

# Annual Environmental Management Report



 $1^{st}$  July 2014 to  $30^{th}$  June 2015



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# 1.0 INTRODUCTION

# 1.1 Purpose

The purpose of this Annual Environment Management Report (AEMR) is to provide the Department of Planning and Environment (DP&E) and other stakeholders a report of Port Kembla Coal Terminal's (PKCT's) environmental performance together with actions taken in relation to environmental control and regulatory compliance across the July 2014 to June 2015 reporting period.

# 1.2 Scope

This AEMR provides information on PKCT's compliance with the requirements of the PKCT Major Project Approval 08\_0009 which was granted on the 12<sup>th</sup> June 2009. The approval requires PKCT to prepare an annual AEMR. By letter of 25<sup>th</sup> March 2010, The DP&E (formerly the Department of Planning and Infrastructure (DP&I)) approved a PKCT request for the submission date to be the 31<sup>st</sup> July annually to facilitate financial year reporting.

This report has been prepared with reference to the NSW Department of Primary Industries Guidelines and Format for Preparation of an Annual Environmental Management Report dated January 2006.

This report will be submitted to the DP&E. Following DP&E feedback, it will be forwarded to the Environment Protection Authority (EPA) and the Department of Trade and Investment (DT&I) or as required by the respective agencies. A copy of this AEMR will also be made available to the public via the <u>PKCT website</u>.

# 1.3 Background

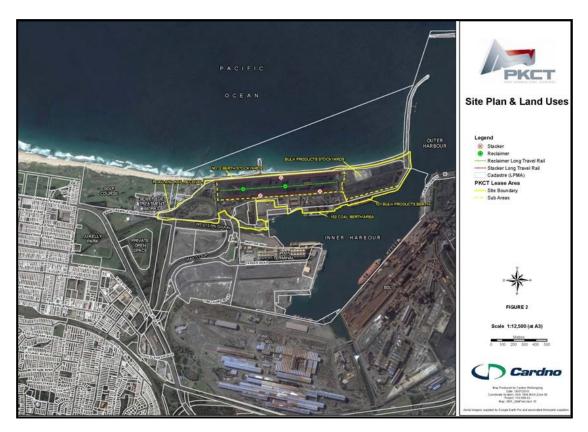
PKCT is located on Lot 22 in DP 1128396 on the northern side of the Inner Harbour of Port Kembla, Wollongong. On the 31<sup>st</sup> May 2013, NSW Ports acquired a long term lease for Port Kembla and Port Botany through which the current leasing arrangement with PKCT remains. Land is leased to PKCT under a 20 year, plus 20 year option. The lease commenced in August 1990 and PKCT has executed this option taking the lease period to 2030.

Six equal shareholders, namely Illawarra Services Proprietary Limited (South 32), Oakbridge Proprietary Limited (Glencore), Centennial Coal Company Limited, Tahmoor Coal Pty Limited and Metropolitan Collieries Proprietary Limited (Peabody) and Wollongong Coal Limited (formerly Gujarat NRE), form the Board of PKCT. South 32, reporting to the PKCT Board, has managed PKCT since 1990. PKCT is the major coal intermodal facility in southern NSW for the transfer of coal from rail and road to ship.

PKCT is responsible for receiving, assembling and loading coal from the southern and western NSW coalfields, for transport by ship to international and domestic markets. PKCT has two bulk handling facilities; a high capacity Coal Berth (Berth 102) that handles the loading of coal, and a Bulk Products Berth (Berth 101) that loads and unloads a range of bulk products. See Figure 1.



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# Figure 1: PKCT Site plan and land uses

The Bulk Products Berth was constructed in the early 1960's after construction of Port Kembla Inner Harbour, see Figure 2. The Coal Berth was constructed in the early 1980's.

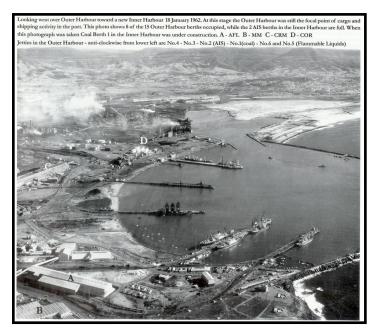


Figure 2: Early image of Port Kembla Inner Harbour. Image referenced from "Roadstead to World Class Port", Port Centenary Committee 1999.

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PKCT entered the lease to operate the facility in accordance with a development consent from Wollongong City Council (WCC) and EPA Environment Protection Licence (EPL) number 1625.

In 2008, PKCT commenced preparation of a Major Project Application under Part 3A of the Environmental Planning and Assessment Act (EPAA) 1979 seeking consent to alter coal receival arrangements by public road.

Consultation with the DP&E resulted in the remit of the application with the scope being increased to include consent for PKCT's existing operations. The Environmental Assessment (EA) submitted with the Major Project Application included an assessment of all environmental impacts associated with the current and ongoing PKCT activities.

In June 2009 the DP&E conditionally approved PKCT's Major Project Application (08\_0009) for Existing Operations & Increased Road Receival Hours. This consent replaces the previous development approval from WCC and sets new conditions for environmental impacts, management and reporting.

# 1.4 Objectives

The objective of this AEMR is to provide a report that outlines the environmental monitoring, mitigation, assessments and management actions undertaken by PKCT over the July 2014 to June 2015 reporting period.

# 1.5 Environment Management

PKCT has an Environment Management System (EMS) in place to meet its environmental obligations. The EMS is certified to AS/NZS ISO 14001:2004 and is supported by policies, standards, an environment management strategy, management plans and procedures. Key documents of the EMS include the following:-

- Sustainable Development Policy PO.BM.291
- Environment Policy PO.HS.85
- Quality Policy PO.BM.236
- Environment Management Strategy MP.HS.464
- Noise Management Plan MP.HS.387
- Air Quality Management Plan MP.HS.386
- Driver Code of Conduct Implementation Plan MP.BM.453
- Water Management Plan MP.HS.462
- Green and Golden Bell Frog Management Plan MP.HS.109
- Landscape Management Plan MP.HS.470
- Greenhouse Gas and Energy Efficiency Management Plan MP.HS.461
- Waste Management Plan MP.HS.460
- Fire Management Plan MP.HS.459

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Policies are published on <u>PKCT's web site</u>. Management Plans required under Project Approval 08\_0009 are also published once DP&E approval is obtained.

# 1.6 Terminal Contact

Figure 3 below identifies relevant contacts at PKCT.

| PKCT Employee & Position                    | Contact Details            |  |
|---|----------------------------|--|
| Mr. Peter Green                             | (02) 4228 0288             |  |
| General Manager                             | Peter.Green@pkct.com.au    |  |
| Mr. Alex Chalk                              | (02) 4221 1877             |  |
| Risk Manager                                | Alex.Chalk@pkct.com.au     |  |
| Mr. Luke Pascot                             | (02) 4221 1155             |  |
| Environmental Specialist                    | Luke.Pascot@pkct.com.au    |  |
| Mr. John Gorman                             | (02) 4221 1802             |  |
| Operations Manager (Acting General Manager) | John.Gorman@pkct.com.au    |  |
| Community Hotline                           | 1800 111 448               |  |
|   | communitylinks@pkct.com.au |  |

# **Figure 3: PKCT contacts**

# 1.7 Actions Arising From Previous AEMR Review

Following submission of the 2012/2013 AEMR, the DP&E requested some changes to the format of the following AEMR be made. The format was updated and the new report structure was submitted in 2013/2014. Following review of the 2013/2014 AEMR, the DP&E was satisfied with the report structure. No further updates or other actions were required.

# 2.0 ADMINISTRATIVE CONDITIONS

Under Schedule 2 of PKCT's Major Project Approval 08\_0009, PKCT has 14 Administrative Conditions. The Administrative Conditions are listed under the headings outlined in Figure 4. The following section outlines PKCT's compliance with these across the reporting period.

| Administrative Condition                       | AEMR Section |
|--|--------------|
| Obligation to Minimize Harm to the Environment | Section 2.1  |
| Terms of Approval                              | Section 2.2  |
| Limits on Approval                             | Section 2.3  |
| Management Plans / Monitoring Programs         | Section 2.4  |
| Surrender of Consents                          | Section 2.5  |
| Structural Adequacy                            | Section 2.6  |
| Demolition                                     | Section 2.7  |
| Operation of Plant and Equipment               | Section 2.8  |
| Dispute Resolution                             | Section 2.9  |

# Figure 4: Administrative conditions

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# 2.1 Obligation to minimize harm to the Environment

1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimize any harm to the environment that may result from the operation of the project.

The condition is consistent with PKCT's policies and management standards including a commitment to meet legal and other requirements.

PKCT has in place an Environmental Aspects and Impacts Register. This document provides a framework whereby PKCT identifies, records, risk-ranks and provides controls for activities associated with the operation that have the potential to cause harm to the environment.

# 2.2 Terms of Approval

- 2. The Proponent shall carry out the project generally in accordance with the:
  - (a) EA;
  - (b) Response to Submissions;
  - (c) Statement of Commitments (See Appendix 2); and
  - (d) Conditions of this approval
- 3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.
- 4. The Proponent shall prepare revisions of any strategies, plans or programs required under this consent if directed to do so by the Director-General. Such revisions shall be prepared to the satisfaction of, and within a timeframe approved by, the Director-General.
- 5. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
  - (a) Any reports, plans, programs, strategies or correspondence that are submitted in accordance with this approval; and
  - (b) The implementation of any actions or measures contained in these reports, plans, programs, strategies or correspondence.

The requirements of this condition were met across the reporting period. The Environment Management Strategy (EMS) has been developed to facilitate the means by which DP&E approval conditions are met. The AEMR provides an annual compliance report.

# 2.3 Limits on Approval

6. The Proponent shall not receive more than 7.5 million tonnes of coal and bulk products at the site by public road in any calendar year without the written approval of the Director-General. In Seeking this approval, the Proponent shall submit a report to the Director-General that:

(a) reviews the transport related impacts associated with the trucks being used to deliver coal and bulk products to the terminal;
(b) demonstrates that these impacts are generally consistent with the predicted and/or approved impacts; and
(c) examines whether there are any other reasonable and feasible measures that could be implemented to minimise these impacts.
Once this approval has been obtained, the Proponent shall not receive more than 10 million tonnes of coal and bulk products at the site by public road in any calendar year.

7. The Proponent shall only receive coal dispatched from NRE No 1 Colliery at Russell Vale if that coal has been

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dispatched between the hours of:

- (a) 7 am to 10 pm Monday to Friday; and
- (b) 8 am to 6 pm Saturday and Sunday or Public Holidays
- Unless in accordance with a project approval granted to that Colliery under Part 3A of the EP&A Act.
- 8. Subject to conditions 6 and 7 of this schedule, coal and bulk products may be received by the Proponent at the site by road delivery twenty four hours per day, seven days per week.

PKCT did not receive more than 7.5 million tonnes of coal and bulk products by public road during the 2014 calendar year.

With regard, Schedule 2, Condition 6, PKCT application to the Director General to receive 10 million tonnes per annum was approved on the 29<sup>th</sup> September 2013 subject to conditions.

### 2.4 Management Plans / Monitoring Programs

9. With approval of the Director-General, the proponent may submit any management plan or monitoring program required by this approval on a progressive basis.

The PKCT Water Management Plan, Drivers Code of Conduct and Drivers Code of Conduct Implementation Plan were revised and submitted to the DP&E in August 2014.

### 2.5 Surrender of Consents

10. Within 12 months of the date of this approval, the Proponent shall surrender all existing development consents and existing use rights associated with operations at the site in accordance with clause 97 of the EP&A Regulation.

Applicable consents have been surrendered. No action was required in this reporting period.

# 2.6 Structural Adequacy

11. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Facilities maintenance is carried out onsite in accordance with legal and other requirements including applicable Australian Standards and the Building Code of Australia.

#### 2.7 Demolition

12. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS* 2601-2001: The Demolition of Structures, or its latest version.

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PKCT did not undertake any demolition projects required to conform to *Australian Standard AS2601-2001* in this reporting period.

In the 2015/2016 reporting period, PKCT will be undertaking demolition of redundant equipment and services at the southern end of the site. The proposed demolition includes removal of various conveyors and hoppers, associated transfer stations and demolition of the old Bulk products Berth road receival station. All demolition works will be undertaken in accordance with AS 2601.

# 2.8 Operation of Plant & Equipment

- 13. The Proponent shall ensure that all plant and equipment used onsite is:
  - (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper efficient manner.

PKCT management and staff have a responsibility to maintain equipment to ensure correct operation and efficiency. PKCT ensures all personnel are suitably qualified, trained and competent to ensure that equipment is operated in a proper and efficient manner.

# 2.9 Dispute Resolution

14. In the event that the Proponent and the Council or a Government agency, other than the Department, cannot agree on the specification or requirements of this approval, the matter may be referred by either party to the Director-General for resolution, whose determination of the disagreement shall be final and binding on the parties.

PKCT accepts the dispute resolution process. This condition is referenced in the PKCT Environment Management Strategy.

There were no disputes during the reporting period.

# 3.0 SPECIFIC ENVIRONMENTAL CONDITIONS

This section provides a summary of the Specific Environmental Conditions outlined in Schedule 3 of the PKCT Major Project Approval 08\_0009 and, how PKCT complies with these requirements.

Figure 5 below provides an overview of each of the Specific Environmental Conditions and a reference to their location in the AEMR.



| Specific Environmental Condition             | AEMR Section |  |
|--|--------------|--|
| Noise  | Section 3.1  |  |
| Transport                                    | Section 3.2  |  |
| Air Quality                                  | Section 3.3  |  |
| Meteorological Monitoring                    | Section 3.4  |  |
| Surface Water                                | Section 3.5  |  |
| Biodiversity                                 | Section 3.6  |  |
| Visual Amenity                               | Section 3.7  |  |
| Greenhouse and Energy Efficiency Section 3.8 |              |  |
| Waste Section 3.9                            |              |  |
| Hazards Section 3.10                         |              |  |
| Fire Control                                 | Section 3.11 |  |

#### Figure 5: Specific environmental condition overview

#### 3.1 Noise

#### **3.1.1 Noise Standards and Performance Measures**

EPL 1625 and Major Project Approval 08\_0009 pertain to noise emissions from PKCT's premises. Noise criteria are outlined as follows;

#### Impact Assessment Criteria

1. The Proponent shall ensure that the noise generated by the project at any privately-owned residence does not exceed the criteria specified in Table 1 for the location nearest to that residence.

Table 1: Noise impact assessment criteria dB(A) LAeq (15 min)

| Location                 | Time Period | Limits(LA <sub>eq,15 min</sub> dB(A) |
|--------------------------|-------------|--------------------------------------|
|                          | Day         | 51                                   |
| Cnr Swan St/Kembla St    | Evening     | 50                                   |
|                          | Night       | 49                                   |
| Cnr Swan St/ Corrimal St | Day         | 51                                   |
|                          | Evening     | 50                                   |
|                          | Night       | 49                                   |
| Cnr Keira St/ Fox St     | Day         | 55                                   |
|                          | Evening     | 49                                   |
|                          | Night       | 45                                   |

Notes:

- (a) To determine compliance with the LA<sub>eq, (15 min)</sub> noise level limits in the above table, noise from the project is to be measured at the most affected point within the residential boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the DECC may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise levels where applicable.
- (b) The noise emission limits identified in the above table apply under meteorological conditions of:
  - wind speeds of up to 3 m/s at 10 metres above ground level; or
  - temperature inversion conditions of up to 3°C/100m, plus a 2 m/s source-to-receiver component drainage flow wind at 10 metres above ground level for those receivers where applicable
  - in accordance with the NSW Industrial Noise Policy.

However, if the Proponent has a written negotiated noise agreement with any landowner of the land listed in Table 1, and a copy of this agreement has been forwarded to the Department and DECC, then the Proponent may exceed the noise

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limits in Table 1 in accordance with the negotiated noise agreement.

#### **Noise Monitoring Program**

- 2. The Proponent shall prepare and implement a Noise Monitoring Program for the project to the satisfaction of the Director-General. This program must:
  - (a) be developed in consultation with DECC;
  - (b) be submitted to the Director-General for approval within 6 months from the date of this approval, or as otherwise agreed by the Director-General; and
  - (c) include a:
    - $\circ$  combination of attended and unattended noise monitoring measures;
    - noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this approval; and
    - reasonable and feasible best practice noise mitigation measures to ensure project specific noise criteria are met.

#### **Continuous Improvement**

- 3. The Proponent shall:
  - (a) continue to implement all reasonable and feasible best practice noise mitigation measures;
  - (b) continue to investigate ways to reduce the noise generated by the project, including maximum noise levels which may result in sleep disturbance; and
  - (c) report on these investigations and the implementation and effectiveness of these measures in the AEMR to the satisfaction of the Director-General.

#### 3.1.2 Noise Monitoring

#### 3.1.2.1 Noise Monitoring Methodology

PKCT utilises a noise consultant, Wilkinson Murray, for noise monitoring surveys associated with its operations. Due to the complex nature of the noise environment, which involves numerous industrial sources, sub-arterial roadways and close proximity to the Wollongong town centre, traditional noise monitoring with a sound level meter cannot adequately measure the noise contribution from PKCT due to elevated background noise levels. Wilkinson Murray utilises a BarnOwl<sup>®</sup> directional noise monitoring system to conduct attended noise monitoring. Directional noise monitoring provides source detection and analysis of noise from PKCT and excludes operator discretion in the attended monitoring.

Noise monitoring is undertaken three times across the day, Day (7:00am to 6:00pm), Evening (6:00pm to 10:00pm) and Night (10:00pm to 7:00am), and utilising the BarnOwl<sup>®</sup>, at three off-site monitoring locations. One on-site location is used. Monitoring Locations utilised in the PKCT Noise Monitoring Program are presented in Appendix A.

#### 3.1.2.2 Noise Monitoring Results and Compliance 2014/2015

Three routine noise monitoring surveys were undertaken during the 2014/2015 reporting period. These occurred on 28<sup>th</sup> July 2014, 17<sup>th</sup> December 2014 and 3<sup>rd</sup> June 2015 and were undertaken by noise consultant, Wilkinson Murray. Monitoring was undertaken across day, evening and night time periods as stipulated in Project Approval 08\_0009, Schedule 3,



Condition 1. A summary of the estimated LAeq noise levels measured using the BarnOwl<sup>®</sup> in the direction of PKCT from the three surveys is presented below in Figure 6.

| Monitoring<br>Period | Range of<br>directional Noise<br>Levels Measured<br>28 <sup>th</sup> July 2014 | Range of<br>directional Noise<br>Levels Measured<br>17 <sup>th</sup> Dec 2014 | Range of<br>directional Noise<br>Levels Measured<br>3 <sup>rd</sup> Jun 2015 | Noise Impact<br>Criteria |
|----------------------|--|---|--|--------------------------|
| Day                  | All <25dBA   | All <25dBA  | <35dBA to 45dBA  | 51-55dBA                 |
| Evening              | All <20dBA   | All <25dBA  | <35dBA to 46dBA  | 49-50dBA                 |
| Night                | <20dBA to 21dBA  | All <25dBA  | All <35dBA   | 45-49dBA                 |

# Figure 6: Estimated noise levels from PKCT direction using BarnOwl – July/December 2014 and June 2015.

The monitoring was undertaken during "typical" operations with road and rail receival and ship loading occurring in most of the monitoring periods.

With the exception of some noise noted below the Impact Criteria measured at Location 1 during the July 2014 survey and Location 2 during the June 2015 survey, noise generated from PKCT was essentially inaudible at the off-site monitoring locations for the July 2014, December 2014 and June 2015 surveys. The measured noise levels from the direction capturing PKCT were within criteria for all times at all locations. The July 2014, December 2014 and June 2015 noise surveys concluded that noise generation from PKCT is below the applicable noise criteria and essentially inaudible.

A full summary of monitoring results for the July 2014, December 2014 and June 2015 surveys is presented in Appendix B.

# **3.1.3 Trends in Noise Emissions**

PKCT has undertaken twelve noise surveys since September 2009. On all occasions, the consultant has concluded that "noise from PKCT was below the Noise Impact Criteria". Figure 7 below compares the overall noise monitoring compliance for each of the noise monitoring surveys beginning in September 2009.



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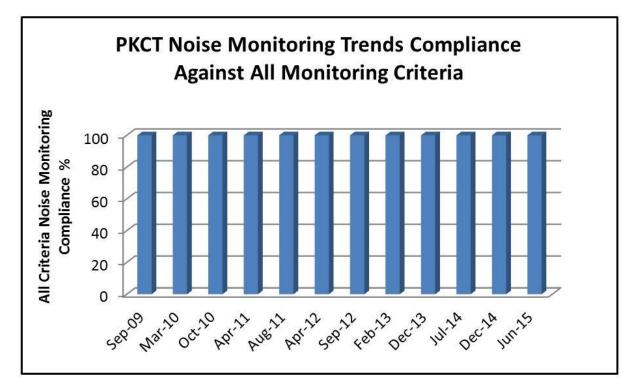


Figure 7: PKCT noise monitoring trends, compliance against all monitoring criteria.

# 3.1.4 Noise – Activities undertaken During 2014/2015 Reporting Period

A summary of the actions undertaken for the 2014/2015 reporting period related to noise is presented below. PKCT continues to look for opportunities to improve noise levels across its operations.

- PKCT undertook three routine noise monitoring surveys on July 28<sup>th</sup> 2014, December 17<sup>th</sup> 2014 and 3<sup>rd</sup> June 2015.
- An Opportunity for Improvement identified in the 2014 AECOM Independent Audit was
  to review and update the PKCT NMP to include discussions on the use of the BarnOwl for
  noise monitoring. This review was to include further analysis of the suitability and
  limitations of using the BarnOwl for noise monitoring at PKCT. PKCT's noise consultant
  Wilkinson Murray undertook a review of the suitability of the BarnOwl for noise
  monitoring at PKCT in February 2015. Following the review, the consultant concluded
  that with some limitations, using the BarnOwl provides a significant improvement over
  non-directional approaches when identifying noise level from a source that is localised in
  direction. Based on this review, PKCT will continue to utilise the BarnOwl for its noise
  monitoring program.

# 3.1.5 Noise - Activities Planned for 2015/2016 Reporting Period

A summary of the actions proposed to be undertaken in the 2015/2016 reporting period is presented below.



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- PKCT has undertaken a review of the limitations of and appropriateness of using the BarnOwl for noise monitoring at the site. The NMP will be updated with this information during the 2015/2016 reporting period.
- PKCT's noise monitoring consultant recommended that noise surveys are best done at PKCT in December and March with consideration to meteorological conditions. This will be taken into account in scheduling noise surveys in the 2015/2016 reporting period. In scheduling noise surveys, considerations will also be given to site activities to ensure they reflect normal operations.

# 3.2 Transport

#### 3.2.1 Transport Standards and Performance Measures

#### Monitoring of Coal Transport

3. The Proponent shall keep records of the amount of coal and bulk products received at the site each year, and include these records in the AEMR.

#### **Traffic Management**

4. The Proponent shall ensure that vehicles waiting to deliver coal or bulk products to the site do not queue or park on public roads other than Port Kembla Road.

#### **Driver's Code of Conduct**

- 5. The Proponent shall, in consultation with affected mines and principal haulage operators, develop a program to implement the Driver's Code of Conduct (see Appendix 3) to the satisfaction of the Director-General. This program must:
  - (a) be submitted to the Director-General for approval within 6 months from the date of this approval, or as otherwise agreed by the Director-General;
  - (b) include a driver induction program to cover (but not be limited to) speed limits, compression braking, truck washing, load covering and queuing on local roads; and
  - (c) include measures to ensure the Driver's Code of Conduct is enforced.

# **3.2.2 Transport Monitoring**

# 3.2.2.1 Transport Monitoring Methodology

Shippers to PKCT are signatories to the PKCT Drivers Code of Conduct (DCC). This document was developed in consultation with the PKCT road receival customers, and their associated road transport providers, Roads and Traffic Authority (now Roads and Maritime Services), EPA, and the PKCT Community Consultative Committee (CCC).

The document outlines specific measures focusing on opportunities to minimise, mitigate and manage traffic volume, traffic safety and acoustic impacts. Among others, it specifically covers items such as haulage routes, compression breaking, road delivery standards, truck washing, queuing on Springhill Road, load covering and incident management and reporting.

A Heavy Haulage Induction manual and induction program and a Drivers Code of Conduct Implementation Plan are in place to support DCC implementation.



PKCT monitors compliance against the DCC via an audit program. The monitoring of road transport operations is undertaken by PKCT personnel, by the shippers and their associated road transport providers. Audits are undertaken at the mine site, on route and at PKCT. Monthly compliance reports are supplied to PKCT. Road transport providers also undertake driver observations.

# 3.2.2.2 Transport Monitoring Results and Compliance 2014/2015

In accordance with Schedule 3, Condition 4, PKCT is required to keep records of the amount of coal and bulk products received at the site each year. Figure 8 below provides a summary of throughput and receival over the reporting period.

| Shiploading July to December 2015       | Coal      |           | Coke         | Iron Ore | Total      |
|---|-----------|-----------|--------------|----------|------------|
| Shiploading July to December 2015       | Coking    | Steaming  | Coke         | Iron Ore | TOTAL      |
| Berth 101: Bulk Products Berth (Tonnes) | 42,317    | 0         | 2,345        | 0        | 44,662     |
| Berth 102: Coal Berth (Tonnes)          | 8,658,596 | 4,466,313 | 0            | 0        | 13124909   |
|   |           |           | Total (tonne | is)      | 13,169,571 |

| Receivals July to December 2014 | Private Road | Public Road  | Total      |
|---------------------------------|--------------|--------------|------------|
| Road Receival (Tonnes)          | 2,495,553    | 4,362,389    | 6,857,942  |
| Rail Receival (Tonnes)          |              |              | 6,214,160  |
|                                 |              | Total Tonnes | 13,072,102 |

# Figure 8: Summary of PKCT throughput 2014/2015

Across the 2014/2015 reporting period 1268 driver observations, 40 audits and 686 Trucksafe audits were completed. Driver observations included monitoring of at least 7,631 individual drivers.

A summary of the auditing results is presented in Appendix C.

With regard to Section 3.2.1 Condition 4, PKCT identified one incidence of queueing on Springhill Road. This event, involving two trucks, occurred on the 10<sup>th</sup> December 2014 and was captured as event EV-01495 in PKCT's Event Management System. The truck companies were not identified however all road transport providers were advised to recommunicate requirements to drivers and that any further events would not be tolerated. It is noted that compliance with this provision has been very good since commencement of Project Approval in 08\_0009 and this has been the first reported event of its type.

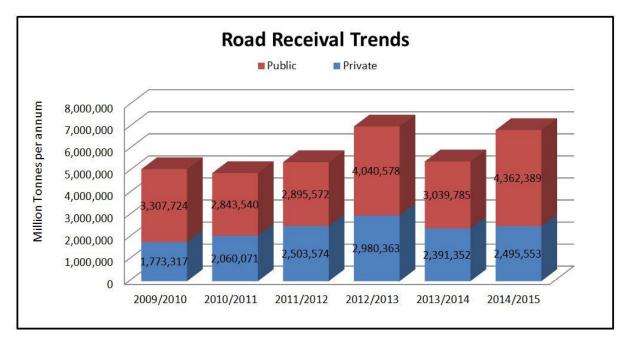
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As part of the monitoring regime, PKCT records and responds to complaints and incidents associated with coal transport to and from PKCT where required. A summary of complaints and incidents is presented in Appendix D.

# 3.2.3 Trends in Transport

Road receival at PKCT has increased by approximately 1.4 million tonnes compared to last year with a total of 6,857,942 million tonnes of combined private and public road receivals across 2014/2015, Figure 9.



# Figure 9: Road receival trends

# 3.2.4 Traffic – Activities Undertaken During 2014/2015 Reporting Period

A summary of the actions undertaken for the 2014/2015 reporting period related to traffic is presented below.

- Northern Truckwash Upgrade completed. An Effectiveness Review was submitted to the EPA on 6<sup>th</sup> February 2015. Routine monitoring has been implemented.
- RFID Project This project entailed the installation of a system for monitoring trucks passing through the North Truckwash to ensure trucks obey traffic lights and pass through at the appropriate speed. A boom gate to assist with regulating truck speeds has been installed and integrated with the RFID program during the reporting period.
- The 2014 AECOM Independent Audit identified a number of Opportunities for Improvement around the DCC. Reference was made to updating the DCC, the DCC Implementation Plan and the Drivers Summary Sheets being used. The various actions completed are outlined in Appendix E.
- PKCT installed a supplementary truck hose down facility/location on its premises to allow truck drivers to undertake additional, focused washing of trucks and insides of trailers if required. This would normally be undertaken as an end of shift activity.



# 3.2.5 Traffic - Activities Planned for 2015/2016 Reporting Period

A summary of the planned actions related to the 2015/2016 reporting period related to Traffic is presented below.

• Continue to monitor the effectiveness of the completed North Truckwash installation.

# 3.3 Air Quality

# 3.3.1 Air Quality Standards and Performance Measures

EPL 1625 and Major Project Approval 08-0009 pertain to air quality and emissions from PKCT's premises. Air quality criteria are outlined as follows;

#### Impact Assessment Criteria

7. The Proponent shall ensure that dust generated by the project does not cause additional exceedances of the criteria listed in Tables 3 to 5 at any residence.

| Pollutant                                | Averaging Period | Criterion |
|--|------------------|-----------|
| Total suspended particulate (TSP) matter | Annual           | 90 μg/m3  |
| Particulate matter < 10 μm (PM10)        | Annual           | 30 µg/m3  |

Table 4: Short term impact assessment criteria for particulate matter

| Pollutant                         | Averaging Period | Criterion |
|-----------------------------------|------------------|-----------|
| Particulate matter < 10 μm (PM10) | 24 hour          | 50 μg/m3  |

#### Table 5: Long term impact assessment criteria for deposited dust

| Pollutant      | Pollutant Averaging Period Maximum Increase in |                      | Maximum Total Deposited |  |
|----------------|--|----------------------|-------------------------|--|
|                |  | Deposited Dust Level | Dust Level              |  |
| Deposited Dust | Annual   | 2 g/m²/month         | 4 g/m²/month            |  |

Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS 3580.10.1-1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.

However, if the Proponent has a written negotiated air quality agreement with any landowner to exceed the air quality limits in Table 3, 4 and/or 5, and a copy of this agreement has been forwarded to the Department and DECC, then the Proponent may exceed the air limits in Table 3, 4 and/or 5 in accordance with the negotiated air quality agreement.

#### Operations

- 8. The Proponent shall:
  - (a) ensure any visible air pollution generated by the project is both minimised and recorded, and that operations are modified as required to minimise any resultant air quality impacts on nearby residences;
  - (b) ensure that the real-time air quality monitoring and meteorological monitoring data is assessed regularly; and
  - (c) where dust is generated by the project, that operations are modified and/or stopped as required to ensure compliance with the relevant air quality criteria

to the satisfaction of the Director-General.

#### 9. During carrying out of the project, the Proponent shall ensure that:

- (a) all loaded trucks entering or leaving the site have their loads covered; and
- (b) trucks associated with the project pass through a truck wash before entering the public road network
- to the satisfaction of the Director-General.

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#### Air Quality Monitoring Program

- 10. The Proponent shall prepare and implement an Air Quality Monitoring Program for the project to the satisfaction of the Director-General. This program must:
  - (a) be developed in consultation with DECC;
  - (b) be submitted to the Director-General for approval within 6 months from the date of this approval, or as otherwise agreed by the Director-General; and
  - (c) include:
    - real-time sampling to monitor the dust emissions of the project;
    - an air quality monitoring protocol for evaluating compliance with the air quality impact assessment criteria in this approval; and
    - reasonable and feasible best practice emissions mitigation measures to ensure project specific assessment criteria are met.

### 3.3.2 Air Quality Monitoring and Compliance

#### 3.3.2.1 Air Quality Monitoring Methodology

PKCT has an Air Quality Management Plan (AQMP) in place and is operational as follows;

- The AQMP, developed in consultation with the EPA, was submitted to DP&E by the due date of 9<sup>th</sup> December 2009. The DP&E approved the AQMP by letter of 25<sup>th</sup> March 2010.
- The EPA assisted in developing the AQMP though did not add any new air quality criteria to EPL 1625. In the 2014 EPL review, the EPA included new obligations on PKCT to report on continuous dust against the DPE Impact Assessment Criteria and this has commenced in the 2014/15 EPL Annual Return.
- PKCT's AQMP contains dust monitoring, assessment, reporting and mitigation and management provisions to ensure necessary actions are undertaken and that dust from PKCT's premises does not exceed the criteria in the Impact Assessment Criteria outlined above.
- PKCT provides 24/7 site operational control via the Main Control Room (MCR). MCR operators monitor site conditions and weather forecasts. If dust is observed, action is taken through the operation of sprays or other available controls. Dust events observed which emanate beyond the immediate source with a potential to have off site impacts are entered into PKCT's event management system, requiring investigation and corrective action. PKCT also has an auditing process in place which includes site observations of dust, dust associated with tuck movements and the assessment of associated controls.
- PKCT has a total of 14 depositional dust gauges (11 Industrial and 3 residential) located on site and on adjacent port and residential areas, and two continuous dust monitors located to the north and south of the site, see Figure 10 below. These locations are specified in the EPL and Project Approval 08\_0009. Dust Samples from each dust deposition gauge are collected on a monthly basis by an environmental contractor and

sample analysis is performed at a NATA accredited laboratory. Results from the residential depositional gauges are analysed on a monthly basis and compared to the EPA amenity criteria of 4 grams/m<sup>2</sup>/month. The results are reported on the PKCT website.

#### PORT KEMBLA COAL TERMINAL **DUST & WEATHER MONITOR LOCATIONS**

EPL РКСТ

No. No. 30<sup>th</sup> October 2012



Figure 10: PKCT air quality monitoring sites

# 3.3.2.2 Air Quality Monitoring Results and Compliance 2014/2015

PKCT collects monthly depositional dust records at three residential sites and 11 industrial sites located on or near the PKCT premises. Monthly dust deposition results for the three residential dust gauges are presented in Figure 11 below.

Dust Gauges- Environment Protection Licence monitoring sites Sites denoted "P": industrial; "R": residential Continuous Dust Monitor Sites- additional (a) BlueScope High Volume Sampler & dust gauge (b) PKCT EPL Monitoring Site R2 (2 gauges) Weather stations (a) at each continuous dust monitor site (b) PKCT Main Control Room 🤍

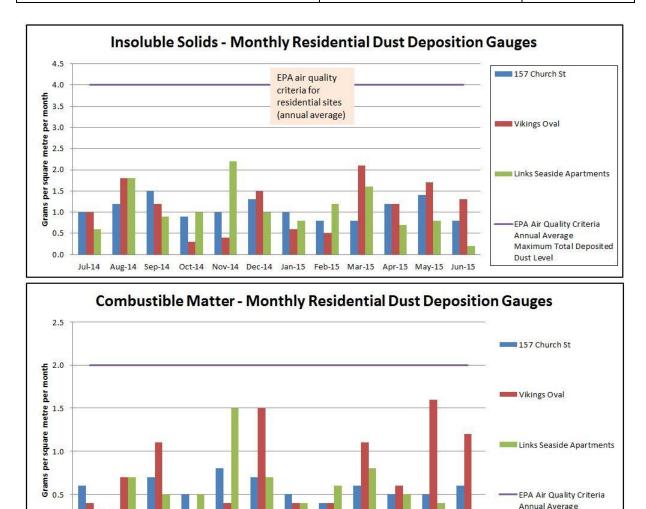
**Dust Monitor Location Description** 





Maximum Increase in Deposited Dust Level

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# Figure 11: PKCT residential depositional dust gauges

0.0

Jul-14

Dust deposition levels for insoluble solids at residential monitoring sites across the reporting period were within the assessment criteria of (4 g/m<sup>2</sup>/month) for all months. It should be noted that the assessment criteria is an annual average.

Dust deposition results for combustible matter at residential monitoring sites across the reporting period were within the assessment criteria (2 g/m<sup>2</sup>/month) for all months.

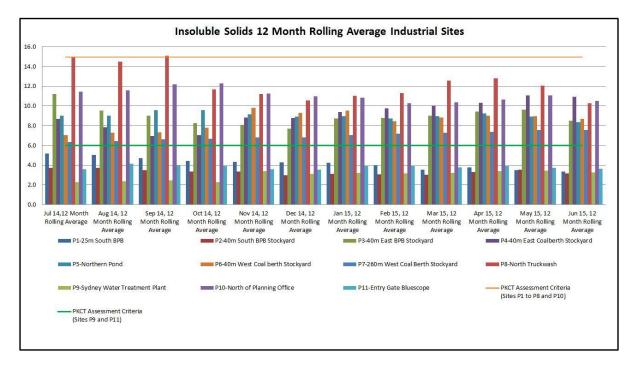
Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15

Twelve month rolling average Insoluble Solids results for the 11 PKCT industrial dust gauges are presented below in Figure 12. Results for ten of the monitoring sites recorded fell within the assessment criteria. One site, P8 located near the Northern Truckwash recorded results slightly outside the assessment criteria in September 2014.

The elevated levels recorded in September 2014 for the Northern Truckwash gauge are reported as an annual average. The level is likely a cumulative result of persistent strong westerly winds during that month and the preceding month. The truckwash was operational across September 2014.

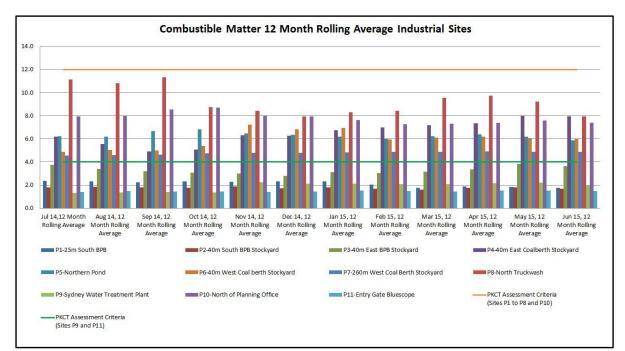


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# Figure 12: PKCT industrial dust deposition gauges insoluble solids 12 month rolling average.

Twelve month rolling average Combustible Matter results for the 11 PKCT industrial dust gauges are presented below in Figure 13. All results were within the PKCT assessment criteria for the reporting period. Combustible matter is considered an indicator of coal related dust particulate.



# Figure 13: PKCT industrial dust deposition gauges combustible matter 12 month rolling average.



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PKCT has two continuous dust monitors. One monitor is located at the southern end of PKCT's premises. The other monitor is located north of PKCT's premises, midway to the residential boundary. Data from these monitors is captured and analysed by specialist air quality consultants for PKCT. Data and exceedances related to the northern monitor are presented with wind data in Appendix F, and in Figure 14 below.

The annual average concentration of TSP at the PKCT northern monitoring site was below the trigger level of 90  $\mu$ g/m<sup>3</sup>.

The annual average PM10 concentration of 30.8  $\mu$ g/m<sup>3</sup> at the northern monitoring site was marginally above the trigger level of 30  $\mu$ g/m<sup>3</sup>.

At the northern PKCT monitoring site, the trigger level of 90  $\mu$ g/m<sup>3</sup> for the 24 hour average TSP concentration was exceeded on 42 occasions, while the 24 hour average PM10 air quality standard of 50  $\mu$ g/m<sup>3</sup> was exceeded on 65 occasions. Each TSP exceedance day was also a PM10 exceedance day.

PKCT was identified as having made, at most, a minor contribution (i.e. less than 30%) to 39 of the 42 exceedances of the 24 hour average TSP trigger level at the PKCT northern monitoring site. PKCT was identified as having made a moderate contribution (30% to 70%) on two remaining exceedance days.

PKCT was identified as having made, at most a minor contribution (i.e. less than 30%) to 59 of the 65 exceedances of the 24 hour average PM10 objective at the PKCT northern monitoring site. PKCT was identified as having made a moderate contribution (30% to 70%) on four remaining exceedance days.

| PKCT contribution rating          | Number of TSP exceedance<br>days | Number of PM <sub>10</sub> exceedance<br>days |
|-----------------------------------|----------------------------------|---|
| None                              | 8                                | 13  |
| Minimal (0% to 10%)               | 19                               | 27  |
| Minor (10% to 30%)                | 12                               | 19  |
| Moderate (30% to 70%)             | 2                                | 4   |
| Major (70% to <mark>1</mark> 00%) | 0                                | 0   |
| Unclassified (missing data)       | 1                                | 2   |
| Total exceedance days             | 42                               | 65  |

# Figure 14: PKCT contribution ratings for exceedance days during July to June 2015

On average, PKCT was estimated to have contributed 11% to TSP levels at the PKCT northern monitoring site on days when exceedances of the TSP trigger level occurred.

On average, PKCT was estimated to have contributed 12% to PM10 levels at the PKCT northern monitoring site on days when exceedances of the PM10 standard occurred.

# 3.3.3 Trends in Air Quality

Comparative data for the PKCT residential depositional dust gauges is presented in Figure 15 below. Each year, 12 samples are collected at each gauge. As is shown in the Figure, the number of exceedances occurring across each year is low and no significant trend is observable in the current data set.

Of the exceedances recorded, two occurred at the Vikings Oval gauge in the 2012/2013 and one at Links Seaside Apartments in 2013/2014. Petrographic testing indicated all were due to local effects i.e. landscaping and lawn mowing known to be occurring during the time of exceedance.

| Residential Air Quality Criteria Number of Exceedances - Insoluble Solids |  |   |   |   |   |  |
|---|--|---|---|---|---|--|
|   | 2011/2012 2012/2013 2013/2014 2014/201 |   |   |   |   |  |
| Links Seaside Apartments  | Criteria 4 g/m²/month                  | 0 | 0 | 1 | 0 |  |
| Vikings Oval  | Criteria 4 g/m²/month                  | 0 | 2 | 0 | 0 |  |
| 157 Church Street   | Criteria 4 g/m²/month                  | 0 | 0 | 0 | 0 |  |

| Residential Air          | Quality Criteria Number o | of Exceedance | es -Combust | ible Matter |           |
|--------------------------|---------------------------|---------------|-------------|-------------|-----------|
|                          |                           | 2011/2012     | 2012/2013   | 2013/2014   | 2014/2015 |
| Links Seaside Apartments | Criteria 2 g/m²/month     | 0             | 0           | 0           | 0         |
| Vikings Oval             | Criteria 2 g/m²/month     | 0             | 2           | 0           | 0         |
| 157 Church Street        | Criteria 2 g/m²/month     | 0             | 0           | 0           | 0         |

# Figure 15: Annual residential depositional dust gauge trends

A summary of the 2014/2015 depositional and continuous dust gauge data compared to historical records is presented below in Figure 16.

PKCT's Environmental Assessment on Air Quality undertaken in 2008 predicted that impacts to air quality from PKCT would be well below relevant DECC criteria based on existing PKCT operations and the proposal to receive coal by road over a 24/7 period up to a maximum of 10mtpa. Annual average results for the three depositional dust gauges show that for both total insoluble solids and for combustible matter, levels are well within the DECC guidelines on all occasions, see Figure 16. This aligns with the predictions in the Environmental Assessment.

Annual average results recorded at the continuous dust gauges are within the relevant DECC guidelines on all occasions except for the PM10 annual average in FY2012/2013 and FY2014/2015, see Figure 16. The continuous dust monitors used to record this information cannot discern where the dust source is from, however the data is analysed by a consultant on behalf of PKCT and assesses the likely contribution by PKCT to the results.

During 5 of the 65 PM10 exceedance days in the FY2014/2015 reporting period at the northern monitor, one or more of the OEH monitors at Wollongong, Kembla Grange and Albion Park South recorded an elevated concentration above 40  $\mu$ g/m<sup>3</sup> but below the air

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quality objective. The coinciding concentrations indicate that regional particulate levels may have been elevated during these exceedance periods.

PKCT continues to utilise the collected data to minimise and manage dust from its operations.

|                    |                                 | FY 2011        | FY 2012         | FY 2013        | FY 2014        | FY 2015        |  |
|--------------------|---------------------------------|----------------|-----------------|----------------|----------------|----------------|--|
| Location           | Standard                        | Annual Average | Annual Average  | Annual Average | Annual Average | Annual Average |  |
|                    | Residential Depositional Gauges |                |                 |                |                |                |  |
|                    |                                 | Total In       | soluble Solids  |                |                |                |  |
| Vikings Oval (d)   | 4 g/m <sup>2</sup> month        | 1.4            | 1.4             | 1.6*           | 1.2            | 1.1            |  |
| Church Street (d)  | 4 g/m <sup>2</sup> month        | 3.5            | 1.5             | 1.3            | 1.6            | 1.1            |  |
| Ross Street (d)    | 4 g/m <sup>2</sup> month        |                | 1.6             | 1.4            | 1.4            | 1.1            |  |
| Combustible Matter |                                 |                |                 |                |                |                |  |
| Vikings Oval (d)   | 2 g/m <sup>2</sup> month        | 0.8            | 0.8             | 0.8*           | 0.7            | 0.8            |  |
| Church Street (d)  | 2 g/m <sup>2</sup> month        | 0.8            | 0.6             | 0.6            | 0.6            | 0.6            |  |
| Ross Street (d)    | 2 g/m <sup>2</sup> month        | =              | 0.8             | 0.6            | 0.7            | 0.6            |  |
|                    |                                 | Continuo       | us Dust Monitor |                |                |                |  |
|                    |                                 |                | TSP             |                |                |                |  |
| Northern ( c)      | 90 ug/m <sup>3</sup>            | 32.2           | 34              | 62             | 44.3           | 45.8           |  |
| PM10               |                                 |                |                 |                |                |                |  |
| Northern ( c)      | 30 ug/m <sup>3</sup>            | 25.8           | 27              | 47             | 24.8           | 30.8           |  |

Data for FY 2013 (July 2012 and January 2013) has been omitted for the residential depositional gauge at Vikings Oval. The results received were well outside normal values for this location. Subsequent petrographic analysis confirmed that the main constituents of the sample were plant matter and not related to PKCT operations.

# Figure 16: Summary of continuous dust data for 2014/2015

# 3.3.4 Air Quality – Activities Undertaken During 2014/2015 Reporting Period

A summary of the actions undertaken for the 2014/2015 reporting period related to Air Quality is presented below.

- A stockpile veneering trial was undertaken on a coal stockpile located at the southern end of PKCT's Bulk Products Berth Stockyard. The stockpile of approximately 160,000 tonnes needed to be in place for up to six months and as a result was considered a suitable candidate for the veneering trial. A risk assessment and environmental review was undertaken prior to the veneering process. The product was added to the stockpile via a truck-mounted water cannon and, once set, formed a semi-rigid crust on the stockpile surface. The crust enabled water addition to be significantly lowered through the period and monitoring across the process did not identify any dust occurrences, see Figure 17.
- The 2014 AECOM Independent Audit identified that one of the depositional dust gauges used in the dust monitoring program had been vandalised. This finding was classified as a minor non-conformance. The audit findings recommended installing a fence around the gauges to prevent public access. In December 2014, dust gauges P3 and P4 located along the Seawall Road had fences installed around them. See Figure 17 below.



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# Figure 17: New fencing around Dust Gauge P4 to prevent vandalism of gauge and veneering of southern stockpile

- A trial of a continuous dust monitor alert system was completed and the system was implemented in January 2015. The system uses an automatic email dust alert system based on readings from PKCT's two continuous dust monitors. The alerts take into account wind direction and potential PKCT contribution. The alerts are trigger based and will notify the Main Control Room (MCR) operators of elevated dust levels approaching PKCT's air quality criteria. MCR operates 24/7 and an alert, when received, will trigger site and system checks and further actions when deemed necessary.
- In response to community concerns and EPA and government attention to the topic of dust associated with rail transport of coal, the NSW Minerals Council has been facilitating an industry group, Coal Train Dust Technical group (CTDTG), to address matters raised. PKCT is a participant in the CTDTG and is also working with PKCT rail shippers and rail transport providers. A review of management practices was undertaken resulting in a Statement of Commitments which was communicated via press release through the NSW Minerals Council website in December 2014. CTDTG has continued to work in accordance with these commitments.



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- On 30<sup>th</sup> May 2014, the EPA undertook an audit of PKCT's rail unloading facility. This formed part of a broader audit program covering 15 NSW facilities with a focus on rail transport. The audit assessed compliance to PKCT's EPL with consideration to aspects related to minimising or preventing the loss of coal in the form of spills, leaks and dust emissions. The audit identified a single non-compliance related to fine coal on wagon surfaces. In response to the audit findings, PKCT submitted an action plan for work to be undertaken in March2015. These actions included;
  - Updating of procedures and management plans and re-communication of dust control measures to personnel Status: complete
  - Development and communication of dustiness criteria for different coal types Status: initial draft complete, further work required with assistance from Rail Shippers.
  - Re-evaluating existing systems to identify if additional dust covers could be installed -Status: Review was undertaken but didn't identify any reasonably practical improvement opportunities.
  - Evaluation of Dust Extinction Moisture methodology (DEM) and use of real time coal moisture measurement. Status: In principle, DEM is considered viable. Its use will require cooperation from Rail Shippers. PKCT's rail receival moisture meter was checked and found to be operational. Further work is needed to validate moisture data generated.
  - Commitment to undertake dust management strategies as identified in Industry based study "Coal Train Dust Management Practices". Status: NSW Minerals Council is liaising, on behalf of the CTDTG, with the EPA and the community. PKCT is continuing to participate in CTDTG and progressing actions. Further information is available on NSW Minerals Council <u>website</u>.

# 3.3.5 Air Quality - Activities Planned for 2015/2016 Reporting Period

A summary of the planned actions related to the 2015/2016 reporting period related to air quality is presented below.

- PKCT has completed some preliminary benchmarking with other coal terminals on automated dust suppression spray systems. PKCT will continue to investigate improving the functionality and automation of the current stockpile dust suppression system.
- An Opportunity for Improvement identified in the 2014 AECOM Independent Audit was for PKCT to conduct an internal dust review for rail dust and site dust emissions. PKCT will continue to work with the NSW Minerals Council, the EPA and other coal terminals to undertake this across the 2015/2016 reporting period.
- EPA has advised of a follow up rail receival compliance audit. This is expected early 2015/2016. PKCT will participate as needed and address any matters raised.
- PKCT has included a review of the existing Dust Management Strategy in the 2016 business plan. Review will give consideration to the current regulatory and community environment in contemplating improvement opportunities and priorities and an action plan will be developed.
- EPA has approached PKCT to give consideration to its air quality methodology. The EPA has advised of an increased focus on PM2.5 particulates and is encouraging continuous dust monitoring and better integration of monitoring across the port precinct and the



Illawarra. Accordingly, a review will be undertaken which will include consideration of a 3<sup>rd</sup> continuous dust monitor at the Viking's Oval site which is on the residential boundary north of PKCT's premises.

# 3.4 Meteorological

# **3.4.1 Meteorological Monitoring Standards and Performance Measures**

11. During the life of the project, the Proponent shall ensure that there is a suitable meteorological station on or in the vicinity of the site that generally complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline.

# 3.4.2 Meteorological Monitoring

# 3.4.2.1 Meteorological Monitoring Methodology

PKCT primarily utilises an on-site weather station to measure, monitor and record weather variables. The station measures wind speed and direction, rainfall, air pressure, temperature and humidity continuously at the site.

Additionally, PKCT operates two continuous dust monitors which measure PM10, PM2.5, TSP, wind speed and wind direction.

Data from the monitoring stations is used by PKCT personnel to assist with environmental management on site.

# 3.4.2.2 Meteorological Monitoring Results and Compliance 2014/2015

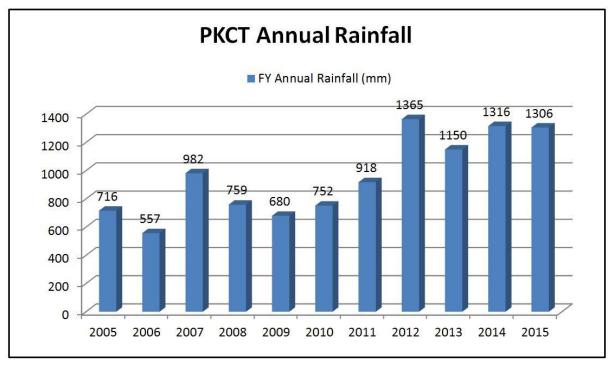
A summary of the meteorological data recorded at PKCT across the 2014/2015 reporting period is presented below in Figure 18 and Figure 19. An annual wind summary from the northern and southern continuous dust monitors is presented in Appendix F.



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| Year/Month | Rainfall (mm) | Temperature<br>Mean<br>°C | Wind<br>Max Speed<br>metres/ sec | Wind<br>Average Speed<br>metres/ sec |
|------------|---------------|---------------------------|----------------------------------|--------------------------------------|
| Jul-14     | 2.6           | 14.3                      | 26.0                             | 5.7                                  |
| Aug-14     | 234.4         | 13.8                      | 26.9                             | 5.6                                  |
| Sep-14     | 38.3          | 16.0                      | 24.1                             | 5.7                                  |
| Oct-14     | 112.2         | 18.0                      | 25.3                             | 5.2                                  |
| Nov-14     | 40.7          | 19.4                      | 29.3                             | 5.2                                  |
| Dec-14     | 143.7         | 20.7                      | 22.9                             | 5.2                                  |
| Jan-15     | 97.5          | 21.9                      | 23.6                             | 5.5                                  |
| Feb-15     | 47.8          | 22.0                      | 19.0                             | 4.4                                  |
| Mar-15     | 94.2          | 21.0                      | 23.4                             | 5.0                                  |
| Apr-15     | 403.9         | 18.2                      | 30.0                             | 5.8                                  |
| May-15     | 61.6          | 16.5                      | 21.1                             | 5.3                                  |
| Jun-15     | 29.0          | 14.7                      | 15.9                             | 4.0                                  |

# Figure 18: PKCT weather station monitoring data 2014/2015



# Figure 19: PKCT annual rainfall (financial year)

# 3.4.3 Trends in Weather

As is shown in Figure 19 above, the 2014/2015 reporting period was generally a wet year compared to others since 2005 with a total precipitation of 1306mm recorded. The general observation across the reporting period was that of extended periods of minimal



precipitation followed by high intensity, short duration downpours. This rainfall pattern has been observed at PKCT over the past few years.

### 3.5 Surface Water

### 3.5.1 Surface Water Standards and Performance Measures

EPL 1625 and Major Project Approval 08-0009 pertain to water quality and discharge limits from PKCT's premises. Water quality criteria are outlined as follows;

#### Discharge Limits

12. Except as may be expressly provided in an EPL for the project, the Proponent shall comply with Section 120 of the *Protection of the Environment Operations Act 1997*.

#### Water Management Plan

- 13. The Proponent shall prepare and implement a Water Management Plan to the satisfaction of the Director- General. This Plan must:
  - (a) be prepared in consultation with DECC;
  - (b) be submitted to the Director-General for approval within 12 months of this approval or as otherwise agreed by the Director-General; and
  - (c) include:
    - a site water balance, which includes details of sources of water supply, on-site water use and management and off-site water discharges and investigates and describes measures to minimise water use by the project;
    - a sediment control plan for surface works on the site that is consistent with the requirements of the *Managing Urban Stormwater: Soils and Construction Manual* (Landcom 2004, or its latest version);
    - a surface water monitoring program that includes:
      - stormwater effluent discharge criteria;
      - a monitoring protocol for evaluating compliance with the stormwater effluent discharge criteria; and
      - reasonable and feasible mitigation measures to ensure the stormwater effluent discharge criteria are met.

# 3.5.2 Surface Water Monitoring

#### 3.5.2.1 Surface Water Monitoring Methodology

PKCT has a Water Management Plan MP.HS.462 (WMP) which is in operation and DP&E approved. This plan was submitted to the DP&E within 12 months of Project Approval 08 0009.

This Plan outlines the processes operating currently with regard to water monitoring, assessment, reporting, mitigation and management provisions to ensure necessary actions are undertaken in accordance with DP&E approval conditions.

The WMP includes reference to PKCT's Water Savings Action Plan (WSAP). This Plan has been in place since 2006 and has most recently been revised in June 2012. PKCT has now met its regulatory obligations and no further reporting is required. PKCT will continue the process internally as a management tool to seek further water savings.

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PKCT also operates under EPL 1625. Under this licence, PKCT is required to measure water quality at its Licenced Discharge Point 16 (LDP16). Daily grab samples are taken from LDP16 when harbour discharges occur.

On a monthly basis, PKCT collates and reviews water usage across the site and discharge water quality. LDP16 discharge monitoring data is uploaded to the <u>PKCT website</u> as required under Schedule 4, Condition 9 of Project Approval 08\_0009.

In September 2014, PKCT completed a five-yearly review of EPL 1625 with the EPA. Related to water monitoring, the review process added an additional monitoring requirement to sample overflows from PKCT's satellite ponds and to report the data via the Annual Return process. PKCT's pH limits for LDP16 were removed and replaced with a monitoring and reporting requirement and LDP16's Oil and Grease limit was removed and changed to a "visible/not visible" reporting requirement.

# 3.5.2.2 Surface Water Monitoring Results 2014/2015

PKCT's revised licence conditions and limits for LDP16 are presented below in Figure 20.

| Monitoring Parameter | 100 percentile limits |
|----------------------|-----------------------|
| рН                   | Monitoring only       |
| TSS                  | 50 mg/litre           |
| Oil and Grease       | Visible               |

# Figure 20: EPL 1625 water quality parameter limits and compliance.

Across the FY2014/2015 reporting period, PKCT recorded a total of 143 discharges from LDP16. Of these discharges, 135 were compliant for TSS and 143 were compliant for Oil and Grease. One sample had insufficient water to analyse for TSS. pH was monitored as required, see Figure 21 below.

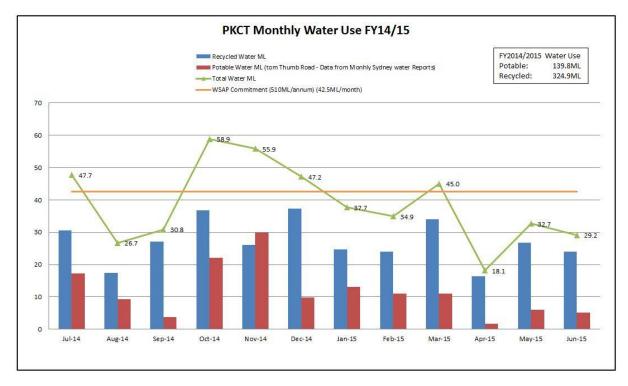
| Monitoring<br>Parameter | Number of<br>Overflows | Maximum<br>recorded<br>value | Minimum<br>recorded<br>value | Mean<br>recorded<br>value | Compliant<br>Samples (%) |
|-------------------------|------------------------|------------------------------|------------------------------|---------------------------|--------------------------|
| рН                      | 143                    | 10                           | 6.7                          | 8                         | n/a                      |
| TSS (mg/l)              | 143                    | 110                          | <5                           | 16                        | 94                       |
| Oil and Grease (mg/l)   | 143                    | <5                           | <5                           | <5                        | 100                      |

# Figure 21: Water quality monitoring summary for LDP16 discharges

PKCT monitors water usage across the site on a monthly basis. A summary of the water usage for the site compared to the WSAP is presented below in Figure 22.



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# Figure 22: PKCT monthly water use for 2014/2015 reporting period

# **3.5.2.3 Surface Water Monitoring Compliance**

Of the 143 discharges from LDP16 recorded during the 2014/2015 reporting period, PKCT was compliant for 143 Oil and Grease samples and 135 TSS samples. This equates to 100% and 94% compliance respectively.

Of the eight recorded TSS exceedances, five were directly related to the presence of "turbid water" phenomena on the site, three were related to high algal counts. On the 13/02/15, an overflow sample was taken at LDP16. Between collection and delivery at the lab, a bottle was misplaced and, as a result, there was insufficient water to undertake a TSS analysis.

A summary of the turbid water phenomena identified on site is presented below. A full summary of LDP16 overflow data is presented in Appendix G.

In March 2014, following a significant rainfall event, PKCT had a discharge event from the Settling Lagoon which exceeded our Environment Protection Licence (EPL) Total Suspended Solids licence limit. Water in the Settlement Lagoon appeared red and was visibly turbid at the time.

Investigations were undertaken with assistance from expert water quality consultants i.e. Nalco and Ecoengineers and a source of water was found on site that would not effectively flocculate with the existing dosing chemical used at PKCT.

PKCT reported its initial findings to the EPA on May 16<sup>th</sup> 2014 with an undertaking to further investigate and to better understand the contributing factors and develop controls. PKCT was issued with a Formal Warning in July 2014.

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Actions have been progressed during the 2014/2015 reporting period as follows.

- Pond water quality- monitoring undertaken to identify turbid water inflows which may result in TSS exceedances.
- Settlement Lagoon- buffer capacity provided, where possible, through controlled discharges to assist in providing additional settlement time in case turbid water found its way into the Settlement Lagoon.
- Water sampling and testing- undertaken to identify a substance or new source of particulate which may be impacting on the flocculant's performance.
- Water treatment- options investigated for modifying dosing arrangements to incorporate a coagulant in the dosing process to improve settling performance.
- Investigation by Ecoengineers- work done to date was reviewed with further investigation undertaken to better understand the causes of the turbid water, contributing factors and possible controls.

Actions to be progressed during the 2015/2016 reporting period as follows.

- Ecoengineers investigation has now been completed and a report back to the EPA is proposed early August 2015.
- A coagulant dosing facility will be established by the end of August 2015 and trialled on site to assess its effectiveness in treating turbid water under operational conditions. This is expected to be completed by 30 June 2016.
- Monitoring- pond water quality monitoring, Settlement Lagoon buffer capacity maintenance and water sampling and testing will continue as needed.

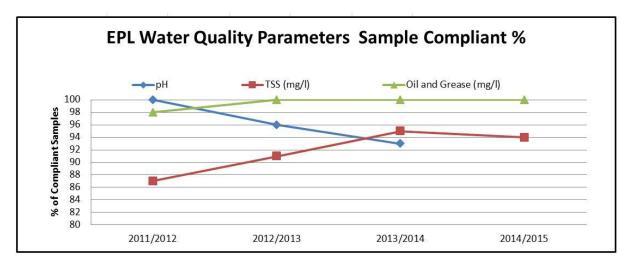
#### 3.5.3 Trends in Surface Water Monitoring

Figure 23 below highlights the trends in compliance measured at LDP16 for EPL 1625 water quality parameters of pH, TSS and Oil and Grease. As is shown in Figure 23, compliance has remained stable at 100% for Oil and Grease and fallen slightly from 95% to 94% compliance for TSS during this reporting period. pH is now monitoring and reporting only.



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|                          | 2011/2012              |                        | 2012/2013                           |                        | 2013/2014  |                        | 2014/2015 |                        |
|--------------------------|------------------------|------------------------|-------------------------------------|------------------------|--|------------------------|-----------|------------------------|
| Monitoring<br>Parameter  | Number of<br>Overflows | Compliant<br>Samples % | and the second second second second | Compliant<br>Samples % | and the second | Compliant<br>Samples % |           | Compliant<br>Samples % |
| рH                       |                        | 100                    |                                     | 96                     |  | 93                     |           | Reporting only         |
| TSS (mg/l)               | 97                     | 87                     | 68                                  | 91                     | 91   | 95                     | 143       | 94                     |
| Oil and Grease<br>(mg/l) |                        | 98                     |                                     | 100                    |  | 100                    |           | 100                    |



#### Figure 23: Trends in water EPL water quality data at LDP16

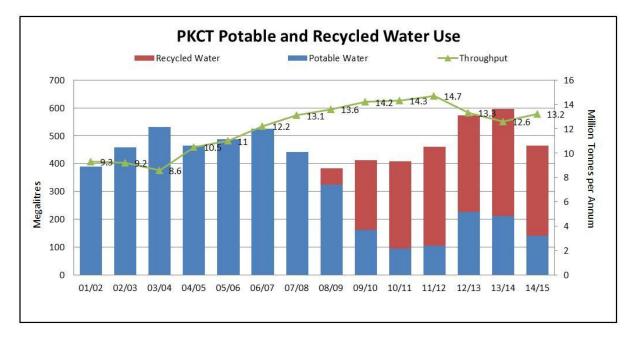
Site water use as a whole has decreased across the 2014/2015 reporting period compared to the 2013/2014 reporting period, see Figure 24 below. Total water used decreased from 597 ML (2013/2014) to 464 ML (2014/2015). In addition, the total volume of both potable water and recycled water used across PKCT in the 2014/2015 reporting period fell compared to last reporting period. A large portion of the reduced water use realised at PKCT can be attributed to significant rainfall events across August 2014 and April 2015. The amount of rainfall that fell in short duration events in these months saturated the site to a level where stockpile sprays were rarely required.

Recycled water as a percentage of the total water used increased from 64% (2013/2014) to 70% (2014/2015).

Overall, the use of recycled water is considered a benefit to the environment in its provision of significant potable water savings. PKCT continues to look for water savings across its operations.



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#### Figure 24: Trends in Potable and Recycled water use at PKCT

#### 3.5.4 Surface Water – Activities Undertaken During 2014/2015 Reporting Period

A summary of the actions undertaken for the 2014/2015 reporting period related to surface water is presented below.

• Installation of a permanent pipe system to allow rapid controlled discharge from the Settlement Lagoon. The system was installed to utilise an existing pump and offers another tool for managing water quality in the Settlement Lagoon, see Figure 25 below.



# Figure 25: New pipework installed at LDP16 in the Lagoon to assist with controlled dewatering

• Turbid water, as a result of mobilised clays in some products being delivered to PKCT, has caused TSS exceedances during the 2014/2015 reporting period. Various management initiatives were undertaken to assist with understanding and managing the turbid water events throughout the year. These included installation of bund walls at the drainage end of the coal berth stockyard, daily monitoring (weekdays) of the water

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quality in the Settlement Lagoon and field trials of a coagulant dosing process to assist with clarification of turbid water on site. A consultant was engaged to identify the cause of the turbid water on site.

- Updating the PKCT WMP was identified as an opportunity for improvement in the 2014 AECOM independent Audit. The WMP was updated in August 2014.
- Major civil works associated with PRP 12, "Implement upgrades to stormwater pollution control system" began during the reporting period. PKCT has secured funding for \$3.2 million dollars to upgrade and improve the functionality and effectiveness of the Central Pond. The improvements to the Central Pond will assist the workforce to undertake safe and efficient cleaning of the Central Pond and assist in reducing sediment transfer to the Settlement Lagoon, see Figure 26 below.



#### Figure 26: PRP12 - Upgrade of Central Pond.

## 3.5.5 Surface Water - Activities Planned for 2015/2016 Reporting Period

The 2014 AECOM Independent Audit identified 4 minor non-conformances associated with surface water. These were related to pH and TSS exceedances measured in the Settlement Lagoon. PKCT will continue to ensure that the surface water standards and performance measures are considered during any planning of any future restoration and improvement works. A summary of the planned actions for the 2015/2016 reporting period is presented below.

• Continue investigations on improving Settlement Lagoon pH and TSS compliance. This includes installation of a trial dosing system at the Central Pond to assist with water clarification in the Settlement Lagoon.



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- Complete work on PRP12 "Implement upgrades to stormwater pollution control system". Completion of the Central Pond upgrade works is scheduled for December 2015.
- Continue to identify and implement opportunities for improvement related to surface water at PKCT as they arise.

#### 3.6 Biodiversity

#### 3.6.1 Biodiversity Standards and Performance Measures

#### Green and Golden Bell Frog Management Plan

- 14. The Proponent shall prepare and implement a Green and Golden Bell Frog Management Plan for the project to the satisfaction of the Director-General. This program must:
  - (a) be developed in consultation with DECC; and
  - (b) be submitted to the Director-General for approval within 12 months from the date of this approval, or as otherwise agreed by the Director-General.

#### **3.6.2 Biodiversity Monitoring**

#### **3.6.2.1 Biodiversity Monitoring, Results and Compliance**

A Green and Golden Bell Frog Management Plan MP.HS.109 (GGBFMP) is implemented, in operation and DP&E approved. The GGBFMP has been developed in consultation with the EPA and PKCT is continuing to work closely with the authority as matters arise. Actions include:-

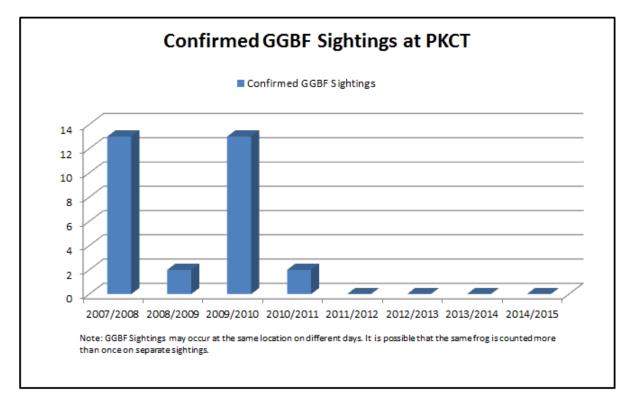
- Maintenance and monitoring by Wollongong City Council of its Greenhouse Park frog ponds.
- Periodic surveys involving an expert consultant. Surveys to include PKCT premises and Wollongong City Council's greenhouse Park frog ponds.
- Monitoring and reporting by site personnel as part of site operations.
- Ongoing awareness for site personnel through inductions and site communications.

#### 3.6.3 Trends in Biodiversity

PKCT undertakes GGBF surveys and records all sightings in a register. PKCT personnel have not identified any GGBF during normal operations or as a result of focused surveys since 2011. Figure 27 below shows the trend in GGBF sightings at PKCT back to the 2007/2008 financial year.



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## Figure 27: GGBF sightings at PKCT

## 3.6.4 Biodiversity – Activities Undertaken During 2014/2015 Reporting Period

A summary of the actions undertaken for the 2014/2015 reporting period related to biodiversity is presented below.

- PKCT undertook a GGBF survey on the 3<sup>rd</sup> February 2015. The survey was supervised by an expert consultant from NICHE Environment and Heritage, with assistance provided by the PKCT Environmental Specialist and Risk Manager. Evening and night surveys confirmed that GGBFs are not currently present on site. Two other frog species were identified on site during the survey, the Peron's Tree Frog and the Striped Marsh Frog. Survey included Greenhouse Park frog ponds. It was noted that the ponds were in need of some remedial work. Wollongong City Council was notified of these observations.
- Workers at PKCT are instructed to report and record any GGBF (or other frog) sightings throughout the year. Sightings are recorded in a site database. No GGBFs were identified by the PKCT site personnel in the 2014/2015 reporting period.
- As recommended in the 2014 AECOM Independent Audit, the GGBFMP was reviewed and updated where necessary in December 2014.

#### 3.6.5 Biodiversity - Activities Planned for 2015/2016 Reporting Period

PKCT will continue to ensure that the biodiversity standards and performance measures are considered during any planning for future restoration and improvement works. A summary of the planned actions related to the 2015/2016 reporting period related to biodiversity is presented below.



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- Continued monitoring for GGBF populations at PKCT during site operations and Project Works.
- The annual GGBF survey undertaken in February 2015 did not identify any GGBF on site. The report recommended PKCT to liaise with Office of Environment and Heritage to determine if the annual survey continues, see Appendix H. PKCT will progress this recommendation with the relevant authorities during the coming reporting period.
- Follow up on the February 2015 GGBF survey findings and engage Wollongong City Council in discussion on undertaking some remedial work.
- Undertake further surveys when deemed necessary.

#### 3.7 Visual Amenity

#### 3.7.1 Visual Amenity Standards and Performance Measures

#### Lighting Emissions

- 15. The Proponent shall:
  - (a) ensure no external lights shine above the horizontal;
  - (b) ensure that all external lighting associated with the project complies with Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version, and
  - (c) take all reasonable and feasible measures to mitigate off-site lighting impacts from the project
  - to the satisfaction of the Director-General.

#### Landscape Management Plan

- 16. The Proponent shall prepare and implement a Landscape Management Plan to the satisfaction of the Director-General. This Plan must:
  - (a) be submitted to the Director-General for approval within 12 months of this approval, or as otherwise agreed by the Director-General; and
  - (b) include;
    - details of screening trees to be planted on the road receival earth bund and along the northern site boundary; and
    - $\circ \quad \text{ an implementation program.}$

#### **3.7.2 Visual Amenity Monitoring**

#### 3.7.2.1 Visual Amenity Monitoring, Results and Compliance.

Lighting - A consultant, Lightpoint Consulting Services, undertook a review of site lighting and assessment against the standard in 2011. A report of 4<sup>th</sup> October 2011 concluded that PKCT was in compliance with AS 4282 and no evidence of any detrimental impact was found on residential areas.

Obligations associated with lighting emissions have been communicated to personnel involved in plant modifications and upgrades and the requirements are taken into account in project development.

PKCT is currently progressing a major restoration and compliance project on site. As part of the project, all new lighting will be assessed and will comply with AS4282. Additionally, the

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project has generally used LED lighting and ensured light emission is either local to access and stairway areas or, elevated and directed towards the ground or stockpiles in other areas. The lights have been designed so that they are easily accessible allowing for quick adjustment if required.

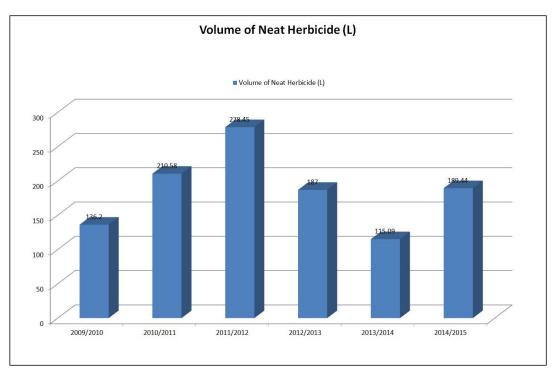
Landscaping - PKCT's Landscape Management Plan MP.HS.470 (LMP) is in operation and DP&E approved. This document includes details of proposed tree planting. Implementation is staged and processed through PKCT's project approval process.

PKCT utilises a landscaping contractor to maintain lawns and gardens and control weeds on site. Landscape contractor staff are trained in chemical application and use non-residual herbicides (Glyphosate 360 – trademark Roundup). All weed spraying undertaken considers prevailing weather conditions and locations and PKCT is provided with a Weed Spraying Notification Form (WSNF) each time an herbicide is used on site. See Appendix I for an example of a WSNF.

#### 3.7.3 Trends in Visual Amenity

PKCT's lighting survey in 2011 did not identify any offsite lighting impacts associated with the PKCT operation. There have been no recorded community complaints relating to lighting since PKCT commenced operations in 1990.

Chemical is applied on site to control weeds. Figure 28 below shows the volume of herbicide used on site across respective reporting periods. The 2014/2015 reporting period saw an increase in the volume of neat herbicide used at PKCT.



# Figure 28: Volume of neat herbicide used for weed spraying at PKCT (does not include volumes for May-June)

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## 3.7.4 Visual Amenity – Activities Undertaken During 2014/2015 Reporting Period

A summary of the actions undertaken for the 2014/2015 reporting period related to visual amenity is presented below.

• Ongoing maintenance of the landscaped area near the northern transfer station. The garden is now well established in this area, see Figure 29 below.



## Figure 29: Landscaped area near Northern Transfer Station, July 2015

• There were no community complaints relating to lighting across the 2014/2015 reporting period.

## 3.7.5 Visual Amenity - Activities Planned for 2015/2016 Reporting Period

The 2014 AECOM independent Audit identified one Opportunity for Improvement associated with visual amenity. PKCT will continue to ensure that visual amenity and landscape management is considered during any planning for future restoration and improvement works.

• As identified in the 2014 AECOM independent Audit, PKCT will review and update if necessary the LMP.

## 3.8 Greenhouse and Energy Efficiency

## 3.8.1 Greenhouse and Energy Efficiency Standards and Performance Measures

|   | Operating Conditions  |  |  |  |  |
|---|---|--|--|--|--|
|   | 17. The Proponent shall implement all reasonable and feasible measures to minimise: |  |  |  |  |
|   | (a) energy use onsite; and  |  |  |  |  |
|   | (b) greenhouse gas emissions from the project                                       |  |  |  |  |
| _ | to the satisfaction of the Director-General.  |  |  |  |  |
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#### Greenhouse and Energy Efficiency Plan

- 18. Within 12 months of this approval or as otherwise agreed by the Director-General, the Proponent shall prepare and implement a Greenhouse and Energy Efficiency Plan for the project. This plan must:
  - (a) be prepared generally in accordance with the *Guidelines for Energy Savings Action Plans* (DEUS 2005, or its latest version);
  - (b) be submitted to the Director-General for approval;
  - (c) include a program to estimate/monitor greenhouse gas emissions and energy use generated by the project;
  - (d) include a framework for investigating and implementing measures to reduce greenhouse gas emissions and energy use at the project;
  - (e) describe how the performance of these measures would be monitored over time; and
  - (f) report on the project's greenhouse gas emissions and minimisation measures in the AEMR to the satisfaction of the Director-General.

#### 3.8.2 Greenhouse and Energy Efficiency Monitoring

#### 3.8.2.1 Greenhouse and Energy Efficiency Monitoring Methodology

In accordance with Condition 18, a Greenhouse Gas and Energy Efficiency Management Plan MP.HS.461 (GGEEMP) was included in the 0910 AEMR submission to DP&E. It outlines the monitoring and management processes in place, including PKCT's Energy Savings Action Plan (Established under the Energy Administration (Water and Energy Savings) Act 2005), and regulated by EPA).

The GGEEMP is in operation and DP&E approved.

In accordance with legal advice, PKCT, having operational control, is deemed to be the reporting entity under the referenced legislation. Accordingly, PKCT is currently under the reporting threshold.

A consultant was engaged to advise on applicable site activities and energy aspects and to develop a monitoring format. The format developed has been implemented. Though not reporting at this stage, PKCT is recording data and monitoring energy use and greenhouse gas generation. Figure 30 below outlines the volumes of reportable emissions from PKCT operations across the reporting period.



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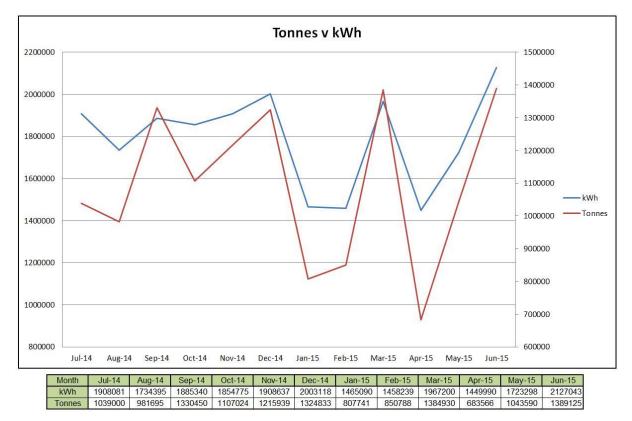
| 2014/2015 FY                   |                   | А                                   | В                                      | С                                      | D                         | E                                      |
|--------------------------------|-------------------|-------------------------------------|--|--|---------------------------|--|
| (July-June)                    |                   |                                     |  |  | Gigajoules                | tonnes                                 |
|                                | Reporting<br>unit | Amount consumed<br>(reporting unit) | Energy content (GJ per reporting unit) | Emissions factor (kg<br>CO2-e per GJ)  | Reportable energy<br>(GJ) | Reportable emissions<br>(tonnes CO2-e) |
| Scope 1 – direct emissions     |                   |                                     |  |  |                           |  |
| Diesel oil(transport)          | kL                | 0                                   | 38.60                                  | 69.90                                  | 0                         | 0                                      |
| Diesel oil (stationary energy) | kL                | 0                                   | 38.60                                  | 69.50                                  | 0                         | 0                                      |
| Biodiesel B20 (Transport)      | kL                | 105                                 | 30.88                                  | 69.51                                  | 3230                      | 225                                    |
| Petrol (transport)             | kL                | 19                                  | 34.20                                  | 69.60                                  | 655                       | 46                                     |
| Petroleum based oils           | kL                | 3                                   | 38.80                                  | 27.90                                  | 130                       | 4                                      |
| Petroleum based greases        | kL                | 4.49                                | 38.80                                  | 27.90                                  | 174                       | 5                                      |
| Acetylene                      | m3 *              | 53                                  | 0.0393                                 | 51.33                                  | 2                         | 0                                      |
| Scope 2 – indirect emissions   |                   |                                     |  |  |                           |  |
|                                | Reporting<br>unit |                                     | Energy content (GJ per<br>kWh)         | Emissions factor (kg<br>CO2-e per kWh) |                           |  |
| Electricity                    | kWh               | 21,485,206                          | 0.0036                                 | 0.89                                   | 77347                     | 19122                                  |
| Total                          |                   |                                     |  |  | 81538                     | 19401                                  |
| Threshold                      |                   |                                     |  |  | 100,000                   | 25,000                                 |

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#### Figure 30: Greenhouse gas report 2014/2015

#### 3.8.2.1 Greenhouse and Energy Efficiency Monitoring, Results and Compliance.

Energy use is measured at PKCT on a monthly basis. Energy use generally follows the same trend as throughput at the site, i.e. when there is an increase in throughput, energy use also increases. Figure 31 below provides monthly energy consumption and tonnes for the 2014/2015 reporting period.



#### Figure 31: PKCT tonnes v kWh

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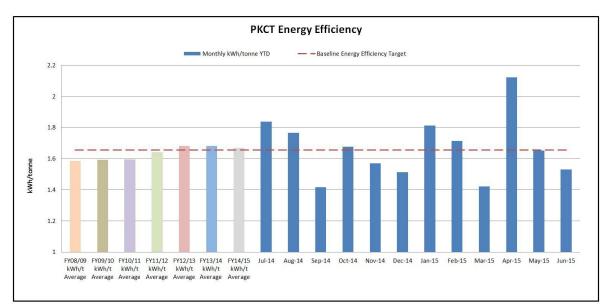


#### **3.8.3 Trends in Energy Efficiency**

PKCT measures energy efficiency against its baseline energy efficiency target of 1.655 kWh/tonne. This figure is calculated by dividing the energy used at the premises (kWh) by throughput (tonnes). The 2014/2015 reporting period saw six months where monthly kWh/tonne exceeded the baseline energy efficiency target, see Figure 32 below. These records correspond with low throughput months, in particular during the month of April 2015.

Overall, the kWh/tonnes for the 2014/2015 reporting period was marginally above the baseline energy efficiency target of 1.655kWh/tonne (1.67kWh/tonne) which is comparable to the 2013/2014 financial year (1.68kWh/tonne).

A negative trend (i.e. above the baseline energy efficiency target) has been observed in energy efficiency in recent years relating to the operating ship loading and receival rates of material handling equipment. PKCT's business improvement process is tracking these parameters seeking to reverse the trend through remedial and upgrade works.

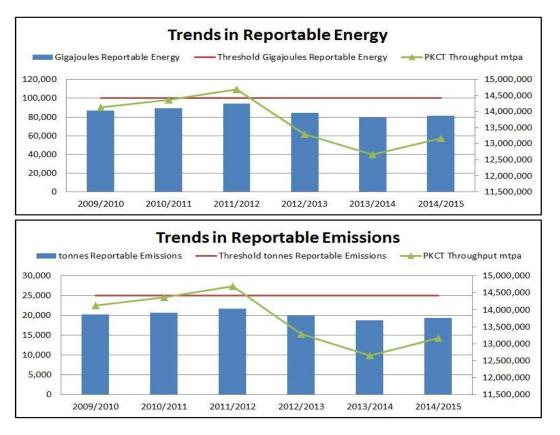


## Figure 32: PKCT energy efficiency trends

PKCT monitors greenhouse gas generated by the site annually. At this stage, greenhouse gas emissions and reportable energy are below the legislated reporting thresholds, see Figure 30. Reportable energy consumption and greenhouse gas emissions have slightly increased at PKCT this reporting period. Energy use and therefore emissions follow throughput. Figure 33 below shows this emissions trend.







#### Figure 33: Trends in reportable energy and greenhouse gas emissions

#### 3.8.4 Energy Efficiency – Activities Undertaken During 2014/2015 Reporting Period

A summary of the actions undertaken for the 2014/2015 reporting period related to Energy Efficiency is presented below.

- PKCT continues to hold regular review meetings to monitor energy usage trends and to assess energy use at the site.
- PKCT continues to consider energy efficiency measures as part of the development of new projects. In this regard, no projects of note were implemented across the reporting period.

#### 3.8.5 Energy Efficiency - Activities Planned for 2015/2016 Reporting Period

A summary of the actions planned for the 2015/2016 reporting period is presented below.

- The 2014 AECOM Independent Audit identified one Opportunity for Improvement associated with energy efficiency, "review and update the GGEE Management Plan". The plan will be updated when scheduled in August 2015.
- As part of PKCT's High Voltage plant upgrade, new network connected protection relays are being installed on the four new yard machines and two existing Shiploader 11kV feeders. New network connected protection relays are also being installed on each of the 21 motors which drive 14 yard conveyors. The network connected protection relays include monitoring and historical trending of power and power quality usage. This data



will be used to control high power plant operation and assist in monitoring energy efficiency.

• PKCT will continue to ensure that energy efficiency is considered during any planning for future restoration works.

#### 3.9 Waste

#### 3.9.1 Waste Standards and Performance Measures

#### **Operating Conditions**

19. The Proponent shall:

- (a) monitor the amount of waste generated by the project;
- (b) investigate ways to minimise waste generated by the project;
- (c) implement reasonable and feasible measures to minimise waste generated by the project; and
- (d) report on waste management and minimisation in the AEMR to the satisfaction of the Director-General.

#### 3.9.2 Waste Monitoring

#### 3.9.2.1 Waste Monitoring Methodology

PKCT's Waste Management Plan MP.HS.460 (WSMP) was submitted to DP&E with the 0910 AEMR. The plan is in operation. The WSMP contains waste monitoring, assessment, reporting, and mitigation and management provisions to ensure necessary actions are undertaken and that waste from PKCT premises comply with the criteria in the condition above.

The objectives of the WSMP are to;

- Identify waste streams from PKCT normal operations.
- Review waste streams to identify opportunities to reduce waste generation.
- Categorise identified waste streams into reuse, recycle, recovery or disposal.
- Provide a framework for managing waste and educating staff to reduce disposal.
- Provide methodology for waste handling to ensure implementation of framework.
- Ensure availability of waste related data for the PKCT AEMR.
- Monitor the success of the WSMP and continually improve it based on results
- Ensure suitable PKCT Managerial review of the waste management process leading to consideration and/or implementation of suitable improvement opportunities.



## 3.9.2.2 Waste Monitoring Results and Compliance 2014/2015

PKCT records and tracks waste as it is generated across the site. Waste streams at PKCT are tracked via normal operations and through project specific operations. A summary of the waste generated through various projects at PKCT is presented below in Figure 34.

|                          | PROJECT WASTE 2014/2015 |        |               |         |          |          |
|--------------------------|-------------------------|--------|---------------|---------|----------|----------|
| Project                  | Waste Type              | Unit   | Project Total | On Site | Recycled | Landfill |
| Berth 101 soil stockpile | Contaminated Soil       | Tonnes | 121.36        | 0       | 0        | 121.36   |
| Building 69 and 72       | Asbestos eves sheeting  | Tonnes | 1.36          | 0       | 0        | 1.36     |
| Belt clean up            | Used conveyor belts     | Tonnes | 169           | 0       | 169      | 0        |

## Figure 34: Project generated waste 2014/2015

General site waste is managed by a waste contractor. An annual summary of the waste generated at PKCT across the reporting period is presented below in Figure 35. PKCT transitioned to a new waste service provider in late May 2014.

| Annual Waste Volumes                                  | July 2014 to June 2015 |    |                       |  |
|---|------------------------|----|-----------------------|--|
| General Waste   | 105,460                | kg | Landfill              |  |
| Cardboard Recycling                                   | 4,686                  | kg | Recycled              |  |
| Waste Rags  | 3,840                  | L  | Recycled              |  |
| Waste Grease Cartridges                               | 960                    | L  | Recycled              |  |
| Waste Oil Filters                                     | 1,200                  | L  | Recycled              |  |
| Waste Pressure Packs                                  | 2,160                  | L  | Recycled              |  |
| J120 Waste (oil and<br>hydrocarbons mixed with water) | 58,960                 | L  | Off Site<br>Treatment |  |
| Black Iron  | 94,003                 | kg | Recycled              |  |
| Copper  | 1,776                  | kg | Recycled              |  |

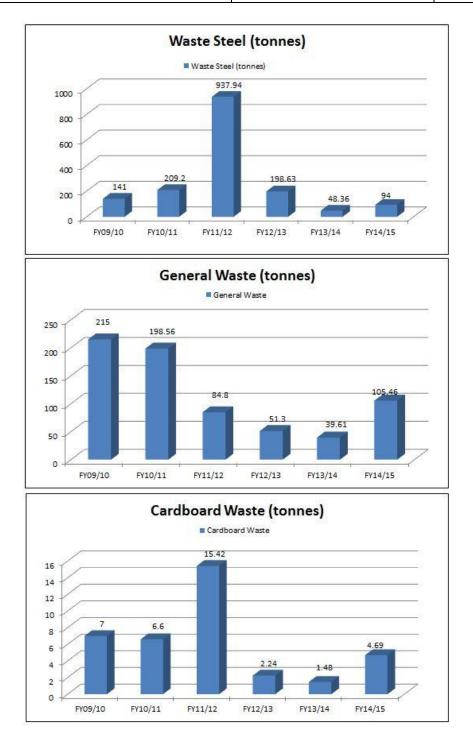
#### Figure 35: Waste Summary FY2014/2015

## 3.9.3 Trends in Waste

Figure 36 below shows trends in three different waste streams generated at PKCT, steel, general waste and cardboard. The 2014/2015 reporting period saw an increase in all three waste streams generated through PKCT's operations. PKCT continues to educate its workforce on waste reduction through periodic awareness communications, see Figure 37.



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#### Figure 36: Waste trends at PKCT

#### 3.9.4 Waste – Activities Undertaken During 2014/2015 Reporting Period

A summary of the actions undertaken for the 2014/2015 reporting period related to waste is presented below.

• 6559 tonnes of spillage coal was returned to customers as part of spillage screening and recycling activities during the reporting period.



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- The ISO 14001 Surveillance Audit undertaken by Lloyds in December 2013 identified a need to review the waste management plan and procedures. The Waste Management Plan was reviewed and updated in February 2015.
- PKCT removed and recycled 169 tonnes of used conveyor belts from site.
- In February 2015, "Waste Management at PKCT" was included as a key topic in the PKCT Newsletter. See Figure 37 below.

#### Waste Management at PKCT – Did you know?

PKCT generated almost 40 tonnes of general Recycling at home waste ending up in landfill in the last financial year Following the Christman Following

At PKCT we <u>all</u> have an obligation to understand and manage waste. Our DPI Approval states we are to monitor, investigate and implement ways to minimise and report on the waste generated at site. PKCT's Waste Management Plan outlines how our site implements this waste management process.

Across the site, PKCT utilises various bins for collecting recyclable waste. In the workshops you will see brightly coloured wheelie bins for collecting aerosol cans, oil filters, scrap metal and even used rags.

For those of us spending time in the office, printer cartridges are recycled via Cartridge Recovery Boxes located in the Project Office Compactus Room and behind the reception desk in the Admin Building. Scrap cardboard can be placed in the caged skip bins located outside the Execution Block, and in front of the Greaser's workshop.

Remember that only PKCT generated waste is to be placed in the site bins. As well as safety considerations, private waste adds an additional cost to PKCT's operation.

Following the Christmas period, there are many of us with dead or soon-to-be-dead batteries at home. When batteries are sent to landfill, heavy metals can leach to soil and water. BATTERY WORLD located in Shellharbour and Fairy Meadow will accept and recycle household and car batteries for free! Simply take your used batteries down to your nearest store and drop them off or call 13 17 60 for further information.

Many councils offer a kerbside collection service for bulky, unwanted household waste that cannot be placed in your wheelie bins. Check with your local council if you're planning a spring clean.

Second fridge or old freezer not needed? Fridge Buyback is a residential energy savings program that actually pays you to help save the environment and reduce your power bills by giving up your old second fridge or upright freezer. For more information call 1800 708 401 or visit the Fridge Buyback website at www.fridgebuyback.com.au







6 February 2015

#### Figure 37: Extract from February 2015 PKCT Newsletter

## 3.9.5 Waste - Activities Planned for 2015/2016 Reporting Period

The AECOM Independent Audit did not identify any actions associated with waste. A summary of the actions planned for the 2015/2016 reporting period is presented below.

- PKCT will undertake a review of the Waste Management Plan.
- PKCT will continue to identify areas of waste reduction across its operations



#### 3.10 Hazards

#### 3.10.1 Hazards Standards and Performance Measures

#### Dangerous Goods

**20.** The Proponent shall ensure that storage, handling and transport of dangerous goods are done in accordance with the relevant *Australian Standards*, particularly *AS1940* and *AS1596*, and the *Dangerous Goods Code*.

#### **3.10.2 Hazards Monitoring**

#### **3.10.2.1** Hazards Monitoring, Results and Compliance.

PKCT is aware of all dangerous goods onsite and ensures personnel are suitably trained to handle these. Any substances onsite are stored in accordance with AS1940 & AS1596.

PKCT utilises a proprietary chemical database system called ChemAlert to record information on chemicals at the site. Substance Data Sheets (SDS) and substance evaluation forms are available electronically from ChemAlert.

Regular environmental auditing is undertaken in the Main Store and Workshop areas to ensure compliance with relevant standards.

PKCT continues to look for opportunities to improve the storage of dangerous or hazardous goods on site. During the 2014/2015 reporting period, PKCT undertook a site-wide audit of chemicals on site. A number of unidentified containers and old chemicals were found during the audit. PKCT had the chemicals removed from site by a licenced waste contractor. As part of the audit process, PKCT purchased another two aerosol storage cabinets for use in its workshops, see Figure 38, and undertook a communication program on hazardous chemicals across various Team Meetings.



Figure 38: Two new aerosol storage cabinets introduced to East and West workshop areas.



PKCT continues to utilise a mobile refuelling system for its plant machinery and does not store any fuel on site. In February 2014, PKCT decommissioned the underground fuel storage tanks and completed remediation of the site.

## 3.11 Fire Control

#### 3.11.1 Fire Control Standards and Performance Measures

#### Fire Control

- 21. During the project, the Proponent shall:
- (a) ensure that it maintains suitable equipment to respond to any fires onsite; and
- (b) assist the fire and emergency services as much as possible if there is a fire onsite.
- 22. The Proponent shall ensure that it maintains a Fire Management Plan for the site.

#### **3.11.2 Hazards Monitoring**

#### 3.11.2.1 Fire Control Monitoring, Results and Compliance.

PKCT has a Fire Management Plan MP.HS.459 (FMP) in place which outlines the processes in place pertaining to fire management associated with the PKCT operations.

## 3.11.3 Fire Control – Activities Undertaken During 2014/2015 Reporting Period

PKCT had one minor fire and a smouldering roller across the reporting period. Figure 39 below outlines the events and PKCT's response.

| Date       | EMS number | Summary                                | Description of action                                 |
|------------|------------|--|---|
| 12/11/2014 | EV-01449   | smouldering with potential to escalate | Coal was run off belts and roller changed.            |
| 02/02/2015 | EV-01565   | of Conveyor 9 overheated and caught    | Controlled fire by stopping belt and using fire hose. |

## Figure 39: Fires recorded at PKCT in the 2014/2015 reporting period

A summary of further activities undertaken associated with fire control across the reporting period is presented below.

• Ongoing servicing and compliance checks of fire-fighting systems in line with relevant standards is undertaken by certified external service providers.

## 3.11.4 Fire Control - Activities Planned for 2015/2016 Reporting Period

The AECOM Independent Audit did not identify any actions associated with fire control. PKCT will continue to utilise its FMP and ensure it complies with the stipulated fire control standards and performance measures.



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A project has been approved to install fire suppression in PKCT's north and south substations. The project is scheduled for completion by mid-May 2016. These substations are critical to PKCT's operation.

#### 4.0 ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING

#### 4.1 Environmental Management Performance Measures and Compliance

|    | Environmental Management (Schedule 4, Condition 1)  | Relevant section of PKCT EMS  |
|----|---|---|
|    | Proponent shall prepare and implement an Environmental Management<br>ategy for the project to the satisfaction of the Director-General. This strategy<br>st:  | Refer to the PKCT EMS   |
| a) | be submitted to the Director-General for approval within 12 months of this project approval or otherwise agreed by the Director-General   | EMS was submitted to the DP&E with<br>eth 2009/2010 AEMR by the due date<br>of 31 <sup>st</sup> July 2010 |
| b) | provide for the strategic context for the environmental management of the project;  | Refer to Section 5  |
| c) | identify the statutory requirements that apply to the project;  | Refer to Section 6  |
| d) | <ul> <li>describe the procedures that would be implemented to:</li> <li>keep the local community and relevant agencies informed about the operation and environmental performance of the project</li> <li>receive, handle, respond to, and record complaints;</li> <li>resolve any disputes that may arise during the course of the project;</li> </ul> | Refer to Section 11<br>Refer to Section 11<br>Refer to Section 11.3                                       |
|    | <ul> <li>respond to any non-compliance;</li> </ul>  | Refer to Section 7.6  |
|    | <ul> <li>manage cumulative impacts; and</li> </ul>  | Refer to Section 7.3  |
|    | respond to emergencies;   | Refer to Section 8.1  |
| e) | include an environmental monitoring program for the project that includes all the monitoring requirements of the approval;  | Refer to Section 9  |
| f) | describe how the various incident and approval reporting requirements of the project would be integrated into a single reporting system; and  | Refer to Section 9  |
| a) | describe the role, responsibility, authority and accountability of all the key personnel involved in the environmental management of the project.   | Refer to Section 4  |

#### Figure 40: EMS compliance in the AEMR

PKCT has in place an approved Environmental Management Strategy (EMS). The EMS was submitted with the 2009/2010 AEMR to the DP&E. The EMS details how PKCT complies which each line item of Schedule 4, Condition 1, Environmental Management of Project Approval 08\_0009. Figure 40 above references the specific EMS Sections that PKCT utilises for compliance with Schedule 4, Condition 1.

## 4.2 Reporting - Incident Reporting

#### Incident Reporting

- 2. Within 24 hours of detecting the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall notify the Department and other relevant agencies of the incident.
- 3. Within 21 days of notifying the Department and other relevant agencies of such an incident, the Proponent shall provide the Department and these agencies with a written report that:
  - a) Describes the date, time, and nature of the incident;

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- b) Identifies the cause (or likely cause) of the incident
- c) Describes what action has been taken to date: and
- d) Describes the proposed measures to address the incident.

Requirements associated with Schedule 4, Conditions 2 and 3 are referenced in PKCT's EMS and Event Management Procedure. There were no reportable incidents across the 2014/2015 reporting period.

#### 4.3 Reporting - Annual Reporting

#### **Annual Reporting**

- 4. Within 12 months of this approval, and annually thereafter, the Proponent shall submit and AEMR to the Director-General and all relevant agencies. This report must:
  - a) Identify the standards and performance measures that apply to the project
  - b) Describe the works carried out in the last 12 months;
  - c) Describe the works planned to be carried out in the next 12 months;
  - d) Include a summary of the complaints received during the past year; and compare this to complaints received in the previous years;
  - e) Include a summary of the monitoring results for the project during the past year;
  - f) Include an analysis of these monitoring results against the relevant:
    - Impact assessment criteria/limits;
    - Monitoring results from previous years; and
    - Predictions in the EA or other documents listed in condition 2 of schedule 2;
  - g) Identify and discuss all exceedances of approval and licence conditions and other applicable standards and performance measures;
  - h) Identify any trends in the monitoring results over the life of the project;
  - i) Identify any non-compliance during the previous year; and
  - j) Describe what actions were, or are being, taken to ensure compliance.

Following feedback from the DP&E on the format of the 2012/2013 AEMR, PKCT revised the structure of the 2013/2014 AEMR to better align with the requirements of Schedule 4, Condition 4. Submission of this AEMR, with its changes satisfies the requirements of the Condition.

#### 4.4 Independent Environmental Audit

#### Independent Environmental Audit

- 5. By 31 March 2011 and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an independent Environmental Audit of the Project. This audit must:
- a) Be conducted by a suitable qualified, experienced, and independent team of experts whose appointment has been endorsed by the Director-General;

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b) Include consultation with the relevant agencies;

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- c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL (Including any strategy, plan or program required under these approvals); and
- review the adequacy of strategies, plans and/or programs required under these approvals; and, if appropriate
   recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan
- or program required under these approvals.

Note: This audit team should be led by a suitably qualified auditor, and include experts in the field of noise, air quality, and traffic management.

- 6. Within 6 weeks of completing this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General with a response to any recommendations contained in the audit report.
- 7. Within 3 months of submitting the audit report to the Director-General, the Proponent shall review and if necessary revise the strategies/plans/programs required under this approval, to the satisfaction of the Director-General.

As required under Schedule 4, Condition 5 of Project Approval 08\_0009, PKCT undertook its Triennial Independent External Audit on 28<sup>th</sup> March 2014. The auditor, AECOM, was approved by the Director-General by letter dated 27<sup>th</sup> February 2014.

PKCT completed the audit and submitted an audit report the DP&E on 9<sup>th</sup> May 2014. By email of 29<sup>th</sup> May 2014, the DP&E provided a response to the audit submission raising a number of matters requiring PKCT's attention. PKCT sought to address these matters and by email of 10<sup>th</sup> June 2014, PKCT submitted a revised audit report (Version 3) together with a requested PKCT Action Plan.

The DP&E provided further feedback by two emails on 16<sup>th</sup> June 2014. Clarification on some items was sought together with suggested changes to the AECOM Audit Report. A revised action plan and clarification of the requested points was submitted to the DP&E by the due date of 23<sup>rd</sup> June 2014.

Of the 96 conditions contained in the MCoA (including Statement of Commitments), 85 conditions applied to the audit, of which PKCT complied with 84 conditions. There was one non-compliance (classified as minor) and 20 opportunities for improvement.

Of the 84 conditions contained in the EPL, 47 conditions applied to the audit, of which PKCT complied with 43 conditions. There were four non-compliances (classified as minor) and five opportunities for improvement.

The final, revised Action Plan with further details on the minor non-compliances is presented in Appendix E. PKCT is currently working on completing the required actions of the plan.

#### 4.5 Access to Information

#### Access to Information

Within 3 months of the approval of any strategy/plan/program required under this approval (or any subsequent revision of these strategies/plans/programs), or the completion of the audits or AEMR, required under this approval, the Proponent shall:

a) provide a copy of the relevant document/s to the relevant agencies

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|    | b) place a copy of the document/s on its website; and   |
|----|---|
|    | c) remove superseded copies of strategies/plans/programs from its website.  |
| 9. | During the project, the Proponent shall:  |
|    | <ul> <li>a) make a summary of monitoring results required under this approval publically available on its website;<br/>and</li> </ul> |
|    | b) Update these results on a regular basis (at least every 6 months).   |

Actions arising from the 2014 Triennial Independent Audit include updating of a number of PKCT Management Plans, refer to Appendix E. Once updated and approved by the relevant agencies, these plans will be uploaded the PKCT website, <u>www.pkct.com.au</u>.

As required under Condition 9, PKCT makes a summary of its monitoring results publically available on its website. Both the PKCT 2013/2014 AEMR and the 2014/2015 interim EMR can be found on <u>www.pkct.com.au</u>.

#### 5.0 STATEMENT OF COMMITMENTS

PKCT prepared and submitted a Statement of Commitments as part of the Environmental Assessment submitted to the DP&E for the 08\_0009 Major Project Application. The DP&E accepted these commitments and they now form "Appendix 2" of the Approval.

PKCT's compliance with these commitments across the 2014/2015 reporting period is outlined in the following sections.

#### 5.1 Statement of Commitments -Traffic and Transportation

| Objective  | Commitment  |
|--|---|
| <ul> <li>Transport of coal and bulk products to PKCT to be conducted in a manner which does not adversely impact on public safety or amenity of road users.</li> <li>Safety standards to be maintained by trucks following designated routes procedures</li> <li>Internal PKCT roadways to be maintained to minimize coal and bulk products spillage and carry over onto public roadways.</li> </ul> | <ul> <li>Public road haulage of coal and bulk products to<br/>PKCT will not exceed 10 million tonnes per annum.</li> <li>Publication of annual throughput tonnes including<br/>in-loading method (i.e. road and rail received coal<br/>and bulk products).</li> <li>All trucks delivering coal and bulk products to PKCT<br/>must follow designated heavy vehicle transport<br/>routes.</li> <li>A driver's code of conduct will be utilised for all<br/>transport companies delivering product to PKCT.</li> <li>Review effectiveness of truckwash facilities to be<br/>undertaken.</li> <li>Unless further or alternative Approval for NRE No 1<br/>Colliery at Russell Vale is in place, PKCT will only<br/>receive coal from the NRE No 1 Colliery if that coal<br/>has been dispatched from that Colliery by public<br/>road between the hours of 7am to 10pm Monday to<br/>Friday and 8am to 6pm Saturday and Sunday or<br/>Public Holidays.</li> </ul> |

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A summary of actions undertaken across the 2014/2015 reporting period specific to this Statement of Commitments is presented below. Further details related to the Traffic and Transportation Statement of Commitments can be found under Section 3.2 of the AEMR.

- Public road receivals for the reporting period were 4.36mtpa.
- An interim Environment Management Report and AEMR are published on the PKCT website every 6 months, making throughput records publically available.
- PKCT and its associated road transport providers utilise an auditing program to ensure compliance with the PKCT DCC. This includes monitoring of trucks adherence to the specified travel routes.
- The Northern Truckwash upgrade project was completed. An effectiveness review was completed and a final report "Northern Truck Wash 2013 Upgrade – Effectiveness Review" was submitted as required to the EPA on 6<sup>th</sup> February 2015.
- PKCT receives monthly DCC compliance reports from Brindles who provide coal haulage for Wollongong Coal. Wollongong Coal must ensure that coal is dispatched within the designated dispatch hours. The reports highlight any breaches to the designated dispatch hours. No breaches were reported to PKCT, or observed in the 2014/2015 reporting period.

#### 5.2 Statement of Commitments -Air Quality

| Objective   | Commitment  |
|---|---|
| • Minimise dust emissions from activities carried out on the PKCT site. | <ul> <li>Installation of two continuous dust monitors to<br/>monitor airborne dust emissions.</li> <li>Maintain appropriate dust suppression systems on site<br/>to effectively manage dust both on stockpiles and<br/>roadways.</li> </ul> |

A summary of actions undertaken across the 2014/2015 reporting period specific to this Statement of Commitments is presented below. Further details related to the Air Quality Statement of Commitments are found under Section 3.3 of the AEMR.

- PKCT has two continuous dust monitors. These remained operational throughout the reporting period.
- A veneering trial was undertaken on a stockpile located on the south of the site from March through to June 2015. The trial proved to be effective in assisting PKCT to manage dust emissions from its operations.
- PKCT has a preventative maintenance system in place (Works and Assets) which provides for the routine inspection and maintenance of environmental equipment including existing dust suppressions systems, stockpile sprays, truck wash and water cart. Operations shift teams monitor and operate the equipment and, where necessary, provide a breakdown response.



## 5.3 Statement of Commitments -Water Management

| Objective   | Commitment   |
|---|--|
| <ul> <li>Minimise use of potable water on site.</li> <li>Effective management of on-site stormwater.</li> </ul> | • Reduction of freshwater use on site to be achieved through the implementation of recycled water (Tertiary Treated Effluent) for dust suppression on stockpiles and other non-domestic uses e.g. fire, spillage washdown, conveyor sprays. Staged approach to be implemented which will result in a 360 Megalitre per annum reduction by the end of 2010. |

A summary of actions undertaken across the 2014/2015 reporting period specific to this Statement of Commitments is presented below. Further details related to the Water Management Statement of Commitments are found under Section 3.5 of the AEMR.

• Recycled water use has continued at PKCT across the reporting period. Full details and summary of volumes are presented in Section 3.5.

#### 5.4 Statement of Commitments -Noise Management

| Objective  | Commitment   |
|--|--|
| <ul> <li>Responsible management of PKCT site operational noise.</li> </ul> | <ul> <li>Ensure that ongoing compliance is maintained to the<br/>NSW Industrial Noise policy.</li> <li>Development and implementation of a noise<br/>management plan for the PKCT site.</li> </ul> |

A summary of actions undertaken across the 2014/2015 reporting period specific to this Statement of Commitments is presented below. Further details related to the Noise Management Statement of Commitments are found under Section 3.1 of the AEMR.

- PKCT has developed and implemented Noise Management Plan MP.HS.387. The plan references the NSW Industrial Noise Policy. Relevant PKCT personnel have been made aware of the compliance requirement.
- Three noise monitoring surveys were undertaken across the reporting period. All monitoring data was within the noise criteria at all locations.

#### 5.5 Statement of Commitments -Community Relations

| Objective   | Commitment  |
|---|---|
| PKCT to be regarded as a responsible corporate citizen<br>by the community. | <ul> <li>Continued operation of the PKCT Community<br/>Consultative Committee</li> <li>Continued advertisement and operation of the<br/>telephone hotline.</li> </ul> |

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A summary of actions undertaken across the 2014/2015 reporting period specific to this Statement of Commitments is presented below.

- PKCT utilises its Community Consultative Committee (CCC) as a forum for updating the community on its operations and receiving and providing feedback from local residents. PKCT held three meetings across the reporting period on 13<sup>th</sup> August 2014, 3<sup>rd</sup> December 2014 and 6<sup>th</sup> May 2015. PKCT will continue to hold these forums at least on a 4 monthly basis.
- PKCT received two community complaints associated with the operation during the reporting period. A summary of all complaints, including road related complaints is presented in Appendix D.
- PKCT continues to utilise its telephone hotline. The hotline and general contact details for the site are located on the PKCT website, <u>www.pkct.com.au</u>.
- The 2014 AECOM Independent Audit identified an Opportunity for Improvement associated with Community Relations. The recommendation was to include information on the CCC on the PKCT website. This action was implemented and the CCC terms of reference were added to the PKCT website in September 2014.

#### 5.6 Statement of Commitments – Environmental monitoring

| Objective  | Commitment  |
|--|---|
| <ul> <li>To ensure compliance to the conditions of PKCT's<br/>Department of the Environment and Climate Change<br/>licence.</li> </ul> | • Development and implementation of a management plan which documents the environmental monitoring requirement of PKCT. |

PKCT has in place Environmental Monitoring Strategy MP.HS.464. The Strategy outlines the various monitoring requirements together with references to applicable management plans. General descriptions of PKCT monitoring and monitoring methodology are found throughout the AEMR. Figure 41 below outlines the sections of the AEMR describing Environmental Monitoring.

| Environmental Monitoring Area        | Section of AEMR |
|--------------------------------------|-----------------|
| Noise                                | Section 3.1     |
| Transport                            | Section 3.2     |
| Air Quality                          | Section 3.3     |
| Meteorological                       | Section 3.4     |
| Surface Water                        | Section 3.5     |
| Biodiversity                         | Section 3.6     |
| Visual Amenity                       | Section 3.7     |
| Greenhouse Gas and Energy Efficiency | Section 3.8     |
| Waste                                | Section 3.9     |
| Hazards                              | Section 3.10    |
| Fire Control                         | Section 3.11    |

Figure 41: Environmental monitoring area and reference in AEMR

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## 5.7 Statement of Commitments – Environmental Management System

| Objective                                    | Commitment  |
|--|---|
| PKCT to maintain certification o ISO 140001. | • PKCT will continue to be certified to ISO 14001 and will be externally audited against the certification criteria on an annual basis. |

A summary of actions undertaken across the 2014/2015 reporting period specific to this Statement of Commitments is presented below.

- PKCT participated in three ISO 14001 external surveillance audit across the reporting period. The audits were undertaken by Lloyds on the 20<sup>th</sup> to 22<sup>nd</sup> August 2014, 25<sup>th</sup> February 2015 and 22<sup>nd</sup> to 24<sup>th</sup> June 2015. PKCT continues to be certified under ISO 14001. See Appendix J for Certification Certificate.
- On 28<sup>th</sup> March 2014, PKCT completed its triennial independent audit. Findings from the audit are presented in the Action Plan in Appendix E.

#### 5.8 Statement of Commitments – Greenhouse Gases

| [ | Objective   | Commitment  |
|---|---|---|
|   | <ul> <li>Minimise the production of greenhouse gas emissions<br/>associated with PKCT operations</li> </ul> | <ul> <li>PKCT to review onsite electricity use and identify and<br/>implement economically viable opportunities for<br/>reduced electricity usage.</li> </ul> |

PKCT undertook a greenhouse gas emission and energy use assessment of the Terminal following the Major Project Approval. The report found that PKCT's use of electricity for powering coal handling infrastructure is by far the largest energy user. As a result, 97% of PKCT GHG emissions are Scope 2 emissions associated with electricity generated by power stations.

Opportunities for energy reduction are pursued when purchasing new equipment and considered when developing improvements.

Further details related to the Greenhouse Gas and Energy Efficiency Statement of Commitments can be found under Section 3.8 of the AEMR.

#### 5.9 Statement of Commitments – Landscaping

| Objective  | Commitment  |
|--|---|
| Improve the visual amenity of PKCT on the surrounding community. | <ul> <li>Improve onsite soft landscaping through the planting<br/>of trees on the road receival earth bund and along the<br/>northern site boundary.</li> </ul> |

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With reference to the Landscape Management Plan MP.HS.460 (LMP), PKCT has developed a Landscape Concept Plan along the northern boundary. During this reporting period, maintenance of Stage 2 has continued and the area is now well established, see Figure 29 in Section 3.7 for progress of landscaping.

The nature and timing of further landscaping works requires consideration of major remedial works in development and PKCT's strategic planning to ensure their compatibility. Stage 3 Road Receival landscaping remains on hold currently.

#### 5.10 Statement of Commitments – Flora and Fauna

| Objective  | Commitment  |
|--|---|
| Management of Green and Golden Bell Frogs (GGBF) | <ul> <li>Implement Interim Management Plan</li> <li>Undertake a GGBF Survey and then develop a Long<br/>Term Plan of Management.</li> </ul> |

A Green and Golden Bell Frog Management Plan MP.HS.109 (GGBFMP) is in place. It was developed in consultation with the EPA and is DP&E approved.

A GGBF survey was undertaken by specialist consultants on 3<sup>rd</sup> February 2015. No GGBF's were found on site.

Further details related to the Flora and Fauna Statement of Commitments are found under Section 3.6 of the AEMR.

#### 5.11 Statement of Commitments – Waste

| Objective   | Commitment                                    |
|---|---|
| <ul> <li>Minimise waste generated at the site to reduce the volume of waste requiring disposal to landfill.</li> <li>Prevent dispersal of waste from the site to receiving environments.</li> </ul> | Develop a Waste Management Plan for the site. |

PKCT has a Waste Management Plan MP.HS.459 (WSMP) which identifies the various waste streams generated at PKCT. The Plan outlines the methods used to minimise waste via reuse, recycling and suitable disposal of waste when necessary.

Further details related to the Waste Statement of Commitments are found under Section 3.9 of the AEMR.

## 6.0 ENVIRONMENTAL PROTECTION LICENCE 1625

PKCT holds EPL 1625 under the Protection of the Environment Operations Act 1997. This stipulates the emission criteria that PKCT must not exceed. Criteria are outlined for water, noise and dust. Pollution Reduction Programs (PRPs) are attached to the EPL to identify aspects which may require improvement.

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PKCT is required to submit an Annual Return to the EPA reporting performance against licence requirements. The 2014/2015 Annual Return was submitted to the EPA via registered post on the 27<sup>th</sup> May 2015.

As the specific criteria for water, noise and dust are common to both the EPL and Project Approval 08\_0009, all data and discussion associated with these criteria are outlined in other sections in the AEMR.

Figure 42 below provides a summary of the EPL conditions, Project Approval 08\_0009 requirements and the section of the AEMR that discusses the criteria.

| Component | Reference area in<br>Project Approval<br>09_0009                             | Reference area in EPL 1625  | Relevant<br>Section of<br>AEMR |
|-----------|--|---|--------------------------------|
| Noise     | Schedule 3, Condition<br>1, Condition 2 and<br>Condition 3.                  | Limit Condition L4, L4.1  | Section 3.1                    |
| Air       | Schedule 3, Condition<br>7, Condition 8,<br>Condition 9 and<br>Condition 10. | Monitoring and Recording Conditions M2, M2.1, M2.2  | Section 3.3                    |
| Water     | Schedule 3, Condition 12 and Condition 13.                                   | Limit Condition L2, L2.1,<br>L2.2, L2.3, L2.4<br>And<br>Monitoring and Recording<br>Condition M2.3. | Section 3.5                    |

Figure 42: Common requirements of Project Approval 08\_0009 and EPL1625

## 6.1 Other EPL Matters in the 2014/2015 Reporting Period

- PKCT's management team participated in an emergency drill in May 2015. This drill included components that tested the effectiveness of the PKCT Pollution Incident Response Management Plan.
- PKCT has continued to update its website with monthly monitoring data summaries throughout the reporting period.
- PKCT worked with the EPA and completed a five-yearly EPL review in September 2014. This process made some changes to the existing EPL. The current EPL can be found on the EPA website <a href="http://www.epa.nsw.gov.au">www.epa.nsw.gov.au</a>.
- On 30<sup>th</sup> May 2014, the EPA undertook a legal compliance audit of PKCT's rail receival operation focusing on rail wagon dust and coal residue drag out. In December 2014, PKCT received the final audit report. The report identified a single non-compliance related to fine dust deposition on the exterior of wagons. In response to the audit findings, PKCT developed an Action Program. The Action Program was submitted to the EPA on the 31<sup>st</sup> March 2015. PKCT is working through the proposed actions.
- C9 Pump Overflow On 5<sup>th</sup> June 2014, during a storm event, the pit sump "Pump 9 Sump" overflowed to Port Kembla Harbour for a short duration after the pump was

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found not to be operational. The event was not considered "material". The event was reported to the EPA via email and an incident report was provided. Via letter dated 18<sup>th</sup> September 2014, PKCT received an Official Caution for the overflow event. An Action Plan was developed which focused on connecting the sump to PKCT's automated monitoring system SCADA. This work was completed in early 2015 and the sump is now visible on the SCADA system and alarmed to assist with early identification of pump failures.

- High TSS in Settlement Lagoon Following a significant storm event on the 24<sup>th</sup> March 2014, discharge occurred from Point 16 (Settlement Lagoon) which exceeded EPL limits for total suspended solids. The discharge occurred over three consecutive days on 25<sup>th</sup>, 26<sup>th</sup> and 27<sup>th</sup> March. In the days following, further discharge occurred resulting in another two non-compliant samples on 4<sup>th</sup> and 6<sup>th</sup> April. The event was reported to the EPA at the time and an incident report was submitted. Event was also included in the 2013/2014 EPL Annual Return. PKCT received a formal warning from the EPA for this event during this reporting period on 25/07/14. A consultant has been engaged to investigate and recommend corrective actions. Investigation is complete and a report back to the EPA is planned early August 2015 to confirm further actions to be undertaken.
- On 18/03/15 during routine cleaning of Shiploader 1 on PKCT's Coal Berth 102, a volume of washdown water containing coal fines flowed into the harbour causing a black plume to form. The plume extended for approximately 50m under the berth in a southerly direction. Investigation into the event identified the cause as a blocked launder pipe which led to a backup of water and spillage from the Shiploader. The event was reported to the EPA incident line and following advice from the EPA, an Action Plan was developed. Details of the event were reported in the 2014/2015 Annual Return. Actions are progressing with a forecast December 2015 completion.

## 7.0 RESULTS COMPARED TO THE ENVIRONMENTAL ASSESSMENT 2008

An environmental assessment was undertaken as part of PKCT's application associated with Project Approval 08\_0009 and submitted to the DPE in a report titled "Environmental Assessment- Existing Operations and increased Road Receival Hours for Port Kembla Coal Terminal 2008" (EA).

This EA focussed on the key environmental issues of PKCT proposal to increase road deliveries to 24/7 for a maximum of 10mtpa. It has also addressed secondary environmental issues to ensure there was a rigorous review of PKCT's existing and proposed operations. It showed that existing and proposed PKCT operations have a small environmental footprint, which is minimised through existing environmental impact mitigation measures. The assessment included predications for environmental aspects such as noise and dust.

Monitoring results obtained over the 2014/2015 reporting period align with predications made in the EA. Traffic and noise studies undertaken associated with PKCT's application to the DPE for 7.5 MTPA to 10 MTPA approval also aligned.

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Air quality monitoring results are compared to the predictions of the EA in Section 3.3 of the AEMR.

## 8.0 COMPLAINTS

Schedule 4, Condition 4d requires PKCT to include a summary of the complaints received during the past year, and compare this to complaints received in previous years. Figure 43 below provides a summary of complaints recorded at PKCT and reported to PKCT by road transport providers.

As can be seen in Figure 43, total complaints made to PKCT have remained relatively consistent over the past five reporting periods. PKCT continues to record all complaints in its Event Management System and responds appropriately when a complaint is received. PKCT continues to work with its shippers and road transport providers to ensure complaints are recorded and handled appropriately.

A full summary of complaints is presented in Appendix D.

|   | Number of Complaints recorded by PKCT |         |         |         |         |
|---|---------------------------------------|---------|---------|---------|---------|
| Complaints                                | FY10/11                               | FY11/12 | FY12/13 | FY13/14 | FY14/15 |
| General (PKCT)<br>Drivers Code of Conduct | 2                                     | 2       | 3       | 0       | 2       |
| related                                   | 19                                    | 19      | 20      | 5       | 3       |
| Total                                     | 21                                    | 21      | 23      | 5       | 5       |

Figure 43: PKCT and DCC complaints.

## 9.0 CONCLUSION

This Annual Environmental Management Report (AEMR) identifies PKCT's approval and licence conditions and explains how PKCT complies with these requirements. It meets the specific AEMR requirements in Major Project Approval 08\_0009 Condition 4 of Schedule 4.

This AEMR demonstrates that PKCT has undertaken appropriate actions to manage its environmental impacts with the overall aim of minimising harm to the environment. This report forms part of PKCT's environmental management system which is directed by PKCT's Environmental Management Strategy. PKCT provides this AEMR to the DP&E and other stakeholders using information taken from environmental monitoring, assessment and reporting activities undertaken on a regular basis through the reporting period.

This AEMR does not raise any concerns regarding the ongoing ability of PKCT to comply with environmental requirements in the Major Project Approval, Environment Protection Licence 1625 and other regulatory requirements. Further, this AEMR confirms PKCT's commitment to continual improvement in the mitigation of environmental impacts.

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**10.0 APPENDIX** 

## 10.1 Appendix A

#### Figure 4-1 Monitoring Location 1 – Corner Swan & Kembla Streets



The angle of 35° is obtained by setting BarnOwl<sup>®</sup> to measure between angles 140° to 175°.



#### Figure 4-2 Monitoring Location 2 – Corner Swan & Corrimal Streets



The angle of 25° is obtained by setting BarnOwl<sup>®</sup> to measure between angles 170° to 195°.



#### Figure 4-3 Monitoring Location 3 – Corner Keira & Fox Streets



The angle of 40° is obtained by setting BarnOwl<sup>®</sup> to measure between angles 125° to 165°.



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## Figure 4-4 Monitoring Location – Receivals





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#### 10.2 Appendix B

| Port Kembla Coal Terminal       |  |
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#### Table 5-1 Summary of Monitoring Results - Location 1 - Corner Swan & Kembla Streets

|                           |            |                   | BarnOwl <sup>®</sup> LAeq (dBA)               |           | SLM                       | Wind Speed               |                    |               |  |   |
|---------------------------|------------|-------------------|---|-----------|---------------------------|--------------------------|--------------------|---------------|--|---|
| Date<br>& Start Time      | Period     | Criteria<br>(dBA) | PKCT Direction<br>[Est. PKCT<br>Contribution] | All Noise | LA90<br>(dBA)             | (m/s) and<br>Direction   | Stability<br>Class | Compliance    | Observations   |   |
| 29/07/14<br>10.45-11.00am | Day        | 51                | 38  | 62 48     | 3.0 m/s<br>48 23 – 24 Deg | 48                       | D                  | D             | YES<br>Negligible  | At residential location:<br>Noise dominated by road traffic and local activities.<br>1 truck movement potentially audible.                    |
|                           |            |                   | [<20]   |           |                           | 23 – 24 Deg              |                    | Audibility    | On-site:<br>Noise recorded from truck movements and unloading.<br>Approximate truck movements: 13 In; 16 Out                                   |   |
| 28/07/14                  | Evening 50 |                   | 35<br>[<20]                                   | 61 45     | 45                        | 2.6 m/s<br>284 - 289 Deg | D/E                | YES           | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities potentially audible for a brief interval. |   |
| 6.20-6.35pm               |            | 50                |   |           |                           |                          |                    | - 289 Deg     | Negligible =<br>Audibility   | On-site: Noise recorded from truck movements and<br>unloading. Truck wash alarm. Train unloading.<br>Approximate truck movements: 4 In; 8 Out |
| 28/07/14                  | Night 49   | 49                | 35  | 59        | 39                        | 0.7 – 1.4 m/s            | F                  | YES           | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities potentially audible for a brief interval. |   |
| 11.00-11.15pm             |            |                   | [21]  |           |                           |                          | 277 – 353 Deg      | 277 – 353 Deg | 77 – 353 Deg   | Audibility  |
| 28/07/14<br>11.15-11.30pm | Night      | 49                | 32<br>[<20]                                   | 51        | 37                        | 2.1 – 2.2 m/s            | D                  | YES           | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.                              |   |
|                           |            |                   |   |           |                           | 287 – 295 Deg            |                    | Not Audible   | On-site: Noise recorded from truck movements and<br>unloading. Approximate truck movements: 12 In; 6 Out                                       |   |

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### Table 5-2 Summary of Monitoring Results – Location 2 – Corner Swan & Corrimal Streets

|                            |           |                   | BarnOwl <sup>®</sup> L <sub>A</sub>           | eq (dBA)  | - SLM         | Wind Speed                     |                    |                                 |  |
|----------------------------|-----------|-------------------|---|-----------|---------------|--------------------------------|--------------------|---------------------------------|--|
| Date<br>& Start Time       | Period    | Criteria<br>(dBA) | PKCT Direction<br>[Est. PKCT<br>Contribution] | All Noise | LA90<br>(dBA) | (m/s) and<br>Direction         | Stability<br>Class | Compliance                      | Observations   |
| 29/07/14<br>11.10-11.25am  | Day       | 51                | 44<br>[<20]                                   | 64        | 48            | 3.1 – 3.2 m/s<br>26 – 32 Deg   | C/D                | YES<br>Not Audible              | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>On-site: Noise recorded from truck movements and                              |
|                            |           |                   |   |           |               |                                |                    |                                 | unloading. Approximate truck movements: 9 In; 8 Out  |
| 28/07/14<br>6.55-7.10pm    | Evening   | 50                | 44<br>[<20]                                   | 63        | 45            | 1.4 m/s<br>291 – 294 Deg       | D                  | YES<br>Negligible<br>Audibility | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities potentially audible for a brief interval.<br>On-site: Noise recorded from truck movements and |
|                            |           |                   |   |           |               |                                |                    |                                 | unloading. Approximate truck movements: 5 In; 5 Out  |
| 28/07/14<br>11.45-Midnight | Night     | 49                | 40<br>[<20]                                   | 57        | 39            | 1.6 – 1.8 m/s<br>287 – 312 Deg | D/E                | YES<br>Negligible               | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities potentially audible for a brief interval.   |
| 11.45-Midnight             |           |                   | [<20]   |           |               | 287 – 312 Deg                  |                    | Audibility                      | On-site: Noise recorded from truck movements and<br>unloading. Approximate truck movements: 9 In; 10 Out   |
| 28/07/14<br>Midnight-      | Night     | 49                | 36  | 60        | 39            | 1.1 – 1.3 m/s                  | D/F                | YES<br>Negligible               | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities potentially audible for a brief interval.   |
| 12.15am                    | et a real |                   | [<20]   |           |               | 119 – 302 Deg                  | 119 – 305 Deg      |                                 | On-site: Noise recorded from truck movements and<br>unloading. Approximate truck movements: 1 In; 8 Out  |

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### Table 5-3 Summary of Monitoring Results – Location 3 – Corner Keira & Fox Streets

|                           |         |                   | BarnOwl <sup>®</sup> L <sub>A</sub>           | <sub>eq</sub> (dBA) | - SLM                     | Wind Speed                     |                    |                            |  |
|---------------------------|---------|-------------------|---|---------------------|---------------------------|--------------------------------|--------------------|----------------------------|--|
| Date<br>& Start Time      | Period  | Criteria<br>(dBA) | PKCT Direction<br>[Est. PKCT<br>Contribution] | All Noise           | L <sub>A90</sub><br>(dBA) | (m/s) and<br>Direction         | Stability<br>Class | Compliance                 | Observations   |
| 29/07/14<br>11.40-11.55am | Day     | Day 55            | 61<br>[<25]                                   | 69                  | 53                        | 3.9 – 4.1 m/s<br>35 – 38 Deg   | С                  | YES<br>Not Audible         | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.                              |
| 11.10 11.55411            |         |                   | [ \23]  |                     |                           | 33 30 Deg                      |                    | NOT AUGIDIE                | On-site: Noise recorded from truck movements and<br>unloading. Approximate truck movements: 9 In; 3 Out  |
| 28/07/14                  | -       |                   | 54  |                     | 45                        | 2.0 m/s                        | -                  | YES                        | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.                              |
| 7.35-7.50pm               | Evening | 49                | [<20]   | 64                  | 45                        | 310 – 327 Deg                  | E                  | Not Audible                | On-site: Noise recorded from truck movements and<br>unloading. Truck wash alarm. Train unloading.<br>Approximate truck movements: 4 In; 8 Out  |
| 28/07/14<br>12.30-12.45am | Night   | 45                | 49<br>[<20]                                   | 57                  | 35                        | 1.4 – 2.6 m/s<br>342 – 358 Deg | D                  | YES<br>Negligible          | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities potentially audible for a brief interval. |
| 12.30-12.43am             |         |                   | [<20]   |                     |                           | 342 – 336 Deg                  |                    | Audibility                 | On-site: Noise recorded from truck movements and<br>unloading. Approximate truck movements: 6 In; 8 Out  |
| 28/07/14                  |         |                   | 47  |                     |                           | 1.8 – 2.8 m/s                  | 2/5                | YES                        | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities potentially audible for a brief interval. |
| 12.45-1.00am              | Night   | 45                | [<20]   | 55                  | 35                        | 318 – 324 Deg                  | D/E                | Negligible -<br>Audibility | On-site: Noise recorded from truck movements and<br>unloading, and a potential train approach.<br>Approximate truck movements: 12 In; 9 Out    |

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### Table 5-1 Summary of Monitoring Results – Location 1 – Corner Swan & Kembla Streets

|                           |         |                   | BarnOwl® La                                   | <sub>eq</sub> (dBA) | - SLM         | Wind Speed             |                    |                      |   |
|---------------------------|---------|-------------------|---|---------------------|---------------|------------------------|--------------------|----------------------|---|
| Date<br>& Start Time      | Period  | Criteria<br>(dBA) | PKCT Direction<br>[Est. PKCT<br>Contribution] | All Noise           | LA90<br>(dBA) | (m/s) and<br>Direction | Stability<br>Class | Compliance           | Observations  |
| 17/12/14<br>5.00-5.15pm   | Day     | 51                | 36<br>[<25]                                   | 59                  | 52            | 3.0-3.3<br>154-156º    | с                  | YES<br>Not Audible = | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.   |
| F                         |         |                   | ,   |                     |               |                        |                    | Hotridable           | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 7  |
| 17/12/14<br>6.55-7.10pm   | Evening | 50                | 44<br>[<25]                                   | 64                  | 47            | 47 2.8-3.5<br>157-167º |                    | YES                  | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.   |
| 0.55-7.10pm               |         |                   | [<25]   |                     |               | 137-1675               |                    | Not Audible          | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 6  |
| 17/12/14<br>10.00-10.15pm | Night   | 49                | 33<br>[<25]                                   | 55                  | 41            | 0.7-1.3<br>141-216º    | D/E                | YES<br>Not Audible   | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road |
|                           |         |                   |   |                     |               |                        |                    | _                    | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 11   |
| 17/12/14<br>10.15-10.30pm | Night   | 49                | 30<br>[<25]                                   | 51                  | 41            | 1.3-1.9<br>216-273º    | E/F                | YES<br>Not Audible _ | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road |
|                           |         |                   |   |                     |               |                        |                    |                      | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 10   |

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# Table 5-2 Summary of Monitoring Results – Location 2 – Corner Swan & Corrimal Streets

|                           |         |                   | BarnOwl <sup>®</sup> La                       | <sub>eq</sub> (dBA) | - SLM         | Wind Speed             |                    |                      |   |
|---------------------------|---------|-------------------|---|---------------------|---------------|------------------------|--------------------|----------------------|---|
| Date<br>& Start Time      | Period  | Criteria<br>(dBA) | PKCT Direction<br>[Est. PKCT<br>Contribution] | All Noise           | LA90<br>(dBA) | (m/s) and<br>Direction | Stability<br>Class | Compliance           | Observations  |
| 17/12/14<br>5.25-5.40pm   | Day     | 51                | 42<br>[<25]                                   | 68                  | 51            | 3.1-3.8<br>156-167º    | с                  | YES<br>Not Audible 『 | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.   |
| 5125 5. ropin             |         |                   | [ 120]  |                     |               | 130 107                |                    | Not Addibic          | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 7  |
| 17/12/14                  | Evening | 50                | 41  | 58                  | 49            | 2.7-3.1                | D                  | YES                  | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.   |
| 6.30-6.45pm               |         |                   | [<25]   |                     |               | 143-1470               |                    | Not Audible          | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 6  |
| 17/12/14<br>10.40-10.55pm | Night   | 49                | 40<br>[<25]                                   | 60                  | 42            | 2.0-2.2<br>252-259º    | D/E                | YES<br>Not Audible   | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road |
|                           |         |                   |   |                     |               |                        |                    |                      | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 5  |
| 17/12/14<br>10.55-11.10pm | Night   | 49                | 43<br>[<25]                                   | 54                  | 41            | 1.8-2.0<br>252-264º    | D/E                | YES<br>Not Audible   | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road |
|                           |         |                   |   |                     |               |                        |                    |                      | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 6  |

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### Table 5-3 Summary of Monitoring Results – Location 3 – Corner Keira & Fox Streets

|                                       |         |                   | BarnOwl <sup>®</sup> L <sub>A</sub>           | eq (dBA)  | - SLM                     | Wind Speed             |                    |                      |   |
|---------------------------------------|---------|-------------------|---|-----------|---------------------------|------------------------|--------------------|----------------------|---|
| Date<br><mark>&amp; Start Time</mark> | Period  | Criteria<br>(dBA) | PKCT Direction<br>[Est. PKCT<br>Contribution] | All Noise | L <sub>A90</sub><br>(dBA) | (m/s) and<br>Direction | Stability<br>Class | Compliance           | Observations  |
| 17/12/14<br>5.45-6.00pm               | Day     | 55                | 38<br>[<25]                                   | 64        | 52                        | 3.0-3.3<br>156-157º    | C                  | YES<br>Not Audible = | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 6 |
| 17/12/14<br>6.05-6.20pm               | Evening | 49                | 40<br>[<20]                                   | 63        | 51                        | 3.0-3.6<br>148-157º    | с                  | YES<br>Not Audible - | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>On-site: Noise dominated by truck movements and  |
| 17/12/14<br>11.20-11.35pm             | Night   | 45                | 33<br>[<20]                                   | 54        | 40                        | 2.1-2.3<br>256-261º    | D                  | YES<br>Not Audible   | unloading. Number of trucks entering: 8<br>At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road            |
|                                       |         |                   |   |           |                           |                        |                    |                      | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 7  |
| 17/12/14<br>11.35-11.50pm             | Night   | 45                | 32<br>[<20]                                   | 57        | 41                        | 2.2-2.3<br>256-259°    | D/E                | YES<br>Not Audible   | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road   |
|                                       |         |                   |   |           |                           |                        |                    |                      | On-site: Noise dominated by truck movements and<br>unloading. Number of trucks entering: 5  |

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### Table 5-1 Summary of Monitoring Results – Location 1 – Corner Swan & Kembla Streets

|                           |         |                   | BarnOwl <sup>®</sup> L <sub>A</sub>           | <sub>eq</sub> (dBA) | - SLM         | West Court                           |                    |                                 |  |
|---------------------------|---------|-------------------|---|---------------------|---------------|--------------------------------------|--------------------|---------------------------------|--|
| Date<br>& Start Time      | Period  | Criteria<br>(dBA) | PKCT Direction<br>[Est. PKCT<br>Contribution] | All Noise           | LA90<br>(dBA) | Wind Speed<br>(m/s) and<br>Direction | Stability<br>Class | Compliance                      | Observations   |
| 03/06/15<br>4.53-5.08pm   | Day     | 51                | 46<br>[<25]                                   | 61                  | 53            | 1.9<br>199º                          | F                  | YES<br>Not Audible <sup>—</sup> | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>On-site: Noise dominated by truck movements and |
|                           |         |                   |   |                     |               |                                      |                    |                                 | train. Number of trucks entering: 6  |
| 03/06/15                  | Evening | 50                | 42  | 55                  | 49            | 1.5                                  | E                  | YES                             | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.  |
| 7.08-7.23pm               |         |                   | [<25]   |                     |               | 260°                                 |                    | Not Audible                     | On-site: Noise dominated by truck movements and train. Number of trucks entering: 9  |
| 03/06/15<br>10.43-10.58pm | Night   | <mark>49</mark>   | 39<br>[<25]                                   | 53                  | 47            | 1.8<br>240°                          | F                  | YES<br>Not Audible              | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road            |
|                           |         |                   |   |                     |               |                                      |                    | 27                              | On-site: Noise dominated by truck movements and<br>train. Number of trucks entering: 3   |
| 03/06/15<br>10.58-11.13pm | Night   | 49                | 39<br>[<25]                                   | 52                  | 47            | 2.3<br>246º                          | F                  | YES<br>Not Audible _            | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road            |
| Si<br>                    |         |                   | 1994 - 1995 -                                 |                     |               |                                      |                    |                                 | On-site: Noise dominated by truck movements and train. Number of trucks entering: 2  |

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### Table 5-2 Summary of Monitoring Results – Location 2 – Corner Swan & Corrimal Streets

|                           |         |                   | BarnOwl <sup>®</sup> L <sub>A</sub>           | <sub>eq</sub> (dBA) | - SLM         | Wind Speed             |                    |                       |   |  |
|---------------------------|---------|-------------------|---|---------------------|---------------|------------------------|--------------------|-----------------------|---|--|
| Date<br>& Start Time      | Period  | Criteria<br>(dBA) | PKCT Direction<br>[Est. PKCT<br>Contribution] | All Noise           | LA90<br>(dBA) | (m/s) and<br>Direction | Stability<br>Class | Compliance            | Observations  |  |
| 03/06/15<br>5.20-5.35pm   | Day     | ay 51             | 48<br>[~45]                                   | 60                  | 55            | 1.9<br>230º            | F                  | YES<br>Not Audible == | At residential location:<br>Noise dominated by road traffic and local activities.<br>Mechanical plant audible from PKCT.                                  |  |
| 5.20 5.55pm               |         |                   | [ 13]   |                     |               | 250                    |                    | Not Addible           | On-site: Noise dominated by truck movements and<br>train. Number of trucks entering: 5  |  |
| 03/06/15                  | Evening | 50                | 48  | 58                  | 53            | 1.0<br>265°            | D                  | YES                   | At residential location:<br>Noise dominated by road traffic and local activities.<br>Mechanical plant audible from PKCT.                                  |  |
| 7.35-7.50pm               |         |                   | [~46]   |                     |               | 2650                   |                    | Not Audible           | On-site: Noise dominated by truck movements and train. Number of trucks entering: 4   |  |
| 03/06/15<br>11.28-11.43pm | Night   | 49                | 40<br>[<25]                                   | 55                  | 51            | 1.2<br>239º            | F                  | YES<br>Not Audible    | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road |  |
|                           |         |                   |   |                     |               |                        |                    |                       | On-site: Noise dominated by truck movements and train. Number of trucks entering: 3   |  |
| 03/06/15<br>11.43-11.58pm | Night   | <mark>4</mark> 9  | 40<br>[<25]                                   | 56                  | 51            | 1.8<br>241º            | F                  | YES<br>Not Audible    | At residential location:<br>Noise dominated by road traffic and local activities.<br>PKCT activities not audible.<br>Trucks barely audible on access road |  |
|                           |         |                   |   |                     |               |                        |                    |                       | On-site: Noise dominated by truck movements and<br>train. Number of trucks entering: 2  |  |

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### BarnOwl<sup>®</sup> LAeq (dBA) SLM Wind Speed Stability Date Criteria **PKCT Direction** Period Compliance Observations LA90 (m/s) and & Start Time Class (dBA) [Est. PKCT All Noise (dBA) Direction Contribution At residential location: Noise dominated by road traffic and local activities. 03/06/15 58 YES 1.7 55 72 Е PKCT activities not audible. Day 53 5.42-5.57pm [<35] 2730 Not Audible On-site: Noise dominated by truck movements and train. Number of trucks entering: 6 At residential location: Noise dominated by road traffic and local activities. 03/06/15 54 2.2 YES PKCT activities not audible. Evening 49 65 53 Е [<35] Not Audible 6.23-6.38pm 2690 On-site: Noise dominated by truck movements and unloading. Number of trucks entering: 3 At residential location: Noise dominated by road traffic and local activities. 04/06/15 49 1.9 YES PKCT activities not audible. 57 45 Night 49 12.11-12.26am [<35] 2390 Not Audible Trucks barely audible on access road On-site: Noise dominated by truck movements and train. Number of trucks entering: 3 At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. 04/06/15 47 1.4 YES 45 56 50 Night 2360 Trucks barely audible on access road 12.26-12.41am [<35] Not Audible On-site: Noise dominated by truck movements and train. Number of trucks entering: 1

### Table 5-3 Summary of Monitoring Results – Location 3 – Corner Keira & Fox Streets

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### 10.3 Appendix C

| Monthly Reports Summary FY 14/15             | Jul-14  | Aug-14  | Sep-14  | Oct-14                | Nov-14               | Dec-14  | Jan-15  | Feb-15                | Mar-15  | Apr-15  | May-15  | Jun-15  | FY14/15 Total | Comment  |
|--|---------|---------|---------|-----------------------|----------------------|---------|---------|-----------------------|---------|---------|---------|---------|---------------|--|
| Tonnes - Public Road                         | 387,563 | 319,312 | 328,331 | 399,061               | 398,335              | 447,519 | 192,541 | 263,098               | 436,988 | 372,469 | 376,635 | 440,537 | 4,362,389     |  |
| Tonnes - Private Road                        | 192,083 | 176,846 | 213,537 | <mark>291,</mark> 988 | <mark>302,146</mark> | 232,162 | 160,697 | <mark>165,88</mark> 9 | 171,948 | 129,817 | 211,370 | 247,070 |               | nb primarily rail delivered tonnes to<br>BlueScope then internal road to PKCT          |
| Total road tonnes                            | 579,646 | 496,158 | 541,868 | 691,049               | 700,481              | 679,681 | 353,238 | 428,987               | 608,936 | 502,286 | 588,005 | 687,607 | 6,857,942     |  |
| Spillage - Public Road                       | 0       | 0       | 0       | 0                     | 0                    | 0       | 0       | 0                     | 0       | 0       | 0       | 0       | 0             |  |
| Incident - Other                             | 0       | 1       | 0       | 2                     | 1                    | 1       | 3       | 2                     | 0       | 2       | 0       | 0       | 12            |  |
| Impact with other vehicle                    | 0       | 1       | 0       | 1                     | 0                    | 0       | 0       | 0                     | 0       | 0       | 0       | 0       | 2             |  |
| Incidents Reported to RTA                    | 0       | 2       | 0       | 0                     | 0                    | 0       | 0       | 0                     | 0       | 0       | 0       | 0       | 2             |  |
| Complaints                                   | 0       | 1       | 2       | 0                     | 0                    | 1       | 0       | 0                     | 0       | 0       | 0       | 0       | 4             | Note: complaints related to DCC only   |
| EPL/ regulatory breaches                     | 0       | 0       | 0       | 0                     | 0                    | 1       | 0       | 0                     | 0       | 0       | 0       | 0       | 1             | Two trucks parked on Springhill Road   |
| Inductions (%)                               | 100     | 100     | 100     | 100                   | 100                  | 100     | 100     | 100                   | 100     | 100     | 100     | 100     | 100           | 7  |
| Hours restrictions breach                    | 0       | 0       | 0       | 0                     | 0                    | 0       | 0       | 0                     | 0       | 0       | 0       | 0       | 0             |  |
| Road Transport Providers (RTP): Observations | 108     | 94      | 69      | 63                    | 123                  | 122     | 127     | 111                   | 121     | 112     | 121     | 97      | 1,268         |  |
| RTP: Number of drivers observed              | 659     | 682     | 651     | 577                   | 622                  | 766     | 775     | 614                   | 619     | 507     | 641     | 518     | 7,631         |  |
| RTP: Trucksafe/NHVAS/Other Audits            | 50      | 70      | 68      | 55                    | 53                   | 55      | 61      | 76                    | 71      | 44      | 40      | 43      | 686           |  |
| CTO / Audits at minesites (Shippers & PKCT)  | 0       | 0       | 0       | 0                     | 0                    | 0       | 0       | 0                     | 0       | 0       | 0       | 0       | 0             | Includes data from Shippers<br>* data supplied by Illawarra Coal not<br>month specific |
| CTO / Audits: At PKCT (Shippers & PKCT)      | 4       | 4       | 1       | 3                     | 4                    | 3       | 1       | 2                     | 2       | 3       | 2       | 2       | 31            | * data supplied by Illawarra Coal not<br>month specific                                |
| CTO / Audits: Mine to PKCT (Shippers & PKCT) | 2       | 1       | 1       | 0                     | 0                    | 0       | 0       | 0                     | 3       | 1       | 1       | 0       | 9             |  |
| RTP system audits                            | 0       | 0       | 0       | 0                     | 0                    | 0       | 0       | 0                     | 0       | 0       | 0       | 0       | 0             | Includes data from Shippers and Road<br>Transport Provider's                           |

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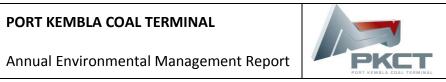
### 10.4 Appendix D

|            |                         |                   | FY14/15 Complaints Sumr  | nary - PKCT Site Related Complaints   |  |
|------------|-------------------------|-------------------|--|---|--|
| Date       | <b>Reporting Period</b> | PKCT Event Number | S  | ummary  | PKCT Action  |
| 18/12/2014 | FY14/15                 | EV-01506          | coal trucks parking at the bottom<br>related to noise associated wit | ed PKCT and made a complaint regarding<br>of Mt Ousley Road. The complaint was<br>h the parked trucks being started and<br>oving off. | The investigation identified that some trucks (PKCT coal<br>and others) had been using the area while the drivers<br>had a meal break. The truck companies were alerted to<br>the complaint and instructed to immediately cease<br>parking their vehicles in the area. The information was<br>passed on to the community member who appreciated<br>the legitimacy of the feedback. No further action was<br>sought.  |
| 2003/2014  | FY14/15                 | EV-01646          | had a problem with coal dust on h                                    | I the PKCT hotline and indicated that he<br>is veranda. Strong southerly winds were<br>day of the complaint.                          | The resident was contacted and a PKCT representative visited the premises on an agreed day i.e. 26/03/15 a few days later. A sample of the dust was taken and sent for analysis. PKCT reviewed the operation of its dust suppression system and dust management practices for the day of 20/03/15. The investigation did not identify any failures of PKCT's dust management system. Spray suppression systems were known to be on and operational and an unrelated site inspection during the wind event did not identify any dust issues. The results of the analysis and investigation were shared with the resident. Some context was also provided to the resident on scale of the Port Kembla Harbour industrial precinct and the variety of dust sources contained therein. The resident responded to PKCT's investigation of the event via email in a positive manner. No further action was sought. |
|            |                         |                   | Complaints Recorde   | d by Road Transport Providers   |  |
| Date       | <b>Reporting Period</b> | Event Number      | Company  | Summary   | Action   |
| 25/08/2014 | FY 14/15                | n/a               | Brindles Pty Ltd   | Speed Complaint   | Drivers were reminded that speed limit is 50kmh on<br>Bellambi Lane.   |
| 01/09/2014 | FY 14/15                | n/a               | Brindles Pty Ltd   | Noise Complaint   | Trucks that were identified returned to yard to be<br>checked by mechanics.  |
| 03/09/2014 | FY 14/15                | n/a               | Brindles Pty Ltd   | Noise Complaint   | Drivers were advised to limit noise when driving past truck stop.  |

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| -          |                  |              |  | Y14/15 Incidents  |   |
|------------|------------------|--------------|--|---|---|
| Date       | Reporting Period | Event Number | Company                                    | Summary   | Action  |
| 08/08/2014 | FY14/15          | n/a          | Bulktrans - Bulktrans Reported             | Empty truck collision with stationary tilt<br>tray at intersection of Masters and<br>Springhill Road.         | Incident reported to RTA.   |
| 10/08/2014 | FY14/15          | n/a          | Bulktrans - Bulktrans Reported             | Car ran red light and struck loaded truck at<br>intersection of Masters and Springhill<br>Road.               | Incident reported to RTA.   |
| 13/08/2014 | FY14/15          | EV-01327     | Bulktrans - PKCT Reported                  | Trucks swerving across road to avoid speed<br>hump on PKCT property.  | Trucks stopped and issue discussed with drivers.<br>Followed up with various transport companies and at<br>Road Users Forum.                  |
| 07/10/2014 | FY14/15          | EV-01388     | Brindles - PKCT Reported                   | Trucks swerving across road to avoid speed hump on PKCT property.   | truck was subcontracted for another company at time o<br>incident. Company notified and driver given "formal<br>warning" for their behaviour. |
| 13/10/2014 | FY14/15          | n/a          | Bulktrans - Bulktrans Reported             | Car ran into back of loaded truck while<br>coming down mountain.  | Police attended incident.   |
| 15/10/2014 | FY14/15          | EV-01402     | Bulktrans - PKCT Reported                  | Driver observed on phone while exiting road receival area.  | Observer unable to stop truck to discuss. Incident reported to transport company.   |
| 12/11/2014 | FY14/15          | EV-01450     | Bulktrans - PKCT Reported                  | B double truck broken down in middle of<br>road near PKCT main entry gate.                                    | Traffic management set up and mechanics directed to<br>location. Truck repaired and moved on.   |
| 02/12/2014 | FY14/15          | EV-01480     | Bulktrans - PKCT Reported                  | Driver working under raised tray.   | Truck details passed on to relevant company and<br>communication process rolled out by company to inforr<br>drivers of dangers.               |
| 10/12/2014 | FY14/15          | EV-01495     | Unknown                                    | Two trucks were observed parking on<br>Springhill Road due to heavy congestion at<br>road receival system.    | All shippers alerted to breach at shippers meeting, and informed that this would not be tolerated.  |
| 07/01/2015 | FY14/15          | EV-01529     | Bulktrans - PKCT Reported                  | Truck creeping forward on red light while<br>turning into Port Kembla Road.                                   | Truck company contacted and issue was discussed with<br>driver involved.  |
| 21/01/2015 | FY14/15          | EV-01546     | Brindles - PKCT Reported                   | Truck prematurely moved forward at stop<br>sign causing PKCT employee vehicle to<br>steer to avoid collision. | Event was reported to truck company for follow up with driver. Driver did not see car in his blind spot.                                      |
| 28/01/2015 | FY14/15          | EV-01558     | Bulktrans - Bulktrans and PKCT<br>Reported | Truck driver standing under raised trailer.   | Company contacted and management was informed.<br>Communication of event was sent to company drivers.   |
| 12/02/2015 | FY14/15          | EV-01578     | Brindles - PKCT Reported                   | Driver washing raised truck body not<br>wearing correct PPE.  | Event reported to truck companies and issue reinforced  |
| 26/02/2015 | FY14/15          | EV-01598     | Bulktrans - PKCT Reported                  | Truck not giving way at give way sign on<br>PKCT property.  | Truck company contacted, discussion was had with<br>driver and lapse of concentration identified as cause.                                    |
| 11/04/2015 | FY14/15          | EV-01668     | Bulktrans - PKCT Reported                  | Driver fractured finger while cleaning coal from tailgate.  | Investigation undertaken, disciplinary action undertake<br>with driver for not following procedure.   |
| 22/04/2015 | FY14/15          | n/a          | Bulktrans - Bulktrans Reported             | Coal cover ripped off by wind whilst<br>tipping at PKCT.  |   |

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# 10.5 Appendix E

# AECOM INDEPENDENT EXTERNAL AUDIT 2014: PKCT RESPONSE TO RECOMMENDATIONS AND ACTION PLAN PROGRESS JUNE 2015

| ltem<br>No. | Approval | Condition/<br>Number              | Topic/<br>Requirement  | Audit<br>Finding/<br>Comment  | Recommendation   | Response/Action   | Status as of end June<br>2015   |
|-------------|----------|-----------------------------------|--|---|--|---|---|
| 1           | MCoA     | Schedule<br>3,<br>Condition<br>12 | Discharge<br>Limits<br>Except as<br>may be<br>expressly<br>provided in<br>an EPL for<br>the project,<br>the<br>Proponent<br>shall comply<br>with Section<br>120 of the<br>Protection of<br>the<br>Environment<br>Operations<br>Act 1997. | Non-<br>complian<br>ce<br>(minor)<br>Exceedan<br>ces of pH<br>and TSS<br>criteria<br>outlined<br>in PKCT's<br>EPL<br>occurred<br>over the<br>reporting<br>period,<br>though<br>they were<br>minor<br>and few.<br>However,<br>due to | It is recommended that<br>PKCT:<br>- Continue with<br>undertaking controlled<br>discharges after rain<br>events.<br>- Undertake sediment<br>testing of sediment<br>within the Settlement<br>Lagoon to assess<br>nutrient loading. Subject<br>to test results, conduct<br>maintenance of<br>Settlement Lagoon to<br>clear sediment.<br>- Undertake further<br>investigations into algae<br>control options and trial.<br>- If necessary and<br>relevant, expand<br>investigations regarding<br>water quality controls | <ul> <li>PKCT has been working with the EPA regarding measures and strategies to be implemented to reduce TSS and pH discharge exceedances at EPL</li> <li>Monitoring Point 16. In late 2013, two Pollution Reduction Programs (PRP), PRP 12 and PRP 13, were prepared in consultation with the EPA. These PRP's were approved and a licence variation was received on the 22<sup>nd</sup> November 2013.</li> <li>The intent of PRP12 is to improve stormwater controls at PKCT which will ultimately reduce sediment reporting to EPL discharge Point 16, and reduce the likelihood of future TSS exceedances. Work is currently underway on the PRP with a completion date of 30<sup>th</sup> June 2014.</li> <li>PRP13 was completed and a final</li> </ul> | PRP12 – Upgrade of<br>Central Pond is underway<br>and expected to be<br>complete by December<br>2015.<br>PKCT has reported<br>occasional TSS<br>exceedances during the<br>2014/2015 reporting<br>period. Management<br>measures including<br>sediment testing in the<br>Settlement Lagoon,<br>controlled discharge and<br>investigation of dredging<br>options have been<br>undertaken.<br>A consultant was engaged<br>in 2014 to undertake a<br>review on the cause of |
|             |          |                                   |  |   |  |   |   |

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| ltem<br>No. | Approval | Condition/<br>Number | Topic/<br>Requirement | Audit<br>Finding/<br>Comment  | Recommendation   | Response/Action   | Status as of end June<br>2015   |
|-------------|----------|----------------------|-----------------------|---|--|---|---|
|             |          |                      |                       | these<br>exceedan<br>ces PKCT<br>does not<br>comply<br>with this<br>condition | and treatment beyond<br>algal controls (e.g. study<br>the receiving<br>environment to<br>determine potential<br>environmental impacts<br>of alkaline water<br>entering this system).<br>- If further control<br>options are exhausted<br>and prove ineffective in<br>lowering pH levels to<br>within EPA-defined<br>limits, engage in<br>consultation with EPA<br>regarding pH range and<br>associated percentile<br>compliance (noting<br>permissible seasonal<br>fluctuations if<br>necessary).<br>- Alternatively, engage<br>in consultation with<br>Sydney Water regarding<br>potential water<br>treatment options prior<br>to distribution to PKCT. | report submitted to the EPA on 31 <sup>st</sup><br>March 2014. The report identified a<br>number of recommendations and<br>further actions to reduce pH levels in<br>site discharges. PKCT is awaiting a<br>response from the EPA on the report<br>and its recommendations.<br>In the interim and noting the actions<br>recommended in the Independent<br>External Audit,<br>PKCT has continued to undertake<br>controlled discharges from the<br>Settlement Lagoon after rain events.<br>A specialist consultant has been<br>engaged to review the available data<br>and reports and to provide<br>recommendations on methods to<br>reduce pH levels in the discharge<br>waters. Sediment testing has been<br>undertaken in the Lagoon to assess<br>the nutrient loading.<br>Action by: PKCT Environmental<br>Specialist | some of the TSS<br>exceedances occurring at<br>LDP16. The final report<br>was received in July 2015<br>and is currently under<br>review.<br>Status – Action ongoing |

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| ltem<br>No. | Approval | Condition/<br>Number             | Topic/<br>Requirement  | Audit<br>Finding/<br>Comment  | Recommendation                        | Response/Action  | Status as of end June<br>2015 |
|-------------|----------|----------------------------------|--|---|---------------------------------------|--|-------------------------------|
|             |          |                                  |  |   |                                       | Completed by: Specialist consultant<br>report will be provided by the 8 <sup>th</sup><br>August 2014. It is expected further<br>actions will ensue from the<br>recommendations and associated EPA<br>consultation. |                               |
| 2           | EPL      | Schedule<br>L1<br>Condition<br>1 | Pollution of<br>waters<br>Except as<br>may be<br>expressly<br>provided in<br>any other<br>condition of<br>this licence,<br>the licensee<br>must comply<br>with section<br>120 of the<br>Protection of<br>the<br>Environment<br>Operations<br>Act 1997. | Non-<br>complian<br>ce<br>(minor)<br>Refer to<br>Item No.1<br>comment | Refer to Item No.1<br>recommendations | Refer to Item No.1 response and actions  | See response to Item No.1     |
| 3           | EPL      | Schedule<br>L2,                  | Concentratio<br>n Limits   | Non-<br>complian  | Refer to Item No.1 recommendations    | Refer to Item No.1 response and actions  | See response to Item No.1     |

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|-------------|----------|----------------------|--|----------------------------------|--------------------|---------------------------------|-------------------------------|
|             |          | Condition<br>1       | For each<br>monitoring/d<br>ischarge<br>point or<br>utilisation<br>area<br>specified in<br>the table\s<br>below (by a<br>point<br>number), the<br>concentratio<br>n of a<br>pollutant<br>discharged at<br>that point, or | Refer to<br>Item No.1<br>comment |                    |                                 |                               |
|             |          |                      | applied to<br>that area,<br>must not<br>exceed the<br>concentratio<br>n limits<br>specified for<br>that<br>pollutant in<br>the table.  |                                  |                    |                                 |                               |
| 4           | EPL      | Schedule             | Concentratio   | Non-                             | Refer to Item No.1 | Refer to Item No.1 response and | PKCT undertook a five         |

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|-------------|---|-----------------------------------|--|--|---|--|--|--|--|
|             |   | L2,<br>Condition<br>2             | n Limits<br>Where a pH<br>quality limits<br>specified in<br>the table, the<br>specified<br>percentage<br>of samples<br>must be<br>within the<br>specified<br>ranges. | complian<br>ce<br>(minor)<br>Refer to<br>Item No.1<br>comment  | recommendations   | actions  | yearly review of EPL 1625<br>in September 2014 with<br>the EPA. An outcome of<br>the review was that pH<br>limits were removed from<br>the EPL with monitoring<br>and reporting of pH to<br>continue. Based on the<br>new licence conditions pH<br>exceedances will no<br>longer occur at LDP16. |  |  |
| 5           | EPL   | Schedule<br>M3,<br>Condition<br>1 | Testing<br>Methods,<br>Concentratio<br>n Limits<br>Monitoring<br>for the<br>concentratio<br>n of a<br>pollutant<br>emitted to<br>the air<br>required to<br>be        | Non-<br>complian<br>ce<br>(minor)<br>Monitori<br>ng<br>method<br>was<br>confirme<br>d to be<br>appropria<br>te. Only<br>non-<br>conforma | It is recommended that<br>PKCT:<br>- Install a locked cage<br>at this monitoring site to<br>avoid future tampering,<br>and undertake regular<br>monitoring at this site to<br>verify tampering has not<br>occurred and the device<br>is still functional. | Public access to this dust monitoring<br>site is recognised as an issue. PKCT<br>accepts the recommendation by<br>AECOM and will investigate options,<br>including those recommended, for<br>improving security.<br>Action by: PKCT Environmental<br>Specialist<br>Completion Date: A solution to the<br>security issue at this monitoring site<br>will be determined by the 8 <sup>th</sup> August<br>2014 together with an | In December 2014, Dust<br>Gauges P3 and P4 had<br>locked fences erected<br>around the gates to<br>minimise the likelihood of<br>vandalism at the sites.<br>Status – Action complete.   |  |  |
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|-------------|----------|----------------------|-----------------------|------------------------------|----------------|----------------------|-------------------------------|
|             |          |                      | conducted             | nce noted                    |                | implementation date. |                               |
|             |          |                      | by this               | was due                      |                |                      |                               |
|             |          |                      | licence must          | to a Dust                    |                |                      |                               |
|             |          |                      | be done in            | Depositio                    |                |                      |                               |
|             |          |                      | accordance            | n Gauge                      |                |                      |                               |
|             |          |                      | with:                 | funnel at                    |                |                      |                               |
|             |          |                      | (a) any               | point P4                     |                |                      |                               |
|             |          |                      | methodology           | found not                    |                |                      |                               |
|             |          |                      | which is              | to be in                     |                |                      |                               |
|             |          |                      | required by           | the Dust                     |                |                      |                               |
|             |          |                      | or under the          | Depositio                    |                |                      |                               |
|             |          |                      | Act to be             | n Gauge                      |                |                      |                               |
|             |          |                      | used for the          | bottle                       |                |                      |                               |
|             |          |                      | testing of the        |                              |                |                      |                               |
|             |          |                      | concentratio          | observed                     |                |                      |                               |
|             |          |                      | n of the              | during                       |                |                      |                               |
|             |          |                      | pollutant.            | the audit.                   |                |                      |                               |
|             |          |                      |                       | This was                     |                |                      |                               |
|             |          |                      |                       | investigat                   |                |                      |                               |
|             |          |                      |                       | ed and                       |                |                      |                               |
|             |          |                      |                       | was                          |                |                      |                               |
|             |          |                      |                       | thought                      |                |                      |                               |
|             |          |                      |                       | to be due                    |                |                      |                               |
|             |          |                      |                       | to                           |                |                      |                               |
|             |          |                      |                       | tamperin                     |                |                      |                               |
|             |          |                      |                       | g by the                     |                |                      |                               |
|             |          |                      |                       | public.                      |                |                      |                               |

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|-------------|----------|----------------------|-----------------------|------------------------------|----------------|-----------------|-------------------------------|
|             |          |                      |                       | There has                    |                |                 |                               |
|             |          |                      |                       | been                         |                |                 |                               |
|             |          |                      |                       | anecdotal                    |                |                 |                               |
|             |          |                      |                       | history of                   |                |                 |                               |
|             |          |                      |                       | tamperin                     |                |                 |                               |
|             |          |                      |                       | g and a                      |                |                 |                               |
|             |          |                      |                       | locked                       |                |                 |                               |
|             |          |                      |                       | cage has                     |                |                 |                               |
|             |          |                      |                       | been                         |                |                 |                               |
|             |          |                      |                       | recomme                      |                |                 |                               |
|             |          |                      |                       | nded for                     |                |                 |                               |
|             |          |                      |                       | this site.                   |                |                 |                               |

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| ltem<br>No. | Doc. | Condition                      | Торіс                             | Opportunity for Improvement   | PKCT Response/ Actions  | Status as of end June<br>2015  |
|-------------|------|--------------------------------|-----------------------------------|---|---|--|
| 6           | MCoA | Schedule 3,<br>Condition<br>13 | Water<br>Management<br>Plan (WMP) | It is recommended that PKCT:<br>- Review and update the WMP at<br>least annually so that the<br>document reflects the current<br>state of operations on site.<br>- In particular, the WMP needs to<br>include most recent EPL discharge<br>criteria and exceedances,<br>reference to new PRPs and<br>investigations/trials undertaken to<br>date. | In noting the non-compliance (minor)<br>associated with pH and TSS, an initial<br>WMP review will be undertaken<br>within three months of the<br>Independent Audit report submission<br>date in accordance with Schedule 4,<br>Condition 7.<br>The document review will be tracked<br>in PKCT's Event Management System<br>(EMS) and is record "COR-00140".<br>An annual review for this document<br>has been entered into the EMS. The<br>review is scheduled for 3 <sup>rd</sup> March<br>2015 and is record "RR-00024".<br>Action by: PKCT Risk Manager.<br>Completion Date: 8 <sup>th</sup> August 2014 | Water Management<br>Plan was reviewed and<br>updated in August<br>2014. DP&E was<br>notified of the updated<br>plan via letter dated 8 <sup>th</sup><br>August 2014.<br>Status – Action<br>complete. |
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| ltem<br>No. | Doc. | Condition                      | Торіс  | Opportunity for Improvement   | PKCT Response/ Actions   | Status as of end June<br>2015  |
|-------------|------|--------------------------------|--|---|--|--|
| 7           | MCoA | Schedule 3,<br>Condition<br>14 | Green and<br>Golden Bell<br>Frog<br>Management<br>Plan<br>(GGBFMP) | It is recommended that PKCT:<br>- Review and update the GGBF<br>Management Plan at least annually<br>so that the document reflects the<br>current state of operations on site.<br>If no changes are made to the<br>document, review date at least<br>should be noted on the document<br>to track reviews. | Findings and recommendations<br>noted. PKCT accepts that a periodic<br>review of Management Plans is<br>necessary. However the reviews<br>should be appropriate to the specific<br>Plan and the frequency of change. The<br>current review process for the GGBF is<br>bi-annual. Internal and external<br>events can trigger an earlier review<br>under change management.<br>The next document review is<br>scheduled for 3 <sup>rd</sup> October 2014. An<br>action has also been entered in the<br>EMS and is record "RR-00025"<br>Action by: PKCT Risk Manager.<br>Completion Date: 30 <sup>th</sup> November<br>2014. | GGBF Management<br>Plan was reviewed and<br>updated in December<br>2014.<br>Status – Action<br>complete. |
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|-------------|------|--------------------------------|---------------------------------------|---|--|--|
| 8           | MCoA | Schedule 3,<br>Condition<br>14 | Landscape<br>Management<br>Plan (LMP) | It is recommended that PKCT:<br>- Review and update the LMP at<br>least annually so that the<br>document reflects the current<br>state of operations on site,<br>including ongoing maintenance of<br>landscaping on site. | Findings and recommendations<br>noted. PKCT accepts that a periodic<br>review of Management Plans is<br>necessary. However the reviews<br>should be appropriate to the specific<br>Plan and the frequency of change. The<br>current review process for the LMP is<br>bi-annual. Internal and external<br>events can trigger an earlier review<br>under change management.<br>The next document review is<br>scheduled for 29 <sup>th</sup> August 2015. An<br>action has also been entered in the<br>EMS and is record "RR-00026".<br>Action by: PKCT Risk Manager.<br>Completion Date: 30 <sup>th</sup> September<br>2015 | LMP is scheduled for<br>review in September<br>2015.<br>Status : In progress |
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|   | em<br>Io. | Doc. | Condition                      | Торіс   | Opportunity for Improvement  | PKCT Response/ Actions   | Status as of end June<br>2015  |
|---|-----------|------|--------------------------------|---|--|--|--|
|   | 9         | MCoA | Schedule 3,<br>Condition<br>18 | Greenhouse<br>and Energy<br>Efficiency Plan<br>(GGEE) | It is recommended that PKCT:<br>- Review and update the GGEE<br>Management Plan at least annually<br>so that the document reflects the<br>current state of operation on site.<br>- In particular, the GGEE needs to<br>include reference to the most<br>recent relevant legislation, NGERs<br>data and a summary of information<br>gathered through the ESAPs. | Findings and recommendations<br>noted. PKCT accepts that a periodic<br>review of Management Plans is<br>necessary. However the reviews<br>should be appropriate to the specific<br>Plan and the frequency of change. The<br>current review process for the GGEE is<br>bi-annual. Internal and external<br>events can trigger an earlier review<br>under change management.<br>The next review is scheduled for 31 <sup>st</sup><br>July 2015. An action has also been<br>entered in the EMS and is record "RR-<br>00027".<br>Action by: PKCT Risk Manager.<br>Completion Date: 31 <sup>st</sup> August 2015. | GGEE Management<br>Plan is scheduled for<br>review in August 2015.<br>Status : In progress |
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| ltem<br>No. | Doc. | Condition                        | Торіс                   | Opportunity for Improvement  | PKCT Response/ Actions   | Status as of end June<br>2015  |
|-------------|------|----------------------------------|-------------------------|--|--|--|
| 10          | EPL  | Operating<br>Conditions,<br>O4.1 | Sedimentatio<br>n Ponds | It is recommended that PKCT:<br>- Complete, finalise and implement<br>Settlement Lagoon Cleanout<br>Process document.<br>Document/record implementation<br>of document implementation (e.g.<br>staff training and maintenance<br>schedules). | Recommendation is accepted. An<br>action has been entered in the EMS<br>and the record is "COR-00138".<br>Action by: PKCT Environmental<br>Specialist.<br>Completion Date: 25 <sup>th</sup> September<br>2014. | Investigation into<br>Lagoon dredging<br>options is underway.<br>Procedure will be<br>updated following<br>completion of<br>dredging.<br>Status: In progress |
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| 11EPLPollution<br>Studies<br>and<br>Reduction<br>Programs<br>U1.1EIP - install<br>northern<br>truck wash<br>upgradesIt is recommended that PKCT<br>ensure that the following part of<br>the condition is completed by 30<br>June:<br>By 30 June 2014 the licensee must<br>carry out a review of the<br>environmental performance of the<br>Northern Truck Wash, and provide<br>a written report describing the<br>review to the EPA. This report must<br>include information on how the<br>issues identified in the PKCT<br>Northern Truck Wash Review as<br>per requirements in EPL 1625 PRP<br>N0.10 Port Kembla Coal Terminal<br>July 2011' and the EPA letter to the<br>licensee dated 16 August 2011<br>have been addressed. In particular<br>the review must include, but not<br>be limited to, how the following<br>key elements have beenDraft report is complete. PKCT has<br>met with the EPA and submitted a<br>request for an extension to the<br>30.9.14. The upgrade is practically<br>complete but some further<br>modifications impacting on truck<br>performance still need to be carried<br>out.11Programs<br>U1.1U1.1Northern Truck Wash, and provide<br>a written report describing the<br>review to the EPA. This report must<br>include information on how the<br>issues identified in the PKCT<br>No.10 Port Kembla Coal Terminal<br>July 2011' and the EPA letter to the<br>licensee dated 16 August 2011<br>have been addressed. In particular<br>the review must include, but not<br>be limited to, how the following<br>key elements have beenCompletion Date: 30 <sup>th</sup><br>September 2014. | Doc. Conditi                          | on Topic                             | Opportunity for Improvement  | PKCT Response/ Actions  | Status as of end June<br>2015  |
|---|---------------------------------------|--------------------------------------|--|---|--|
| addressed:<br>- water treatment<br>- spray pressure<br>- spray volume   | Studies<br>and<br>Reductio<br>Program | northern<br>truck wash<br>n upgrades | <ul> <li>ensure that the following part of the condition is completed by 30 June:</li> <li>By 30 June 2014 the licensee must carry out a review of the environmental performance of the Northern Truck Wash, and provide a written report describing the review to the EPA. This report must include information on how the issues identified in the PKCT</li> <li>Northern Truck Wash Review as per requirements in EPL 1625 PRP</li> <li>N0.10 Port Kembla Coal Terminal July 2011' and the EPA letter to the licensee dated 16 August 2011 have been addressed. In particular the review must include, but not be limited to, how the following key elements have been addressed:</li> <li>water treatment</li> <li>spray pressure</li> </ul> | <ul> <li>met with the EPA and submitted a request for an extension to the 30.9.14. The upgrade is practically complete but some further modifications impacting on truck performance still need to be carried out.</li> <li>Action by: PKCT Risk Manager.</li> <li>Completion Date: 30<sup>th</sup> June 2014 subject to an extension to 30<sup>th</sup></li> </ul> | A review of the<br>effectiveness of the<br>Northern Truckwash<br>Upgrade was<br>undertaken and an<br>extension to the<br>submission date was<br>granted by the EPA. A<br>report was submitted<br>to the EPA in February<br>2015.<br>Status – Action<br>complete. |

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| - spray orientation<br>- spray drift<br>- vehicle speed<br>- truckwash management<br>- truckwash maintenance<br>- truck wash auditing, and<br>- water/dust carryover |  |
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| ltem<br>No. | Doc. | Condition                          | Торіс                  | Opportunity for Improvement  | PKCT Response/ Actions   | Status as of end June<br>2015  |
|-------------|------|------------------------------------|------------------------|--|--|--|
| 12          | MCoA | Statement<br>of<br>Commitme<br>nts | Community<br>Relations | It is recommended that PKCT:<br>- Include details of CCC on PKCT<br>website. | Recommendation is noted. An action<br>has been entered in the EMS and the<br>record is "COR-00139". Community<br>information on the website will be<br>reviewed and changes discussed with<br>the Community Consultative<br>Committee.<br>Action by: PKCT Environmental<br>Specialist.<br>Completion Date: 31 <sup>st</sup> October 2014 | The PKCT CCC terms of<br>reference were added<br>to the PKCT website in<br>September 2014.<br>Status – Action<br>complete. |

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|-------------|--|----------------------------------|-------|--|---|--|--|
| 13          | EPL  | Operating<br>Conditions,<br>O3.1 | Dust  | It is recommended that PKCT:<br>- Conduct an internal review<br>relating to dust emissions beyond<br>the boundary of the site.<br>- Review the train receival system<br>to ensure all reasonable and<br>feasible measures are employed to<br>prevent or minimise dust impacts<br>beyond the rail loop. | <ul> <li>Findings and recommendations are noted. Considerable effort is required for these undertakings and this is reflected in the completion date below.</li> <li>An internal review will be undertaken by PKCT relating to dust emissions beyond the boundary of the site.</li> <li>PKCT is participating in a NSW Minerals Council facilitated review of mine to port coal train operations in Newcastle and the Illawarra. The study's focus is on fugitive emissions from coal trains and includes an industry survey which will audit existing practices and identify potential improvements.</li> <li>EPA Compliance Audit of PKCT's rail receival in May 2014 resulted in PKCT submitting an Action Plan in response to a non-conformance finding.</li> </ul> | PKCT has committed to<br>implementing the<br>actions identified in the<br>NSW Minerals Council<br>(NMC) facilitated<br>review of mine to port<br>coal train management<br>practices in Newcastle<br>and the Illawarra n.b<br>Statement of<br>Commitments on NMC<br>website.<br>PKCT continues to work<br>with shippers and the<br>rail transport company<br>to implement<br>monitoring and<br>management measures<br>to assist with managing<br>any dust emissions<br>from site. |  |
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|    | Action by: PKCT Risk Manager. Statement of                            |             |      |   |   |                                   |  |
|----|---|-------------|------|---|---|-----------------------------------|--|
|    |   |             |      |   |   | Commitments and EPA               |  |
|    |   |             |      |   | Completion Date: 30 <sup>th</sup> June 2015 | Action Plan provided              |  |
|    |   |             |      |   |   | for a 30 <sup>th</sup> June 2015. |  |
|    |   |             |      |   |   | Further work was                  |  |
|    |   |             |      |   |   | identified in both and            |  |
|    |   |             |      |   |   | will continue over the            |  |
|    |   |             |      |   |   | 2015/2016 period.                 |  |
|    |   |             |      |   |   | Status: In progress               |  |
|    |   |             |      |   |   |                                   |  |
| 14 | EPL   | Operating   | Dust | As above                                  | As above                                    | Refer to Item 13.                 |  |
|    |   | Conditions, |      |   |   |                                   |  |
|    |   | 03.2        |      |   |   |                                   |  |
|    |   |             |      |   |   |                                   |  |
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|-------------|------|----------------------------|--|---|--|--|
| 15          | MCoA | Schedule 3,<br>Condition 6 | Implementati<br>on Program<br>for the<br>Driver's Code<br>of Conduct | It is recommended that PKCT:<br>- Review and update the<br>Implementation Program for the<br>DCC at least annually, so that the<br>document reflects the current<br>state of operations on site.<br>- Update the Implementation<br>Program for the DCC to strengthen<br>and specify PKCT's disciplinary<br>process in instances of non-<br>compliances.<br>-Establish and implement a<br>monitoring/auditing schedule for<br>undertaking CTO's and intensive<br>periods of monitoring of driver<br>behaviour, within and external to the<br>PKCT site, and document this<br>monitoring program in the<br>Implementation Program for DCC | Recommendation is accepted. In<br>accordance with Schedule 4,<br>Condition 7, the Implementation Plan<br>for DCC will be reviewed and revised<br>as appropriate.<br>An action has been entered in the<br>EMS and the record is "RR-0031".An<br>annual review for DCC<br>Implementation Plan has been<br>entered into the EMS and the record<br>is RR-00028.<br>A monitoring schedule will be<br>established and implemented as part<br>of the review.<br>Action By: PKCT Environment<br>Specialist<br>Completion Date: 8 <sup>th</sup> August 2014 | A review and update of<br>the DCC<br>Implementation Plan<br>was undertaken in<br>August 2014. DP&E was<br>notified of the changes<br>via letter dated 8 <sup>th</sup><br>August 2014.<br>Status –Action<br>complete. |

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|-------------|---|----------------------------|--|--|---|---|--|
| 16          | DCC   | Driver<br>Summary<br>Sheet | Road Delivery<br>Standards –<br>Hold a valid<br>driver's<br>licence  | It is recommended that PKCT:<br>- Include in monthly reporting<br>template an opportunity for road<br>transport providers to confirm that<br>all drivers hold valid licences for<br>the reporting period.  | Recommendation is accepted. Action<br>is complete.<br>Monthly Reporting Template has<br>been updated and distributed to<br>relevant road transport providers via<br>email on 3 <sup>rd</sup> June 2014. | Driver summary sheet<br>was updated and<br>distributed to all<br>shippers via email in<br>June 2014.<br>Status – Action<br>complete.    |  |
| 17          | DCC   | Driver<br>Summary<br>Sheet | Road Delivery<br>Standards -<br>Not apply<br>compression<br>brakes at Port<br>Kembla and<br>Springhill<br>Road | It is recommended that PKCT:<br>- Stipulate to relevant road road<br>transport providers that this<br>criteria be adequately covered and<br>specifically referenced in their<br>audit forms. This will allow PKCT to<br>better monitor compliance with<br>this aspect of the PKCT DCC. | Recommendation is being progressed<br>individually with relevant road<br>transport providers.<br>Action by: PKCT Environmental<br>Specialist.<br>Completion Date: 30 <sup>th</sup> September<br>2014    | Driver Audit forms<br>were updated with<br>relevant companies<br>during September and<br>November 2014.<br>Status – Action<br>complete. |  |
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|-------------|------|----------------------------|---|--|--|---|
| 18          | DCC  | Driver<br>Summary<br>Sheet | Road Delivery<br>Standards –<br>Utilise<br>truckwash at<br>PKCT after<br>tipping. | It is recommended that PKCT:<br>- Update DCC at least annually to<br>ensure the document accurately<br>reflects current operations and<br>requirements.<br>-Specifically update the DCC to<br>include changed truckwash<br>operations as a result of the<br>upgrade.<br>- Update the CTO to include<br>specific criteria regarding the new<br>truckwash (e.g. stops on signals,<br>travels through truckwash at no<br>more than 5km/hr etc.) | <ul> <li>Recommendation is accepted. In accordance with Schedule 4,</li> <li>Condition 7, the DCC will be reviewed and revised, including the Driver Summary sheet as appropriate.</li> <li>An action has been entered in the EMS and the record is "RR-0030".</li> <li>An annual review for DCC has been entered into the EMS and the record is "RR-00029".</li> <li>CTO recommendation is accepted and the action is complete (3<sup>rd</sup> June 2014).</li> <li>PKCT CTO form updated to include reference to traffic signals and speed restrictions at new truckwash.</li> <li>Action by: PKCT Environmental Specialist</li> <li>Completion Date: 8<sup>th</sup> August 2014.</li> </ul> | DCC was updated in<br>August 2014 and DP&E<br>was notified by letter<br>dated 8 <sup>th</sup> August 2014.<br>CTO was updated in to<br>include specific criteria<br>regarding new<br>truckwash in June<br>2014.<br>Status – Action<br>complete. |

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|-------------|---|----------------------------|--|--|---|--|--|
| 19          | DCC   | Driver<br>Summary<br>Sheet | Road Delivery<br>Standards –<br>Have the load<br>covered from<br>the mine to<br>PKCT road<br>receival area | It is recommended that PKCT:<br>- Pass on recommendations to<br>Bulktrans to complete audit forms<br>in a thorough manner, including all<br>criteria relevant at the time of the<br>audit.   | <ul> <li>This recommendation accepted. An action has been entered in EMS and the record is "COR-00145".</li> <li>Action by: PKCT Environmental Specialist.</li> <li>Completion Date: 8<sup>th</sup> August 2014.</li> </ul> | Email was sent to<br>Bulktrans reminding<br>them to complete audit<br>forms in a thorough<br>manner, including all<br>criteria relevant at the<br>time of the audit on 6 <sup>th</sup><br>August 2014.<br>Status – Action<br>complete. |  |
| 20          | DCC   | Driver<br>Summary<br>Sheet | Road Delivery<br>Standards –<br>Operate the<br>vehicle in a<br>manner that<br>minimises<br>vehicle noise   | It is recommended that PKCT:<br>- Stipulate to relevant road road<br>transport providers that this<br>criteria be adequately covered and<br>specifically referenced in their<br>audit forms. This will allow PKCT to<br>better monitor compliance with<br>this aspect of the PKCT DCC. | Recommendation is accepted.<br>Refer to Item No. 17 response and<br>actions.  | Driver Audit forms<br>were updated with<br>relevant companies<br>during September and<br>November 2014.<br>Status – Action<br>complete.  |  |
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| 21          | DCC   | Driver<br>Summary<br>Sheet | Road Delivery<br>Standards –<br>All trucks are<br>to pass<br>through a<br>truckwash at<br>mine and at<br>PKCT | It is recommended that PKCT:<br>- Update DCC at least annually to<br>ensure the document accurately<br>reflects current operations and<br>requirements.<br>-Specifically update the DCC to<br>include changed truckwash<br>operations as a result of the<br>upgrade.<br>- Update the CTO to include<br>specific criteria regarding the new<br>truckwash (e.g. stops on signals,<br>travels through truckwash at no<br>more than 5km/hr etc.) | Recommendation is accepted.<br>Refer to Item No. 18 response and<br>actions. | DCC was updated in<br>August 2014 and DP&E<br>was notified by letter<br>dated 8 <sup>th</sup> August 2014.<br>CTO was updated in to<br>include specific criteria<br>regarding new<br>truckwash in June<br>2014.<br>Status – Action<br>complete. |  |  |
| 22          | DCC   | Driver<br>Summary<br>Sheet | Road Delivery<br>Standards –<br>drivers must<br>ensure<br>tailgates are<br>locked.                            | It is recommended that PKCT:<br>- Stipulate to relevant road<br>transport operators that this<br>criterion be adequately covered<br>and specifically referenced in their<br>audit forms. This will allow PKCT to<br>better monitor compliance with<br>this aspect of the PKCT DCC.   | Recommendation is accepted.<br>Refer to Item No. 17 response and<br>actions. | Driver Audit forms<br>were updated with<br>relevant companies<br>during September and<br>November 2014.<br>Status – Action<br>complete.   |  |  |
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|-------------|---|----------------------------|---|--|--|---|--|
| 23          | DCC   | Driver<br>Summary<br>Sheet | Road Delivery<br>Standards –<br>No queuing is<br>permitted on<br>Springhill road  | It is recommended that PKCT:<br>- Stipulate to relevant road road<br>transport providers that this<br>criteria be adequately covered and<br>specifically referenced in their<br>audit forms. This will allow PKCT to<br>better monitor compliance with<br>this aspect of the PKCT DCC. | Recommendation is accepted.<br>Refer to Item No. 17 response and<br>actions. | Driver Audit forms<br>were updated with<br>relevant companies<br>during September and<br>November 2014.<br>Status – Action<br>complete. |  |
| 24          | DCC   | Routes                     | All trucks<br>travelling to<br>and from<br>PKCT will do<br>so by using<br>major arterial<br>roads as<br>outlined in<br>the PKCT<br>Driver's Code<br>of Conduct. | It is recommended that PKCT:<br>- Stipulate to relevant road<br>transport operators that this<br>criteria be adequately covered and<br>specifically referenced in their<br>audit forms. This will allow PKCT to<br>better monitor compliance with<br>this aspect of the PKCT DCC.      | Recommendation is accepted.<br>Refer to Item No. 17 response and<br>actions. | Driver Audit forms<br>were updated with<br>relevant companies<br>during September and<br>November 2014.<br>Status – Action<br>complete. |  |
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| 25          | DCC  | Routes            | Appin Road -<br>Special care<br>should be<br>taken when<br>crossing<br>Loddon River<br>bridge which<br>is narrow.   | It is recommended that PKCT:<br>- Stipulate to relevant road road<br>transport providers that this<br>criteria be adequately covered and<br>specifically referenced in their<br>audit forms. This will allow PKCT to<br>better monitor compliance with<br>this aspect of the PKCT DCC  | Recommendation is accepted.<br>Refer to Item No. 17 response and actions.    | Driver Audit forms<br>were updated with<br>relevant companies<br>during September and<br>November 2014.<br>Status – Action<br>complete. |
| 26          | DCC  | Haulage<br>Routes | Masters Rd -<br>Compression<br>braking on<br>this route<br>should be<br>avoided due<br>to community<br>disturbance. | It is recommended that PKCT:<br>- Stipulate to relevant road road<br>transport providers that this<br>criteria be adequately covered and<br>specifically referenced in their<br>audit forms. This will allow PKCT to<br>better monitor compliance with<br>this aspect of the PKCT DCC. | Recommendation is accepted.<br>Refer to Item No. 17 response and<br>actions. | Driver Audit forms<br>were updated with<br>relevant companies<br>during September and<br>November 2014.<br>Status – Action<br>complete. |

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| 27          | DCC  | Haulage     | Springhill Rd -                  | It is recommended that PKCT:  | Recommendation accepted.                    | Driver Audit forms                  |
|             |      | Routes      | Compression                      | - Stipulate to relevant road road                                   |   | were updated with                   |
|             |      |             | brakes are not                   | transport providers that this                                       | Refer to Item No. 17 response and           | relevant companies                  |
|             |      |             | to be used on                    | criteria be adequately covered and specifically referenced in their | actions.                                    | during September and November 2014. |
|             |      |             | the approach<br>to the lights at | audit forms. This will allow PKCT to                                |   | November 2014.                      |
|             |      |             | Springhill and                   | better monitor compliance with                                      |   | Status – Action                     |
|             |      |             | Port Kembla                      | this aspect of the PKCT DCC.  |   | complete.                           |
|             |      |             | Road.                            |   |   | complete.                           |
|             |      |             |                                  |   |   |                                     |
|             |      |             |                                  |   |   |                                     |
|             |      |             |                                  |   |   |                                     |
|             |      |             |                                  |   |   |                                     |
| 28          | MCoA | Schedule 3, | Noise                            | It is recommended that PKCT:  | Recommendation is accepted.                 |                                     |
|             |      | Condition 2 |                                  | Update the Noise Management   |   |                                     |
|             |      |             |                                  | and Monitoring Plan to include                                      | PKCT's noise consultant, Wilkinson          |                                     |
|             |      |             |                                  | discussion regarding the limitations                                | Murray, will be engaged to address          |                                     |
|             |      |             |                                  | posed by, and appropriateness of                                    | the matters raised.                         |                                     |
|             |      |             |                                  | using the Barn Owl Noise  |   |                                     |
|             |      |             |                                  | Monitoring System.  | Action by: PKCT Risk Manager                |                                     |
|             |      |             |                                  | Conduct further analysis of the                                     | s star star                                 |                                     |
|             |      |             |                                  | measurement results to verify                                       | Completed by 31 <sup>st</sup> October 2014. |                                     |
|             |      |             |                                  | whether the limitations of the Barn                                 |   |                                     |
|             |      |             |                                  | Owl system do not adversely   |   |                                     |
|             |      |             |                                  | impact the findings of the report.                                  |   |                                     |

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| ltem<br>No. | Doc. | Condition                  | Торіс  | Opportunity for Improvement   | PKCT Response/ Actions   | Status as of end June<br>2015   |
|-------------|------|----------------------------|--|---|--|---|
| 29          | DCC  | Driver<br>Summary<br>Sheet | Travel Time –<br>Road haulage<br>of coal is<br>permitted to<br>PKCT between<br>7am and<br>10pm<br>Monday to<br>Friday and<br>8am to 6pm<br>on Saturday<br>and Sunday | It is recommended that PKCT:<br>Review the Driver Summary Sheet<br>to ensure that all obligations within<br>the DCC are included and provided<br>to road transport companies and<br>road transport providers, in the<br>form of an updated DCC. Align the<br>DCC obligations to the MCoA, in<br>particular to truck dispatch times<br>from NRE to PKCT. | Recommendation is accepted.<br>Refer to Item No. 18 response and<br>actions. | DCC was updated in<br>August 2014 and DP&E<br>was notified by letter<br>dated 8 <sup>th</sup> August 2014.<br>CTO was updated in to<br>include specific criteria<br>regarding new<br>truckwash in June<br>2014.<br>Status – Action<br>complete. |
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| ltem<br>No. | Doc. | Condition   | Торіс          | Opportunity for Improvement      | PKCT Response/ Actions              | Status as of end June<br>2015 |
|-------------|------|-------------|----------------|----------------------------------|-------------------------------------|-------------------------------|
| 30          | EPL  | Schedule    | Deadline for   | It is recommended that PKCT:     | Recommendation is accepted.         | PKCT has submitted the        |
|             |      | R1,         | Annual         | Keep records of lodgement of     |                                     | 2013/2014 and                 |
|             |      | Condition 5 | Return. The    | Annual Returns for documentation | Action complete.                    | 2004/2015 Annual              |
|             |      |             | Annual Return  | and quality assurance purposes.  |                                     | return since the 2014         |
|             |      |             | for the        |                                  | PKCT has recently submitted the     | AECOM Audit. Records          |
|             |      |             | reporting      |                                  | 2013/2014 Annual Return. Records of | of lodgement have             |
|             |      |             | period must    |                                  | lodgement have been filed.          | been filed for both           |
|             |      |             | be supplied to |                                  |                                     | submissions.                  |
|             |      |             | the EPA by     |                                  |                                     |                               |
|             |      |             | registered     |                                  |                                     | Status – Action               |
|             |      |             | post no later  |                                  |                                     | complete.                     |
|             |      |             | than 60 days   |                                  |                                     |                               |
|             |      |             | after the end  |                                  |                                     |                               |
|             |      |             | of the         |                                  |                                     |                               |
|             |      |             | reporting      |                                  |                                     |                               |
|             |      |             | period         |                                  |                                     |                               |

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| ltem<br>No. | Doc.       | Condition | Topic    | Requirement                                  | PKCT Response                           | Status as of end June 2015  |
|-------------|------------|-----------|----------|--|---|-----------------------------|
| 31          | P&I Letter | Schedule  | Limits   | PKCT is approved to increase road            | Requirements are noted.                 | Various updates related to  |
|             | reference  | 2,        | on       | transportation of coal and bulk              |   | the DCC as recommended      |
|             | 12/08896-1 | Condition | Approval | products up to 10 mtpa subject to;           | PKCT will ensure that any               | by the AECOM audit were     |
|             | Dated:     | 6         |          |  | outstanding recommendations             | accepted and included in    |
|             | 25/09/2013 |           |          | The DCC or where more                        | related to the Code are included        | the review of the DCC       |
|             |            |           |          | appropriate, the DCC                         | in the revision of the DCC and/or       | during August 2014.         |
|             |            |           |          | Implementation Plan being updated            | DCC Implementation Plan during          | Measures for encouraging    |
|             |            |           |          | to include;                                  | the review process.                     | and facilitating drivers to |
|             |            |           |          | <ul> <li>The Code related</li> </ul>         | Measures for encouraging and            | report poor road            |
|             |            |           |          | recommendations in the                       | facilitating drivers to report poor     | conditions that may         |
|             |            |           |          | document Port Kembla Coal                    | road conditions that may                | increase noise impacts on   |
|             |            |           |          | Terminal – Independent                       | increase noise impacts on               | sensitive receivers and     |
|             |            |           |          | Environmental Audit Report                   | sensitive receivers and traffic         | traffic light timing and    |
|             |            |           |          | (AECOM, 2011) and                            | light timing and sequencing that        | sequencing that causes      |
|             |            |           |          | <ul> <li>Measures for encouraging</li> </ul> | causes unnecessary braking noise        | unnecessary braking noise   |
|             |            |           |          | and facilitating drivers to                  | haulage routes will be                  | haulage routes were         |
|             |            |           |          | report poor road conditions                  | investigated and included in the        | included in the DCC         |
|             |            |           |          | that may increase noise                      | DCC and DCC Implementation              | Implementation Plan         |
|             |            |           |          | impacts on sensitive                         | Plan review.                            | review under section 4.3    |
|             |            |           |          | receivers and traffic light                  | Action by: Environmental                |                             |
|             |            |           |          | timing and sequencing that                   | Specialist                              | Status – Action complete.   |
|             |            |           |          | causes unnecessary braking                   | Completion Date: 8 <sup>th</sup> August |                             |
|             |            |           |          | noise along haulage routes                   | 2014.                                   |                             |

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| ltem<br>No. | Doc.  | Condition                        | Торіс                    | Requirement   | PKCT Response   |   |
|-------------|---|----------------------------------|--------------------------|---|---|---|
| 32          | P&I Letter<br>reference<br>12/08896-1<br>Dated:<br>25/09/2013 | Schedule<br>2,<br>Condition<br>6 | Limits<br>on<br>Approval | <ul> <li>PKCT is approved to increase road transportation of coal and bulk products up to 10 mtpa subject to;</li> <li>A copy of the document 10 Mtpa Road Transport Monitoring Trial, NSW DP&amp;E Submission Report – Condition 6 of "Major Project Approval 08_0009" (Revision 3, dated May 2013, Port Kembla Coal Terminal/Cardno) being placed on Port Kembla Coal Terminal Limited's website</li> </ul> | Requirement noted, action<br>complete. Document has been<br>placed on PKCT Website. | Document has been<br>placed on the PKCT<br>website and is publically<br>available.<br>Status – Action complete. |

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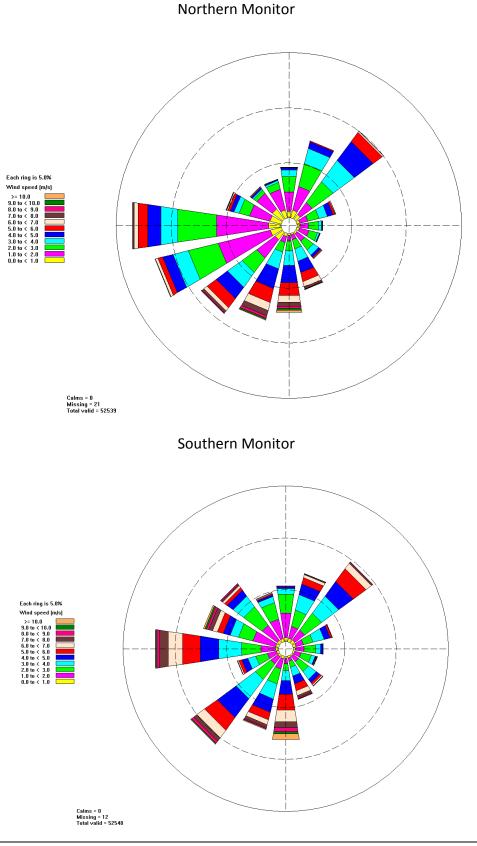
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#### 10.6 Appendix F



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| Date of     | 24-hour average TSP concentration (µg/m <sup>3</sup> ) | Likelihood of PKCT<br>contributing to | Percentage of winds from<br>direction of PKCT (south) | Contribution of PKCT to the exceeding 24-<br>hour concentration <sup>b</sup> |                |          | Wind speed (m/s) ° |         |
|-------------|--|---------------------------------------|---|--|----------------|----------|--------------------|---------|
| exceedance  | concentration (µg/m <sup>-</sup> )                     | exceedance levels <sup>a</sup>        | during period   | µg/m³  | %              | Rating   | Maximum            | Average |
| 13 October  | 91.0   | Possible                              | 27.8%   | \$   | See table note | d        | 7.8                | 2.8     |
| 25 October  | 144.7  | Possible                              | 43.8%   | 10.7   | 7%             | Minimal  | 6.2                | 2.6     |
| 30 October  | 113.7  | Unlikely                              | 2.1%  | See tabl   | e note e       | None     | 4.0                | 1.9     |
| 31 October  | 139.3  | Possible                              | 11.1%   | See tabl   | le note e      | None     | 4.0                | 1.8     |
| 14 November | 160.4  | Possible                              | 22.9%   | 4.3  | 3%             | Minimal  | 9.5                | 2.9     |
| 15 November | 108.2  | Possible                              | 55.6%   | 11.8   | 11%            | Minor    | 7.1                | 3.1     |
| 20 November | 126.1  | Possible                              | 5.6%  | 8.1  | 6%             | Minimal  | 4.3                | 2.3     |
| 21 November | 106.5  | Possible                              | 48.6%   | 19.1   | 18%            | Minor    | 6.9                | 3.1     |
| 22 November | 99.8   | Possible                              | 34.0%   | 11.4   | 11%            | Minor    | 4.7                | 2.7     |
| 23 November | 102.4  | Possible                              | 39.6%   | 12.1   | 12%            | Minor    | 6.3                | 2.4     |
| 24 November | 98.2   | Possible                              | 14.6%   | 7.9  | 8%             | Minimal  | 3.9                | 1.8     |
| 3 December  | 176.5  | Possible                              | 27.8%   | 17.5   | 10%            | Minimal  | 6.9                | 1.7     |
| 4 December  | 94.2   | Unlikely                              | 5.6%  | 6.9  | 7%             | Minimal  | 7.0                | 2.2     |
| 5 December  | 95.3   | Possible                              | 13.2%   | 12.3   | 13%            | Minor    | 6.1                | 1.8     |
| 7 December  | 102.0  | Possible                              | 4.2%  | 3.6  | 4%             | Minimal  | 3.9                | 1.7     |
| 8 December  | 107.3  | Possible                              | 38.2%   | 11.5   | 11%            | Minor    | 6.4                | 3.0     |
| 9 December  | 98.9   | Possible                              | 69.4%   | 29.5   | 30%            | Minor    | 4.9                | 2.5     |
| 13 December | 91.0   | Unlikely                              | 54.9%   | 31.2   | 34%            | Moderate | 6.1                | 3.6     |
| 16 December | 114.8  | Possible                              | 3.5%  | See tabl   | e note e       | None     | 9.7                | 3.4     |
| 17 December | 121.3  | Possible                              | 76.4%   | 31.6   | 26%            | Minor    | 9.7                | 4.3     |
| 18 December | 141.6  | Unlikely                              | 0.0%  | No winds t   | from PKCT      | None     | 3.4                | 1.9     |
| 23 December | 105.7  | Unlikely                              | 3.5%  | 1.3  | 1%             | Minimal  | 4.8                | 2.5     |
| 24 December | 98.0   | Possible                              | 79.9%   | 26.7   | 27%            | Minor    | 7.8                | 3.7     |

#### Table 10 Exceedances of the 24-hour average TSP trigger level of 90 µg/m<sup>3</sup> at the northern PKCT monitoring site during the July 2014 to June 2015 period

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| Date of     | 24-hour average TSP   | Likelihood of PKCT<br>contributing to | Percentage of winds from<br>direction of PKCT (south) |            | Contribution of PKCT to the exceeding 24-<br>hour concentration <sup>b</sup> |          |                  | Wind speed (m/s) <sup>c</sup> |  |
|-------------|-----------------------|---------------------------------------|---|------------|--|----------|------------------|-------------------------------|--|
| exceedance  | concentration (µg/m³) | exceedance levels <sup>a</sup>        | during period   | µg/m³      | %  | Rating   | Maximum          | Average                       |  |
| 25 December | 90.2                  | Possible                              | 9.0%  | 5.3        | <mark>6%</mark>  | Minimal  | 6.0              | 2.1                           |  |
| 31 December | 127.4                 | Unlikely                              | 15.3%   | 8.5        | 7%   | Minimal  | 5.9              | 2.8                           |  |
| 1 January   | 134.3                 | Unlikely                              | 15.3%   | 5.3        | 4%   | Minimal  | 6.4              | 2.9                           |  |
| 2 January   | 140.6                 | Possible                              | 54.9%   | 31.7       | 23%  | Minor    | 5.0              | 2.3                           |  |
| 4 January   | 100.9                 | Possible                              | 26.4%   | 8.6        | 8%   | Minimal  | 7.7              | 3.2                           |  |
| 9 January   | 218.2                 | Unlikely                              | 18.1%   | 11.8       | 5%   | Minimal  | 4.9              | 2.2                           |  |
| 10 January  | 114.0                 | Possible                              | 58.3%   | 41.0       | 36%  | Moderate | 6.1              | 2.2                           |  |
| 14 January  | 125.4                 | Unlikely                              | 0.0%  | No winds t | from PKCT  | None     | 6.8              | 3.7                           |  |
| 16 January  | 91.1                  | Unlikely                              | 4.9%  | 3.7        | 4%   | Minimal  | 3.4              | 1.8                           |  |
| 21 January  | 149.4                 | Unlikely                              | 22.2%   | 28.6       | 19%  | Minor    | 4.7              | 2.2                           |  |
| 22 January  | 157.9                 | Unlikely                              | 0.7%  | 0.4        | 0%   | Minimal  | 5.0              | 2.3                           |  |
| 23 January  | 100.1                 | Unlikely                              | 0.0%  | No winds t | from PKCT  | None     | 5.3              | 2.8                           |  |
| 24 January  | 146.1                 | Unlikely                              | 1.4%  | 0.3        | 0%   | Minimal  | 5.4              | 2.3                           |  |
| 25 January  | 99.5                  | Possible                              | 33.3%   | 13.8       | 14%  | Minor    | 10.9             | 3.4                           |  |
| 8 February  | 91.9                  | Unlikely                              | 13.2%   | 8.4        | 9%   | Minimal  | 4.1              | 1.6                           |  |
| 15 February | 127.7                 | Unlikely                              | 4.9%  | See tabl   | e note e   | None     | 3.3              | 1.5                           |  |
| 19 February | 97.4                  | Unlikely                              | 4.2%  | See tabl   | e note e   | None     | 4.9              | 1.7                           |  |
| 20 February | 165.1                 | Possible                              | 16.0%   | 4.3        | 3%   | Minimal  | <mark>4.6</mark> | 1.4                           |  |
| 21 February | 93.5                  | Unlikely                              | 17.4%   | 8.6        | 9%   | Minimal  | 4.5              | 1.5                           |  |

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Table notes:

a Identified using scatter plots of 10-minute average TSP concentration versus wind direction and wind speed

b. Identified using scatter plots, percentage of winds from direction of PKCT (south) during exceedance period, and comparison of northern and southern TSP concentrations over periods when the wind is from the south. Contribution based on percentage of total 24-hour average TSP concentration (0% = no cont, 0-10% = minimal, 10-30% = minor, 30-70% = moderate, >70% = major) • Maximum and average 10-minute average wind speed recorded at the northern PKCT monitoring site during 24-hour exceedance period

4. For this exceedance day there was no data from the southern monitor, so the contribution analysis could not be performed. See Section 5.1.3.3.3.

\* For this exceedance day the pollutant concentration decreased on average during periods when the wind passed from the south over the PKCT site

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Table 11 Exceedances of the 24-hour average PM<sub>10</sub> air quality standard of 50 µg/m<sup>3</sup> at the northern PKCT monitoring site during the July to December 2014 period

| Date of<br>exceedance | 24-hour average PM <sub>10</sub><br>concentration (µg/m <sup>3</sup> ) | Likelihood of PKCT<br>contributing to<br>exceedance levels <sup>a</sup> | Percentage of winds from<br>direction of PKCT (south)<br>during period | Contribution of PKCT to the exceeding 24-<br>hour concentration <sup>b</sup> |                |          | Wind speed (m/s) ° |         |
|-----------------------|--|---|--|--|----------------|----------|--------------------|---------|
| execcutive            | (F2)   |   |  | µg/m³  | %              | Rating   | Maximum            | Average |
| 6 October             | 54.8   | Possible  | 13.9%  | S  | See table note | d        | 6.1                | 2.7     |
| 13 October            | 62.4   | Possible  | 27.8%  | S  | ee table note  | d        | 7.8                | 2.8     |
| 23 October            | 57.7   | Possible  | 36.1%  | 11.6   | 20%            | Minor    | 3.4                | 1.4     |
| 24 October            | 52.6   | Possible  | 13.2%  | 2.9  | 6%             | Minimal  | 5.6                | 2.7     |
| 25 October            | 102.8  | Possible  | 43.8%  | 7.2  | 7%             | Minimal  | 6.2                | 2.6     |
| 29 October            | 56.3   | Possible  | 18.1%  | 2.3  | 4%             | Minimal  | 5.7                | 3.3     |
| 30 October            | 77.9   | Unlikely  | 2.1%   | See tab  | le note e      | None     | 4.0                | 1.9     |
| 31 October            | 94.8   | Possible  | 11.1%  | See tab  | le note e      | None     | 4.0                | 1.8     |
| 6 November            | 50.7   | Possible  | 86.8%  | 13.1   | 26%            | Minor    | 7.5                | 4.0     |
| 10 November           | 51.3   | Possible  | 90.3%  | 20.1   | 39%            | Moderate | 5.0                | 3.0     |
| 12 November           | 51.2   | Unlikely  | 10.4%  | 3.5  | 7%             | Minimal  | 4.7                | 2.1     |
| 13 November           | 57.9   | Unlikely  | 0.0%   | No winds   | from PKCT      | None     | 5.4                | 3.0     |
| 14 November           | 108.1  | Possible  | 22.9%  | 2.8  | 3%             | Minimal  | 9.5                | 2.9     |
| 15 November           | 75.3   | Possible  | 55.6%  | 8.2  | 11%            | Minor    | 7.1                | 3.1     |
| 19 November           | 59.0   | Unlikely  | 0.7%   | 0.2  | 0%             | Minimal  | 6.1                | 3.6     |
| 20 November           | 85.7   | Possible  | 5.6%   | 6.2  | 7%             | Minimal  | 4.3                | 2.3     |
| 21 November           | 71.4   | Possible  | 48.6%  | 12.6   | 18%            | Minor    | 6.9                | 3.1     |
| 22 November           | 70.1   | Possible  | 34.0%  | 8.5  | 12%            | Minor    | 4.7                | 2.7     |
| 23 November           | 70.6   | Possible  | 39.6%  | 7.5  | 11%            | Minor    | 6.3                | 2.4     |
| 24 November           | 67.4   | Possible  | 14.6%  | 5.1  | 8%             | Minimal  | 3.9                | 1.8     |
| 26 November           | 54.0   | Unlikely  | 0.0%   | No winds   | form PKCT      | None     | 6.7                | 4.1     |
| 1 December            | 53.4   | Unlikely  | 7.6%   | See tab  | le note e      | None     | 6.5                | 3.4     |
| 2 December            | 50.3   | Possible  | 10.4%  | 6.1  | 12%            | Minor    | 8.5                | 4.0     |
| 3 December            | 124.3  | Possible  | 27.8%  | 11.9   | 10%            | Minimal  | 6.9                | 1.7     |
| 4 December            | 63.0   | Unlikely  | 5.6%   | 4.4  | 7%             | Minimal  | 7.0                | 2.2     |

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| Date of<br>exceedance | 24-hour average PM <sub>10</sub><br>concentration (µg/m <sup>3</sup> ) | Likelihood of PKCT contributing to | Percentage of winds from<br>direction of PKCT (south) | Contribution of PKCT to the exceeding 24-<br>hour concentration <sup>b</sup> |           |          | Wind speed (m/s) ° |         |
|-----------------------|--|------------------------------------|---|--|-----------|----------|--------------------|---------|
| exocedanoe            | (FØ)   | exceedance levels a                | during period   | µg/m³  | %         | Rating   | Maximum            | Average |
| 5 December            | 61.7   | Possible                           | 13.2%   | 7.5  | 12%       | Minor    | 6.1                | 1.8     |
| 6 December            | 52.8   | Possible                           | 29.2%   | 10.1   | 19%       | Minor    | 4.6                | 1.9     |
| 7 December            | 66.9   | Possible                           | 4.2%  | 2.4  | 4%        | Minimal  | 3.9                | 1.7     |
| 8 December            | 71.0   | Possible                           | 38.2%   | 7.1  | 10%       | Minor    | 6.4                | 3.0     |
| 9 December            | 68.0   | Possible                           | 69.4%   | 19.2   | 28%       | Minor    | 4.9                | 2.5     |
| 10 December           | 55.6   | Unlikely                           | 1.4%  | 0.2  | 0%        | Minimal  | 4.0                | 1.8     |
| 12 December           | 54.8   | Possible                           | 100.0%  | 35.6   | 65%       | Moderate | 9.8                | 7.0     |
| 13 December           | 65.4   | Unlikely                           | 54.9%   | 22.6   | 34%       | Moderate | 6.1                | 3.6     |
| 15 December           | 59.4   | Unlikely                           | 1.4%  | See tab  | le note e | None     | 5.2                | 2.9     |
| 16 December           | 80.8   | Possible                           | 3.5%  | See tab  | le note e | None     | 9.7                | 3.4     |
| 17 December           | 86.9   | Possible                           | 76.4%   | 21.5   | 25%       | Minor    | 9.7                | 4.3     |
| 18 December           | 98.2   | Unlikely                           | 0.0%  | No winds   | from PKCT | None     | 3.4                | 1.9     |
| 23 December           | 72.8   | Unlikely                           | 3.5%  | 0.8  | 1%        | Minimal  | 4.8                | 2.5     |
| 24 December           | 67.1   | Possible                           | 79.9%   | 15.8   | 24%       | Minor    | 7.8                | 3.7     |
| 25 December           | 62.3   | Possible                           | 9.0%  | 3.6  | 6%        | Minimal  | 6.0                | 2.1     |
| 27 December           | 55.4   | Possible                           | 32.6%   | 11.3   | 20%       | Minor    | 5.1                | 2.5     |
| 31 December           | 90.6   | Unlikely                           | 15.3%   | 5.8  | 6%        | Minimal  | 5.9                | 2.8     |
| 1 January             | 94.8   | Possible                           | 15.3%   | 3.8  | 4%        | Minimal  | 6.4                | 2.9     |
| 2 January             | 99.3   | Possible                           | 54.9%   | 21.0   | 21%       | Minor    | 5.0                | 2.3     |
| 3 January             | 53.8   | Unlikely                           | 0.0%  | No winds   | from PKCT | None     | 6.5                | 3.1     |
| 4 January             | 69.8   | Possible                           | 26.4%   | 5.5  | 8%        | Minimal  | 7.7                | 3.2     |
| 6 January             | 53.8   | Possible                           | 18.8%   | 4.9  | 9%        | Minimal  | 4.6                | 1.7     |
| 9 January             | 148.1  | Possible                           | 18.1%   | 7.7  | 5%        | Minimal  | 4.9                | 2.2     |
| 10 January            | 77.9   | Possible                           | 58.3%   | 27.1   | 35%       | Moderate | 6.1                | 2.2     |
| 14 January            | 86.7   | Unlikely                           | 0.0%  | No winds   | from PKCT | None     | 6.8                | 3.7     |
| 16 January            | 60.0   | Unlikely                           | 4.9%  | 1.9  | 3%        | Minimal  | 3.4                | 1.8     |
| 18 January            | 50.1   | Unlikely                           | 68.1%   | 7.0  | 14%       | Minor    | 6.8                | 3.3     |

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| Date of<br>exceedance | 24-hour average PM <sub>10</sub><br>concentration (µg/m <sup>3</sup> ) | Likelihood of PKCT<br>contributing to | Percentage of winds from<br>direction of PKCT (south) | Contribution of PKCT to the exceeding 24-<br>hour concentration <sup>b</sup> |           |         | Wind speed (m/s) ° |         |
|-----------------------|--|---------------------------------------|---|--|-----------|---------|--------------------|---------|
|                       | /  | exceedance levels a                   | during period   | µg/m³  | %         | Rating  | Maximum            | Average |
| 21 January            | 102.2  | Unlikely                              | 22.2%   | 18.8   | 18%       | Minor   | 4.7                | 2.2     |
| 22 January            | 109.8  | Unlikely                              | 0.7%  | 0.3  | 0%        | Minimal | 5.0                | 2.3     |
| 23 January            | 70.2   | Unlikely                              | 0.0%  | No winds   | from PKCT | None    | 5.3                | 2.8     |
| 24 January            | 102.7  | Unlikely                              | 1.4%  | 0.1  | 0%        | Minimal | 5.4                | 2.3     |
| 25 January            | 65.0   | Possible                              | 33.3%   | 8.4  | 13%       | Minor   | 10.9               | 3.4     |
| 8 February            | 58.6   | Unlikely                              | 13.2%   | 5.2  | 9%        | Minimal | 4.1                | 1.6     |
| 15 February           | 84.7   | Unlikely                              | 4.9%  | See tab  | le note e | None    | 3.3                | 1.5     |
| 19 February           | 69.3   | Unlikely                              | 4.2%  | See tab  | le note e | None    | 4.9                | 1.7     |
| 20 February           | 116.6  | Possible                              | 16.0%   | 2.0  | 2%        | Minimal | 4.6                | 1.4     |
| 21 February           | 65.2   | Unlikely                              | 17.4%   | 6.2  | 10%       | Minimal | 4.5                | 1.5     |
| 9 March               | 57.4   | Possible                              | 20.8%   | 1.4  | 3%        | Minimal | 5.4                | 2.0     |
| 18 March              | 59.7   | Possible                              | 22.2%   | 5.4  | 9%        | Minimal | 4.9                | 1.9     |
| 20 March              | 52.4   | Possible                              | 65.3%   | 10.4   | 20%       | Minor   | 9.6                | 4.6     |
| Table note:           |  | 6                                     |   |  |           | 1       | 5                  |         |

Table note:

a Identified using scatter plots of 10-minute average PM10 concentration versus wind direction and wind speed

b Identified using scatter plots, percentage of winds from direction of PKCT (south) during exceedance period, and comparison of northern and southern PM10 concentrations over periods when the wind is from the south. Contribution based on percentage of total 24-hour average PM10 concentration (0% = no cont, 0-10% = minimal, 10-30% = minor, 30-70% = moderate, >70% = major)

Maximum and average 10-minute average wind speed recorded at the northern PKCT monitoring site during 24-hour exceedance period
 for this exceedance day there was no data from the southern monitor, so the contribution analysis could not be performed. See Section 5.1.3.3.3.

\* For this exceedance day the pollutant concentration decreased on average during periods when the wind passed from the south over the PKCT site

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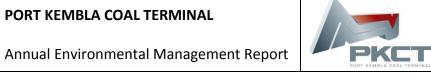


#### 10.7 Appendix G

| Dete     | рН         | TSS        | Oil and Grease |
|----------|------------|------------|----------------|
| Date     | (pH units) | (mg/litre) | (mg/litre)     |
| 1-7-14   | 7.9        | 5          | Not visible    |
| 9-7-14   | 9.1        | 5          | Not visible    |
| 10-7-14  | 9.2        | 5          | Not visible    |
| 11-8-14  | 9.6        | 33         | Not visible    |
| 12-8-14  | 9.7        | 34         | Not visible    |
| 13-8-14  | 9.4        | 5          | Not visible    |
| 14-8-14  | 9.6        | 77         | Not visible    |
| 15-8-14  | 9.4        | 19         | Not visible    |
| 17-8-14  | 8.3        | 7          | Not visible    |
| 18-8-14  | 7.9        | 5          | Not visible    |
| 19-8-14  | 7.5        | 5          | Not visible    |
| 20-8-14  | 7.2        | 12         | Not visible    |
| 22-8-14  | 7.0        | 5          | Not visible    |
| 23-8-14  | 7.0        | 5          | Not visible    |
| 25-8-14  | 6.7        | 6          | Not visible    |
| 26-8-14  | 6.7        | 5          | Not visible    |
| 27-8-14  | 7.1        | 5          | Not visible    |
| 28-8-14  | 8.2        | 5          | Not visible    |
| 3-9-14   | 7.7        | 10         | Not visible    |
| 8-9-14   | 6.9        | 9          | Not visible    |
| 8-10-14  | 10         | 35         | Not visible    |
| 14-10-14 | 9.2        | 31         | Not visible    |
| 15-10-14 | 9.2        | 22         | Not visible    |
| 16-10-14 | 6.8        | 10         | Not visible    |
| 17-10-14 | 6.9        | <5         | Not visible    |
| 1-11-14  | 9.6        | 10         | Not visible    |
| 2-11-14  | 9.4        | 8          | Not visible    |
| 12-11-14 | 9.7        | 31         | Not visible    |
| 15-11-14 | 9.2        | 27         | Not visible    |
| 17-11-14 | 9          | 47         | Not visible    |
| 18-11-14 | 9.8        | 69         | Not visible    |
| 19-11-14 | 9.9        | 23         | Not visible    |
| 20-11-14 | 9.9        | 52         | Not visible    |
| 27-11-14 | 8.7        | 16         | Not visible    |
| 28-11-14 | 8.3        | 13         | Not visible    |
| 2-12-14  | 8.7        | 18         | Not visible    |
| 3-12-14  | 8.8        | 27         | Not visible    |
| 4-12-14  | 7.7        | 17         | Not visible    |

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| Data     | рН         | TSS        | Oil and Grease |
|----------|------------|------------|----------------|
| Date     | (pH units) | (mg/litre) | (mg/litre)     |
| 5-12-14  | 8          | 6          | Not visible    |
| 6-12-14  | 7.5        | 10         | Not visible    |
| 7-12-14  | 7.3        | <5         | Not visible    |
| 10-12-14 | 7.3        | <5         | Not visible    |
| 11-12-14 | 7.5        | <5         | Not visible    |
| 12-12-14 | 7.2        | <5         | Not visible    |
| 15-12-14 | 7.6        | <5         | Not visible    |
| 16-12-14 | 8.6        | <5         | Not visible    |
| 17-12-14 | 9          | 14         | Not visible    |
| 29-12-14 | 9.3        | 20         | Not visible    |
| 30-12-14 | 9.3        | 20         | Not visible    |
| 11-1-15  | 8.1        | 14         | Not visible    |
| 12-1-15  | 7.4        | 25         | Not visible    |
| 13-1-15  | 8.3        | 19         | Not visible    |
| 15-1-15  | 7.8        | 11         | Not visible    |
| 20-1-15  | 9.0        | 19         | Not visible    |
| 21-1-15  | 6.9        | 11         | Not visible    |
| 27-1-15  | 7.1        | 12         | Not visible    |
| 28-1-15  | 7.6        | <5         | Not visible    |
| 29-1-15  | 6.9        | 11         | Not visible    |
| 30-1-15  | 7.2        | 11         | Not visible    |
| 5-2-15   | 7.3        | 6          | Not visible    |
| 6-2-15   | 7.8        | 6          | Not visible    |
| 9-2-15   | 8.9        | 17         | Not visible    |
| 10-2-15  | 9.0        | 13         | Not visible    |
| 13-2-15  | IS         | IS         | Not visible    |
| 14-2-15  | 8.7        | 38         | Not visible    |
| 15-2-15  | 8.6        | 26         | Not visible    |
| 17-2-15  | 8.9        | 19         | Not visible    |
| 18-2-15  | 7.4        | 17         | Not visible    |
| 19-2-15  | 7.5        | 19         | Not visible    |
| 22-2-15  | 7.4        | 19         | Not visible    |
| 25-2-15  | IS         | IS         | Not visible    |
| 26-2-15  | 7.5        | 9          | Not visible    |
| 27-2-15  | 7.6        | 11         | Not visible    |
| 1-3-15   | 8.0        | 19         | Not visible    |
| 2-3-15   | 7.8        | 14         | Not visible    |
| 4-3-15   | 7.6        | 17         | Not visible    |
| 15-3-15  | 9.2        | 19         | Not visible    |
| 22-3-15  | 9.3        | 29         | Not visible    |

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| Date    | рН         | TSS        | Oil and Grease |  |  |
|---------|------------|------------|----------------|--|--|
| Date    | (pH units) | (mg/litre) | (mg/litre)     |  |  |
| 24-3-15 | 9.0        | 27         | Not visible    |  |  |
| 25-3-15 | 8.0        | 17         | Not visible    |  |  |
| 26-3-15 | 7.6        | 10         | Not visible    |  |  |
| 29-3-15 | 7.9        | 33         | Not visible    |  |  |
| 2-4-15  | 8.6        | <5         | Not visible    |  |  |
| 3-4-15  | 8.4        | 11         | Not visible    |  |  |
| 4-4-15  | 8.1        | 22         | Not visible    |  |  |
| 5-4-15  | 7.9        | 5          | Not visible    |  |  |
| 6-4-15  | 6.9        | <5         | Not visible    |  |  |
| 7-4-15  | 7.5        | <5         | Not visible    |  |  |
| 8-4-15  | 7.7        | <5         | Not visible    |  |  |
| 9-4-15  | 7.1        | 9          | Not visible    |  |  |
| 11-4-15 | 7.1        | 5          | Not visible    |  |  |
| 13-4-15 | 7.5        | 15         | Not visible    |  |  |
| 15-4-15 | 8.9        | 30         | Not visible    |  |  |
| 16-4-15 | 8.9        | 16         | Not visible    |  |  |
| 17-4-15 | 8.3        | 13         | Not visible    |  |  |
| 18-4-15 | 8.3        | 8          | Not visible    |  |  |
| 19-4-15 | 7.8        | 7          | Not visible    |  |  |
| 20-4-15 | 7.1        | 82         | Not visible    |  |  |
| 21-4-15 | 7.2        | <5         | Not visible    |  |  |
| 22-4-15 | 7.2        | 9          | Not visible    |  |  |
| 23-4-15 | 7.2        | <5         | Not visible    |  |  |
| 24-4-15 | 6.9        | <5         | Not visible    |  |  |
| 26-4-15 | 7.1        | <5         | Not visible    |  |  |
| 26-4-15 | 6.8        | <5         | Not visible    |  |  |
| 27-4-15 | 6.9        | 5          | Not visible    |  |  |
| 28-4-15 | 7.4        | 6          | Not visible    |  |  |
| 28-4-15 | 7.5        | 6          | Not visible    |  |  |
| 29-4-15 | 7.7        | <5         | Not visible    |  |  |
| 30-4-15 | 7.7        | 11         | Not visible    |  |  |
| 1-5-15  | 7.7        | 60         | Not visible    |  |  |
| 2-5-15  | 7.6        | 26         | Not visible    |  |  |
| 3-5-15  | 7.7        | 12         | Not visible    |  |  |
| 4-5-15  | 7.8        | 7          | Not visible    |  |  |
| 5-5-15  | 7.8        | 5          | Not visible    |  |  |
| 10-5-15 | 7.6        | 57         | Not visible    |  |  |
| 11-5-15 | 7.7        | 48         | Not visible    |  |  |
| 12-5-15 | 7.8        | 110        | Not visible    |  |  |
| 13-5-15 | 7.9        | 54         | Not visible    |  |  |

Annual Environmental Management Report

PKCT

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| Date    | рН         | TSS        | Oil and Grease |
|---------|------------|------------|----------------|
|         | (pH units) | (mg/litre) | (mg/litre)     |
| 14-5-15 | 7.9        | 26         | Not visible    |
| 15-5-15 | 7.8        | 14         | Not visible    |
| 16-5-15 | 7.9        | <5         | Not visible    |
| 17-5-15 | 7.9        | <5         | Not visible    |
| 18-5-15 | 7.8        | <5         | Not visible    |
| 22-5-15 | 7.7        | 7          | Not visible    |
| 23-5-15 | 7.8        | <5         | Not visible    |
| 24-5-15 | 7.7        | <5         | Not visible    |
| 28-5-15 | 7.5        | 11         | Not visible    |
| 1-6-15  | 7.8        | <5         | Not visible    |
| 10-6-15 | 7.6        | <5         | Not visible    |
| 12-6-15 | 7.6        | <5         | Not visible    |
| 13-6-15 | 7.6        | 7          | Not visible    |
| 14-6-15 | 7.7        | 8          | Not visible    |
| 15-6-15 | 7.7        | <5         | Not visible    |
| 16-6-15 | 7.6        | 6          | Not visible    |
| 17-6-15 | 7.3        | 32         | Not visible    |
| 18-6-15 | 7.3        | 9          | Not visible    |
| 19-6-15 | 7.4        | 12         | Not visible    |
| 20-6-15 | 7.5        | 13         | Not visible    |
| 21-6-15 | 7.6        | 21         | Not visible    |
| 22-6-15 | 7.4        | 26         | Not visible    |
| 23-6-15 | 7.5        | 7          | Not visible    |
| 25-6-15 | 7.2        | 40         | Not visible    |
| 27-6-15 | 7.3        | <5         | Not visible    |

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## 10.8 Appendix H

#### **Executive summary**

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by Port Kembla Coal Terminal to undertake an autumn survey for Green and Golden Bell Frogs in ponds located on its facility at Port Kembla. These surveys form part of its on-going monitoring as part of its Green and Golden Bell Frog Management Plan.

On Thursday the 3rd of February 2015 a diurnal and nocturnal survey was undertaken of nine ponds located around the facility and one site with constructed Green and Golden Bell Frog ponds located in the adjacent Greenhouse Park.

No Green and Golden Bell Frogs or tadpoles were located during either the diurnal or nocturnal survey. Two other frog species were located, Peron's Tree Frog and the Striped Marsh Frog. The ongoing monitoring on site the lack of recent records from the facility indicates that the Green and Golden Bell Frog is not currently present on the site and has not been for several years. It is advised that Port Kembla Coal Terminal liaises with OEH to determine if the annual monitoring program needs to be continued and, if not, what circumstances any monitoring may be undertaken.

PKCT Bell Frog Monitoring Surveys

Fauna Monitoring Report

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#### 10.9 Appendix I

# **Notification of Weed Spraying**

#### **Johnsons Landscapes**

| Date                           | 3/3/2015           |
|--------------------------------|--------------------|
| Person/s Responsible           | T.McMahon, M. wedd |
| Area to be sprayed             | Conveyours 8+11    |
| Start time                     | 7-30 am            |
| Estimated duration             | 6 hrs              |
| Weather                        | Fre, Light NE wind |
| Frog and Wildlife Inspection   | (Tes) / No         |
| General Comments               |                    |
| Total amount of litres sprayed | 800L               |

| rotar amount of nites sprayed | OUCL                                 |         |
|-------------------------------|--------------------------------------|---------|
| Type of spray used            | Glycophosate 360 (Trademark Roundup) | Yes) No |
| Other Type of spray used      |                                      |         |

#### SIGN OFF: WORK COMPLETED

Date: 3/3/2015 Time: 2-45 Signature: 172AUS McMAHOW



#### 10.10 Appendix J

| æ  | <b>LRQA</b><br>Business Assurance  |                                      |
|--|--|--------------------------------------|
| This is to certify that the Qua                                | ality & Environmental M  | anagement System of:                 |
| Por  | a Coal Terminal L<br>t Kembla Road<br>ng, New South V<br>Australia   |                                      |
| has been approved by Ll<br>to the following Quality & Er       |  |                                      |
|  | ZS ISO 9001:2008<br>ZS ISO 14001:2004  |                                      |
| The Quality & Environmer                                       | ntal Management Syste  | m is applicable to:                  |
| Receiving, stockpiling a<br>dry bulk n                         | and loading of coa<br>naterials for shipm  |                                      |
| Approval<br>Certificate No: MEL0928466                         | Original Approval:<br>Current Certificate:   |                                      |
|  | Certificate Expiry:  | 28 February 2016                     |
| Issue  | M.J. Kaalid<br>ed by: Lloyd's Register Quality   | )<br>Assurance Limited               |
| Level 6 Fawkner Ce<br>For and on behalf of 71 Fenchurch Street | is subject to the provision on the rev<br>intre, 499 St Kilda Road, Melbourne, Vic,<br>London EC3M 485 United Kingdom. R<br>with the 1964 assument and conflication procession<br>containation for the conflicat please variance and<br>containation for the containation of the containation of the containation<br>containation of the containation of the containation of the containation<br>containation of the containation of the containation of the containation<br>containation of the containation of the containation of the containation of the containation of the containation<br>containation of the containation of the c | , 3004<br>soistration number 1879370 |