

Date Issued: 07 September 2012	<b>Pollution Incident Response Plan and Emergency Response Procedure – St Marys</b>	Doc Ref: 7.1 WI 08
-----------------------------------	---	-----------------------

## CCIA ST MARYS POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN

### NAME, LOCATION, ADDRESS & NATURE OF OPERATIONS.

Chemcolour Industries Australia Pty Limited – Manufacturing, is situated at.

The site is situated on 1.4 hectares (3.5 acres). All business functions are located on this site – Manufacturing, Raw Materials and Finished Goods Warehousing, Administration, Sales and Technical Departments.

The site has been developed over the past 50 years as a chemical-manufacturing site and as such has a well-developed infrastructure of vessels, storage tanks, pipe runs and building suitable for a variety of processes and materials.

### SITE PROCESS SUPPORT INFRASTRUCTURE

SITE PLAN - Refer APPENDIX A. (at front of hard copy folder)

INVENTORY OF DANGEROUS GOODS AT SITE – Refer APPENDIX B. (at front of hard copy folder)  
INVENTORY OF OTHER POTENTIAL POLLUTANTS AT SITE – Refer to Appendix B1 (at front of hard copy folder)

EMERGENCY CONTACT PHONE NUMBERS – Refer APPENDIX C. (at front of hard copy folder)

SAFETY SHOWERS & EYEWASH LOCATIONS – Refer APPENDIX D. (at front of hard copy folder)

STORMWATER CATCHMENT & CONTROL – Refer to APPENDIX E (at front of hard copy folder)  
STORMWATER UNDERGROUND LINES – Refer to APPENDIX E1 (at front of hard copy folder)

### Flameproof Zoning: -

The site is essentially Zone 1 Class 1 rated, necessitated by the historical handling of solvents and dangerous goods around the site. All forklifts are of the scrubbed diesel type. Pumps generally used are air operated Wilden type with various chemical resistances based on duty required. All vessels fixed and portable are earthed as are containers used for filling or decanting. Filters are GAF types with various particle size filter elements available.

### On Site Utilities / Services

- Steam – Water tube boiler – vessel heating ability up to 185°C
- Chilled water at 5°C
- Compressed air at 750KPA
- Cooling water – evaporative
- Process water
- Effluent Treatment Plant
- Wet Scrubber
- Intermediate and Site bunding for Stormwater/Fire Water/Loss of containment.

### NUMBER OF PERSONS EXPECTED ON SITE.

- The site generally operates Monday to Friday from 3 am to 5 pm.
- Between 3am – 7am - max 6 staff
- Between 7am – 1pm – max 24 staff
- Between 1pm – 5pm - max 10 staff

- Saturday between 3am – 11am – max 6 staff (A rare occurrence)

**INFRASTRUCTURE LIKELY TO BE AFFECTED BY A SERIOUS INCIDENT.**

- Dangerous Goods are stored in above ground bulk tanks in various locations, all bunded.
  - Loss of Containment while loading / unloading
- Loss of Containment while pumping to Glass Lined Vessel (95).
  - Bulk chemical Tanks and Glass Lined Vessel in Bunds
- Loss of Containment bulk tank failure. All tanks are in bunds.
- Exotherm tanks 72, 93, 99 and GLV. Emergency Cooling Water supply from Diesel powered pump.
- Fire in tanks 72, 93, 99 and GLV. Close Hatch to starve fire of Oxygen.
- Power outage at critical stage of batch.
  - Emergency power loss Cooling Water and Compressed Air supply.
- Warehouse storage. Numerous areas individually bunded. Segregation of material classes. Refer to Appendix A

**ANALYSIS OF POTENTIAL ENVIRONMENTAL HAZARDS**

The following potential environmental pollution hazards have been identified using 7.3 SOP 01 – Hazard Identification and Risk Assessment:

Potential Hazard Y/N (S) = significant	Potential Risk Y/N	Risk severity	Description of Hazard or Risk	Risk Treatment	Control Actions taken
Y(S)	Y	d/3= Moderate	Discharge of flammable/combustible/corrosive liquid from tanker unloading.	3 - Engineering 4 - Procedures & training 5 - PPE	3. Tanker discharges inside bunded area. Bunded area has 3cbm collection sump. Each store tank has individual tanker delivery line. 2 x Pump Emergency stops available adjacent to off-loading point. Emergency alarm point adjacent to unloading area. ISO tankers are fitted with emergency isolation valve. CCI owned hoses used for off loading are pressure tested 6 monthly or replaced. Emergency shower and eyewash station is located at unloading area. Diphoterine is available to stop / neutralise corrosive burns when in contact with skin or contact with the eyes. 4. Written tanker unloading instructions are in place. Operators are trained in correct unloading procedure and emergency procedures. Sump condition is checked weekly by supervisor. 5. Operators supplied with

					correct PPE and trained in its use.
Y	Y	d/2=Low	Discharge of combustible/corrosive liquid due to overfilling of tank	3 - Engineering 4 - Procedures & training	3. Store tanks are fitted with high level alarms. Alarms are checked/calibrated 6 monthly. Store tanks have self-contained bunds. Tank vapour control is by carbon pots/scrubber connection and vents have water seals. 4. Written tanker unloading instructions are in place. Operators are trained in correct unloading procedure and emergency procedures. Operating procedures require the operator to confirm the ullage available in the store tanks and the delivery volume before discharging the tanker. Condition of bunds, carbon pots, scrubber and water seals checked weekly by supervisor.
Y	Y	C/2= Moderate	Failure of flexible hose containing wax due to blockage or closed valve	4 - Training & procedures	3. Mechanical condition of hoses are checked on a 3 month frequency by engineering. 4. Written procedures are in place detailing how to start and stop liquid transfers when using flexible hoses. Instructions specifically cover the requirement to check the physical condition of the hose before use, to check the condition of the O ring at each end and to fully drain wax hoses after use.
Y(S)	Y	D/4=High	Fire in store tank of combustible material	3 - Engineering 4 - Training	3. Tanks and lines are grounded/bonded to avoid static discharge. Phenol tank has temperature probe. Future action -- install hi temp alarm on Phenol tank. Phenol tank temperature is recorded on supervisor's weekly checklist. Temp probe is calibrated six monthly. Electrical tracing on phenol tank is tested 6 monthly. Insulation on T104 (palm melt) is shielded to prevent ingress of liquid wax. Fire/evacuation alarms are located throughout the site. 4. All staff are trained in

					fire alarm and evacuation procedures. Evacuation alarms are tested monthly. Site evacuation procedure is tested at least six monthly.
Y(S)	Y	E/4=High	Explosion in reactor/mixer due to static discharge	3 - Engineering 4 - Training	3. Tanks and lines are grounded/bonded to avoid static discharge. Air driven pumps used exclusively within all production areas. 4. Operators are trained in the handling of Dangerous Goods and the management of potential sources of static electricity.
Y	Y	C/2= Moderate	Leak from corroded store tank	3 - Engineering 4 - Administration	3. Tanks are located in bunded areas. Exterior condition of tank shells are monitored by annual thickness testing. Maintenance programme is in place for painting of tank shells where required. 4. Condition of bunds are checked weekly by supervisor. Minor leaks of piping/pumps are address by maintenance requests.
Y	Y	D/1 = Low	Uncontrolled release due to scrubber failure	3 - Engineering 4 - Administration	3. System has standby water pump installed. System has low water flow alarm installed. 4. Detailed inspection checklist completed by supervisor on weekly basis
N	N	N/A	Incorrect release of contaminated effluent to trades waste	3 - Engineering 4 - Administration	3. Effluent plant is physically isolated from Trades Waste connection, requiring a flex hose to be installed to complete the connection. 4. Liquid effluent is tested on site before release to the system. Records of test retained. Independent samples also taken by Sydney water.
Y	Y	D/2=Low	Leak of flammable material from IBC	4 - Training	4. All forklift drivers are trained and licenced. All operators and stores staff are trained in spill response procedures. Spill response kits are available through the site. Fire extinguishers are available throughout the site.
Y(S)	Y	E/4=High	Mixing of incompatible chemicals in a store tank due to tanker connected to wrong tank	3 - Engineering 4 - Administration / Training	3. Each product has a separate delivery system. Delivery systems are identified and numbered. 4. Written operating instructions are available

					for the delivery systems. Operators are trained in the written procedures. Only trained operators are permitted to work on the process.
Y	Y	D/2=Low	Failure of carbon pots or water seals	4 - Administration	4. Carbon pots and water seals are checked on a weekly basis by plant supervisor. Maintenance issues are addressed via the maintenance request system. Wind sock shows wind direction in event of a release.
Y	Y	E/3= Moderate	Failure of store tank bunding	3 - Engineering 4 - Administration / Training	3. Bunds are constructed of permanent materials. Tanks shells are thickness tested on set frequency. 4. Condition of bunds is checked weekly by supervisor and records are retained.
Y	Y	D/2=Low	Discharge of contaminants from blind pits	3 - Engineering 4 - Administration / Training	3. Sumps are constructed of permanent materials. 4. Condition of sumps is checked weekly by supervisor and records are retained. Sumps are cleaned by sludge gulper as and when required.
Y	Y	D/2 = Low	Leak of flammable material in Class 3 storage	3 - Engineering	3. Class 3 store is fully bunded. Store is under continuous flammable atmosphere monitoring. Extraction fan failure alarm is installed. Building had Faraday Cage installed on roof and fire doors.
Y	Y	D/2=Low	Failure of IBC releasing product onto unsealed ground	4 - Administration	4. IBCs are supplied under contract to a specification. IBCs are visually checked prior to filling. IBCs are checked for condition during final QC check. IBCs are stacked 1m from edge of bunded areas and first stack is limited to 2 high. All operators are trained in spill response procedure. Spill kits are available through the area.
Y(S)	Y	D/4=High	Uncontrolled release of contaminated stormwater	3 - Engineering 4 - Administration / Training	3. Site is bunded with retention capacity of 38m <sup>3</sup> in bottom yard and 22m <sup>3</sup> in top yard. Isolation valves on connection to municipal stormwater are locked closed. Blind sump in bottom yard can be pumped to effluent treatment plant. Feasibility of installing 'first flush' recovery system is being studied.

					4. Stormwater is tested by site lab before approval to release. Results are retained. Release of stormwater approved by Operations Manager only. Contaminated stormwater can be redirected to Effluent plant averaging tank.
Y	Y	E/3= Moderate	Incorrect disposal of contaminated solid waste from Rotary vac filter	3 - Engineering 4 - Administration / Training	4. Solid waste is recovered from treated liquid effluent via rotary vac filter. Filter is maintained via planned maintenance programme. 4. Solid waste is tested prior to release for disposal. Disposal is managed via licenced waste management contractor. Chain of custody documentation is maintained.

**EMERGENCY PLANNING ASSUMPTIONS.**

This Emergency Evacuation Plan deals mainly with fire and explosion hazards of flammable liquids and gases. One should note however that other hazards may exist as well, namely

- toxicity of gases and vapours,
- mechanical hazards, due to the high pressure of gases at ambient temperatures.

**Toxicity**

Most flammable liquids produce adverse health effects when they are swallowed or make contact with the skin or eyes. Erroneous or accidental drinking of such liquids is avoided by organisational measures such as

- Clear labelling of bottles and containers as toxic, irritant or corrosive,
- Prohibition to use recycled drink bottles for chemicals and vice versa,
- Cleanliness and Housekeeping,
- Clear separation of areas for working and recreation.

Possible measures against skin and eye contact are

- Use of suitable gloves, eye protection, face shields, aprons, boots etc. Noted on each Production Batch card.
- Provision of soap and approved detergent,
- Closed handling of liquids where possible,
- Provision of adsorbent's to clean up spills. Spill Kits located at various points on site.

Eye washes and emergency showers may help to mitigate the effects of contamination due to mishaps or incidents. Refer to Appendix D.

Many flammable liquids exhibit a considerable vapour pressure under process conditions. Like gases, the resulting vapours pose a health hazard when inhaled. The risk depends on the concentration of the vapour or gas in air, or the duration of the exposure and on the type of activity. The concentrations, which may cause adverse health effects, are much lower than those posing a fire and explosion hazard.

Examples:

	Exposure Limit	Lower Explosion Limit
Acetic Acid	10 ppm	4% = 40000 ppm
Ammonia	25 ppm	16% = 160000 ppm
Phenol	5ppm	1.3% = 13000 ppm

Formaldehyde                      2ppm                                      7% = 70000 ppm

#### Physical hazards

Mechanical hazards result from the high pressure of pressurised gases such as natural gas, piped onto site, oxygen, nitrogen or acetylene in cylinders. Apart from explosions resulting from ignition of acetylene or natural gas, rupture of pressure vessels may also have devastating mechanical effects due to recoil forces (rocketing). Pressure vessels are therefore regularly controlled for their mechanical integrity. To avoid damage of such vessels and in particular of the corresponding valves:

- pressure vessel (cylinders) are transported with caps protecting the valves and,
- pressure vessels (cylinders) are secured wherever they are stored and set up for use

In case of a fire, containers with liquefied or pressurised gases and flammable liquids must be cooled to prevent a BLEVE (Boiling Liquid Expanding Vapour Explosion).

#### Fire and Explosion

Flammable liquids and gases represent high fire and explosion hazards due to

- their large heat of combustion (high fire load),
- their high burning rate,
- the possible formation of explosive atmospheres.

Flammable liquids and gases are very energetic fuels. In addition these fuels burn fiercely and thus produce extremely high heat production rates. As a result fire may spread not only by convective heat transfer, but also by thermal radiation. Spread of fire is increased even more due to the formation of pool fires and the dispersion of gases and vapour.

#### SITE INFRASTRUCTURE TO MINIMIZE HARM OR SPREAD

Spill Kits are located in warehouse, outside the Pigment Shed, in the engineer's workshop, at DG Tanker unloading area, in Bay 9 and at the container ramp.

- The locations of these are noted on the attached Site Plan. Appendix A
- A pallet of Absorbent material, in 25Kg bags, is located just inside the main door of the Warehouse, which can be transported, by forklift, to the location of any spill, for ease of handling.
- Each Warehouse area is individually bunded to contain spills and Firewater runoff.
- Stormwater and Firewater from the Top Yard, closest to the buildings, is directed to a bunded area on the Eastern boundary. This area has a "Blind Pit" at its lowest point which can be used for pumping out the contents of the bund.
- The lower part of the site, between the Truck Gate and the Emulsion bund, is also bunded to contain Stormwater and Firewater. Again a "Blind Pit" can be accessed to pump out the retained contents.
- The lowest point of the site is also fitted with a large valve which is normally closed. This is located below the Emulsion Bund, adjacent to the Wax tanker loading area. This enables the retention of Storm water and Firewater generated onto the roof of the Production and Office buildings.
- The concreted area in front of the Offices and the Western end of the main Production building is also bunded, fitted with a Normally Closed valve. This will only retain Stormwater and firewater which falls within that bunded area.

#### COMMUNICATIONS WITH NEIGHBOURS

- In the event of a Pollution Incident occurring on site, and the subsequent Evacuation of the site, we have a responsibility to inform our neighbours.
- Depending on the severity or potential severity to them, they may need to become prepared for evasive action to maintain their health.
- Once an Evacuation has occurred, and people are at the Assembly point, the Communications person is to nominate employees and despatch them to the various neighbouring properties.
- The people should be briefed, before they go, as to what they should say to the person contacted at the neighbouring properties. This will depend on the conditions at the time and if they need to take immediate action or be prepared to take action if/when the situation changes.

- Ongoing updates should be provided to all of the neighbours, including when the cause for the original evacuation has been removed.

NEIGHBOURS TO BE INFORMED

Weir and Harrod	11-17 Anne St	
Windoer	18 Anne St	
Tuka PVC	2/22 Anne St	
CBH Fabrications	27 Anne St	
Brazier Drums	32 Bent St	
Dunn Brothers	4/34 Bent St	

DETAILS OF CHEMCOLOUR EMERGENCY CONTACT PERSONNEL.

Position	Name	Address	City	Postcode	Home phone
Operations Manager					
Maintenance Engineer					
Technical Manager					
Azelis Managing Director					
24 Hour Emergency Contact # 1800 127 406 for Product safety advice					



CCIA -- ST MARYS SITE

EVACUATION PLAN

TEAM RESPONSIBILITIES

EMERGENCY CONTROLLER:

DEPUTY EMERGENCY CONTROLLER  
PRODUCTION WARDEN:

WAREHOUSE WARDEN:

COMMUNICATIONS:

FIRST AID:

SECURITY OFFICER:

TECHNICAL ADVICE:

DUTIES AND ACTIONS OF THE EMERGENCY MANAGEMENT TEAM

EMERGENCY CONTROLLER

Duties

1. Control of all activities until able to hand over to the External Senior Emergency Service Officer.
2. Take action to ensure the safety of all personnel.

Actions

1. In an emergency/incident, take control of the situation.
2. Activate Evacuation Alarm to clear the site, if not already activated.
3. Receive information on the following from Wardens and others:-
  - A. Type of Emergency:  
Fire, Explosion, Chemical Spill, etc.
  - B. Casualties:  
Dead, Injured
  - C. Assistance Required:  
Fire & Rescue, Ambulance, Police, SES, Nepean Rescue Squad, etc.
  - D. Hazards:  
Fire, Gas Leak etc.
4. Ensure that the relevant Authorities have been notified.
5. Ensure all personnel have been evacuated from the site, and are accounted for by using information on Bundy Cards, Visitors book, Staff movement records.
6. Delegate control of Carpark Gate.
7. Assist the Authorities in attendance, as required.
8. Keep senior management informed of developments.
9. Isolate Energy sources as directed by Emergency Services.
10. Allow employees to re-enter site when the Senior Emergency Service Officer permits, or in the case of a Practice Drill, make own decision.

EVACUATION ASSEMBLY AREA – Grassed area (council nature strip) between the Truck Gate entrance and the Car Park entrance.

THE ONLY EMPLOYEES PERMITTED TO TALK TO THE MEDIA DURING AN EMERGENCY IS THE FOLLOWING:

Managing Director  
Operations Manager

DEPUTY EMERGENCY CONTROLLER

Duties

1. Assist the Emergency Controller with the overall control procedure.
2. During the absence of the Emergency Controller, the Deputy will assume control.

Actions

1. Activate Evacuation alarm to clear the site, if not already activated.
2. Receive or relay information on the following:-
  - A. Type of Emergency:  
Fire, Explosion, Chemical Spill, etc.
  - B. Casualties:  
Dead, Injured.
  - C. Assistance Required:  
Fire Brigade, Ambulance, Police, SES, Nepean Rescue Squad, etc.
  - D. Hazards:  
Fire, Gas Leak etc.
2. Take control in the absence of the Emergency Controller.
3. Proceed to the evacuation assembly area and ensure ALL persons are accounted for via the roll call, using information on Bundy Cards, Visitors Book, Staff Movements Record. Report this information to the Emergency Controller.
4. Direct the Fire Brigade, Police and/or Ambulance Service.
5. Take further direction from the Emergency Controller.

EVACUATION ASSEMBLY AREA – Grassed area (council nature strip) outside between the Truck Gate entrance and Car Park entrance.

## WARDENS

### Duties

1. Take control of his/her allocated area.
2. Ensure that all personnel are evacuated before reporting the site clear to the Emergency Controller.

### Actions

1. On notification of an emergency/incident assess the situation, and then inform the Emergency Controller of the following.
  - A. Type of Emergency:  
Fire, Explosion, Chemical Spill, etc.
  - B. Casualties:  
Dead, Injured
  - C. Assistance Required:  
Fire Brigade, Ambulance, Police, SES, Nepean Rescue Squad, etc.
  - D. Hazards:  
Fire, Gas Leak etc.
2. Activate Evacuation Alarm to clear the site, if not already activated.
3. Complete a physical search of the designated area and ensure all personnel have evacuated.
- 3a. Production Area Warden must stop Boiler and Air Compressor, collect bundy cards, contractor book and take these to Emergency Controller in evacuation assembly area.
4. Report to the Emergency Controller that the area is all clear.
5. Arrange assistance for any physically handicapped or injured personnel.
6. Assist the Authorities.
7. Take direction from the Emergency Controller.

EVACUATION ASSEMBLY AREA – Grassed area (council nature strip) between the Truck Gate entrance and the Car Park entrance.

## COMMUNICATIONS PERSON.

### Duties

1. Activate the Evacuation alarm to clear the site, if not already activated.
2. Ensure that all incoming calls are switched to the night switch.

### Actions

1. Immediately inform the Emergency Controller.
2. Evacuate to Emergency Assembly Area.
3. For a Pollution Incident, contact by phone, each of the following authorities, advising them of the situation at the site. This must be done "Promptly and Without Delay".
  - NSW EPA
  - NSW Health
  - NSW Fire and Rescue, or local brigade
  - Safe Work NSW
  - Penrith City Council

Refer to APPENDIX C for contact numbers

4. Notify Ambulance, Police, SES, and Nepean Rescue Squad as directed.

The following information shall be relayed in this instance:-

- A. Type of Emergency:  
e.g. Fire, Explosion, Chemical Spill, etc.
  - B. Casualties:  
Dead, Injured
  - C. Assistance Required:  
Fire Brigade, Ambulance, Police, SES, Nepean Rescue Squad, etc.
  - D. Hazards:  
Fire, Gas Leak etc.
  - E. Site Address: CHEMCOLOUR INDUSTRIES AUST P/L  
Telephone (02) 88018100 (or the number of the mobile phone being used)
  - F. Nearest cross street –
5. Take Bundy Cards, Visitor's Book and Staff Movement book to the Evacuation Assembly Point.
  6. Contact surrounding properties using a mobile phone or sending employees. Numbers listed over page.
  7. Take direction from the Emergency Controller.

EVACUATION ASSEMBLY AREA – Grassed area (council nature strip) between the Truck Gate entrance and the Car Park entrance.

## Appendix C -- EMERGENCY CONTACT NUMBERS

**IMMEDIATE CONTACT**

NSW EPA Environment Line	131555
NSW Health	02 9391 9000
NSW Fire and Rescue – Local Fire Brigade Dunheved	02 9623 1215
Safe Work NSW	131050
Penrith City council	02 4732 7777

**CONTACT DETAILS FOR THE EMERGENCY SERVICES – if required.**

CONTACT	PHONE NUMBER
AMBULANCE / FIRE / POLICE.	000

TINDALE MEDICAL CENTRE 115 Lethbridge street Penrith	4729 5100
---	-----------

NEPEAN HOSPITAL Great Western Highway Kingswood	4734 2000
--	-----------

INTEGRAL ENERGY (Electricity)	131003
-------------------------------	--------

SYDNEY WATER. Service Difficulties & Emergencies.	132090
--	--------

AGL (Gas) Gas leak or hazard	131909
------------------------------	--------

FIRE BRIGADE DUNHEVED –	9623 1213
----------------------------	-----------

FIRE BRIGADE ST MARY'S – Corner Marsden Rd / GT Western Highway	9623 3897
--	-----------

POLICE ST MARY'S 323 Great Western Highway	9677 5099
---	-----------

POISON INFORMATION Westmead	131126
--------------------------------	--------

NATIONAL SECURITY HOTLINE	1800 123 400
---------------------------	--------------

**NEIGHBOURS TO BE INFORMED**

Weir and Harrod	11-17 Anne St	
Windoer	18 Anne St	
Tuka PVC	2/22 Anne St	
CBH Fabrications	27 Anne St	
Brazier Drums	32 Bent St	
Dunn Brothers	4/34 Bent St	

**EMERGENCY SECURITY OFFICER**

#### Duties

1. Take control over the Truck Entry gate.

#### Actions

1. Proceed to the emergency assembly area.
2. Get your name marked off.
3. Proceed directly to No. 1 – Truck Entry Gate
4. Close and control movement through entry gate.
5. Provide access for Emergency vehicles at all times.
6. Direct Emergency Services personnel to the Emergency Controller.
7. Take direction from the Emergency Controller.

The Police will manage all road traffic during an emergency.

EVACUATION ASSEMBLY AREA – Grassed area (council nature strip) between the Truck Gate entrance and the Car Park entrance.

#### FIRST AIDERS

#### Actions

1. Collect the area's first aid kit and proceed to the evacuation assembly area.
2. Receive information from Emergency controller on:-
  - A. Type of Emergency:  
Fire, Explosion, Chemical Spill, etc.
  - B. Casualties:  
Dead, Injured
  - C. Assistance Required:  
Fire Brigade, Ambulance, Police, SES, Nepean Rescue Squad, etc.
  - D. Hazards:  
Fire, Gas Leak etc.
2. Attend to first aid requirements as directed by the Emergency Controller.
3. Stand by for instruction from the Emergency Controller or external emergency services.

EVACUATION ASSEMBLY AREA – Grassed area (council nature strip) between the Truck Gate entrance and the Car Park entrance.

#### THE EVACUATION ALARM

This is a continuous sounding alarm activated from an alarm button in the area. There are 13 of these located around the site. The Evacuation alarm system is monitored by an external provider. On activation the external provider will call the Operations Manager (Emergency Controller) to advise of the activation.

Sequence of raising alarm:

- a) If there is a problem sufficient to warrant evacuation immediately inform the Emergency Controller.
- b) Emergency Controller assesses the situation, and if necessary directs the Activation of the Evacuation Alarm to commence evacuation instruction. If the alarm malfunctions then the order to evacuate will be relayed via a runner or PA system.
- d) If the Emergency Controller or deputy is not immediately available, or if the problem is catastrophic this procedure may be short-circuited by an operator pressing an alarm button.  
Information required to be given to the Emergency Controller includes:-
  - A. Type of Emergency:  
Fire, Explosion, Chemical Spill, Etc.
  - B. Location of emergency
  - C. Casualties:  
Dead, Injured
  - D. Assistance Required:  
Fire Brigade, Ambulance, Police, SES, Nepean Rescue Squad
  - E. Hazards:  
Fire, Gas Leak, burst disk blow off, etc.

#### ON-SITE COMMUNICATIONS SYSTEM.

The internal Public Address System (PA) will be used for the making of announcements in an emergency/incident situation.

In the event of the PA network failing, messengers nominated by the Emergency Controller, Deputy Emergency Controller and Wardens will relay messages.

Mobile radios are available for onsite communication as well. Each staff member in control of a mobile radio at the time of the emergency must take the radio to the Evacuation Assembly Area..

The Emergency Controller will inform the Fire Brigade, Ambulance Service and NSW Police of the emergency if appropriate, if not already done.

THIS COULD BE DONE USING A MOBILE PHONE OF ONE OF THE EVACUATED EMPLOYEES.

#### EMERGENCY RESOURCES ON - SITE.

The following resources are available on site:

2 hydrants are located on site. At each hydrant is a fire cabinet which contains the following

- 3 \* 38mm diameter hoses of 20 metre length
- 1 \* Akron branch
- 1 \* Foam adaptor & foam.
- 6 \* Spill Kits in yellow 240Litre wheeled bins

Throughout the site at various locations are fire hose reels and fire extinguishers of the following types,

- Water,
- Foam,
- Dry Chemical and
- Carbon Dioxide.



## SAFE EVACUATION & MUSTERING OF PERSONNEL.

### IN EVENT OF FIRE OR OTHER EMERGENCY

- In case of a fire, employees should actuate the nearest fire alarm box by depressing the button and/or make a telephone call to the Fire Brigade, dial 000. The locations of the fire alarm boxes are noted on the evacuation floor plans. The alarm alerts personnel of the need for evacuation and sends a signal to the mimic board in the production office that there is an alarm condition on the site.
- It may be necessary to activate additional fire alarm boxes, or shout the alarm, if people are still in the building and the alarm has stopped sounding, or if the alarm does not sound. This can be done while exiting the building.
- Persons discovering a fire, smoky condition, explosion or major Loss of Containment should activate an Evacuation alarm button. Any pertinent fire or rescue information should be conveyed to the Fire Brigade. All emergency telephone numbers are listed at the beginning of this EEP.

### Action

1. PROCEED TO THE ASSEMBLY AREA (NATURE STRIP BETWEEN THE FRONT GATES).
2. ENSURE AS YOU ARE LEAVING, YOU CLOSE ALL DOORS ON YOUR WAY OUT.
3. DO NOT USE THE FRONT PLANT VERANDAH – AS IT IS CLOSE TO NUMEROUS HAZARDS.
4. GO VIA THE MOST DIRECT AND SAFE ROUTE TO THE ASSEMBLY POINT EXCLUDING THE FRONT PLANT VERANDAH.
5. DO NOT RUN – WALK PURPOSIVELY.
6. DO NOT RE-ENTER THE SITE.
7. WARDENS TO CHECK OFFICES/AMENITIES ETC. ON THE WAY OUT AND REPORT ANY RELEVANT INFORMATION TO THE EMERGENCY CONTROLLER AT THE ASSEMBLY AREA.
8. GO TO THE ASSEMBLY POINT AND STAY THERE UNTIL TOLD OTHERWISE BY THE EMERGENCY CONTROLLER. GATES SHOULD BE LOCKED / MONITORED TO PREVENT TRUCKS/VISITORS ENTERING THE SITE.
9. ENSURE THE SAFETY OF VISITORS, CONTRACTORS, TRUCK DRIVERS, AND CCIA EMPLOYEES.
10. PANIC MUST BE AVOIDED AT ALL COSTS, IF UNCHECKED A FATAL SITUATION COULD RESULT.

### POINTS TO REMEMBER

1. All persons should be aware of the hazards of hot gases and smoke, and have some idea of the best ways of dealing with these hazards.
2. Any person found overcome by smoke or gas should be moved immediately to a smoke free atmosphere, and resuscitation methods applied by a First Aider.
3. Any rescue method is a good method.
4. Do not place yourself in any danger.

### CONTAINMENT OF INCIDENTS.

CCIA can initially respond to leaks, odours and spills involving chemicals, diesel, natural gas and other similar concerns with detection equipment currently available on site. The St Mary's site has and maintains the following combustible gas detectors that are capable of detecting gases with a flammable range as well as oxygen, carbon monoxide and hydrogen sulfide:

1. Industrial Scientific 4 Gas Monitors – QA Lab
2. Gas Detector's Class 3 Dangerous Goods Store.

#### A. Asbestos Incidents

Incidents involving or believed to be asbestos should be immediately reported to the Operations Manager. He shall, to the best of his ability, mitigate the hazard until an outside contractor can be employed. The Site Asbestos Register is located in the top drawer of the flameproof cabinet in the site main office.

#### B. Corrosive Material

1. Incidents involving corrosive chemicals should first be checked to determine pH.
2. pH paper or similar shall be used to ascertain whether the chemical is acidic or basic
3. Using the appropriate Personal Protective Equipment, after consulting the MSDS, trained staff could attempt to neutralize the material.
4. Sodium Bicarbonate should be utilized for spills involving acids.
5. Acetic Acid should be used for spills involving bases.

#### C. Flammable Liquids

Incidents involving flammable liquids should first be checked for the Lower Explosive Level, here-after referred to as LEL to check the flammability or ignitability of the Hazardous Material. Emergency Response Personnel should utilize the Flammable Gas Detection Device located in the lab or the P.I.D.

1. If the gas detector indicates a level higher than 10% of the LEL, evacuate the building and contact the Emergency Controller
2. If the spilled material is not within the flammable range...
  - absorb the material utilizing Dri Sorb, Socks, Pads, contained in Portable Spill Kits located in Bay 8 and adjacent to DG Tanker Unloading area.
  - The material should then be double bagged, labelled and placed in the Main Accumulation Area for future pick-up.

#### D. Poisons

Incidents involving poisons most likely will not be able to be taken care of in-house. Respiratory protection will need to be worn in order to prevent or limit personnel over-exposure.

- Contact Operations Manager or Technical Manager.

### MINOR RELEASES

#### Initial Response and Notification

1. Chemical releases that can be cleaned up by personnel on the spot are defined as minor. Minor releases involve low toxicity liquids or solids not generating dangerous gases or fumes, e.g., small acid and solvent spills, hydraulic fluids, fuel oils, etc. Minor releases are limited in quantity and pose no emergency or significant threat to the safety and health of employees.
2. Notify persons in the immediate area and prevent access to the release if possible. Evacuate persons in the immediate vicinity if they are at risk.
3. If flammable or combustible liquids are released immediately turn off all sources of ignition.
4. Avoid breathing vapours from the chemical. If in a Laboratory, open windows and turn on a hood fan. Close the sash if the release was in a hooded cabinet.
5. Contact the Operations Manager if assistance is needed in cleaning up the chemical.

#### Specific Emergency Procedures

1. Determine the name of the chemical by checking labels and shipping papers. Obtain the SDS and identify the hazards associated with the chemical. Is it flammable, combustible, reactive, toxic, corrosive, or an oxidizing agent?
2. Do not touch the chemical. Consult the SDS. Wear appropriate gloves, eye protection, and protective clothing if necessary. For concentrated acids and alkalis, a face shield is needed in addition to goggles. Wear an air-purifying respirator if hazardous gases, fumes, or dusts are present that are within the range of protection of the respirator. Ensure that proper cartridges are used. Anyone who wears an air-purifying respirator must be properly trained and medically evaluated.
3. Stop the leak at the source and try to prevent the release from spreading. Prevent the release from entering drains or leaking onto the ground. Upright overturned containers. Turn the container so that a hole points up. Transfer liquids from leaking containers to new ones. Plug or patch a leaking drum. Surround liquids with an inert absorbent such as vermiculite or spill booms.

4. Absorb small releases of acids, caustics, solvents, oil, and aqueous solutions with paper towels, spill pads, or spill control pillows. Paper towels should not be used for more than tiny amounts of volatile liquids because the paper will aid evaporation. Using tongs, carefully place towels, pads, or pillows onto the chemical. Pick up flammable liquid control materials using spark proof tools (e.g. plastic). Carefully pick up the saturated material with a scoop or tongs, place in a plastic bag, label, and dispose as hazardous waste. Keep oxidizers away from combustible materials (wood, paper towels, oil, etc.).
5. For a large liquid release, use a squeegee to bring the liquid into contact with absorbents. Always work toward the centre of the release. If an absorbent is not readily available cover the chemical with a plastic sheet to reduce vaporization.
6. Carefully push solids into a pile with a plastic scraper. Brushes and brooms may create an unacceptable dust hazard and should be used with caution.
7. Acid and base residues that were not absorbed by the vermiculite or spill-pillows should be removed with neutralizers. Small acid releases can be neutralized with sodium bicarbonate or sodium carbonate and alkali spills with sodium bisulfate, citric acid or vinegar. Commercial adsorbent control materials can also be used. Wash the contaminated area with soap and water to remove any remaining residues.

#### MAJOR RELEASE

##### Initial Response & Notification

1. Any incident which endangers people, property, or the environment should be treated as a major release. If you are unsure about the severity, or the hazards are unknown, treat it as a major release.
2. The following are examples of chemical releases that should be considered major: Vessel shell failure, Bulk storage tank failure, ISO tank failure, road Tanker failure.
3. Do not attempt to clean up a major release. Only trained emergency response personnel should handle major chemical releases.
4. If flammable or combustible liquids are released, immediately turn off all sources of ignition. If you have been exposed to a toxic chemical, get into fresh air as quickly as possible.
5. Remain calm. Evacuate persons in the immediate vicinity of the release. Remove injured personnel to fresh air or an emergency shower or eyewash. If occupants in the building are in danger, press the Evacuation alarm button to evacuate the building. Evacuate to an upwind location for toxic gases such as chlorine. Assemble in a designated area well away from the building. If in a Laboratory, on your way out, open windows and turn on a hood, if possible. Close the sash if the release was in a hood. Close the door and turn off the air conditioning and ventilation systems to prevent vapours from spreading throughout the building. Do not put yourself in danger.
7. Report the chemical release to the Operations Manager. Wait in a safe place for emergency personnel to arrive and direct them to the location of the release. Provide the following information:
  - Name and telephone number of the caller
  - Location of the release
  - Name and quantity of materials involved
  - Extent of injuries, if any
  - Environmental concerns, such as the location of stormwater drains & streams
  - Any unusual features such as foaming, odour, fire, etc.
  - Any terrorism activity suspected.