EMERGENCY PREPAREDNESS - POLLUTION INCIDENT RESPONSE PROGRAM

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1. PURPOSE

Tomago Aluminium (TAC) holds an Environment Protection Licence with the NSW Environment Protection Authority (EPA). As per the *Protection of the Environment Operations Act 1997* (the POEO Act), the holder of an Environment Protection Licence must prepare, keep, test and implement a pollution incident response management plan (PIRMP) that complies with Part 5.7A of the POEO Act in relation to the activity to which the licence relates.

If a pollution incident occurs in the course of an activity so that material harm to the environment (within the meaning of section 147 of the POEO Act) is caused or threatened, the person carrying out the activity must **immediately** implement this plan in relation to the activity required by Part 5.7A of the POEO Act.

A copy of this plan must be kept at the premises, and be made available on request by an authorised EPA officer and to any person who is responsible for implementing this plan.

Parts of the plan must also be available on the website (www.tomago.com.au/health-safety/emergency-response).

As such this program defines Tomago Aluminium's approach to emergency preparedness and response to HSE incidents on the Tomago Aluminium Site. The objective of the program is to ensure:

- Emergency situations that may occur on the Tomago Aluminium Site are managed to reduce the severity of incident and impact on site personnel and neighbouring premises.
- Ensure comprehensive and timely communication to the staff at TAC, relevant authorities and people outside the facility that may be impacted.
- Ensure that key personnel responsible for the implementation and maintenance of the plan are identified and staff are trained and experienced to deal with emergency situations.

2. SCOPE

This program applies to all activities on the Tomago Aluminium smelter site at Tomago Rd Tomago New South Wales.

Name of licensee:	Tomago Aluminium Company Pty Ltd ABN 68001862228	
EPL number:	6163	
Premises name and address:	Tomago Aluminium Company 638 Tomago Road Tomago 2322	
Company contact / PIRMP activation details	**Name:** Robyn Parker **Position or title:** Environment Superintendent **Business hours contact number/s:** 0249669329 or 0409913473 **After hours contact number/s:** 0409913473 **Email:** robyn.parker@tomago.com.au **Name:** Simon Mitchell **Position or title:** Manager, People, Safety & Environment **Business hours contact number/s:** 0249669094 or 0422157056 **After hours contact number/s:** 0409913473 **Email:** simon.mitchell@tomago.com.au	
Website address:	www.tomago.com.au	
Scheduled activity/fee based activity on EPL	Metallurgical Activities	Aluminium production
	Metallurgical Activities	Metal waste generation
	Waste Processing	Non-thermal treatment of hazardous and other waste
	Waste Storage	Waste storage – hazardous, restricted solid, liquid, clinical and related waste and asbestos waste.

3. REFERENCES

OHS.OP.4.9.1	Emergency Response Plan	110000000123
OHS.OP.4.9.2	Crisis Management Plan	110000000175
OHS.MP.011	Records & Record Management	110000000176
	Notification of EHS Incidents	110000000298
PW.EMS.0011	Notification of Neighbours regarding Offsite Impact	120000002255
OHS.OP.4.5.6.1.1	TAC Dangerous Goods Manifest	130000000637

4. DEFINITIONS

Term	Definition
Emergency Response Plan (ERP)	Detailed procedures for responding to a HSE emergency situation, such as a fire or explosion, major injury or illness, pollution incident or uncontrolled release of energy. An ERP is the written outcome of the emergency intervention planning process. It specifies who does what, when and how, and includes methods for mitigating likely injury and illness associated with the potential emergency situations. These are located on the DMS under Emergency Response.
Emergency Response Team (ERT)	The on-site first response intervention team. This team has resources such as medical, fire fighting capability, security, environment and other specialist assistance required to respond, assess and mitigate the emergency.
External Services	This team could include NSW Fire & Rescue, Police, Ambulance, Hazmat or external Health Services
Emergency Situation	Situation caused by an event that urgently endangers people, property or the environment and that requires immediate measures to mitigate consequences.
Pollution Incident	Means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but does not include an incident or set of circumstances involving only the emission of any noise.
Shall	Indicates a mandatory requirement
Should	Indicates a non-mandatory requirement

5. RESPONSIBILITIES

Task/Details	CEO	PSE Manager	EHS Systems Officer	Dept. managers	Health, Hygiene & Security Services Leader	Superintendent Environment	Production Supervisors
Development and Maintenance of Pollution Incident, Emergency Preparedness and Response Program		X					
Development and Maintenance of Department Emergency Response Plans				X			
Initiation and leadership of vulnerability assessment and risk assessment		X					
Development and Maintenance of Emergency Response Training Plan and Competency Assessment					X		
Maintain documentation in the Document Management System			X				
Development and Facilitation of Emergency Simulations		X			X		
Instigate Crisis Management Process	X						
Notification of statutory authorities of an emergency		X		X		X	
Liaison representative with External Services					X		
Inspection and Maintenance of Emergency Response Equipment					X		
Initial assessment of incident & Department and PSE Manager communication							X

NOTE: Licence 6163 requires the EPA to be notified of personnel to contact in emergency situations (o4.2). the site nominees are Robyn Parker and Simon Mitchell. Any personnel changes require notification to the EPA.

6. EMERGENCY RESPONSE

6.1 Emergency Management Structure

6.1.1 Emergency Response

An emergency on the Tomago Aluminium Site can be escalated through three action levels based on the severity of the event and the capability of TAC personnel and equipment to deal with the event. The three levels of emergency area

- Level 1 (Department Response)
- Level 2 (Plant Level Response)
- Level 3 (External Response)

6.1.2 Level 1 Emergency Response

The Tomago Aluminium site has been divided into a number of Departments depending on the type of activity carried out.

The principal Departments and activities are:

Liquid Metal	Liquid Metal Production
	Pot Relining
	Pot Delining
	Gas Treatment
Bake Anodes Operations	Green Anode Production
	Green Anode Baking
	Rodding Baked Anodes with Stem
	Carbon & Bath Product recycling
	Bake Ovens 1, 2 &3 Fume treatment
Cast Products	Liquid Metal Casting
	Dross Processing
	Water Treatment
	Shipping Operations

Maintenance Services	Electrical Substations/Switch Boards/Rectifiers
	Site Utilities
	Maintenance workshops
Business Services	Warehousing
	Diesel Storage

It is the responsibility of each Department to manage Level 1 emergencies and escalate if required. Potential emergency situations and actions to be taken are detailed in the Department Emergency Response Plans. Evacuation procedures and Muster locations are provided for all work areas at Tomago Aluminium and personnel are trained in the use of portable fire extinguishers and spill kits.

6.1.3 Level 2 Emergency Response

If the situation is unable to be managed within the Department (Level 1 emergency) it shall be raised to a Level 2 emergency. The TAC Emergency Response Team will then take control of the situation.

6.1.4 Level 3 Emergency Response

The TAC Emergency Response Team will determine if a Level 2 emergency is to be escalated to a Level 3 emergency. In a Level 3 emergency the external services control the incident and the TAC Emergency Response Team provides support.

6.2 Identification of Emergency Situations

Situations that may require emergency response are identified through the site HSE risk registers. A summary of the potential environmental emergency scenarios for the site is contained in Appendix A, along with a guide as to whether the incident would have potential or actual material harm. Some of the preventative measures that are implemented to reduce the risk of an emergency situation arising are also detailed in Appendix A. The potential emergency scenarios are reviewed on an annual basis and contribute to the Annual Emergency Response Training Plan.

6.3 Emergency Response Measures

6.3.1 Emergency Response Team

Tomago Aluminium has an established internal Emergency Response Team for immediate response to any accident, incident or adverse event. The Tomago Aluminium Emergency Response Team is available on all

shifts. The Emergency Response Team procedures are set out in the Emergency Response Plan (OHS.OP.4.9.1) and in specific Event ERP's.

6.3.2 Emergency Equipment and Facilities

Tomago Aluminium has adequate medical, fire, rescue, environmental response and communication equipment available consistent with the type and magnitude of emergencies likely to occur on the Tomago Aluminium site and the ongoing adequacy is reviewed on an annual basis.

The equipment is inspected and maintained so it is ready for use. The Emergency Response Teams manually check the equipment weekly and report findings to the Emergency Services Supervisor. A full inventory of the Tomago emergency response equipment is located in *TAC Fire & Rescue Vehicle (160000001197)* and in Statutory Inspection checklists.

Portable fire extinguishers and spill response kits are installed throughout the plant. This equipment is regularly inspected.

Tomago Aluminium maintains special dry chemical equipment to provide capability to fight fires in molten metal areas where water is not a suitable extinguishing agent.

A stormwater retention pond and sedimentation basin provides the site with first flush capacity to retain contaminated firewater or chemical/hydrocarbon spills. A floating boom is maintained to prevent hydrocarbons and debris entering the Hunter River.

6.3.3 Training and Simulations

Tomago Aluminium provides training for all members of the Emergency Response Team in medical, fire, rescue, security and environmental skills, including proper use of emergency response equipment and facilities. The minimum training standard is Certificate III in Mine Emergency Response and Rescue.

The Emergency Response Team is involved in a number of simulations each year, which can involve outside emergency services. The schedule of simulations is included in the emergency response team-training plan.

Depending on the nature of the simulation, some or all of the external emergency services participate in the emergency response simulations either in an active role or as observers and are involved in the debriefing. Simulation exercises are reviewed at their conclusion by the personnel involved. Learnings, suggestions for improvement and related document changes shall be recorded and actioned. Agreed actions are implemented and communicated to all relevant personnel.

All employees are advised of evacuation requirements through inductions and simulation training is regularly conducted in each area.

6.3.4 Inventory of chemicals and potential pollutants

Dedicated Dangerous Goods depots are established on the site. The Dangerous Goods Manifest and Dangerous Goods Storage Location Map are located at the Main Gate Security Centre and on ChemWatch database.

Quantities of Dangerous goods and Hazardous substances are minimised and the site does not trigger as a Major Hazard Facility under the NSW legislation. A summary of Dangerous Goods quantities for the site are provided in TAC procedure:

OHS.OP.4.5.6.1.1 TAC Dangerous Goods Manifest 130000000637

6.3.5 Communications of Emergency Situations

The Security gatehouse is the Site's Communication and Fire Control Centre. In the event of an emergency, injury or pollution incident the Business Unit and PSE Manager will be notified and responsible for ensuring notification of authorities in accordance with TAC procedure:

Notification of EHS Incidents 110000000298

The security gatehouse is manned on a 7 day/24 hour basis and all external calls should be directed to security on (02) 49669669

In the event that an emergency or pollution incident occurs that has potential to impact on neighbouring properties and/or local communities communication mechanisms are detailed in the TAC procedure

PW.EMS.0011 Notification of Neighbours regarding Offsite Impact 120000002255

6.3.6 Emergency Response Maps

A detailed series of maps is maintained in Tomago Aluminium's Drawing Management System (TCHEST) to assist in decision making during an emergency situation. These maps include

Drawing	Drawing number
Natural Gas Yard piping	020M81-700
Site Plant Air	020M81-018 &020m81-013
Fire protection systems	010M22-008
Dangerous goods site layout	10440
Site Layout	010M22-001
Stormwater ponds	010C05-111
Site Stormwater drainage	010C05-019
FM Global Hydrants	19643
Dangerous Goods Production and Process Locations	19274
Spill Kit Locations	17589

These can also be found at \\Tac32\env_sust\Environment Services\Emergency Response Maps

7 Crisis Management

The activation of the Crisis Management Team and Plan is at the discretion of the Chief Executive Officer or his/her delegate. The crisis management plan is activated after the initial recovery phase of the emergency incident if required to ensure coordination and efficiency of the ongoing recovery after an event.

8 Records

Minutes of meetings, simulation results, competency assessments and training plans are to be treated as records in accordance with *Plantwide Records Management OHS.MP.011.*

This plan is to be tested / reviewed and consequently updated every 12 months or within one month following it's activation. This review should incorporate input from the Health, Hygiene & Security Services Leader for learnings from the Emergency Response simulations carried out. Records of the activation / testing / review of this plan are to be logged in Appendix B of this document.

APPENDIX A: HSE EMERGENCY SCENARIOS – SUMMARY HSE RISK REGISTERS

Scenario	Hazard to Human Health or Environment	Preventative measures / pre-emptive actions	Potential to impact on External neighbours	Comments	Conditions under which a "material harm" pollution incident should be deemed to have occurred
Loss of Baked Anodes Fume Treatment capability	Emission of fume	Trained operators on site at all times. Routine maintenance program in place Automatic switch to emergency diesel fans to maintain draft and improve dispersion via stack	Yes (via Air)		Unplanned outage of more than 4 hours duration
Fire in Ringmain or Bake Ovens fume treatment centre	Burns to TAC operational staff Emission of fume & generation of contaminated firewater	Monitoring equipment in place to ensure maximum combustion of volatiles in the bake ovens process. Crtical Emergency Drills carried out monthly by all shift teams. The Fume treatment centres have a number of online monitoring devices. If a fault is detected the Fume Treatment Centre will automatically enter bypass mode to prevent a fire in the Fume treatment centre Routine inspections of flues to check for fuel build up. Fume treatment centres deluge systems Site drains feed to stormwater detention basin prior to discharge to Hunter River.	Yes (via air & water)	The stormwater detention pond needs to be kept as empty as reasonably practical in order to perform this function.	All events of this nature that trigger Level 2 Emergency Response
Fire in Paste Plant	Burns to TAC operational staff &emergency response workers Emission of fume & generation of contaminated firewater	Fire suppression systems in place and inspected / tested Formalised Hot work procedures required for work in area Site drains feed to stormwater detention basin prior to discharge to Hunter River.	Yes (via air and water)	The stormwater detention pond needs to be kept as empty as reasonably practical in order to perform this function.	All events of this nature that trigger Level 2 Emergency Response

Scenario	Hazard to Human Health or Environment	Preventative measures / pre-emptive actions	Potential to impact on External neighbours	Comments	Conditions under which a "material harm" pollution incident should be deemed to have occurred
Spillage of High Temperature Fluid or Liquid Pitch in Paste Plant	Burns and Fume inhalation to TAC operational staff and emergency response workers Emission of Fume and contamination of stormwater	High Temperature Fluid that runs throughout the Paste Plant can be directly dumped into bunded storage tanks. Routine maintenance and bund inspection programs in place Liquid Pitch stored in bunded storage tanks. Site drains feed to stormwater detention basin prior to discharge to Hunter River Retention boom maintained in stormwater pond	Yes (via water)	Pitch will solidify when temperature drops below 90°C The stormwater detention pond needs to be kept as empty as reasonably practical in order to perform this function.	Uncontained spillage of High Temperature Fluid
Fire in Substation	Fume inhalation to TAC operational staff and emergency response workers Emission of fume to air and generation of contaminated fire water	Inspection and monitoring program for transformers. Site drains feed to stormwater detention basin prior to discharge to Hunter River	Yes (via air and water)	The stormwater detention pond needs to be kept as empty as reasonably practical in order to perform this function.	All events of this nature.
Molten Aluminium explosion in Liquid Metals, Cast Products	Molten metal burns to TAC operational staff Emission of fume and dust to air	Prohibited items for site identified and entry prevented by education, inductions and security surveillance. Operators trained in Standard Operating Procedures	No	Specialised Dry Chemical firefighting equipment maintained	Not likey without escalation to building fire
Molten Cast Iron Explosion in: Rodded Anodes, Liquid Metals	Molten metal burns to TAC operational staff Emission of fume and dust to air	Prohibited items for site identified and entry prevented by education, inductions and security surveillance. Operators trained in Standard Operating Procedures	No	Specialised Dry Chemical firefighting equipment maintained	Not likey without escalation to building fire
Loss of Gas Treatment capability in Liquid Metals	Emission of fume to air	Trained operators on site at all times. Routine maintenance programs in place	Yes	Most likely causes are loss of power and/or loss of compressed air production. Potential damage to vegetation from extended outage	Loss of more than one gas treatment centre and/or a loss greater than 2 hours in duration

Scenario	Hazard to Human Health or Environment	Preventative measures / pre-emptive actions	Potential to impact on External neighbours	Comments	Conditions under which a "material harm" pollution incident should be deemed to have occurred
Major Hydrocarbon Spill	Contamination of stormwater	Bunding in place at major hydrocarbon storage areas. Personnel trained in the use of spill kits that are situated across the plant Site drains feed to stormwater detention basin prior to discharge to Hunter River Retention boom maintained in stormwater pond	Yes (water)	The stormwater detention pond needs to be kept as empty as reasonably practical in order to perform this function.	Uncontained hydrocarbon spillage
Fire in Dangerous Goods storage areas	Burns/Fume inhalation to TAC operational staff and emergency response workers Emission of fume	Dedicated dangerous goods established in accordance with appropriate Australian standards	Yes		When incident triggers Level 3 Emergency Response
Arc flash/electrocution	electrocution/burns	Restricted access to electrical area Detailed isolation procedures	No		Not applicable
General building fire	Burns to TAC operational staff &emergency response workers	Fire detection and suppression systems in place and tested on a routine basis	Yes (Air)		When incident triggers Level 3 Emergency Response
Loss of Power to Plant	Emission of fume to air	Inspection and monitoring program for transformers.	Yes (Air)	Loss of emission control equipment	As per Loss of Baked Anodes Fume Treatment capability and Loss of Gas Treatment capability in Liquid Metals
Release of ammonia from dross incident	Emission of fume to air	Procedures in place to reduce likelihood of themite reactions in dross	No	Generation rate not expected to be high enough to impact neighbouring properties or cause material harm	Not applicable

APPENDIX B: RECORDS OF TESTING / REVIEW / ACTIVATION OF THIS PLAN

Date of review/ test/ activation	Reason	Reviewers	New version number
27/05/13	Review following activation events 63656 / 63673	Plant debrief involving crisis management team	
21/11/13	Review following activation event 64406	Neil Roser & Robyn Parker	
21/01/14	Review following activation event 64992	Robyn Parker	
12/12/14	Desktop review	Neil Roser	15
06/11/15	Editorial change	Robyn Parker	16
01/12/15	Desktop review	Neil Roser	17
09/01/16	Test: activation event 78001	Neil Roser	No changes
14/12/16	Desktop review	Neil Roser & Robyn Parker	18
13/12/17	Desktop review including scenario testing	Neil Roser, Robyn Parker, Danny Oakley	19
23/4/18	Review following activation events 99916 & 99958	Neil Roser, Robyn Parker, Simon Treyvaud	20
21/01/19	Editorial change	Charmain Underwood	21
25/11/19	Desktop review	Robyn Parker	22
13/05/20	Review following activation event 128734	Robyn Parker / Simon Treyvaud	23
31/07/20	Desktop review following activation events 131290 and 131396	Robyn Parker	24
14/9/2020	Editorial change	Charmain Underwood	25
01/04/2021	Review following activation event 140674	Robyn Parker	26