues and outcomes from the event.

12.1 Level One Emergency – Local Alert

An incident where the effects are expected to be confined to a limited area within the plant boundaries and can be adequately managed by personnel within the immediate location.

Its characteristics are that it:

- Is unlikely to worsen and be easily contained;
- Can be dealt with using local resources, e.g. fire extinguishers;
- Requires the ERT to be activated;
- May require the SRT to assemble;
- Requires internal notification but may not require any external notification immediately;
- Does not require evacuation to muster point;
- Only requires limited first aid; and
- Is unlikely to attract media interest in a local or national sense.

The Shift Superintendent must be notified. They shall assume the role of Incident Controller and activate the ERT but may not mobilise the SRT. Examples include a small-contained acid or ammonia leak, a leaking flange or a small fire.

This emergency level may not require the mobilisation of external emergency services. Command and control of the emergency will remain with the Incident Controller.

12.2 Level Two Emergency – Site Alert

An incident where the effects will remain contained to a limited area but may spread to other areas within the respective plant boundaries. Such incidents will not cross the plant boundary, nor will they be harmful but may create perceptions / panic amongst neighbouring facilities and/or community.

Its characteristics are that it:

- Is contained to an area onsite and within the perimeter;
- Is not harmful to neighbouring facilities or community;
- Requires the ERT and the SRT to assemble and be activated;
- May require CRT to be advised and/or activated;
- Page 35/116 changes to be made. May require injury treatment;
- “Requires the immediate notification to nominated regulatory agencies by the SRT;
- Evacuation to Muster Buildings /Refuge chambers and/or evacuation of site may be required;
- Incident, until controlled, has the potential to escalate to a Level Three incident; and media interest is possible both at local and state level.

Examples include an acid spill that is not contained, a small ammonia leak or a developing fire visible from distance.

This emergency level may or may not require the mobilisation of external emergency services to assist site personnel and augment site resources.

If the incident escalates and triggers a Westplan response, the role of Incident Controller will be filled by a civil emergency services officer (Police, DFES District Officer). The Yara Pilbara Incident Controller will not maintain control of the incident but will provide whatever the designated Incident Controller requires in relation to personnel, assets, technical assistance, etc. As the civil Incident Controller has little or no knowledge of the plant and the hazards involved, it is likely the Yara Pilbara senior person (previously the Incident Controller) will fill the role of Deputy Incident Controller or Operations (as defined by the AIIMS

The Incident Controller and SRT will maintain close coordination of the incident in order to mobilise resources required to ensure an effective response to an incident or emergency.

12.3 Level Three Emergency – External Alert

An incident where the effect may spread and impact the people, property and the environment inside and outside of the plant.

Its characteristics are that it:

- Is significant and has the capacity to worsen;
- Requires the ERT and the SRT to activate;
- Requires CRT to be advised/activated;
- Requires the immediate notification to internal and external stakeholders and near neighbours;
- Requires the immediate notification to nominated regulatory agencies by the SRT;
- Likely to require external support from local emergency services;
- May require evacuation to Muster buildings/Refuge chambers and/or offsite as necessary;
- May involve casualties; and
- Media interest is expected at local, state or national level.

Examples include an uncontrolled fire or a large toxic gas release.

This emergency level will require the mobilisation of external emergency services to protect public persons, property and the environment and to assist site personnel and augment site resources. Onsite command and control of the emergency will remain with the Incident Controller.

The Loading Master will assume command and control of emergencies on the jetty during ship loading.

Control of other offsite aspects of the emergency becomes the responsibility of the designated HMA, which under the Emergency Management Regulations 2006 are allocated to DFES.

The Incident Controller and SRT will maintain close coordination of the incident in order to mobilise resources required to ensure decisive response to an incident or emergency. The SRT will regularly update CRT with detail of the event.

13 Emergency Warning Systems

13.1 On Site Warning System

If required, the Incident Controller (Shift Superintendent of respective plant) shall authorise the activation of an emergency alarm, common to both plants, to alert all personnel to evacuate to Muster buildings/Refuge chambers. Confirmation of the site emergency alarm is carried out via the radio and PA system. If the Shift Superintendent is not immediately available, the Panel Operator shall initiate the alarm. The alarm should be sounded for the following situations;

- Any explosion;
- A fire (other than a minor fire that can be controlled);
- An uncontrolled ammonia gas or liquid release;
- An uncontrolled process gas release; or
- Any other situation where persons need to be accounted for and/or protected from an event.

The emergency alarm is to be raised whenever there is an unplanned medium-to-large release (or leak) at either plant.

In all cases, it is preferential to raise the alarm as it allows personnel to take precautionary actions.

Emergency sirens are provided in the different plant areas to alert personnel in emergency situations. These sirens are also audible at the Water Corporation Desalination Plant. The emergency alarm sounds like an air raid siren and is tested every Monday at 0900 hours at the Ammonia Plant and 0915 hours at the TAN Plant.

13.2 Off Site Communication System

This notification is required when a neighbouring facility, building or organisation may be affected by an emergency. In the case of a toxic release it is vital that neighbouring facilities in the path of such a release are notified immediately so that they can take appropriate safety measures.

If an emergency is classified as a Level Two or Level Three emergency, Yara Pilbara will immediately notify neighbouring facilities, DFES, WAPOL, regulators, local administration and all concerned agencies using the Message Manager System (EMQNet); which assists in alerting third party agencies through their nominated person(s).

Listed Message Manager recipients will receive a pre-defined and pre-approved SMS and/or email alert advising them of the nature of the onsite emergency.

Yara Pilbara maintain a hardcopy of the names and emergency contact numbers of external emergency departments, statutory authorities and neighbouring facilities in the area which is revised and updated on a quarterly basis by the Emergency Response Coordinator.

The contact listing is also maintained in the SRT Control Room. The Incident Controller will initiate contact with the required neighbouring facilities in consultation with the SRTL.

Yara Pilbara will update neighbouring facilities and DFES with latest status about the incident and future course of action during a significant incident.

14 Emergency Coordination

The location of the emergency will determine the appropriate emergency response, command and control.

14.1 Emergencies within the Site Boundaries

For emergencies located within the plant boundaries, including the TAN Remediation Project Office and the Water Corp Desalination Plant, the initial response will be made by Yara Pilbara ERT under the command of the respective site Incident Controller.

14.2 Emergencies within the Pipeline Corridor

For emergencies within the export pipeline corridor that arise from or impact the ammonia export line, response will be made by Yara Pilbara ERT under the command of the Ammonia Plant Incident Controller. Yara Pilbara will advise DFES, Landcorp and PPA if any emergency exists in the Yara Pilbara East / West Service Corridor.

14.3 Emergencies within the Dampier Port at the Ship Loading Facility

For emergencies located at the PPA Dampier Port that arise on the BLB Jetty, Yara will firstly notify DFES and then commence first response by the Yara ERT under the command of the Loading Master acting as Incident Controller. In this case, the Incident Controller will immediately notify the Ammonia Plant Control Room and then PPA.

15 Action on Hearing the Alarm – On-Site

The emergency alarm sounds like an oscillating air raid siren and will be sounded throughout the plant for one minute.

Upon hearing the emergency alarm all personnel onsite (both Ammonia and TAN Plants) shall move to the closest Muster Building /Refuge chamber **as follows:**

- Stop work, immediately observe the windsock and evacuate across and upwind to the nearest and safest Muster Building or Refuge chamber.
  Escape hoods to be used when safe evacuation across and upwind to the nearest and safest Muster Building /Refuge chamber is not possible.
- The first staff member from site who reaches a Muster Building /refuge chamber shall become the Muster Warden for that area.
- For the **Ammonia Plant,** when a Refuge chamber is reached, you are to enter the Refuge Chamber, proceed through the airlock and await instructions from the Muster Warden to swipe your EAC at the swipe reader, then walk to and sit on the farthest available seat, when a Muster Building is reached, you are to assist in securing the building as directed and await instruction from the Muster Warden . When entering the Muster Building provide your name to the Muster Warden or delegate. They will provide Security with the accounted number of persons mustered.
- For the **TAN Plant**, when a Muster Building is reached, you are to assist in securing the building as directed and await instruction from the Muster Warden . When entering the Muster Building swipe, the Muster Reader then move away from this area after confirming your swipe visually and audibly on the reader. As soon as practicable, give your name to the Muster Warden or Muster Warden delegate.
- For the TAN Remediation Project, when a Muster Building is reached, you are to assist in securing the building as directed and await instruction from the Muster Warden . When entering the Muster Building provide your name to the Muster Warden or delegate. They will provide Security with the accounted number of persons mustered.
- The Muster Warden takes the names of everyone at the Muster Point/Building and confirms the names/numbers with the security guard by telephone or radio.
- Security guard to print out Emergency Muster report through Gallagher and keep it as a hardcopy.

Muster Buildings are equipped with public address system speakers and two-way radios to communicate with the Incident Controller and Security ,refuge chambers are equipped with a landline and base radio's..

All personnel will remain at the Muster Buildings /refuge chambers until the all clear alarm is sounded (continuous siren or tone).

Evacuation Assembly Area EAA1 and EAA2 (Ammonia) and Emergency Assembly Area EAA2 (TAN Plant) are only to be used when there is a complete evacuation of the Ammonia and/or TAN Plant.

See Appendix I for Muster Points and Evacuation Assembly Areas

15.1 All Clear and Re-Entry

Prior to terminating an emergency, the Incident Controller will assess the situation and ensure that the risk has been controlled and there is no possibility of the incident reoccurring. The Incident Controller shall also initiate actions related to site clean-up, barricading, spill containment and safe disposal of any contaminated material resulting from the emergency. The all clear alarm is recognised as a continuous air raid siren on the Ammonia Plant and a continuous tone on the TAN Plant PA System and will indicate the all clear has been given. This will be confirmed via the two-way radio and the public address system. After the all clear has sounded, all employees shall report to their department.

ALL Work Permits shall stand '**SUSPENDED'** as soon as emergency is declared.

ALL jobs must be reassessed for risk prior to recommencing work.

ALL work permits must be revalidated and reissued before recommencement of work.

16 Roles & Responsibilities

ROLE	ACCOUNTABILITIES

Incident Controller - Shift Superintendent (or Senior Panel Operator in their absence)	***Emergency Preparedness***
	• Participate in desktop, field and multi-agency exercise for emergency throughout the year;
	• Be aware of the ERT members present / available during shift; and
	• Be prepared to take all decisions regarding managing the emergency and plant operation during the period of emergency.
	Emergency Response
	• Assume role of Incident Controller in an emergency, In the event of an emergency at the Dampier Bulk Liquids Berth, the Ship Loading Officer at the Berth will assume the role of the Incident Controller (IC).;
	  ○ If the incident is on a plant site, locate at the Control Room of the effected plant
	  ○ If the incident is within the shipping pipeline boundary, locate at the Ammonia Plant Control Room.
	  ○ If at the BLB Jetty, locate at the BLB Load Control Room
	• Place vest on to display Incident Controller;
	• Declare interim emergency level;
	• If in doubt, treat the situation as a worst-case scenario;
	• Declare emergency, sounds the site muster alarm and mobilise ERT if appropriate;
	• If required order evacuation of all personnel including employees, contractors and visitors.
	• Ring 000 to notify external emergency services;
	• Notify 3rd parties as required (or delegate to SRT);
	• Liaise with DFES once direct contact is established.
	• Inform SRTL;
	• Instruct Security to account for all personnel on site;
	• Get feedback from Security of each Muster /Building /refuge chamber to confirm the accounting of site personnel;
	• Manage the emergency and liaise between Emergency Response Team, Site Response Team, Security and Plant Operators;
	• Maintain communication with ERTL and the SRTL;
	• Liaise with and seek assistance from emergency services as required;
	• Initiate Message Manager Third Party notification protocols in EMQnet.
	• Direct panel operators in the operation of the plant;
	• Organise shutdown, isolation, outside service requirements, etc. as situation demands to make the area safe;
	• Provide predictions of incident potential or escalation to SRTL and external emergency services;
	• Communicate with regulators or delegate to SRTL and provide regular updates; and
	• Order termination of emergency or alternative actions.
	• Refer to PIPs to formulate plan:
	 

ROLES	ACCOUNTABILITIES
Emergency Response Team Leader	***Emergency Preparedness*** • Undertake emergency response training as required to maintain competency level; • Ensure emergency response equipment is maintained and ready for use; • Ensure ERT members attend regular emergency response training and are familiar with the location of emergency response equipment; • Organise with HESQ Manager to conduct desktop, field and multi-agency exercises throughout the year; and • Be aware of ERT members present / available during shift. ***Emergency Response*** • Upon notification of emergency by the Incident Controller, proceed to the Central Control Room (YPF or TAN provided it is safe to do so) as soon as practicable; • Account for all ERT Members and EMR and contact the Incident Controller with confirmation of numbers. • Mobilise, command and coordinate the onsite EMR Communicate with the Incident Controller with reference to, Intentions of the ERT in combatting the incident: ▪ Providing accurate information on incident; ▪ Gaining more information on current weather and operating conditions; ▪ Making safe access to incident site; ▪ Shut down requirements; ▪ Minimising damage; ▪ Containing major spills / leaks and making area safe; ▪ Liaison with HESQ to clean up and dispose of the spill in accordance with the relevant PIP and/or the Ammonia Spill - Environmental Work Instruction ; and ▪ Requirement of external emergency assistance. • Assist the Incident Controller with information and situational understanding as required by external emergency services personnel; and Call upon the ESO to treat any casualties.
Emergency Response Team	***Emergency Preparedness*** • Undertake emergency response training as required to maintain competency level; and • Participate in desktop, field and multi-agency exercises throughout the year. ***Emergency Response*** • The ERT will be mobilised by the ERTL if required; • Upon mobilisation of the site siren, if safe to do so, immediately move to the Central Control Room, or the location advised by the ERTL, and prepare for a briefing from the ERTL • The ERT will follow instructions given by the ERTL.

ROLES	ACCOUNTABILITIES
Emergency Services Officer	***Emergency Preparedness*** • Ensure first aid equipment is maintained and ready for use; • Participate in desktop, field and multi-agency exercises throughout the year; and • Identify the ERT members on each shift and notify the Shift Superintendent; and • Be aware of whom the ERTL is on each shift. ***Emergency Response*** • When mobilised, receive commands and ensure coordination with the ERTL; • Remain at medical centre unless responding to requests for assistance from ERTL; • Assess the need for treatment of injuries and triage of casualties; • Provides transportation for sick or injured persons from site to Karratha Health Campus • Advise the ERTL of the need for further medical assistance from both internal and external resources, and • Communicates with Dr or Karratha Health Campus regarding status of Injured Person
Panel Operator	***Emergency Preparedness*** • Participate in desktop, field and multi-agency exercises throughout the year; • Ensure familiarisation with emergency isolation and shutdown procedures; and • Ensure familiarisation with the information required to be collected when an emergency is reported. ***Emergency Response*** • The most senior operator will assume the Incident Controller role in the absence of the Shift Superintendent; • Receive emergency reporting call on radio or telephone; • **Repeat information given by caller to ensure accuracy;** • Immediately notify the Shift Superintendent; • If the Shift Superintendent unavailable and the emergency requires immediate site muster, sound the emergency alarm; • Remain in contact with and operate plant as directed by the Shift Superintendent; and • Follow all further instructions given by Shift Superintendent. • Responsible for Log keeping during incidents with the Shift Superintendent and inform near neighbours using the EMQNet messaging tool

ROLES	ACCOUNTABILITIES
Gatehouse Security Officer	***Emergency Preparedness*** • Participate in desktop, field and multi-agency exercises throughout the year; • and • Ensure all personnel, contractors and visitors are issued with swipe cards and swipe in and out when entering or leaving the facility. ***Emergency Response*** • Access the Gallagher personnel onsite screen. This screen accounts for the number of personnel onsite at any time (as personnel reach Muster Point/Building and swipe their card it will register and display their location); • Record and account for personnel using the site Electronic Access Control System and compare with the number of persons present at each Muster Point / Building from the Muster Marshalls; • Contact the Incident Controller with the headcount results; • Follow all instructions given by the Incident Controller; • Maintain a log of activities and times relating to the incident; • Control vehicle access through the main gate; and • Assist emergency services and crew and inform the Incident Controller when they arrive; and Direct emergency vehicles to the pick-up point as instructed by the Incident Controller.
Jetty Operator (BLB Incidents)	***Emergency Preparedness*** • Participate in desktop, field and multi-agency exercises throughout the year; • Ensure all personnel, contractors and visitors operating near the Berth are aware of the emergency arrangements when entering or leaving the facility; • Ensure familiarisation with emergency isolation and shutdown procedures for the BLB; and • Ensure familiarisation with the information required to be collected when an emergency is reported. ***Emergency Response*** • Upon hearing evacuation alarm immediately conduct isolation and make safe activities; • Contact the Incident Controller with headcount if appropriate; • Follow all instructions given by the Incident Controller; • Assist emergency services and crew and inform the Incident Controller when they arrive; and • Direct emergency vehicles to the location as instructed by the Incident Controller.

ROLES	ACCOUNTABILITIES
All Employees, Visitors & Contractors	***Emergency Response*** • Follow all site evacuation procedures upon hearing the emergency siren; • Obey all directions given by the Incident Controller; • Only use Yara Pilbara communication systems for emergency communication only; • Monitor two-way radio emergency channel 5. Unless directly involved, keep emergency channel clear; • Remain at Muster building/Refuge chamber until the all clear is sounded and confirmed by Incident Controller; and • Follow any further directions given by the Incident Controller.

17 Notification and Liaison

Yara Pilbara may have a responsibility to notify external emergency service agencies, government authorities, local administration and neighbouring facilities either by landline or EMQNet.

17.1 Department of Fire and Emergency Services (DFES) Notification

Once DFES has been notified of the emergency, the Incident Controller is then responsible for further liaising with DFES.

Contact Number for DFES is 000

Once a direct contact is established, the Incident Controller will liaise with DFES Communications Centre (COMCEN) 1800 198 140 to update them on the following:

- If the hazard has or could spread beyond the plant limits or export pipeline (impact off-site);
- If the emergency is beyond the experience and resources of Yara Pilbara or its contractors;
- If the protective equipment available is not adequate to deal with the event; and
- Any employees or members of the public are or could be at risk.

Calls for attendance by external agencies shall be directed to the DFES Communications Centre on 000 (“Police, fire or ambulance” to be stated on answering) and the following information provided:

- Location of the emergency;
- Nature of emergency;
- Escalation potential;
- Details of any actual or potential life involvement; and
- The plant contact number for further details if required.

The SRTL is the second point of contact for emergency services for any strategic information. Whilst onsite the SRTL can be contacted in SRT Control Room.

Contact Numbers for Yara Pilbara SRT Control Room are

08 9183 4101 / 08 9183 4161 for conference calls

WHEN CALLING DFES, INFORM THE OPERATOR THAT A DFES EMERGENCY RESPONSE GUIDE

- **No. 55 for AMMONIA PLANT; and**
- **No. 54 for TAN PLANT**

IS IN PLACE FOR THE FACILITIES AND CONFIRM THAT ALL REQUIRED INFORMATION HAS BEEN GIVEN BEFORE TERMINATING THE CALL

Yara Pilbara Security will advise the Incident Controller of the arrival of Emergency Services. Security will direct emergency vehicles to the location Pick up point as instructed by the Incident Controller

17.2 Statutory Notification

Notification is required under applicable legislation and may include:

17.2.1 Department of Mines, Industry Regulation and Safety (DMIRS) Critical Risks Section

in the case of incidents where:

- A death, serious injury or significant damage occurs in connection with either plant or export pipeline
- A death or serious injury is sustained by a person at either plant or export pipeline,
- Any incident that impacts the licence to operate;
- An incident involving a Dangerous Good; and/or
- Any incident that occurred that could have resulted in the above.

17.2.2 Western Australian Police (WAPOL)

WAPOL have a statutory duty to investigate incidents within the state of Western Australia. They have a statutory duty to inform the next-of-kin of personnel who sustain fatal injuries in an incident.

All Level Two and Level Three incidents shall be reported by the SRT or Incident Controller to regulators and other agencies through the Message Manager system and/or by direct telephone contact. Updates will be given while controlling the incident.

17.2.3 Department of Water and Environmental Regulation (DWER)

Section 72(1) of the Environmental Protection Act 1986 states:

….if a discharge of waste -

(a) occurs as a result of an emergency, accident or malfunction; or

(b) occurs otherwise than in accordance with a works approval or licence or with a requirement contained in an environmental protection notice; or

(c) is of a prescribed kind or a kind notified in writing to the occupier concerned,

and has caused or is likely to cause pollution, material environmental harm or serious environmental harm, the occupier of the premises on or from which that discharge took place who does not, as soon as practicable after that discharge, give the CEO oral or electronic notification followed by written notification of the prescribed details of that discharge commits an offence.

17.2.4 Department of Agriculture, Water and Environment (DAWE)

17.3 The TAN Plant operates under the requirements of the EPBC Act Approval EPBC 2008/4546. Condition 8(e) of this approval requires that any impact on the heritage values of the Dampier Archipelago (including Burrup Peninsula) National Heritage Place must be reported to the Department (DAWE) in writing within 72 hours. Notification to Gas Supplier (Santos Ltd)

All Level Two and Level Three incidents shall be reported by SRT or Incident Controller to the gas supplier, Santos Limited, through the Message Manager system and/or by direct telephone contact.

Depending on the situation there may be a need to restrict gas supply to the plant. The SRT will notify Santos Ltd regarding restricting the gas supply.

Contact Numbers for Santos Ltd:

Varanus Island Control Room	**6218 7637**
24/7 Radio Room	6218 7600
Field Supervisor	6218 7601
Duty Incident Commander	0498 988 010

17.4 Notification to Pilbara Ports Authority (PPA)

All Level Two and Level Three incidents shall be reported by the SRT or Incident Controller to the PPA through the Message Manager system and/or by direct telephone contact.

If the incident is on the Bulk Loading Berth Jetty, the Chief Maritime Officer shall notify PPA. A separate notification through Message Manager shall also be issued.

17.5 Notification to Pipeline Corridor Owner (Landcorp)

All Level Two and Level Three incidents shall be reported by the SRT or Incident Controller to Landcorp through the Message Manager system and/or by direct telephone contact.

17.6 Notification to Neighbouring Facilities

Notification will be made where a neighbouring facility, building or organisation may be affected or perceived to be affected by an emergency, so they may take appropriate action to protect life safety.

Yara Pilbara will notify neighbouring facilities using the EMQNet Message Manage system and/or by direct telephone contact.

Monthly Testing of the Neighbours Message Manage system is conducted and contact list updated when required.

Each neighbouring facility has also been given an information pack as part of requirements of the Dangerous Goods Safety (Major Hazard Facilities) Regulations

(Schedules 1 and 4). The information pack outlines information about the Yara Pilbara Plants, their contact details, safety measures, appropriate response and other information to assist neighbouring facilities in the event of an emergency.

17.7 Notification to Yara Maritime Logistics

Notification to be made to the Head of Contingency (refer to HOPS 7-09) in the event of an emergency situation during maritime activities when Yara owned products are onboard a vessel.

18 Communication Systems

18.1 Fixed Communication System

Two types of fixed communication system are installed at the plants:

- EPABX system; and
- Public Address (PA) system.

18.2 Intrinsically Safe Portable Communication Systems

Two-way radio communications channels are designated as per the Yara Radio Communications Procedure (650-119-PRO-YPF-0001) (refer to attachment 4 for detail).

- Channel 4 is a dedicated strictly for emergency use only and for contacting Medic or First Aid / Ambulance support.
- Channel 11 is a dedicated backup for emergency channel 4.

It may be noted that digital channels 1 to 6 and 12-13 operate using repeaters. In the event of a site blackout these channels will be available for 2 hours using battery backup. In the event of prolonged power failure these channels may become non-operational. In such situations channels 7 to 11 will be operational if the individual radio battery has sufficient charge.

Yara Pilbara has 5 designated “external emergency services only” radios. These radios shall be located at the Emergency Centre / Security Gate for immediate use by external emergency services arriving onsite.

19 Emergency Power Supply

The emergency power supplies comprise of the Emergency Generator and Emergency Switchboard, Uninterruptible Power Supply (UPS), batteries and associated power cabling.

20 Muster buildings, Evacuation Assembly areas and Refuge Chambers

In order to facilitate the rapid evacuation of personnel following an emergency, Muster buildings, Refuge Chambers and Evacuation Assembly Areas are provided. Each of these Refuge Chambers, areas or buildings have been selected for the following criteria:

- Occupancy (majority of personnel operate in these areas)
- Ease and speed of access
- Located indoors (protection from atmospheric issues)

20.1 Ammonia Plant

The Ammonia Plant Muster building, refuge chambers & Evacuation Assembly Areas are as follows:

- **Refuge Chamber 1** – North of the Control Room paralleling North Road
- **Refuge Chamber 2** – Southeast corner of the Administration Building paralleling East Road.
- **Refuge Chamber 3** – Northwest of the Fire and Safety Building adjacent to East Road.
- **Refuge Chamber 4** – Contractors Offices area adjacent to Evacuation Assembly Area 2
- **Muster Building 11 –** Southern side of the SCWT in the lower laydown area. This muster building (temporary) does not have a telephone or swipe facility, an attendance list will be made, and numbers will be reported to Security.
- **EAA 1 –** Ammonia Gatehouse Northern side of the Complex along the main exit route.
- **EAA 2 –** Evacuation point on the south of ammonia plant / desalination plant along the main exit route of desalination plant.
- **EAA 3** – Evacuation point South Western side of Flare
- **EAA 4** – Evacuation point North of Natural Gas Knockout Drum

Each Muster building has swipe card access, telephones and radios available for communications. The Muster buildings also have first aid kits and fresh water supply.

Location of Muster buildings, refuge chambers and Evacuation Assembly Areas are shown/listed in Appendices D & I.

20.2 Technical Ammonium Nitrate (TAN) Plant

The Muster Buildings and Evacuation Assembly Areas at the TAN Plant are as follows:

- **Muster Building 5** – TAN Control Room.
- **Muster Building 6** – The Security and Emergency Centre
- **Muster Building 7 –** The Administration Building
- **EAA 5** – Evacuation Assembly Area next to the Security and Emergency Centre
- **EAA 6** – Evacuation Assembly Area in the North-East corner of the plant.
- **EAA 7** – South /western corner of Unit 52

Each Muster Building is used as a muster point and has swipe card access, telephones and radios available for communications. The Refuges also have first aid kits and fresh water supply.

Location of Muster Points and Evacuation Assembly Areas are shown/listed in Appendices D & I.

The evacuation assembly areas have been located in accordance to table 4.1 in the Safe Storage of Ammonium Nitrate – Code of Practice.

Location of Muster Points and Evacuation Assembly Areas are shown/listed in Appendices D & I

20.3 TAN Remediation Project

For the duration of the TAN Remediation Project including commissioning phase of the TAN Remediation Project additional muster buildings and evacuation assembly areas have been provided as follows

- **Muster Building 8** – TAN Remediation Project Office Conference Room (western flank of the building) This muster building (temporary) does not have a swipe facility, an attendance list will be made, and numbers will be reported to Security.
- **Muster Building 9 –** TAN Remediation Project Office Conference Room (eastern flank of the building) This muster building (temporary) does not have a swipe facility, an attendance list will be made, and numbers will be reported to Security.
- **Muster Building 10, 12 & 13** – East of Transporter Workshop. This muster building (temporary) does not have a telephone or swipe facility, an attendance list will be made, and numbers will be reported to Security.
- **EAA 6** – Evacuation Assembly Point near the North-East corner of the plant

Location of Muster Buildings /refuge chambers and Evacuation Assembly Areas are shown/listed in Appendices D & I

20.4 Off-Site Evacuation Assembly Area

The Off-Site Evacuation Assembly Area has been nominated as the Woodside Visitor Centre on Burrup Peninsula Road and Hearsons cove. Evacuation will depend on prevailing winds at the time and the decision will be made by the SRT Leader.

21 Protective Equipment

Protective equipment is provided at each plant and at the ship loading facility to enable personnel to escape during an emergency, to enable rescue personnel to assist injured personnel and to operate critical items of the plant in order to control the emergency.

A list of fire protection equipment which is located at each plant and the ship loading facility is contained in Appendix C.

A list of protective and emergency equipment available on site is contained in Appendix G.

22 First Aid & Medical Facilities

First aid kits, safety showers and eyewash stations are provided at strategic locations throughout each plant and at the ship loading facility.

First aid will be provided by a qualified ESO 24 hours a day. Support may be provided to the ESO by other senior first aid qualified Yara Pilbara personnel on site.

A site ambulance equipped with appropriate first aid supplies is located at the Emergency Centre. This ambulance will be used to transport sick and injured personnel to the hospital, where transportation to hospital is time critical.

The nearest external medical facilities are in Karratha at Karratha Health Campus, approximately 20 km from the plant.

A list of first aid equipment is found in Appendix H.

23 Chemical Spill Kits

Chemical Spill Kits are available on each plant and are contained in appropriately marked wheelie bins. Each wheelie bin contains coveralls, several chemical absorbent materials, rubber gloves, goggles and other associated materials and equipment to assist in the clean-up of small spills.

The fire tender has further supporting equipment to assist in larger or more toxic chemical spill situations. The fire tender also contains required PPE.

Disposal of spill clean-up material (including spent / used absorbent) must comply with the Waste Management Procedure.. Liaise with HESQ for advice.

24 Gas Monitors

24.1 Handheld Gas Monitors

Yara Pilbara has handheld gas monitors, which measure numerous gases (NH_3, Cl_2, LEL, O_2, CO, NO_x and H_2S). The hand-held gas monitors are able to give quick and accurate gas readings in emergency situations. The hand-held monitors are in the Control Room at each plant and in the Security Gatehouse.

Operations personnel have been trained in the use of hand-held gas monitors.

The Emergency Response Team have their own gas monitor and pump in the fire tender.

24.2 Fixed Plant Gas Monitors

24.2.1 Ammonia Plant Control Room

The following inputs from the field feed to the Ammonia Plant Control Room

- Gas (methane) detectors x 2;
- Ammonia detectors x 18; and
- Fire detectors x 10.

Fixed gas monitors are strategically mounted in locations in the field where there is a possibility of a release of gas or fire. The operator in the Ammonia Plant Control Room is alerted by an alarm upon activation of the detectors. The Control Room Operator will send the respective Field Operator to investigate alarm activations.

24.2.2 Technical Ammonium Nitrate (TAN) Plant Control Room

The following inputs from the field feed to the TAN Plant Control Room

- Ammonia detectors
- Hydrogen detectors
- NO_x detectors
- N_2O detectors;
- Flame detectors; and
- Smoke, thermal and laser detectors

The fixed detectors are strategically mounted in locations in the field. The operator in the TAN Plant Control Room is alerted upon activation of the detectors. The Control Room Operator will send the respective Field Operator to investigate alarm activations.

25 Site Ingress / Egress

25.1 Common to both Ammonia and TAN Plant

The main access to both Plants is from Village Road which runs off Burrup Peninsula Road.

There is a Security Gatehouse with boom gates to control ingress and egress of vehicles and personnel. To avoid entry of unwanted vehicles and personnel from outside, during emergency situations, the boom gates will be monitored by Security Officers when the emergency siren is sounded.

The Security Gatehouse is manned 24 hours a day by Yara Pilbara Security.

During a major incident, Security staff will assist the Police if required.

A secondary access road to both plants is a dirt road that runs off Burrup Peninsula Road to the Water Corporation Desalination Plant. There are keys on both sides of the gates in break glass key boxes.

25.2 Ammonia Plant Only

There is a third access road to the Ammonia Plant located south of the Quadrant Energy Skid for the Natural Gas Pipeline. This can be used, if required, as an alternate entry or exit point to the Ammonia Plant if the other access points are inaccessible.

26 Off-Site Migratory Action

Yara Pilbara is an active member of the Burrup Industries Emergency Management Committee (BIEMC) and supports other industries if mutual aid is required.

This support is also reciprocated, and emergency equipment and resources can be called upon from the BIEMC neighbours if required.

DFES will assist in coordinating neighbour mutual aid through a signed Memorandum of Understanding.

27 Training & Competency

Yara Pilbara has competent people to deal with emergencies.

The content of this Emergency Management Plan will be presented and explained to all Yara Pilbara employees.

Attendance at training courses is recorded and maintained for audit purposes and to ensure relevant people are receiving training. The HESQ Manager, Training Coordinator, Security & ER Coordinator & ESO's are responsible for ensuring that the required training is provided to the employees and all training records are updated on regular basis.

Yara Pilbara has personnel trained in the following areas:

- First Aid: All ERT personnel are trained in First Aid and ESO's have a minimum of Certificate IV in Health Care (Ambulance)
  and will be in the Emergency Centre. The facility also has 24-hour first aid coverage by trained Emergency Services Officers. There will be a minimum of four first aid trained personnel on each shift.
- Fire Fighting: Contact information for personnel trained, in firefighting and rescue procedures is in the SRT Control Rooms, Administration Building and the Emergency Centre.
- All operational and production personnel are trained and active members of the ERT and there will be an appropriate number of employees trained in relevant Emergency Response capabilities on each shift.
- All employees, contractors and visitors shall be trained in generic emergency procedures and escape apparatus applicable to their work area during induction.

Refresher training will be scheduled for all people to maintain their competencies as depicted by the Yara Pilbara Training and Development System. Refresher training for ERT personnel will be on-going as required to maintain Currency of Certification.

The HESQ Manager / Security & ER Coordinator, ESO's and Training Coordinator will ensure training is provided for the following positions:

Position	Competencies Required
SHIFT SUPERINTENDENT (Incident Controller)	• Site Specific Intermediate Fire Fighting • Self-Contained Breathing Apparatus • Site Specific Hazmat Overview • Site Specific Site Fire Tender & Pump • Site Specific Incident Management System • HLTAID003-Provide first aid • EMQNet Message Manager Training
EMERGENCY RESPONSE TEAM LEADER	• Site Specific Intermediate Fire Fighting • Site Specific Incident Management System • Self-Contained Breathing Apparatus • Site Specific Hazmat Overview • Site Specific Site Fire Tender & Pump • HLTAID003-Provide first aid
EMERGENCY RESPONSE TEAM	• Site Specific Intermediate Fire Fighting • Self-Contained Breathing Apparatus • Site Specific Hazmat Overview • Site Specific Site Fire Tender & Pump • HLTAID003-Provide first aid
EMERGENCY SERVICES OFFICER	• Certificate III in Mine Emergency Response & Rescue • Certificate IV in Health Care (Ambulance) • Site Specific Site Fire Tender & Pump
SECURITY & ER COORDINATOR	• Certificate III in Mine Emergency Response & Rescue • Certificate IV in Health Care (Ambulance) • Site Specific Site Fire Tender & Pump • EMQNet Message Manager Training • Certificate IV in Security and Risk Management • Certificate IV in Public Safety (Firefighting Supervision)

28 Exercises, Testing, Auditing and Review

A schedule of planned simulated emergencies to test the emergency management system is in place.

Regular exercises will be scheduled accordingly by the Emergency Response Coordinator.

The scheduling of the testing of the emergency management system will be managed in Synergi. Records and any resulting actions will be recorded in Synergi.

Testing and audit exercises include:

- Site Emergency Muster drill (6 per/year)
- Level 1 ERT Pre-Incident Plan Field Exercises (4 x per annum).
- Level 2 Desk Top Exercise (1 x per annum).
- Level 3 Full Scale Mock Exercise (1 x per annum).
    - Inclusion of external emergency services as appropriate

As many persons as practical will be involved in simulated emergency exercises as a refresher program.

These events are to be monitored to record system deficiencies so that improvements may be implemented.

Every significant emergency response event is formally reviewed to identify system deficiencies. Results of all audits and reviews will be communicated to all employees.

Internal / external audits and self-assessments will be conducted on a regular basis to monitor compliance with the requirements of the Emergency Response standard and procedures, in addition to equipment sufficiency and application. The objectives of the audits are to test the effectiveness of the emergency response and as part of the continuous development process, to identify and make recommendations for further improvement.

29 Incident Investigations

The Plant Manager and the HESQ Manager have the following responsibilities in relation to incident investigations:

- To organise an internal or independent investigation of incidents that occur;
- To assist external agencies in the event of a statutory investigation; and
- To ensure that all evidence is preserved when it is likely that a statutory investigation will be conducted.

All employees of Yara Pilbara are responsible for reporting all incidents to their supervisor. This process is outlined in the Yara Pilbara Hazard, Incident and Accident Investigation and Reporting Procedure.

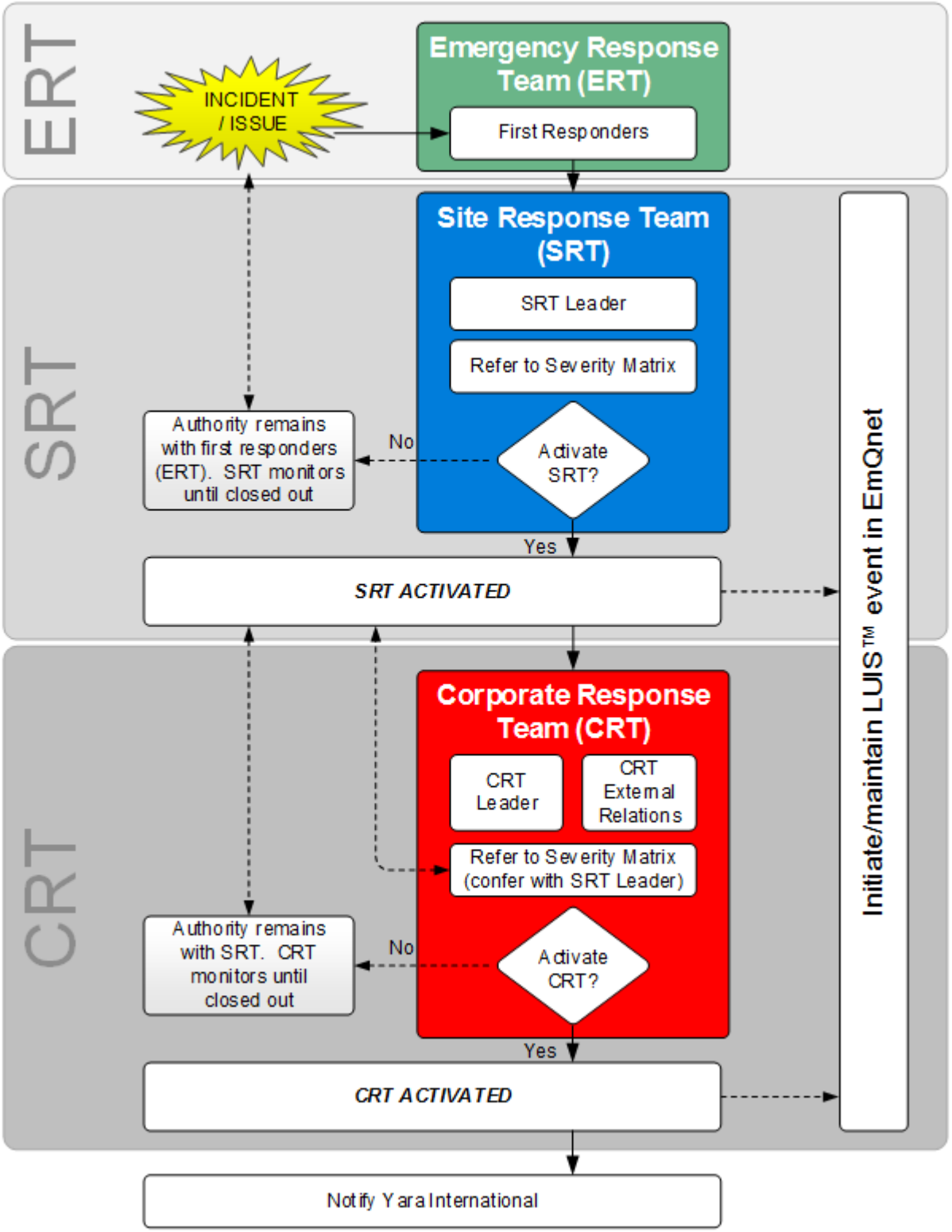
30 Debriefing

The Plant Manager and the HESQ Manager are responsible to ensure a debriefing of all personnel involved in the emergency, and that the debriefing takes place within a reasonable time following the stand-down phase.

“Hot” debrief conducted for all personnel involved and immediately after the incident conducted by the ERT TL.

Incident De briefing to all ERT Team members once all equipment was made up and the Emergency Response capabilities restored by the IC.

APPENDIX A – Emergency Notification Flow Chart



APPENDIX B – Pre-Incident Plans

Plan No	Pre-Incident Plan No.
Flammable Releases	
1.	250-500-PLN-YPF-0003.1 Natural Gas Release
2.	250-500-PLN-YPF-0003.2 Process Stream (Flammable Gas) Release
22.	250-500-PLN-YPF-0003.22. Non-Process Catalyst Fire
Toxic Releases	
3.	250-500-PLN-YPF-0003.3 Ammonia Release (Export Pipeline, TAN and/or Ammonia Plant)
-	Deleted
5.	250-500-PLN-YPF-0003.5 Ammonia Release (Ship Loading & Jetty)
Others	
6	250-500-PLN-YPF-0003.6 Major Injury or Fatality
7	250-500-PLN-YPF-0003.7 Non-Process Fire
8	250-500-PLN-YPF-0003.8 Extreme Weather
9	250-500-PLN-YPF-0003.9 Bomb or Terrorist Threat
10	250-500-PLN-YPF-0003.10 Substation, Transformer Bay, Generator or Crude Oil Tank Fire
11	250-500-PLN-YPF-0003.11 Ammonium Nitrate Prill Fire
12	250-500-PLN-YPF-0003.12 ANSOL Incident
13	250-500-PLN-YPF-0003.13 Nitric Acid Solution Incident
14	250-500-PLN-YPF-0003.14 NOx Gas Incident
15	250-500-PLN-YPF-0003.15 Bush Fire **No. reserved only**
17	250-500-PLN-YPF-0003.17 Security Breach
18	250-500-PLN-YPF-003.18 Other Environmental Incident **No. reserved only**
21	250-500-PLN-YPF-003.21 Earthquake & Flooding Contingency Planning

APPENDIX C – Location of Emergency Fire Equipment

Location	Fire Protection Equipment at Plant
Ammonia Plant - General	
Firewater Storage Tank	There is a designated Firewater Tank, 2005-MF which has a capacity of: Effective Volume 4,971 m^3 and nominal Volume of 5,269 m^3. Desalinated Water tank of 6376 m^3 capacity is connected to the main fire water tank to provide additional emergency water.
Firewater pump	To pump discharge pressure of 860 kPa with 700 kPa at the hydraulically remotest point of the fire water network. Main Fire Water pump is provided with automatic starting facilities as per NFPA-20. If the pressure in the pump discharge header falls below 400 kPa the electric pump will start. Firewater pump start buttons are in the Fire Control Room. Pumps available are one electric and one diesel driven pump, 570 m^3/h, discharge pressure 860 kPa, diff. head 88 m.
Ring Main	Distributed throughout the plant by a network looped around the plant so that all hydrants will have source of water at least from two directions. Isolating valves are in the system to permit fire water to reach any area regardless of a failure in any single line.
Fire Tenders	1 x Scania P310 Fire Tender with 1500ltr capacity water tank delivering 4,300ltr/min with a foam capacity of 300 litres.
Hydrants	Fire Hydrants: - (AS 2419.1-1994) – Wet Barrel tube type, each fitted with 2x 2 ½ inch hose connections, 1x 4-inch hose connection and 1x 3-inch connection for monitor. Hydrants are located such that possible damage by road traffic is avoided. All hydrants at Fertiliser plant have a fire hose box with 1 x 64mm firehose ,1 x 38 mm fire hose and a straight stream fog nozzle.

Location	Fire Protection Equipment at Plant
Ammonia Plant - Process Plant	
Inside Battery Limits (ISBL)	4x Monitors at Strategic locations. Each monitor is rated for 120 m^3/hr. capacity at 7 bar supply pressure. Monitors are fitted with an isolation valve and adjustable stream nozzle. The maximum water jet throw is 60 m horizontally at 45° trajectory and 28 m vertically in still air at 7 bar pressure. Monitors have traversing mechanism to give 360° rotation in either direction of the horizontal plane and 125° in the vertical plane (+80° to 45°) with separate swivels through a quick acting handlebar. For unattended operation of the monitor at the desired angles, suitable locks or swivel joints are provided. One handle for traversing both the horizontal and vertical rotation of the monitor is provided on the monitor body.
Ammonia Plant - Ammonia and Diesel Storage	
Ammonia Storage	4x Monitors at strategic locations. Each monitor is rated for 120 m^3/hr. capacity at 7 bar supply pressure. Monitors are fitted with isolation valve and adjustable stream nozzle. The maximum water jet throws are 60 m horizontally at 45° trajectory and 28 m vertically in still air at 7 bar pressure. Monitors have traversing mechanism to give 360° rotation in either direction of the horizontal plane and 125° in the vertical plane (+80° to 45°) with separate swivels through a quick acting handlebar. For unattended operation of the monitor at the desired angles, suitable locks or swivel joints are provided. One handle for traversing both the horizontal and vertical rotation of the monitor is provided on the monitor body.
Diesel Storage	Fire hoses & 50 kg foam extinguisher, wheel mounted type, suitable for Class A B rated fires (flammable liquid fires)
Ammonia Plant - Utilities	
Cooling Tower	Reinforced rubber lined hose, 30 m long, 64 mm diameter complete with BIC couplings.
Utility Units	Reinforced rubber lined hose, 30 m long, 64 mm diameter complete with BIC couplings.
Sub-stations	Reinforced rubber lined hose, 30 m long, 64 mm diameter complete with BIC couplings.
Buildings	Reinforced rubber lined hose, 30 m long, 64 mm diameter complete with BIC couplings. 9kg Dry Powder and CO_2 portable fire extinguishers.

Location	Fire Protection Equipment at Plant
Control Room	FM-200 Gaseous Suppression System is provided for protection of cable basement below the flooding floor. The system is operated both automatically upon signal from smoke detectors and manually at the gas cylinder bank. The system includes 100% spare cylinders inline.
Control Room, Electrical Substation	An aspirating smoke detection system with an air sampling system that draws air from panels in Control Room, Electrical Sub-Station and other enclosures with high smoke development risk. Smoke Detectors are 'Single Zone Voting' for alarm purpose only and 'Cross Zone Voting' for alarm and automatic activation of connected fire suppression system. Automatic Heat Detectors; 'Single Zone Voting' Heat Detectors are provided for Alarm purpose only. Reinforced rubber lined hose, 30 m long, 63 mm diameter complete with hermaphrodite couplings. 9kg Dry Powder and CO_2 extinguishers.
Warehouse	Reinforced rubber lined hose, 30 m long, 64 mm diameter complete with hermaphrodite couplings. 9kg Dry Powder and CO_2 extinguishers.
Administration	Reinforced Rubber Lined hose, 30 m long, 64 mm diameter complete with hermaphrodite coupling. 9kg Dry Powder and CO_2 portable fire extinguishers.
Export Pipeline	No firefighting equipment is provided along the pipeline. The inspection vehicle will carry 4.5kg dry powder and CO_2 portable fire extinguishers.

Location	Fire Protection Equipment at Plant
Ammonia Plant **Ship Loading Facilities**	Yara Pilbara's firefighting system uses PPA's existing 8-inch fire water main and ties in an 8-inch line to this main header. The firewater is supplied using 2x 500 m³ firewater tanks located in the PPA area. PPA have guaranteed a supply of firewater for up to 4 hours at a rate of 72 m³/hr in the main firewater header. This can be refilled within 6 hours. This is as per the requirement of Australian Standards AS 2419. The Bulk Liquids Berth constitutes of 3x Fire Hydrants (with provision for 1x more in the future) and 2x Water Curtain Nozzles (Fogging Nozzles). The fire hydrants are installed for emergency response teams to fight any jetty related incidents. PPA currently have an arrangement with DFES who will be called upon to tackle any jetty related fires. In the event of an ammonia vapour release, the water curtain nozzles will be activated to suppress ammonia vapour at the berth. The minimum water jet throw for the nozzles is 31 m horizontally and 10 m vertically, in still air at 8 bar pressure. The water curtain nozzles are rated as follows: 2 x 2.5-inch nozzles at 72 m³/hr and 8 bar pressure each (to be run at 45 m³/hr each). The pressure to the fogging nozzles is supplied via a booster pump, located between sections T7 and T8 on the jetty.

Location	Fire Protection Equipment at Plant
TAN Plant - General	
Firewater Storage Tank	Two (2) desalinated water storage tanks (93-FB-001A/B) are used to store fire-fighting water. The tanks also supply desalinated water to all the users in the process and utility units in the complex. Each tank has a capacity of 1,038 m^3 and 600 m^3 of that capacity will be dedicated for firefighting. As shared tanks, the connection points to the TAN Plant utilities from the tanks are located above the dedicated fire-fighting water level and thus cannot draw water from it. Desalinated water is fed into these tanks from the Ammonia Plant at a maximum of 50 m^3/h. The tank is topped up automatically when the water level drops below the allowable limit. The tanks can provide firewater for up to 4 hours, not including the automatic fill from Ammonia Plant.

Location	Fire Protection Equipment at Plant
Firewater Pump	The main firefighting centrifugal pumps (91-GA-002A/B) have a 350 m^3/h capacity and can deliver water at 9.8 Bar. The main pump running is electrically driven and the other is a spare diesel pump. A centrifugal jockey pump with a. 27 m^3/h capacity is installed to maintain a constant pressure in the ring main at 9.8 Bar.
Ring Main	The site uses multiple interconnected ring main systems. All the ring mains have 12-inch piping with some 8-inch connections. Most of the piping is underground with some above ground piping using the same pipe racks as the process pipework. Block valves are installed at sections of the distribution system to enable isolation for maintenance. Block valves are butterfly valves with position indication if underground.
Hydrants	Fire hydrants installed in accordance with the Australian Standard AS 2419.1 (Fire Hydrant Installations - System design, installation and commissioning). Fire hydrants are located along the ring main and the normal distance between above ground hydrants will be approximately 60 m. Hydrants have full coverage of the site.
Water Mist System	A water mist system is installed in the NOx compressor shelter. The water mist system shall be in accordance with Australian Standard AS 4587 (Water Mist Fire Protection Systems – System Design, Installation and Commissioning).

Location	Fire Protection Equipment at Plant
TAN Pant - General	
Fire hose reels	Fire hose reels are installed in accordance with Australian Standard AS / NZS 1221 (Fire Hose Reels). Hose reels are equipped with a 30 m hose with a diameter of 25 mm. Nozzles have a capacity of 197 L/min at 3.5 bar inlet pressure. Hose reels have a working range between 1.75 and 10.5 bar inlet pressure. Fire hose reels are flat wall mounted single direction type. Fire hose reels are located at areas with fire hazards, such as the chemical store, compressor shelter, TAN bag storage and bulk TAN storage.
Fire Monitors	Fire monitors are provided at strategic locations near and within fire hazardous areas. Fire water monitors are assumed to have a capacity of 1,325 L/min at 7 bar inlet pressure. Monitors are approximately at ground level and the minimum distance between a monitor and protected structure is 15 m. Fire monitors are located at: • Two (2) in Unit 12 process area; • Three (3) in Unit 32 process area; and • Seven (7) in Bulk TAN storage building.
Dry riser / columns	A dry riser is used at the Prilling tower. A dry column or dry ring main is used in the bag storage. The dry riser and column have Siamese fittings for fire inlet and outlet connection points. The inlet allows for connection with a fire truck for supply of fire water. The outlet connections allow the connection of a fire hose reel or fire monitor.
Fire Extinguishers	Fire extinguishers located on the site include portable / wheeled dry chemical type and portable CO_2 extinguishers in accordance with Australian Standard AS 2444 (Portable Fire Extinguishers and Fire Blankets – Selection and Location). Wheeled dry chemical fire extinguishers are located at points with higher fire risks such as oil cooled transformers, oil units of compressors or the chemical store. Portable fire extinguishers act as a first line of defence to cope with small fires.

Location	Fire Protection Equipment at Plant
TAN Plant - Nitrate Production & Storage Conveyor galleries	
Dry Deluge Fire Protection System	Conveyor galleries to/ from ammonium nitrate production or storage buildings have a dry deluge fire protection system. The deluge system consists of Six (6) spray nozzles which are initiated by two (2) smoke and one (1) thermal detector on each side. Fire barriers include protection of flammable construction material of at least 3 metres on both sides of barrier. The conveyor belt stops automatically if the F&G system receives a signal from 2 out of 6 detectors. Deluge is activated manually from the Control Room. A deluge valve is located near the water spray system and will have a pressure switch for indication of water flow operation.

Location		Fire Protection Equipment at Plant
Location	**Fire Protection Equipment at Plant**	
TAN Plant – Nitric Acid Plant (Unit 12)		
Hydrogen Cylinders store	**Detection / Alarms**	2x Hydrogen detectors above the cylinders
	Protection / Mitigation	Hose Reels Hydrants Fire monitors
Compressors building	**Detection / Alarms**	Detectors (NOx, NH_3 multicriteria & smoke detectors for duct) Analog and digital signals junction boxes Beacons Fire hand switches Fire horns Gas horn
	Protection / Mitigation	Water mist system Hose Reels Hydrants Fire monitors Dry chemical extinguisher (portable)
TAN Plant – (Unit 32)		
TAN plant (coating drum)	**Detection / Alarms**	Detectors (smoke & thermal) Analog & digitals signals junction boxes Beacons Fire hand switches Fire horns
	Protection / Mitigation	Hose reels Dry chemical extinguisher (portable) Deluge system (in the conveyor 72-PC-001)

Location	Fire Protection Equipment at Plant	
TAN plant (coating storage area)	**Detection/ Alarms**	Beacons Fire horns
	Protection/ Mitigation	Hose Reels Hydrants Fire monitors
Conveyors inside Unit 32	**Detection/ Alarms**	Fire hand switches
	Protection/ Mitigation	Hose reels Dry chemical extinguisher (portable)
Prilling towers	**Detection/ Alarms**	Fire hand switches Beacons Analog & digitals signals junction boxes CCTV
	Protection/ Mitigation	Dry riser Hose reels (low level) Hydrants (low level) Dry chemical extinguisher (portable) Fire Monitors
Refrigeration compressor	**Detection/ Alarms**	Four (4) NH_3 detectors Fire hand switches Beacons
	Protection/ Mitigation	Dry chemical extinguisher (portable) Hydrants Hose reels Fire Monitors
Shift Laboratory	**Detection/ Alarms**	Detectors (NOx, NH_3, smoke detectors for duct) Fire hand switches Fire horns Beacons Analog and digital signals junction boxes
	Protection/ Mitigation	Dry chemical extinguisher (portable) Trip of air supply system including closing of gas tight damper on detection of explosive/ toxic gas at the air intake

Location	Fire Protection Equipment at Plant	
TAN Plant – Substations		
Substation I	**Detection/ Alarms**	Gas detection (NH_3 and NO) air intake Fire hand switches Fire horns with beacons Laser Smoke Detectors
	Protection/ Mitigation	Dry chemical & CO_2 extinguishers (portable) Walls, floor and roof are fire resistant (1hr duration) Cable tunnels and transformer rooms are 2 hours fire resistant
Substation II	**Detection/ Alarms**	Gas detection (NH_3 and NO) air intake Fire hand switches Fire horns with beacons Laser Smoke Detectors
	Protection/ Mitigation	Dry chemical & CO_2 extinguishers (portable) Walls, floor and roof are fire resistant (1hr duration) Cable tunnels and transformer rooms are 2 hours fire resistant
TAN Plant – Ammonium Nitrate Solution and Off-Spec Treatment (Unit 35)		
Off-Spec Treatment Unit	**Detection/ Alarms**	Fire hand switches Beacons
	Protection/ Mitigation	Hose Reels Hydrants Dry chemical extinguisher (portable)
ANSOL Loading Area	**Detection/ Alarms**	Fire hand switch
	Protection/ Mitigation	Hydrants Hose reels inside the bag storage
Conveyor	**Detection/ Alarms**	Fire hand switch
	Protection/ Mitigation	Hydrants Hose reels

Location	Fire Protection Equipment at Plant	
TAN Plant – TAN Bulk Storage (Unit 71)		
TAN Bulk Storage	**Detection/ Alarms**	Detectors (NOx, N_2O, NH_3, smoke detectors for duct, VESDA) Fire hand switches Beacons Analog and digital signals junction boxes Solenoid valve junction box
	Protection/ Mitigation	Hose reels Hydrants Fire monitors Spray nozzles (deluge valve) and fire walls at both ends of 72-PC001 Dedicated parking area (outside bulk storage) for front loaders. Parking area is equipped with sprinkler nozzles and fire walls Dry chemical extinguishers (portable & wheeled) Trip of air supply system including closing of gas tight damper on detection of explosive/ toxic gas at the air inlet
TAN Plant – Conveyor Galleries		
Unit 32 to Unit 72	**Detection/ Alarms**	**Conveyor leaving U32 and entering U72:** Smoke and thermal heat detectors on each side of the fire walls In case of fire alarm, the conveyor belt is stopped automatically if 2 of 6 detection signals are activated. The deluge can be activated manually from the Control Room and locally. Fire hand switches Beacons Analog & digital signals junction boxes Solenoid valve junction box
	Protection/ Mitigation	Spray nozzles (deluge valve) and fire walls at both ends of 72-PC001 Hydrants Fire monitor in U32

Location	Fire Protection Equipment at Plant	
Unit 72 to Unit 73	**Detection/ Alarms**	**Conveyor leaving U72 and entering U73:** Detectors (smoke & thermal) on each side of fire walls. In case of fire alarm, the conveyor belt is stopped automatically if 2 of 6 detection signals are activated. The deluge can be activated manually from the Control Room and locally. Fire hand switch Analog & digitals signals junction boxes
	Protection/ Mitigation	Hose reels Hydrants Fire monitors Spray nozzles (deluge valve) and fire walls in both ends of conveyor 72-PC-002 Dry chemical extinguishers (portable & wheeled)
TAN Plant – TAN Bagging Unit (Unit 73)		
TAN Bag Storage	**Detection/ Alarms**	Detectors (smoke) Fire hand switches Beacons Fire horns
	Protection/ Mitigation	Hose reels Hydrants Dry riser and inner ring main with additional discharged points (portable fire monitors, hoses, etc.) supplied by a fire truck Portable and wheeled dry chemical extinguishers Dedicated parking area (outside bag storage) for front loaders. Parking equipped with sprinkler nozzles and fire walls.
TAN Plant –Bag Storage (Unit 74)		
Empty Bag Storage	**Detection/ Alarms**	Smoke detectors Fire hand switches Beacons Fire horns
	Protection/ Mitigation	Hose reels Hydrants Dry chemical extinguisher (portable)

Location	Fire Protection Equipment at Plant	
TAN Plant – Emergency Fire Pumps Shelter (Units 91 & 93)		
Emergency Fire Pumps Shelter	**Detection/ Alarms**	Fire hand switch Fire horn Beacon Junction box
	Protection/ Mitigation	Hose reels Hydrants Sprinkler nozzles using the other pump
TAN Plant – Diesel Storage		
Diesel storage tank and unloading bay	**Detection/ Alarms**	Nil
	Protection/ Mitigation	Fire extinguisher Hydrants Double walled tank (self-bunded) Foam available via the Ammonia Plant Fire Tender
Diesel emergency generator and tank	**Detection/ Alarms**	Fire Hand Switch
	Protection/ Mitigation	Fire extinguisher Hydrants Hose Reels Double walled tank (self-bunded)
TAN Plant – Cooling Tower (Unit 87)		
Cooling Tower	**Detection/ Alarms**	Fire Hand Switch Beacons Digitals signals junction boxes
	Protection/ Mitigation	Hose Reels Hydrants

Location	Fire Protection Equipment at Plant	
TAN Plant – Utilities		
Offices	**Detection/ Alarms**	NH_3 and NO_x detectors in ducting Smoke detectors Fire hand switches Fire horns Beacons Analog & digital signals junction boxes
	Protection/ Mitigation	Hydrants (outside of the building) Dry chemical & CO_2 extinguishers (portable) Trip of air supply system including closing of gas tight damper on detection of explosive/ toxic gas at the air inlet
Control Room Building	**Detection/ Alarms**	Detectors (NOx, NH_3, smoke detectors, smoke detectors for duct) Fire hand switches Fire horns Beacons Analog & digital signals junction boxes
	Protection/ Mitigation	Hydrants Dry chemical & CO_2 extinguishers (portable) Trip of air supply system including closing of gas tight damper on detection of explosive/ toxic gas at the air inlet
Chemical Store	**Detection/ Alarms**	Smoke detectors Fire hand switches Fire horns Beacons
	Protection/ Mitigation	Hydrant Hose reel Dry chemical extinguishers (portable & wheeled)
Spare Parts Building	**Detection/ Alarms**	Smoke detectors Fire hand switches Fire horns Beacons
	Protection/ Mitigation	Hose reel (in the chemical store) Dry chemical extinguishers (portable)

Location	Fire Protection Equipment at Plant	
Security Gate	**Detection/ Alarms**	Detectors (NOx, NH_3, smoke detectors, smoke detectors for duct) Fire hand switches Fire horns Beacons
	Protection/ Mitigation	Dry chemical & CO_2 extinguishers (portable) Trip of air supply system including closing of gas tight damper on detection of explosive/toxic gas at the air inlet
Transporter Office	**Detection/ Alarms**	Detectors (NOx, NH_3, smoke detectors, smoke detectors for duct) Fire hand switches Fire horns Beacons
	Protection/ Mitigation	Trip of air supply system including closing of gas tight damper on detection of explosive/toxic gas at the air inlet Dry chemical extinguishers (portable)
Workshop Area	**Detection/ Alarms**	Fire hand switches Fire horns Beacons
	Protection/ Mitigation	Dry chemical extinguishers (portable & wheeled)

Location	Fire Protection Equipment at Plant
TAN Remediation Project Office	
Fire Extinguishers	Fire extinguishers located on the site include portable dry chemical type and portable CO_2 extinguishers in accordance with Australian Standard AS 2444 (Portable Fire Extinguishers and Fire Blankets – Selection and Location). Two (2) Fire blankets. Portable fire extinguishers act as a first line of defence to cope with small fires.
Hydrants	Fire hydrants installed in accordance with the Australian Standard AS 2419.1 (Fire Hydrant Installations - System design, installation and commissioning). One Fire hydrant are located next to the Water storage facility.
Firewater Storage Tank	Two (2) clean water storage tanks (Temporary) are used to store fire-fighting water. Two (2) of these tanks has a capacity of 22 m^3 dedicated for firefighting. These tanks can only be utilised as a last resort, the nearest Hydrant that is feeding of TAN Site Main ring is 100 metres three (3) fire hose lengths away and should always be utilised.
Detection/Alarms	Beacons Fire hand switches Fire horns Gas horn

Location	Fire Protection Equipment at Plant
Bulk Liquid Berth	
Ship loading Facilities	Yara Pilbara's firefighting system uses PPA's existing 8-inch fire water main and ties in an 8-inch line to this main header. The firewater is supplied using 2x 500 m³ firewater tanks located in the PPA area. PPA have guaranteed a supply of firewater for up to 4 hours at a rate of 72 m³/hr in the main firewater header. This can be refilled within 6 hours. This is as per the requirement of Australian Standards AS 2419. The Bulk Liquids Berth constitutes of 3x Fire Hydrants (with provision for 1x more in the future) and 2x Water Curtain Nozzles (Fogging Nozzles). The fire hydrants are installed for emergency response teams to fight any jetty related incidents. PPA currently have an arrangement with DFES who will be called upon to tackle any jetty related fires. In the event of an ammonia vapour release, the water curtain nozzles will be activated to suppress ammonia vapour at the berth. The minimum water jet throw for the nozzles is 31 m horizontally and 10 m vertically, in still air at 8 bar pressure. The water curtain nozzles are rated as follows: 2x 2.5-inch nozzles at 72 m³/hr and 8 bar pressure each (to be run at 45 m³/hr each). The pressure to the fogging nozzles will be supplied via a 1x 100% jacking pump, located between sections T7 and T8 on the jetty.

Emergency Vehicles & First Aid Facilities	
Ammonia Plant & TAN Plant	
Emergency Vehicles	Ambulance Fire Appliance - Scania P310 Fire Tender with 1500 L capacity water tank.
First Aid Facilities	Emergency Centre

APPENDIX D – Overview of Plant Locations and Operations

Ammonia and TAN Plant Description

The plants are located within the King Bay and Hearson's Cove Industrial Area on the Burrup Peninsula, in the Pilbara region of the North-West of Western Australia, (approximately 1,300 km north of Perth). The site is situated within a 72-hectare lease area. The location of the plants is shown below.

The Ammonia ship loading jetty is located at the DBLB. A 5.2 km long above ground ammonia pipeline transfers refrigerated liquid ammonia from the Ammonia plant to the jetty.

The Yara Pilbara Fertiliser Ltd (Yara Pilbara) Ammonia Plant is located at the Yara Pilbara Peninsula. The ammonia process is based on the KBR Purifier Process™, a low energy natural gas reforming process.

Feedstock for producing the ammonia is natural gas received from Santos Ltd at Varanus Island through a pipeline and Metering station.

The YPN site encompasses three process plants; nitric acid, ammonium nitrate solution and technical ammonium nitrate prills. The nitric acid and ammonium nitrate solution processes are well proven and based on technology licensed from Espindesa, Spain. The technical ammonium nitrate process for making porous prills is based on Yara technology operating in several plants.

Ammonia feedstock and utilities are delivered from YPF to YPN via pipelines.

Ammonia Plant Layout

The layout of the Ammonia plant is shown below and comprises of:

- Administration Building, Laboratory, Training Room, Document Control, Warehouse and the Fire & Safety Building are located along the east boundary of plant to ensure easy access from the main gate (located at the North-East corner of the ammonia plant).
- Utility block, which houses Captive Power Plant, DM plant, Package Boilers, Emergency Generator etc. is located between ammonia unit and Warehouse/ Fire & Safety Building.
- Ammonia unit is located between the utility block and the ammonia storage area and is close to the cooling tower area. Primary reformer is in the north side of the ammonia unit.
- Cooling tower and cooling water package is located on the south of ammonia unit and utility block.
- Ammonia Plant Control Room is located on the north of utility block and is close to the ammonia unit.
- Ammonia storage tanks are located along the plant west boundary. Ammonia storage flare is in the South-West corner of the storage area.
- 4 x 40-person Refuge Chambers located on the north side of the CCR, between main Administration building and the Fire & Safety building and in the Contractors Yard.

Please refer to Dangerous Goods Manifest, Appendix K for further information on types and quantities.

Refer to following site map for Muster Buildings /Refuge chambers & Emergency Assembly Areas.

Vacant plot north of Ammonia Plant

NORTH ROAD
SOUTH ROAD
CENTRE ROAD
SHORT ROAD
ACCESS ROAD
WEST ROAD
THIRD AVENUE
SECOND AVENUE
FIRST AVENUE
EAST ROAD
CATALYST STORAGE
DESAL DRIVE

SITE BOUNDARY FENCE

NATURAL GAS KNOCKOUT DRUM
FROM DAMPIER TO BUNBURY NATURAL GAS PIPELINE
TO DAMPIER PORT BULK LOADING BIRTH
NO VEHICLE ENTRY
DANGEROUS GOODS MANIFEST & MSDS
EVACUATION ASSEMBLY AREA 1
EVACUATION ASSEMBLY AREA 4
EVACUATION ASSEMBLY AREA 3
EVACUATION ASSEMBLY AREA 2
MUSTER POINT 1
MUSTER POINT 2
MUSTER POINT 3
MUSTER POINT 4
MUSTER BUILDING 11
CONTROL ROOM
INCIDENT COMMANDER
CONTROL ROOM
SS
CAR PARK
ADMINISTRATION
SS
D/C
TRN
LAB
FIRE & SAFETY
TO YARA TAN PLANT
SRT COORD ROOM
TO TAN PLANT
DISCHARGE POINT OF DIVERSION DRAINS
PRIMARY REFORMER
23
26
15
PROCESS ANALYSER ROOM
FUEL
ISBL AMMONIA PRODUCTION PLANT
18
SUPPORT GAS TO VENTS & FLARE
13
19
20
21
22
AMMONIA STORAGE
9
AMMONIA STORAGE
10
PUMP
11
LPG
5
SS
SEDIMENTATION BASIN 2
DISCHARGE POINT FROM BASIN 2
FLARE
28
DESAL
SS
COOLING CIRCUIT
COOLING TOWERS
ELECTRO-CHLORINATOR
SS
DIESEL
1
SEDIMENTATION BASIN 1
DISCHARGE POINT FROM BASIN 1
17
POWER PLANT
EDG
25
3
SS
IGG
8
IA
BOILERS 50T & 150T
27
FIRE WATER
2
WATER
WATER
NEUTRAL PIT
14
16
SS
WATER
WAREHOUSE
STORE
CONTRACTOR OFFICES
MUSTER BUILDING 11
DANGEROUS GOODS MANIFEST
DANGEROUS GOODS YARD
6
SW LAYDOWN AREA
CONTRACTOR OFFICES
24
STORE
WATER CORPORATION DESALINATION PLANT
DISCHARGE POINT OF DIVERSION DRAINS
WATERCOURSE SOUTH OF SITE
Vacant plot west of Ammonia Plant
Yara TAN Plant directly east of Ammonia Plant

N

DANGEROUS GOODS KEY

Area ID	DG Class	Storage Type
1	C1	Bulk
2	C1	Manufacturing
3	C1	Bulk
4	2.1	Manufacturing
5	2.1	Bulk
6	2.1, 2.2, 2.3, 3, 6.1, 8	PackagedDG
7	2.1, 2.2, 2.3	PackagedDG
8	2.2	Manufacturing
9	2.3 Sub Risk 8	Bulk
10	2.3 Sub Risk 8	Bulk
11	4.2,9	Packaged DG
12	3, 6.1, 8	Packaged DG
13	3, 6.1, 8	Manufacturing
14	8	Bulk
15	D2.1,9	Manufacturing
16	8	Manufacturing
17	C1	Bulk
18	OASE(aMDEA) >40%nonDG	Manufacturing
19	2.3 Sub Risk 8	Manufacturing
20	2.3 Sub Risk 8	Manufacturing
21	2.3 Sub Risk 8	Manufacturing
22	2.3 Sub Risk 8, 4.2	Manufacturing
23	2.1, 2.2	PackagedDG
24	2.1, 2.2	PackagedDG
25	C1	Manufacturing
26	2.1	Manufacturing
27	8	Manufacturing
28	3, 8	Manufacturing
Ammonia Pipeline	2.3 Sub Risk 8	Manufacturing
Nitrogen Pipeline	2.2	Manufacturing

- Fire Water Line
- Hydrant
- Monitor 12 NOS
- Natural Gas Isolation Point
- Anhydrous Ammonia Isolation Point
- Underground
- Above Ground
- Ammonia Pipeline
- Natural Gas Pipeline
- Nitrogen Pipeline
- ER Building Location
- Muster Building
- Site Entrance/Exit Evacuation Point
- Wind Sock
- Fence

SCALE
0 10m 20m 30m 40m 50m 60m

Dangerous Goods & Combustible Liquid Manifest

Yara Pilbara Fertilisers
2200 MTPDAmmonia Plant
Lot 564 Village Road,
Burrup Peninsula WA

650-508-DWG-YPF-0001
Revision: 15
Last Updated: 27.01.2021
Update: Muster Building 11 (Rev 26 of EMP)

TAN Plant Layout

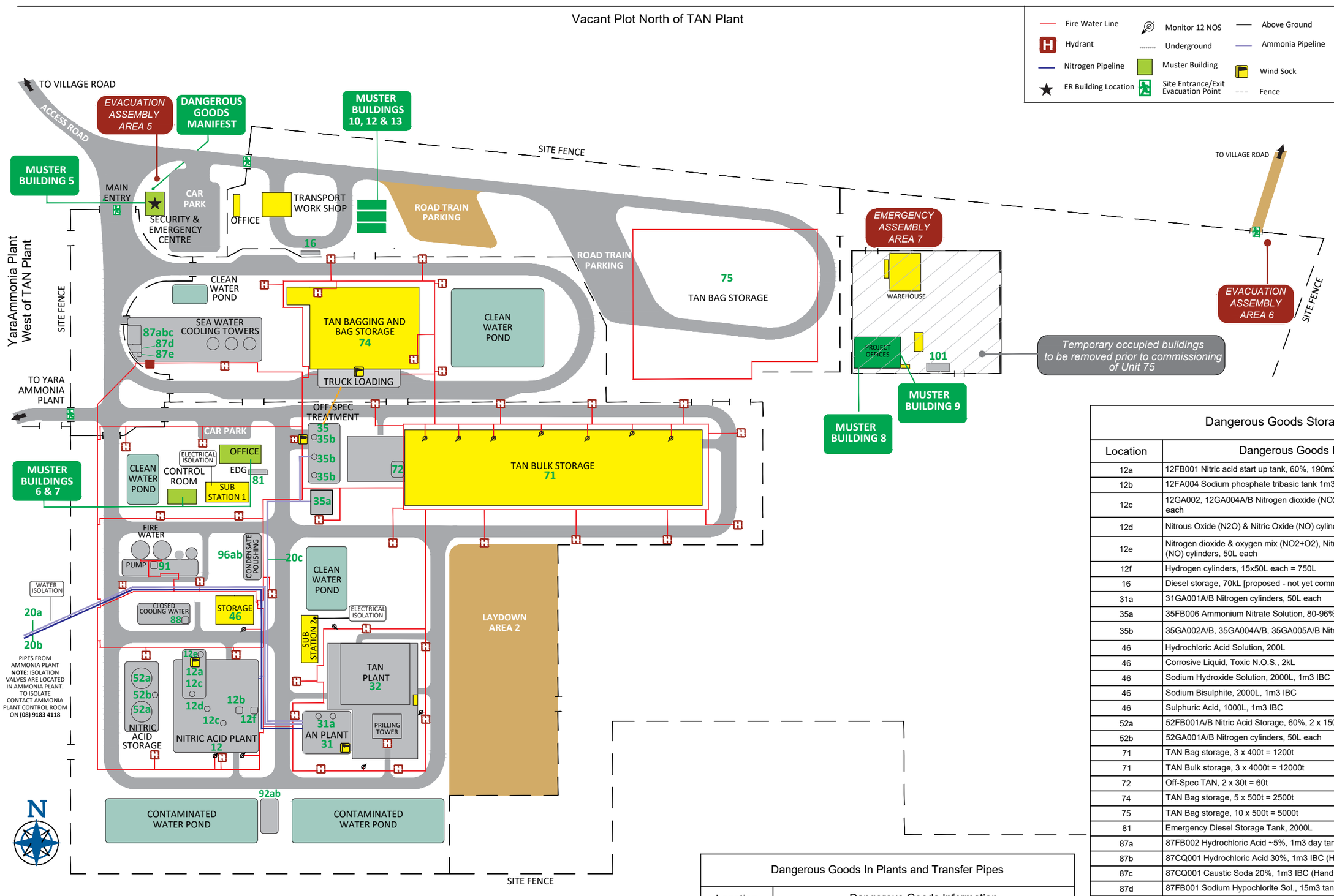
The layout of the TAN plant is shown below and comprises of:

- Main entrance Security Gate and Emergency Centre, Workshop's, Offices and Transporters Workshop to the north-west site corner;
- AN Truck Loading Area and ANSOL Truck Loading Area to the south of the Transporters Workshop;
- Site offices, TAN Control Room, Fire Water Area (including diesel pump, jockey & fire tank) are located near the eastern boundary;
- TAN Remediation Project Offices located inside fence perimeter at the North-Eastern corner of Transporters Workshop. Temporary Crib rooms are located to the east of the transporter workshop.
- Chemical storage areas; one south of the Site offices, the other on the eastern side of the Technical Ammonium Nitrate Unit;
- Process Manufacturing Areas, including;
    - Unit 12 - Nitric Acid 60% Plant, 760 t/d.
    - Unit 31 - Ammonium Nitrate Solution Plant, 965 t/d.
    - Unit 32 - Technical Ammonium Nitrate Plant, 915 t/d.
    - Unit 12, 31, 32 - Anhydrous Ammonia (liquid) piping.
    - Unit 35 - Ammonium Nitrate Solution Handling and Off-Spec Treatment (20 t/d),
    - Nitrogen Transfer Line
- Associated Process Storage Areas, including;
    - Unit 35 – ANSOL storage
    - Unit 52 – Nitric Acid storage;
    - Unit 72 – TAN Bulk storage
    - Unit 74 – TAN Bag storage;
    - Unit 75 – TAN Bag Storage
    - Unit 46 – Diesel storage tank.

Please refer to Dangerous Goods Manifest, Appendix K for further information on types and quantities.

Refer to following site map for Muster Buildings & Emergency Assembly Areas.

Vacant Plot North of TAN Plant



Vacant Plot South of TAN Plant

NOTE: CONTAMINATED & CLEAN WATER PONDS DO NOT DRAIN OFF SITE
PROCESSING AREAS DRAIN TO CONTAMINATED PONDS AND NON-PROCESSING AREAS DRAIN TO CLEAN WATER PONDS
WATERCOURSE SOUTH OF SITE

Yara Pilbara Nitrates

Lot 564 (Lot 3107) Village Road
Karratha WA6714

Dangerous Goods & Combustible Liquid Manifest

SCALE
0 10m 20m 30m 40m 50m 60m

650-508-DWG-YPN-0006
Rev 8
Last Updated: 27.01.2021

Vacant Plot East of TAN Plant

Dangerous Goods In Plants and Transfer Pipes

Location	Dangerous Goods Information
12	Nitric Acid 60% Plant, 760 t/d
20a	Ammonia liquid transfer pipeline from Ammonia Plant
20b	Nitrogen transfer pipeline from Ammonia Plant
20c	Ammonia gas pipeline within TAN production facility
31	Ammonium Nitrate (AN) Solution Plant
32	Technical Ammonium Nitrate (TAN) Plant
35	Technical Ammonium Nitrate (TAN) Off-spec Handling

Dangerous Goods Storage

Location	Dangerous Goods Information
12a	12FB001 Nitric acid start up tank, 60%, 190m3
12b	12FA004 Sodium phosphate tribasic tank 1m3 IBC
12c	12GA002, 12GA004A/B Nitrogen dioxide (NO2), Nitric Oxide (O) cylinders 50L each
12d	Nitrous Oxide (N2O) & Nitric Oxide (NO) cylinders, 50L each
12e	Nitrogen dioxide & oxygen mix (NO2+O2), Nitrous Oxide (N2O), Nitric Oxide (NO) cylinders, 50L each
12f	Hydrogen cylinders, 15x50L each = 750L
16	Diesel storage, 70kL [proposed - not yet commissioned]
31a	31GA001A/B Nitrogen cylinders, 50L each
35a	35FB006 Ammonium Nitrate Solution, 80-96%, 500t
35b	35GA002A/B, 35GA004A/B, 35GA005A/B Nitrogen cylinders, 50L each
46	Hydrochloric Acid Solution, 200L
46	Corrosive Liquid, Toxic N.O.S., 2kL
46	Sodium Hydroxide Solution, 2000L, 1m3 IBC
46	Sodium Bisulphite, 2000L, 1m3 IBC
46	Sulphuric Acid, 1000L, 1m3 IBC
52a	52FB001A/B Nitric Acid Storage, 60%, 2 x 1500t
52b	52GA001A/B Nitrogen cylinders, 50L each
71	TAN Bag storage, 3 x 400t = 1200t
71	TAN Bulk storage, 3 x 4000t = 12000t
72	Off-Spec TAN, 2 x 30t = 60t
74	TAN Bag storage, 5 x 500t = 2500t
75	TAN Bag storage, 10 x 500t = 5000t
81	Emergency Diesel Storage Tank, 2000L
87a	87FB002 Hydrochloric Acid ~5%, 1m3 day tank
87b	87CQ001 Hydrochloric Acid 30%, 1m3 IBC (Handling)
87c	87CQ001 Caustic Soda 20%, 1m3 IBC (Handling)
87d	87FB001 Sodium Hypochlorite Sol., 15m3 tank
87e	87CC001 Sodium Metabisulphite, 1m3 IBC
88	88CC001 Caustic Soda 20%, 1m3 IBC (Handling)
91	91FA002 Fire Diesel Storage Tank, 2500L
92a	92CB005 Caustic Soda 20%, 1m3 IBC
92b	96CB005 Sulphuric Acid 98%, 1m3 IBC
96a	96CB001 Caustic Soda 20%, 1m3 IBC
96b	96CB001 Sulphuric Acid 98%, 1m3 IBC
101	Diesel storage, 4500L

APPENDIX E – Hazardous Inventories Adjacent to the Plants

Note: There are a number of Major Hazard Facilities, oil / gas supply bases and gas supply pipelines that are in the vinciity of Yara Pilbara's operations on the Burrup Pennisular. However the hazardous inventories of these facilites are outside of the immediate impact areas and should not be impacted by an incident at Yara Pilbara facilities.

APPENDIX F – Plant Population During Normal Operations (Indicative Only)

LOCATION	NO. OF PERSONNEL DAY SHIFT	NO. OF PERSONNEL NIGHT SHIFT	REMARKS
Ammonia Plant			
Administration Building	20	0	Day 0700 – 1530 hrs.
Contractors on Site/normal or Turnaround related	Between 0 and 90	40	Day 0600 – 1800 hrs. Night 1800 – 0600 hrs
Laboratory & Document Control	5	0	Day 0700 – 1530 hrs. Day 0600 – 1800 hrs.
Emergency Centre & Security Gatehouse *both TAN & Ammonia Plants	Between 5-10	2 (Gate)	Day 0700 – 1530 hrs. Night 1800 – 0600hrs
Workshop / Warehouse	20	0	Day 0700 – 1530 hrs. Night 1800 – 0600 hrs.
Control Room	12	4	Day 0600 – 1800 hrs. Night 1800 – 0600 hrs.
ISBL / OSBL	5	5	Day 0600 – 1800 hrs. Night 1800 – 0600 hrs.
Jetty / Pipeline (Only during ship loading)	3	3	Various shifts
TOTAL EMPLOYEES	**160x day shift**	**54x night shift**	

The total number of personnel employed at the Ammonia Plant will range from 70 –160. These personnel will work various shifts and days according to their rosters and positions. The number of personnel on night shift equals the number of personnel on day and night weekend shifts and public holidays.

All operations and production personnel are trained in firefighting and are active members of the ERT. This allows for emergency response coverage 24 hours a day, 7 days a week.

LOCATION	NO. OF PERSONNEL DAY SHIFT	NO. OF PERSONNEL NIGHT SHIFT	REMARKS
TAN Plant			
Offices	12 – 22	0	Day 0700 – 1630hrs
Contractors on Site/normal or Turnaround related	0 – 70	40	Day 0600 – 1800hrs Night 1800 – 0600hrs
Central Control Building	5 – 14	6	Day 0600 – 1800hrs Night 1800 – 0600hrs
Chemical Store	0 - 1	0	Day 0700 – 1630hrs
Spare Parts Building	0 – 1	0	Day 0700 – 1630hrs
Emergency Centre & Security Gate *both TAN & Ammonia Plants	5 - 10	2 (Gate)	Day 0600 – 1800hrs Night 1800 – 0600hrs
Transporters Workshop	1 – 3	0	Day 0700 – 1630 hrs
Transporters Workshop Offices	1 – 2	0	Day 0700 – 1630 hrs
Bulk Storage Building U71	2 – 5	0	Day 0600 – 1800 hrs Night 1800 – 0600hrs
AN Truck Loading and Bagging U73 & Bag Storage U74	2 – 7	0	Day 0700 – 1630 hrs
Shift Laboratory (in U32)	0 – 1	0 - 1	Intermittent during sample (4 per shift)
LIR I / Sub Station I	0 – 1	0	Day 0700 – 1630 hrs
LIR II / Substation II	0 - 1	0	Day 0700 – 1630 hrs
TAN Remediation Project Office	0-25	0	Day 0600 – 1800 hrs
TOTAL EMPLOYEES	**28-160**	**Up to 48**	

The total number of personnel employed at the Technical Ammonium Nitrate Production Facility will range from 11 - 160. These personnel will work various shifts and days according to their rosters and positions. The number of personnel on night shift equals the number of personnel on day and night weekend shifts and public holidays. All operations and production personnel are trained in firefighting and are active members of the ERT. This allows for emergency response coverage 24 hours a day, 7 days a week.

APPENDIX G – Protective Equipment

Within Fire Tender and Located at the Emergency Centre

- Self-Contained Breathing Apparatus;
- SCBA Long Lines with Scape sets
- Fire Resistant Turn out coats and pants;
- Chemical Splash Suits;
- Fully Encapsulated Chemical Suits;
- Personal Gas Detecting Devices;
- Fire Resistant Hard Hats & Shields; and
- Fire Resistant Boots.

At Plant & Ship loading Facility

- Self-Contained Breathing Apparatus;
- Fully Encapsulated Chemical Suits;
- Hard hats;
- Chemical Splash suits;
- Respirators and Filter Cartridges;
- 5 Minute Escape Units;
- 15 Minute S-Cap Air Units;
- Safety Goggles;
- Safety Visors;
- Elbow Length PVC Gloves;
- PVC Coats and Pants;
- PVC Overalls;
- Hearing Protection; and
- Dust Coveralls.

APPENDIX H – First Aid Equipment

Emergency first aid equipment is listed below:

No.	First Aid Equipment
1	Portable oxygen equipment.
2	Portable oxy-viva – complete.
5	Oxy-Sok Resuscitation Kits.
15	Eye wash stations.
1	Otoscope/ Ophthalmoscope.
4	Glucometer.
2	Thermoscan
4	AED

Other Equipment in First Aid Room and the Ambulance

- Treatment table x 1;
- Medical charts and books;
- Patient slide boards;
- AED
- Stair Chair
- K.E.D
- SCBA
- Splint;
- Linen;
- First aid treatment supplies;
- Scoop Stretcher;
- Maggi lamp;
- Defibrillator (Ambulance & FA Room); and
- Mobile Phone (located at Security) for Ambulance.

Within Fire Tender:

- Industrial First Aid Kit; and
- Oxy Viva.

At Ship Loading Facility:

- First Aid Kit; and
- Oxy-Sok Resuscitation Kit.

At TAN Remediation Project Office:

- First Aid Kit

APPENDIX I – Emergency Escape & Evacuation

Emergency, Escape & Evacuation *Note: Refer to Appendix D for Site Maps	
Ammonia Plant	
Windsock Locations	North Storage Tank Vessel 121-MD Pipe rack 268 Corner. Centre Rd & 3rd Ave Pipe Bridge Corner. South Rd. & Ist Ave
Muster Buildings and Refuge chambers	**Refuge chamber 1** – North side of the CCR on North Road. **Refuge chamber 2** – Southeast corner (rear) of Administration Building parallel to East Road. **Refuge chamber 3** – Directly northwest of the Fire & Safety building adjacent to East Road. **Refuge chamber 4** – North of the Contractors Office(s) southeast of Desal Drive **Muster Building 11** – Southern side of the SCWT in the lower laydown area.
Evacuation Assembly Area **(swipe card before leaving via Security Gatehouse and Desalination Gate only)**	**EAA 1 - Ammonia** Security Gatehouse **EAA 2 - Desalination** Gate **EAA 3 - South** Western side of Flare **EAA 4 - North** of Natural Gas Knockout Drum
TAN Plant	
Windsock Locations	Top of the Prilling tower (U32) Top of the Absorption Tower (U12) Top of the Truck Loading Area (U73)
Muster Buildings (swipe card on entry) *** Temporary (TAN Remediation Project)**	**Muster Building 5** Main Security Gatehouse and Emergency Centre **Muster Building 6** TAN Control Room **Muster Building 7** TAN Administration Building ***Muster Building 8** TAN Remediation Project Office, west conference room in main office building ***Muster Building 9** – TAN Remediation Project Office Conference Room (eastern flank of the building) ***Muster Building 10,12 & 13** – East of Transporter Workshop
Evacuation Assembly Areas *** Temporary (TAN Remediation Project)**	**EAA 5 -** Evacuation Assembly Area next to the Security and Emergency Centre ***EAA 6 -** Evacuation Assembly Area in the North-East corner of the plant. **EAA 7** – South /western corner of Unit 52

Off site	
Woodside Visitor car park (only open during business hours)	Northern end of Burrup Peninsula Road prior to entrance of Karratha Gas Plant – distance approximately 3.2 kilometres
Hearsons cove beach	Eastern end of TAN plant – distance approximately 2 kilometres

APPENDIX J – Indicative Population of Surrounding Area

King Bay Industrial Area includes the following industries:

Company	No. Employees	Company	No. Employees
Agility	50 day	**Mermaid Marine**	50 day
Australian Marine Services	2 day	**MI Australia**	5 -10 day
Brambles	30 day & adhoc night	**Oceanic Offshore**	3 day
Cleanaway	15 day	**Pilbara Port Authority**	25 – 75 day
Coates Hire	10 day & max 2 night	**Schlumberger**	100 day (max 40-50 on site)
ECM	30 employees	**Toll Energy**	35 day & max 4. adhoc night
Gearhart United	15 & 4 adhoc night	**Western Stevedores**	Up to 50 day
Halliburton	30 day	**Woodside Pluto LNG**	Approx. 100 day
Hughes Industrial Services	32 day & 2 night max. 10 at shift change	**Woodside Supply base**	50 day
Karratha Gas Plant	Approx. 500 – 800 day Shutdown up to 2000	**Unirig**	5 day

APPENDIX K – Inventory & Location of Dangerous Goods

Ammonia Plant Dangerous Goods in Excess of Schedule 1 MHF Threshold (NOHSC:1014(2002))

Material	UN Number	Location	Amount
Ammonia	1005	Synthesis & Refrigeration Plant	30 Tonnes
		Storage Tanks 21001/2-MF	80,000 Tonnes
		500mm Export Pipeline and 100mm Recirculation line.	600 Tonnes
		Jetty Line and Ship Loader	29 Tonnes

Dangerous Goods less than Schedule 1 MHF Threshold (NOHSC: 1014(2002)).

Material	UN Number	Location	Amount
Natural Gas	1972	Natural Gas Feed and Conditioning	1.3 Tonnes
		Primary Reformer	2.0 Tonnes
Hydrogen	1049	Secondary reformer and Methanator	1.2 Tonnes

Other Dangerous Goods

Material	UN Number	Location	Amount
Diesel Fuel	0000	Diesel Storage Tanks 2301-MF 2304-MF	 54 Tonnes 11 Tonnes
Liquid Nitrogen	1977	2501-MLF1	50 Tonnes
Sulphuric Acid	1830	2204-MF 2205-MFF 2001-MUL1F	22 Tonnes
Sodium Hydroxide Solution	1824	2201-MUL2F 2203-MF 2207-MF	37 Tonnes
Hydrazine	3293	106-ML	0.21 Tonnes
Ammonia Solution	2672	107-ML	1 Tonne
Metal Catalyst Dry	2881	Converter 105md	291.2 Tonnes

TAN Plant – Inventory & Location of Dangerous Goods

Notes:

- Loaded vehicles are not parked and stored at the site.
- Dangerous Goods in Tanks, vessels, towers, exchangers, evaporators are based on total capacity of the container.
- Pipework considered is based on the main lines between equipment/ units.
- For conveyors, elevators, screens, bucket elevators, pre-dryers, dryers, drum, hopper, quantity is based on maximum capacity. Residence time 10% considered in 32-GJ-003, 32-CI-010 and 73-FE-001 A/B. A residence time of 5 minutes has been considered for 32-FZ-004.
- Ammonia and NOx quantity are based on the Isolation Sections (IS) considered in the MHF Risk Assessment report, (2-250-329-REP-TRE-8021). The MHF Isolation Sections are identified in section 7" Dangerous goods in manufacture or process piping" under item "Process ID" as "IS", accordingly.
- Ammonium Nitrate Solution quantity is based on total capacity whereas in MHF Risk Assessment (2-250-329-REP-TRE-8021) the quantity of Ammonia Solution is based on High Level of liquid.
- Ammonium Nitrate Solution 50-82 % is not Dangerous Goods in accordance with Australian Dangerous Goods Code (ADG Code). For the purposes of this Manifest, it has been considered in both, MHF Risk Assessment (2-250-329-REP-TRE-8021) and this Manifest due to the level of risk (potential explosion).

Legend:

- BSS Loose storage of solids in bulk
- C1 combustible liquids
- UTG Underground Tank
- GTD Tank Situated Normally at Ground Level
- GTS Self-bounded ground Tank
- IBC Intermediate bulk containers (e.g. Bulka bags)
- IDA storage of IBCs outside a building
- IDB storage of IBCs within a building
- kg for solids
- L For gas or liquid
- PDA package (drum or cylinder) depot in the open air
- PDB package (drum or cylinder) depot within a building
- PDC storage of package (drum or cylinder) in a fully enclosed room within another building
- PG Packing group

Summary information about dangerous goods quantities

Class	Packaging Group	Maximum quantity (L or kg)
2.1	n/a	300 L
2.2	n/a	1,777 L
2.3	n/a	1,269,450 L
3	n/a	n/a
4.1	n/a	n/a
5.1 (Prill)	III	20,808,397 kg
5.1 (solution)	n/a	552,120 L
6.1	n/a	n/a
8	II	3,214,000 L
8 SR 5.1	n/a	n/a
C1	n/a	70,000 L

Bulk Dangerous Goods Storages

Storage location	Storage ID	Proper shipping name	UN no.	Class or Division	SR	Packaging Group	Type	Quantity (L or kg)
Unit 46	VPU 4711	Combustible Liquid	n/a	C1	n/a	n/a	GTS	70,000 L
Unit 35	35-FB-006	Ammonium Nitrate Sol. 92%	2426	5.1	n/a	II	GTD	382,000 L
Unit 71	Unit 71	Ammonium Nitrate (Prill)	1942	5.1	n/a	III	BSS	12,000,000 kg
Unit 72	Unit 72	Ammonium Nitrate (off-spec)	1942	5.1	n/a	n/a	BSS	60,000 kg
Unit 12	12-FB-001	Nitric Acid 60%	2031	8	n/a	II	GTD	190,000 L
Unit 52	52-FB-001 A	Nitric Acid 60%	2031	8	n/a	II	GTD	1,500,000 L
Unit 52	52-FB-001 B	Nitric Acid 60%	2031	8	n/a	II	GTD	1,500,000 L
Unit 92	92-CB-005	Caustic Soda Sol. 20%	1824	8	n/a	II	IDA	1,000 L
Unit 96	96-CB-001	Caustic Soda Sol 20%	1824	8	n/a	II	IDA	1,000 L
Unit 87	87-FB-001	Sodium Hypochlorite	1791	8	n/a	II	GTD	15,000 L
Unit 87	87-FB-002	Hydrochloric Acid Sol. 5 %	1789	8	n/a	II	GTD	1,000 L
Unit 87	87-CC-002	Sodium Metabisulphite	2693	8	n/a	II	IDA	1,000 L
Unit 92	92-CB-005	Sulphuric acid Sol. 98%	1830	8	n/a	II	IDA	1,000 L
Unit 96	96-CB-001	Sulphuric acid Sol. 98%	1830	8	n/a	II	IDA	1,000 L

Packaged dangerous goods of PG I or Class 2.3

Storage location	Proper shipping name	UN no.	Class or Division	SR	Type	Quantity (L or kg)
Unit 12	Ammonia (cylinders)	1005	2.3	8	PDA	50 L
					Total Division 2.3	50 L

Packaged dangerous goods of Division 2.1

Storage location	Proper shipping name	UN no.	Class or Division	SR	Type	Quantity (L or kg)
Unit 12	Hydrogen (cylinders)	1049	2.1	n/a	PDA	300 L
					Total Division 2.3	300 L

Packaged dangerous goods of Division 2.2

Storage location	Proper shipping name	UN no.	Class or Division	SR	Type	Quantity (L or kg)
Unit 12	2*N_2, N_2O, NO, 2*NO_2 (cylinders)	1977 1070 1660 1067	2.2	n/a	PDA	300 L
Unit 31	N_2	1977	2.2	n/a	PDA	100 L
Unit 35	N_2	1977	2.2	n/a	PDA	150 L
Unit 52	N_2	1977	2.2	n/a	PDA	50 L
					Total Division 2.2	600 L

Packaged dangerous goods of Class 2.2 SR 5.1

Storage location	Proper shipping name	UN no.	Class or Division	SR	Type	Quantity (L or kg)
Unit 12	Oxygen (cylinders)	1072	2.2	5.1	PDA	50 L
					Total Division 2.2 SR 5.1	50 L

Packaged dangerous goods of PG III

Storage location	Proper shipping name	UN no.	Class or Division	SR	Type	Quantity (L or kg)
Unit 71	Ammonium Nitrate	1942	5.1	-	IDB	1,200,000 kg
Unit 74	Ammonium Nitrate	1942	5.1	-	IDB	2.500,000 kg
Unit 75	Ammonium Nitrate	1942	5.1	-	IDA	5,000,000 kg
					Total Division 2.2 SR 5.1	8,700,000 kg

Dangerous goods in manufacture or process piping

Storage location	Process ID	Proper shipping name	UN no.	Class/ Division/ SR	Quantity (L or kg)
U63/ U20/ U12/ U31	Piping (120701, 310192, 200690, 610690)	Nitrogen	1977	2.2	1,177 L
Unit 32	32-FA-004	Ammonium Nitrate Sol. 30%	n/a	n/a	17,000 L
Unit 32	32-FA-005	Ammonium Nitrate Sol. 60%	n/a	n/a	42,200 L
Unit 35	35-FB-002 A	Ammonium Nitrate Sol. 50%	n/a	n/a	60,000 L
Unit 35	35-FB-002 B	Ammonium Nitrate Sol. 50%	n/a	n/a	60,000 L
Unit 35	35-FB-004	Ammonium Nitrate Sol. 50%	n/a	n/a	200,000 L
Unit 35	35-FB-005	Ammonium Nitrate Sol. 50%	n/a	n/a	200,000 L
				Total AN Sol <60%	**580,377 L**
Unit 12	12-IS-4	Ammonia (l)	1005	2.3/ 8	2,020 L
Unit 12	12-IS-5L	Ammonia (l)	1005	2.3/ 8	21,510 L
Unit 12	12-IS-9	Ammonia (l)	1005	2.3/ 8	910 L
Unit 32	32-IS-10L	Ammonia (l)	1005	2.3/ 8	710 L
Unit 32	32-IS-12L	Ammonia (l)	1005	2.3/ 8	880 L

Storage location	Process ID	Proper shipping name	UN no.	Class/ Division/ SR	Quantity (L or kg)
Unit 32	32-IS-15	Ammonia	1005	2.3/ 8	7,580 L
				Total Ammonia	**33,610 L**
Unit 12	12-IS-5V	Ammonia (g)	1005	2.3/ 8	17,400 L
Unit 31/32	31/32-IS-11V& 12V	Ammonia (l)	1005	2.3/ 8	20,280 L
Unit 31/35	31/35-IS-11V& 12V	Ammonia (l)	1005	2.3/ 8	1,440 L
Unit 32	32-IS-14	Ammonia (g)	1005	2.3/ 8	1,310 L
				Total Ammonia	**40,430 L**
Unit 12	12-IS-6	Nitric Oxide, Nitrogen Dioxide, Di-Nitrogen Tetra-Oxide mixture (13.6% NO2)	1660 1067 1070	2.3 / 5.1, 8	197,200 L from ammonia oxidation reactor (12-DC-001) to the process compressor (12-GB-002) including the overhead line from bleaching tower (12-DA-002) (a/g)
Unit 12	12-IS-7	Nitric Oxide, Nitrogen Dioxide, Nitrous Oxide (12.4% NO2)	1660 1067 1070	2.3 / 5.1, 8	22,520 L
Unit 12	12-IS-8	Nitric Oxide, Nitrogen Dioxide, Nitrous Oxide (Tail gas 0.07% NO2)	1660 1067 1070	2.3 / 5.1, 8	975,640 L from absorption tower (12-DA-001) overhead system and isolation valve 12-XZV-013 to tail gas expander (12-GF-002) (a/g)
				Total NO_X	**1,195.360 L**

Storage location	Process ID	Proper shipping name	UN no.	Class/ Division/ SR	Quantity (L or kg)
Unit 31	31-DC-001	Ammonium Nitrate Sol. 78%	2426	5.1	57,000 L
Unit 31	Piping (310228)	Ammonium Nitrate Sol. 76%	2426	5.1	1,000 L
Unit 31	31-FA-001	Ammonium Nitrate Sol. 85%	2426	5.1	33,000 L
Unit 31	31-FA-002	Ammonium Nitrate Sol. 96 %	2426	5.1	32,100 L
Unit 31	31-FA-006	Ammonium Nitrate Sol. 78%	2426	5.1	22,500 L
Unit 31	Piping (310230/31, 310234)	Ammonium Nitrate Sol. 85%	2426	5.1	3,740 L
Unit 32	32-FA-001	Ammonium Nitrate Sol. 96 %	2426	5.1	1,600 L
Unit 32	32-FA-057	Ammonium Nitrate Sol. 96%	2426	5.1	13,640 L
Unit 32	Piping (310235/ 310237/38, 320254/ 320242/ 320250, 320244/ 45, 320247/ 48, 320254/ 320251)	Ammonium Nitrate Sol. 78 -96%	2426	5.1	5,540 L
				Total AN Sol >76%	**170,120 L**
Unit 32	32-CI-001 B	Ammonium Nitrate (Prill)	1942	5.1	1,041 kg
Unit 32	32-CI-002 A	Ammonium Nitrate (Prill)	1942	5.1	1,283 kg
Unit 32	32-CI-002 B	Ammonium Nitrate (Prill)	1942	5.1	1,283 kg
Unit 32	32-CI-010	Ammonium Nitrate (Prill)	1942	5.1	2,158 kg
Unit 32	32-FZ-004	Ammonium Nitrate (Prill)	1942	5.1	2,083 kg
Unit 72	72-PC-001	Ammonium Nitrate (Prill)	1942	5.1	1,830 Kg
Unit 72	72-PC-002	Ammonium Nitrate (Prill)	1942	5.1	2,943 kg

Storage location	Process ID	Proper shipping name	UN no.	Class/ Division/ SR	Quantity (L or kg)
Unit 72	72-FE-004 A	Ammonium Nitrate (Prill)	1942	5.1	6,966 kg
Unit 72	72-FE-004 B	Ammonium Nitrate (Prill)	1942	5.1	6,966 kg
Unit 72	72-PC-004	Ammonium Nitrate (Prill)	1942	5.1	9,100 kg
Unit 72	72-GJ-001	Ammonium Nitrate (Prill)	1942	5.1	1,203 kg
Unit 72	72-PC-006	Ammonium Nitrate (Prill)	1942	5.1	6,008 kg
Unit 73	73-FE-001 A	Ammonium Nitrate (Prill)	1942	5.1	1,290 kg
Unit 73	73-FE-001 B	Ammonium Nitrate (Prill)	1942	5.1	1,290 kg
Unit 73	73-PC-003	Ammonium Nitrate (Prill)	1942	5.1	1,912 kg
				Total AN Prill	**48,397 kg**
Unit 12	12-DA-001	Nitric Acid (60%)	2031	8	785,000 L
Unit 12	Piping (120239, 120253, 120240)	Nitric Acid (60%)	2031	8	1,060 L
Unit 12	12-DA-002	Nitric Acid (60%)	2031	8	36,600 L
Unit 12	Piping (120237, 200201, 520200)	Nitric Acid (60%)	2031	8	2,020 L
Unit 12	Piping (120237, 200201, 520200)	Nitric Acid (60%)	2031	8	3,870 L
				Total Nitric Acid 60%	**829,660 L**
Unit 87	87-CQ-001	Hydrochloric Acid 30%	1789	8	1000 L
Unit 87	87-CQ-001	Caustic Soda 20%,	1824	8	1000 L
Unit 88	88-CC-001	Caustic Soda Sol. 20%	1824	8	1,000 L

APPENDIX L – Emergency Response Team Duty Cards

Duty Card One – Incident Controller

Duty Card ONE – Incident Controller

The function of the Incident Controller is to be in control of all incidents that occur. During small incidents the IC usually also performs the operations, planning and logistics functions.

As the incident develops in size or complexity, responsibility for managing these functions shall be performed by the SRT. The Incident Controller will accomplish the strategy developed to combat the incident by meeting the tactical objectives and directs all the incident tactical operations and the implementation of the Pre - Incident Plan

- ❒ Assume role of Incident Controller in an emergency.
- ❒ Switch radio to **Channel 4.**
- ❒ Place the Incident Controller vest on for identification purposes.
- ❒ Assess the incident in order to classify interim emergency level.
- ❒ If required order all personnel on site to evacuate to refuges.
- ❒ Initiate and co-ordinate the mobilisation of the ERTL
- ❒ Initiate contact with SRT Emergency Services or their alternate.
- ❒ Direct the Panel Operator to contact external Emergency Services to provide aid to the affected facility as required (utilise alternate methods if unable to connect to 000).
- ❒ Verbally notify the SRT Leader of the incident, providing a detailed brief.
- ❒ Complete an Incident Report Form (YARA CMS-F-01) ASAP and provide to the SRTL
- ❒ Maintain communications with the ERTL, the SRT and external Emergency Services.
- ❒ Regularly update the ERTL on the situation – include, what has been done, what's going to be done, what's changed and any critical issues requiring resolution.
- ❒ Account for all personnel on site. (With assistance from the Security Guard using the Gallagher System).
- ❒ If there has been an ammonia release, determine if any Neighbouring Facilities require notification by referring to the maps in the Control Room and using the Anemometer.
- ❒ Delegate the task to notify Neighbouring Facilities to a Panel Operator using EMQNet Message Manager.

***Note**: that if SRT is activated, this function will be conducted by 3rd Party Communications Coordinator.*

- ❒ If external Emergency Services are required to come to site organise the Liaisons Officer to meet them at the Gatehouse and bring them to the Control Room if safe to do so.
- ❒ Monitor the safety of the ERT and regularly assess the need for support from Emergency Services.
- ❒ Command and coordinate the activities of the Control Room Operators.
- ❒ Regularly reassess the emergency level.
- ❒ Consider the potential for the incident to be protracted and develop a relief in place plan.
- ❒ When the emergency is over sound the "All Clear" siren.

Duty Card Two – Panel Operator

Duty Card TWO- Panel Operator

Duty Card Two is the function of all Panel Operators when an emergency is reported to the Control Room.

Emergency Radio – ***Channel 4***

Emergency Phone – ***Extension Fertiliser – 4165*** ***Nitrates – 4007***

Call sign for radios: ***EMERGENCY EMERGENCY EMERGENCY***

- ❒ Using checklist, note all information provided by the caller:
  - ❒ What has happened.
  - ❒ What may happen due to incident.
  - ❒ Number of people still in immediate area.
  - ❒ No # of injuries.
  - ❒ What current action is underway to make the plant safe?
  - ❒ What is known about the emergency – plant condition etc.
- ❒ Contact Shift Superintendent who assumes the role of Incident Controller for all Plant and Pipeline emergencies:

  Phone Extension Fertilisers – **4165** Nitrates - **4007**

  Radio Channel **4.**
- ❒ For an incident at the jetty, liaise with the Loading Master who will act as the Incident Controller at the Jetty.
- ❒ Replay all information to the Shift Superintendent (Incident Controller).
- ❒ If the Incident Controller is unavailable and the emergency requires immediate evacuation to the refuges, sound the emergency siren.
- ❒ Operate plant as directed by the Shift Superintendent.
- ❒ Follow all instructions given by the Shift Superintendent
- ❒ Maintain a log of events where appropriate.

Duty Card Three – Security Guard

Duty Card THREE - Security Guard

Duty card Three is the function of all Security Guards during an emergency.

Emergency Radio – ***Channel 4***

Emergency Phone – ***Extension Fertilisers – 4165*** ***Nitrates – 4007***

Call sign for radios: ***EMERGENCY EMERGENCY EMERGENCY***

- ❒ Upon hearing the emergency siren or being notified by the Incident Controller, stop access to the site by vehicles (signs displayed at gates) and people.
- ❒ Access the personnel onsite screen using the Gallagher System. This screen accounts for how many people are on site and as personnel reach muster points and swipe it then registers their location and print a report.
- ❒ Record and account for personnel at each muster building and refuge chambers by radio to confirm numbers. Compare radio numbers with the onsite screen numbers. Notify the Control Room with this number.
- ❒ Ensure site access is maintained for emergency vehicles only.
- ❒ If Emergency Services arrive on site, record the names of and numbers of who enter the site.
- ❒ Inform the Incident Controller or Control Room when Emergency Services arrive.
- ❒ Give Emergency Services Yara Pilbara radios if required (Emergency radios kept in the Security Gatehouse).
- ❒ Maintain a log of events as required.
- ❒ Upon hearing the ALL CLEAR siren, advise all occupants over Channel 5

Duty Card Four – Emergency Response Team Leader (ERTL)

Duty Card FOUR - Emergency Response Team Leader (ERTL)

The function of the ERTL is to mobilize, command and coordinate the Emergency Response Team (ERT) and the ESO When the ERTL believes that the real or potential scale of the incident will require the deployment of resources greater than those available on-site, he/she must liaise with the Incident Controller who will act to enable and coordinate the additional resources.

Emergency Radio – ***Channel 4***

Emergency Phone – ***Extension Fertilisers – 4165*** ***Nitrates – 4007***

Call sign for radios: ***EMERGENCY EMERGENCY EMERGENCY***

- ❒ On receiving notification to attend an emergency, make your way to the Emergency Building as quickly as possible and inform the Incident Controller of your arrival.
- ❒ Contact and mobilise your ERT to the Emergency Building.
- ❒ Account for the ERT and radio to Security their names and numbers.
- ❒ Brief the ERT as they arrive and deploy them as required.
- ❒ Ensure that the safety of ERT members is always maintained and that the rescue of injured personnel does not expose rescuers to an unacceptable risk.
- ❒ Plan and coordinate the tactical response to the incident with the following priorities:
    - ❒ Self and Emergency Response Team preservation;
    - ❒ Extract injured personnel and reduce trauma
    - ❒ Maintain plant safety;
    - ❒ Protect the environment;
    - ❒ Protect property; and
    - ❒ Restore plant operations.
- ❒ Place all equipment at a safe distance from the incident. Consider re-positioning appliances closer to the scene once control is achieved.
- ❒ For incidents outside battery limits utilise Yara supplied equipment wherever possible.
- ❒ Upon arriving at the emergency scene, assess the emergency and update the Incident Controller with a situation report, including:
    - ❒ Situation
    - ❒ Mission
    - ❒ Execution
    - ❒ Command, communication and logistics
- ❒ Preserve the safety of all personnel, contractors and general public at or near the emergency incident site.
- ❒ Provide the Incident Controller with regular updates on the progress of the status of the incident.
- ❒ Liaise with Emergency Services and other authorities in attendance at the site. Arrange a suitable assembly area for vehicles and equipment and access routes for attending agencies.

Duty Card Five – Emergency Response Team

Duty Card FIVE - Emergency Response Team (ERT)

Duty card Five is for all ERT members when they are appointed to the ERT for that shift or are called out to join the ERT in an emergency.

Emergency Radio – ***Channel 4***

Emergency Phone – ***Extension Fertilisers – 4165*** ***Nitrates – 4007***

Call sign for radios: ***EMERGENCY EMERGENCY EMERGENCY***

- ❒ On receiving notification by the ERTL to attend an emergency, make your way to the Fire and Safety Building, respective Control Rooms or TAN Security Gate.
- ❒ When you arrive at the Fire and Safety Building, respective Control Rooms or TAN Security Gate inform the ERTL, who will confirm names and numbers with Security Guards.
- ❒ The ERTL will brief you on the emergency.
- ❒ The ERTL will command and coordinate the ERT.
- ❒ Work in conjunction with the ERTL to plan and coordinate the tactical response to the incident with the following priorities:
    - ❒ Self and Emergency Response Team preservation;
    - ❒ Extract injured personnel;
    - ❒ Reduce trauma;
    - ❒ Maintain plant safety;
    - ❒ Protect the environment;
    - ❒ Protect property; and
    - ❒ Restore Plant Operations.

Duty Card Six – Emergency Services Officer

Duty Card SIX – Emergency Services Officer

Duty Card Six is for all ESO's when they are on shift or are called out to assist in an emergency.

Emergency Radio – ***Channel 4***

Emergency Phone – ***Extension Fertilisers – 4165*** ***Nitrates – 4007***

Call sign for radios: ***EMERGENCY EMERGENCY EMERGENCY***

- ❒ Upon hearing the emergency alarm wait for the ERTL to provide an exact location and briefing on the emergency.
- ❒ On receiving notification by the ERTL to attend an emergency, make your way to the emergency location as briefed.
- ❒ You report and liaise with the ERTL who will assist and coordinate your response.
- ❒ Remain at the First Aid Room unless responding to requests for assistance from ERTL.
- ❒ Assess the need for treatment of injuries and triaging of casualties.
- ❒ Provides transportation for sick or injured persons from site to Karratha Health Campus Advise the ERTL of the need for further medical assistance both internal and external resources.
- ❒ *Communicates with DR or Karratha Health Campus regarding status of Injured Person*

Duty Card Seven – Muster Warden

Duty Card SEVEN – Muster Warden

Duty Card Seven is for all Muster Wardens during the event of a Muster. The function of the Muster Warden is to attend the nearest Muster Point upon hearing the emergency siren and, if the first person there, follow the below procedures.

Emergency Radio – ***Channel 4***

Emergency Phone – ***Extension Fertilisers – 4165*** ***Nitrates – 4007***

Call sign for radios: ***MUSTER WARDEN AT MUSTER POINT (1/2/3 or4 state your location)***

Shelter in Place Procedure

- ❒ Upon hearing the emergency alarm make your way to the nearest Muster building or refuge chamber.
- ❒ Don the identification vest and delegate another person to don the second vest
- ❒ Ensure all occupants swipe the EAC card at the muster point and that they are accounted for on the Muster Marshal Emergency Personnel Checklist ,temporary buildings that does not have swipe facilities will account for people by contacting Security on Channel 5 and report the numbers written down on the checklist..
- ❒ Report to Security when requested the status numbers of the muster via the two-way radio (channel 5) or via phone (extension 4111)
- ❒ If instructed by the Incident Controller, search the designated areas according to the relevant **Red** Warden file (located at TAN Security Gatehouse, TAN Control Room ,SRT Room and Ammonia Control Room) to ensure that everyone is within the Muster Building and accounted for.
- ❒ Anyone refusing or unable to move to the Muster Building must be reported to Security
- ❒ Report to security via two-way radio (channel 5) or via phone (extension 4111) once search is complete
- ❒ Await further instruction from Incident Controller.

Evacuation Procedure

- ❒ Distribute bottled water and assist moving any people with a disability
- ❒ Follow the instructions from the Incident Controller and guide occupants to the nominated Evacuation Assembly Area.
- ❒ Report to security via two-way radio (channel 5) or via phone (extension 4111) once occupants have arrived at the nominated Evacuation Assembly Area.
- ❒ **IF INSTRUCTED** by Incident Controller guide the occupants to the nominated **OFFSITE** Evacuation Assembly Area. Assist moving people with a disability
- ❒ Report to security via two-way radio (channel 5) or via phone (extension 4111) once occupants have arrived at the nominated Offsite Evacuation Assembly Area.

APPENDIX M – Incident Controller Duty Cards

Plan No	Pre-Incident Plan No.	Quick Reference Duty Card No.
1.	250-500-PLN-YPF-0003.1 Natural Gas Release	250-500-FRM-YPF-0001
2.	250-500-PLN-YPF-0003.2 Process Stream (Flammable Gas) Release	250-500-FRM-YPF-0002
3.	250-500-PLN-YPF-0003.3 Ammonia Release (Export Pipeline, TAN and/or Ammonia Plant)	250-500-FRM-YPF-0003
	Deleted	
5.	250-500-PLN-YPF-0003.5 Ammonia Release (Ship Loading & Jetty)	250-500-FRM-YPF-0005
6.	250-500-PLN-YPF-0003.6 Major Injury or Fatality	250-500-FRM-YPF-0006
7.	250-500-PLN-YPF-0003.7 Non-Process Fire	250-500-FRM-YPF-0007
8.	250-500-PLN-YPF-0003.8 Extreme Weather	250-500-FRM-YPF-0008
9.	250-500-PLN-YPF-0003.9 Bomb or Terrorist Threat	250-500-FRM-YPF-0009
10.	250-500-PLN-YPF-0003.10 Substation, Transformer Bay or Generator Fire	250-500-FRM-YPF-0010
11.	250-500-PLN-YPF-0003.11 Ammonium Nitrate Prill Fire	250-500-FRM-YPF-0011
12.	250-500-PLN-YPF-0003.12 ANSOL Incident	250-500-FRM-YPF-0012
13.	250-500-PLN-YPF-0003.13 Nitric Acid Solution Incident	250-500-FRM-YPF-0013
14.	250-500-PLN-YPF-0003.14 NOx Gas Incident	250-500-FRM-YPF-0014
15.	N/A – Bush Fire Duty Card Only	250-500-FRM-YPF-0015
16.	N/A – Vehicle Interaction or Roll Over Duty Card Only	250-500-FRM-YPF-0016
17.	250-500-PLN-YPF-0003.17 Security Breach: Intruder or Active Shooter	250-500-FRM-YPF-0017
18.	250-500-PLN-YPF-0003.18 Other Environmental Incident Duty Card	250-500-FRM-YPF-0018
	Other	
	Other	
21.	250-500-PLN-YPF-0003.21 Earthquake & Flooding Contingency Planning	250-500-FRM-YPF-0021
22.	250-500-PLN-YPF-0003.22 Catalyst Fire	250-500-FRM-YPF-0022