

# **Sydney Trains Environmental Management System System Procedure**

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## **EPL 12208 AoA Monitoring & Reporting**

## Document History

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Title	EPL 12208 AoA Monitoring & Reporting		
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1.0	Environmental Advisor (810302)	4-Oct-12	First Issue
1.1	Environmental Advisor (810302)	3-Dec-12	Minor changes to reflect EPA comments
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# 1 Introduction

## 1.1 Purpose

The purpose of this procedure is to provide a consistent approach for 'angle of attack' (AoA) monitoring and reporting in order to facilitate compliance with Sydney Trains' obligations under:

- Condition U1.1 of environment protection licence (EPL) 12208 to implement an AoA monitoring and reporting pollution reduction program (PRP)
- Section 66(6) of the *Protection of the Environment Operations Act 1997* (POEO Act) to make AoA monitoring data available in accordance with the *Requirements for publishing pollution monitoring data* (EPA, March 2012).

## 1.2 Scope

This procedure applies to AoA monitoring and reporting as required under condition U 1.1 of EPL 12208 and section 66 (6) of the POEO Act. Accordingly this procedure applies to AoA monitoring of southbound trains through Beecroft and AoA reporting where the 30 milliradian reporting indicator has been exceeded.

## 1.3 Roles and Responsibilities

**Table 1.1: Rail Operator Roles and Responsibilities**

<b>Position</b>	<b>Roles and Responsibilities</b>
Rail Operator	<ul style="list-style-type: none"> <li>• Submits train information using TRIMS or an agreed equivalent</li> <li>• Fits AEI tags as per the minimum operating standards for rolling stock</li> </ul>
	If rolling stock exceeds the AoA reporting indicator: <ul style="list-style-type: none"> <li>• Receives weekly AoA exception report from Sydney Trains</li> <li>• Provides quarterly AoA action report to Sydney Trains <b>by 20<sup>th</sup> October, 20<sup>th</sup> January, 20<sup>th</sup> April, 20<sup>th</sup> July.</b></li> </ul>

**Table 1.1: Sydney Trains Roles and Responsibilities**

<b>Position</b>	<b>Roles and Responsibilities</b>
Manager Operational Technology	<ul style="list-style-type: none"> <li>• Custodian of AoA monitoring system, data and reports</li> <li>• Provides weekly AoA exception report for rail operators <b>by cob Tuesday</b></li> <li>• Provides monthly AoA summary for website <b>by 10<sup>th</sup> of month</b></li> </ul>
Manager Freight & Private Passenger Operations	<ul style="list-style-type: none"> <li>• Custodian of operational relationship with rail operators</li> <li>• Provides current list of rail operators and contact details</li> </ul>
Manager Internet	<ul style="list-style-type: none"> <li>• Custodian of Sydney Trains' corporate website</li> <li>• Publishes monthly AoA summary on website <b>by 15<sup>th</sup> of month</b></li> </ul>
Manager Environment	<ul style="list-style-type: none"> <li>• Custodian of operational relationship with EPA</li> <li>• Specifies AoA report requirements</li> <li>• Provides quarterly AoA update to EPA <b>by 31<sup>st</sup> October, 31<sup>st</sup> January, 30<sup>th</sup> April, 31<sup>st</sup> July.</b></li> </ul>

## 2 EPL 12208 AoA Monitoring & Reporting

Industry research into curve noise indicates a correlation between wheel squeal and the alignment of the train wheel relative to the rail. In order to identify wheels with the potential to squeal, Sydney Trains monitors axle alignment, better known as 'angle of attack' (AoA), on southbound trains through Beecroft.

Reporting between Sydney Trains, rail operators and the NSW Environment Protection Authority (EPA) of AoA monitoring data and actions taken in response to that data is formalised through this procedure, which has been prepared to facilitate compliance with Condition U1.1 (b) of EPL 12208.

### 2.1 AoA Monitoring (Condition U1.1 (a))

The Manager Operational Technology is responsible for:

- maintaining the AoA monitoring system, which comprises AoA monitors, an automatic equipment identification (AEI) tag reader, rail temperature gauge and weather station
- recording and storing AoA monitoring data for each southbound train, rail vehicle and axle through Beecroft
- providing user interfaces to the AoA monitoring data.

In order to facilitate capture of meaningful AoA monitoring data, the Rail Operator is responsible for:

- providing train information using train running information management system (TRIMS) or an agreed equivalent
- fitting rail vehicles with correctly coded and operable AEI tags as per the minimum operating standards for rolling stock (see ESR 0001-H).

### 2.2 AoA Reporting (Condition U1.1 (b) (c))

Sydney Trains uses  $AoA \geq |30|$  milliradians as the threshold for reporting exceptions to rail operators. Specific AoA reporting tasks under this procedure are discussed below and presented in Table 2.1.

**Table 2.1: AoA Reporting Overview**

Position	Weekly	Monthly	Quarterly
<b>Manager Operational Technology</b>	Provides AoA exception reports <b>by Tuesday</b>	Provides AoA summary <b>by 10<sup>th</sup></b>	nil
<b>Rail Operator</b>	Receives AoA exception report	Nil	Provides AoA action report <b>by 20<sup>th</sup></b>
<b>Manager Freight Operations</b>	nil	Nil	Receives AoA action report
<b>Manager Internet</b>	nil	Publishes AoA summary <b>by 15<sup>th</sup></b>	nil
<b>Manager Environment</b>	nil	nil	Provides AoA update to EPA <b>by 31<sup>st</sup> (30<sup>th</sup>)</b>

#### 2.2.1 Weekly AoA exception reports

The Manager Operational Technology is responsible for providing weekly AoA exception reports to:

- the Rail Operator showing all AoA exceptions attributed to that rail operator
- Manager Environment showing all AoA exceptions.

At a minimum the weekly AoA exception report must cover the period Monday to Sunday and be provided by close of business the following Tuesday.

### 2.2.2 Monthly AoA summary (POEO Act, s.66(6))

The Manager Operational Technology is responsible for providing a monthly AoA summary to the Manager Internet. At a minimum the monthly AoA summary must cover the calendar month and be provided by the 10<sup>th</sup> of the following month.

The Manager Internet is responsible for publishing the monthly AoA summary on the Sydney Trains corporate website by the 15<sup>th</sup> of that month.

### 2.2.3 Quarterly AoA action reports

The Rail Operator is responsible for providing a quarterly AoA action report to the Manager Freight & Private Operations and the Manager Environment by the 20<sup>th</sup> of the following month.

As per the EPL 12208 Annual Return period, the quarterly periods are:

1. 1 July to 30 September; report due to Sydney Trains by 20<sup>th</sup> October
2. 1 October to 31 December; report due to Sydney Trains by 20<sup>th</sup> January
3. 1 January to 31 March; report due to Sydney Trains by 20<sup>th</sup> April
4. 1 April to 30 June; report due to Sydney Trains by 20<sup>th</sup> July.

At a minimum the quarterly AoA action report must be on company letterhead and, as prescribed by EPL 12208, include “remedial actions taken to rectify misaligned axles on rolling stock”.

### 2.2.4 Quarterly AoA updates

The Manager Environment is responsible for providing a quarterly AoA update to the EPA by the 31<sup>st</sup> (30<sup>th</sup>) of the following month.

As per the EPL 12208 Annual Return period, the quarterly periods are:

1. 1 July to 30 September; update due to EPA by 31<sup>st</sup> October
2. 1 October to 31 December; update due to EPA by 31<sup>st</sup> January
3. 1 January to 31 March; update due to EPA by 30<sup>th</sup> April
4. 1 April to 30 June; update due to EPA by 31<sup>st</sup> July.

At a minimum, the quarterly AoA update must include a quarterly AoA monitoring summary and a copy of the quarterly AoA action reports received from rail operators.

### 3 EMS Essential Documents

The Essential Records associated with this System Procedure (required to provide leadership and direction in the EMS or to demonstrate conformance to the EMS or for the continuation of Sydney Trains' primary business) are listed in Table 3.1. Requirements for Essential Records are contained in EMS-08-PR-0011 *EMS Record Management*.

**Table 3.1: Essential Records**

Essential Record	Parent document	Record Management System	Confidential Record (Yes/No)	Record Retention Period	Record Use Review	Use Review By
Weekly AoA exception reports	This procedure	Paper or electronic	No	7 years	3 years	Document custodian
Monthly AoA summaries	This procedure	Paper or electronic	No	7 years	3 years	Document custodian
Quarterly AoA action reports	This procedure	Paper or electronic	No	7 years	3 years	Document custodian
Quarterly AoA updates	This procedure	Paper or electronic	No	7 years	3 years	Document custodian

## 4 Definitions and Acronyms

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**AoA:** angle of attack

**AEI:** automatic equipment identification

**EPA:** NSW Environment Protection Authority

**EPL:** Environment Protection Licence; issued by the EPA under the POEO Act

**EPL 12208:** network environment protection licence held by Sydney Trains

**POEO Act:** *Protection of the Environment Operations Act 1997* (NSW)

**PRP:** pollution reduction program

**TRIMS:** train running information management system

## 5 References

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Environment protection licence (EPL) 12208

*Protection of the Environment Operations Act 1997* (POEO Act)

*Requirements for publishing pollution monitoring data* (EPA, March 2012)

ESR 0001-H *Minimum Operating Standards for Rolling Stock – Appendix H – Automatic Equipment Identification*

## Appendix 1: Rail Operators

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RailCorp Track Access Agreements are in place with:

- 3801 Limited
- Australian Railway Historical Society
- Australian Western Railroad
- Freightliner Australia
- Genessee & Wyoming Australia
- Great Southern Railway
- Holdco Holdings; trading as Southern Shorthaul Railroad
- Interail [Aurizon]
- John Holland Rail
- Lachlan Valley Railway Society Cooperative
- Manildra
- NSW Rail Transport Museum
- Pacific National [Asciano]
- Qube Logistics
- Rhomberg Rail
- The Rail Motor Society.