



SWAN BAY

Pollution Incident Response Management Plan

Document Control

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Flow Chart

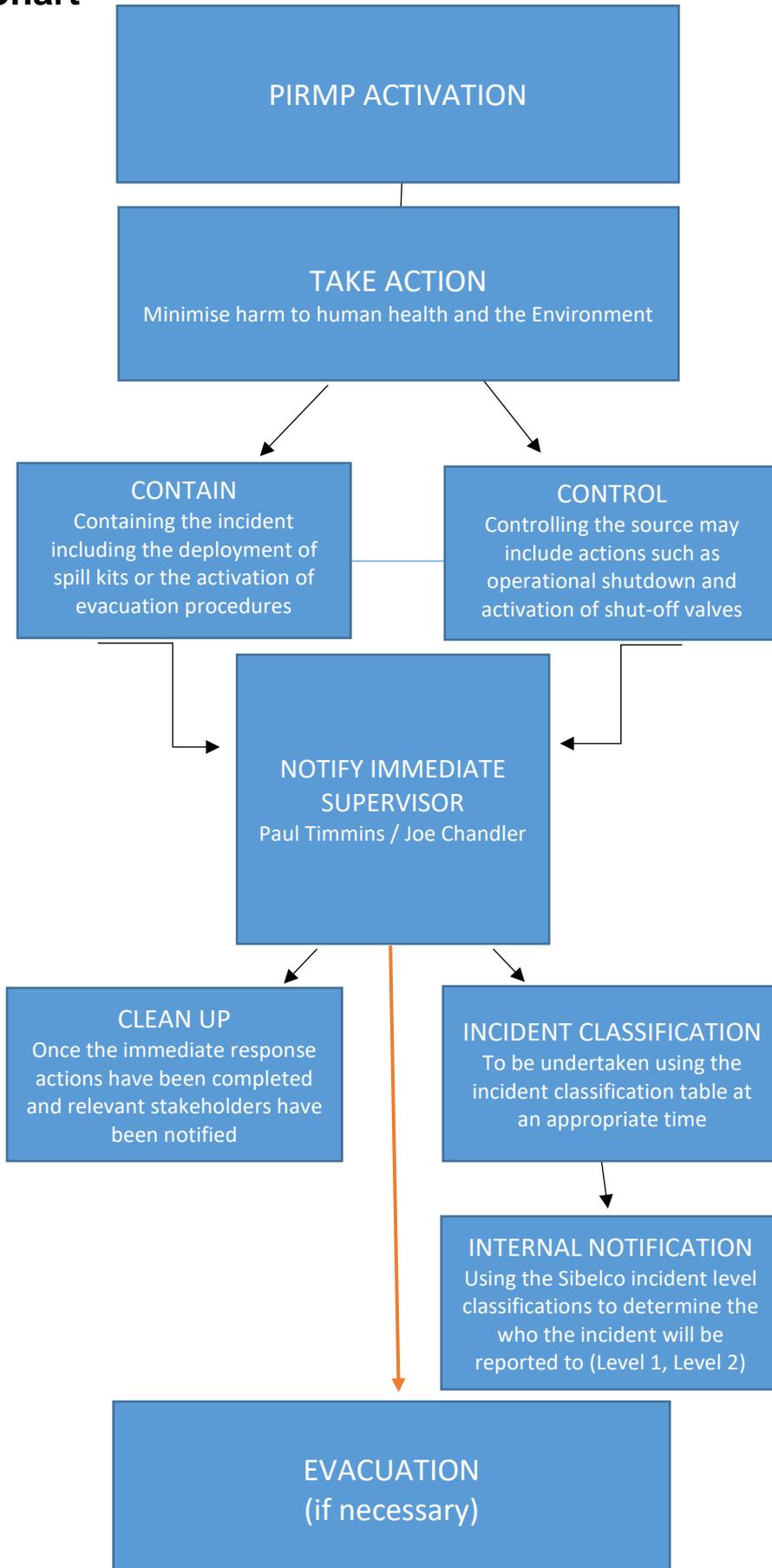


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1. Introduction

1.1. Purpose

This Pollution Incident Response Management Plan (PIRMP) focuses on the management of pollution incidents at Swan Bay. The purpose of the PIRMP is to ensure site readiness in the event of a pollution incident. The PIRMP applies to all pollution incidents that occur at the site as a result of activities carried out by Sibelco.

The current Swan Bay Clay Deposit (ML5938) is located approximately 45 kilometres north-east of Newcastle and occurs within the Medowie State Forest. Mining operations have ceased at Swan Bay

1.2. Compliance background

In February 2012, amendments were made to the NSW Protection of the Environment Operations Act 1997. These amendments introduced the requirement for holders of an environment protection license (EPL), to prepare and implement a Pollution Incident Response Management Plan (PIRMP). This PIRMP has been developed to satisfy the new compliance requirements.

1.3. EHS system context

A critical component of the Sibelco environment, health and safety system is the management of safety and environmental incidents. Existing policies, procedures and plans provide guidance on incident response. The PIRMP shall be implemented in addition to the other existing policies, procedures and plans, as they relate to pollution incident response. Where an inconsistency exists, the PIRMP shall take precedence to the extent of the inconsistency.

Existing procedures and plans that may be relevant include:

- EHS Incident Notification & Investigation Procedure (Corporate)
- Site Incident Response Planning Procedure (Corporate)
- Rapid Response Management Procedure (Corporate)
- Emergency Response Procedures (Site-specific)

1.4. Definitions

Air pollution	the emission into the air of any air impurity
Air impurity	includes smoke, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, mists, odours and radioactive substances
Land pollution	placing in or on, or otherwise introducing into or onto, the land (whether through an act or omission) any matter, whether solid, liquid or gaseous: <p>(a) that causes or is likely to cause degradation of the land, resulting in actual or potential harm to the health or safety of human beings, animals or other terrestrial life or ecosystems, or actual or potential loss or property damage, that is not trivial, or</p> <p>that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter, but does not include placing</p>

	in or on, or otherwise introducing into or onto, land any substance excluded from this definition by the regulations.
Material harm	<p>(a) harm to the environment is material if:</p> <ul style="list-style-type: none"> (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 <p>(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.</p>
Noise	includes sound and vibration
Noise pollution	the emission of offensive noise
Pollution	water pollution, or air pollution, or noise pollution, or land pollution
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 it does not include an incident or set of circumstances involving only the emission of any noise
Water pollution	<p>(a) placing in or on, or otherwise introducing into or onto, waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, so that the physical, chemical or biological condition of the waters is changed, or</p> <p>(b) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any refuse, litter, debris or other matter, whether solid or liquid or gaseous, so that the change in the condition of the waters or the refuse, litter, debris or other matter, either alone or together with any other refuse, litter, debris or matter present in the waters makes, or is likely to make, the waters unclean, noxious, poisonous or impure, detrimental to the health, safety, welfare or property of persons, undrinkable for farm animals, poisonous or harmful to aquatic life, animals, birds or fish in or around the waters or unsuitable for use in irrigation, or obstructs or interferes with, or is likely to obstruct or interfere with persons in the exercise or enjoyment of any right in relation to the waters, or</p> <p>(c) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter,</p>

and, without affecting the generality of the foregoing, includes:

- (d) placing any matter (whether solid, liquid or gaseous) in a position where:
 - a. it falls, descends, is washed, is blown or percolates, or
 - b. it is likely to fall, descend, be washed, be blown or percolate, into any waters, onto the dry bed of any waters, or into any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, or
- (e) placing any such matter on the dry bed of any waters, or in any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted,

if the matter would, had it been placed in any waters, have polluted or have been likely to pollute those waters.

Waters

the whole or any part of:

- (a) any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea), or
 - (b) any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.
-

2. Risk assessment

The following section describes the hazards to human health or the environment, associated with the operations at Swan Bay, along with the risk management for each hazard.

2.1. Risk register

The hazards to human health or the environment are described in the site risk register (refer to **Appendix A**). The risk register also includes details of the following:

- the receiving environment that could be harmed by the hazard;
- the risk event that could occur as a result of the hazard harming the receiving environment (including neighbouring premises);
- likelihood of the risk event occurring;
- rating of the consequence of the risk event occurring; and
- details of the pre-emptive action to be taken to mitigate the risk of harm to human health or the environment.

2.2. Inventory of pollutants

As Swan Bay has ceased operations there are no long any pollutants kept on site.

2.3. Site plan

The following site plan illustrates the location of Swan Bay the surrounding area that is likely to be affected by a pollution incident, the location of potential pollutants on the premises, the location of stormwater drains on the premises and evacuation muster points.

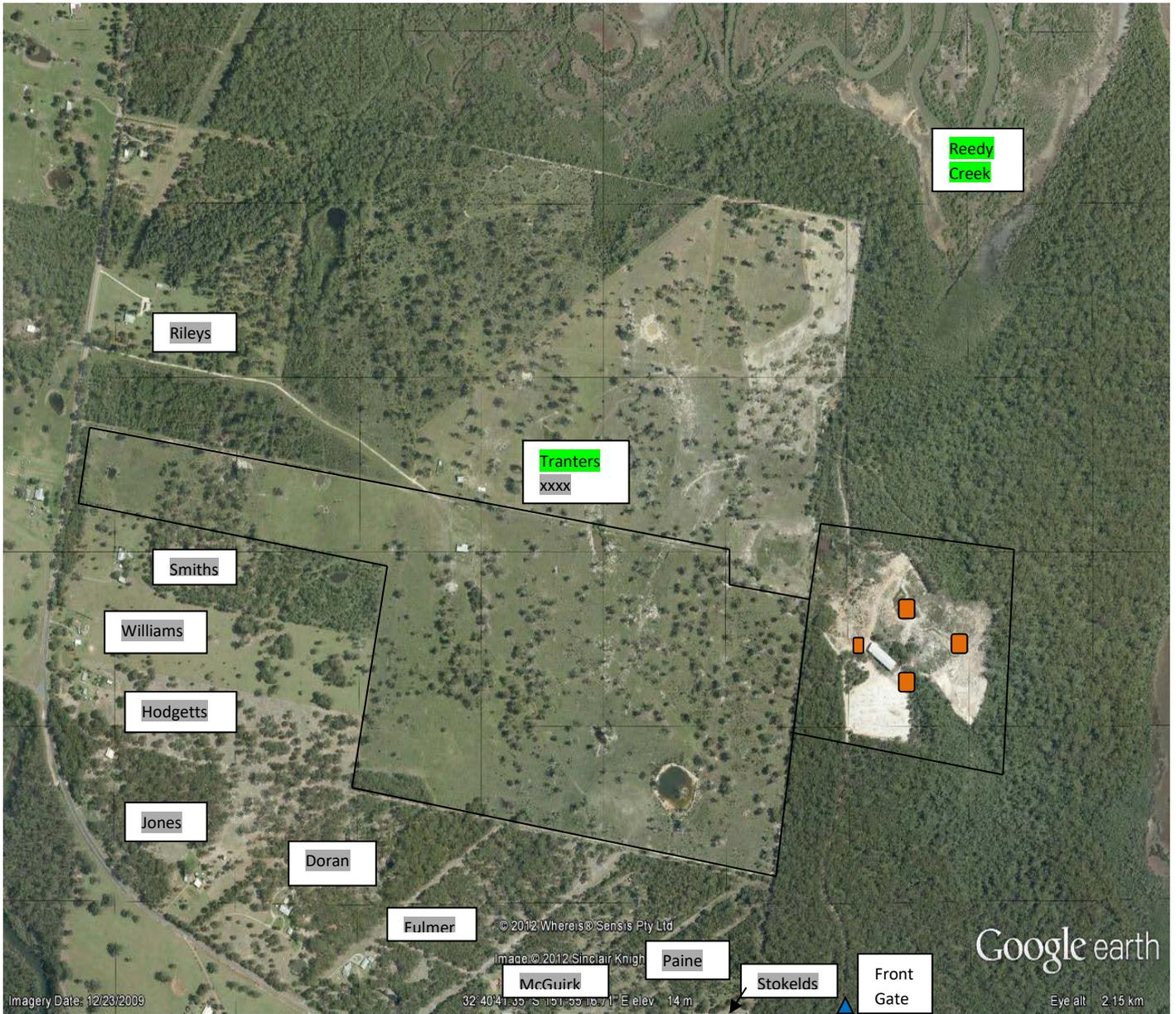


Figure 1: Swan Bay Site Plan

▲ Emergency Muster Points – Shed (Primary), Front Gate (Secondary)

xxx Potential receiving areas – dust

xxx Potential receiving areas – Sediment laden water

■ Sediment Pits

3. Pollution incident response

3.1. Immediate response

Minimising harm

In the event of a pollution incident, the immediate response will involve actions to minimise harm to human health, followed by actions to minimise harm to the environment.

Immediate response to pollution incidents will vary according to the circumstances, however the general approach for all pollution incidents will be as follows:

(i) Control the source of the incident

Controlling the source may include actions such as operational shutdown of equipment and activation of shut-off valves.

(ii) Contain the incident

Containing the incident may include the deployment of spill response kits or the activation of evacuation procedures (refer to section 3.2 below).

Equipment that will be used to minimise harm to human health is described in the following table.

Equipment	Location of equipment
PPE	Site Vehicles

Equipment that will be used to minimise harm to the environment is described in the following table.

Equipment	Location of equipment
Spill Kit	Site Vehicles

Incident classification

Incident classification will be undertaken using the Incident Classification Table (refer to **Appendix B**).

Internal notification

All personnel shall immediately notify their Supervisor of all pollution incidents that occur on the premises, or as a result of activities carried out by Sibelco personnel or contractors. The Supervisor shall immediately notify the Responsible Manager of the pollution incident.

The Responsible Manager shall immediately after being notified of the pollution incident, consult with the Environmental Advisor to assess whether the pollution incident has caused or threatens material harm to the environment. In the event that the Environmental Advisor cannot be contacted, the Responsible Manager shall consult with the relevant Environment or Health & Safety Manager.

If it is assessed that the pollution incident has caused or threatens material harm to the environment, the Responsible Manager shall immediately notify the Regional Manager and the relevant

Environment or Health & Safety Manager. Incidents classified at this level will automatically be classified as “high impact incidents”. The Rapid Response Management Procedure will therefore be implemented, in addition to the PIRMP.

If it is assessed that the pollution incident has not caused or does not threaten material harm to the environment, the Responsible Manager shall follow internal incident reporting procedures.

External notification of pollution incidents is addressed further below.

3.2. Evacuation

In order to minimise harm to persons on the premises, the following evacuation procedures will be implemented.

1. Identify and contain the hazard, if possible and safe to do so- **All**.
2. If someone is injured, and it is safe to do so, rescue the injured person if you suspect spinal injuries move them only if you have to, as little as possible until they are out of immediate danger then call emergency services - **All**.
3. Initiate evacuation verbally by persons in the direct area, then inform people on site by activating vehicle horn and by UHF (Channel 14) or mobile phone if unresponsive to the signal horn activation, that there is an emergency and to proceed calmly to the assembly area
4. If a designated Chief Warden is not available, the most senior employee will take the position of the Chief Warden – follow advice given from the Chief Warden over the phone and make the call on if an external emergency service is required. **All**
5. Operators will shut down mobile equipment and isolate energy sources (if it is required and is safe to do so) - **Operators**.
6. Once everyone has assembled, there will be a role call to ensure all staff, contractors and visitors are accounted for using the sign in book.
7. If someone is missing, and it is safe to do so, the Warden will try to find the missing person or delegate someone to look for the missing person. In an unsafe environment, emergencies services should be informed of the missing person, probable location and any other relevant information.

3.3. Notify stakeholders

As soon as the immediate response actions have been carried out to ensure the safety of people or to contain a pollution incident, relevant external stakeholders shall be notified.

The notification process is described in the Public Notification Procedure (refer to **Appendix C**) and includes the following:

- internal notification process;
- notification of neighbouring industrial, residential or community premises;
- notification of relevant authorities; and
- mechanisms for early warnings and regular updates to external stakeholders.

Where external notification is required, stakeholders will be notified with reference to the Stakeholder Contact List (refer to **Appendix D**).

3.4. Clean-up

Once the immediate response actions have been completed and relevant stakeholders have been notified, the strategy for clean-up of the pollution incident shall be developed and implemented.

Where relevant, the Regional Manager shall co-ordinate with the relevant authorities or persons that have been notified, the strategy for combating and cleaning-up the pollution caused by the incident.

3.5. Response personnel

The personnel responsible for incident response are as follows:

Table 1: Response personnel

Position	Name	Contact	Responsibility
Environment Advisor	Joe Chandler	0407 023 680	Activation of the plan and managing the response to a pollution incident.
Program Lead	Paul Timmins	0437 130 854	Authorised to notify relevant authorities.

4. Training and testing

4.1. Pollution incident response training

Training of personnel in incident response will occur at least annually, in the form of toolbox talks or simulated incident exercises. The frequency of training will be commensurate with the risk of pollution incidents at the site.

4.2. PIRMP testing

The PIRMP will be tested routinely to ensure that the information included in the plan is accurate and up to date and the plan is capable of being implemented in an effective and efficient manner.

The PIRMP will be tested on an annual basis and also within one month of any pollution incident occurring.

Routine testing will be undertaken in the form of either desktop simulations or practical exercises or drills.

APPENDIX A

Risk Register

APPENDIX B

Incident Classification Table

Risk Analysis Tools

	Environment and Community	Health and Safety	Financial
Catastrophic	<ul style="list-style-type: none"> • Permanent impacts to populations of rare or threatened flora or fauna; or • Adverse impacts (i.e. damage, destruction or removal) to a state or nationally listed indigenous or non-indigenous heritage item; or • Complete removal of habitat of threatened species; or • Significant impairment of ecosystem function; or • Multiple negative media reports; or • Legal action initiated by member of the community. 	<ul style="list-style-type: none"> • One or more fatalities 	<ul style="list-style-type: none"> • >\$1M business impact
Major	<ul style="list-style-type: none"> • Removal, destruction or loss of whole populations of common native flora and/or fauna; or • Adverse impacts to non-listed or locally significant indigenous or non-indigenous heritage items; or • Negative media report or multiple community complaints. 	<ul style="list-style-type: none"> • Injury or illness that requires hospitalisation and/or results in permanent impairment 	<ul style="list-style-type: none"> • \$100k-\$1M business impact
Moderate	<ul style="list-style-type: none"> • Loss of individual member of rare or threatened species; or • Extensive impacts on soil, air or water that requires coordinate clean-up; or • Offsite discharges/emissions outside of advised levels (e.g. license limit, or environmental advisor / consultant advice) or; • Individual community complaint 	<ul style="list-style-type: none"> • Injury or illness more severe than a sprain, strain or superficial wound that requires medical treatment and/or a temporary work restriction (e.g. breaks, fractures, lacerations, burns, torn ligaments) 	<ul style="list-style-type: none"> • \$50-100k business impact
Minor	<ul style="list-style-type: none"> • Contamination of any on-site water body or impacts on soil and air quality beyond immediate work area but contained onsite; or • Loss of individuals of common (not threatened) native flora or fauna. 	<ul style="list-style-type: none"> • Sprain, strain, or superficial wound (i.e. bruise, cut, abrasion) that requires medical treatment and/or a temporary work restriction 	<ul style="list-style-type: none"> • \$10-50k business impact
Insignificant	<ul style="list-style-type: none"> • Direct impacts on soil or air within immediate work area and immediately cleaned up with no residual contamination. 	<ul style="list-style-type: none"> • Injury or illness that requires no more than first aid treatment and no work restriction 	<ul style="list-style-type: none"> • \$5-10k business impact

Figure 2: Sibelco Consequence Criteria

Description	Guidance
	This is a subjective judgement based on your knowledge and experience; simply make your best estimate.
Almost Certain	The consequence is expected to occur. Eg >85% probability of occurring within the context of the risk assessment
Likely	The consequence will probably occur. Eg 25% to 85% probability of occurring within the context of the risk assessment
Occasional	The consequence might occur. Eg 10% to 25% probability of occurring within the context of the risk assessment
Unlikely	The consequence probably won't occur. Eg 1% to 10% probability of occurring within the context of the risk assessment
Rare	The consequence is very unlikely to occur. Eg <1% probability of occurring within the context of the risk assessment

Figure 3: Sibelco Likelihood Criteria

CONSEQUENCE						
		CATASTROPHIC	MAJOR	MODERATE	MINOR	INSIGNIFICANT
L I K E L I H O O D	ALMOST CERTAIN The consequence is expected to occur Eg >85%	25 High	23 High	20 High	16 Medium	11 Medium
	LIKELY The consequence will probably occur Eg 25% to 85%	24 High	21 High	17 Medium	12 Medium	7 Low
	OCCASIONAL The consequence might occur Eg 10% to 25%	22 High	18 Medium	13 Medium	8 Low	4 Low
	UNLIKELY The consequence probably won't occur Eg 1% to 10%	19 Medium	14 Medium	9 Low	5 Low	2 Low
	RARE The consequence is very unlikely to occur Eg <1%	15 Medium	10 Low	6 Low	3 Low	1 Low

Public Notification Procedure

PURPOSE

This procedure focuses on the notification process to external stakeholders, in the event of a pollution incident as a result of operations at Swan Bay. External stakeholders include neighbouring industrial, residential or community premises and relevant authorities. This procedure forms part of site-specific Pollution Incident Response Management Plans and has been developed to meet compliance obligations under the Protection of the Environment Operations Act 1997.

SCOPE

This procedure applies to Swan Bay site.

REFERENCES

- Swan Bay Pollution Incident Response Management Plan
 - Stakeholder Contact List
 -

DEFINITIONS

- **Immediate notification:** promptly and without delay, after the person becomes aware of the incident; as soon as it is safe to do so; and not as to delay immediate actions to ensure the safety of people or contain a pollution incident.

PROCEDURE

1.1 Notify incident internally

All personnel shall immediately notify their Supervisor of all pollution incidents that occur on Swan Bay premises, or as a result of activities carried out by Sibelco personnel or contractors.

The Supervisor shall immediately notify the Operations Manager of the pollution incident.

1.2 Contact initial combat agency



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The Operations Manager shall call '000' if the incident presents an immediate threat to human health or property, with the purpose of coordinating a response from Fire and Rescue NSW, the NSW Police or the NSW Ambulance Service, as required.

1.3 Notify neighbouring premises of immediate threat

The Operations Manager shall provide early warnings to neighbouring premises by notifying them of any immediate threat to human health or property. Neighbouring premises shall be notified with reference to the site plan and Stakeholder Contact List in the Swan Bay Pollution Incident Response Management Plan.

1.4 Assess material harm to the environment

The Operations Manager shall immediately after being notified of the pollution incident, consult with the Environmental Advisor to assess whether the pollution incident has caused or threatens material harm to the environment.

In the event that the Environmental Advisor cannot be contacted, the Regional Manager shall consult with the relevant Environment or Health & Safety Manager.

If it is assessed that the pollution incident has caused or threatens material harm to the environment, the Operations Manager shall immediately notify the Regional Manager and the relevant Environment or Health & Safety Manager.

If it is assessed that the pollution incident has not caused or does not threaten material harm to the environment, the Operations Manager shall follow internal incident reporting procedures.

1.5 Notify authorities

The Regional Manager shall, in consultation with the relevant Environment or Health & Safety Manager, immediately verbally notify all of the authorities in the table below, in order of priority. Authorities must be notified at this step regardless of whether they have been contacted earlier in the process (e.g. step 1.2).

The information to be provided to each Authority is detailed in the Pollution Incident Notification Form. All information listed in the Pollution Incident Notification Form must be communicated to each Authority. If information required in the Pollution Incident Notification Form is unknown at the time of the notification, it must be notified to the Authority immediately after it becomes known.

Details of each notification shall be recorded in the Pollution Incident Notification Form.

Priority	Authority	Contact number
1	Environment Protection Authority	131 555 or (02) 9995 5555
2	Ministry of Health via Newcastle Public Health Unit	0249246477 divert to John Hunter Hospital After Hours
3	Work Cover Authority	13 10 50

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Priority	Authority	Contact number
4	Port Stephens Council	0249246477
5	Fire and Rescue NSW	1300729579

1.6 Notify neighbouring premises

The Operations Manager shall notify the owners or occupiers of premises in the vicinity of the site who may be affected by the pollution incident. The Pollution Incident Notification Form may be used to guide the information to be included in the notification.

The neighbouring premises and their contact details are detailed in the site plan and Stakeholder Contact List in the Swan Bay Pollution Incident Response Management Plan.

1.7 Update neighbouring premises

The Operations Manager shall update the owners or occupiers of premises in the vicinity of the site who may be affected by the pollution incident, as required. Updates may include the following:

- status of the incident response;
- status of the dispersion of the pollutant; and
- recommended actions to minimise the risk of harm as a result of the pollution incident.

The neighbouring premises and their contact details are detailed in the site plan and Stakeholder Contact List in the Swan Bay Pollution Incident Response Management Plan.

1.8 Notify authorities in writing

The Operations Manager shall ensure that each Authority is notified in writing within seven days of the incident occurring. The information listed in the Pollution Incident Notification Form must be communicated to each Authority.

DOCUMENTS REQUIRED

- Pollution Incident Notification Form

Part 1. Incident notification information

Site			
Date of incident		Time of incident	
Pollutant	Name/nature: Quantity/volume: Concentration:	Duration of incident	
Location of incident	Pollutant originated from: Pollutant went to:		
Circumstances of the incident			
Immediate cause of the incident			
Immediate response actions taken			
Immediate response actions proposed			

Part 2. Incident notification record

Authority	Date of notification	Time of notification	Name of Officer	Reference number	Information notified	Comments (e.g. outstanding information to be notified at a later date)

APPENDIX D

Stakeholder Contact List

Stakeholder	Key contact and position	Physical Address	Postal Address	Telephone; Fax; Email.	Reason why stakeholder has been identified as a key stakeholder for this site?
Newcastle (Environment Protection 7 regulation; Country, Culture and Heritage)	Environmental Officer	117 Bull Street, Newcastle West. NSW. 2300	PO Box 488G, Newcastle, 2300.	Phone: 02 4927 3119 Fax: 02 4927 3192 Email: rog.hcc@environment.nsw.gov.au	The regulator of environment protection. administers the Environmental Protection Licence for the premises (EPL No. 1266
National Parks and Wildlife	Office of Environment and Heritage	117 Bull Street, Newcastle West. NSW. 2300	117 Bull Street, Newcastle West. NSW. 2300	Phone: 02 4927 3119 Fax: 02 4927 3192 Email: rog.hcc@environment.nsw.gov.au	National parks and wildlife owns land adjoining the site boundary
Port Stephens Council	Jordan Skinner	116 Adelaide St, Raymond Terrace NSW 2324	116 Adelaide St, Raymond Terrace NSW 2324	T: 4980 0255 F: 4980 3612 council@portstephens.nsw.gov.au	Administers the development approval for the premises (DA No. 05/1812). Council must be consulted in regards to changes to operations.
Crown Lands	Rob Micheli	437 Hunter Street Newcastle NSW 2300	PO Box 2185 Dangar NSW 2309	Phone: 1300 886 235 - Toll Free (02) 9842 8200 Fax: (02) 4925 3517 Email: enquiries@crowland.nsw.gov.au	Key stakeholder

DTI	4931 6651
<u>Neighbouring Properties</u>	
Anna & Frank Stokeld	49975010
Mr & Mrs Riley	49975103
L Paine & E. Bowcott	49975672
Ms B Smith	49975729
Mr & Mrs Jones	49975779
D. Fulmer & C. Mostyn	49284540
J. Doran & M. Earnshaw	49870044
M. McGuick & J. Peddie	49975563
Mr Hodgetts & Ms Dunleavy	49870070