



**BHP Billiton Worsley Alumina Pty Ltd**  
**Electricity Generation Licence Performance Audit and Asset**  
**Management Review Report**

November 2013



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# 1. Executive Summary

GHD was engaged by BHP Billiton Worsley Alumina Pty Ltd (**WAPL**) to conduct a Performance Audit and Asset Management Review related to the conditions of their Electricity Generation Licence (EGL12) at their alumina refinery in Collie Western Australia in accordance with the audit guidelines set down by the Economic Regulatory Authority of Western Australia.

WAPL is an alumina refinery that requires both steam and electricity power for its operation. The WAPL Power Plant identified at the refinery operation as Facility 110 is located in Collie in Western Australia. The Licence relates to the operation of the WAPL Power Plant. The WAPL Power Plant includes the operation of three coal-fired boilers and four steam turbines and associated infrastructure to generate both steam and power.

The performance audit and asset management review was conducted at the refinery on the 9<sup>th</sup> September 2013 by the audit team and covered the audit period from 1<sup>st</sup> July 2010 to 30<sup>th</sup> June 2013.

## 1.1 Overall Assessment

### 1.1.1 Performance Audit

It is the auditor's professional view; the Licensee has maintained an acceptable level of compliance with the requirements of the Licence conditions of their Electricity Generation License (EGL 12) for the audit period. Two minor improvements were identified for the Licensee's consideration and full details are incorporated later in this report.

### 1.1.2 Asset Management Review

In the auditor's professional view, WAPL has maintained an effective AMS in relation to the Electricity Generation License (EGL 12) for the review period based on AMS processes. A number of areas for improvement were identified and full details are incorporated later in this report.

## 2. Introduction

The regulation of the electricity industry in Western Australia is governed by the Electricity Industry Act 2004 (the Act) and the Energy Coordination Act 1994. The Act has established a regulatory framework surrounding the provision of electricity generation primarily by way of a licensing scheme administered by the Economic Regulation Authority (**the Authority**).

Under the Act, generation of electricity within controlled areas must be licensed. The licence sets a range of conditions, including minimum service standards and regular reporting.

The Authority has under the provisions of the Act, issued BHP Billiton Worsley Alumina Pty Ltd (**WAPL**) an Electricity Generation Licence (EGL 12) (**the Licence**) commencing 30 June 2006. There have been changes to the licence since inception and this performance audit and asset management system review was carried out based on Version 4 dated 13<sup>th</sup> January 2011 of the Licence.

Sections 13 and 14 of the Act require WAPL to provide the Authority with a performance audit and an asset management system review (the **review**) report on the effectiveness of its asset management system not less than once in every 24 month period (or such longer period that the Authority allows).

WAPL is an alumina refinery that requires both steam and electricity power for its operation. The WAPL Power Plant identified at the refinery operation as Facility 110 is located in Collie in Western Australia. The Licence relates to the operation of the WAPL Power Plant. The WAPL Power Plant includes the operation of three coal-fired boilers and four steam turbines and associated infrastructure to generate both steam and power.

The audit has been conducted in accordance with Audit Guidelines: Electricity, Gas and Water issued by the Authority (August 2010). The audit has been conducted in order to assess the licensee's level of compliance with the conditions of its licence and to assess the effectiveness of the asset management system.

The audit and review were conducted in August and September 2013 and they covered the period from 1<sup>st</sup> July 2010 to 30<sup>th</sup> June 2013 and were conducted in accordance with the detail set down in the approved audit plan.

Where issues of non-compliance were identified, recommendations and a suitable methodology to rectify the non-compliance have been provided in this report. The final methodology and timeframe for compliance were decided by WAPL and an action register has been established and forms part of this report.

A full set of field notes, including audit and assessment findings along with individual recommendations are included in this report.

It is the responsibility of the Licensee to determine if the recommendations are appropriate and/or alternative means of addressing non-compliance are available. Ultimately the Licensee will be responsible for advising the Authority of actions taken in rectification of the non-compliance issues. Also the Licensee will be responsible for submitting a copy of the final report to the Authority.

Whilst tables 1 and 2 which include the Licensee's post-audit and post review implementation plans are contained in this report they do not formally form part of the audit and review. They are provided as demonstration of the Licensee's plans to close the gaps in compliance.

## 3. Key Findings

### 3.1 Performance Audit

#### 3.1.1 Summary of Opinion on the Control Environment

The control environment to ensure compliance with licensing conditions is assessed to be satisfactory.

The outcome of the inspection of the generating assets and interviews with WAPL personnel was that the systems are operated effectively, within the current standards and code requirements and present minimal risks to the station personnel.

#### 3.1.2 Overall Assessment

In the auditor's professional view, the Licensee has maintained an acceptable level of compliance with the requirements of the Licence conditions. Two minor improvements were identified for the Licensee's consideration.

#### 3.1.3 Previous Post-Audit Plan

This audit also reviewed how WAPL has progressed on the action plans generated from the audits taken previously in relation to the Licence.

WAPL has progressed its implementation of these action plans as listed below.

#### 3.1.4 Summary of Issues and Recommendations

There are two minor issues and their recommendations for this performance audit period. One of these has been closed out.

Table 1 Summary of Previous audit action plans

Rec. No.	Ref	Recommendation	Previous Audit Action Plan	Status	Revised action plan (if applicable)
Generation Licence condition 4.1.	85	<p><b>Issues</b></p> <p>The Licensee paid the fees but was late in one payment. There is a need for a process to ensure licence obligations are met and on time</p> <p><b>Recommendations</b></p> <p>Develop a compliance manual listing obligations and target times with scheduled review times. A time based procedure in SAP allocated to a senior position would ensure that the procedure is not tied to a particular operative.</p>	<p>Assignment of all ERA contact to one department, the Energy and Major Commodities department. Key individual (Commercial Analyst) within department assigned. All relevant people within department added to ERA communication distribution list to ensure relevant items actioned if key person unavailable. All ERA actions included in KPI's for department and individual. .</p> <p><b>Responsible Person</b></p> <p>Commercial Analyst</p>	<p><b>Completed</b></p> <p>WAPL has implemented the assignment including alerts on the 1SAP system.</p>	N/A
Electricity Industry Act section 11	110	<p><b>Issues</b></p> <p>One report was provided in the manner required. The report was accurate in that it was consistent with the audit findings. One report was not provided at all. The 2010 report was late (outside the</p>	<p>Assignment of all ERA contact to one department, the Energy and Major Commodities department. Key individual (Commercial Analyst) within department assigned. All relevant people within department added to ERA communication distribution list to ensure relevant items actioned if key person unavailable. All</p>	<p><b>Completed</b></p> <p>WAPL has implemented the assignment including alerts on the 1SAP system.</p>	N/A



Rec. No.	Ref	Recommendation	Previous Audit Action Plan	Status	Revised action plan (if applicable)
		<p>audit period. There is a need for a process to ensure licence obligations are met and on time</p> <p><b>Recommendations</b></p> <p>Develop a compliance manual listing obligations and target times with scheduled review times. A time based procedure in SAP allocated to a senior position would ensure that the procedure is not tied to a particular operative.</p>	<p>ERA actions included in KPI's for department and individual. .</p> <p><b>Responsible Person</b></p> <p>Commercial Analyst</p>		

### 3.1.5 Summary Table of Issues and Recommendations

Table 2 Performance Audit Summary of Issues and Recommendations

Ref	Lic Clause	Issue	Recommendation	Post Audit Action	Compliance Scale	Person Responsible/Date of implementation
105	Fees Clause 4.1	A late payment of Licensing Fees was noted	<i>Implement a flagging system in WAPL accounts process to notify management that the payment is pending to allow for fee payment on time</i>	<b>Completed.</b> A process is in place to flag fee payment dates.	4	N/A
124	Provision of Information Clause 16.1	Submitted annual compliance reports and associated advice of receipt from ERA not collated to provide clear closeout of requirement	<i>Attach a copy of each annual Compliance Report to the letter of receipt from the ERA so as to demonstrate the timeliness of submissions</i>	WAPL to create repository dedicated to storing collated ERA/EGL required annual compliance documentation	3	WAPL Manager Production Power/ June 2014

## 3.2 Asset Management Review

### 3.2.1 Summary of Opinion on the Control Environment

The control environment for asset management is assessed to be satisfactory.

The outcome of the inspection of the generating assets and interviews with WAPL staff was that the assets are operated effectively as per the Asset Management System (**AMS**), within the current standards and code requirements.

There are no deficiencies in the AMS.

### 3.2.2 Overall assessment

In the auditor's professional view, WAPL has maintained an effective AMS in relation to the Electricity Generation License (EGL 12) for the review period based on AMS processes. A number of areas for improvement were identified and full details are incorporated later in this report.

### 3.2.3 Previous Post-Audit Plan

This audit also reviewed how WAPL has progressed on the action plans generated from the audits taken previously in relation to the Licence.

WAPL has progressed its implementation of these action plans as listed below.

Table 3 Summary of Previous Audit action plans

Ref Item	Recommendation	Previous Audit Action Plan	Status	Revised action plan (if applicable)
Risk Management	Implement procedures to ensure risk assessment tools are used with self assessment of controls and risk control audit processes completed. (non mandatory recommendation audit guidelines 11.4)	<p>Procedures to ensure risk assessment tools are used with self assessment of controls and risk control audit processes are completed. These are covered under the published Risk Management Worsley Business Level Document. They are covered in BHP Billiton’s Group Level Documents. These Risk Management procedures apply to all Worsley procedures.</p> <p><b>Responsible Person</b></p> <p>Superintendent Risk &amp; Governance Superintendent Powerhouse</p>	<p><b>Completed</b></p> <p>The management procedure is now applied to all the risk assessment and risk management.</p>	N/A
Review of AMS	Implement a review of the broader AMS including reviewing key operating and maintenance procedures to ensure the generating plant meets the life requirements of the refinery. Any risks arising from the reviews should be developed along	<p>Review of the broader AMS including reviewing key operating and maintenance procedures completed. Contingency plans developed.</p> <p><b>Responsible Person</b></p>	<p><b>Completed</b></p> <p>Reviews of the broader AMS are implemented.</p>	N/A

Ref Item	Recommendation	Previous Audit Action Plan	Status	Revised action plan (if applicable)
	with the consequent contingency plans.	Superintendent Asset Care Superintendent Powerhouse		

### 3.2.4 Summary of Issues and Recommendations

Table 4 AMS Summary of Issues and Recommendations

Ref	Key Processes	Issue	Recommendation	Post-Audit Action Plan	Person Responsible/ Date of Implementation
1/13	Asset Planning	WAPL Power Plant does not have an isolated AMP. It presently works on the Alumina Plan.	<i>WAPL to formalise an isolated consolidated asset plan for the power plant. A reporting system is to be established to measure and monitor actual against the plans.</i>	WAPL to create the asset plan for the power plant.	WAPL Manager Production Power/ June 2014
2/13	Environmental Analysis	WAPL Power Plant depends on the wider Alumina Refinery to meet some of the environmental/legal and safety obligations.	<i>The Licensee is recommended for WAPL Power Plant to establish a consolidated compliance manual to track all these compliance.</i>	WAPL to consider creating a Compliance Manual with monitoring facility in place.	WAPL Manager Production Power/ June 2014

Ref	Key Processes	Issue	Recommendation	Post-Audit Action Plan	Person Responsible/ Date of Implementation
3/13	Review of AMS	There is no independent review of the Asset Management System which WAPL has incorporated into the Alumina Refinery plan.	<i>The Licensee is recommended to have an independent review/audit conducted on the Asset Management System.</i>	WAPL to schedule an independent review/audit of the Power Plant AMS.  WAPL to update audit/review process.	WAPL Manager Production Power/ June 2014

## 4. Audit / Review Scope

### 4.1 Objectives and Scope

#### 4.1.1 Performance Audit

The objective of the performance audit is to evaluate the effectiveness of the measures taken by WAPL to meet the obligations of the performance and quality standards referred to in the Licence. The audit will focus on WAPL's systems and effectiveness of processes used to ensure compliance with the obligations, standards, outputs and outcomes as required by the Licence.

The audit has identified areas where improvement is required and has recommended corrective action as necessary.

The audit has applied a risk-based approach to focus on the systems and effectiveness of processes used to ensure compliance with the standards, outputs and outcomes required by the Licence.

The scope of the audit covered the following areas;

- **Risk Assessment** – the risks imposed by non-compliance with the Licence conditions and the development of a risk-based audit plan to focus on the higher risks areas, with less intense coverage of medium and low risk areas;
- **Process Compliance** – the effectiveness of systems and procedures in place throughout the audit period, including the adequacy of internal controls;
- **Outcome Compliance** – the actual performance against standards prescribed in the Licence throughout the period of the Licence;
- **Output Compliance** – the existence of output from systems and procedures throughout the audit period, i.e. proper records, written procedures and training to provide assurance that procedures are being consistently followed and controls are being maintained;
- **Integrity of Reporting** – the completeness and accuracy of the compliance and performance reports provided to the Authority; and
- **Compliance with any individual Licence conditions** – the requirements imposed on the specific licensee by the Authority or specific issues that are advised by the Authority.

#### 4.1.2 Asset Management Review

The objective of the AMS review is to assess the measures taken by WAPL for the proper management of assets used in the provision and operation of services and, where appropriate, the construction or alteration of relevant assets. The review focuses on the asset management system and asset management plans that measure the proper operation and maintenance of assets at WAPL's Power Plant.

More intense scrutiny was applied to the Environmental Analysis, Asset Operations, Asset Maintenance, Asset Management Information System, Risk Management, Contingency and Financial sections of the AMS review than the other lower risk areas.

The scope of the AMS review covered the following key processes:

- Asset Planning;
- Asset Creation and Acquisition;

- Asset Disposal;
- Environmental Analysis;
- Asset Operations;
- Asset Maintenance;
- Asset Management Information System;
- Risk Management;
- Contingency Planning;
- Financial Planning;
- Capital Expenditure Planning; and
- Review of AMS.

## 4.2 Methodology

### 4.2.1 Field work – Performance Audit

- An initial meeting was conducted with relevant staff through telephone conferencing and presence at WAPL's offices in Perth. The review process was discussed to obtain an understanding of the procedures, systems and controls in place to ensure compliance with the licence conditions;
- The adequacy of the controls to cover identified risks were evaluated, the outcome of which determined where more extensive audit testing of the higher risk areas was required so as to provide sufficient assurance and confirm lower risk areas by discussion and observation;
- A site visit was conducted to interview relevant site staff, to review records maintained at the site and to investigate the implementations of work systems;
- Compliance with the licensing conditions was assessed over the audit period as well as at the time of the audit;
- Improvement options for issues and weaknesses were researched and appropriate and potential improvements were developed. Some less complex issues were dealt with and remedies were recommended during the audit.

### 4.2.2 Fieldwork – Asset Management Review

- An initial meeting was conducted with relevant staff through telephone conferencing and presence at WAPL's offices Perth. The Review process was discussed to obtain an understanding of the procedures, systems and controls in place to ensure effective asset management;
- A site inspection of the asset was carried out;
- The Licensee's documented procedures and processes were analysed for planning, O&M of assets to assess whether they are consistent with the regulatory arrangements under the Licence and the ERA's Audit Guidelines Electricity, Gas and Water;
- The review focussed on the higher risk areas that were determined through a risk management approach. The lesser risk areas were reviewed but not with as much vigour as the higher risk areas;



- The effectiveness of the asset management approach was evaluated and weaknesses and issues were identified and with recommendations being formulated with WAPL management to create a more robust system;

#### 4.2.3 Audit Reporting

- Prior to the conclusion of the audit visits, the auditor discussed any observations and recommendations with the Licensee's representative to confirm understanding of the issue and to agree upon actions to be taken.
- A draft report was provided to the Licensee for review and response to the post audit recommendations in a post audit implementation plan, including any proposed corrective action, responsible person and timeframe.
- A final draft report, including the agreed post audit implementation plan is provided to the Authority for final acceptance.
- Upon acceptance by the Authority, a copy of the final report is provided to the Licensee who will provide an electronic copy and three printed copies to the Authority.
- The Authority may make and publically distribute copies of the final report and publish results in their entirety or in a comparative report. The Authority will make the report publically available on the ERA website after the Authority has fulfilled its statutory functions.

### 4.3 Time Period Covered in Audit/Review

The Audit covered the period from 1<sup>st</sup> July 2010 to 30<sup>th</sup> June 2013

### 4.4 Time Period of Audit/Review

The Audit was conducted from August 2013 to September 2013.

### 4.5 Licensee's Representatives

WAPL Energy primary contacts are as follows:

Staff	Position
Hans Dopheide	Manager Production - Power
Glenn Suckling	Acting PCI Superintendent, Powerhouse
Tony Minards	Powerhouse Superintendent
Brett Cannop	Analyst Reporting Operations
Terrence Willetts	Powerhouse Operations Specialist

### 4.6 Key Documents and Other Information Sources

#### 4.6.1 Performance Audit

- Audit Guidelines: Electricity, Gas and Water Licences, August 2010
- BHP Billiton Worsley Alumina Pty Ltd Electricity Generating Licence (EGL 12), Version 4, issued 13<sup>th</sup> day of January 2011

- Approved, BHP Billiton Worsley Alumina Pty Ltd Electricity Generation Licence Audit and Asset Management Review Audit Plan (61/29798-August 2013)

#### 4.6.2 Asset Management Review

- Audit Guidelines: Electricity, Gas and Water Licences, August 2010
- BHP Billiton Worsley Alumina Pty Ltd Electricity Generating Licence (EGL 12), Version 4, issued 13<sup>th</sup> day of January 2011
- Approved, BHP Billiton Worsley Alumina Pty Ltd Electricity Generation Licence Audit and Asset Management Review Audit Plan (61/29798-August 2013)
- Organisation Design Protocol Integrated Conceptual Design – Functions
- 6 Months Energy Forecast.
- Life of Asset Replacement Capital Plan
- Capital Investment
- Risk Management
- Risk assessment
- Energy supply and consumption analysis
- Business Information Report
- 5 Year Plan Worsley – Final – 2014 to 2018
- Financial external Report
- Financial Internal Report
- Financial Policies
- Inspection Logs
- Risk Maintenance
- 1SAP Work Management
- Risk Registers
- Incident Register
- Maintenance reports
- Operation reports

#### 4.7 Audit/Review Team Members and Hours Utilised

Staff	Hours
Robert Ceic – Project Director	7
Alan Meagher – Lead Auditor	25
Pius Tang – Auditor	38
Nello Nigro – Audit Reviewer	10
Total	80

## 5. Performance Summary

### 5.1 Performance Audit

#### 5.1.1 Compliance Rating Scale

Compliance Status	Rating	Description of compliance
COMPLIANT	5	Compliant with no further action required to maintain compliance.
COMPLIANT	4	Compliant apart from minor or immaterial recommendations to improve the strength of internal controls to maintain compliance
COMPLIANT	3	Compliant with major or material recommendations to improve the strength of internal controls to maintain compliance.
NON-COMPLIANT	2	Does not meet minimum requirements.
SIGNIFICANTLY NON-COMPLIANT	1	Significant weaknesses and/or serious action required.
NOT APPLICABLE	N/A	Determined that the compliance obligation does not apply to the licensee's business operations.
NOT RATED	N/R	No relevant activity took place during the audit period; therefore it is not possible to assess compliance.

5.1.1 Performance Audit Compliance Summary

Table 5 Performance Audit Compliance Summary

Performance Operating Area		Operating Licence Reference	Consequence (1=minor, 2=moderate, 3=major)	Likelihood (A=likely, B=probable, C=unlikely)	Inherent Risk	Adequacy of existing controls (S=strong, M=moderate, W=weak)	Compliance Rating (5=Highest, 1=lowest, N/A = Not Applicable, N/R = Not Rated)					
Operating Areas						1	2	3	4	5	N/A	N/R
Services in designated areas	Schedule 1 Clause 2.1	1	C	Low	S					✓		
<b>Term</b>						1	2	3	4	5	N/A	N/R
Term	Clause 3.1	1	C	Low	M					✓		
<b>Fees</b>						1	2	3	4	5	N/A	N/R
Fees	Clause 4.1	1	C	Low	M					✓		
<b>Compliance</b>						1	2	3	4	5	N/A	N/R
Compliance to applicable legislation	Clause 5.1	2	C	Medium	M			✓				

Performance Operating Area	Operating Licence Reference	Consequence (1=minor, 2=moderate, 3=major)	Likelihood (A=likely, B=probable, C=unlikely)	Inherent Risk	Adequacy of existing controls (S=strong, M=moderate, W=weak)	Compliance Rating (5=Highest, 1=lowest, N/A = Not Applicable, N/R = Not Rated)							
<b>Transfer of licence</b>						1	2	3	4	5	N/A	N/R	
Transfer of licence	Clause 6.1										✓		
<b>Cancellation of licence</b>						1	2	3	4	5	N/A	N/R	
Cancellation of licence	Clause 7.1										✓		
<b>Surrender of licence</b>						1	2	3	4	5	N/A	N/R	
Surrender of licence	Clause 8.1										✓		
Licensee submission to authority actions if surrender of licence	Clause 8.2										✓		
Authority to publish if surrender of licence notice received	Clause 8.3										✓		
Effective date of licence surrender	Clause 8.4										✓		

Performance Operating Area		Operating Licence Reference	Consequence (1=minor, 2=moderate, 3=major)	Likelihood (A=likely, B=probable, C=unlikely)	Inherent Risk	Adequacy of existing controls (S=strong, M=moderate, W=weak)	1	2	3	4	5	Compliance Rating (5=Highest, 1=lowest, N/A = Not Applicable, N/R = Not Rated)	N/A	N/R
<b>Renewal of licence</b>							1	2	3	4	5	N/A	N/R	
Renewal of licence	Clause 9.1												✓	
<b>Amendment of licence on Application of the Licensee</b>							1	2	3	4	5	N/A	N/R	
Amendment of licence (Licensee)	Clause 10.1	1	C	Low	M						✓			
<b>Amendment of licence by the Authority</b>							1	2	3	4	5	N/A	N/R	
Amendment of licence (Authority)	Clause 11.1	1	C	Low	M						✓			
Written notice from Authority for any amendment of licence	Clause 11.2	1	C	Low	M						✓			
Substitution of existing licence	Clause 11.3	1	C	Low	M						✓			
Compliance of fees for amendments to licence.	Clause 11.4	1	C	Low	M						✓			
<b>Accounting records</b>							1	2	3	4	5	N/A	N/R	

Performance Operating Area		Operating Licence Reference	Consequence (1=minor, 2=moderate, 3=major)	Likelihood (A=likely, B=probable, C=unlikely)	Inherent Risk	Adequacy of existing controls (S=strong, M=moderate, W=weak)						Compliance Rating (5=Highest, 1=lowest, N/A = Not Applicable, N/R = Not Rated)		
Accounting records to comply with Australian Accounting Standards	Clause 12.1	1	C	Low	M						✓			
<b>Individual performance standards</b>						<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		<b>N/A</b>	<b>N/R</b>	
Individual performance standards in applicable legislation	Clause 13.1	1	C	Low	M						✓			
Authority prescribe individual performance standard	Clause 13.2	1	C	Low	M						✓			
Licensee submissions considerations in relation to prescribed individual performance standards imposed	Clause 13.3	1	C	Low	M						✓			
Approved performance standards set out in terms and conditions of licence	Clause 13.4	1	C	Low	M						✓			
<b>Performance Audits</b>						<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		<b>N/A</b>	<b>N/R</b>	





Performance Operating Area		Operating Licence Reference	Consequence (1=minor, 2=moderate, 3=major)	Likelihood (A=likely, B=probable, C=unlikely)	Inherent Risk	Adequacy of existing controls (S=strong, M=moderate, W=weak)	1	2	3	4	5	N/A	N/R
<b>Provision of information</b>							1	2	3	4	5	N/A	N/R
Provision of information	Clause 16.1	1	C	Low	M				✓				
<b>Publishing information</b>							1	2	3	4	5	N/A	N/R
The Authority may direct licensee to publish information	Clause 17.1	1	C	Low	M					✓			
Subject to clauses 17.3, licensee must publish information referred to in clause 17.1	Clause 17.2	1	C	Low	M					✓			
Licensee must conduct an asset management system review and provide the Authority a subsequent report every 24 months	Clause 17.3	1	C	Low	M					✓			
Review must comply with the Authority's standard guidelines dealing with the asset management review	Clause 17.4	1	C	Low	M					✓			

Performance Operating Area		Operating Licence Reference	Consequence (1=minor, 2=moderate, 3=major)	Likelihood (A=likely, B=probable, C=unlikely)	Inherent Risk	Adequacy of existing controls (S=strong, M=moderate, W=weak)	1	2	3	4	5	N/A	N/R
							Compliance Rating (5=Highest, 1=lowest, N/A = Not Applicable, N/R = Not Rated)						
<b>Notices</b>							1	2	3	4	5	N/A	N/R
Notices in writing	Clause 18.1	1	C	Low	M						✓		
Evidence of receipt of notices	Clause 18.2	1	C	Low	M					✓			
<b>Review of authority's decisions</b>							1	2	3	4	5	N/A	N/R
Review of authority's decisions	Clause 19.1	1	C	Low	M								✓
Review of authority's decisions	Clause 19.2												✓
<b>Asset management system</b>							1	2	3	4	5	N/A	N/R
The licensee must provide an asset management system	Clause 20.1	1	C	Low	M						✓		

Performance Operating Area		Operating Licence Reference	Consequence (1=minor, 2=moderate, 3=major)	Likelihood (A=likely, B=probable, C=unlikely)	Inherent Risk	Adequacy of existing controls (S=strong, M=moderate, W=weak)					Compliance Rating (5=Highest, 1=lowest, N/A = Not Applicable, N/R = Not Rated)		
The Authority must be notified of the asset management system	Clause 20.2	1	C	Low	M						✓		
Any material change to asset management system must be reported to the Authority	Clause 20.3	1	C	Low	M				✓				
Licensee must conduct an asset management system review and provide the Authority a subsequent report every 24 months	Clause 20.4	1	C	Low	M						✓		
Review must comply with the Authority's standard audit guidelines dealing with the asset management review	Clause 20.5	1	C	Low	M						✓		
Licensee may seek review of Authority's standard guidelines dealing with the review	Clause 20.6	1	C	Low	M						✓		
Independent expert must be approved by the Authority	Clause 20.7	1	C	Low	M						✓		

### 5.1.1 Observations and Recommendations

These field notes were compiled by Alan Meagher.

- Metering Code refers to the 2012 version unless specified.

Table 6 Operating Licence Audit Checklist

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
			<b>Operating Area</b> Clause 2.1 Schedule 1	<i>Is it in the correct operating area</i>	Review drawing (ERA-EL-108A)	Drawing sighted for Audit Review period 1/7/2010 to 30/06/2013	5	
			<b>Term</b> Clause 3.1	<i>This licence commences on the commencement date and continues until the earlier of:</i>  <i>a) the cancellation of the licence pursuant to clause 7 of the licence</i>  <i>b) the surrender of the licence pursuant to clause 8 of the licence; or</i>  <i>c) the expiry date</i>	Review Licence issue date and expiry date	EGL 12, Version 4, 13 January 2011 commencement date 30 June 2006. No additional clauses.  BHP Billiton Worsley Alumina P/L ABN 58 008 905 155, Collie WA 6225 Expires 29 June 2036.  13/01/2011 Electricity Lic Review 2010 amendment by substitution letter	5	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
						sighted		
105	Electricity Industry Act section 17(1)	2	<b>Fees</b> Clause 4.1	<i>The licensee must pay the applicable fees in accordance with the Regulations</i>	Observe receipt of payment  Review internal systems for generating reminders to pay fees.	Payment receipts and purchase orders sighted  System has recently been updated to flag the coming payment	4	See Post Audit Action Plan
106	Electricity Industry Act section 31(3)	NR	<b>Compliance</b> Clause 5.1	<i>A licensee must take reasonable steps to minimise the extent or duration of any interruption, suspension or restriction of the supply of electricity due to an accident, emergency, potential danger or other unavoidable cause.</i>	Check for compliance	The licence relies on the provision of steam to the refinery.  An AMS and SMS exist.  An industry experience manager, Manager Production - Power is engaged.  A comprehensive training regime is in place with new trainees accepted from known refinery staff.  Powerhouse operating philosophy sighted.	5	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
107	Electricity Industry Act section 41(6)	2	Clause 5.1	<i>A licensee must pay the costs of taking an interest in land or an easement over land.</i>	Check compliance	Entire plant footprint included in Worsley Refinery ownership	NR	
345	Electricity Industry Metering Code clause 3.3B	2	Clause 5.1	<i>A user who is aware of bi-directional flows at a metering point which was not previously subject to a bi-directional electricity flows or any changes in a customer's or user's circumstances in a metering point which will result in bi-directional electricity flows must notify the network operator within 2 business days.</i>	Check whether applicable and if applicable, check for compliance.	<p>The generator has a bi-directional flow arrangement in place 45/35 at the generator's discretion. Sighted</p> <p>Electricity trading agreement - Verve until March 2016 Sighted.</p> <p>Electricity transfer contract WP/WAPL expired in June 2013, executed July 2013. Sighted</p> <p>3 coal fired boilers and 4 steam turbines.</p> <p>Name plate: 110 MW (steam for refinery). 45/35 at generators discretion grid.</p>	5	
360	Electricity Industry	2	Clause 5.1	<i>A Code participant who becomes aware of an outage or malfunction</i>	Check whether applicable and if	No outages/malfunctions	NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
	Metering Code clause 3.11(3)			<i>of a metering installation must advise the network operator as soon as practicable.</i>	applicable, check for compliance.	noted during audit period.		
385	Electricity Industry Metering Code clause 3.27	2	Clause 5.1	<i>A person must not install a metering installation on a network unless the person is the network operator or a registered metering installation provider for the network operator doing the type of work authorised by its registration.</i>	Check whether applicable and if applicable, check for compliance.	All metering is installed and maintained by Western Power on Western Power property.	NR	
392	Electricity Industry Metering Code clause 4.4(1)	NR	Clause 5.1	<i>If there is a discrepancy between energy data held in a metering installation and data held in the metering database, the affected Code participants and the network operator must liaise together to determine the most appropriate way to resolve a discrepancy.</i>	Check whether applicable and if applicable, check for compliance.	Operator unaware of any discrepancies	NR	
393	Electricity Industry Metering Code clause 4.5(1)	NR	Clause 5.1	<i>A Code participant must not knowingly permit the registry to be materially inaccurate.</i>	Check whether applicable and if applicable, check for compliance.		NR	
394	Electricity Industry	2	Clause 5.1	<i>Subject to subclause 5.19(6), if a Code participant, other than a</i>	Check whether applicable and if		NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
	Metering Code clause 4.5(2)			<i>network operator, becomes aware of a change to, or an inaccuracy in, an item of standing data in the registry, then it must notify the network operator and provide details of the change or inaccuracy within the timeframes prescribed.</i>	applicable, check for compliance.			
409	Electricity Industry Metering Code clause 5.4(2)	2	Clause 5.1	<i>A user must, when reasonably requested by a network operator, assist the network operator to comply with the network operator's obligation under subclause 5.4(1).</i>	Check whether applicable and if applicable, check for compliance.	Distress issue on instruction may come from operator.  NIL known.	NR	
393#	Electricity Industry Metering Code 2005 clause 5.4(2)	2	Clause 5.1	<i>A user must, when reasonably requested by a network operator, use reasonable endeavours to assist the network operator to comply with the network operator's obligation under clause 5.4(1).</i>	Check whether applicable and if applicable, check for compliance.	Included in Agreement but no requirement has been raised in the audit period	5	
422	Electricity Industry Metering Code clause 5.16	2	Clause 5.1	<i>If a user collects or receives energy data from a metering installation then the user must provide the network operator with the energy data (in accordance</i>	Check whether applicable and if applicable, check for compliance.	Comes from network operator if at all.	NR	



Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
				<i>with the communication rules) within the timeframes prescribed</i>				
423	Electricity Industry Metering Code clause 5.17(1)	2	Clause 5.1	<i>A user must provide standing data and validated, and where necessary substituted or estimated, energy data to the user's customer to which that information relates where the user is required by an enactment or an agreement to do so for billing purposes or for the purpose of providing metering services to the customer</i>	Check whether applicable and if applicable, check for compliance.		N/A	
426	Electricity Industry Metering Code clause 5.18	2	Clause 5.1	<i>If a user collects or receives information regarding a change in the energisation status of a metering point then the user must provide the network operator with the prescribed information, including the stated attributes, within the timeframes prescribed.</i>	Check whether applicable and if applicable, check for compliance.		N/A	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
427	Electricity Industry Metering Code clause 5.19(1)	NR	Clause 5.1	<i>A user must, to the extent that it is able, collect and maintain a record of the prescribed information in relation to the site of each connection point with which the user is associated.</i>	Check whether applicable and if applicable, check for compliance.	One connection point	NR	
428	Electricity Industry Metering Code clause 5.19(2)	NR	Clause 5.1	<i>A user must, to the extent that it is able, collect and maintain a record of the prescribed information in relation to the site of each connection point with which the user is associated.</i>	Check whether applicable and if applicable, check for compliance.	One connection point only	NR	
429	Electricity Industry Metering Code clause 5.19(3)	2	Clause 5.1	<i>Subject to subclauses 5.19(3A) and 5.19(6), the user must, within 1 business day after becoming aware of any change in an attribute described in subclause 5.19(2), notify the network operator of the change.</i>	Check whether applicable and if applicable, check for compliance.		NR	
411#	Electricity Industry Metering Code 2005 clause 5.19(3)	2	Clause 5.1	<i>Subject to clause 5.19(4) and 5.19(6), the user must, within 1 business day after becoming aware of any change in an attribute described in clause 5.19(2) (or such other time as is specified in the applicable service</i>	Check whether applicable and if applicable, check for compliance.		NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
				<i>level agreement), notify the network operator of the change.</i>				
431	Electricity Industry Metering Code clause 5.19(6)	NR	Clause 5.1	<i>The user must use reasonable endeavours to ensure that it does not notify the network operator of a change in an attribute described in subclause 5.19(2) that results from the provision of standing data by the network operator to the user.</i>	Check whether applicable and if applicable, check for compliance.		NR	
414#	Electricity Industry Metering Code 2005 clause 5.19(6)	NR	Clause 5.1	<i>The user must use reasonable endeavours to ensure that it does not notify the network operator of a change in an attribute described in clause 5.19(2) that results from the provision of standing data by the network operator to the user.</i>	Check whether applicable and if applicable, check for compliance.		NR	
437	Electricity Industry Metering Code clause 5.21(5)	2	Clause 5.1	<i>A Code participant must not request a test or audit under subclause 5.21(1) unless the Code participant is a user and the test or audit relates to a time or times at which the user was the current user or the Code participant is the IMO.</i>	Check whether applicable and if applicable, check for compliance.	no action during audit period	NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
420#	Electricity Industry Metering Code 2005 clause 5.21(5)	2	Clause 5.1	<i>A Code participant must not request a test or audit under clause 5.21(1) unless:  (a) if the Code participant is a user — the test or audit relates to a time or times at which the user was the current user; or  (b) it is the IMO.</i>	Check whether applicable and if applicable, check for compliance.		N/A	
438	Electricity Industry Metering Code clause 5.21(6)	2	Clause 5.1	<i>A Code participant must not make a request under subclause 5.21(1) that is inconsistent with any access arrangement or agreement.</i>	Check whether applicable and if applicable, check for compliance.	no action during audit period	NR	
421#	Electricity Industry Metering Code 2005 clause 5.21(6)	2	Clause 5.1	<i>A Code participant must not make a request under clause 5.21(1) that is inconsistent with any access arrangement or agreement.</i>	Check whether applicable and if applicable, check for compliance.	no action during audit period	NR	
456	Electricity Industry Metering Code clause 5.27	2	Clause 5.1	<i>Upon request from a network operator, the current user for a connection point must provide the network operator with customer attribute information that it reasonably believes are missing</i>	Check whether applicable and if applicable, check for compliance.		NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
				<i>or incorrect within the timeframes prescribed</i>				
439#	Electricity Industry Metering Code 2005 clause 5.27	2	Clause 5.1	<p><i>Without limiting clauses 4.5 or 4.6, a network operator may, if it reasonably believes that one or more components of the customer attributes (but not the site attributes or address attributes) for a connection point:</i></p> <p><i>(a) are missing; or</i></p> <p><i>(b) are incorrect,</i></p> <p><i>request those current values from the current user, and the current user must provide the information requested in accordance with the communication rules within 2 business days after receiving the request (or such other time as is specified in the applicable service level agreement).</i></p>	Check whether applicable and if applicable, check for compliance.		NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
469	Electricity Industry Metering Code clause 6.1(2)	2	Clause 5.1	<i>A user must, in relation to a network on which it has an access contract, comply with the rules, procedures, agreements and criteria prescribed.</i>	Check whether applicable and if applicable, check for compliance.	No evidence of contravention of rules, procedures, agreements or prescribed criteria	NR	
472	Electricity Industry Metering Code clause 7.2(1)	2	Clause 5.1	<i>Code participants must use reasonable endeavours to ensure that they can send and receive a notice by post, facsimile and electronic communication and must notify the network operator of a telephone number for voice communication in connection with the Code</i>	Check whether applicable and if applicable, check for compliance.	<p>The site has telephone, fax, internet/email access and post office box address.</p> <p>The network operator is able to contact generator and obtain a number to contact by phone (Manager Production - Power or delegate).</p> <p>1 SAP NO 1 Request form.</p>	5	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
474	Electricity Industry Metering Code clause 7.2(4)	2	Clause 5.1	<i>If requested by a network operator with whom it has entered into an access contract, the Code participant must notify its contact details to a network operator within 3 business days after the request.</i>	Check whether applicable and if applicable, check for compliance.	A long standing agreement is in force.	NR	
475	Electricity Industry Metering Code clause 7.2(5)	2	Clause 5.1	<i>A Code participant must notify any affected network operator of any change to the contact details it notified to the network operator under subclause 7.2(4) at least 3 business days before the change takes effect.</i>	Check whether applicable and if applicable, check for compliance.	No change to details during the audit period	NR	
451#	Electricity Industry Metering Code 2005 clause 7.2(5)	2	Clause 5.1	<i>A Code participant must notify any affected network operator of any change to the contact details it notified to the network operator under clause 7.2(4) at least 3 business days before the change takes effect.</i>	Check whether applicable and if applicable, check for compliance.	No change to details during the audit period	NR	
476	Electricity Industry Metering Code clause	2	Clause 5.1	<i>A Code participant must subject to subclauses 5.17 A and 7.6 not disclose, or permit the disclosure of, confidential information provided to it under or in</i>	Check whether applicable and if applicable, check for	BHPB Worsley has confidentiality protocols in place. Sighted	5	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
	7.5			<i>connection with the Code and may only use or reproduce confidential information for the purpose for which it was disclosed or another purpose contemplated by the Code.</i>	compliance.			
452#	Electricity Industry Metering Code 2005 clause 7.5	2	Clause 5.1	<i>A Code participant must, subject to clause 7.6: (a) not disclose, or permit the disclosure of, confidential information provided to it under or in connection with this Code; and</i>	Check whether applicable and if applicable, check for compliance.	BHPB Worsley has confidentiality protocols in place. Sighted	5	
				<i>(b) only use or reproduce confidential information for the purpose for which it was disclosed or another purpose contemplated by this Code.</i>	Check whether applicable and if applicable, check for compliance.	BHPB Worsley has confidentiality protocols in place. Sighted	5	



Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
477	Electricity Industry Metering Code clause 7.6(1)	2	Clause 5.1	<i>A Code participant must disclose or permit the disclosure of confidential information that is required to be disclosed by the Code.</i>	Check whether applicable and if applicable, check for compliance.	Sighted non-compliance reports to ERA as per ERA guidelines:  11/12 (10 September 2012)  12/13 (21 August 2013)  10/11 not sighted  The auditor was unable to confirm ERA receipt date of these reports so it was not determined if they were submitted within the appropriate time frame .	3	
478	Electricity Industry Metering Code clause 8.1(1)	NR	Clause 5.1	<i>If any dispute arises between any Code participants then (subject to subclause 8.2(3)) representatives of disputing parties must meet within 5 business days after a notice given by a disputing party to the other disputing parties and attempt to resolve the dispute by negotiations in good faith.</i>	Check whether applicable and if applicable, check for compliance.	No disputes identified for audit period.	NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
454#	Electricity Industry Metering Code 2005 clause 8.1(1)	NR	Clause 5.1	<i>If any dispute arises between any Code participants other than the Authority ("<b>disputing parties</b>"), then (subject to clause 8.2(3)) representatives of the disputing parties must meet within 5 business days after a notice given by a disputing party to the other disputing parties and attempt to resolve the dispute by negotiations in good faith ("<b>representative negotiations</b>")</i>	Check whether applicable and if applicable, check for compliance.	As above	NR	
479	Electricity Industry Metering Code clause 8.1(2)	NR	Clause 5.1	<i>If a dispute is not resolved within 10 business days after the dispute is referred to representative negotiations, the disputing parties must refer the dispute to a senior management officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.</i>	Check whether applicable and if applicable, check for compliance.	As above	NR	
480	Electricity Industry Metering Code clause 8.1(3)	NR	Clause 5.1	<i>If the dispute is not resolved within 10 business days after the dispute is referred to senior management negotiations, the disputing parties must refer the dispute to the</i>	Check whether applicable and if applicable, check for compliance.		N/A	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
				<i>senior executive officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.</i>				
481	Electricity Industry Metering Code clause 8.1(4)	2	Clause 5.1	<i>If the dispute is resolved by representative negotiations, senior management negotiations or CEO negotiations, the disputing parties must prepare a written and signed record of the resolution and adhere to the resolution.</i>	Check whether applicable and if applicable, check for compliance.		N/A	
482	Electricity Industry Metering Code clause 8.3(2)	NR	Clause 5.1	<i>The disputing parties must at all times conduct themselves in a manner which is directed towards achieving the objective in subclause 8.3(1).</i>	Check whether applicable and if applicable, check for compliance.		N/A	
			<b>Transfer of Licence</b> Clause 6.1	<i>This licence may be transferred only in accordance with the Act.</i>	Compare Licence issued to names between last audit and now through interview.	No transfers of name during the audit period.	NR	
			<b>Cancellation of Licence</b>	<i>This licence may be cancelled only in accordance with the Act.</i>	Check evidence of validity of	No cancellation of licence during the audit	NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
			Clause 7.1		Licence. Enquire through interview.	period.		
			<b>Surrender of Licence</b> Clause 8.1	<i>This licence may be surrendered pursuant to this clause 8.</i>	Check evidence of validity of Licence. Enquire through interview.	Licence not surrendered during the audit period.	NR	
			Clause 8.2	<i>(a) set out the date that the licensee wishes the surrender of the licence to be effective; and</i>	Check evidence of validity of Licence. Enquire through interview.	No intention to surrender licence.	N/A	
				<i>(b) set out the reasons why the licensee wishes to surrender the licence, including the reasons why it would not be contrary to the public interest for the surrender of the licence to be effective on the date set out in the notice.</i>			N/A	
			Clause 8.3	<i>Upon receipt of the notice from the licensee pursuant to clause 8.2, the Authority will publish the notice.</i>	No action required		N/A	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
			Clause 8.4	<i>Notwithstanding clause 8.2, the surrender of the licence will only take effect on the later of the day that: (a) the Authority publishes a notice of the surrender in the Western Australian Government Gazette, such date to be at the discretion of the Authority; and</i>	Check evidence of validity of Licence. Enquire through interview.	Licence date validated/sighted.	5	
				<i>(b) the licensee hands back the licence to the Authority.</i>		As above	5	
			Clause 8.5	<i>The licensee will not be entitled to a refund of any fees by the Authority.</i>	Check evidence of validity of Licence. Enquire through interview.		NR	
			<b>Renewal of Licence</b> Clause 9.1	<i>This licence may be reviewed only in accordance with the act.</i>	Check evidence of validity of Licence. Enquire through interview.		NR	
			<b>Amendment of Licence on Application of the Licence</b>	<i>The Licensee may apply to the Authority to amend the licence in accordance with the Act.</i>	Check for any Licence amendment request through interview.	Licence amended by substitution during audit period by ERA. Substituted Licence 12, to Licence 12 version 4.	5	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
			Clause 10.1		Sight current Licence for amendments.	New licence dated 13 January 2011 until 29 June 2036.		
			<b>Amendment of Licence by the Authority</b> Clause 11.1	<i>Subject to any applicable legislation, the Authority may amend the licence at any time in accordance with this clause.</i>	Check for evidence of any amendment to the License since the last audit. List out all amendments if any.	As above.  In accordance with applicable legislation and following the outcome of the completed Review of Electricity Licences 2010	5	
			Clause 11.2	<i>Before amending the licence under clause 11.1, the Authority must:</i>  <i>(a) provide the licensee with written notice of the proposed amendments under consideration by the Authority;</i>	If amendments happen during this audit period, check for the written notice from Authority and correspondence from WAPL.	See 11.1	5	
				<i>(b) allow 15 business days for the licensee to make submissions on the proposed amendments; and</i>	If amendments happen during this audit period, check for the written notice from Authority		NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
					and correspondence from WAPL			
				<i>(c) take into consideration those submissions.</i>	If amendments happen during this audit period, check for the written notice from Authority and correspondence from WAPL.		NR	
			Clause 11.3	<i>This clause also applies to the substitution of the existing licence.</i>	Check for any substitution to the existing License.	See 11.1	5	
			Clause 11.4	<i>For avoidance of doubt, the licensee will not have to pay a fee for amendments under clause 11.</i>	Interview the Licence holder.	No fee payments for amendments evidenced	NR	
119	Electricity Industry Act section 11	2	<b>Accounting Records</b> Clause 12.1	<i>The licensee and any related body corporate must maintain accounting records that comply with standards issued by the Australian Accounting Standards Board or equivalent International</i>	Check accounting records and whether audited by a qualified accountant to an	BHPB Accounts Reports to IFRS and amendments to AIFRS	5	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
				<i>Accounting Standards.</i>	approved standard.  Inspect a sample of accounts.			
			<b>Individual Performance Standards</b> Clause 13.1	<i>Performance standards are contained in applicable legislation</i>	Check any individual performance standards specified			
			Clause 13.2	<i>The Authority may prescribe individual performance standards in relation to the licensee of its obligations under this licence or the applicable legislation.</i>	Check Licence schedules for individual performance standard	There are no Authority prescribed individual performance standards added to the licence except those required by applicable legislation.	NR	
			Clause 13.3	<i>Before approving any individual performance standards under this clause, the Authority will:</i>  <i>a) provide the licensee with a copy of the proposed individual performance standards;</i>	Check for any submissions		NR	
				<i>b) allow 15 business days for the</i>			NR	



Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
				<i>licensee to make submissions on the proposed individual performance standards; and</i>				
				<i>c) take into consideration those submissions.</i>			NR	
120	Electricity Industry Act section 11	2	Clause 13.4	<i>Once approved by the Authority, the individual performance standards are included as additional terms and conditions to this licence. A licensee must comply with any individual performance standards prescribed by the Authority.</i>	Check that performance standards are complied with.		NR	
101	Electricity Industry Act section 13(1)	NR	<b>Performance Audit</b> Clause 14.1	<i>The licensee must, unless otherwise notified in writing by the Authority, provide the Authority with a performance audit within 24 months after the commencement date, and every 24 months thereafter.</i>	Check for compliance to this clause on audits carried out.	Last performance audit conducted in 2010 with report submitted to ERA. (Approximately 19 October 2010).  ERA approval of 36 months to next audit.	5	
121	Electricity Industry Act section 11	2	Clause 14.2	<i>The licensee must comply, and must require the licensee's auditor to comply, with the Authority's standard audit guidelines.</i>	Audit compliance to the audit guidelines	Licensee's auditor is ERA approved to provide Audit Services to ERA requirements.	5	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
			Clause 14.3	<i>The licensee may seek a review of any of the requirements of the Authority's standard audit guidelines in accordance with clause 19.1.</i>	Check for any review to the standard audit guidelines.	No reviews of the standard audit guidelines requested during the audit period.	NR	
			Clause 14.4	<i>The performance audit must be conducted by an independent auditor approved by the Authority. If the licensee fails to nominate an auditor within one month of the date that the performance audit was due, or the auditor nominated by the licensee is rejected on two successive occasions by the Authority, the Authority may choose an independent auditor to conduct the performance audit.</i>	Check for approval of auditor appointment by the authority.	Letter sighted from ERA approving the lead auditor to lead the performance audit.	5	
123	Electricity Industry Act section 11	2	<b>Reporting a Change in Circumstances</b> Clause 15.1	<i>The licensee must report to the Authority:  (a) if the licensee is under external administration as defined by the Corporations Act 2001 (Cwlth), within 2 business days of such external administration occurring; or</i>		Licensee not under external administration during the audit period.	NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
				<p><i>(b) if the licensee:</i></p> <p><i>(i) experiences a change in the licensee's corporate, financial or technical circumstances upon which this licence was granted; and</i></p>	<p>(i) Check for whether any external administration occurring.</p>	<p>No changes within the audit period.</p>	NR	
				<p><i>(ii) the change may materially affect the licensee's ability to perform its obligations under this licence, within 10 business days of the change occurring; or</i></p>	<p>(ii) Check for any change in the corporate, financial or technical circumstances. If any, check for compliance of informing within 10 days.</p>		NR	
				<p><i>(c) if the:</i></p> <p><i>(i) licensee's name;</i></p> <p><i>(ii) licensee's ABN;</i></p> <p><i>(iii) licensee's address;</i></p> <p><i>(iv) description of the generating works; or</i></p> <p><i>(v) name plate capacity of the generating works, change, within</i></p>	<p>(iii) Check for change in licensee's name, ABN, address, generating works description and nameplate capacity. If any, check for</p>	<p>No changes in audit period.</p>	NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
				<i>10 business days of the change occurring.</i>	compliance of informing within 10 days.			
124	Electricity Industry Act section 11	2	<b>Provision of Information</b> Clause 16.1	<i>The licensee must provide to the Authority any information that the Authority may require in connection with its functions under the Act in the time, manner and form specified by the Authority.</i>	Check through interview any request from Authority for information and response as well as confirm that annual compliance reports to the Authority were submitted by the due date.	Annual compliance reports submitted.  2010, 2011, and 2013. The 2012 Annual Compliance report was not sighted.  Performance Compliance Reports 2008, 2010 and 2013 were sighted.	3	See Post Audit Action plan
125	Electricity Industry Act section 11	2	<b>Publishing Information</b> Clause 17.1	<i>The Authority may direct the licensee to publish any information within a specified timeframe it considers relevant in connection with the licensee or the performance by the licensee of its obligations under this licence.</i>	Review if this process has been required during the audit period.	No direction to publish during the audit period	NR	
125	Electricity Industry Act	2	Clause 17.2	<i>Subject to clause 17.3, the licensee must publish the</i>	Review if this process has	No direction to publish during the audit period	NR	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
	section 11			<i>information referred to in clause 17.1</i>	been required during the audit period.			
126	Electricity Industry Act section 11	2	<b>Notices</b> Clause 18.1	<i>Unless otherwise specified, all notices must be in writing.</i>	Review if this process has been required during the audit period.		NR	
			Clause 19.1	<i>Removed from Audit at ERA direction</i>			N/A	
102	Electricity Industry Act section 14(1)(a)	NR	<b>Asset Management System</b> Clause 20.1	<i>The licensee must provide for, an asset management system in respect of the licensee's assets.</i>	Check the existence of asset management system.	Asset Management System sighted electronically set up on SAP system	5	
103	Electricity Industry Act section 14(1)(b)	2	Clause 20.2	<i>The licensee must notify the Authority of the details of the asset management system within 5 business days from the later of:</i> <i>(a) The commencement date; and</i>	Check for compliance.	AMS in operation prior to audit period	NR	
				<i>(b) The completion of construction of the generating works.</i>		AMS in operation prior to audit period	NR	
103	Electricity	2	Clause 20.3	<i>The licensee must notify the</i>	Check for	No substantial changes	5	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
	Industry Act section 14(1)(b)			<i>Authority of any substantial change to the asset management system within 10 business days of such change.</i>	compliance on the asset management system version submitted to date. Note if any changes have occurred and if subsequence notice of change has been forwarded to authority in a timely manner.	noted		
104	Electricity Industry Act section 14(1)c	NR	Clause 20.4	<i>The licensee must provide the Authority with a report by an Independent expert, acceptable to the Authority, as to the effectiveness of the asset management system not less than once in every period of 24 months calculated from the commencement date (or any longer period that the Authority allows by notice in writing).</i>	Check for compliance for the last report	This audit covers the three year period (granted by ERA instead of 2 year timeframe) and includes an asset management review	5	
122	Electricity Industry Act	2	Clause 20.5	<i>The licensee must comply, and must require the licensee's expert</i>	Confirm that the audit -guidelines	The auditor is approved to conduct these audits	5	

Electricity Compliance Manual No	*Obligation under Condition	Type	Licence Clause or Schedule	Licence Obligation	Audit Actions	Findings	Compliance Scale	Recommended Action (s)
	section 11			<i>to comply, with the Authority's standard audit guidelines.</i>	have been met for this audit.	by the ERA. ERA Letter sighted		

# Refers to Metering Code compliance number in the 2011 Manual

## 5.1 Asset Management Review

Table 7 Asset Management Process and Policy Definition Adequacy Ratings

Rating	Description	Criteria
A	Adequately defined	<ul style="list-style-type: none"> <li>Processes and policies are documented.</li> <li>Processes and policies adequately document the required performance of the assets.</li> <li>Processes and policies are subject to regular reviews, and updated where necessary.</li> <li>The asset management information system(s) are adequate in relation to the assets that are being managed.</li> </ul>
B	Requires some improvement	<ul style="list-style-type: none"> <li>Process and policy documentation requires improvement.</li> <li>Processes and policies do not adequately document the required performance of the assets.</li> <li>Reviews of processes and policies are not conducted regularly enough.</li> <li>The asset management information system(s) require minor improvements (taking into consideration the assets that are being managed).</li> </ul>
C	Requires significant improvement	<ul style="list-style-type: none"> <li>Process and policy documentation is incomplete or requires significant improvement.</li> <li>Processes and policies do not document the required performance of the assets.</li> <li>Processes and policies are significantly out of date.</li> <li>The asset management information system(s) require significant improvements (taking into consideration the assets that are being managed).</li> </ul>
D	Inadequate	<ul style="list-style-type: none"> <li>Processes and policies are not documented.</li> <li>The asset management information system(s) is not fit for purpose (taking into consideration the assets that are being managed).</li> </ul>

Table 8 Asset Management Performance Ratings

Rating	Description	Criteria
1	Performing effectively	<ul style="list-style-type: none"> <li>The performance of the process meets or exceeds the required levels of performance.</li> <li>Process effectiveness is regularly assessed and corrective action taken where necessary.</li> </ul>



Rating	Description	Criteria
2	Opportunity for improvement	<ul style="list-style-type: none"> <li>The performance of the process requires some improvement to meet the required level.</li> <li>Process effectiveness reviews are not performed regularly enough.</li> <li>Process improvement opportunities are not actioned.</li> </ul>
3	Corrective action required	<ul style="list-style-type: none"> <li>The performance of the process requires significant improvement to meet the required level.</li> <li>Process effectiveness reviews are performed irregularly, or not at all.</li> <li>Process improvement opportunities are not actioned.</li> </ul>
4	Serious Action required	<ul style="list-style-type: none"> <li>Process is not performed, or the performance is so poor that the process is considered to be ineffective.</li> </ul>

Table 9 Asset Management Effectiveness Summary

ASSET MANAGEMENT SYSTEM	Asset Management process and policy definition adequacy rating	Asset Management performance rating
1. Asset planning	<b>A</b>	<b>1</b>
1.1	A	2
1.2	A	1
1.3	A	1
1.4	A	1
1.5	A	1
1.6	A	1
1.7	A	1
1.8	A	1
1.9	A	1
2. Asset creation/ acquisition	<b>A</b>	<b>1</b>
2.1	A	1
2.2	A	1
2.3	A	1
2.4	Not rated	Not rated
2.5	A	2

ASSET MANAGEMENT SYSTEM	Asset Management process and policy definition adequacy rating	Asset Management performance rating
3. Asset disposal	<b>A</b>	<b>1</b>
3.1	A	1
3.2	A	1
3.3	A	1
3.4	A	1
4. Environmental analysis	<b>A</b>	<b>1</b>
4.1	A	1
4.2	A	1
4.3	A	2
4.4	A	1
5. Asset operations	<b>A</b>	<b>1</b>
5.1	A	1
5.2	A	1
5.3	A	1
5.4	A	1
5.5	A	1
5.6	A	1
5.7	Not rated	Not rated
5.8	A	1
6. Asset maintenance	<b>A</b>	<b>1</b>
6.1	A	1
6.2	A	1
6.3	A	1
6.4	A	1
6.5	A	1
6.6	A	1
6.7	A	1

ASSET MANAGEMENT SYSTEM	Asset Management process and policy definition adequacy rating	Asset Management performance rating
7. Asset Management Information System	<b>A</b>	<b>1</b>
7.1	A	1
7.2	A	1
7.3	A	1
7.4	A	1
7.5	A	1
7.6	A	1
7.7	A	1
8. Risk Management	<b>A</b>	<b>1</b>
8.1	A	1
8.2	A	1
8.3	A	1
9. Contingency planning	<b>A</b>	<b>1</b>
9.1	A	1
9.2	A	1
10. Financial planning	<b>A</b>	<b>1</b>
10.1	A	1
10.2	A	1
10.3	A	1
10.4	A	1
10.5	A	1
10.6	A	1
11. Capital expenditure planning	<b>A</b>	<b>1</b>
11.1	A	1
11.2	A	1
11.3	A	1
11.4	A	1

ASSET MANAGEMENT SYSTEM	Asset Management process and policy definition adequacy rating	Asset Management performance rating
12. Review of AMS	<b>B</b>	<b>2</b>
12.1	A	1
12.2	B	2

### 5.1.1 Observations and Recommendations

The licenced generation plant comprises three coal-fired boilers and four steam turbines with a total capacity of 110 MW. The facility also includes other supporting plant such as water treatment unit, coal unloading, coal storage and forwarding equipment required for effective operation. The plant operates on base load to meet the demands of the Alumina process. All excess electrical power is exported into the electricity grid through a 55 km of 66 kV transmission lines.

Field notes are compiled by Pius Tang and reviewed by Alan Meagher.

**Table 10 Asset Management Review Field Notes**

<b>1. Asset Planning</b>				
<b>Key process:</b> Asset planning strategies are focussed on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price).				
<b>Outcome:</b> Integration of asset strategies into operational or business plans will establish a framework for existing and new assets to be effectively utilised and their service potential optimised				
<b>Review approach</b>				
<ul style="list-style-type: none"> <li>Assess the adequacy of the asset planning process.</li> <li>Assess the adequacy of the asset management plan.</li> <li>Assess whether the asset management plan is up to date and implemented in practice.</li> <li>Assess whether the plan clearly assigns responsibilities and whether these have been applied in practice.</li> </ul>				
Effectiveness Criteria	Performance	Adequacy Ratings	Comments	Recommendations
1.1 <i>Does the planning process and objectives reflect the need of all stakeholders and is it integrated with business planning?</i>	A	2	WAPL power plant operates on a three year plan base on a 5 years Alumina production forecast. This plan is done dependent on the Alumina production as they dictate the amount of steam and electricity that need to be produced. The electricity production is not dependent on the electricity market.	WAPL to formalise an isolated consolidated asset plan for the power plant. A reporting system is to be established to measure and monitor actual against the plans.

1.2 <i>Have service levels been defined?</i>	A	1	The power plant primary objective is to supply steam for the Alumina plant operation. The requirements are clearly defined in the Organisation Design Protocol with KPIs set. The KPIs are displayed in the powerhouse control room. These KPIs are continued to be monitored and reported.	
1.3 <i>Have non-asset options (e.g. demand management) been considered.</i>	A	1	WAPL has an energy group monitoring the demand management. WAPL has a strict asset acquiring/replacement process which utilises business case considerations prior to any asset acquisitions.	
1.4 <i>Have the lifecycle costs of owning and operating assets been assessed?</i>	A	1	The lifecycle costs of owning and operating the assets are established in the Life of Asset Replacement Capital Plan and capital investment policy.	
1.5 <i>Have funding options been evaluated?</i>	A	1	The funding for its Capex and Opex are under WAPL's business plans. There are no plans for any extension.	
1.6 <i>Are the costings justified and have the cost drivers been identified?</i>	A	1	All costs are justified through the yearly budgeting process and business plans. All costs are monitored and cost drivers are identified.	
1.7 <i>Have the likelihood and consequences of asset failure been predicted?</i>	A	1	The power plant has two groups namely, Process Control Improvement and Maintenance Analysis Improvement to continually monitor the assets. Risk principles are applied to the analysis including consequence and risk management.	
1.8 <i>Are the plans being regularly reviewed and updated?</i>	A	1	The performance of the plant is being monitored and reviewed through weekly and monthly reports.	

1.9 Is the capability of the plant adequate to meet future demand?	A	1	The power plant known as 110 is not adequate to meet the full demand for the Alumina plant. However, there are another two other plant known as 111 and 112 under different generation licences serving the Alumina plant.	
<b>2. Asset Creation and Acquisition</b>				
<b>Key process:</b> Asset creation/acquisition means the provision or improvement of an asset where the outlay can be expected to provide benefits beyond the year of outlay.				
<b>Outcome:</b> A more economic, efficient and cost effective asset acquisition framework which will reduce demand for new assets, lower service costs and improve service delivery.				
<b>Review approach</b>				
<ul style="list-style-type: none"> <li>Assess the adequacy of policies and procedures covering the creation and acquisition of assets.</li> <li>Select a sample of creations/acquisitions over the review period and confirm that adequate procedures have been followed and actual costs are as predicted.</li> </ul>				
Effectiveness Criteria	Performance	Adequacy Ratings	Comments	Recommendations
2.1 Are full project evaluations being undertaken for new assets, including comparative assessment of non-asset solutions?	A	1	WAPL utilise a procedure called Life of Asset Replacement Capital Plan to conduct capital project evaluation process. There is no major asset creation during the audit period as the additional generation assets are covered under a separate licence. However, all improvement and replacement projects consideration passes through a rigid risk management process and justification which is strongly tied to the Alumina Plant.	
2.2 Do evaluations include all life-cycle costs?	A	1	As the power plant is link to the operation of the Alumina Plant, the plant will be maintained in accordance to the Alumina Plant requirement. The plan is consolidated into the Alumina 5 year plan.	
2.3 Do projects reflect sound engineering and business decisions?	A	1	All business cases are scrutinised through Life of Asset Replacement Capital Plan guidelines. They are also analysed through risk and business plans of the Alumina Plant. There is no asset creation during the audit period.	
2.4 Are the commissioning tests documented and completed?	Not rated	Not rated	There is no new asset commissioning test during the audit period.	

2.5 Have the ongoing legal/environmental/safety obligations of the asset owner been assigned and understood?	A	2	WAPL has a group which manages the responsibility for ensuring all legal /environment /safety obligations are met. The power plant is operated under the Mines Act. WAPL site is certified under AS/NZS ISO 14001:2004	WAPL to develop a compliance manual to track its obligations.
<b>3. Asset Disposal</b>				
<p><b>Key process:</b> Effective asset disposal frameworks incorporate consideration of alternatives for the disposal of surplus, obsolete, underperforming or unserviceable assets. Alternatives are evaluated in cost benefit terms.</p> <p><b>Outcome:</b> Effective management of the disposal process will minimise holdings of surplus and underperforming assets and will lower service costs.</p>				
<p><b>Review approach</b></p> <ul style="list-style-type: none"> <li>Assess the adequacy of policies and procedures covering the identification of underperforming assets, disposal of assets and replacement strategy.</li> <li>Determine whether a regular review of the usefulness of assets is performed.</li> <li>Select a sample of disposals over the review period and confirm that adequate procedures have been followed.</li> </ul>				
<b>Effectiveness Criteria</b>	<b>Performance</b>	<b>Adequacy Ratings</b>	<b>Comments</b>	<b>Recommendations</b>
3.1 Are under-utilised and under-performing assets identified as part of a regular systematic review process?	A	1	WAPL has developed a group known as Process Control Improvement which monitors the performance of the asset. Any underperforming assets identified are further assessed by the maintenance analysis improvement group.	



3.2 <i>Are the reasons for under-utilisation or poor performance critically examined and corrective action or disposal undertaken?</i>	A	1	The reasons for under-utilisation or poor performance assets are examined and subject to scrutiny against failure risk and business financial risk.	
3.3 <i>Are disposal alternatives evaluated?</i>	A	1	There is no disposal during the audit period. However, WAPL do have procedures as outline in the Life of Asset Replacement Capital Plan.	
3.4 <i>Is there a replacement strategy for assets?</i>	A	1	The Life of Asset Replacement Capital Plan outlines the strategy.	
<b>4. Environmental Analysis</b>				
<b>Key process:</b> Environmental analysis examines the asset system environment and assesses all external factors affecting the asset system.				
<b>Outcome:</b> The asset management system regularly assesses external opportunities and threats and takes corrective action to maintain performance requirements.				
<b>Review approach</b>				
<ul style="list-style-type: none"> <li>• Review achievement of performance and service standards over the audit period.</li> <li>• Investigate any breaches and assess corrective action taken.</li> <li>• Review the adequacy of reporting and monitoring tools.</li> </ul>				

Effectiveness Criteria	Performance	Adequacy Ratings	Comments	Recommendations
4.1 Are opportunities and threats in the system environment assessed?	A	1	WAPL constantly considers threats such as carbon tax, export trading enterprise, loss of coal supply, etc. WAPL utilised a risk based system to assess these opportunities and threats in the system environment. This is regularly monitored. External issues such as coal supply are also assessed with mitigating measures of stocking up to 6 months.	
4.2 Are Performance Standards (availability of service, capacity, continuity, emergency response etc.) measured and achieved?	A	1	No known aspects of environmental issues are present during the audit period. WAPL carry out emissions and environmental monitoring. All other KPIs are routinely monitored through the daily, weekly and monthly report. The daily report includes steam production rate and cost.	
4.3 Is there compliance with statutory and regulatory requirements?	A	2	WAPL has maintained the ISO-14001 for the site. All compliance is monitored. There was no known non-compliance during the audit period.	The Licensee is recommended for WAPL Power Plant to establish a consolidated compliance manual to track all these compliance.
4.4 Have customer service levels been achieved?	A	1	The power plant has met all the requirements from the Alumina Plant. This is monitored through the production loss report from the Alumina Refinery.	
<b>5. Asset Operations</b>				
<b>Key process:</b> Operations functions relate to the day-to-day running of assets and directly affect service levels and costs.				
<b>Outcome:</b> Operations plans adequately document the processes and knowledge of staff in the operation of assets so that service levels can be consistently achieved.				
<b>Review approach</b>				
<ul style="list-style-type: none"> <li>Assess the adequacy of policies and procedures covering operations functions</li> <li>Assess the adequacy of staff resourcing and training</li> <li>Confirm the policies and procedures have been followed during the review period by testing of asset register, observation of operational procedures, analysis of costs, etc.</li> <li>Assess the significance of exceptions identified and whether adequate corrective action has been taken.</li> </ul>				

Effectiveness Criteria	Performance	Adequacy Ratings	Comments	Recommendations
5.1 Are the operational policies and procedures documented and do the link to the required service levels?	A	1	WAPL operates the power plant as per the operational policies, procedures and guidelines defined. These are routinely monitored.	
5.2 Is risk management applied to prioritise operations tasks?	A	1	The asset operation and maintenance is through predominantly risk based assessment. The plant operation is still consistent with the OEM's recommendation.	
5.3 Are assets documented in an Asset Register including asset type, location, material, plans of components, an assessment assets' physical/structural condition and accounting data?	A	1	All the plant assets are registered in the IT system. The IT system used is the enterprise system 1SAP R3 and will be upgraded to R4 soon. The system records asset identification, details, assessment, and O & M among other information.	
5.4 Are operational costs measured and monitored?	A	1	All operational costs are measured and monitored.	
5.5 Are staff receiving training commensurate with their responsibilities?	A	1	WAPL has a learning system which maintains records of staff operational and statutory training. All training commensurate with the responsibilities of the staff. One change is that staff are now allowed to be trained outside their responsibilities for personal development.	
5.6 Is the cogeneration facility operations able to provide a reliable service to customers?	A	1	The facility has provided reliable service to the Alumina plant.	

5.7 Where the Licensee contracts a third party to manage the cogeneration facility, does the Licensee effectively monitor the performance of the third party?	Not rated	Not rated	The Licensee operates the power plant.	
5.8 Is the current staffing arrangements and responsibilities adequate for effective asset operations?	A	1	The current staffing is sufficient as confirmed.	
<b>6. Asset Maintenance</b>				
<b>Key process:</b> Maintenance functions relate to the upkeep of assets and directly affect service levels and costs.				
<b>Outcome:</b> Maintenance plans cover the scheduling and resourcing of the maintenance tasks so that work can be done on time and on cost.				
<b>Review approach</b>				
<ul style="list-style-type: none"> <li>Assess the adequacy of policies and procedures covering maintenance functions</li> <li>Confirm the policies and procedures have been followed during the review period by testing of maintenance schedules, analyses of cost etc.</li> <li>Assess the significance of exceptions identified and whether adequate corrective action has been taken.</li> </ul>				
<b>Effectiveness Criteria</b>	<b>Performance</b>	<b>Adequacy Ratings</b>	<b>Comments</b>	<b>Recommendations</b>
6.1 Have the maintenance policies and procedures been documented and linked to service levels required.	A	1	WAPL operates a fully functioning AMS with maintenance strategies defined in the 1SAP. All the service standards are defined and monitored. The policies, procedures and guidelines are defined and recorded in the 1SAP.	
6.2 Are regular inspections undertaken of asset performance and condition?	A	1	The asset has been inspected as per manufacturer's recommendation and through maintenance experience developed over the years. Regular inspections are carried out in the form of daily, weekly, monthly and quarterly checklist activities which was sighted. WAPL has a proactive asset management approach.	

6.3 <i>Have the maintenance plans (emergency, corrective and preventative) been documented and completed on schedule.</i>	A	1	Maintenance plans are documented and completed as scheduled through prioritisation registered in the 1SAP.	
6.4 <i>Are the failures analysed and operational/maintenance plans adjusted where necessary?</i>	A	1	WAPL has formed a group known as Process Control Improvement which monitors the performance of the asset. Any failures identified are further assessed by the maintenance analysis improvement group. This results in making adjustments as necessary.	
6.5 <i>Has risk management been applied to prioritise maintenance tasks?</i>	A	1	The Plant is required by WAPL internal procedure to compile and review annually the risks associated with the operation. Preventative maintenance tasks are set to a frequency related to legal/statutory obligations, frequency of failure or preventative schedules. Any engineering changes are to be risk assessed before submission for approval. Changes to maintenance schedules must be risk assessed to determine safety impact and equipment risk	
6.6 <i>Are the maintenance costs measured and monitored?</i>	A	1	All maintenance cost are monitored through the 1SAP system and monthly report.	
6.7 <i>Is the current staffing arrangements and responsibilities adequate for effective asset maintenance?</i>	A	1	The present staffing is sufficient to meet the obligations to the Alumina Refinery.	

## 7. Asset Management Information System

**Key process:** An asset management information system is a combination of processes, data and software that support the asset management functions.

**Outcome:** The asset management information system provides authorised, complete and accurate information for the day to date running of the asset management system. The focus of the review is the accuracy of performance information used by the licensee to monitor and report on service standards.

### Review approach

- Assess the adequacy of policies and procedures covering the general control and security of the computer systems used to provide management information on service

standards/licence obligations.

- Confirm that management reports on service standards/licence obligations are being reviewed and significant exceptions to service standards are promptly up and action.

<b>Effectiveness Criteria</b>	<b>Performance</b>	<b>Adequacy Ratings</b>	<b>Comments</b>	<b>Recommendations</b>
<i>7.1 Is there adequate system documentation for users and IT operators?</i>	A	1	WAPL uses the 1SAP enterprise system. There is adequate system documentation in the IT system. It is easy to follow.	
<i>7.2 Do the input controls include appropriate verification and validation of data entered into the system?</i>	A	1	There are processes in place to ensure data entered into the system are verified including through data reconciliation and high forms of verification of integrity of data. The data are logged using the 1SAP system which is accessed through individual password. There are workflow processes in the system where supervisors log in through personal password for checking and verification.	
<i>7.3 Is there a logical security access control which is adequate, such as passwords?</i>	A	1	WAPL has a very strict enforcement of passwords as a control for access.	
<i>7.4 Does the physical security access control appear adequate?</i>	A	1	The physical security access to the centre is adequate.	
<i>7.5 Does the data backup procedure appear adequate?</i>	A	1	WAPL maintained a strict policy of data backup under Global BHP Systems with all data saved electronically is backed up every 24 hours on onsite servers. All versions of controlled documents are retained with the obsoleted, superseded or retired in a secure vault drive and are watermarked accordingly.	
<i>7.6 Are the key computations related to licensee performance reporting materially accurate?</i>	A	1	The key computations related to licensee performance reporting are materially accurate from the audit evidence reviewed.	

7.7 Do the management reports appear adequate for the licensee to monitor licensee obligations?	A	1	The management reports appear adequate for the licensee to monitor licensee obligation. Financial budgets are forecast in advance to identify the operation efficiency on cost to product produced. Business BI Reports are reviewed for weekly and monthly compliance with non-compliance events investigated for changes to strategy and rescheduling. Site planning has a production planning meeting with maintenance, operations and improvement teams on a weekly basis.	
<b>8. Risk Management</b>				
<p><b>Key process:</b> Risk management involve the identification of risks and their management within an acceptable level of risk.</p> <p><b>Outcome:</b> An effective risk management framework is applied to manage risks related to the maintenance of service standards.</p>				
<p><b>Review approach</b></p> <ul style="list-style-type: none"> <li>• Assess the adequacy of policies and procedures covering risk management and contingency planning.</li> <li>• Assess whether the risk management policies and procedures have been applied in practice</li> <li>• Assess the adequacy of staff understanding and training on risk management.</li> </ul>				
Effectiveness Criteria	Performance	Adequacy Ratings	Comments	Recommendations
8.1 Do risk management policies and procedures exist and are they being applied to minimise internal and external risks associated with the asset management system?	A	1	WAPL has a good documented risk management policies and procedures that are adhered to. Risks are assessed and applied to maintenance and operation activities.	
8.2 Are risks documented in a risk register and are treatment plans actioned and monitored?	A	1	The risk register exists and are constantly monitored for treatment actions. The lists are reviewed annually. One of the outcome include probability of boiler explosion which is mitigated through superheater replacement.	

8.3 <i>Is the probability and consequences of asset failure being regularly monitored?</i>	A	1	WAPL operators are monitoring the day to day performance of the asset. WAPL Process Control Improvement group monitor the performance of the asset with a view of asset improvement. Failures identified are further assessed by the Maintenance Analysis Improvement group. The outcome is escalated with risk assessment done.	
<b>9. Contingency Planning</b>				
<b>Key process:</b> Contingency plans document the steps to deal with unexpected failure of an asset.				
<b>Outcome:</b> Contingency plans have been developed and tested to minimise any significant disruption to service standards.				
<b>Review approach</b>				
<ul style="list-style-type: none"> <li>Determine whether contingency plans have been developed and are current</li> <li>Determine whether contingency plans have been tested. If so, review the results to confirm that any improvements identified have been actioned.</li> </ul>				
<b>Effectiveness Criteria</b>	<b>Performance</b>	<b>Adequacy Ratings</b>	<b>Comments</b>	<b>Recommendations</b>
9.1 <i>Are contingency plans documented, understood and tested to confirm their operability and to cover higher risks?</i>	A	1	WAPL has a contingency plan incorporated in the Alumina plan. The contingency plans include fuel stock, data recovery and spare parts. Material risk categories equipment potential failures have a crisis emergency management plan to detail the actions to be taken at escalating levels from 1 a detection to level 3 an event occurring. The plans detail contact and immediate actions to reduce risk at levels 1,2 and control and recovery at a level 3. The crisis emergency plans have a supporting business management plan with a guide on incident management team response, action required to be taken immediately and recovery over a 3 month period or longer. BHPB Worsley Alumina conduct a scenario test on a 3 monthly basis with the crisis emergency plans reviewed annually. Test evacuations of the Production power facility have a planned task on a quarterly basis.	
9.2 <i>Is there a contingency plan for the unavailability or loss of key operational staff</i>	A	1	WAPL has a contingency plan for the unavailability or loss of key operational staff. The site has a specific succession planning program including “understudy” trainees who can step up if required. In extreme circumstances WAPL can call on other in house specialists from their other electrical generation facilities and indeed	



(including third party contract staff)?			the wider BHP Billiton network if required.	
<b>10. Financial Planning</b>				
<p><b>Key process:</b> The financial planning component of the asset management plan brings together the financial elements of the service delivery to ensure its financial viability over the long term.</p> <p><b>Outcome:</b> A financial plan that is reliable and provides for the long-term financial viability of the services.</p>				
<p><b>Review approach</b></p> <ul style="list-style-type: none"> <li>Obtain an understanding of the financial planning, budgeting and reporting process and assess its effectiveness.</li> <li>Obtain a copy of the current financial plan (including budget/actual) and assess whether the process is being followed.</li> </ul>				
Effectiveness Criteria	Performance	Adequacy Ratings	Comments	Recommendations
10.1 Does the financial plan state the financial objectives and strategies and actions to achieve the objectives?	A	1	WAPL power house O&M budget is part of the overall Alumina Refinery budget and business plan. It states the financial objectives including strategies and actions to achieve the objectives.	
10.2 Does the financial plan identify the source of funds for capital expenditure and recurrent costs?	A	1	The financial plan is aligned with WAPL's overall business plans. It identifies the source of funds for the capital expenditure and recurrent costs.	
10.3 Does the financial plan provide projections of operating statements (profit and loss) and statement of financial position (balance sheets)?	A	1	The financial plan does provide projections of operating profit and loss through the balance sheet statement and operating statements. The projections are up-to-date and are sufficient to cover the future costs of operating the plant.	

10.4 Does the financial plan provide firm predictions on income for the next five years and reasonable indicative predictions beyond this period?	A	1	The financial planning does consider projections on income for 5 years.	
10.5 Does the financial plan provide for the operations and maintenance, administration and capital expenditure requirements of the services?	A	1	The financial plan does provide the O&M, administration and capital expenditure requirements.	
10.6 Are significant variances in actual/budget income and expenses identified and corrective action taken where necessary?	A	1	The actual versus budget expense and income are closely monitored by WAPL in the 1SAP. Any significant variances will raise alerts which resulted in investigations with corrective actions implemented.	
<b>11. Capital Expenditure Planning</b>				
<p><b>Key process:</b> The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure on each over the next five or more years. Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates.</p> <p><b>Outcome:</b> A capital expenditure plan that provides reliable forward estimates of capital expenditure and asset disposal income, supported by documentation of the reasons for decisions and evaluation of alternatives and options.</p>				
<p><b>Review approach</b></p> <ul style="list-style-type: none"> <li>• Obtain an understanding of the capital expenditure planning process and assess its effectiveness.</li> <li>• Obtain a copy of the capital expenditure plan for the current year and assess whether the process is being followed.</li> </ul>				

Effectiveness Criteria	Performance	Adequacy Ratings	Comments	Recommendations
11.1 <i>Is there a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates?</i>	A	1	The capital expenditure list in the Alumina Plan carries the expenditure that is required to maintain the assets in accordance to the manufacture's recommendation and asset integrity risk analysis.	
11.2 <i>Does the plan provide reasons for capital expenditure and timing of expenditure?</i>	A	1	All capital expenditure is either through manufacture's recommendation or through business case.	
11.3 <i>Is the capital expenditure plan consistent with the asset life and condition identified in the asset management plan?</i>	A	1	The capital expenditure is consistent with the asset life and condition in the asset management plan.	
11.4 <i>Is there adequate process to ensure that the capital expenditure plan is regularly updated and actioned?</i>	A	1	The capital expenditure is monitored through the 1SAP system and reporting.	
<b>12. Review of AMS</b>				
<b>Key process:</b> The asset management system is regularly reviewed and updated.				
<b>Outcome:</b> Review of the Asset Management System to ensure the effectiveness of the integration of its components and their currency.				
<b>Review approach</b>				
<ul style="list-style-type: none"> <li>Determine when the asset management plan was last updated and assess whether any significant changes have occurred.</li> <li>Determine whether any independent reviews have been performed. If so, review results and actions taken.</li> </ul>				

- Consider the need to update the asset management plan based on the results of this review.
- Determine when the AMS has last reviewed.

Effectiveness Criteria	Performance	Adequacy Ratings	Comments	Recommendations
12.1 Is there a review process in place to ensure that the asset management plan and the asset management system described therein are kept?	B	2	The broader AMS review is carried out. However, it still lacks the consolidated AMS plan for the power plant.	As per recommendation in 1.1.
12.2 Are independent reviews (e.g. internal audit) of the asset management system reviewed?	B	2	<p>WAPL does not have an external party reviewing the plans or the AMS with the exception of risk registers which are reviewed by external auditors for compliance to ISO14001 &amp; 9001 environmental and quality ISO standards.</p> <p>However, internal reviews are carried out by the WAPL management team.</p> <p>BHPB Worsley Alumina conduct a scenario test on a 3 monthly basis with the crisis emergency plans reviewed annually.</p> <p>Test evacuations of the Production power facility have a planned task on a quarterly basis.</p> <p>There are reviews of the risk registers internally by governance function for compliance at a senior management level and internally by Analysis and Improvement teams at the business level.</p> <p>Compliance to standards and group level documents are scheduled on an annual basis.</p> <p>Material risk critical controls are tested internally on an annual basis and are open to review at any time by corporate level.</p>	The Licensee is recommended to have an independent review/audit conducted on the Asset Management System.

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## 6. Signature of Auditor

To the best of my knowledge, this report is based on true representation of the audit findings and opinions.

My thanks go to all parties who assisted in providing information and cooperation in respect to this audit.

Alan Meagher

Lead Auditor

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