Procedure

Incident Investigation

Document number: PRO-00793

Rev no.	Description	Process Owner			Approved for issue			
		Position	Name	Signature	Position	Name	Date	Signature
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SOURCE STORE SUPPLY

Contents

1. Purpose

Seqwater is committed to continuous improvement within our business. The purpose of this procedure is to standardise processes and responsibilities in relation to the notification and investigation of incidents with the aim of ensuring:

- incidents are investigated to the extent necessary, to determine the root causes and contributing factors, and to identify actions which aim to:
  - eliminate or minimise identified hazards or risks as far as reasonably practicable
  - prevent reoccurrence of incidents
  - imbed Seqwater values
  - challenge work processes that need improvement.
- Investigations should be conducted in a manner that provides a consistent approach, with assurance that any recommendations are actionable and based on reliable evidence.
- This procedure supports the requirements of Element 14 – Incidents and Issue Management as detailed in Corporate Management System Manual (MAN-00004) for all quality systems.

2. Scope

This procedure applies to all incidents notified under MAN-00276 Emergency Management Manual work activities within Seqwater.

The incident investigation methodology to be used by Seqwater is based upon the Incident Cause Analysis Method (ICAM).

This procedure does not replace incident and emergency response procedures described by the Emergency Management Manual (MAN-00276) and required under the Bulk Authority Emergency Response Plan (ERP-00001).

3. Roles and responsibilities

Term	Definition
General Managers	• Promote a continuous improvement culture by facilitating processes to investigate incidents that view human errors, process failure or component failure as an opportunity to learn • Review findings from investigation reports to ensure as far as reasonably practical that recommendations are appropriate and adequately address improvements to the identified risk(s) • Review and approve the classification of High Potential Incidents in consultation with relevant managers and subject matter experts (SMEs) • Allocate appropriate resources to investigate assigned incidents within designated timeframes • Approve investigation report findings within their area of responsibility
Managers	• Promote a positive culture by supporting processes around investigations being conducted in a manner which views human errors as an opportunity to learn • Communicate with workers regarding the investigation process outcomes, including key lessons learnt through incident investigations • Provide appropriate resources to adequately investigate all incidents within designated timeframes. • Make recommendations to the General Manager in relation to the classification of High Potential Incidents in consultation with the SME Manager • Consult with lead investigators around following this procedure to guide consistent incident investigation outcomes.
Team Leader/Supervisor	• Where a notifiable or high potential incident has occurred, ensure as far as reasonably practical that the incident scene is preserved and any emergency response taken to control the incident is documented • Support affected personnel and prevent reoccurrence following an incident • Participate and actively contribute to the investigation process as required • If required, direct workers involved in the incident to be tested for substance use in accordance with the Managing Alcohol and Other Drugs Procedure (PRO-01105) • Provide workers involved in the incident or investigation processes with Employee Assistance Program (EAP) support as required • Communicate information in relation to key learning's to staff and actions identified through incident investigations.

Term	Definition
Subject Matter Expert (SME) Manager	• Appoint an appropriately qualified incident investigation team in consultation with the relevant General Manager/Manager as per Appendix B • Utilise risk wizard to capture the incident investigation outcomes enabling analysis of incidents, contributing factors, corrective actions and effective risk analysis • Where appropriate, seek legal advice from Seqwater's legal services team prior to commencing, or at any necessary stage of the investigation • Understand competency requirements for personnel involved in incident investigations including training in ICAM methodology and Seqwater's incident investigation requirements • Report investigation findings to the relevant manager and responsible general manager • Communicate incident investigation outcomes to Executive Leadership Team, Board and other stakeholders as required • Monitor and verify the close-out of corrective actions
Subject Matter Expert (SME) Coordinator/Principal	• Appoint an appropriately qualified incident investigation team in consultation with the relevant Manager/Team Leader in accordance with Appendix B • Consult with lead investigators around following this procedure to guide consistent incident investigation outcomes • Seek legal advice where appropriate with Seqwater's legal services team prior to commencing, and at any necessary stage of the investigation • Report investigation outcomes to the responsible Manager/Team Leader within agreed timeframes • Maintain and administer a database of incident investigation outcomes enabling analysis of incidents, contributing factors, corrective actions and effective risk analysis • Monitor and verify the close-out of corrective actions
Seqwater Legal Services	• Provide advice in relation to the provision of information to, or investigations by, Workplace Health and Safety Queensland (WHSQ), the Electrical Safety Office (ES), Department of Environment and Heritage Protection (DEHP) or other external parties
Lead Investigator	• Conduct and lead the investigation in accordance with this procedure • Lead the investigation to determine the immediate and underlying causes • Compile the investigation report using the recommended template as per Appendix B and file in Seqwater's records management system (TRIM) • Review documented recommendations with the relevant Manager/Team Leader so that all are accepted and agreed

Term	Definition
	to by the relevant parties • Submit the investigation report within the allocated timeframe • Record investigation outcomes in risk wizard to enable the analysis of incidents, contributing factors, corrective actions and effective risk analysis • Report findings to relevant persons as per Appendix B
Investigation team members	• Actively participate in the investigation process and take reasonable direction from the lead investigator.
Workers	• Participate in incident investigations • Participate in testing for alcohol and other drugs in accordance with the Managing Alcohol and Other Drugs Procedure (PRO-01105) • Cooperate and assist with implementation of improvement actions ensuing from investigations

4. Procedure

4.1 Incident Response

The first person aware of an incident must act, where safe to do so, to prevent further harm to people, product quality or supply, the environment, property, reputation or a combination of these, and then must:

- immediately notify the relevant Team Leader/Manager
- immediately telephone Seqwater's Incident Hotline (07) 3270 4040
- preserve the incident scene (refer to section 4.2 specific details)

The responsible Team Leader/Manager upon being notified of the incident shall provide direction to staff to complete the following actions:

- assess the situation and provide assistance and resources where necessary
- confirm that appropriate action has been taken to the extent practicable to prevent further harm
- determine the actual and potential severity of the incident and notify the Incident Hotline and other relevant stakeholders
- follow the relevant incident and emergency response plan (IERP) when it is an emergency
- where a notifiable or high potential incident has occurred, preserve the incident scene to obtain any relevant evidence (refer to section 4.2 for more details)
- document any initial response taken to control the incident
- if required, direct workers involved in the incident to be tested for substance use in accordance with the Managing Alcohol and Other Drugs Procedure (PRO-01105) and offered Employee Assistance Program (EAP) support.

4.2 Preserve the incident scene

Preserving the incident scene enables the collection of evidence to ensure the outcomes of the investigation are factual and enable the identification of causes.

In the case of a notifiable or high potential incident, the first person aware or any other worker involved must facilitate events at the incident scene so that equipment, plant, process, machinery or other associated plant connected with the incident are not disturbed without the permission of the manager or regulator (WHS/Environment). This does not prevent any action:

- to assist an injured person
- to allow an authorised person to remove a deceased person
- to make the site safe or to minimise the risk of a further notifiable incident
- that is associated with a police investigation
- for which an inspector or the regulator has given permission
- to preserve environmental protection
- to maintain water quality for downstream distribution

Work must be stopped until the risk of another or further incident is determined and hazards and risks are managed so far as reasonably practicable.

As soon as possible, capture critical information to facilitate the accurate reporting and investigation of the incident. Examples of critical information may include, but is not limited to:

- the full names of persons involved in the incident
- the exact nature of injuries, property damage, process failure/disruption or environmental harm sustained
- statements from persons involved in the incident, including a clear description of the sequence of events leading up to the incident (witness statements should be recorded on a FRM-00480 – (Incident Witness Statement Form)
- details of any plant or property involved in the incident, including registration numbers of third party vehicles involved
- photographs of the incident scene and/or associated property damage
- process/control system data
- contact details and/or statements from eye witnesses or third parties involved

4.3 Legal & professional privilege

Legal Services should be consulted to consider whether any material generated as part of an investigation should be made under the protection of legal professional privilege (LPP). Please contact Legal Services for advice around determining if specific records from incidents should come under the LPP umbrella.

4.4 External notification to regulators

The need for notification to external parties will be determined by the relevant Subject Matter Expert (SME) Manager in consultation with the responsible manager. The notification will be completed in accordance with the Corporate Delegations and Authorisation Manual (MAN-00076). Refer to Appendix D for WHS notification specifications and (PLN-00004) Drinking Water Quality Management Plan for water quality requirements.

4.5 Investigation planning

4.5.1 Determine the level of investigation

Each incident shall be assessed against the actual and potential consequence as per the Investigation Matrix (Appendix B). This assessment will be done in consultation with the appropriate responsible party/SME as outlined in Appendix B to determine the level of the investigation to be completed. Included are required documentation templates for reports appropriate to the level of investigation.

4.5.2 Investigation team

A lead investigator and an investigation team (where required) will be appointed by the responsible party as per Appendix B. The composition of the investigation team should be commensurate with the actual and potential of the incident so as to be able to determine root causes, contributing factors and identification of appropriate corrective and preventive actions.

4.5.3 Investigation planning

The objectives of planning are to establish the scope, means and timeframes of the investigation, identify the resources and tools required for investigation and to assess and control the risks associated with the investigation activities.

The investigation team will develop an action plan for each investigation which includes plans to collect information from within the following categories:

- People – information relating to witnesses and personnel associated with the incident
- Environment – information relating to weather, workplace, incident scene.
- Equipment – information relating to vehicles, plant, tools, infrastructure etc.
- Procedures – information relating to documents, reports, charts, maps etc.
- Organisation – information relating to training, communication, resources, organisational culture and management etc.

4.6 Data collection

4.6.1 Inspection of the incident site

An inspection of the site should be undertaken as soon as practicable after the incident. Prior to conducting the inspection, the investigation team will complete a Real Time Hazard Assessment (RTHA) for each work area and each type of activity to assess and manage the hazards and risks in gathering evidence.

All conditions (at the time the incident occurred) shall be assessed during the inspection including but not limited to:

- position of equipment, instrumentation and control switches
- illumination, visibility and audibility
- gouges, scratches, smears, discolouration, burn marks, spills
- the effects or condition of the weather
- presence or absence of signage
- excessive force used
- equipment failures
- loss of any containment
- condition of equipment
- process and other operations data.

4.6.2 Records

Video cameras, still photography cameras and sketches may be used to assist with recording the scene. When taking photos or video footage the time and location must be documented. The Incident Investigation Photograph Log (FRM-00479) may be used for this purpose. Consideration must also be given to personal privacy when collecting evidence, with permission sought to collect, store and use private information including images.

In addition, individuals should be advised of the reason and scope of use of the private information including where it will be stored and who will have access to it. The investigation team should review the relevant documents or parts of documents collected during the investigation and reference their use. Record appropriate dates and times associated with the incident on the documents reviewed.

4.6.3 Interviews and statements

Any written statements from witnesses involved may be recorded using the Incident Witness Statement Form (FRM-00480).

Private interviews must be conducted so that:

- confidentiality of any personal information obtained is maintained and any limits to confidentiality are explained
- the interviewee is not pressured into providing a statement or information
- the interviewee may invite other persons to attend the interview such as a work colleague, union representative or safety representative
- the location of the interview is suitable and free of interruptions
- leading questions are not asked and the interviewee is not prompted for answers
- objectivity is maintained
- vague generalisations are avoided and information discussed is specific to what was witnessed.

4.6.4 Evidence collection and storage

The investigation team shall coordinate the collection, labelling, and preservation of physical evidence. All evidence must be documented and stored together in a secure location to allow for retrieval. The Incident Investigation Evidence Log (FRM-00481) may be used for this purpose.

The relevant line manager or site supervisor must establish a quarantine area for any failed equipment or components and tag or label all failed equipment or components as 'out of service' as per the Energy Tag and Lock Out Procedure (PRO-00014).

4.6.5 Final considerations

Once all the data is collected from the incident scene and before the scene is released back to the relevant owner/operator, the following should be considered by the lead investigator:

- all options for gathering information have been exhausted
- all other concurrent investigations are not affected
- communication of any residual hazards should occur
- input has been considered from all SMEs.

4.7 Interim investigation summary

In order to keep key stakeholders informed an interim investigation summary (see Appendix B) constituting the accurate and objective record of the incident and confirmation of the initial incident notification provides preliminary details on the following:

- who was involved
- the location of the incident
- what actually occurred
- when the incident occurred and may include a timeline of significant events that may have occurred leading up to the event
- initial actions to remedy the incident
- details of key evidence reviewed and collected
- preliminary causal factors

Further investigation will continue but the summary should be sufficiently detailed for a reader to understand the incident and the basis of any initial proposed improvements. Based on the initial findings, it may be necessary to reassess the incident level and investigation requirements as per Appendix B.

4.8 Data organisation and analysis

4.8.1 Assess for consistency

The investigation team must review and verify the data to ensure accuracy and objectivity. The initial information obtained should then be organised into the following categories:

- people – information relating to witnesses and personnel associated with the incident.
- environment – information relating to weather, workplace and incident scene.
- equipment – information relating to vehicles, plant, tools, infrastructure etc.
- procedures – information relating to documents, reports, charts, maps etc.
- organisation – information relating to training, communication, resources, organisational culture and management etc.

4.8.2 Analysis of contributing factors

Following the collation of all facts related to the incident the factors that contributed to the incident must be identified. Appendix C provides a guide on investigation outcomes that can be considered around non-contributing factors, absent/failed defences, individual/team actions, team/environmental conditions and organisational factors. Upon identification of the findings, recommendations for corrective and preventive actions are to be developed.

4.9 Developing recommendations, actions, key learnings and reports

4.9.1 Identifying corrective and preventive actions

All recommendations identified from the investigation need to be documented in the investigation report. The lead investigator will provide recommendations for corrective and preventive actions to address absent or failed defences, individual or team actions, task or environmental conditions and organisational factors. These will include corrective or preventive actions required to prevent a reoccurrence of the event as per Non-Conformance, Corrective Action and Continuous Improvement Procedure (PRO-00003). These actions must address each of the contributing factors identified, which will give effective long and short-term control measures.

In determining recommendations for corrective and preventive actions, the hierarchy of controls must be considered. The investigation team should consider recommendations that are:

- specific to the incident
- have implications for the site
- have implications for other areas
- do not introduce any new hazards.

A review of the documented recommendations will be conducted by the lead investigator, their manager and the relevant Managers/Team Leaders including the asset manager to discuss and agree on all proposed corrective and preventive actions.

The timeframes for close-out of proposed actions by responsible Managers/Team Leaders should also be agreed upon by all parties and documented. Timing and priority will be based on the risk of reoccurrence involved. Workers should be consulted in determining the recommended actions and solutions where required.

4.9.2 Incident investigation report

The lead investigator must follow the requirements of Appendix B for the incident investigations' report template, review specifications, and approval. The incident investigation report constitutes an accurate and objective record of the incident and provides complete and accurate details and explicit statements of:

- the investigation team's investigation process
- facts pertaining to the incident
- analytical methods used and their results
- findings of the investigation team, including the causal factors of the incident
- agreed recommendations and associated preventative and corrective actions to prevent recurrence of the incident
- key learnings.

4.9.3 Data recording & communication of key learnings

The corporate electronic database will capture relevant information in relation to the incident, for example; incident levels, mechanisms of incident, related risk category, contributing factors and actions for recording and analysis.

Key learnings should be communicated to identified stakeholders through the most appropriate process, for example; toolbox talks, meetings, emails etc.

5. Training requirements

Training will be provided in accordance with the Training and Competency Management Procedure (PRO-01574). Minimum training requirements are:

- lead investigators must complete an ICAM Lead Investigator Course.
- members of an investigation team should have completed an ICAM Basic Investigators Course. This training will also allow these people to undertake the role of Team Leader for investigations of minor or insignificant incidents. Each business group will identify roles within their area to attend this training.

Managers will confirm through the MAP process relating to specific roles that there are adequate numbers of trained lead incident investigators within Seqwater. These investigators must undertake appropriate training in the application of the ICAM incident investigation methodology.

6. Record keeping

All records are to be retained, archived and disposed of in accordance with the *Queensland State Archives General Retention and Disposal Schedule for Administrative Records* and the *Seqwater Retention and Disposal Schedule QDAN717.*All incident investigation reports, including supporting documentation must be saved in TRIM, with appropriate security that limits access to the record to:

- the incident investigation team
- the SMEs coordinator and manager
- the Manager, Supervisor and Team Leader for the area in which the incident occurred
- Legal Services.

7. Monitoring and audit

The requirements of this procedure may be audited in accordance with the Integrated Management System Internal Audit Procedure (PRO-00002).

Analysis of investigation outcomes will be undertaken as part of yearly management review using the corporate electronic database and reviewed at regular intervals in conjunction with the scheduled risk register and risk profile reviews.

8. References

8.1 Legislation and other requirements

Description	Status	Location
Electrical Safety Act 2002 (Qld)	Active	www.legislation.qld.gov.au
Electrical Safety Regulation 2013 (Qld)	Active	www.legislation.qld.gov.au
Work Health and Safety Act 2011 (Qld)	Active	www.legislation.qld.gov.au
Work Health and Safety Regulation 2011 (Qld)	Active	www.legislation.qld.gov.au
Environmental Protection Act 1994 (Qld)	Active	www.legislation.qld.gov.au
Environmental Protection Regulation 2008 (Qld)	Active	www.legislation.qld.gov.au
Water Supply (Safety and Reliability) Act 2008 (Qld)	Active	www.legislation.qld.gov.au
WHS Standard AS/NZS 4801	Active	www.saiglobaliso.com/online
Environmental Standard ISO 14001	Active	www.saiglobaliso.com/online
Quality Standard ISO 9001	Active	www.saiglobaliso.com/online
Drinking Water Quality Standard ISO 22000	Active	www.saiglobaliso.com/online

8.2 Supporting procedures

Description	Status	Reference
Corporate Management System Manual	Active	MAN-00004
Emergency Management Manual	Active	MAN-00276
Bulk Authority Emergency Response Plan	Active	ERP-00001
Managing Alcohol and Other Drugs Procedure	Active	PRO-01105
Energy Tag and Lock Out Procedure	Active	PRO-00014
Training and, Competency Management Procedure	Active	PRO-01574
Non-conformance, Corrective Action and Continual Improvement Procedure	Active	PRO-00003
Integrated Management System Internal Audit Procedure	Active	PRO-00002
Queensland State Archives General	Active	Q-Pulse external document

Retention and Disposal Schedule for Administrative Records		
Seqwater Retention and Disposal Schedule – QDAN 717	Active	Q-Pulse external document

8.3 Supporting documents, forms and templates

Description	Status	Reference
Incident Investigation Evidence Log	Active	FRM-00481
Incident Investigation Form	Active	FRM-00094
Incident Investigation Photograph Log	Active	FRM-00479
Incident Investigation Report	Active	TEM-00025
Incident Witness Statement Form	Active	FRM-00480

9. Definitions

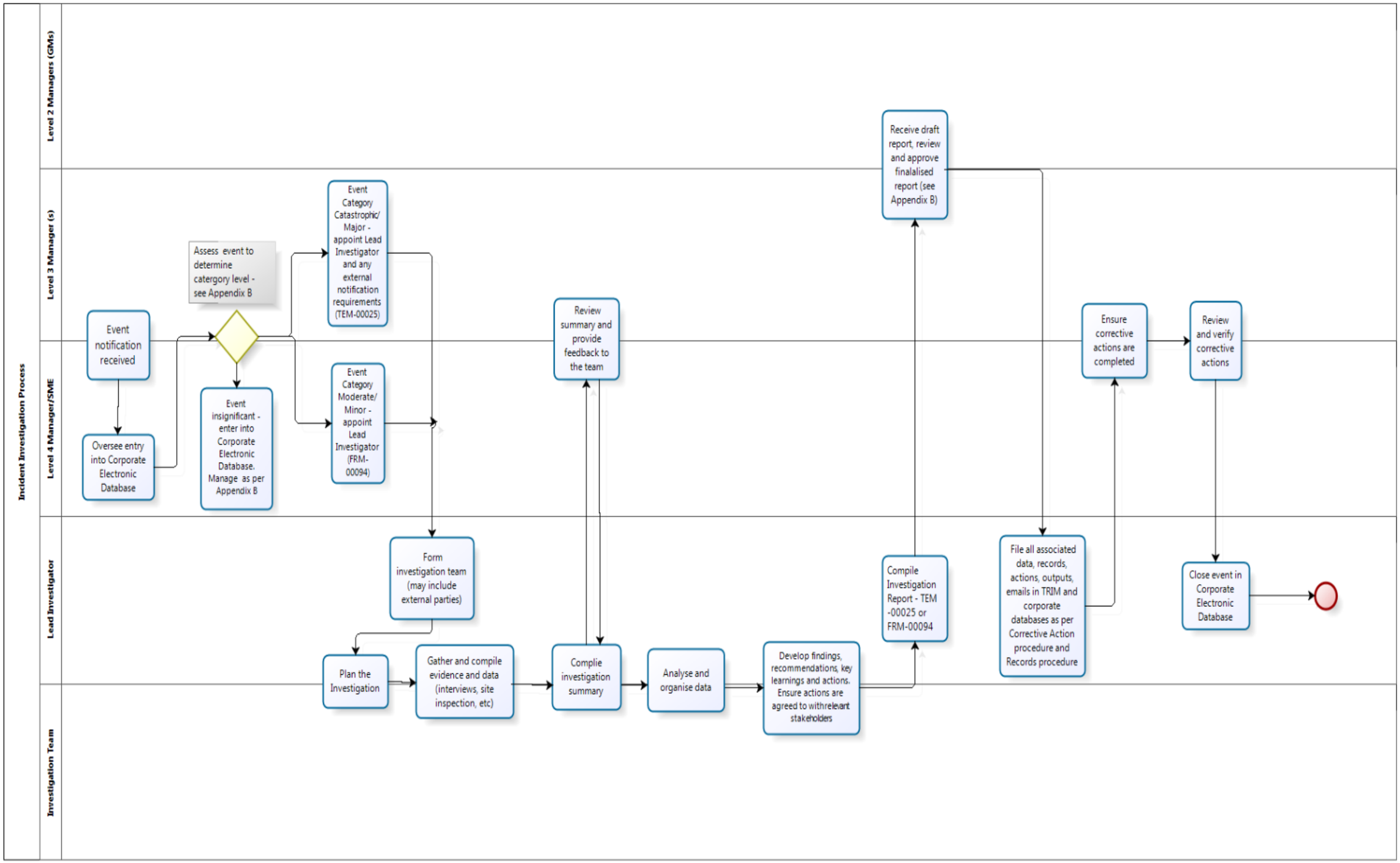
Term	Definition
Absent or failed defences	The situations, systems, conditions, equipment, measures or human factors that normally prevent this type of incident from happening.
Control	A control is any measure or action that modifies risk. Controls include any policy, procedure, practice, process, technology, technique, method, or device that modifies or manages risk.
Corporate Electronic Database	Risk Wizard will be used for all incidents and associated investigations received through OCA as a result of the 2016 Risk Wizard implementation throughout the business.
Effective control (WHS)	The meaning of an effective control includes fit for purpose, being suitable for the nature and duration of the work and installed, set up and used correctly.
Emergency	An event that happens as a consequence of an incident and demands immediate action. It is the broader coordination to manage incidents including mitigation and public and stakeholder outcomes.
First aid injury	Any once-off treatment and/or subsequent observation of minor scratches, cuts, burns, splinters, etc. which do not require professional medical treatment. However, in some instances, a medical practitioner or registered professional may administer the first aid as follows: – Tetanus injection or precautionary antibiotics. – Application of antiseptics during first visit to medical personnel. Application of ointments to abrasions to prevent drying or cracking. – Treatment of first degree burn(s). – Application of bandages(s) during any visit to medical personnel.

Term	Definition
	– Use of elastic bandage(s) during first visit to medical personnel. – Removal of foreign bodies (not embedded) in eye if only irrigation is required. – Removal of foreign bodies from wound if procedure is uncomplicated, and is for example, by tweezers or other simple technique. – Use of non-prescription medications and administration of single dose of prescription medication on first visit for minor injury or discomfort. – Application of hot or cold compress during first visit to medical personnel. – Negative X-Ray taken to confirm the existence or otherwise of a diagnosed condition.
Hazard - WHS/Environment	A situation that has the potential to harm a person and/or the environment and/or damage property etc.
Hazard – Water Quality	A hazard is a biological, chemical, physical or radiological agent that has the potential to cause harm or be aesthetically unacceptable to the consumer.
Hazardous Water Quality Event	A hazardous event is an incident or situation that can lead to the presence of a hazard.
Hierarchy of controls	Identify the risk control actions and responsibilities by identifying controls in the following specific order: • Eliminate the hazard. If elimination of the hazard is not reasonably practicable, minimise the risk so far as reasonably practicable by: • substituting (wholly or partly) the hazard giving rise to the risk with something that gives rise to a lesser risk • isolating the hazard from any person exposed to it • implementing engineering controls. If a risk then remains, then minimise the remaining risk, so far as is reasonably practicable, by implementing administrative controls. If a risk then remains, then minimise the remaining risk, so far as is reasonably practicable, by ensuring the provision and use of suitable Personal Protective Equipment (PPE).
High Potential Incident (HPI)	An incident where the actual or potential risk rating is assessed as “Extreme” or “High”. Incidents that have been classified as a Near Miss may also be deemed as HPI’s. In determining the actual and potential risk, consideration should be based on the reasonably foreseeable outcomes given the circumstances and controls in place at the time of the event. Confirmation of HPI classification is subject to consultation with the Executive Leadership Team.
Incident	Any occurrence that has resulted in adverse and unplanned consequences to water supply, water quality, people, the environment, property, reputation or a combination of these.

Term	Definition
Incident Cause Analysis Method (ICAM)	The ICAM process is an industrial safety analysis tool that sorts the findings of an investigation into a structured framework. An ICAM analysis clarifies why the incident happened and identifies all the factors that contributed to the event. The contributing factors are classified into four categories of the ICAM Model which are: absent or failed defences, individual or team actions, task or environmental factors, and organisational factors.
Individual or team actions	The errors or violations made by people directly involved in the event.
Lost time injury (LTI)	A work-related incident that results in an injury or illness and time lost from work of one day/shift or more.
Medically treated injury (MTI)	An incident which results in the consequence of an injury to a person requiring treatment by, or under the order of, a qualified medical practitioner, or treatment of any injury that could be considered as being one that would normally be treated by a medical practitioner.
Near miss	Any unplanned incident that occurred at the workplace that, although not resulting in any impact, had the potential to do so. Note – A near miss may also be a notifiable incident in accordance with the definition of the term.
Notifiable incident or near miss	An incident that requires notification to a regulator and is determined following consultation between the SME Manager and the responsible manager in accordance with the Corporate Delegations and Authorisation Manual (MAN-00076). Refer to Appendix D for specific WHS incident types to require notification to the regulator.
Organisational factors	The latent system-based factors present before the incident which may have contributed to the presence of specific adverse task/environmental conditions, individual/team actions or absent/failed defences.
Preventive action	Any action to eliminate the cause of a potential non-conformity or other undesirable potential situation.
Reasonably practicable	The following criteria must be applied in determining what is reasonably practicable: • What the person knows or ought to reasonably know about the hazard and ways of eliminating or minimising the hazard • Availability and suitability of ways of eliminating or minimising the hazard • The cost associated with the eliminating or minimising the hazard, if it is grossly disproportionate to the risk.
Regulator	The relevant statutory authority.
Responsible Manager/ Team Leader	Relevant Manager or Team Leader who is responsible for the activity, area or function in which the incident has occurred.

Term	Definition
Risk	The effect of uncertainty on the ability of Seqwater to achieve its objectives.
Risk – Water Quality (ADWG)	The likelihood of identified hazards causing harm in exposed populations in a specified timeframe, including the severity of the consequences.
Risk control (WHS)	Means taking action to eliminate risks so far as is reasonably practicable, and if that is not possible, minimising the risks so far as is reasonably practicable. Eliminating a hazard will also eliminate any risks associated with that hazard.
Root cause	A root cause is the most basic reason for an incident, which if corrected would prevent reoccurrence of the incident.
Subject Matter Expert (SME) Coordinator/Principal	A person who manages a team of subject matter experts and reports to a SME Manager, this may include; WHS Coordinator, Principal Environmental Management, Principal Drinking Water Quality Management, Principal Engineer Analysis and Advice, Principal Asset Sustainability, Principal Process Engineering & Improvement, Operations Coordinators, Asset Maintenance Services Coordinator or other similar roles.
Subject Matter Expert (SME) Manager	A person who manages a team of subject matter experts and reports to a general manager, this may include WHS, Environment, Asset Capability and Sustainability, Drinking Water Quality or other similar functions.
Task or environmental conditions	The situational characteristics which existed immediately prior to the Incident, including the work situation, physical or social environment, or a person's mental, physical or emotional state.
Team leader	A person who is responsible for leading a team of workers, who is not a manager or general manager. Examples of this may be an Operations Supervisor, Senior Dam Operator, Senior Field Ranger, Coordinator or Principal.
Worker	Worker means a person who carries out work in any capacity for Seqwater, including work as: • an employee • a contractor or subcontractor • an employee of a contractor or subcontractor • an employee of a labour hire company who has been assigned to work at Seqwater • an outworker • an apprentice or trainee • a student gaining work experience • a volunteer • a worker of a prescribed class.

Appendix A - Investigation flowchart



Appendix B - Investigation matrix

Incident category/ level	WHS Category Description	Environment Category Description	Water Quality Category Description	Water Supply Category Description	Lead Investigator Appoint By	Timeframes for investigation/Report type	Incident investigation reports to be provided to	Incident investigation report approved by
Catastrophic	Single or multiple fatalities	Actual or potential widespread environmental harm/Impacts to the ecosystem, flora, fauna requiring extensive resources to mitigate (>6 months).	Complete HACCP Critical Control Point failure - WQ product safety cannot be determined. Potential for acute health impacts (potential for declared outbreak). EMT stood up.	Unplanned loss of water supply from any bulk water supply point to any non-network or network connected supply zones for > 24 hours.	Responsible General Manager in consultation with responsible Managers /SME Manager	Within 60 working days Interim summary provided within 5 working days of becoming aware of the incident TEM-00025 –Incident Report Template	Responsible General Manager, Responsible Managers, Legal Services	CEO
Major	Permanent injury or impairment	Localised on/off site actual or potential serious harm/Impacts to the ecosystem, flora, fauna (including declared and rare threatened and vulnerable species) requiring substantial resources to mitigate (>3 &<6 months).	Complete HACCP Critical Control Point failure - WQ product safety cannot be determined. Potential for acute health impacts (no declared outbreak expected). EMT stood up.	Unplanned loss of water supply from any bulk water supply point to any non-network or connected customers supply zones for up to 24 hours	Responsible General Manager in consultation with responsible Managers/SME Manager	30 working days Interim summary provided within 5 working days of becoming aware of the incident TEM-00025 –Incident Report Template	General Manager, SME Manager, Responsible Manager	Responsible General Manager
Moderate	Moderate injury or temporary impairment. One or more entire shift missed as a result	Localised on/off site actual or potential environmental harm/impact to the ecosystem, flora, fauna (excluding declared and rare threatened and vulnerable species) requiring limited resources to mitigate (>1 - <3 months).	Repeated or elevated result above ADWG value / specification for chronic health parameters. Repeated HACCP Critical or Action Limit exceedence - WQ product still in specification but extensive corrective action taken place. Exceedence of Bulk Water Supply Agreement or ADWG aesthetic level with potential for or actual widespread customer impact.	Reservoir levels below communication trigger levels > 8 hours. Reduced operating volumes due to treatment plant capability for a short duration resulting in retailer network configuration changes.	Responsible manager in consultation with SME Manager	20 working days Interim summary provided within 5 working days of becoming aware of the incident FRM-00094 –Incident Investigation Form	Responsible Manager, SME Manager	Responsible Manager
Minor	Minor temporary injury or illness requiring medical treatment. Inability to complete rest of shift or modified duties.	Localised on/off site environmental nuisance. Routine short term remediation (<1 month).	Isolated result above ADWG value / specification for chronic health parameters. Repeated HACCP Critical or Action Limit exceedence - WQ product still in specification & process controlled as per HACCP Plan. Exceedence of Bulk Water Supply Agreement or ADWG aesthetic level with potential for or actual customer impact.	Reservoirs approaching agreed communication trigger levels. Treatment plant at restricted output requiring supply reconfiguration. No loss of supply from any bulk water supply point.	Responsible Team Leader in consultation with SME Coordinator/Principal	10 working days FRM-00094 –Incident Investigation Form	SME Coordinator/Principal, Team Leader	Responsible Team Leader
Insignificant	Symptoms requiring no treatment of first aid treatment only. Returned to full duties	Localised, on site, actual or potential nuisance. Routine short term remediation.	HACCP Critical Limit or repeated Action Limit exceedence - WQ product still in specification & process controlled as per HACCP Plan. Exceedence of Bulk Water Supply Agreement level without customer impact.	Reservoirs lower than agreed normal operating levels for <4 hours or restricted output from treatment plant. No loss of supply from any bulk water supply point. Little or no disruption to normal operations.	SME Coordinator/Principal	5 days Corporate Electronic Database	SME Coordinator/Principal, Team Leader	SME Coordinator/Principal, Team Leader

Appendix C – Sample Causes

Absent of failed defences

DF1	Detection systems/ procedures	☐ Absent ☐ Failed	DF8	PPE	☐ Absent ☐ Failed
DF2	Protection systems/ procedures	☐ Absent ☐ Failed	DF9	Hazard identification	☐ Absent ☐ Failed
DF3	Warning systems/ procedures	☐ Absent ☐ Failed	DF10	Risk management	☐ Absent ☐ Failed
DF4	Guards or barriers	☐ Absent ☐ Failed	DF11	Safe work procedure	☐ Absent ☐ Failed
DF5	Recovery systems/ procedures	☐ Absent ☐ Failed	DF12	Supervision	☐ Absent ☐ Failed
DF6	Escape systems/ procedures	☐ Absent ☐ Failed	DF13	Other:	☐ Absent ☐ Failed
DF7	Rescue systems/ procedures	☐ Absent ☐ Failed	DF14	Other:	☐ Absent ☐ Failed

Code	State details for the identified defences that contributed to the event

Individual/team actions

IT1	Supervision	☐ Absent ☐ Inadequate ☐ Unsuitable	IT8	Equipment/material handling	☐ Inadequate ☐ Unsuitable
IT2	Authority	☐ Absent ☐ Inadequate ☐ Unsuitable	IT9	Horseplay	☐ Absent ☐ Inadequate ☐ Unsuitable
IT3	Operating speed	☐ Absent ☐ Inadequate ☐ Unsuitable	IT10	Hazard recognition	☐ Absent ☐ Inadequate ☐ Unsuitable
IT4	Equipment use	☐ Absent ☐ Misuse ☐ Exceeded limits ☐ Unsuitable Selection	IT11	Hazard management	☐ Absent ☐ Inadequate ☐ Unsuitable
IT5	PPE	☐ Absent ☐ Exceeded limits ☐ Misuse ☐ Unsuitable Selection	IT12	Work method	☐ Absent ☐ Inadequate ☐ Unsuitable
IT6	Work procedure followed	☐ Partially ☐ Not followed ☐ Unsuitable	IT13	Occupational hygiene practices	☐ Absent ☐ Inadequate ☐ Unsuitable
IT7	Change Management	☐ Absent ☐ Inadequate ☐ Unsuitable	IT14	Other:	☐ Absent ☐ Failed

Code	State details for the identified individual/team actions that contributed to the event

Task / Environment Factors

Workplace Factors			Human Factors Impact		
WF1	Task planning / preparation / manning	☐ Some ☐ Significant	HF1	Complacency / motivation	☐ Some ☐ Significant
WF2	Hazard analysis / JSEA / RTHA	☐ Some ☐ Significant	HF2	Drugs / alcohol influence	☐ Some ☐ Significant
WF3	Work procedures	☐ Some ☐ Significant	HF3	Familiarity with task	☐ Some ☐ Significant
WF4	Permit to work	☐ Some ☐ Significant	HF4	Fatigue	☐ Some ☐ Significant
WF5	Abnormal operation	☐ Some ☐ Significant	HF5	Situational awareness	☐ Some ☐ Significant
WF6	Tools / equipment	☐ Some ☐ Significant	HF6	Time / productivity pressures	☐ Some ☐ Significant
WF7	Material availability and suitability	☐ Some ☐ Significant	HF7	Peer pressure	☐ Some ☐ Significant
WF8	Equipment integrity	☐ Some ☐ Significant	HF8	Physical capabilities	☐ Some ☐ Significant
WF9	Housekeeping	☐ Some ☐ Significant	HF9	Mental capabilities	☐ Some ☐ Significant
WF10	Weather conditions	☐ Some ☐ Significant	HF10	Physical stress	☐ Some ☐ Significant
WF11	Congestion / restriction / access	☐ Some ☐ Significant	HF11	Mental stress	☐ Some ☐ Significant
WF12	Routine / non routine task	☐ Some ☐ Significant	HF12	Confidence level	☐ Some ☐ Significant
WF13	Fire and/or explosion	☐ Some ☐ Significant	HF13	Secondary goals	☐ Some ☐ Significant
WF14	Lighting	☐ Some ☐ Significant	HF14	Personal issues	☐ Some ☐ Significant
WF15	Equipment / material temperature / conditions	☐ Some ☐ Significant	HF15	Distraction / pre-occupation	☐ Some ☐ Significant
WF16	Noise	☐ Some ☐ Significant	HF16	Experience / knowledge / skill for task	☐ Some ☐ Significant
WF17	Ventilation	☐ Some ☐ Significant	HF17	Competency	☐ Some ☐ Significant
WF18	Gas, dust or fumes	☐ Some ☐ Significant	HF18	Behavioural beliefs	☐ Some ☐ Significant
WF19	Radiation	☐ Some ☐ Significant	HF19	Personality / attitude	☐ Some ☐ Significant
WF20	Chemical	☐ Some ☐ Significant	HF20	Poor communications	☐ Some ☐ Significant
WF21	Wildlife	☐ Some ☐ Significant	HF21	Poor shift patterns and overtime working	☐ Some ☐ Significant
WF22	Surface gradient	☐ Some ☐ Significant	HF22	Passive tolerance of violations	☐ Some ☐ Significant
WF23	Other:		HF23	Perceived license to	☐ Some ☐ Significant

Workplace Factors			Human Factors Impact		
				bend rules	
			HF24	Change of routine	☐ Some ☐ Significant
			HF25	Reliance of undocumented knowledge	☐ Some ☐ Significant
			HF26	Other	

Code	State details for the identified task/environmental factors that contributed to the event

Organisational Factors

HW	Supervision	☐ Contributing	RM	Risk Management	☐ Contributing
TR	Training	☐ Contributing	MC	Management of change	☐ Contributing
OR	Organisation	☐ Contributing	CM	Contractor management	☐ Contributing
CO	Communications	☐ Contributing	OC	Organisational Culture	☐ Contributing
IG	Incompatible goals	☐ Contributing	RI	Regulatory Influence	☐ Contributing
PR	Procedures	☐ Contributing	OL	Org. Learning	☐ Contributing
MM	Maintenance management	☐ Contributing	VM	Vehicle management	☐ Contributing
DE	Design	☐ Contributing	MS	Management systems	☐ Contributing

Code	State details for the identified organisational factors that contributed to the event

Appendix D – Notifiable Incident Definitions

WHS Notifiable incidents

An incident which involves:

- the death of a person
- a serious injury or illness of a person
- a dangerous incident.

When a notifiable incident occurs, the Manager, WHS will provide the appropriate information in consultation with legal services to WHSQ immediately after becoming aware that the incident has occurred at Seqwater. If the notifiable incident involves a serious electrical incident or a dangerous electrical event then the ESO must also be notified by the Manager, WHS.

The Manager, WHS will also immediately notify Seqwater's Legal Services Manager for the purpose of seeking legal counsel for the notifiable incident and gaining advice on all external notifications and communication with regulators.

If a fatality occurs, the Manager, WHS or nominated representative will immediately telephone the nearest office of WHSQ (or any Inspector) and the Queensland Police Service to provide relevant information about the incident.

Dangerous electrical event

A dangerous electrical event includes:

- when a person, for any reason, is electrically unsafe around high voltage electrical equipment, even if the person doesn't receive an electric shock or injury
- significant property damage caused by electricity or something originating from electricity e.g. electrical fire
- unlicensed electrical work
- unsafe electrical work
- unsafe electrical equipment or electrical equipment that does not have electrical equipment safety system (EESS) approval markings.

Note: high voltage means a voltage above 1000 V AC or 1500 V ripple-free DC.

Dangerous incident

An incident in relation to a workplace that exposes a worker or any other person to a serious risk to a person's health or safety emanating from an immediate or imminent exposure to:

- an uncontrolled escape, spillage or leakage of a substance
- an uncontrolled implosion, explosion or fire
- an uncontrolled escape of gas or steam
- an uncontrolled escape of a pressurised substance
- electric shock
- the fall or release from a height of any plant, substance or thing

- the collapse, overturning, failure or malfunction of, or damage to, any plant that is required to be authorised for use in accordance with the regulations
- the collapse or partial collapse of a structure
- the collapse or failure of an excavation or of any shoring supporting an excavation
- the inrush of water, mud or gas in workings, in an underground excavation or tunnel
- the interruption of the main system of ventilation in an underground excavation or tunnel.

Serious bodily incident

An injury or illness requiring the person to have:

- immediate treatment as an in-patient in a hospital
- immediate treatment for:
  - the amputation of any part of his or her body
  - a serious head injury
  - a serious eye injury
  - a serious burn
  - the separation of his or her skin from an underlying tissue (such as degloving or scalping)
  - a spinal injury
  - the loss of a bodily function
  - serious lacerations
- medical treatment within 48 hours of exposure to a substance.

Serious electrical incident

An incident when a person:

- was killed by electricity
- received a shock or injury from electricity, and was treated for the shock or injury by or under the supervision of a doctor
- received a shock or injury from electricity at high voltage, whether or not the person was treated for the shock or injury by or under the supervision of a doctor.

Note: high voltage means a voltage above 1000 V AC or 1500 V ripple-free DC.

Environmental Breaches

Due to the complexity of environmental regulation the decision to notify environmental regulators will be made by the SME Manager and SME Principal in consultation with Legal Services where required.

Water Quality Incident Notifications

Qld Government Department of Energy & Water Supply (DEWS) specify in the water quality and reporting guidelines that providers must report any incident that will or is likely to adversely affect water quality. This process is outlined in PRO-00707 DWQ Incident Reporting to the Office of the Water Supply Regulator. The requirement to report incidents to the regulator ensures action is taken by the provider to manage these incidents and reduce risks to public health.