CRANE ENFIELD METALS

February 2013

PENRITH SITE

ENVIRONMENTAL EMERGENCY PLAN
&
POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN

EMP 011

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Definitions

CCO	Chemical Control Order
CEM	Crane Enfield Metals
EIA	Environmental Impact Assessment
EPL	Environmental Protection Licence
Emergency	Any event that arises internally or from external sources, which may adversely affect persons or the community generally and which requires immediate response. Emergency procedures are designed to ensure the safety of occupants in the event of an emergency.
Immediately	Promptly and without delay
INS	Incident Notification System
Material harm	(a) harm to the environment is material if: (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and (b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment. It does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.
PIRMP	Pollution Incident Response Management Plan
POEO Act	*Protection of the Environment Operations (POEO) Act 1997*
Pollution Incident	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. (*Protection of the Environment Operations (POEO) Act 1997*)
Primary Containment	Passive systems such as spill oil tanks designed to capture and contain large amounts of oil lost from major oil filled equipment. The principle of operation of these systems is to contain the oil for timely removal and disposal. Examples of primary containment are sealed transformer bunds, and transformer bunds draining to spill oil tanks with underflow discharge.
Secondary Treatment	Passive or active systems deigned to treat contaminated discharge from Primary Containment and/or switchyard drainage systems. The principle of operation of these systems is to separate oil from any discharge. Examples of Secondary Treatment systems are retention dams with underflow discharge, or a coalescing plate oil/water separator tank.
Spill Oil Tank	A concrete tank equipped with an inflow baffle and an underflow outlet that relies upon gravity to separate oil designed. More advanced oil separation systems may also be installed to minimise discharge of oil contaminated water. The separation system is to be low maintenance.

REVISION SUMMARY

Revision	Summary of Changes	Date
0	First version prepared to meet POEO Act requirements	August 2012
1	Amended to address EPA Audit findings	February 2013
2	Amended Fire and Rescue Pollution Incident phone number	March 2013

REFERENCE DOCUMENTS

- CCT-MP-SG-060 Emergency Response Procedure
- MP-SG-022 CEM Environment Impact Assessment
- CCT-MP-SG-065 Incident Reporting
- MP-SG-045 Training Procedure
- CCT Training Matrix
- EMP 17 – Spill response management
- EMP 18 – Stormwater Treatment System
- EMP 19 – Environmental audit checklist
- EMP 20 Trichloroethylene Decanting Procedure
- EMP 23 - Environmental Management of Remelt Scrap Yard and Cooling Tower Areas
- CEM Dangerous Goods Licence 35/037527
- URS (2012) Air Quality Impact Assessment for Soil Vapour Treatment Project, May 2012.
- Site and Building Services Drawing Reference A1376 Rev P
- Matthew Freeburn drawing plan showing spot levels and contours, Ref 23031.
- Work Instruction –TCE delivery Work Instruction

1. INTRODUCTION

New requirements under the Protection of the Environment Legislation Amendment Act 2011 require Environment Protection Licence holders to prepare, keep, test and implement a Pollution Incident Response Management Plan for the licenced activities in accordance with requirements set out in Part 5.7 A of the POEO Act.

1.1 SITE INFORMATION

Crane Enfield Metals Pty. Ltd (CEM) holds a premises based Environment Protection Licence (EPL 1098) covering the scheduled activity of Metallurgical activities.

The CEM facility is located at 2115 Castlereagh Road, Penrith, NSW. The Site is owned and operated by CEM (trading as Crane Copper Tube) for the production of copper tubing. An aluminium extrusion operation is currently operated by Capral on the northern portion of the Site. Refer to **Appendix A** for a locality map for this site, including immediate neighbours.

The Site is occupied by a number of large manufacturing buildings and offices. Areas surrounding the buildings are predominately hardstand concrete and bitumen paved surfaces. The south-eastern section of the Site and surrounding the buildings are mainly hardstand areas, while the north eastern section of the site and the area at the front of Castlereagh Road are unsealed grassed or landscaped areas.

The site is relatively flat with surface water drainage towards a marshy area to the north-east of the site.

The site is located in a commercial and industrial area. Surrounding land uses include:

- North: vacant land proposed for commercial/ industrial building construction;
- South: a large area of vacant land;
- East: vacant land and residences beyond this to the east, and the Penrith Sewage Treatment Plant to the South-east; and
- West: commercial and industrial properties separated by Castlereagh Road, and beyond this is a narrow section of public recreational land adjacent to the Nepean River.

1.2 OBJECTIVE

The Purpose of this PIRMP is to:

- Outline how the risk of a pollution incident will be minimised and controlled through the identification of risks and the development of planned actions to minimise and manage those risks; and
- Document the notification protocol to ensure comprehensive and timely communication about a pollution incident is provided to relevant stakeholders.

1.3 SCOPE

This PIRMP has been prepared in accordance with:

- Part 5.7A of the POEO Act 1997;
- Part 3A of the POEO (General) Regulation 2009; and
- The EPA's *Environmental Guidelines: Preparation of Pollution Incident Response Management Plan* 2012.

This Pollution Incident Response Management Plan (PIRMP) applies to all persons on-site at Crane Enfield Metals, Penrith, inclusive of contractors and visitors.

2. MAJOR HAZARDS

The potential major hazards which have been identified for the CEM Site include:

- Liquid pollutant spills (e.g. hydrocarbon, hazardous chemicals, etc) resulting in land contamination or water contamination;
- Fire;
- Flooding; and
- Air pollution releases.

The likelihood of environmental hazards occurring at the CEM site has been captured through the Hazard and Risk Assessment prepared by the Chief Warden and Operations Manager (Refer to Appendix C). The purpose of this exercise was to identify significant environment and community aspects and impacts across the site, the risk they pose to operations and the controls necessary to effectively manage them.

The specific risk management plans/ protocols for fire emergencies, air pollution, spill events previously developed and currently in place are presented in **Sections 6 – 9** of this Plan.

3. NOTIFICATION PROCEDURES

3.1 DETERMINATION OF MATERIAL HARM

Following containment of the incident, immediate action must be taken to determine if the incident can be classified as a 'material harm incident', i.e. considered to be causing or threatening material harm. As defined by Section 147 of the POEO Act, a material harm incident has occurred if the incident:

- involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or
- results in actual or potential loss (including all reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment) or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations).

The determination of a material harm incident will be made by the HSE Officer / Chief Warden in consultation with the Operations Manager. If the Operations Manager is not available immediately, the determination will be made by the HSE Officer / Chief Warden.

3.2 INTERNAL AND EXTERNAL NOTIFICATION

Notification of an environmental incident is the responsibility of all site and contractor personnel. In the event of an incident, response and notification must be undertaken as per **Section 4**, which contains the following important information:

- the persons and authorities to be notified by Part 5.7 of the POEO Act; and
- the contact details of each relevant authority referred to in section 148 of the POEO Act, refer to **Table 4.2**.
- the agencies must be contacted in the order outlined below:

PIRMP Notification Requirements
Fire and Rescue
EPA
Ministry of Health
Penrith City Council
Work Cover

4. POLLUTION EMERGENCY PROCEDURE

4.1 ROLES & RESPONSIBILITIES

In the event of any pollution incident, **all CEM staff** have a responsibility to raise the alarm and to immediately notify the HSE Officer / Chief Warden. 'Immediately' is taken to mean 'promptly and without delay'. As per guidance provided by the EPA, the decision on whether to notify the incident in accordance with Part 5.7 of the POEO Act should not delay immediate actions to provide the safety of people or contain a pollution incident. However, incident notification will be made as soon as it is safe to do so.

Currently, personnel roles described within this plan are as follows:

- Chief Warden – whose role is the "Emergency Controller" as described in the Emergency Response Procedure CCT- MP-SG-060
- Chief warden is support by Deputy Wardens on shift (including Capral Wardens); and
- Area Managers – particular team leader or supervisor in any specific plant area.

Relevant contacts are listed in **Table 4-2** below and within CCT-MP-SG-060. Further contact details are presented in **Appendix B**.

4.2 EMERGENCY CONTROL CENTRE

The Emergency Control Centre will be based at the Gatehouse. The *Emergency Controller* will be based at this location in the event of an environmental emergency and shall co-ordinate requirements & resources from this location.

4.3 EMERGENCY STATIONS AND ASSEMBLY AREAS

Designated Emergency Stations identified to all staff are to be used in the event of an emergency event, inclusive of any pollution incident.

The location of these, their associated evacuation assembly point and instructions on their use are indicated in the general Emergency Response Procedure CCT-MP-SG-060.

4.4 EVACUATION PROCEDURE

Where a potential evacuation situation arises, all personnel shall follow the evacuation procedures as outlined in the general Emergency Response Procedure CCT-MP-SG-060.

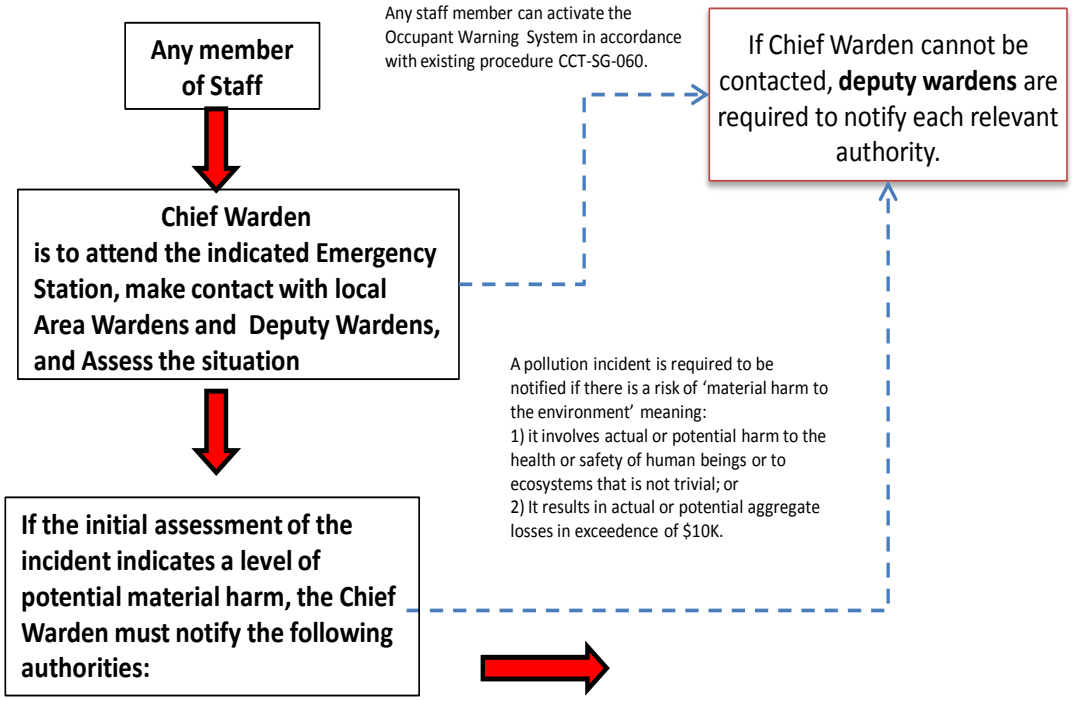
4.5 EMERGENCY INFORMATION

Emergency Controller ensures that relevant site documents (for example centralised MSDS information, copies of stormwater system network) are available at a central location –the Gatehouse and accessible to the Emergency Response Procedure CCT-MP-SG-060.

4.6 ACTIONS TO BE TAKEN DURING OR IMMEDIATELY AFTER A POLLUTION INCIDENT

The following procedure in line with CEM's existing Emergency Procedure would be followed in the event of a pollution incident occurring at the Site:

POLLUTION INCIDENT NOTIFICATION PROCEDURE



Relevant Authorities/ Stakeholders

1. EPA – *131 555*
2. NSW Ministry of Health, Parramatta Office – *9849 3603*
3. WorkCover – *13 10 50*
4. Penrith City Council – *02 4732 7777*
5. Neighbouring Residents

Record Incident in Incident Database

(person becoming aware of incident or team leader – additional information to be added as it becomes available)

Who was notified (organisation)
Who they notified (name and position)
How they were notified (phone/email); and
Time they were notified

In the process of notifying the relevant authorities the following information must be communicated to each authority in accordance with the POEO Regulation 2012 (C 148) during pollution incidents causing or threatening material harm:

1. the time, date, nature, duration and location of the incident,
2. the location of the place where pollution is occurring or is likely to occur,
3. the nature, the estimated quantity or volume and the concentration of any pollutants involved, if known,
4. the circumstances in which the incident occurred (including the cause of the incident, if known),
5. the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known,
6. other information prescribed by the regulations

The information required to be reported is only that information known to the person notifying the incident when the notification is given. If any of the above information is not known during initial notification but becomes known afterwards, that information must also be notified to the relevant authorities.

After initial notification of any material harm incident, it will be the responsibility of the Chief Warden / HSE Officer to liaise with any authority listed in **Table 4-2** that requests additional information, or is providing directions for management of the material harm incident. This may include incident investigation reports and ongoing environmental monitoring results.

Table 4-1 summarises the 24 hour contact details for parties responsible for managing incident response and notifying the relevant authorities.

Table 4- 1 CEM emergency contact

Site Location Details	
Site	Crane Copper Tube
Address	2115 Castlereagh Road, Penrith, NSW
Location Description	Nearest Cross Street – Lugard Street
As per existing Emergency Response Procedure CCT- MP-SG-060, the weighbridge is responsible for notifying the Chief Warden / HSE Officer and Deputy Warden/ Operations Manager if these individuals are off site at time of incident. ***For CEM internal use, 24 hour contact details as per current staff directory***	
External Telephone (Weighbridge)	**(02) 4720 5430**
External Telephone (Control Room)	**(02) 4720 5300**

Table 4-2 Agencies to Notify

Emergency Services – 000			***Required in the event of***
Fire Brigade	000	4721 5575	Fire
Fire and Rescue NSW	000	1300 729 579	Hazardous Materials Response
Ambulance	000	000	Injury
Police (Penrith Station)	000	(02) 4721 9444	As required

State Emergency Service (Penrith)	9673 1277	132 500	Spill containment
Relevant Authorities			
Environment Protection Authority (EPA)	Environment Line 131 555		Pollution incidents causing or threatening material harm
Council – Penrith City Council	4732 7777		Notifiable incident
NSW Ministry of Health – Parramatta (Westmead Hospital)	4734 2022	02 9845 5555 (After Hours)	Notifiable incident – ask for Public Health Officer on call
WorkCover NSW	13 10 50 24 hour	13 10 50 24 hour	Notifiable incident

Table 4-3 Other useful contacts

Sydney Water – Service Problems – 24 hr	132 090
Energy Australia – 24hr	131 388
AGL Gas	131 909
Telstra	131 191
LIQUID WASTE CONTRACTOR (clean up of spills and contaminated waste)	Worth: 9318 0455 Rethmann: tel 9623 4733 Pacific Waste: tel 131 335 NG Koorey: tel 0418 238 889 or 0417 288428 or 9653 2405 Collex: 9642 6977 or 9962 9856 Solvents Australia 9979 6866

4.7 NOTIFICATION TO LOCAL LANDHOLDERS AND COMMUNITY

Community notification shall be undertaken at the determination of the Chief Warden / HSE. Names and contact details of stakeholders, including local residents are included in the Cranes Stakeholder Location Plan (**Figure 2** in **Appendix A**).

The following notification methodology is proposed to be utilised as required:

- early warnings: same day telephone notification to landholders whom may be affected by the incident over the subsequent 24 hour period; and
- updates: follow up phone calls to all landholders whom may have been notified by the initial early warning.

Information provided to the community will be relevant to the incident and may include the following details:

- type of incident that has occurred;
- potential impacts local landholders and the community;
- site contact details; and
- advice or recommendations based on the incident type and scale.

5. INVENTORY OF POLLUTANTS ON SITE

Crane Enfield Metals holds a current Dangerous Goods Licence for the Penrith Site (ref 35/037527).

Refer to **Figure 3** in **Appendix A** for dangerous goods storage locations. **Table 1** in **Appendix A** provides an inventory of notifiable quantities of Dangerous Goods stored at the Facility.

In addition to the chemicals on site included within the CEM Dangerous Goods Licence, there are a number of other potential substances on site which may become pollutants in the event of unforeseen or emergency circumstances such as a spill, loss of containment, plant malfunction, overflow event etc.

Table 5-1 Potential Pollutants on site

Potential pollutant	Location	Estimated Maximum Quantity
Stored Hydraulic Oil	Various storage locations within areas of operation	Estimated quantity 600L across site at any time
Stored production wastes including; - Mixed used oily waters	Temporarily stored of in 200L drums at waste store then disposed of offsite	Variable quantity on site at different times. Approximately 91.1 tonnes generated and disposed of per year
- Liquid Caustic	Temporarily stored of in 200L drums at waste store then disposed of offsite	Variable quantity on site at different times. Approximately 77 t disposed of per year
- Organo Halogen Compounds	Temporarily stored of in 200L drums at waste store then disposed of offsite	Variable quantity on site at different times. Approximately 5 t disposed of per year
Storm water - In the event of a failure of the 'first flush' system	Stormwater from across the Site (or potentially beyond) could transport contaminants directly into the environment and watercourses.	Volume of water would be determined by rainfall and therefore surface water flow. Quantity and composition of pollutants would depend upon the areas across which surface water flow would flow.
- In the event that oily water separators malfunction / overflow	Contaminated process water could potentially be released to the environment via the irrigation system	Volume would be determined by volume of rainfall and water level within the treatment plant at the time.
Stored trichloroethylene (VDU plant) and waste trichloroethylene	Within main building copper mill #1	Approximately 1000L in VDU Approximately 600L waste stored in 200L drums prior to disposal offsite
Fugitive trichloroethylene emissions (air)	Within main building copper mill #1	Ambient average emission levels are known. No foreseeable emergency situation would be likely to impact upon these concentrations
Licenced Stack emissions (VOCs) from operation of SVE unit. - Perchloroethylene - 1,2-Dichloroethylene - Chloroform - Trichloroethylene - Vinyl Chloride - VOC	From stack protruding from main building copper mill #1	Below licence conditions - 19 mg/m^3 - 11 mg/m^3 - 14 mg/m^3 - 59 mg/m^3 - 7 mg/m^3 - 20 mg/m^3

Figure 5-1 shows a generalised schematic of the likely direction of dispersion of air pollutants. This generalised figure is based on more detailed air emission analysis referenced in URS (2012) *Air Quality Impact Assessment for Soil Vapour Treatment Project*, May 2012.

Figure 5-1 Likely direction of flow and dispersion of air pollutants

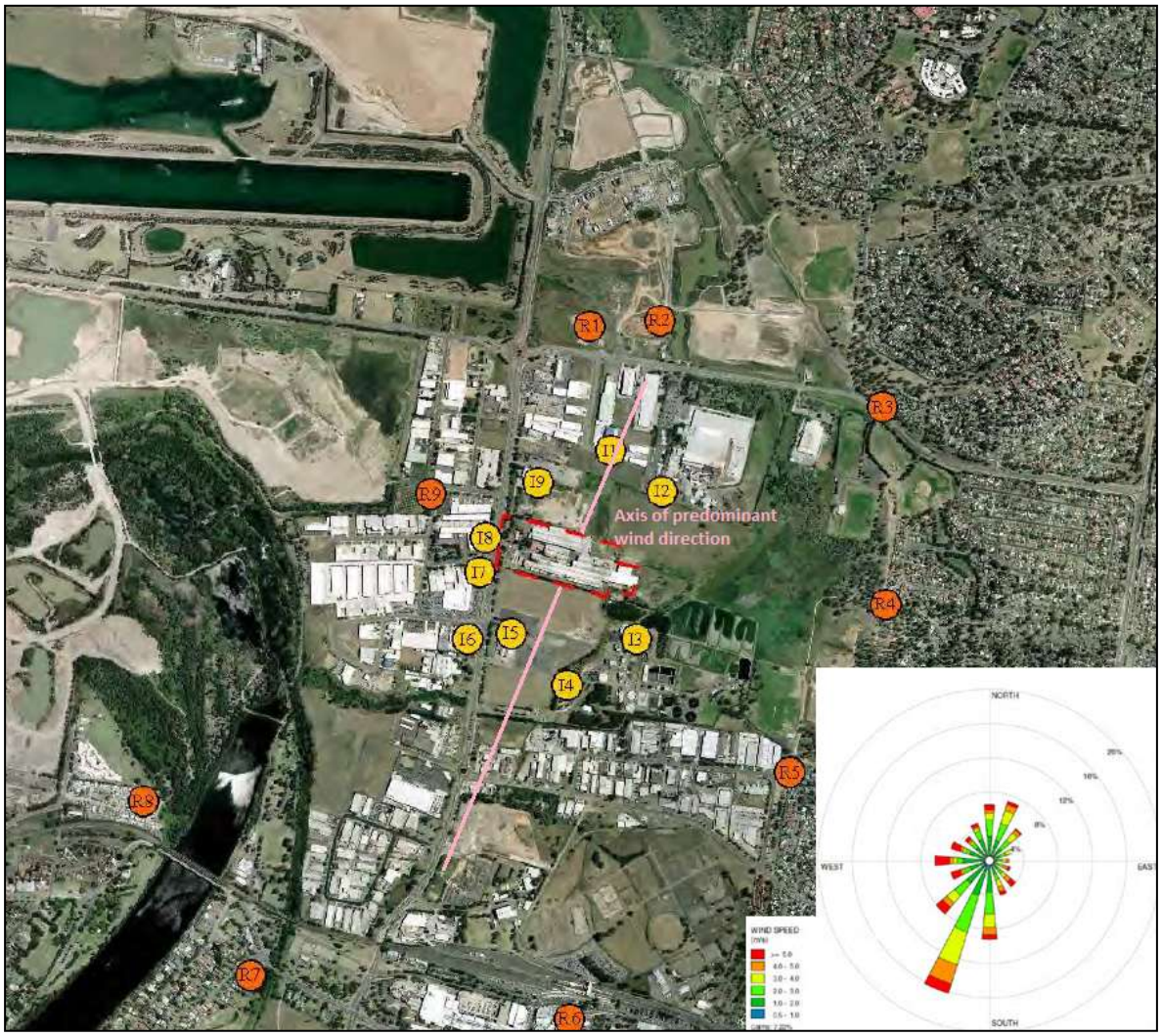


Figure 5-2 shows a generalised schematic of the likely direction of flow of surface water potentially containing pollutants. This generalised figure is based on analysis of Site and Building Services Drawing Reference A1376 Rev P (Appendix A Figure 5) for the locations of stormwater drains and Matthew Freeburn drawing plan showing spot levels and contours, Ref 23031.

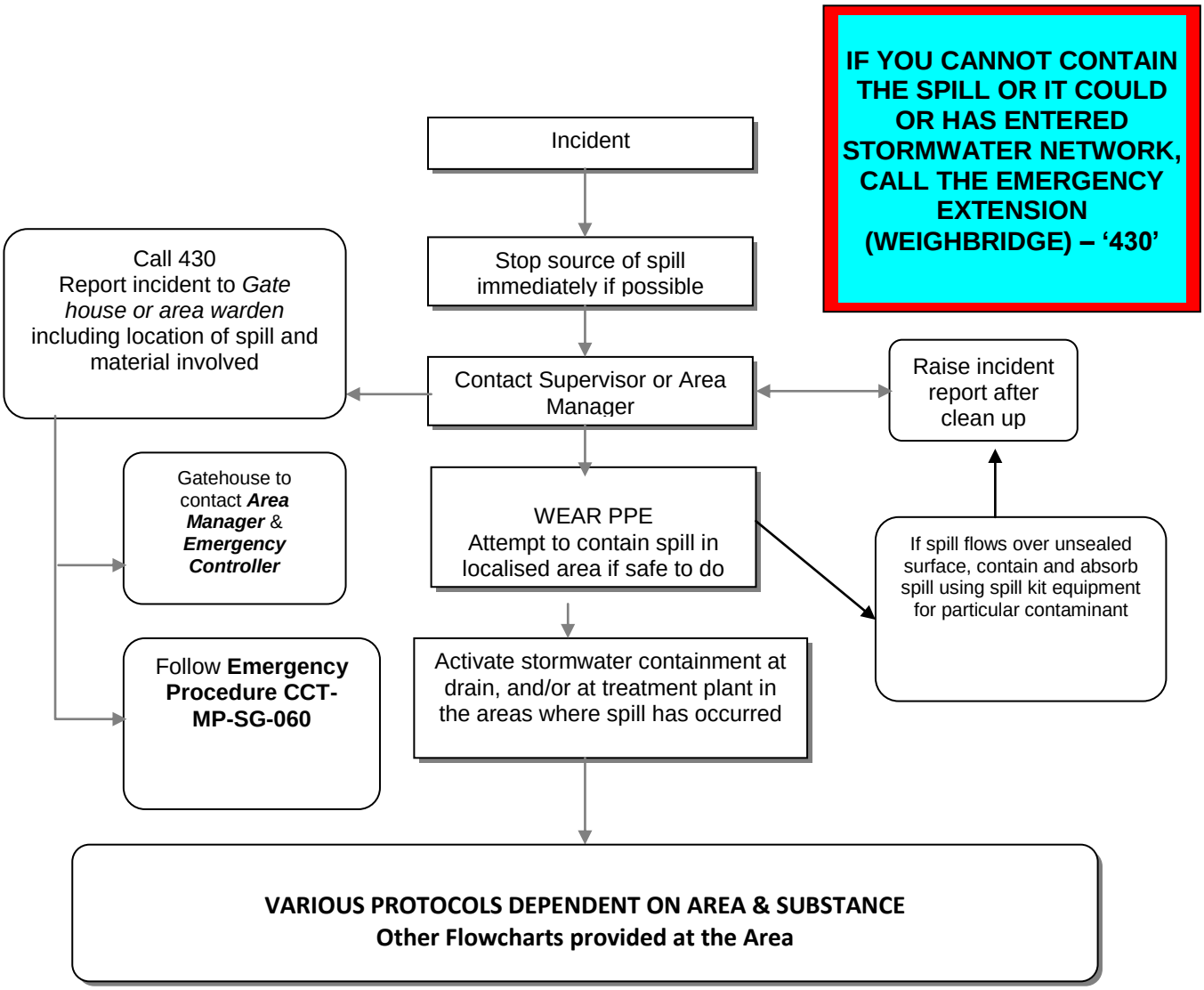
Figure 5-2 Likely direction of flow of surface water flow

6. ENVIRONMENTAL INCIDENT PROCEDURE – FIRE

For response to a fire which may cause an environmental incident, refer to existing Emergency Response Procedure CCT-MP-SG-060 and the environmental incident procedure - liquid pollutant within this plan.

7. ENVIRONMENTAL INCIDENT PROCEDURE – LIQUID POLLUTANT

SPILL to stormwater or Ground/groundwater

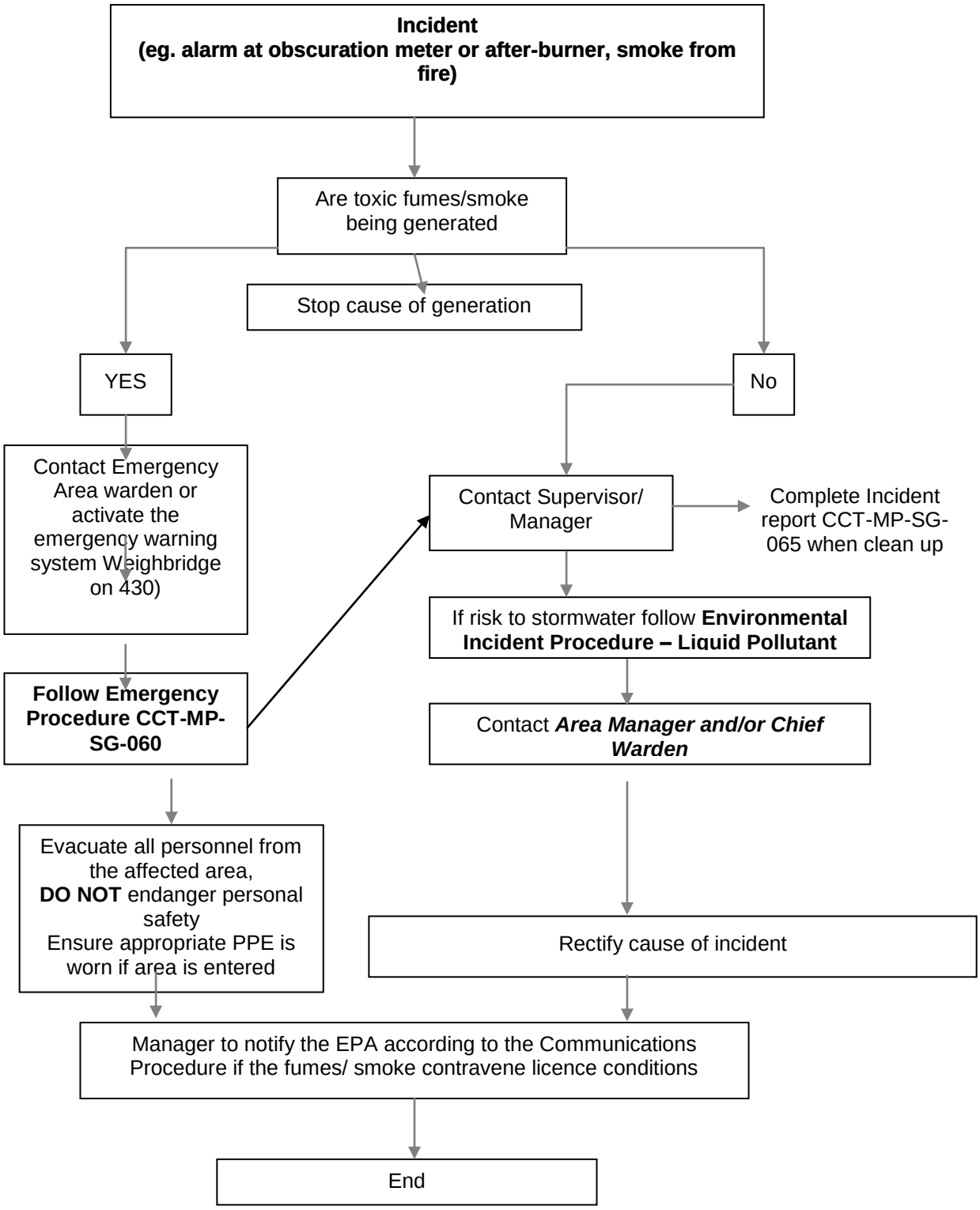


8. ENVIRONMENTAL INCIDENT PROCEDURE - FLOODING

In the event of flooding from any pipe containing water, an environmental risk exists in the management of flood waters. The immediate action to be taken is:

STEP	ACTION
1.	Do not endanger personal safety. Switch off machines if possible, to prevent water damage.
2.	Evacuate all personnel from the impacted area.
3.	Close valves on the piping system, shut off any pumps etc.
4.	Switch off power mains to affected area.
5.	Follow the **Environmental Incident Procedure – Liquid Pollutant** if the water comes in contact with any contaminants
6.	Catch or divert water with plastic, salvage sheets, boards, rubbish bins.
7.	Return to normal conditions as soon as possible.

9. ENVIRONMENTAL INCIDENT PROCEDURE – AIR POLLUTANT



10. TRAINING, TESTING AND COMMUNICATION

10.1 TRAINING

All personnel affected by the content of this document will receive instruction or explanation on the relevant parts of the document. This training will be communicated at staff meetings and at toolbox meetings.

Incident management and emergency response shall be included in all emergency procedure training and site inductions. A training exercise designed to test the adequacy of emergency preparedness and response will be undertaken at least once each year incorporated with the existing Emergency Response Training scheduled for the site.

Training exercises may involve the emergency response team responding to a simulated emergency, but may also include expanded simulations that involve other (or all) site personnel, the Emergency Management Team, Incident Management Team and external response agencies (Ambulance, Fire etc). All training records, including the name of the person undertaking training and date of training, shall be maintained in personal training record files and updated in the CCT training matrix.

10.2 TESTING, REVIEW AND MAINTENANCE

The testing of the PIRMP will be undertaken to check that the information is accurate and current and that the plan is capable of being implemented in a workable and effective manner. Testing shall be undertaken in the following ways:

- the PIRMP will be tested by assessing and reviewing it and making any necessary changes as identified. Testing is taken to be either a desktop review or an environmental emergency drill procedure. Testing will include all components of the plan, including training requirements;
- a review of the PIRMP will occur every 12 months commencing from the date of authorisation by the Operations Manager. Contact details in this document must be kept current at all times; and
- the PIRMP will be reviewed within one month from the date of any pollution incident that occurs in the course of an activity to which the EPL relates. This review will be undertaken in light of the incident, to provide the information included in the plan is accurate and up to date and the plan is still capable of being implemented in a workable and effective manner.

Information to be retained regarding PIRMP testing includes:

- the manner in which the test was undertaken;
- dates when the plan has been tested;
- the person who carried out the testing; and
- the date and description of any update of or amendment to the plan.

This information will be included in Section 10.4 of this report.

10.3 AVAILABILITY OF THE PIRMP

The PIRMP shall be kept in written form at the EPL premises and shall be made available to all personnel responsible for implementing the plan, and to an authorised officer (as defined in the POEO Act) on request.

The PIRMP will be made publicly available within 14 days of finalisation via the Crane Copper Tube website.

No personal information (within the meaning of the *Privacy and Personal Information Protection Act 1998*) or security sensitive site information will be made publicly available as part of the PIRMP. As such, the Appendices to this Plan will not be available on the website.

10.4 REVIEW REGISTER

Date of Test	Name of Personnel Undertaking Test	Manner of Testing	Summary of Changes (Include brief detail and section number)	Date of Update

APPENDIX A: Location maps/ Plans / Tables

Figure 1: Site locality
Figure 2: Cranes Stakeholder Location Plan
Figure 3: Location of dangerous goods depots on site
Figure 4: Location of emergency response stations/ alarms/ location of spill kits
Figure 5: Location of stormwater drains is shown in Drawing Reference A1376

Table 1: Dangerous goods held on site