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# **SYDNEY TRAMWAY MUSEUM**

## **INCIDENT/ACCIDENT INVESTIGATION PROCEDURE**

**MARCH JUNE 2009**

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# SYDNEY TRAMWAY MUSEUM

## 1. Purpose

The purpose of this procedure is to describe the steps that are to be followed when:

- a) Investigating an incident that may lead to an accident (i.e. a near miss) or,
- b) An accident that has occurred.

## 2. Scope

This procedure shall apply to all staff involved in investigating accidents and incidents (see section 7.1).

## 3. Responsibilities

STM personnel are responsible for understanding the operation and reporting any faults on the Incident Report Form as soon as they are noticed.

## 4. References

The Incident Report & Corrective Action Register (STM6067)

Corrective Action Report Form (STM6078)

Drug and Alcohol Program (STM6066)

Incident Report (STM6033)

OH & S Act

Rail Safety Act

## 5. Definitions

- a) **An incident** is any occurrence that results in adverse consequences to people, the environment, property/plant, or a combination of these, resulting in a near miss situation with no injuries and/or only minor damage. Also covered are unsafe actions of persons caused by ignorance or negligence of safety procedures or principles creating a risky outcome.
- b) **An accident** is an unexpected event causing injury and/or damage. The basic causes of such accidents are, in general, unsafe conditions or machinery, equipment or surroundings and the unsafe actions of persons that are caused by ignorance or negligence of safety procedures or principles.
- c) **An incident reporter** is the person who registers the incident/accident.
- d) **An investigation** is a detailed review of the incident/accident including, how it happened, when it happened, the root causes of why it happened, leading to a set of corrective actions and learnings to be communicated where relevant.
- e) **Near Miss** *Any occurrence where the driver of a moving train takes emergency action, or would have if there was sufficient time, to avoid impact with a person, vehicle or other obstruction and no collision occurred. Emergency action includes continuous audible warning and/or brake application.*
- f) **Other Lines** *refers to all of the tracks in Depot Yard, the Depot Main and Cross Street.*
- g) **RSM** – Rail Safety Manager

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- h) **Running Lines** refers to the main lines running through Tramway Avenue to both The Royal National Park station and to Sutherland.
- i) **STM-** Sydney Tramway Museum, a trading name of South Pacific Electric Railway Co-Operative Society Limited.
- j) **The nominated investigator** is the person nominated to investigate the incident/accident.
- k) **The sign-off** is the formal acceptance that the incident/accident is sufficiently documented and investigated. The sign-off includes a review to ensure: the root causes are established, potential consequences and likelihood are correctly ranked, corrective actions are determined and assigned and that key learnings have been identified.
- l) **The close-out** is the formal acknowledgement that, through an audit or review, all corrective actions have been completed and found to be effective
- m) **The supervisor** is the person who is directing activities at the time of the incident.

### 6. Actions

In the event leading to an accident there will be a number of essential factors. These are elements that must be there to enable the sequence to continue and hence the damage to occur. One characteristic of these essential factors must be stressed – they are all important in terms of causation. Another important feature is that essential factors always have design, environmental and behavioral components.

An accident investigation procedure aims to establish the sequence of events that actually occurred and compares these events to what should have occurred. The comparison will then highlight the changes that need to be implemented to prevent a recurrence.

### 7. Procedure

#### 7.1 Notifications

When an **incident or “Near Miss”** occurs an Incident Report (STM6033) must be completed by either the tram crew or the OIC. Depending on the incident, it may have to be notified to the RSM immediately or at the end of the operating day. The RSM then notifies the relevant authorities.

All incidents and **near** misses are recorded by the RSM in the Incident Report & Corrective Action Register (STM6067) for review at the **next** RSMT meetings.

All CATEGORY A occurrences MUST be reported to OTSI and ITSRR on the correct forms. **However for this category both ITSRR and OTSI must be notified by telephone as soon as practicable after becoming aware of the occurrence as well as completing the correct form.**

All CATEGORY B occurrences are to be reported to ITSRR ONLY. However if the media are involved, then OTSI MUST be contacted and the '72 Hour' reporting form' must be completed and faxed to OTSI.

Whether the derailment is a major one or a minor one, **ALL DERAILMENTS MUST BE REPORTED TO ITSRR within 72 hours.**

#### 7.2 Running Lines

If a derailment takes place on a Running line, it is classified as a Category A occurrence and MUST be reported to the Office of Transport Safety Investigation (OTSI) by telephone as soon as practicable after the occurrence. However the OIC must contact one of the following

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people on the list, in order, to arrange for an officer to attend the scene and to make the report to OTSI:

- a) Rail Safety Manager; or
- b) Operations Manager; or
- c) Traffic Manager; or
- d) A director of the Museum; or
- e) If none of the above is contactable, then the OIC is to notify OTSI but will not be required to send a notification to ITSRR unless directed to do so by one of the managers or directors above.

The following information to be provided to OTSI:

- 1) The name of the Accredited operator (Sydney Tramway Museum);
- 2) Brief details of the occurrence including the number of people injured or killed;
- 3) The emergency services who are attending;
- 4) The actions taken by the emergency services or Museum personnel in response to the occurrence;
- 5) The name and telephone number of an individual who can be immediately contacted by the Chief Investigator of OTSI and who can provide details of the occurrence and who, if practical, is at the scene of the derailment.

ITSRR needs to be notified within 72 hours of the occurrence and this will usually be done by one of the managers or directors as listed above.

All members of the crew must be stood down from traffic until after the investigation has been completed. The STM driver or drivers must be tested as per section 6.3 of the Drug and Alcohol program (STM6066).

### **7.3 Other Lines**

If a derailment takes place other than on a Running line and involves death or serious injury of a person, the Chief Investigator of OTSI must be notified as it is classified as a ***Category A occurrence***. The process to be followed is as defined above for Running lines.

If the derailment does NOT involve death or serious injury of a person, then only ITSRR needs to be notified and this will usually be done by one of the managers or directors as listed above.

Again, ITSRR needs to be notified within 72 hours of the occurrence.

After permission is received from the OTSI investigator, the RSM and Police, the OIC will arrange for the recovery of the tram and will coordinate the removal of obstructions. The Infrastructure Manager will arrange for damage to the track to be assessed and repaired. The damaged tram, is possible, will be declared unfit for service and removed to the depot for later inspection by the maintenance staff.

All members of the crew must be stood down from traffic until after the investigation has been completed. The STM driver or drivers must be tested as per section 6.3 of the Drug and Alcohol program (STM6066).

### **7.4 Definition - Category A Occurrence**

The following are notifiable occurrences of Category A:

- a) an accident or incident that has caused death, serious injury or significant property damage,
- b) a running line derailment,
- c) a running line collision between rolling stock,

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- d) a collision at a road or pedestrian level crossing between rolling stock and either a motor vehicle or a person,
- e) a fire or explosion on or in rail infrastructure or rolling stock that affects the safety of railway operations or that endangers one or more people,
- f) a suspected terrorist attack,
- g) any accident or incident involving a significant failure of a safety management system that could have caused death, serious injury or significant property damage,
- h) the theft of or from rolling stock or railway premises of a rail transport operator of security sensitive dangerous goods (within the meaning of the *Australian Dangerous Goods Code* prepared by the National Transport Commission as in force on the commencement of this Regulation) or the tampering with any such goods on rolling stock or railway premises of a rail transport operator,
- i) any other accident or incident that is likely to generate intense public interest or concern.

### 7.4.1 Notification By Telephone

The Museum is to provide the following information when notifying a Category A notifiable occurrence:

- a) the name of Museum,
- b) brief details of the occurrence, including the number of people injured or killed (if any), the emergency services that attended (if any) and any actions taken by the emergency services or rail transport operators in response to the occurrence,
- c) the name and telephone number of an individual who can be immediately contacted to provide further details of the occurrence and who, if practicable, is at the scene.

### **7.5 Definition - Category B Occurrence**

The following are notifiable occurrences of Category B:

- a) a derailment, other than a running line derailment,
- b) a collision involving rolling stock,
- c) any accident or incident at a road or pedestrian level crossing arising from a failure of rail infrastructure or that caused a risk to safety or damage to a person or property,
- d) the passing of a stop signal, or a signal with no indication, by rolling stock without authority,
- e) any accident or incident where rolling stock exceeds the limits of authorised movement given in a proceed authority;
- f) any failure of a signalling or communications system that endangers, or that has the potential to endanger, the safe operation of trains or the safety of people, or that causes or could cause damage to adjoining property,
- g) any slip, trip or fall by a person on, to or from a train, railway track, railway bridge, station, platform, escalator, lift or stairs, or any person being caught in the door of any rolling stock,
- h) any situation where a load affects, or could affect, the safe passage of trains or the safety of people, or causes or could cause damage to adjoining property,
- i) any accident or incident involving dangerous goods that affects, or could affect, the safety of railway operations or the safety of people, or that causes or could cause damage to adjoining property,
- j) any breach of a safe working system or procedure, or the detection of any irregularity or deficiency in such a system or procedure,
- k) any irregularity in any rail infrastructure (including electrical infrastructure and any obstruction on a running line) that could affect the safety of railway operations or the safety of people,
- l) any irregularity in any rolling stock that could affect the safe operation of the train or the safety of people, or cause damage to the rolling stock,

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- m) any fire or explosion that causes damage to rail infrastructure or rolling stock, or both, or that causes the disruption or closure of a railway (even if the closure is only a precautionary measure),
- n) any accident or incident on railway premises where a person inflicts, or is alleged to have inflicted, an injury on another person,
- o) a suspected attempt to suicide,
- p) if a rail safety worker employed by a rail transport operator has returned a result to a test designed to determine the concentration of alcohol or other drugs in a sample of blood or urine that suggests that the worker was in breach of a relevant safety requirement concerning the use of alcohol or other drugs at a relevant time,
- q) the infliction of any wilful or unlawful damage to, or the defacement of, any rail infrastructure or rolling stock that could affect the safety of railway operations or the safety of people,
- r) any accident or incident in a rail corridor that indicates that the security of the corridor is compromised and that affects, or may affect, the safety of railway operations.

### 7.6 Investigation Procedures

#### 7.6.1 An incident/accident investigation must:

- a) be systematic
- b) include near misses
- c) be done in the spirit of co-operation and involvement
- d) be part of the responsibility of line management
- e) not to seek blame (i.e. not to be a witch hunt)

#### 7.46.2 The personnel involved in a lost time/damage causing accident are:

- a) the injured person
- b) their supervisor
- c) the safety officer
- d) the operations manager
- e) the chief engineer
- f) OH&S safety committee representative

#### 7.46.3 The personnel involved in a nil lost time or hazardous incident are:

- a) The person who is identifying the problem
- b) The supervisor
- c) The safety officer
- d) The operations manager

#### 7.46.4 A report to be compiled by the above personnel, co-ordinated by the safety officer and distributed to:

- a) the department manager
- b) the board of directors when the form is completed with the necessary follow up action taken

#### 7.46.5 Procedure to be taken when an injury occurs:

- a) The person injured must notify their supervisor or other senior person.
- b) The injured person is medically attended by *an appropriate person*.
- c) The accident / incident form is raised by the supervisor.
- d) The accident form is to be completed by the accident investigation team. The information obtained is to be fully documented as follows
  - i. Get the facts, i.e. witnesses, sketches, photographs, etc;

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- ii. Trace back the sequence of events identifying all contributing unsafe acts and conditions – human, machine or environment factors
- e) A report to be compiled by the investigation team, coordinated by the Rail Safety Manager and distributed to the Directors for review before sending onto ITSR
- f) The investigation team to look at the unsafe acts and conditions one at a time (remember not to seek blame or make it a witch hunt). Consider all possible remedies.
- g) The investigation team to seek most appropriate remedy in consultation with relevant personnel; e.g. Tramcar Maintenance/Workshop Manager, Infrastructure Manager, Operations Manager, etc
- h) The investigation team to recommend remedial action. Other similar hazards are to be considered also.
- i) The investigation team is to complete all necessary paperwork involved for rectification of the problem and to sign off the investigation.
- j) The investigation team is to follow up and evaluate effectiveness and acceptability of remedies.
- k) When incident form is completed and signed off by the investigation team it will be forwarded to the Board. The Board will ensure all remedies have been completed and found to be effective and acceptable at which time it will close out the investigation.
- l) All completed relevant paperwork will be filed in the office.

### 8. Documentation

OTSI & ITSRR Accident Reporting forms and details can be found on the following web sites.

**The OTSI web site is:**

OTSI – Rail Occurrence Notification:

<http://www.otsi.nsw.gov.au/rail/occurrence-notification.php>

**The ITSRR web sites are:**

ITSRR – Notification of an Occurrence:

[http://www.transportregulator.nsw.gov.au/publications/fact\\_sheet\\_pages\\_08/rail\\_notification\\_occurrences.html](http://www.transportregulator.nsw.gov.au/publications/fact_sheet_pages_08/rail_notification_occurrences.html)

ITSRR – Notification of An Occurrence Form:

[http://www.transportregulator.nsw.gov.au/publications/forms/Form6\\_notification\\_occurrence.pdf](http://www.transportregulator.nsw.gov.au/publications/forms/Form6_notification_occurrence.pdf)

ITSRR - Guideline for the Reporting of Notifiable Occurrences:

<http://www.transportregulator.nsw.gov.au/statistics/Documents/ON-S1.pdf>

ITSRR - Guideline for the Top Event Classification of Notifiable Occurrences:

<http://www.transportregulator.nsw.gov.au/statistics/Documents/OC-G1.pdf>

ITSRR's Role in an Investigation:

[http://www.transportregulator.nsw.gov.au/publications/fact\\_sheet\\_pages\\_08/ITSRRs\\_role\\_investigations.html](http://www.transportregulator.nsw.gov.au/publications/fact_sheet_pages_08/ITSRRs_role_investigations.html)

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