

15. POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN

EMERGENCY RESPONSE CONTROLLER: SHIFT FOREMAN ON DUTY

1. Background

Koppers Carbon Materials and Chemicals (KCMC) is required to prepare and implement a Pollution Incident Response Management Plan (PIRMP) under the Protection of the Environment Legislation Amendment Act 2011 (POELA Act). KCMC PIRMP is included in the site Emergency Response Procedures and associated records and documents referenced therein.

2. Definition – Pollution Incident and Material Harm to the Environment

The PIRMP must be implemented in the event of a Pollution Incident that causes or threatens material harm to the environment. A Pollution Incident is defined under the Protection of the Environment Operations Act (POEO Act) as follows:

‘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 it does not include an incident or set of circumstances involving only the emission of any noise.”

A pollution incident is required to be notified if there is a risk of ‘material harm to the environment’, which is defined in section 147 of the POEO Act as:

- (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.

The relevant information about a pollution incident required to be reported consists of the following:

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.
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 the information required by items (3) to (5) becomes known after the initial notification is made, that information must be provided to the authorities immediately after it becomes known.

3. Description and Likelihood of hazards {POEO (G) Regulation clause 98C(1)(a) and (b)}, and Pre-emptive actions to prevent or minimise risk {clause 98C(1)(c)}

The main hazards to human health or the environment associated with activities undertaken at KCMC premises are:

- **Serious Fire Emergency** – The KCMC site contains many flammable and combustible liquids, flammable gases, and flammable solids. Emergency procedures to deal with a Serious Fire Emergency are recorded in section 2 of the KCMC Emergency Procedures folder, a copy of which is under site telephones. Pre-emptive actions to control the risk of fire include :
 - Nitrogen blanketing of certain storage tanks (identified by Risk Assessment) to provide an inert atmosphere.
 - Temperature measurement of key fume mains to identify temperature increases that may indicate the beginning of a fire.
 - Hot work policies and restrictions to manage potential ignition sources.
 - Distillation Unit shutdown and wash down procedures to remove flammable material before allowing units to be opened and exposed to oxygen in the atmosphere.
 - Earth Straps installed, used, and tested/maintained to manage static electricity when loading vehicles and minimise ignition sources.
 - Standard Operating Procedures for key activities on site, with controls to prevent product spillage (fuel source) and ignition sources.

In the event of a major fire, the following risks are present:

- Harm to people on the site from heat/fire. Pre-emptive actions to prevent(minimise) this risk include:
 - Automatic deluge fire systems in distillation areas.
 - Ring Main and hydrants located strategically around the plant to provide water for fire fighting.
 - Regular testing and maintenance of fire protection systems and alarms.
 - Appropriate training for employees (see section 10 of this plan).
 - Appropriate contractor induction information.
 - Appropriate emergency exercises / evacuation drills including familiarisation visits by teams from NSW Fire & Rescue.
 - Appropriate documentation and recordkeeping for the actions above.
- Harm to people on and off site due to exposure to stored chemicals, smoke, or combustion products. Pre-emptive actions to prevent(minimise) this risk include:
 - Appropriate training for employees (see section 10 of this plan).
 - Half face respirators issued to each employee suitable to filter out smoke particles and hydrocarbons.
 - Dangerous Goods Register is available for Fire / Hazmat personnel (see section 4 of this plan)
 - Communication plan in place for notifying immediate neighbours, community and relevant authorities (see section 7 of this plan).
 - Appropriate documentation and recordkeeping for the actions above.

- Air pollution due to smoke and combustion products.
- Water pollution due to contaminated fire fighting water entering stormwater. Pre-emptive actions to prevent (minimise) this risk include:
 - Storage tanks contained in bunded areas. Fire fighting water used in these areas will be caught in the bund and not flow to stormwater.
 - First Flush sump system outside bunded areas. The initial water landing outside a bunded area is caught in a first flush sump system. This allows time for water flowing down roadways and into drains to be diverted and reduce the risk of stormwater contamination.
 - Emergency Procedures include fire water control and stormwater protection measures.
 - Appropriate documentation and recordkeeping for the actions above.
- **Serious Explosion Emergency** – The KCMC site contains many flammable and combustible liquids, flammable gases, and flammable solids. Emergency procedures to deal with a Serious Explosion Emergency are recorded in section 3 of the KCMC Emergency Procedures folder, a copy of which is under site telephones. Pre-emptive actions to control the risk of explosion include :
 - Nitrogen blanketing of certain storage tanks (identified by Risk Assessment) to provide an inert atmosphere.
 - Hot work policies and restrictions to manage potential ignition sources.
 - Distillation Unit shutdown and wash down procedures to remove flammable material before allowing units to be opened and exposed to oxygen in the atmosphere.
 - Earth Straps installed, used, and tested/maintained to manage static electricity when loading vehicles and minimise ignition sources.
 - Standard Operating Procedures for key activities on site, with controls to prevent product spillage (fuel source) and ignition sources.

In the event of an explosion, the following risks are present:

- Harm to people on the site. Pre-emptive actions to prevent(minimise) this risk include:
 - Appropriate training for employees (see section 10 of this plan).
 - Appropriate contractor induction information.
 - Appropriate emergency exercises / evacuation drills including familiarisation visits by teams from NSW Fire & Rescue.
 - Appropriate documentation and recordkeeping for the actions above.
- Harm to people off site due to exposure to stored chemicals, smoke, or combustion products. Pre-emptive actions to prevent(minimise) this risk include:
 - Appropriate training for employees (see section 10 of this plan).
 - Dangerous Goods Register is available for Fire / Hazmat personnel (see section 4 of this plan)
 - Communication plan in place for notifying immediate neighbours, community and relevant authorities (see section 7 of this plan).
 - Appropriate documentation and recordkeeping for the actions above.

- Air pollution due to smoke and combustion products.
- Water pollution due to bunds or storage tanks being damaged and products entering stormwater. Pre-emptive actions to prevent (minimise) this risk include:
 - Storage tanks contained in bunded areas. If storage tanks are damaged, products spilled in these areas will be caught in the bund and not flow to stormwater.
 - First Flush sump system outside bunded areas. The first quantity of product spilled outside a bunded area will be retained in a first flush sump system. This allows time for material flowing down roadways and into drains to be diverted and reduce the risk of stormwater contamination.
 - Emergency Procedures include fire water control and stormwater protection measures.
 - Appropriate documentation and recordkeeping for the actions above.
- **Serious Gas Leak** – The KCMC site contains piped Natural Gas. Emergency procedures to deal with a Serious Gas Leak are recorded in section 4 of the KCMC Emergency Procedures folder, a copy of which is under site telephones. Pre-emptive actions to control the risk of gas leaks include :
 - Isolation valve to shut off gas supply located in the boiler house (near control room) for quick response.
 - Isolation valve to shut off gas supply located at feeder station, outside main gate, on Woodstock St, for access if the site has been evacuated.

In the event of serious gas leak, the following risks are present:

- Fire (see previous section control measures)
- Explosion (see previous section control measures)
- Harm to people on and off site due to gas exposure. Pre-emptive actions to prevent(minimise) this risk include:
 - Appropriate training for employees (see section 10 of this plan).
 - Communication plan in place for notifying immediate neighbours, (see section 7 of this plan), community (see section 7 of this plan), and relevant authorities (see section 6 of this plan).
 - Appropriate documentation and recordkeeping for the actions above.
- **Serious Product Release or Spillage on Site** – The KCMC site contains many flammable and combustible liquids, flammable gases, and flammable solids and other products that may harm the environment. Emergency procedures to deal with a Serious Product Spillage are recorded in section 5 of the KCMC Emergency Procedures folder, a copy of which is under site telephones. Pre-emptive actions to control the risk of serious product spillage include :
 - Maintenance of plant and equipment to minimise the risk of equipment failure leading to serious product spillage.
 - Appropriate design and material selection for plant and equipment to minimise the risk of equipment failure.

- Standard Operating Procedures for key activities on site, with controls to prevent product spillage (fuel source) and ignition sources.

In the event of a serious product spill on site, the following risks are present:

- Fire (see previous section control measures)
- Explosion (see previous section control measures)
- Harm to people on and off site due to exposure to chemicals and products.

Pre-emptive actions to prevent(minimise) this risk include:

- Half face respirators issued to each employee suitable to filter out hydrocarbon products.
- Dangerous Goods Register is available for Fire / Hazmat personnel (see section 4 of this plan).
- Appropriate training for employees (see section 10 of this plan).
- Communication plan in place for notifying immediate neighbours, (see section 7 of this plan), community (see section 7 of this plan), and relevant authorities (see section 6 of this plan).
- Appropriate documentation and recordkeeping for the actions above.
- Air pollution due to fumes or chemical vapours.
- Water pollution due to products or chemicals entering stormwater. Pre-emptive actions to prevent (minimise) this risk include:
 - Storage tanks contained in bunded areas. Products and chemicals spilled in these areas will be caught in the bund and not flow to stormwater.
 - First Flush sump system outside bunded areas. The first quantity of product spilled outside a bunded area will be retained in a first flush sump system. This allows time for material flowing down roadways and into drains to be diverted and reduce the risk of stormwater contamination.
 - Emergency Procedures include stormwater protection measures.
 - Appropriate documentation and recordkeeping for the actions above.

KCMC also maintains an Aspects and Impacts register which examines the risks associated with specific activities on site, and details specific control measures to deal with those environmental risks. This Aspects and Impacts register is linked with Operations Standard Operating Procedures. Each Operations SOP includes Safety and Environmental notes and control measures.

4. Inventory of Pollutants {POEO (G) Regulation clause 98C(1)(d) and (e)}

The Dangerous Goods Register is kept at Muster Point 2 for easy access by HAZMAT or other emergency services. A copy of the map is located in the supervisors office, along with MSDS folders containing information on all Koppers products as well as other chemicals on site.

5. Safety Equipment {POEO (G) Regulation clause 98C(1)(f)}

Safety Equipment used to minimise the risks to human health or the environment or control a pollution incident include:

- Fire Extinguishers – List of types, locations, and inspection frequency as per Engineering and Maintenance Manual.
- Office Fire Detection and Alarm System.
- Fire Deluge system details and inspection/maintenance frequency as per Engineering and Maintenance Manual.
- Fire Ring Main, Hydrant and Hoses, details and inspection/maintenance frequency as per Engineering and Maintenance Manual.
- Spill Kits, Contents, Location, and inspection frequency as per Engineering and Maintenance Manual.
- Gas Monitors, personal and fixed naphthalene distillation building monitors. Maintenance frequency as per Engineering and Maintenance Manual.
- First Aid Room, First Aid Kits, restocking frequency and locations recorded by Superintendent Operations.
- First Flush Sump system. Managed as per Standard Operating Procedures.
- Personal Protective Equipment – Safety Glasses, Respirator, Long Sleeved High Visibility Shirt, Long Pants, Steel Capped enclosed footwear, Safety Hat, Hearing Protection (ear plugs and ear muffs), gloves.

6. Contact Details {POEO (G) Regulation clause 98C(1)(g) and (h)}

Contact details, including names, position titles, and 24 hour contact details of key individuals responsible for activating this plan and managing the response to a pollution incident are listed in the KCMC Emergency Procedures folder.

The emergency procedures also include the notification details for all 5 relevant authorities required under Section 148 of the POEO Act. These numbers are to be used in conjunction with the EPA notification protocol below:

Firstly, call 000 if the incident presents an immediate threat to human health or property. NSW Fire & Rescue, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.

If the incident does not require an initial combat agency, or once the 000 call has been made, notify the relevant authorities in the following order. The 24-hour hotline for each authority is given when available:

- EPA – Environment Line 131 555
- NSW Health – ask for Public Health Officer 4924 6477
- Workcover 131 050
- Newcastle City Council 4974 2000
4974 1399 (after hours)

In a pollution incident, the emergency response controller on site will take immediate steps to protect safety and the environment, and will appoint a communications officer with duties as described in Section 16 of the KCMC Emergency Procedures folder (Roles and Responsibilities). The purpose of this is to notify the authorities without delay, while still allowing the emergency response controller to take necessary steps to bring the situation under control and minimise the impact of the incident.

7. Communicating with neighbours and the local community {POEO (G) Regulation clause 98C(1)(i)}

In the event of a pollution incident that meets the definition of causing or threatening material harm to the environment, KCMC must communicate with neighbours and the local community to inform them about the incident and give specific information that can minimise the risk of harm.

If there is an immediate danger to life and health, the local combat agency (likely to be NSW Fire & Rescue, HAZMAT Unit) in conjunction with other emergency personnel will co-ordinate necessary communication with or evacuation of the affected area. Police Emergency Services have access to "Emergency Alert" which is an SMS based alert system, amongst other means of communication.

Neighbouring businesses in close proximity to the site will be notified by email and/or phone call and/or SMS about the incident. The list of neighbouring businesses and their contact details is recorded in Section 11 of the KCMC Emergency Procedures folder. This will be coordinated by the Communications Officer without delay after notifying the authorities.

Sensitive community locations in reasonable proximity to the site will also be notified by email and/or phone call and/or SMS about the incident. This group includes schools, child care centres, and nursing homes / Aged Care facilities. The list of sensitive community locations and their contact details is recorded in Section 11 of the KCMC Emergency Procedures folder. This will be coordinated by the Communications Officer without delay after notifying the authorities.

Information about any incident will also be accessible from the KCMC website and updated without delay.

8. Minimising harm to persons on the premises {POEO (G) Regulation clause 98C(1)(j)} and Actions to be taken during or immediately after a pollution incident {POEO (G) Regulation clause 98C(1)(l)}

KCMC Emergency Procedures (located under each telephone on the plant) describe actions to be taken during or immediately after a pollution incident (including actions to minimise harm to persons on the premises). This includes an evacuation procedure and emergency response section (section 12) containing a site map with muster points shown. The evacuation procedure is included in contractor and employee inductions, and a copy of the procedure is given to all inductees.

KCMC has at least one first aid trained employee on site at all times. The site is fitted with emergency / evacuation alarms to notify people to go to muster points on site.

9. Maps {POEO (G) Regulation clause 98C(1)(k)}

A map of the premises including the location of Dangerous Goods Register and stormwater drains is kept at Muster Point 2 for easy access by HAZMAT or other emergency services. A copy of the map is located in the supervisor's office. For security reasons this is not included in the public version of the PIRMP.



10. Staff Training {POEO (G) Regulation clause 98C(1)(m)}

KCMC shall ensure that all employees receive suitable environmental training, and are aware of their responsibilities under the POEO and POELA Acts and regulations.

This will be done by a combination of the following:

- Desktop emergency response exercises including pollution incidents with emergency response controllers twice per calendar year.
- Safety, Health and Environment Meetings.
- Toolbox talks and meetings.
- Accredited training courses for relevant employees.
- Evacuation and emergency response drills.
- Standard Operating Procedure ongoing training and awareness.
- Employee and contractor induction including
 - Responsible Care Policy
 - Site Environmental and Safety Rules
 - Incident reporting
 - Site Safety and Environmental Hazards and control measures
 - Emergency Response and Evacuation Plans

Each year a training program will be approved by KCMC management and implemented to ensure that employees receive necessary training. Courses that may be part of the training program in any particular year include:

- Fire Warden / Emergency Response Controller
- Basic Fire Fighting
- First Aid
- Confined Space
- Manual Handling
- Electrical Safety (also High Voltage awareness and Low Voltage Rescue and Release)
- Hazard Identification and Risk Assessment
- Alcohol and Other Drugs
- Mobile Equipment High Risk Work (eg Forklift, EWP)
- Boiler training
- Dangerous Goods
- Code of Conduct
- Safety Health and Environment Management System
- Internal Auditing

Personnel performing tasks that can cause significant environmental impacts shall be competent on the basis of appropriate education, training, and/or experience.

11. Making Plans Available {POEO (G) Regulation clause 98D}

A full copy of this plan is maintained on the KCMC main site (off Woodstock St, Mayfield).

Relevant sections of this plan are located with Emergency Response folders at the T-661 compound on the Port of Newcastle site and at #6 Berth on the Port of Newcastle site.

Sections of this plan are publicly available in a prominent position on Koppers publicly accessible website. These sections include the procedures for notifying the relevant authorities and communicating with the community.

12. Testing Plans {POEO (G) Regulation clauses 98C (1)(n), (o) and (p), 98C(2)(f) and (g), (98E(1) and 98E(2) }

This plan will be part of KCMC controlled document system, with a review date of every 12 months. As such it is to be checked for accuracy and currency and re-issued every 12 months. Records of reviews and superseded versions will be managed as part of the controlled document system.

This plan is included in KCMC Internal Audit program, to be audited every 12 months (at a different time than the official review period). Findings or discrepancies will be recorded and managed as part of the internal audit corrective action program.

Desktop emergency response exercises including pollution incident management using the PIRMP will be carried out with emergency response controllers twice per calendar year.

Plans will also be tested within one month of any pollution incident occurring.

Records containing the dates on which these testing activities occur and the people involved in these testing activities are maintained as part of KCMC Safety Health and Environment Management System.