



OPERATIONS EMERGENCY PLANNING MANAGEMENT PLAN (EPMP)

for

Coffs Harbour City Council's

Water Treatment Plant

140 Upper Orara Road Karangi NSW 2450

Revision List

Revision:	6
Date:	29 June 2009
Prepared:	Paul Johnson
Reviewed:	Neil Matthews
Approved for Issue:	Simon Thorn

Signature:

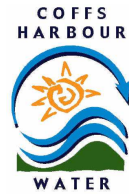
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1.0 Policy Statement

1.1 Water Treatment Plant Emergency Management Policy Statement



Water Treatment Plant Emergency Management Policy Statement

At Coffs Harbour City Council, we demonstrate a duty of care for the health and safety of all, the protection of the environment and provide high quality services to the community.

Emergency Planning and Management is an essential element in achieving the above.

Our aims in relation to the Water Treatment Plant Operations Emergency Management Planning are:

- To provide a risk focused system and resources to deal with emergencies to protect people, property and the environment; and
- To minimize adverse impacts on people, property and the environment.

Our objectives in relation to the Water Treatment Plant Operations Emergency Management Planning are:

- To maintain a high level of preparedness;
- To respond quickly and efficiently to limit the impact of an emergency;
- To manage an emergency until the emergency services arrive and take control;
- To support emergency services with information, knowledge, skills and equipment; and
- To protect emergency responders, personnel and the community from harm.

Our principles are:

- To effectively and consistently consult stakeholders;
- Focus on emergency prevention rather than management of emergencies.
- Prompt implementation of emergency response plans will minimise harm to staff, contractors, community and the environment.

Approved by:

.....
Simon Thorn

.....
13 March 2009

1.2 Risk Management Policy Statement



Risk Management Policy Statement

Managing risk is essential for the efficient management of Council and applies to all of Council's operations. Effective risk management ensures continual improvement and is as much about identifying opportunities as avoiding or mitigating losses.

Management will ensure that all hazards and their associated risks are identified assessed, where possible eliminated or other wise controlled.

Prioritisation of the actions for the implementation of control measures is required where,

- the risks can not be immediately eliminated or the risk reduced to an acceptable level
- the long term controls are not implemented prior to commencement of the activity

Council will review risk assessments and all measures adopted to control risks, whenever

- there is evidence that the risk assessment is no longer valid
- adverse impacts result from exposure to a hazard to which the risk assessment relates
- a significant change is proposed in our place of work or in work practices or procedures to which the risk assessment relates.

Consultation will take place,

- when risks relating to Council's activities are assessed
- when decisions are made about the measures to be taken to control risks
- when the assessment of risks are reviewed
- when introducing or altering the procedures for monitoring risks
- when decisions are made about the adequacy of facilities
- when changes are proposed to the systems or methods of work or the plant or substances used for work.

The hazard identification, risk assessment and control process will be documented and retained by Council's information management system.

Approved by: *Executive Team in consultation with staff.*

.....
Mayor

.....
General Manager

.....
OH&S Committee Chairperson

Date
9 June 2002

2.0 Introduction

2.1 Scope / Parameters

2.1.1 This document constitutes the Operations Emergency Planning Management Plan (OEPMP) for the entire life cycle of the Water Treatment Plant at 140 Upper Orara Road, Karangi NSW 2450 from the commencement of operations.

2.1.2 The scope of this Operations Emergency Planning Management Plan satisfies Section 5.4 a) of the Department of Planning Project Approval (Application 06-0285) given under Section 75J of the Environment Planning and Assessment Act 1979.

2.1.3 Project Approval Extract:

5.4 a) a comprehensive Emergency Plan detailing emergency procedures for the proposed water treatment plant. The plan shall include detailed procedures for the safety of all people outside the project site who may be at risk from the development. The plan shall be in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 1, 'Industry Emergency Planning Guidelines'*

2.2 Aim / Objectives / Principles

2.2.1 The aim, objectives and principals of the Operational Emergency Planning Management Plan as detailed in the policy statement page 4, are:

- To provide a risk focused system and resources to deal with emergencies to protect people, property and the environment;
- To minimise adverse impacts on people, property and the environment;
- To maintain a high level of preparedness;
- To respond quickly and efficiently to limit the impact of an emergency;
- To manage an emergency until the emergency services arrive and take control;
- To support emergency services with information, knowledge, skills and equipment;
- To protect emergency responders, personnel and the community from harm;
- To effectively and consistently consult stakeholders;
- Focus on emergency prevention rather than management of emergencies;
- Prompt implementation of emergency response plans will minimise harm to staff, contractors, community and the environment.

2.3 Key Risks

2.3.1 In relation to this Water Treatment Plant Emergency Management Planning the facility specific key risks have been identified in consultation with operations representatives and key stakeholders.

2.3.2 The emergency risks listed below, are such that if not planned and managed effectively could have significant impact in Council achieving its policy objectives;

- Medical Emergency
- Gas Leak
- Natural Disaster

- Chemical Spill / Hazardous Substances / Dangerous Goods
- Explosion & Fire Emergency
- Rescue – Confined Space / At Height / Over-Under Water / trapped
- Moving Equipment Accident
- Power Failure (Possibility of Emergency)
- Public Unauthorised Entry
- Threat of any Nature

Refer Section 5.0 of this plan for Emergency Response Action Plans.

2.4 NSW Department of Planning – Preferred Model Adopted

2.4.1 The main consideration of emergency planning is the protection of people, property and the environment from harm during an emergency situation. This is achieved by developing an emergency plan that implements a system able to respond promptly to any emergency and that leads to the most effective outcome possible under the circumstances. This plan is designed to be comprehensive, yet concise, simple and flexible. This plan is dynamic and interactive, ensuring ongoing relevance to the needs of the facility and all stakeholders by continual monitoring, review and consultation. Emergency planning process adopted is therefore a cyclical processes as illustrated in Figure 2.1 and the Emergency Plan Preparation process is as illustrated in Figure 2.2 below. All of the stages are inter-related and plan details are continually evaluated and revised as appropriate.

Figure 2-1: Emergency Planning Process Adopted

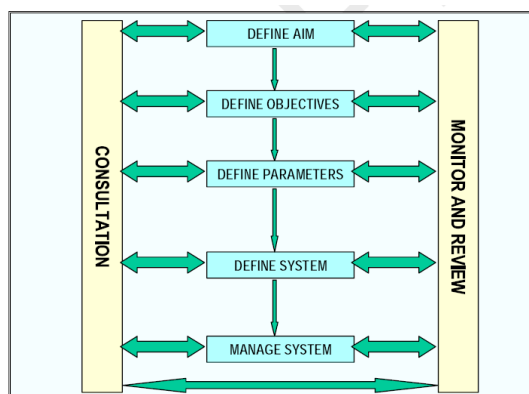
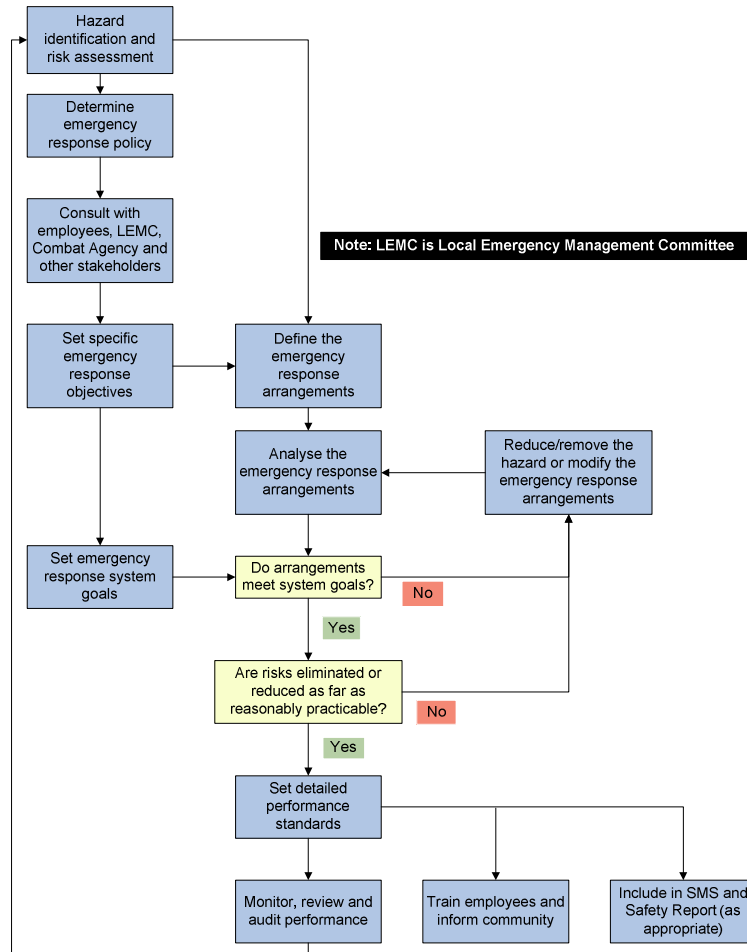


Figure 2-2: Emergency Plan Preparation



3.0 Planning

3.1 EPMP Development

3.1.1 The risk focused emergency planning and management processes are documented in this plan. The plan defines areas such as the facility's emergency functions and organisational structure, emergency procedures, equipment, reporting and communication channels, and the type of interface with emergency services such as Police, Fire Service etc.

3.1.2 The plan clearly identifies:

- the name of the facility and the operator; (Refer Cover Page)
- the identity, scope and status of the emergency plan; (Refer Cover Page & 2.1)
- the location of the facility; (Refer Cover Page and Appendix 2)
- preparation details (the date of preparation and other terms of reference); (Refer Cover Page and Appendix 5)
- authorisation details (person(s) responsible); (Refer Cover Page, Appendix 4 and OSMP 3.2 & Appendix 3)
- contact details; (Refer Cover Page and Appendix 1)
- document control information; (Refer Cover Page and OSMP 10.0)
- definition of the situation that constitutes an emergency for the facility; (Refer Appendix 5)
- aim, objectives and principles of the plan; (Refer 1.1 and 2.2)
- clearly defines the roles, responsibilities, functions and needs of stakeholders; (Refer 1.1, 2.2, Appendix 4 and OSMP 3.2 & Appendix 3)
- facility specific hazards identified as having a significant impact including hazardous materials; (Refer OSMP Appendix 1 and 11.0)
- hazardous materials in significant quantities under the control of the facility, including hazardous intermediates; (Refer Appendix 1 and 11.0)
- types and levels of possible emergencies identified for the facility; (Refer 5.0)
- emergency functions and organisational structure; (Refer 5.0, Appendix 4 and OSMP 3.0)
- the person fulfilling the function of facility emergency control, and designated as the facility emergency controller; (Refer 3.6.2 and Appendix 4)
- the people acting in a position within the organisational structure, or conducting certain emergency functions; (Refer 5.0 and Appendix 4)
- facility specific emergency response action plans which are an important part of the system to manage an emergency, which are clear, simple, practical and achievable; (Refer 5.0)
- the resources including equipment and amenities required to respond to emergencies; (Refer 3.0, 4.1, 4.2, 4.3, 4.4, 4.5 and 4.6)
- the location of the facility emergency control centre and any alternative nominated; (Refer Appendix 1)
- the facility alarm and warning system for all levels of emergency; (Refer 5.0)



- the roles, responsibilities and duties of all personnel involved in activating the emergency plan; (Refer 5.0 and Appendix 4)
- the role, responsibilities of the person nominated to report the emergency to the emergency services; (Refer 5.0 and Appendix 4)
- where applicable, person nominated to report an environmental emergency to appropriate agencies identified; (Refer 5.0 and Appendix 4)
- terminating an emergency; (Refer 5.0 and Appendix 4)
- criteria for what is required to manage the plan; (Refer Cover Page, 2.0, 3.0, 4.0 and Appendix 4)
- information supporting the plan and essential for the emergency services; (Refer 3.6, 5.0, Appendix 1, 2 & 3)
- identify the locations of, and allow for access to, relevant safety, health and environmental information to assist with managing the emergency; (Refer 3.6, 5.0, Appendix 1, 2, 3 & 5 and CEMP, OSMP).
- location maps detailing significant facility and local community features; (Refer Appendix 2 & 3)
- site layout plan detailing significant facility features; (Refer Appendix 2 & 3)
- an easily accessible list of current emergency contact numbers; (Refer 3.6.1 and Appendix 1)
- glossary of references, definitions and abbreviations. (Refer Appendix 5).

3.2 Hazard Identification

3.2.1 Prior to commencement of operations, risks associated with the operations were assessed through a formal risk assessment workshop. The risk assessment workshop held on the 4th February 2009 was attended by operations representatives and key stakeholders. The identified hazards together with the risk control measures are documented in Appendix 1 of the Operational Safety Management Plan (OSMP) for ongoing review and updating as further risks are identified once operations commence.

3.3 Determining Policy

3.3.1 The plant specific Water Treatment Plan Emergency Management Policy Statement as detailed in page 4 of this plan was developed by operations representatives and key stakeholders. Adherence to this policy statement is vital to the success of the Operational Emergency Planning Management System.

3.4 Consultation with Stakeholders

3.4.1 Using a combination of the communication process and other methods as stated throughout this plan, all employees including contractors shall be consulted with regard to the hazards, risks and risk controls that impact on them through the particular work activity that they are performing.

3.5 Facility Specific Objectives

- To maintain a high level of preparedness;
- To respond quickly and efficiently to limit the impact of an emergency;
- To manage an emergency until the emergency services arrive and take control;
- To support emergency services with information, knowledge, skills and equipment; and
- To protect emergency responders, personnel and the community from harm.

3.6 Emergency Response Arrangements

3.6.1 Emergency Response Action Plans as detailed in Section 5 of this plan shall be posted in a prominent location at the plant. Emergency instructions shall be included in the plant specific inductions.

3.6.2 The Plant Superintendent has been nominated as the Emergency Coordinator to ensure planning and preparation in the event of an emergency is performed in accordance with the Emergency Response Action Plans.

3.6.3 Once operations have commenced a familiarisation inspection by emergency services should be undertaken.

3.6.4 The Plant Superintendent shall arrange for an emergency / evacuation exercise to test the effectiveness of the Emergency Response Action Plans and the readiness of Plant attendants within 3 months of operations commencing. The Plant Superintendent may invite participation from external parties and stakeholders to take part in exercises. A debrief shall occur after the exercise to determine and adopt lessons learnt principles.

4.0 Implementation

4.1 Training

- 4.1.1 The Plant Superintendent shall ensure that a yearly training review is carried out to identify any training requirements that are required for himself/herself or plant attendants and contractors as appropriate, e.g. refresher first aid certificate.
- 4.1.2 The outcome of the Plant Superintendent's training review shall be approved for implementation by the Manger – Treatment Process Control.
- 4.1.3 Training records shall be maintained by the Plant Superintendent.

4.2 Performance Standards Evaluation / Improvement

- 4.2.1 Performance standards against which the implementation of the Safety Management System can be measured may include:
- % emergency response action plans activated per year – Target 0
 - % of hazards identified and closed out within 7 days – Target 95%
 - % of attendant's relevant competencies attained – Target 90%..

4.3 Inspection and Testing

- 4.3.1 Inspection and testing shall be carried out using a number of methodologies and practices to ensure that material, plant, equipment, work method, protective measures and other items as necessary are in place which are fit for purpose in the case of an emergency.
- 4.3.2 Methodologies and functions shall include:
- Maintaining of Plant and Equipment
 - Monitoring of Work Activities
 - Informal Hazard Inspections
 - Formal Hazard Inspections (Audits)

Refer project specific Operations Safety Management Plan for further detail Section 7.1.

4.4 Audit / Monitoring Program

- 4.4.1 Auditing and monitoring of safety practices including emergency planning and management shall be performed as detailed in the Plant Superintendents yearly audit schedule. The audit schedule details the audit frequency and the areas or sections (including contractors) to be audited.
- 4.4.2 As a minimum the Emergency Planning Management Plan shall be audited within 3 months of operations commencement and at a frequency not > twelve monthly and within every 3 years thereafter.
- 4.4.3 The Plant Superintendent shall carry out self audits/reviews of the plant on a regular basis, where a non-conformance is found through the self audit/review process, the Plant Superintendent shall forward audit/review reports to the Manager – Treatment Process Control for review/comments.

- 4.4.4 The Plant Superintendent shall ensure any agreed deficiencies identified within audit/reviews that corrective actions are taken to the point of close out.

4.5 Investigation, Reporting and Notifications

- 4.5.1 The Plant Superintendent shall ensure all incidents including emergency response are managed in accordance with section 7.3 Incident Management of the project specific Operational Safety Management Plan (OSMP).

- 4.5.2 Section 7.3 of the OSMP details the following:

- Reporting and investigation requirements
- Incident class definitions
- Incident notification and reporting timeframes
- Reporting requirement to external parties

4.6 Management System Review (Change & Continual Improvement)

- 4.6.1 The Plant Superintendent shall collate monitoring and surveillance data, stakeholder feedback and improvement data relating to emergency planning and management. The results of the analysis are presented to management for review. The emergency planning and management system review is normally conducted as an integral part of the overall review of the plant systems. Records of such reviews are documented as minutes. Any deficiencies, corrective action or preventive action identified are managed to a point of close out by the Plant Superintendent. Records of management reviews relating to the Plant are maintained by the Plant Superintendent.

- 4.6.2 System reviews are generally carried out yearly.

5.0 Emergency Response Action Plans

5.1 Emergency Response and Evacuation

- 5.1.1 Emergency Response Action Plans shall be included as part of the Plant specific Induction and posted prominently in operations offices and amenities.
- 5.1.2 The Plant Superintendent has been nominated as the Emergency Coordinator to ensure planning and preparation in the event of an emergency is performed in accordance with this Plan. Unplanned events that may occur at the Plant that are covered in the emergency response action plans below include:
- Medical Emergency
 - Gas Leak
 - Natural Disaster
 - Chemical Spill / Hazardous Substances / Dangerous Goods
 - Explosion & Fire Emergency
 - Rescue – Confined space / At Height / Over-Under Water / Trapped
 - Moving Equipment Accident
 - Power Failure (Possibility of Emergency)
 - Public Unauthorised Entry
 - Threat of any Nature
 - Fluoride Concentrations Over 1.5 mg/L
- 5.1.3 Once operations have commenced a familiarisation inspection by emergency services should be undertaken.
- 5.1.4 The Plant Superintendent shall arrange for an emergency / evacuation exercise to test the effectiveness of responses and the readiness of operational staff and contractors. The Plant Superintendent may invite participation from external parties and providers to the exercise. A debrief shall occur after the exercise to determine and adopt lessons learnt.

5.2 Emergency Level and Classifications

5.2.1 Levels of Emergency

Emergencies can vary in scale. Information provided in Appendix 1 Risk Assessment of the OSMP will provide guidance in determining the level of emergency for a particular type of incident.

Table 5-1: Levels of Emergency

Local	Site	External
An emergency where the impacts on people, property and the environment: <ul style="list-style-type: none"> are expected to be confined to a specific location within the facility and no escalation is expected. 	An emergency where the impact on people, property and the environment <ul style="list-style-type: none"> are expected to spread to or affect parts of the facility, but not offsite. 	An emergency where the impact on people, property and the environment <ul style="list-style-type: none"> are expected to impact both within the facility and beyond the boundary of the facility.
Emergency Services MAY BE REQUIRED	Emergency Services SHOULD BE REQUIRED	Emergency Services WILL BE REQUIRED
Examples: <ul style="list-style-type: none"> leaking flange or seal small fire in kitchen 	Examples: <ul style="list-style-type: none"> pipe rupture overflowing tank 	Examples: <ul style="list-style-type: none"> uncontrolled fire explosion toxic gas release

5.2.2 Emergency Classifications

Class 1

People – Causes or has the potential to cause damage which permanently alters the future of the individual (fatality, quadriplegia, amputee, disabled or psychological disturbance).

Environment – Causes or has the potential to cause permanent environmental damage and results in remediation costs of > \$50,000.

Plant / Equipment / Property – Causes or has the potential to cause damage to plant / equipment and / or property > \$50,000.

Class 2

People – Causes or has the potential to cause an injury or disease resulting in temporary disability or time lost from work of one or more complete days or shifts.

Environment – Causes or has the potential to cause damage to the environment which can be rectified and results in remediation costs of > \$10,000 and < \$50,000.

Plant / Equipment / Property – Causes or has the potential to cause damage to plant / equipment and / or property > \$10,000 and < \$50,000.

Class 3

People – Causes or has the potential to cause an injury which inconveniences the individual such as minor cuts or sprains, but allows the person to continue to carry out normal duties.

Environment – Causes or has the potential to cause damage to the environment which can be easily rectified and results in remediation costs of < \$10,000.

Plant / Equipment / Property – Causes or has the potential to cause damage to plant / equipment and / or property < \$10,000.

5.3 Medical Emergency

Table 5-2: Medical Emergency

Actions	Responsible Person	Emergency Authorities	CHCC Notifications
Assess situation and determine course of action necessary	Plant Superintendent (Emergency Coordinator)	Ambulance	Manager – Treatment Process Control (Refer OSMP 7.3 for timeframe),
Provide first aid as necessary support as required			
Contact relevant authority (000) Ambulance, Fire Rescue and convey precise location and state of the victim.			
Provide access and egress to emergency location if practical to do so.			
Assemble Operational Team to assess damage/issues/repairs of plant as required			



5.4 Gas Leak

NOTE: A Hazard and Operability Study (HAZOP) has been carried out by operations staff and key stakeholders. The study identified numerous chlorine gas safeguards which were successfully worked into the final design, these included:

- leak detection system
- SCADA system alerts
- automated emergency services e-mail notification
- ventilation system maybe activated / deactivated externally
- Plant siren installed for emergency evacuation.

Table 5-3: Gas Leak

Actions	Responsible Person	Emergency Authorities	CHCC Notifications
Raise the alarm and notify Emergency Services if required.	Plant Superintendent (Emergency Coordinator)	Advise emergency services as required.	Manager – Treatment Process Control (Refer OSMP 7.3 for timeframe).
Raise Plant evacuation siren if not automatically set off.			
Assess hazard zone – determine course of action necessary and initiate control measures.			
Emergency evacuation to be initiated if necessary.			
Follow directions given by Emergency Coordinator and emergency service personnel.			
In the event of a major uncontrollable leak there is only one course of action to be taken: <ul style="list-style-type: none"> • Evacuate the plant and hand over to emergency services and provide assistance. 			

5.5 Natural Disaster (e.g. flood, storm, earthquake)

Table 5-4: Natural Disaster

Actions	Responsible Person	Emergency Authorities	CHCC Notifications
Try to remove personnel and equipment from immediate danger	Plant Superintendent (Emergency Coordinator)	Contact emergency services as required.	Manager – Treatment Process Control (Refer OSMP 7.3 for timeframe).
Isolate any dangerous equipment, hazardous substances or areas of buildings if safe to do so			
Assemble Operational Team to assess vacating plant/ damage/issues/repairs of plant as required.			

5.6 Chemical Spill / Hazardous Substances / Dangerous Goods

Table 5-5: Chemical Spill / Hazardous Substance / Dangerous Goods

Actions	Responsible Person	Emergency Authorities	CHCC Notifications
Raise the alarm – notification to Emergency / Environmental Services if required	Plant Superintendent (Emergency Coordinator)	Advise emergency services as required.	Manager – Treatment Process Control (Refer OSMP 7.3 for timeframe).
Secure the area – establish hazard zone			
Approach with care – beware of vapours and gases, approach from upwind			
Identify products – look for signage, and Operations & Maintenance Manual and Material Safety Data Sheets.			
Assess situation – determine course of action necessary and initiate control measures IF SAFE TO DO SO.			
Evacuation procedure to be initiated if necessary			
Follow directions given by Emergency Coordinator and emergency service personnel			
In the event of a major spill or leak there are three courses of action to be taken:			
<ul style="list-style-type: none"> • Containment of the spill or leak. 			
<ul style="list-style-type: none"> • Recovery and disposal of the materials used to contain or clean up the spill or leak. • Evacuate the plant and hand over to emergency services. 			
Assemble Operational Team to assess vacating plant/damage/issues/repairs of plant as required.			

5.7 Explosion and Fire Emergency

Table 5-6: Explosion and Fire Emergency

Actions	Responsible Person	Emergency Authorities	CHCC Notifications
Assist any person in immediate danger, if safe to do so.	Emergency Coordinator (Plant Superintendent)	Advise Fire Brigade and Police Note: Ask for Fire Brigade Rescue Unit if an injured person is in a confined space or trapped.	Manager – Treatment Process Control (Refer OSMP 7.3 for timeframe)
Close doors to isolate fire.			
Notify Emergency Services.			
Use fire fighting equipment to attack fire, only IF SAFE TO DO SO .			
Evacuate under direction of Emergency Coordinator (Plant Superintendent) and remain in evacuation assembly area until advised otherwise.			
Follow directions given by Emergency Coordinator (Plant Superintendent) or emergency service personnel.			
Take samples of any contaminated water leaving the site if time permits.			
Provide assistance to the Fire Brigade who will assume control of the site.			
Assemble Operational Team to assess vacating plant/damage/issues/repairs of plant as required.			



5.8 Rescue – Confined Space / At Height / Over-Under Water / Trapped

- Identify location of person requiring rescue and potential access/egress limitations.
- Contact Emergency Services through fire brigade – specifically specific rescue team required and the nature of the rescue, e.g. confined space, trapped, at height.
- Ascertain if any person/s injured – if yes, request Ambulance.
- Initiate rescue if possible and safe to do so.
- Handover control of rescue to emergency services and deploy resources as applicable to support emergency personnel.

Table 5-7: Rescue – Confined Space / At Height / Over-Under Water / Trapped

Actions	Responsible Person	Emergency Authorities	CHCC Notifications
Identify location of person requiring rescue and potential access/egress limitations	Plant Superintendent (Emergency Coordinator)	Advise Fire Brigade if required.	Manager – Treatment Process Control (Refer OSMP 7.3 for timeframe)
Contact Emergency Services through fire brigade – specify rescue team required and the nature of the rescue, e.g. confined space, trapped, at height.			
Ascertain if any person/s injured – if yes, request Ambulance.			
Initiate rescue if possible and safe to do so.			
Handover control of rescue to emergency services and deploy resources as applicable to support emergency personnel.			



5.9 Moving Equipment Accident

Table 5-8: Plant or Car Accident

Actions	Responsible Person	Emergency Authorities	CHCC Notifications
Remove other personnel from area and secure.	Emergency Coordinator (Plant Superintendent)	Advise Ambulance and Police. Note: Ask for Fire Brigade Rescue if an injured person is trapped.	Manager – Treatment Process Control (Refer OSMP 7.3 for timeframe)
Apply first aid if necessary.			
Contact Emergency Services if required.			
Notify the Emergency Response Coordinator (ERC) of the incident requiring emergency response			
Emergency Coordinator (Plant Superintendent) attends incident site and coordinates emergency response and recovery until Emergency Services arrive.			
Assist Emergency Services as necessary and/or follow directions and provide assistance.			
Quarantine the scene for investigative purposes.			

5.10 Power Failure (Possibility of Emergency)

Table 5-9: Power Failure for Extended Period

Actions	Responsible Person	Emergency Authorities	CHCC Notifications
<p>Contact Electricity Authority to determine how long supply will be off.</p> <p>Provide 'Metering Point' and 'Meter Number'</p> <p>Note that the generator will cut in automatically when power fails. This is also monitored on plant system.</p>	<p>Plant Superintendent (Emergency Coordinator)</p>	<p>Country Energy 132 080</p>	<p>Manager – Treatment Process Control (Refer OSMP 7.3 for timeframe)</p>
<p>Generator will have to be refuelled within 12 hours if power failure is extended.</p>			
<p>When Power Supply is returned, shutdown generator should be refuelled as required. Contact Plant Superintendent to ensure the generator is checked and serviced as required.</p>			

5.11 Public Unauthorised Entry

Table 5-10: Public Unauthorised Entry

Actions	Responsible Person	Emergency Authorities	CHCC Notifications
Contact Plant Superintendent and try to isolate intruder(s).	Plant Superintendent	Advise Police if required	Manager – Treatment Process Control (Refer OSMP 7.3 for timeframe)
Contact Police if required			
Assemble Operational Team to assess damage/issues/repairs of plant as required			



5.12 Threat of any Nature

THREAT RECORDING FORM

In the event that Council receives a threat of any kind, the following must be filled in.

If the threat is received by phone, remain calm and try to keep the caller on the line. *This form must be kept at the Switchboard and in the Plant Superintendents office.*

Who received the threat?		Location	Time	Date
How was the threat received? Post <input type="checkbox"/> Telephone <input type="checkbox"/> Delivery <input type="checkbox"/> Note <input type="checkbox"/> Other <input type="checkbox"/>				
Did the person identify themselves?				
Threat details				
What is the threat?	Contamination <input type="checkbox"/> Biological <input type="checkbox"/> Chemical <input type="checkbox"/> Bomb / explosive <input type="checkbox"/> Threat to tamper <input type="checkbox"/> Personal physical violence <input type="checkbox"/> Other <input type="checkbox"/> (explain)			
What is the source of the threat? (contaminant type, quantity, etc)				
When is it going to happen?				
Where is it going to happen?				
Why are you doing this?				
Does caller appear familiar with Council area by description of threat location?				
Identity of the caller	Sex Male <input type="checkbox"/> Female <input type="checkbox"/>	Age Young <input type="checkbox"/> Old <input type="checkbox"/>	Accent Local <input type="checkbox"/> Foreign <input type="checkbox"/> Origin?	
Caller's voice Soft <input type="checkbox"/> Calm <input type="checkbox"/> Slow <input type="checkbox"/> Fast <input type="checkbox"/> Angry <input type="checkbox"/> Loud <input type="checkbox"/> Deep <input type="checkbox"/> Laughing <input type="checkbox"/> Slurred <input type="checkbox"/> Normal <input type="checkbox"/> Nasal <input type="checkbox"/> Lisp <input type="checkbox"/> Stutter <input type="checkbox"/> Cracking <input type="checkbox"/> Other <input type="checkbox"/>				
Language Foul <input type="checkbox"/> Illiterate <input type="checkbox"/> Well spoken <input type="checkbox"/> Incoherent <input type="checkbox"/> Irrational <input type="checkbox"/> Familiar? (who did it sound like?)				
Background noise (describe) Music <input type="checkbox"/> Voices <input type="checkbox"/> Machinery <input type="checkbox"/> Street noises <input type="checkbox"/> Animals <input type="checkbox"/> Children <input type="checkbox"/> Office <input type="checkbox"/> Traffic <input type="checkbox"/> Other <input type="checkbox"/>				
Origin of call? Local <input type="checkbox"/> STD <input type="checkbox"/> Mobile <input type="checkbox"/> Other <input type="checkbox"/>			Is the call connection clear? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Emergency action taken? (including notification to authorities)				

On completion of this Form you must distribute a copy immediately to your Manager, Director and the General Manager.

5.13 Fluoride Concentrations Over 1.5mg/L

5.13.1 Purpose of this Plan

The purpose of this Emergency Response Plan is to outline:

- Procedures for shutting down the fluoridation equipment in the event of overdosing
- Actions required to identify and rectify problems
- Actions required to advise and protect the public in the event of an overdosing event
- Reporting protocols including a clear chain of command and designated responsibility

It is important to manage the addition of fluoride into Coffs Harbour's potable water supply as overdosing can have adverse impact on the health of consumers. Therefore this procedure describes the preventative measures in place to prevent overdosing of the supply and also details the response process to be taken should it occur.

The fluoride operating target in treated water is 1mg/L. Over a calendar year, greater than 95% of all routine fluoride samples are to fall within the operating range of 0.9 to 1.5mg/L. At no time is the fluoride concentration to exceed 1.5 mg/L in the treated water. If it is exceeded, the following Emergency Response in 5.13.3 shall be followed to minimise fluoride concentrations over 1.5 mg/L reaching consumers.

5.13.2 Controls to Prevent Overdosing

To prevent the overdosing of fluoride there is a online fluoride analyser to monitor fluoride concentrations as potable water is transferred to the treated water storage tank. This is further confirmed by the daily manual testing of fluoride concentrations at the Treatment Plant Laboratory.

The fluoride dosing system conducts cross-checking for any significant discrepancy in fluoride levels and usage and if there is a discrepancy, an alarm is raised on the SCADA system. The discrepancy alarms are:

- Fluosilicic Acid Storage Tank Level Discrepancy
- Fluoride Day Tank Weight / Volume Discrepancy
- Daily Fluoride Weight / Volume Usage Discrepancy
- Fluoride Dosing Point Flow Discrepancy

The fluoride dosing system is designed so that In the event of abnormal operation or during fault conditions, the fluoride dosing system shuts down or if the fluoride analyser detects a 'High' Fluoride level (i.e. 1.5 mg/L) the WTP is shut down. For more information on the fluoride dosing system refer to the Coffs Harbour Water Treatment Plant Functional Specification - Fluoride Dosing System, Coffs Infrastructure Alliance.

5.13.3 Emergency Response

Table 5-11: Emergency Response Plan for Fluoride Overdose

Actions	Responsible Person	External Authorities	CHCC Notifications
1. Sample the outlet of the WTP treated water storage tank.	Plant Superintendent (Emergency Coordinator)	Manager – Treatment Process Control	Manager – Treatment Process Control
2. If the fluoride concentration is over 1.5 mg/L, shut down the fluoridation plant if it has not automatically done so and stop all potable water leaving the treated water storage tank.			
3. Sample the outlet of the Red Hill Balance Tank.			
4. If the fluoride concentration is over 1.5 mg/L at the outlet of Red Hill Balance Tank, this is an overdosing incident.			
5. Notify your Supervisor			
6. Determine the reason for the overdose and immediately attempt to correct/repair. Refer to 5.13.5.			
7. Isolate all downstream reservoir outlets and test fluoride concentrations at reservoir and in various locations in the reticulation system to determine the extent of the overdosing event. Record this information.			
8. Depending on the results scour affected reservoirs and reticulation systems to bring fluoride concentrations to safe levels.			
9. If the testing confirms that the overdose has reached consumers immediate alerts must be released to inform the community. Refer to 5.13.6.			
10. Notify the Water Unit NSW Health. Refer to Notification and Reporting Protocol 5.13.7.			
11. Notify CHCC of Incident. Refer to 5.13.7.3			
12. Closely monitor the fluoride concentration in the treated water.			
13. Initiate Incident Investigation and Improvement. Refer to 5.13.8.			
14. Submit Form 5 – Fluoridation Dosing Incident Notification to the Water Unit NSW Health within three (3) working days. Refer to 5.13.7.2			

5.13.4 Shut Down Procedure for Fluoridation Equipment

If a 'High' Fluoride level (i.e. 1.5 mg/L) is detected by analyser 227-AIT-34, the WTP is shut down.

In abnormal operation, or during fault conditions, the fluoride dosing system shuts down rather than continuing to operate and potentially overdosing. Abnormal operation includes discrepancy between required flow rate and actual flow rate based on primary flow measurement, as well as discrepancy between required flow rate and actual flow rate based on the secondary flow rate. If the fluoride dosing system is faulted and shuts down, then the WTP continues to operate.

Table 5-11 below is derived from the Coffs Harbour Water Treatment Plant Functional Specification - Fluoride Dosing System, Coffs Infrastructure Alliance. In the table it lists the faults that will trigger a shutdown sequence of the fluoride dosing system.

Table 5-12 - Fluoride Dosing System PLC Generated Alarms (Not related to a drive)

	Device	Descriptor	Fault	Time Delay	Latch	Action
1		Fluoride Dosing Sequence	Fluoride Service Water Valve (290-XV-13) Failed To Open	0s	Yes	<ul style="list-style-type: none"> ➤ Generate Fluoride Service Water Valve Failed To Open Alarm ➤ Close Valve ➤ Shutdown Sequence
2		Fluoride Dosing Sequence	Fluoride Service Water Valve (290-XV-13) Open And Fluoride Service Water Flow Low (290-FSL-14)	0-30s	Yes	<ul style="list-style-type: none"> ➤ Generate Fluoride Service Water Flow Low Alarm ➤ Close Valve ➤ Shutdown Sequence
3		Fluoride Dosing Sequence	Fluoride Day Tank Level (290-LIT-02) Low Low	0-10s	Yes	<ul style="list-style-type: none"> ➤ Fluoride Day Tank Level Low Low Alarm ➤ Shutdown Sequence
4		Fluoride Dosing Sequence	Fluoride Day Tank Weight (290-WIT-03) Low Low	0-10s	Yes	<ul style="list-style-type: none"> ➤ Fluoride Day Tank Weight Low Low Alarm ➤ Shutdown Sequence
5		Fluoride Dosing Sequence	Fluoride Dose Rate by Weight (C410010) > {Fluoride Dose Rate (X410001) + Fluoride Dose Rate Tolerance (X410008)}		Yes	<ul style="list-style-type: none"> ➤ Generate Fluoride Dose Rate Discrepancy (High) Alarm ➤ Shutdown Sequence

5.13.5 Actions required to identify and rectify problems

To determine the cause of the overdosing incident access the Karangi WTP SCX SCADA system. Navigate to the System tab, plant Start and Stop tab and select Faults. This will list the sections of the Water Treatment Plant showing what has shut down. Use this information along with the Coffs Harbour Water Treatment Plant Functional Specification - Fluoride Dosing System to identify and rectify the problem.

5.13.6 Communication with Consumers and Media

If the overdose reaches consumers immediate alerts must be released to inform the community that the water is unsafe to consume or use. Notification can be by direct contact, phone calls, news, radio and television. It is also important to consider options on how to provide customers with safe drinking water.

High risk uses listed below must be notified immediately as their water supply may be contaminated or cease during rectification:

- Hospitals and aged care facilities
- Primary, secondary and pre schools
- Dialysis patients

Consumers should be advised that they listen for media updates and that reticulated water not used or consumed until the Council advises that fluoride concentrations are back to safe levels.

5.13.7 Notification and Reporting Protocol

5.13.7.1 Notification of Incident to External Authorities

In the event of the fluoride concentration exceeding 1.5mg/L in the treated water entering the distribution system, the Manager – Treatment Process shall follow the Fluoride Communication Protocol Diagram as illustrated in Figure 5-1.

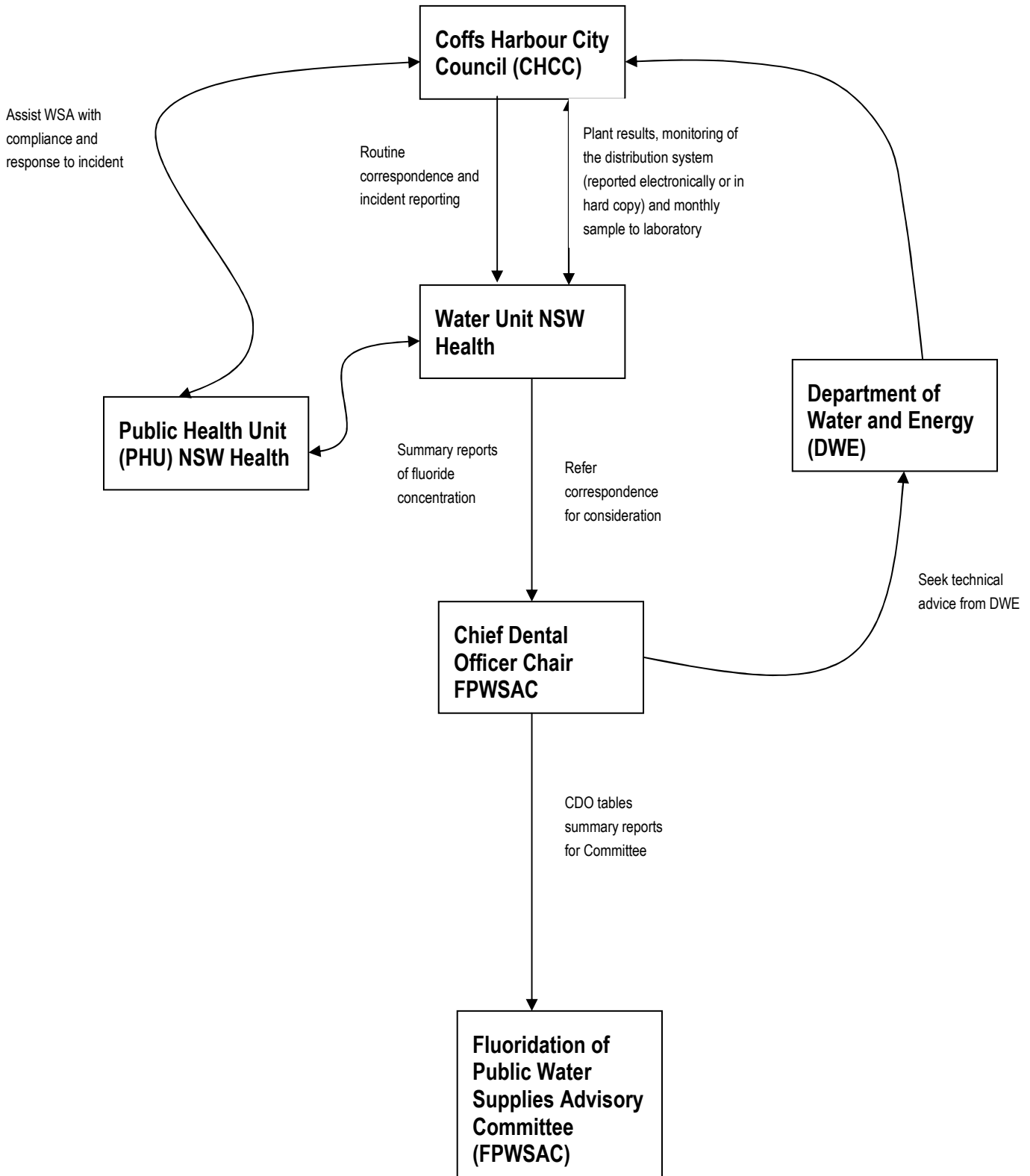
Routine correspondence and enquiries relating to the Code of Practice should be directed to the Water Unit NSW Health. The Water Unit will refer enquiries to the Chief Dental Officer for consideration as appropriate. Correspondence should be addressed to:

Manager, Water Unit
NSW Department of Health
PO Box 798
GLADESVILLE NSW 211

Telephone 02 9816 0589
Fax 02 9816 0377
Email waterqual@dol.health.nsw.gov.au



Figure 5-1: Fluoride Communication Protocol Diagram



5.13.7.2 Exception Reporting

Following the incident of fluoride concentrations exceeding 1.5mg/L in the treated water entering the water distribution system, the Manager Treatment Process shall submit Form 5 – Fluoridation Dosing Incident Notification to the Clerical Officer of the Water Unit NSW Health within 3 working days.

Other incidents requiring notification within three (3) working days to the Water Unit NSW Health include:

- Failure to fluoridate (greater than 24 hours)
- Underdosing incident resulting in fluoride below the minimum concentration in the Instrument of Approval (greater than 24 hours)

The notification should include details of the incident (extent, times, water volume affected etc), what remedial action has been taken, and what actions intend to be taken to minimise the risk of the same incident occurring again.

5.13.7.3 Notification and of Incident – Internally to Coffs Harbour City Council

All incidents must be reported. Every person who carries out work for or on behalf of Council has responsibility for this.

The forms used for reporting the above are;

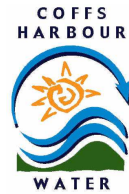
- Incident Report, and
- Incident Investigation Form.

These forms can be sourced from the document Incident, Hazard, Improvement Reporting and Investigation Procedure on Coffs Harbour City Council's QSE system.

5.13.8 Incident Investigation and Improvement

For internal incident investigation and incident improvement procedures refer to Incident, Hazard, Improvement Reporting and Investigation Procedure on Coffs Harbour City Council's QSE system.

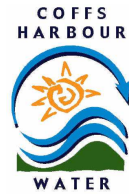
Following an overdosing event, a number of external authorities as shown in Figure 5-1 will be involved in incident investigation and improvements to prevent the incident occurring again.



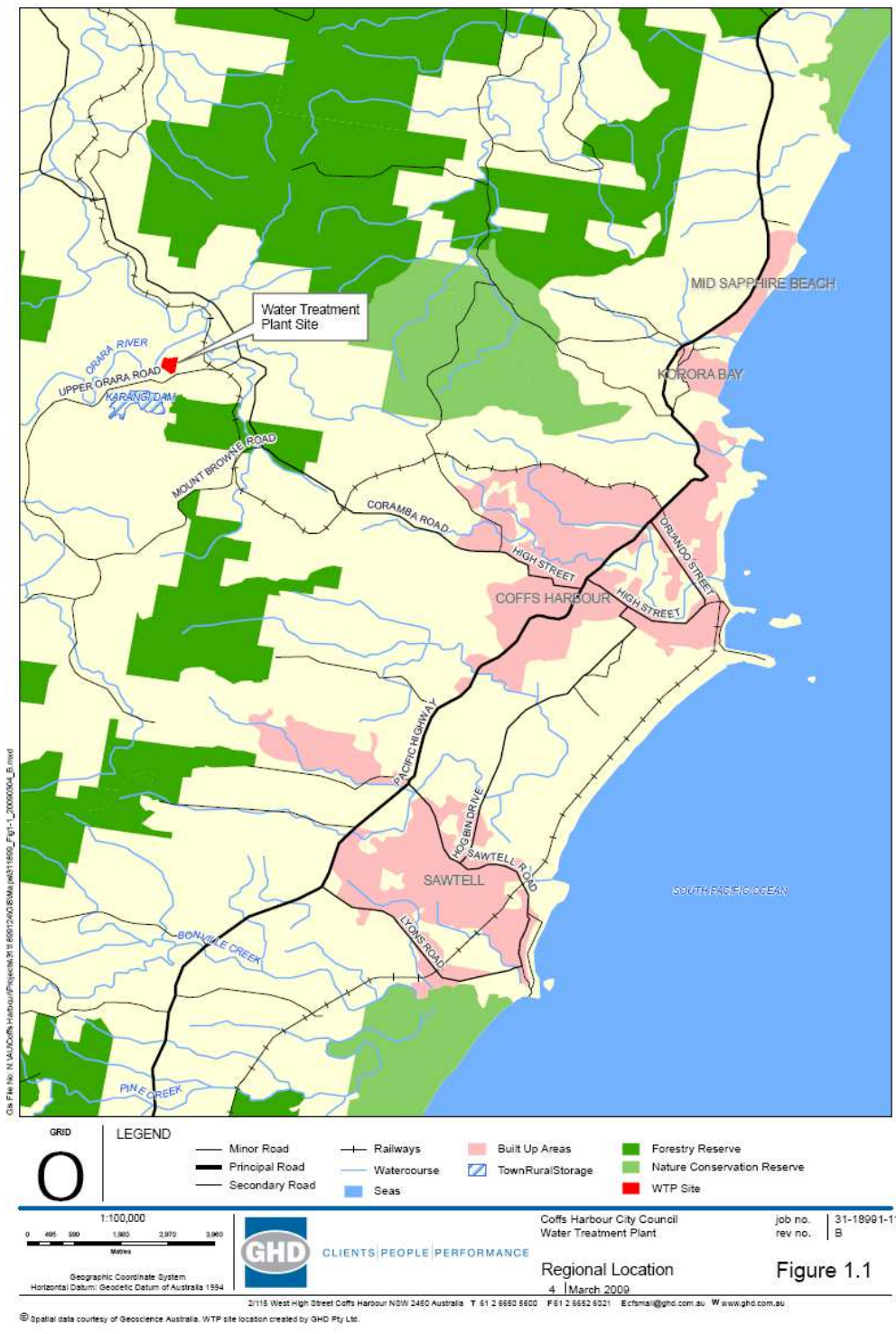
Appendix 1 Emergency Response Contacts List

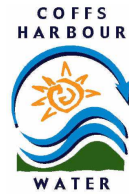


EMERGENCY CONTACT PHONE NUMBERS		
CONTACT	Bus. Phone No.	After Hours Phone No.
COFFS HARBOUR WATER		
Treatment Process Control – Adam Wilson	(02) 6648 4498	0427 409 612
Water Treatment Plant – Superintendent – Les Potter	(02) 6648 4498	0429 411 935
COFFS HARBOUR CITY COUNCIL WATER TREATMENT PLANT CONTACTS		
City Services – Director – Jason Gordon	(02) 6648 4401	0419 425 681
Coffs Harbour Water – Executive Manager – Simon Thorn	(02) 6648 4470	0428 484 470
OTHER EMERGENCY CONTACTS		
POLICE	000	000
AMBULANCE	000	000
Workplace Health and Safety	1300 369 915	1300 369 915
FIRE - Control Centre (Sydney)	000	000
HOSPITALS	(02) 6656 7000	(02) 6656 7000
ELECTRICITY	13 6262	13 6262
TELSTRA	13 2203	13 2203
ENVIRONMENT PROTECTION AGENCY (DECC)	1300 130 372 / 131 555	1300 130 372 / 131 555
WATER UNIT NSW HEALTH	(02) 9816 0589	



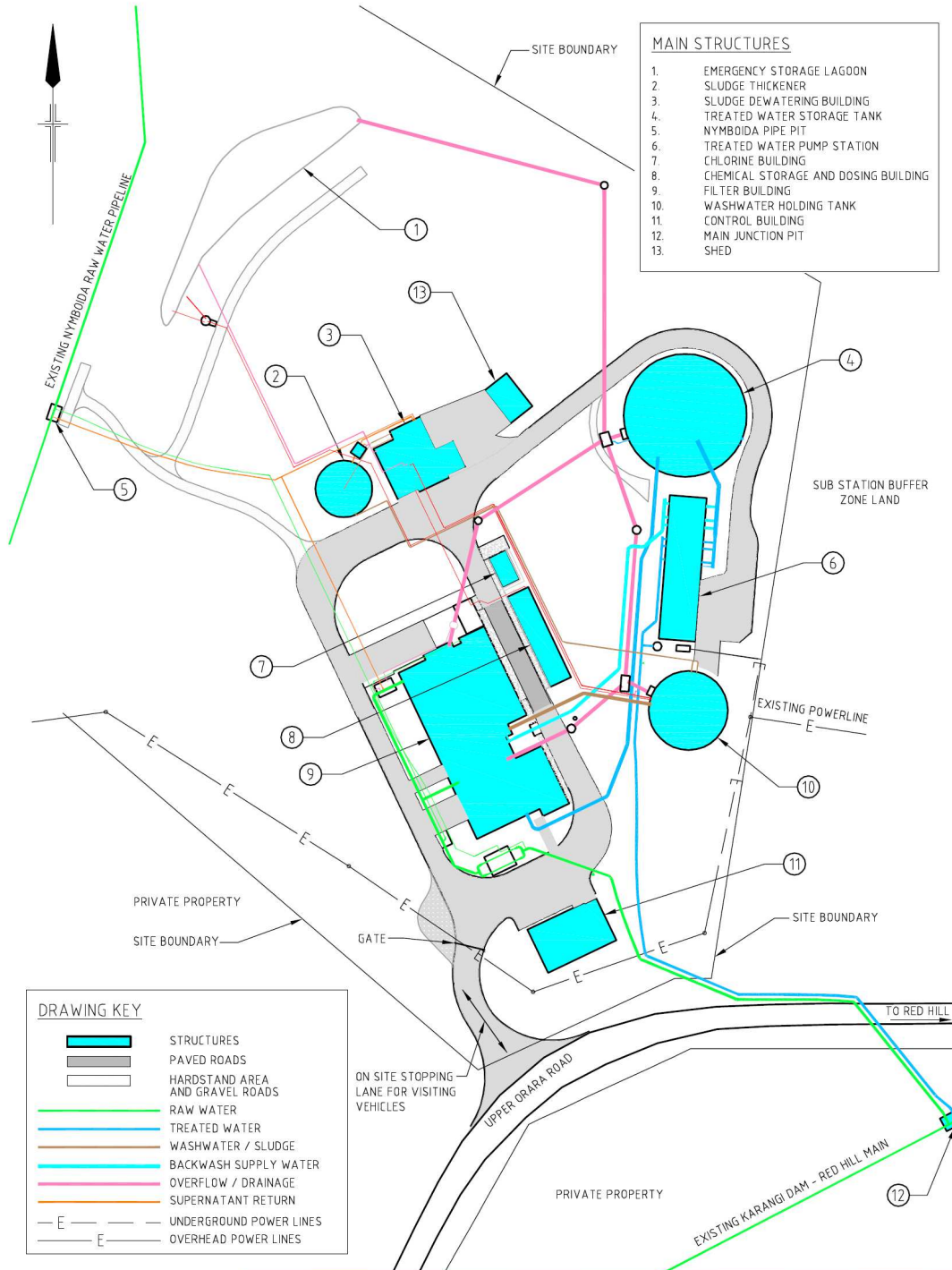
Appendix 2 Operations Location Plan





Appendix 3 Operations Layout Plan

Operations Layout Plan



COFFS INFRASTRUCTURE ALLIANCE
 Level 5, 145 Eagle St Brisbane
 QLD 4000 Australia
 GPO Box 668 Brisbane QLD 4001
 T 61 7 3316 3000 F 61 2 5219 7772
 E cmail@cia.optusnet.com



CLIENTS | PEOPLE | PERFORMANCE

COFFS HARBOUR CITY COUNCIL
 WATER TREATMENT PLANT
OVERALL SITE LAYOUT

job no. 31-18991
 rev no.

scale | N.T.S. for A4 date | 25/02/09

Level 8, 180 Lonsdale Street Melbourne VIC 3000 Australia T 61 3 8687 8000 F 61 3 8687 8111 E meilmail@ghd.com.au W www.ghd.com.au

Plot Date: 25 February, 2009 - 2:15 PM

Cad File No: FIGURE-EA-1.5.dwg



Appendix 4

Emergency Response Personnel Responsibilities Matrix

Appendix 4 – Emergency Response Personnel Responsibilities Matrix

The following matrix summarises the main activities which must be undertaken, the positions that have primary responsibility to undertake the activities and the positions that are required to provide support or assistance.

Emergency Description.	Executive Manager – Coffs Harbour Water	Manager – Treatment Process Control	Plant Superintendent	Attendants / Contractors	Police	Ambulance	Workplace Health & Safety	Fire	Hospitals	Electricity	Telstra	Environment Protection Agency (DECC)
Medical Emergency (Refer 5.3)		S	P	S		ES						
Gas Leak (Refer 5.4)		S	P	S	ES							
Natural Disaster (Refer 5.5)		P	S	S	ES							
Chemical Spill / Hazardous Substances / Dangerous Goods (Refer 5.6)		S	P	S	ES							
Explosion & Fire Emergency (Refer 5.7)		S	P	S				ES				
Rescue – Confined Space / At Height / Over-Under Water / Trapped(Refer 5.8)		S	P	S		ES		ES				
Moving Equipment Accident (Refer 5.9)		S	P	S		ES						
Power Failure (Possibility of Emergency) (Refer 5.10)		S	P	S						ES		
Public Unauthorised Entry (Refer 5.11)		S	P	S	ES							
Threat of any Nature (Refer 5.12)	S	P	S	S	ES							
Fluoride Concentrations Over 1.5 mg/L (Refer to 5.13)	S	P	S									
LEGEND												
P = CHCC Lead S = CHCC Support ES = Emergency Services												

Appendix 5

Definitions, References and Abbreviations

A5-1 Definitions

Emergency situation	<p>The diverse nature of industries implies that the system developed by one facility to manage an emergency may not be appropriate for another facility. Even the basic definition of an emergency situation may differ from facility to facility.</p> <p>This definition should also identify the types of incident or circumstance that do not constitute an emergency and the point at which an emergency ceases to be an emergency. A facility's definition of an emergency should be distinguished from, and yet complementary with, the use of the term by Police, Fire and other emergency services. The term, as used by the emergency services, will apply not only to events involving hazardous materials in industry but also to a wider range of conceivable incidents.</p> <p>Their sense of the term (and similar expressions such as 'emergency situation') is derived from definitions in relevant legislation and associated policies for determining whether a particular incident or circumstance is to be considered as an emergency.</p>
Emergency	<p>as defined by the NSW State Emergency Management and Rescue Act (SERMA), 1989, means an emergency due to actual or imminent occurrence (such as fire, flood, storm, earthquake, explosion, epidemic or warlike action) which:</p> <p>(a) endangers, or threatens to endanger, the safety or health of persons or animals in the State; or</p> <p>(b) destroys or damages, or threatens to destroy or damage, any property in the State, being an emergency which requires a significant and coordinated response.</p> <p>For the purposes of the definition of "Emergency", property in the State includes any part of the environment of the State. Accordingly, reference to:</p> <p>(a) threats or danger to property includes a reference to threats or danger to the environment, and</p> <p>(b) the protection of property includes a reference to the protection of the environment.</p> <p>a definition of an emergency situation is necessary because an emergency plan is only activated in an emergency situation and de-activated when the emergency situation ceases to exist.</p> <p>For the purpose of this plant specific Operational Emergency Planning Management Plan the definition of what constitutes an emergency at the facility (i.e. a situation, which activates and de-activates the emergency plan), is as follows:</p> <ul style="list-style-type: none">• a hazardous situation (or threat of a hazardous situation) which requires action to control, correct and return the site to a safe condition and also requires timely action to protect people, property and the environment from harm. The level at which a hazardous situation should be regarded as an emergency

A5-2 References

OH&S Management Systems:

AS 4801 OH&S management systems – Specification with guidance for use

Other Standards:

US Standard 29 CFR 1910 OS&H standards

Hazardous Industry Planning Advisory Papers (HIPAPs):

- No. 1 Industry Emergency Planning Guidelines
- No. 2 Fire Safety Study Guidelines
- No. 3 Environmental Risk Assessment Guidelines
- No. 4 Risk Criteria for Land Use Planning
- No. 5 Hazard Audit Guidelines
- No. 6 Guidelines for Hazard Analysis
- No. 7 Construction Safety Studies
- No. 8 HAZOP Guidelines
- No. 9 Safety Management System Guidelines
- No. 10 Land Use Safety Planning (Consultation Draft)

Other Publications:

Applying SEP 33: Hazardous and Offensive Development Application Guidelines

Multi-level Risk Assessment

Locational Guideline: Development in the Vicinity of Operating Coal Seam Methane Wells

Liquefied Petroleum Gas Automotive Retail Outlets

Code of Practice for Fluoridation of Public Water Supplies 2002

Fluoridation of Public Water Supply Act 1957

Coffs Harbour Water Treatment Plant Functional Specification, Fluoride Dosing System

CHCC Incident, Hazard, Improvement Reporting and Investigation Procedure



Other in use documentation:

- | | |
|--------------------|--|
| Woolgoolga | - Water Reclamation Plant (WRP) Emergency Plan |
| 4 February 2009 | - Plant Specific Risk Assessment |
| John Holland Group | Various Design & Construction Safety system related documents. |

A5-3 **Abbreviations**

OEPMP	Operations Emergency Planning Management Plan
ERC	Emergency Response Coordinator
HAZOP	Hazard and Operability
HIPAP's	Hazardous Industry Planning Advisory Papers
ITP	Inspection and Test Plan
NCR	Non Conformance Report
NSW	New South Wales
OH&S	Occupational Health & Safety
OHS&R	Occupational Health Safety & Rehabilitation
OSMP	Operation Safety Management Plan
SERMA	State Emergency Management and Rescue Act
SWMS	Safe Work Method Statement
WRP	Water Reclamation Plant