

Kooragang Industrial Water Scheme - PIRMP

Pollution Incident Response Management Plan

This document is to be viewed in conjunction with Incident Management Plan (ER-KIWS-IMP-100).

Document #: ENV-KIWS-PIRMP.200

Address: Mayfield West Advanced Water Treatment Plant

15 – 21 Channel Road, Mayfield West, NSW, 2304

EPA Licence: 20757

Facilities on site:

- Advanced Water Treatment Plant
- Pipework to and from the Shortland Dechlorination Building
- Brine Pipeline to Burwood Beach Plant sewer collection network

Contents

Introduction	2
Kooragang Industrial Water Scheme	2
Purpose and definitions	3
Incident Management Process	4
Notification Procedure for Pollution Incidents	5
Hazards and Controls	6
Pollution Incidents Likelihood	6
Pre-emptive Actions	7
Inventory of potential Pollutants on Site	7
Safety Equipment on site	8
Harm Minimisations Measures on Site	9
Actions to be taken in the event of an emergency	9
Actions for responding to Pollution caused by an incident	9
Flowchart for Notifiable Pollution Incident	10
Emergency Exercises	11
Review of the Plan	11
Site Maps	11
Definitions	12
Related documents	12
Review and Document Control	13

Introduction

SUEZ Water & Treatment Solutions culture is underpinned by a vision for a workplace free of injury and environmental incidents of ‘No Injuries’. The vision is supported by senior management’s commitment to a policy of protecting people and the environment as the highest priority of all business objectives, while ensuring customer expectations are met or exceeded.

The company is committed to managing its business in an environmentally sensitive and sustainable manner and to preventing pollution for the benefit of its employees, clients and the community. Environmental impacts are considered during the company’s decision making process and at all stages of service delivery. We promote an attitude of environmental care with individual responsibility for the environment and pride in our environmental performance. All managers, employees and contractors are accountable for environmental protection and made aware of their environmental responsibilities and obligations to comply with the law and SUEZ’s environmental policy.

Compliance with environmental laws is seen a minimum requirement and, where possible, we continually improve our operations to minimise or eliminate adverse environmental effects.

As such, the operation of the Kooragang Industrial Water Scheme (KIWS) is performed in a manner that ensures our aims and policies are met. To support our endeavour, we have implemented, maintain and continuously improve a management system that is certified to ISO 14001 to identify, monitor and control environmental risks arising from the KIWS operation. The performance of the management system is regularly reviewed and human, physical and financial resources are provided meet the aims and objectives of our policies.

Kooragang Industrial Water Scheme

The MWAOTP is a 9 megalitre per day membrane filtration and reverse osmosis recycling plant commissioned in November 2014, owned by Water Utilities Australia, and operated by SUEZ under an operations and maintenance contract.



Purpose and definitions

The purpose of this plan is to provide effective procedures for dealing with a pollution incident at SUEZ sites located within NSW which hold NSW Environmental Protection Authority (EPA) licenses for one or more facilities/operations on site. The information and procedures contained within this document are in accordance with requirements as set out within the *Protection of the Environment Legislation Amendment Act 2011 No 63*.

This Plan is provided as part of each SUEZ site *Incident Management Plan (IMP)* in accordance with the procedures set out in the *Incident Management Procedure*.

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

Notification of pollution incidents:

A pollution incident on a SUEZ site must be notified according to the notification procedure on page 6 of this document in the event that the incident:

- Causes harm to the health or safety of human beings or the environment which is not trivial, and/or
- Which results in monetary loss or damage costing an amount exceeding \$10,000 (cost to include clean-up/further pollution mitigation measures)

Not Trivial means:

- Harm to human health (Injury/Illness) as a result of a pollution incident which is of major severity or above (as defined in the *Incident Reporting and Investigation Procedure*)
 - Harm may in some instances not result in an injury classified as major but may still be considered notifiable. This decision is to be made by the Plant Manager or most senior worker on site at the time of the incident
- Harm to the environment which is of major severity or above (as defined in the *Incident Reporting and Investigation Procedure*)

Incident Management Process

The incident management process utilised at SUEZ sites takes place in four phases:

PHASE	ELEMENTS
Identification	An emergency is identified and the alarm raised.
Response	Response actions take place in parallel rather than sequentially, minimising the impact of the emergency; these being: <ol style="list-style-type: none"> 1. The safety of personnel (isolation of incident area, evacuation, rescue, first aid); 2. Establishment of the Incident Management Structure; 3. Assessment/investigation of the incident; 4. Classification of the incident and notifications.
Stabilisation	Objectives and strategies are developed resulting in an action plan being implemented to combat the incident. Progress is continually re-assessed.
Recovery	Incident condition is eliminated and incident closed reporting, investigation and notifications, debrief, lessons learnt.

The incident management phases and the actions in each phase are detailed in the IMP and are supported by Incident Response Procedures (IRPs) which have been developed for potential emergency situations

Incidents are classified based on assessment variables such as whether sufficient plant resources can manage the incident, or the extent of the impact of the incident (i.e. localised, site and off-site). The classification determines the notification and reporting requirements and the incident management structure formed. The roles and responsibilities of each incident management member is defined in the management system.

Incidents classified as major (an “emergency”) instigate SUEZ’s Crisis Management Plan which describes SUEZ Australia’s management of the incident externally (e.g. with stakeholders), within the company and at the plant. Depending on the incident, a Crisis Management Team may be set-up and roles assigned for incident management functions as described in the plan.

Notification Procedure for Pollution Incidents

When a pollution incident occurs on site

1. Immediately engage in harm minimisation measures / spill containment as per procedures documented in the site IMP
2. If the incident presents an immediate threat to human health or property contact emergency services on **000** immediately
3. Assess the level of actual or potential pollution and decide whether the incident is a '**notifiable**' incident according to the definition provided on Page 3 of this document.
4. If the incident is considered '**notifiable**' the following agencies must be notified immediately in listed order:
 - a) For pollution incidents within normal working hours the worker nominated as 'Notifying the Authorities' as per the table on Page 4 of this document (or the most senior worker on site at the time of the incident) must make all notifications
 - b) For pollution incidents, which occur outside of normal working hours the most senior worker on site at the time of the incident must make all notifications

Environmental Regulatory Authority:	NSW EPA	Contact:	131 555
Work Health and Safety Regulatory Authority:	Safe Work NSW	Contact:	131 050
Local Council:	Newcastle City Council	Contact:	02 4974 2000
Fire and Rescue:	Mayfield West Fire Station	Contact:	1300 729 579
Ministry of Public Health Unit:	(Ph) 02 4924 6477 (Fax) 02 4924 6048		
Business Hours:	8:30 am – 5:00 pm		
After Hours (John Hunter Hospital):	Ask for Public Health Officer on call		

Note:* Record the following information:

- a) The time, date, nature duration and location of the incident
- b) The location of the place where pollution is occurring or is likely to occur
- c) The nature, the estimated quantity or volume and the concentration of any pollutants involved
- d) The circumstances in which the incident occurred (including the cause of the incident, if known)
- e) The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution

Water Utilities Australia, the owner and neighbours, are also notified:

Hazards and Controls

The types of hazards which may occur on site include:

- Land or water contamination from hazardous chemicals stored on site
- Air contamination from smoke or fumes in the event of a fire
- Non-treated water release

Site specific hazards to human health or the environment identified on the site including the likelihood of their occurrence and the actions taken to eliminate or reduce those hazards are recorded on the site *Risk Register*. The site *Risk Register* contains information relating to the area or process to which the risk applies and the risk scenario. A risk rating/likelihood of the hazard occurring is available for all scenarios and the controls in place to minimise the likelihood of an incident occurring

Pollution Incidents Likelihood

The following list of events may increase the likelihood of a pollution incident occurring on site:

- Natural disaster – Earthquake/Storm/Flood/windstorm
- Chemical Spill
- Chemical/diesel storage tank failure
- Bunding structural failure
- Liquid Tanker Failure (Diesel)
- Fire within chemical storage area
- Procedure failure
- Liquid combustion/explosion
- Fixed Plant Failure

Pre-emptive Actions

Pre-emptive actions are actions taken to minimise or prevent any risk of harm to human health or the environment. The following are the pre-emptive actions taken on site:

- Site Inductions
- Site HSE Management Plan
- Site Environmental Monitoring Program
- Provision of training and competency assessment for SUEZ Safe Operating Procedures
- Provision and use of spill containment kits
- Where applicable all processes on site are undertaken in accordance with the relevant Australian Standard/s

Inventory of potential Pollutants on Site

Potential Pollutants on site can come in many forms. Chemical pollutants are a considerable risk dependent on the quantity held on site and the storage method used. Hazardous chemicals stored, used or handled on site are recorded on the site Chemical Register. Chemical Registers are kept on site in accordance with the *Hazardous Chemicals and Dangerous Goods Procedure*.

The following table includes all non-chemical potential pollutants identified for the site including the maximum quantity held on site and the storage method.

Potential Pollutant	Maximum quantity held on site	Storage type/Method of storage
Ammonia Aqueous	4,000 L	Vinylester/MEKP/E-glass Bunded Tank 6.0kL
Sulphuric Acid	16,000 L	Glass 16m3 Bunded Tank
Citric Acid	4,000 L	Vinylester/MEKP/E-glass Bunded Tank 2.0kL
Caustic Soda	10,000 L	Vinylester/MEKP/E-glass Bunded Tank 14.0kL
Sodium Bisulphate	30,000 L	Vinylester/MEKP/E-glass Bunded Tank 14.0kL
Antiscalant GE Hypersperse MDC714	4,000 L	Vinylester/MEKP/E-glass Bunded Tank + 2 x 1.0kl IBC 2.0kL
Diesel	80 L	Steel skinned 73L unbunded tank
Sodium Hypochlorite	30,000 L	Vinylester/MEKP/E-glass Bunded Tank 30.0kL
RO Cleaning Product	4,000 L	Vinylester/MEKP/E-glass Bunded Tank + 2 x 1.0kl IBC 2.0kL

Note: For further storage location information refer to the site plans.

Safety Equipment on site

Safety equipment is any equipment located on site which can be used to minimise the risks of a pollution incident occurring or can be used to assist in containing / controlling a pollution incident.

Available on site as listed below:

Type of Safety Equipment	Description – what used for	Storage Location on site
Oil and Gas Spill Kit	Control Oil and Gas spills	- CCT Pump Station
Chemical Spill Kits	Control Chemical spills	- Between Microfiltration Plant and Reverse Osmosis Plant - CCT Pump Station - Bulk Chemical Storage Area
Fire Extinguishing Equipment	Fire	- The Hydrant is keyed on the KIWS Site Layout Plan in the Emergency Information Container - Fire extinguishers are located throughout the site – Dry Powder and CO2 types (Indicated on the Evacuation sign and diagram).

Note: The Safety Data Sheet for all chemicals on site are kept alongside the chemical risk register in accordance with the *Hazardous Chemicals and Dangerous Goods Procedure*.

Harm Minimisations Measures on Site

Harm minimisation measures on site are actions or measures which are taken to minimise the harm to humans or the environment in the event of a pollution incident on site. The following is a list of the harm minimisation measures on site:

- Emergency Response Plans – including evacuation diagrams and emergency evacuation point locations.
- Emergency Response plan training and exercises as per the requirements of the *Incident Management Procedure*
- Trained and accredited First Aiders and Wardens
- Provision of fire-protection systems including firefighting equipment
- Availability of SUEZ personnel with environmental management knowledge for the purposes of assessing environment impact in the event of a pollution incident.
- Local medical facility contact
- Site warning alarm system – smoke detectors in administration building, office building, education annex and main switch room areas

Actions to be taken in the event of an emergency

Immediate actions are those actions which minimise or prevent harm to human health or the environment as a result of a pollution incident. The actions to be taken in the event of a pollution incident are as per the Response Procedures detailed in the site IMP relevant to the type of pollution incident which has occurred.

Actions for responding to Pollution caused by an incident

Following the initial response to a pollution incident occurring on site (as outlined in the site IMP), actions will be taken to combat any harm caused to the environment as a result of the incident. All Action taken will be in collaboration with the relevant authorities and where applicable SUEZ will engage qualified and experienced persons to assist in any required clean-up and mitigation activities.

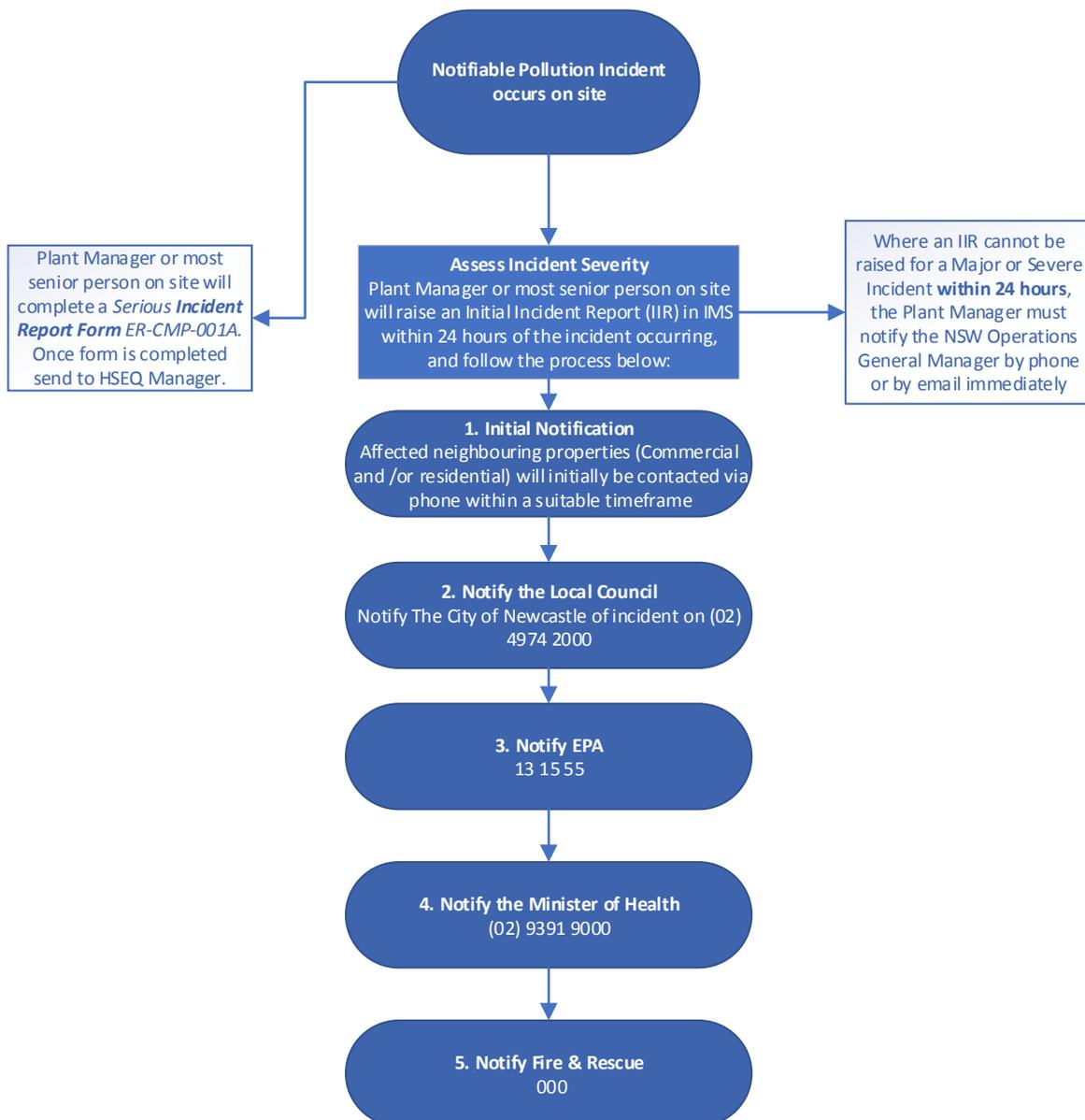
It is the responsibility of the Plant Manager in consultation with the HSEQ team to ensure accurate and timely communication between all parties involved, including but not limited to:

- Relevant authorities,
- Neighbouring properties,
- Any other persons affected by the incident and
- SUEZ management

All pollution incidents must be investigated and corrective actions completed with the aim to prevent further incidents from occurring in the future in line with the *Incident Reporting and Investigation Procedure*.

Flowchart for Notifiable Pollution Incident

The following flowchart illustrates the actions to be taken in the event of a 'notifiable' pollution incident occurring on a SUEZ site:



Staff Training

The relevant Suez workers for the site as recorded in the site IMP must be trained in accordance with the training requirements outlined in the site IMP. The objective of staff training is to ensure an understanding of the requirements for notification in the event of a pollution incident occurring on a SUEZ site, and the actions to take in the event of an emergency

Records of training must be kept as per the *Induction Procedure and Training Procedure*.

Emergency Exercises

Emergency exercises will be performed in accordance with the requirements of the site IMP (minimum one pollution incident emergency drill performed every 12 months)

Review of the Plan

The plan will be reviewed annually in accordance with the requirements as stated in the site IMP. Incidents and exercises occurring on site will be reviewed by the Plant Manager in accordance with the requirements of the *Incident Management Procedure*.

Site Maps

Site Map is provided below.



Definitions

Emergency - Any event which arises internally, or from external sources, and which may adversely affect persons or the community generally, and requires an immediate response.

Incident Management Plan (IMP) - The written documentation of the emergency arrangements for a facility, generally made during the planning process. It consists of the preparedness, prevention and response activities and includes the agreed emergency roles, responsibilities, strategies, systems and arrangements.

EPA - means the Environment Protection Authority constituted by the Protection of the Environment Administration Act 1991.

Evacuation - The orderly movement of people from a place of danger.

Harm – (to the environment) includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution.

Pollution means -

- a) Water pollution, or
- b) Air pollution, or
- c) Noise pollution, or
- d) Land pollution.

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.

Related documents

DOCUMENT NAME	REFERENCE NUMBER
Incident Management Plan	ER-KIWS-IMP-100
Emergency Simulation Checklist	IMP-250-A
Hazardous Chemicals and Dangerous Goods	OHS-015
Hazardous Chemicals / Dangerous Goods Risk Assessment	OHS-015A
Incident Reporting and Investigation Procedure	OHS-005
Protection of the Environment Legislation Amendment Act 2011 No 63.	
Site Plans	

Review and Document Control

VERSION	CHANGE	REVIEWED	AUTHORISED	DATE ISSUED
1	Initial Issue	HSEQ Systems Coordinator	HSEQ Systems Manager	27/11/17