Water and Environment

HAMERSLEY IRON 2010 OPERATIONAL AUDIT AND ASSET SYSTEM MANAGEMENT REVIEW

Prepared for	Hamersley Iron
Date of Issue	24 November 2010
Our Reference	1184B/B1/007c

As part of Aquaterra's commitment to the environment this PDF has been designed for double sided printing and includes blank pages as part of the document.

aquaterra

HAMERSLEY IRON 2010 OPERATIONAL AUDIT AND ASSET SYSTEM MANAGEMENT REVIEW

Prepared for	Hamersley Iron
Date of Issue	24 November 2010
Our Reference	1184B/B1/007c

HAMERSLEY IRON 2010 OPERATIONAL AUDIT AND ASSET SYSTEM MANAGEMENT REVIEW

	Date	Revision Description
Revision A	24/08/2010	Draft for ERA
Revision B	06/10/2010	Updated for ERA comments 6 September 2010
Revision C	24/11/2010	Updated for ERA comments 18/11/10 re sewer breaks and chokes, definition of 'legislation' and the exec. summary

	Name	Position	Signature	Date
Originator	Rhod Wright	Principal Water Resources Engineer		24/11/2010
	Matt Holmes	Senior Env. Consultant (Assistant Auditor)		24/11/2010
Reviewer	Hugh Middlemis	Senior Principal Water Resources Engineer (Reviewer)		24/11/2010

	Location	Address
Issuing Office	Perth	Suite 4, 125 Melville Parade, Como WA 6152 Tel +61 8 9368 4044 Fax +61 8 9368 4055

EXECUTIVE SUMMARY

GENERAL

This report has been prepared in accordance with the Audit Guidelines: Electricity, Gas and Water issued as drafted by the Economic Regulation Authority (May 2009).

Hamersley Iron holds a licence under the Water Services Licensing Act (1995) to provide potable and wastewater services to the three towns of Dampier, Tom Price and Paraburdoo. The current audit has been conducted in order to evaluate Hamersley Iron's compliance with the licence conditions during the period: 1 April 2007 to 31 June 2010. The licence at the start of the period was superseded by another licence dated 21 August 2009. The licence conditions require that quality performance standards be met for provided services, and that effective systems are in place for planning, construction and maintenance of assets.

The issues and recommendations are discussed in the report and Appendix E. The actions taken in response to the previous audit plan are considered proactive. Hamersley Iron has been found to operate a strong control environment, and the water / waste water activities and assets are considered by them to be important in their ongoing business activities. This is reflected in the level of compliance demonstrated and the integrity of the licensee's reporting to ERA and DoH.

The town water / waste water assets are a small part of a very large infrastructure. There have been no significant physical changes on the ground, or to the way that the town systems are operated. In general, Hamersley Iron's AMS (asset management system) initiatives are well-defined with measurable performance goals established and monitored.

In summary the issues and recommendations raised relate to:

- Ratifying the draft Memorandum of Understanding with Department of Health;
- The low awareness of Hamersley Iron as service provider, company branding and minimum standards of services;
- The need to continue to be proactive in preventative maintenance to maintain and improve KPI's (key performance indicators);
- Monitoring the impact on emergency response times and 'disruption' KPIs as Hamersley Iron provides additional staff;
- Field staff reporting back to the call centre;
- Meeting the KPI for resolving of customer complaints;
- Security of data relating to the water quality and KPI records;
- Meeting the KPI for sewer blockage / overflow by correct reporting of sewer blockages / overflow; and remaining proactive on the issue of sewer blockages by customer products, and the continuous need to inform customers of the problems that result;
- Higher staff turnover (including Contractors) and the need to ensure the KPIs and customer obligations are understood by all; and
- The SAP (Hamersley Iron data base) system and current consideration of narrowing down the locators / cost centres.

AUDIT COMPLIANCE CONCLUSIONS

It is the Auditors' view that Hamersley Iron is achieving an adequate level of compliance with the requirements of the Operating Licence. This is through proactive monitoring of all licence conditions, and a current drive to improve aging assets for better long term performance.

Hamersley Iron had 2 non compliances regarding the need to have in place a properly resourced process for effectively receiving, recording and (where possible) resolving 90% of customer complaints within 15 business days. Hamersley Iron has attained 59% in the last 12 months but is confident that all complaints have actually been resolved within 15 business days. The issue relates to the recording, updating and feedback into the computerised system and without these detailed records, HI was not able to explicitly state compliance. The recommendation is that HI improves the inputs into the call recording system.

Hamersley Iron had a third non-compliance in relation to at least 75% of connected properties experiencing a complete interruption of supply for more than 1 hour, which resulted from preventative (catch-up) maintenance measures, which should in turn allow ready compliance with the indicator in future periods.

This audit review concludes that Hamersley Iron's asset management systems are of a high standard, with acquisition and / opex / maintenance and capex / construction initiatives being consistent with the large scale of operations and the projected life of the towns. This reflects well on the management commitment devoted to the operation of the areas under licence to Hamersley Iron. It is the Auditor's professional opinion that Hamersley Iron has appropriate systems in place for the planning, construction, operation and maintenance of its assets.

.

CONTENTS

TABLES

APPENDICES

1 AUDIT REVIEW SCOPE

1.1 GENERAL

Organisations providing water supply; sewerage; irrigation; or drainage services in a controlled area must hold a licence. Under the Water Services and Licensing Act 1995, Hamersley Iron as a water service provider, has been granted a licence to provide water services for 3 towns Dampier, Paraburdoo and Tom Price (Hamersley Iron is also responsible for water and sewer in Pannawonica and Wickham). The potable and sewerage water services for the towns of Dampier, Paraburdoo and Tom Price and their surrounding areas are governed by the one Operating Licence under review in this audit.

The licence conditions require that quality performance standards be met for water and wastewater services, and that Hamersley Iron provides for and maintains an effective asset management system for the proper maintenance of its assets and for the undertaking, maintenance and monitoring of its water services works.

In accordance with Section 37 of the Act and under the conditions of the Operating Licence, Hamersley Iron is required to carry out audits every 24 months, currently modified by ERA to a 36 month audit period. In March 2010, Aquaterra was commissioned by Hamersley Iron, with the approval of the Economic Regulation Authority (ERA), to undertake the 2010 Operational Audit and Asset Management System Review.

The Operating Licence is in the name of Hamersley Iron, which has assets comprising a number of mines and railway, with port and infrastructure located in Dampier. The company has variously branded itself as Pilbara Iron, Hamersley Iron, Robe River, Rio Tinto Iron Ore, etc. The company name is changing to a Rio Tinto global branding, but the Hamersley Iron name has been used herein.

This report summarises the findings of the Operational Audit and Asset Management Review and identifies areas of the asset management system that could be improved or enhanced.

1.2 AUDIT / REVIEW OBJECTIVES

The audit/review provides an opinion to ERA on:

- The adequacy and effectiveness of measures taken by Hamersley Iron to maintain those quality and performance standards referred to in the Licence over the period from April 2007 to June 2010 (39 months); and
- The effectiveness of processes implemented by Hamersley Iron to maintain assets used in the provision of water services, and for the undertaking, maintenance and operation of water service works.

The review also considers aspects of the asset management system which may be further strengthened, with the view to providing feedback to Hamersley Iron on the adequacy and effectiveness of the system.

1.3 SCOPE AND METHODOLOGY

Hamersley Iron operated under both the old form and new Operating Licences during the audit period. The methodology used is based on the protocols outlined in the ERA's Audit Guidelines: Electricity, Gas and Water Licences 2009, designed to promote consistency of performance / operational audits and asset management system reviews. The review of the recommendations and actions planned from the previous audit was based on Operational Audit and Asset Management System Review, Aquaterra, 2007. The 2008 Water Compliance Reporting Manual was also noted.

The guidelines provide a framework for the conduct of audits / reviews. The audit review process is centred on a targeted risk mitigation approach, in which risks are identified in the operational process and assessed against the terms of the licence and standards set by the ERA, in order to focus attention on higher risk areas.

Hence, a prior risk assessment was carried out on the Operating Licence conditions and approved prior to the site visit. An audit priority was calculated for each licence clause, based on the scale of associated generic consequences and likelihood of occurrence. The audit plan included each compliance obligation / licence clause that identified the risk assessment and audit priority rating as per the Guidelines. A number of licence clauses / obligations did not apply as was indicated in the audit plan, but were still considered in detail during the audit. The plan was used generally as a checklist and guide during the audit. However, the primary objective is to provide an independent assessment of each applicable compliance obligation during the audit.

An asset management adequacy matrix / checklist was also produced based on 12 specific system key processes provided in the Guidelines.

The audit and review was conducted over April - August 2010. The audit and review plan was submitted to Hamersley Iron and ERA, and approved by ERA on 16 June 2010. Lead Auditor Rhod Wright undertook the on-site component of the audit / review 20 - 22 July 2010. The visit included a tour of the 3 operational control areas governed by the licence (i.e. Dampier, Paraburdoo and Tom Price). A short closing meeting was held with Hamersley Iron staff to provide an initial assessment of the audit asset system review.

The opinions contained herein were reached after discussions and questioning of various operational and administrative staff and Hamersley Iron's contractors, and observation of processes, procedures and operations in the field. The operational licence compliance ratings are based on a 7-point compliance rating scale; and the effectiveness of asset management processes is based on separate adequacy and performance rating scales provided in the Guidelines.

1.4 DETAILS OF THE LICENSEE'S REPRESENTATIVES PARTICIPATING

The following representatives of Hamersley Iron participated in the audit and review:

1.4.1 DAMPIER

Bennie Smith	General Manager, Utilities
Paul White	Manager Networks
Heath Bennett	Specialist Reliability Engineer
Shannon Dremel	Technical Advisor
Shane Balch	Manager Energy and Quality
Teegan Penny	Customer Services Officer Water
Ken Sloan	Contactor Management Supervisor
Bert Dyt	Planner

1.4.2 PARABURDOO

Heath Bennett	Specialist Reliability Engineer
Emma Webber	Planner
Shane Carrison	Contactor Management Supervisor

1.4.3 TOM PRICE

Eric Stoveld	Supervisor Networks
Tony Lincoln	Contactor Management Supervisor
Lloyd Dundas	NWSP Contractor
Chris Abbot	NWSP Contractor

1.5 DETAILS OF KEY DOCUMENTS AND OTHER INFORMATION SOURCES EXAMINED

Many documents and processes were examined during the audit. These included:

- Operational Audit and Asset Management System Review, Aquaterra, 2007;
- Rio Tinto annual report 2009;
- Water Quality Management Manual;
- KPI licence reporting records;
- Customer Charter;
- Generating a "Scope of Works" as a basis for an upcoming project, and as the base input into SAP;
- SAP system (Hamersley Iron's main business software application) in operation and the generation of Preventative Maintenance Orders (PMO's) by Planners and Schedulers;
- The HP computer recording / monitoring system (the Call Centre) accessed by Customer Service officers in Dampier;
- Asset Management Overview (showing how the Operating Licence and asset management dovetail into the overall system);
- The Asset Management Improvement Plan (the main asset overview document);
- Site Reliability Plans (SRP) detailing risk and maintenance required on components of the schemes;
- The 2009 capital planning budget template - showing the proposed capital projects and cash flow;
- Various 'Safe Work Procedures' (SWP) and Process Resource Tools (PRT) were viewed; and
- A number of the above documents or samples of them were obtained and are included at Appendix F, as well as a number of customer related (consultation) handouts and the customer survey.

1.6 DETAILS OF AUDIT / REVIEW TEAM AND HOURS UTILISED

The Team comprised:

- Lead Auditor — Rhod Wright
- Assistant Auditor — Matt Holmes
- Reviewer — Hugh Middlemis

A total of 145 hours was budgeted for the audit. The breakdown of time spent is as follows:

- 35 hours spent on the site component (Rhod Wright);
- 105 hours shared about equally by Rhod Wright and Matt Holmes on the risk assessment (10%), development and approval of the audit / review plan (40%), and reporting (50%); and
- 5 hours were spent on review of the report (Hugh Middlemis).

2 LICENSEE'S RESPONSE TO PREVIOUS AUDIT RECOMMENDATIONS

The auditor is required to provide an assessment of the licensee's overall response to the recommendations in the previous 2007 Aquaterra Audit.

A tabular summary of the recommendations from the previous audit report is included in Appendix A, along with the action taken by the licensee to address the recommendations. The issues (or in some cases suggestions) that gave rise to the recommendations have been implemented generally.

The alignment of the audit timetable and the reporting timetable has been approved by ERA (along with 3 yearly audit intervals). The Contractors Information Pack has been updated.

The Customer Call Centre has been relocated to Perth and is now fully functional. The one call number has generally encouraged staff / customers to go through the 1800 system, rather than bypass it locally. The Operating Licence requirement of 15 days for resolution of customer complaints is understood, although it appears that the reporting back from the field to the call centre may be less effective as field staff may tend to handle customer liaison locally. Awareness amongst customers of Hamersley Iron as service provider remains low despite best endeavours.

The LEAN system (lean manufacturing or lean production is a production practice that considers the expenditure of resources for any goal other than the creation of value for the end customer to be wasteful, and thus a target for elimination) is entrenched, a significant daily management tool in the immediate and transparent recognition of service failures (and the potential impact on licence KPI's). Some performance criteria are still not met due to the 'catch-up' works taking place in the 3 towns. However water quality criteria have been met in the audit period, and there appears to be no problems with sampling procedures.

3 PERFORMANCE SUMMARY

The 2009 Audit Guidelines gives clear criteria and instructions for the risk assessment process, replicated at Appendix D.

3.1 OPERATIONAL/PERFORMANCE COMPLIANCE RATING

The operational/performance audit report must provide a table that summarises the compliance rating for each licence condition. A tabular summary of prioritised licence obligations, and Hamersley Iron's compliance with those obligations, is included in Appendix B.

The 7-point rating scale described in Guidelines Table 3 is replicated below as follows:

Table 3.1: Operational 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 Licensees Business Operations
Not Rated	N/R	No relevant activity took place during the audit period, therefore it is not possible to assess compliance.

3.2 ASSET MANAGEMENT REVIEW EFFECTIVENESS SUMMARY

The asset management review report must provide a table that summarises the auditor's assessment of both the process and policy definition rating, and the performance rating for each key process in the licensee's asset management system. A tabular summary of tests and an assessment of Hamersley Iron's effectiveness in meeting these tests, are included at Appendix C.

The scales described in Guidelines Table 5 and Guidelines Table 6 are replicated below as follows:

Table 3.2: Asset Management Process and Policy Definition Adequacy Ratings

Rating	Description	Criteria
A	Adequately defined	▼ Processes and policies are documented. ▼ Processes and policies adequately document the required performance of the assets. ▼ Processes and policies are subject to regular views, and updated where necessary. ▼ The asset information system(s) are adequate in relation to the assets that are being managed.
B	Requires some improvement	▼ Process and policy documentation requires improvement. ▼ Processes and policies do not adequately document the required performance of the assets. ▼ Reviews of processes and policies are not conducted regularly enough. ▼ The asset management information system(s) require minor improvements (taking into consideration the assets that are being managed).
C	Requires significant improvement	▼ Process and policy documentation is not complete or requires significant improvement. ▼ Processes and policy do not document the required performance of assets. ▼ Processes and policies are significantly out of date. ▼ The asset management information system(s) require significant improvement (taking into account the consideration the assets are being managed).
D	Inadequate	▼ Processes and policies are not documented. ▼ The asset management information system(s) is not fit for purpose (taking into consideration the assets being managed).

Table 3.3: Asset Management Performance Ratings

Rating	Description	Criteria
1	Performing effectively	The performance of the process meets or exceeds the required levels of performance. Process effectiveness is regularly assessed, and corrective action taken where necessary.
2	Opportunity for improvement	The performance of the process requires some improvement to meet the required level. Process effectiveness reviews are not performed regularly enough. Process involvement opportunities are not actioned.
3	Corrective action required	The performance of the process requires significant improvement to meet the required level. Process effectiveness reviews are performed irregularly, or not at all. Process improvement opportunities are not actioned.
4	Serious action required	Process is not performed, or the performance is so poor that the process is considered to be ineffective.

The overall effectiveness rating for an asset management process is based on a combination of the process and policy adequacy rating and the performance rating.

Table 3.4 below provides a summary table (as per Guidelines Table 7) of Appendix C Asset Management Effectiveness Summary.

Table 3.4: Asset Management Effectiveness Summary

Asset Management System	Asset Management Process and Policy Definition Adequacy Rating	Asset Management Performance Rating
Asset planning	A	1
Asset creation/acquisition.	A	1
Asset disposal.	A	1
Environmental analysis.	A	2
Asset operations.	A	2
Asset maintenance	A	1
Asset Management Information System (MIS)	A	2
Risk management	A	1
Contingency planning	A	1
Financial planning	A	1
Capital expenditure planning	A	1

4 RECOMMENDATIONS

Under Guidelines Section 11.6 Recommendations, the auditor is required to provide detailed recommendations on the actions to be taken by the licensee to address non-compliance (operational/performance audits) or process deficiencies (asset management system reviews). The auditor is required to provide detailed recommendations on the actions to be taken by the licensee to address non-compliance (operational / performance audits) or process deficiencies (asset management system reviews).

The recommendations are in tabular format in Appendix E.

5 OBSERVATIONS

5.1 GENERAL

5.1.1 LEAN SYSTEM

At the 2007 audit, Hamersley Iron had just introduced a new management system, called "LEAN". This is now entrenched and each day a brief meeting is held at the LEAN 'board' which displays / updates communication key performance indicators (KPI's) as an instant visual indicator of compliance / performance in that particular activity (some of which relates to the town water and waste water systems). The system promotes transparency of intra-company communication and action - any unplanned outages, persistent issues (e.g. ageing assets, damages), that put infrastructure 'off-supply' and which may impact operations adversely, are moved up to higher management LEAN boards, and used as a base for monthly reporting.

5.1.2 "UTILITIES" OPERATING DIVISION

In 2006, Hamersley Iron / Rio Tinto created a separate support Utilities MRU (section) with approximately 200 staff, responsible for housing, water, sewer, and other disciplines in mining operations and towns (Pannawonica and Cape Lambert as well as Dampier, Paraburdoo and Tom Price). During the audit period (in 2008), the Utilities MRU has been upgraded from a support division to the Utilities division. It is responsible for provision of water / waste water, electricity, air services, site communications, hydrocarbon management, housing and customer relations), as a separate operating arm with a General Manager and 4 departments - one of which is 'Networks' responsible for power, water, water distribution, and waste water for the towns (and mining operations). This is intended to reflect the importance of these services to the mining operations.

5.2 COMPLIANCE (CLAUSE 5)

Hamersley Iron has complied with applicable legislation, including the Act, the Regulations and the Codes. Hamersley Iron has also complied with the draft MoU (awaiting ratification).

5.3 MEMORANDUM OF UNDERSTANDING (CLAUSE 9)

Under the new / current licence, Hamersley Iron is required to enter into a MoU (Memorandum of Understanding) with the Department of Health (DoH) 'as soon as practicable'. Hamersley Iron approached DoH, and was provided with a sample MoU. An MoU was drafted and submitted to DoH, but Hamersley Iron is currently waiting for DoH to enter into formal discussions with a view to ratifying an MoU. It is understood that the first meeting in this regard was due to be held in late July 2010.

5.4 ACCOUNTING RECORDS (CLAUSE 15)

The Hamersley Iron / Rio Tinto financial statements are prepared in accordance with International Financial Reporting Standards both as adopted by the EU ('EU IFRS') and as issued by the International Accounting Standards Board ('IFRS'), …….and applicable Australian law.

5.5 OPERATIONAL AUDIT (CLAUSE 16)

Hamersley Iron has continued to carry out audits as required under the licence, using standard audit guidelines, and using ERA approved auditors. Hamersley Iron requested an extension of the audit period from 24 months to 36 months and an alignment of the audit period with the licence reporting period. This was approved by ERA on 23 August 2007. This audit therefore covers 39 months from April 2007 to June 2010.

5.6 ASSET MANAGEMENT SYSTEM (CLAUSE 17)

The asset management systems were largely found to be similar to those used in the 2007 audit, and no material changes were noted.

5.7 REPORTING (CLAUSE 18)

The licensee must report to ERA if it is under external administration or experiences a significant change in its corporate, financial or technical circumstances upon which the licence was granted. Since the 2007 audit, it has been 'business as usual' for Hamersley Iron, and it can continue to meet its obligations under the licence. As such, no reporting under this clause is required.

5.8 PROVISION OF INFORMATION (CLAUSE 21)

Hamersley Iron has continued to provide the information required by the licence and specified by ERA.

5.9 NOTICES (CLAUSE 23)

Unless otherwise specified, all notices to ERA must be in writing. Hamersley Iron conforms to this clause by carrying out its business with ERA in written form (letters and emails).

5.10 SCHEDULE 1 - LICENSEE DETAILS

The Operating Licence is in the name of Hamersley Iron and is valid until 1 June 2026.

5.11 SCHEDULE 2 - OPERATING AREAS

There has been no change to the operating areas. The 3 towns under consideration have existed for about 40 years. At the time of the 2007 audit, it had recently been decided that the towns would remain in operation for a projected additional 30 years. Within the audit period, it has been further decided that Dampier and Tom Price would remain towns indefinitely, while the life of Paraburdoo would depend on actual mining or other operations at Paraburdoo (with at least 20 years life remaining). Although Hamersley Iron is expanding mining operations (goal 220Mtpa by end 2010, 330Mtpa by end 2015), it is not anticipated that the towns themselves will expand to any great extent (extra mining accommodation will generally be provided in camps, located elsewhere).

It is understood that the Shire has approached Hamersley Iron in regard to additional subdivisions at Dampier and Tom Price, and Hamersley Iron has advised that these could be accommodated by the current town water / waste water systems. The original water and sewer systems are therefore, currently considered adequate in extent for the future and in terms of the licensed Operating Areas.

5.12 SCHEDULE 3 – CUSTOMER PROVISIONS

5.12.1 CUSTOMER SERVICE CHARTER

The customer service charter is a plain English brochure, which has been updated slightly since the last audit. Hamersley Iron advises that amendments were forwarded to ERA for approval. The customer service charter summarises the key points in the Operating Licence and therefore addresses all of the service issues that are reasonably likely to be of concern to its customers, and accords with ERA's guidelines. The customer service charter is made available to its customers - there was no front office for customers per se in which to display the Customer Charter, but the brochure is displayed in 'Networks' offices in each town, and new residents / customers are provided with a copy at reasonable opportunities (such as a 'welcome' letter for new customers, or with bills for services). Copies can be provided on request, but Hamersley Iron advises that they have never been requested for a copy of the charter.

Service standards are communicated upon request, after a complaint (e.g. poor pressure) and by way of information included in the Customer Charter and newsletters. Evidence that service standards are deliverable at least 90% of the time is done by way of regular reporting to ERA.

Hamersley Iron's requires that services provided by its contractors must comply with the terms and conditions of the licence and the Customer Service Charter.

5.12.2 CUSTOMER COMPLAINTS

At the 2007 Audit, Hamersley Iron had instigated a new Customer Call Centre (ph 1800 992 777), in operation since Christmas 2005, and available to discuss all matters of

housing and services, as well as external queries. The Call Centre consisted of telephone operators in an office in Dampier during the day, and then switched to an external provider at night, allowing 24 hour operation. Since the 2007 Audit, the Customer Call Centre was moved to Perth.

Hamersley Iron advises that the great majority of calls are queries and there are minimal complaints, but each call is logged in a computerised system (HP system), given a unique identifying complaint number for call back, and forwarded to the appropriate supervisor or planner for action. There are some issues with determining the criticality or urgency of any particular incoming call. The field staff also need to call back to update / advise the current situation, which is not always occurring. The Customer Services Officers indicated that the system was improving, with less delays and greater adherence to procedures.

Complaints are dealt with by the Customer Services Officers located in Dampier. Hamersley Iron has a complaint resolution protocol, and the HP call system is the source of monitoring queries / complaints. Past performance delivery data is captured in the KPI data assembled for the ERA reporting.

Hamersley Iron has reported 59% of customer complaints for 2009/2010 were resolved within 15 business days, while the Schedule 4 KPI requires 90%. Hamersley Iron advised that the Call Centre services various other groups (other than 'Networks', the department responsible for meeting licence conditions) and hence deals with many other issues not related to the Operating Licence. Hamersley Iron stated it was confident that all complaints regarding the Operating Licence in the last 12 months were actually resolved within 15 working days, and advised that:

> *"Customer Services gathered this information on behalf of all departments. HP OVSD is the system used for reporting customer complaints by the business. A call is logged with the Service Desk regarding faults, queries, complaints, etc. The Service Desk then allocates the call to the workgroup area responsible for providing assistance. When a call is logged to the Customer Services team, we populate data into the fields and update the history and progress associated with the complaint. This provides us with detailed records of our responses to all calls.*
>
> *However, when reviewing the 2009/2010 data it became apparent that other workgroups have not been using the system in the same manner. We are confident in stating that customer services resolve complaints within the designated timeframe, and the data collated here is a representation of other groups' data.*
>
> *The complaints that we have reported as not being resolved within 15 days are those jobs that have been logged into our HP OVSD system, but no further information was populated after this date. Therefore, while we are confident that all complaints in the last 12 months have been resolved within 15 working days, without these detailed records and supporting documentation we did not feel it was appropriate to include these as resolved within 15 days in the report.*
>
> *We have recognised that there is a gap in data recording and seek to improve this by engaging the other groups. Although we are confident that we are meeting the service standard overall, it is clear that this is not reflected in the data. Therefore we have reported what is measured. Our success to rectify this will be limited by the influence our group has on the others involved and resources available to those groups".*

There have been no significant complaints, and as such the need to refer the customer to the Department of Water has not arisen. However, Hamersley Iron has not provided a system for accurately monitoring the number, nature and outcome of complaints, and this is subject to a recommendation.

5.12.3 CUSTOMER CONSULTATION

The licensee must establish ongoing customer consultation processes which both inform customers and proactively solicit customer opinion on the licensee's operations and delivery of services. Hamersley Iron sends out much information, including a quarterly newsletter to residents of the 3 towns and to new customers, water wise tips, customer surveys, the tiered water rates, pamphlets etc. Hamersley Iron meets with selected customers at regular intervals, and holds an open community forum at which any issue can be raised. Hamersley Iron advised that no request for other forms of consultation has been made by ERA.

Hence consultation initiatives include the community forum, the newsletter, the Hamersley Iron website, Customer Service Charter, survey questionnaires and water conservation literature.

5.12.4 CUSTOMER CONTRACTS

The licensee may enter into an agreement with a customer to provide water services that exclude, modify or restrict the terms and conditions of the licence. Hamersley Iron has not entered into any such agreements.

5.12.5 CUSTOMER SURVEYS

ERA may request a customer survey be undertaken, but has not done so. On its own initiative however, Hamersley Iron carries out customer surveys, but notes that there is little response to the surveys (due to a large staff turnover). Telephone surveys and are not preferred because many residents are shift workers. The current policy is to send out a survey questionnaire to each new customer.

The Hamersley Iron 2010 survey indicated that:

- One in four customers do not know that Hamersley Iron is the water and sewerage provider;
- There was a low awareness of the minimum standards of service for water and sewer;
- Customers generally felt the water quality needed improvement;
- The key concern regarding sewer was odours, blockages and overflows;
- Very few customers were aware of the customer service charter; and
- Very few customers were aware of the complaints procedures available.

Based on this, Hamersley Iron has resolved to improve the branding on invoices and correspondence, and increase general information available to customers.

5.13 SCHEDULE 4 – SERVICE AND PERFORMANCE STANDARDS

5.13.1 CUSTOMER SERVICE STANDARDS

Hamersley Iron has provided an emergency telephone advice system (one call) via the Customer Call centre and meets the Performance Indicator / Targets that 90% of customers should be advised within one hour of reporting an emergency, of the nature and timing of the action to be undertaken.

Hamersley Iron has not met the 90% KPI of dealing with complaints within 15 business days with a 59% KPI value (as discussed above). Hamersley Iron is confident that all relevant complaints were resolved within the required timeframe.

5.13.2 POTABLE WATER SUPPLY

Hamersley Iron meets both pressure and flow requirements in all the 3 towns. Hamersley Iron advises that these parameters are tested once per year at the 'end' of the system at peak, and the results recorded. Paraburdoo measures 55m head, Tom Price 35m and Dampier is the lowest at 29m. All flows are greater than 20L/s, and static maximum heads are less than 100m (the three towns are served by town tanks therefore limiting the maximum static head). The water supply system configuration in each town has not changed, and these are typical results year-to-year.

5.13.3 CONTINUITY

Hamersley Iron has not met the criterion that over each 12 month period, at least 75% of connected properties shall not experience a complete interruption of supply (no flow), exceeding 1 hour, but is aware of the 1 hour criterion and advises it uses it to plan work outages to the extent possible.

Hamersley Iron has improved this water supply disruption KPI to 65%. Failure to meet the KPI has largely resulted from the need to shut down the entire towns of Paraburdoo and Tom Price to carry out repair works (in particular to upgrade section valves, that will allow less connected properties to be shut off for any given repair). Hamersley Iron advised that some customers experienced no outage at all in the last 12 months.

In the preceding 12 months, there have been <20 leaks or bursts per 100km of pipe. The figures are 22.6 leaks or bursts in 07/08, 20.8 in 08/09, and 15.1 leaks or bursts in 09/10. Leak detection is carried out in every town every year with resultant repair works, in an attempt to overcome the general issue of leaks or bursts in an old system (there are 106km of water mains) and this should pay off in the near term.

5.13.4 SEWERAGE SERVICES

There are 85km of sewer, so based on 40 blockages per 100km of sewer main, the KPI is therefore 34 blockages. There were 18 blockages in 07/08, 26 in 08/09, and 11 blockages in 09/10. Thus in the preceding 12 months, there were fewer than 40 blockages per 100km of sewer main.

The KPI that 90% of customers do not experience a wastewater overflow is determined by dividing the number of overflows by the total number of customers. The KPI over the last three years has been 99.8%, 99.7% and 99.6% (equivalent to 6, 8 and 9 overflows).

However, Hamersley Iron advises that the majority of blockages are caused by "customer products" - accidental or deliberate, and advise that the above figures only report blockages and overflows due to (poor) asset condition, and not overflows due to blockages by customer products, beyond their control.

Discussion

Discussion arose on the definition of sewer blockages and wastewater overflows. Hamersley Iron does not report blockages and overflows which occur due to blockages by customer products, beyond their control.

ERA confirms that its view is that when calculating the figure for this indicator, all breaks and chokes should be included (i.e. breaks and chokes that are caused by blockages by customer products should be included). ERA consider this indicator assists them in assessing not only the condition of the asset, but also how well the asset is managed.

The auditor recommends that Hamersley Iron's approach to reporting sewer blockage / overflows be modified in accordance with ERA's requirements. It is also recommends that Hamersley Iron liaise with ERA, such that provision be made in the annual reporting to differentiate between asset based breaks / chokes / spills and those caused by customer products, so that sewer system management practices can continue to be assessed.

5.13.5 CONTRACTORS

Hamersley Iron uses contractors in Dampier, and Paraburdoo / Tom Price, for work covered under the licence. The contractors therefore must meet the same Operating Licence standards and conditions as are required of the licensee. A Hamersley Iron Contract Management Supervisor is stationed in each location to organise and oversee contractors work. A contractors information pack is available to contractors to advise of the required standards.

For planned maintenance, Hamersley Iron takes responsibility for planning the work and advising customers. However, when reactive/emergency work is required (where Hamersley Iron cannot provide prior advice to residents), the contractor becomes responsible for consultation (e.g. door knocks, letter drop). Contractors were interviewed in the field and demonstrated skills in this regard. It is noted that Hamersley Iron intends to increase staff numbers so that it can undertake more of the reactive/emergency work itself, and therefore be

more responsive. Hamersley Iron is also using contractors to introduce more sophisticated methods of sewer repair such as pipe splitting, which can have the effect of greatly reducing OHS issues and avoiding customer disturbance.

5.14 SCHEDULE 5 – INFORMATION REQUIREMENTS (REPORTING)

The "Water Compliance Reporting Manual", August 2008 has been introduced since the 2007 audit. Hamersley Iron is required to provide ERA with data required for performance monitoring purposes as set out in the Manual, which aims to identify all the compliance requirements for water supply, sewerage, drainage and irrigation licensees.

Potable water needs to be safe drinking water in accordance with a Memorandum of Understanding (MoU) between the licensee and the Department of Health. Hamersley Iron is monitoring water quality against the 2004 Australian Drinking Water Guidelines. DoH has made no directions in this regard, pending their formalisation of the MoU. The licensee is providing the required reports on (health related) potable water quality quarterly (as it used to do under the previous licence, and now does under the draft MoU).

Under the provisions of the 'old form' licence:

- Hamersley Iron is to make "every endeavour to ensure no customer shall have more than three interruptions which exceed one hour in any one year". Hamersley Iron advises it has up to 2 interruptions >1hr per annum within the audit period;
- Similarly, the drinking water supply needs to comply with the 1987 'Guidelines for Drinking Water Quality in Australia';
- The drinking water guidelines provided by Hamersley Iron in the draft DoH MoU are awaiting ratification and are based on the 2004 Australian drinking water guidelines. Hamersley Iron has met those guidelines in the current audit period, and has achieved an annual compliance of 95% naeglaria based on 148 samples, 141 and 104 samples in Dampier, Paraburdoo and Tom Price respectively (and 98% thermo tolerant coliforms);
- Hamersley Iron advises it tries to meet non-health related characteristics as far as practicable, but this depends on the sources of water. Dampier water (supplied by the Water Corporation) meets the requirements, while the bore water sources at Paraburdoo and Tom Price exceed TDS and hardness parameters; and
- Incident reporting has been moved from the new Operating Licence to the Manual and has not been audited.

5.15 SCHEDULE 6 – OBLIGATIONS TO CUSTOMERS

Hamersley Iron must set out in writing its 'conditions for connection' and make that information available to all applicants for connection and to people inquiring about connection.

There have been no requests for water and sewer connections in the audit period (or in the previous audit period), other than for Hamersley Iron itself (a number of houses were built by the company in Tom Price with no fees payable). Conditions for water and sewer connections are available in the Dampier administration offices and applications are processed by the Customer Services Unit in Dampier. While no external request for connection has occurred to date, it is understood that this would be dealt with on the basis of a "one-off" quotation for the actual work involved.

5.16 SUMMARY OF OPERATIONAL AUDIT FINDINGS

The continued effectiveness of Hamersley Iron's systems in the provision of drinking water is evident in its performance, and continues to be compliant with respect to 'health related' characteristics since the last audit.

The company's Water Quality Management Manual (last updated January 2010) outlines the sampling and testing regime, and has been created to address compliance with the Operating Licence. Water quality compliance is undertaken with regular monitoring, together with system management processes capable of dealing with detected non-compliances (none occurred). The Water Quality Management Manual (WQMM) may require amendment once DoH provides a final MoU.

Water Quality testing is conducted weekly (microbiology and residual chlorine), monthly (basic physical parameters), and annually (basic physical parameters, inorganic and organic chemistry and a full suite of inorganic compounds). This sampling regime covers all water quality parameters identified in the Australian Drinking Water Guidelines (ADWG), which are listed in the WQMM together with their respective guideline limits. Samples are transported by air (following a formalised custody chain) to a NATA approved laboratory. Sampling is only undertaken by Hamersley Iron staff - sampling protocol instructions and training are contained in the WQMM.

Non-health related parameters (turbidity, TDS, DO, Aluminium, etc, see WQMM) are also captured in the sampling regime, demonstrating capacity to comply with the non-health related water quality characteristics defined in the Operating Licence.

Most of Hamersley Iron's customers are employees of the company. There is a low awareness of Hamersley Iron as service provider and service standards. The company brand is to be applied to documentation and a lot of information is sent out (quarterly newsletter, water wise tips, customer survey, customer charter, tiered water rates, pamphlets etc).

Hamersley Iron meets with selected customers at regular intervals and holds an open community forum at which any issue can be raised. Hamersley Iron advised that no request for other forms of consultation has been made by ERA.

The current audit period, also saw the move of the Customer Call Centre from Dampier to Perth. Customer Service Officers are still located in Dampier. The system is now improved in recording, tracking and progressing complaints, and 'bypass' appears to have been halted by the one call number. It appears that there may still be some problems with 'close out' on the HP system whereby customer liaison is taken (generally effectively) over by field staff (and contractors) without advice back to the Call Centre - this makes tracking, progressing and recording complaints more difficult; and ultimately lack of close out makes complaints reporting difficult and inaccurate.

It is noted that incident reporting is no longer in the Operating Licence (it is in the Compliance Manual).

Since the last audit in 2007, Hamersley Iron has met most of its Operating Licence conditions, is proactive in seeking improvements and dealing with recommendations. Hamersley Iron continues to develop initiatives, as a way of improving performance in the field, procedures for work and data gathering for reporting. The aggressive maintenance regime has lead to services disturbances to customers (the only KPI not being met), but this is a work in progress. The exploration of "pipe cracking" is one measure with regard to sewer repair that can leads to less customer disturbance (and enhanced safety). Hamersley Iron is operating at a high level in regard to their obligations, but some measures can be taken to improve the level of compliance as outlined in the suggestions / recommendations of this audit.

5.17 SUMMARY OF ASSET MANAGEMENT REVIEW FINDINGS

According to the Audit Guidelines (2009), an asset management system comprises the processes and plans needed to ensure the physical assets continue to provide a specified level of service in a cost-effective manner throughout their useful life. The key processes in the asset management life-cycle are:

- Asset planning (including development and maintenance of an asset management plan);
- Asset creation and acquisition;
- Asset disposal;
- Environmental analysis (all external factors that affect the system);
- Asset operations;
- Asset maintenance;
- Asset management information system;
- Risk management;
- Contingency planning;

- Financial planning;
- Capital expenditure planning; and
- Review of AMS.

5.17.1 ASSET PLANNING

Asset planning strategies are focused on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price). Strategic Objectives for assets are driven by KPI's and have been identified in the Hamersley Iron business plan as determined by a series of meetings across various levels of the Networks division. Lifecycle costs of owning and operating assets are assessed, but only in the context of a system that is 40 years old (i.e. the focus is on repair and the need to maintain KPI's) and there are no plans to change or expand the systems. Regard is also had to mine plans as those plans impact the 3 towns. However Hamersley Iron is considering network operating costs by employing more internal resources and utilising less contract resources.

Funds for the town water supply and sewer are drawn from general revenue as budgeted each year. "Zero based budgeting" is now in place, requiring a new cost justification or assessment of operating costs, and maintenance costs, each year. The cost justification for any project is the balance between customer service and criticality of service (as aligned with the strategic plan). In more recent times, costs are analysed (from the accounting system) and reported monthly, as part of on-going measurement of performance.

The likelihood and consequences of asset failure are predicted for the various systems via the SRP's and within the audit period. Six SRP's (reliability plans) have been completed. SRP's had been completed and reviewed, and meetings held with 'maintainers' (field staff). These detail the risk on asset failure of the various components. Field staff can also identify and flag asset issues in the field by using the 'notification system' within the main Hamersley Iron company wide database SAP as the first stage of indentifying incipient failure and the first stage of a potential project.

5.17.2 ASSET CREATION AND ACQUISITION

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. Project evaluations are undertaken for new assets, in the context that no changes to the system are proposed (even though some reasonably large capital projects can be undertaken to overcome current problems). Initial (higher level) project evaluations are undertaken in the Hamersley Iron 'Blue Sheet'. Once approval is given to proceed, then a CEA (capital expenditure application) is prepared, where all alternatives (including non-asset solutions) are canvassed, justification established (which may be on the basis of health, safety, environment, as well as cost and service considerations).

Generally the assets under consideration are for life, and there are no comparative short versus long solutions that require life-cycle costing. However if this is the case then they are included in the CEA.

The CEA justifications are based on engineering, business, compliance, HSE, customer service and sound investment, which are all required if the Capital project is to make its way through to being funded.

Any commissioning tests of completed projects are recorded, documented and filed as project commissioning reports. The great majority of commissioning of assets is rudimentary, generally consisting of functional tests.

In terms of ongoing legal / environmental / safety obligations of the asset owner, Hamersley Iron systems assign and detail obligations. Specifically (i) an "Operational Responsibility Chart" notes the responsible person for each individual clause in the Operating Licence, (ii) the Hamersley Iron IEMS (environmental system) contains legal and other obligations, (iii) the Hamersley Iron IronSafe (safety system) defines accountability for safety by role and (iv) the MoU will be a legally binding document and will have legal obligations when documented.

5.17.3 ASSET DISPOSAL

Effective asset disposal frameworks incorporate consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets. A review process for asset performance is identified as part of a regular systematic process (inspections etc) contained within the SRP's, but it is noted that no under-utilised and under-performing assets exist (except in the sense that they may be underperforming because they are old and have problems (hence regular ongoing assessment of systems via sewer video surveys and water pipe leak detection programs). Based on these surveys, there is then on-going maintenance (e.g. jetting, cutting and foam) or replacement (excavation, and pipe cracking is being trialled). No disposal of assets is undertaken, only corrective actions.

The replacement strategy for assets is determined based on asset monitoring described. A list of assets is drawn up for future capital expenditure, based on the SAP database system, including “notifications” raised, previous work done by PMO's (preventive maintenance orders) raised and maintenance costs associated with that asset, local knowledge, etc.

5.17.4 ENVIRONMENTAL ANALYSIS

Environmental analysis examines the asset system environment and assesses all external factors affecting the asset system. Opportunities and threats in the system environment are assessed in the SRP's, in the Hamersley Iron IEMS risk register and in the Water Quality Management Manual

The performance of the assets is measured via the Operating Licence KPI’s in regard to performance standards and annual reports to ERA. In general water leakage performance criteria are being met; while sewer blockages and overflow performance criteria have not been reported correctly in accordance with the indicator definitions; and customer disturbances are not being met.

For compliance with statutory and regulatory requirements, again refer to the Operating Licence KPI’s and annual reports to ERA. Potable water quality criteria are being achieved, with a minimum 98% for thermotolerant coliforms and naeglaria exceeds 95% compliance (99%).

5.17.5 ASSET OPERATIONS

Operations functions relate to the day-to-day running of assets and directly affect service levels and costs.

Operational policies and procedures, and service levels, are documented in the SRP's. Risk management is documented in the SRPs to prioritise operations tasks. For example water quality, sewer and chlorine operation. The 2010 asset management review, a brief summary of procedures, states that risks are assessed on the site reliability plans, water quality management manual, and IEMS risk register, and then used to prioritise operational tasks. Hence high priority or regularity includes water quality testing, chlorine checks, sewer video and jetting program, sewer run upgrades, sewer manhole replacement. Medium priority or regularity might include water main inspections, greasing rounds, sewer root foaming, and low priority or regularity might include valve checks.

An asset register (xls document) is maintained and assets are documented as drawings and various documents such as the SRP's. There are no 'accounting data' per se in regard to the value of the asset, as the value of the assets is not important to Hamersley Iron. Assessment of the assets ‘physical / structural condition’ has been a focus as the town life extends.

All operational costs are contained within the SAP system, available for formal business wide accounting purposes. Recently, a monthly report has been introduced for monitoring purposes, with accounting data downloaded by the Utilities accountant in Perth to measure and monitor operational costs also allowing closer tracking of costs trends and budgets.

Hamersley Iron carries out training, much of it related to the company's safety requirements. Significant training is received in relation to the handling of chlorine, inductions on site, confined space training, working at heights training, mechanical and electrical isolations, as well as asset management training. In addition an asset management professional development program has been attended, 1 person in 2008, 2 people in 2009. This is a 5 day course, sponsored by Hamersley Iron and run by the University of Western Australia and AIMS (Australian Institute of

Management). The course consists of asset management theory and a hands-on asset management project.

While Hamersley Iron carries out training commensurate with staff responsibilities, staff turnover (in Contractors as well) appears to be relatively high (resulting from the nature and locations of the business) and training therefore remains an on-going priority.

5.17.6 ASSET MAINTENANCE

Maintenance functions relate to the upkeep of assets and directly affect service levels and costs.

SRP's contain the basic maintenance procedures required. The heart of each procedure is a "process resource tool" (PRT), currently under review since March 2010. Examples of PRT's include sewer pumps, chlorine handling, water sampling. The Asset Management Group for Hamersley Iron in Perth is currently reviewing the PRT's. Also service providers, in particular the chlorine suppliers, are asked to input into the PRT. The PRT also contains the level of service required. The maintenance requirements are scheduled in the SAP database system based on those procedures, i.e. a PMO is raised at the appropriate time and the PRT is attached to the maintenance order documentation that is acted upon by field staff.

As described above, regular inspections are undertaken of asset performance and condition, including the water and sewer assets. These inspections / checks include weekly chlorine checks, the sewer video and water main leakage inspections, back flow prevention devices, cathodic protection check, valve condition. Hydramet the chlorine supplier is called upon to provide regular safety major and minor checks of chlorine facilities.

Much of the regular maintenance is programmed automatically into the SAP/PMO system, for regular maintenance orders to be issued at the appropriate time. Emergency works also require a PMO raised at the time. Preventative maintenance is also programmed into the SAP/PMO system. A major preventative maintenance program may become part of the capex program for that year.

Failures are analysed effectively every day at the LEAN board where important KPI's are updated daily and all key staff gather prior to commencing work for the day. Depending on the criticality of the failure, operational / maintenance plans are adjusted as required.

Risk management applied to maintenance tasks in the form of the 2010 asset management review sheet. The risks for maintenance tasks are assessed in each SRP, the water quality manual, the DMS risk register, and they are used to prioritise operational tasks. Hamersley Iron also advised that this year they have introduced a "failure mode affects analysis" where the effect of a failure is considered beforehand e.g. asbestos, tree roots / cracks / splits in sewers.

All operational costs are contained within the SAP system, available for accounting purposes. On site, it was suggested that consideration was being given to narrowing down the locators / cost centres (the current locators / cost centres are very 'broad brush') which might (for example) allow more detailed tracking of trends of costs and maintenance in more specific areas of a town, rather than the town as a whole.

5.17.7 ASSET MANAGEMENT INFORMATION SYSTEM (MIS)

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

There is no specific asset management computer program. The asset management systems revolve around the general Hamersley Iron systems, of which the SAP database is the major part. This system is documented and people are specifically trained to operate it.

Regarding input controls verification and validation of data, data input into the SAP system by maintainers / field staff, is checked by schedulers and planners. Water quality information taken from sampling and test results is collated and reviewed by the specialist reliability engineer. There is also a new system which is the water / sewer / power 'Disturbance Data', which collates outages, spills, bore failures for operational reporting.

While there is no specific asset management computer program, Hamersley Iron introduced the FDMS system in 2009. This is a system which will contain control documents in a controlled area of the computer database system. Controlled documents are being transferred into it at

the moment. Certain people only will have administrative rights to alter (add / delete) from this system.

The systems as discussed are Hamersley Iron wide systems and are assumed to have high standards of security and backup. Much of the collated data relating to the town water and sewer system is filed in an office at the Mine Site at Paraburdoo, so the data is less secure, but the access to the mine site is controlled (gate house) so the data is less secure but low risk.

The licensee performance reporting is manual, checked and collated monthly for monthly reports for collation into the Annual Report, so there is opportunity for checking at various stages. The field staff are aware of licence conditions.

The management reports have been in accordance with regulator requirements. Water quality reports have been based on the draft MoU since Q3 2009. The 09/10 performance report will be based on the Water Compliance Reporting Manual.

5.17.8 RISK MANAGEMENT

Risk management involves the identification of risks and their management within an acceptable level of risk.

A number of risk management policies and procedures exist within the Hamersley Iron system. These include IronSafe, IEMS (risk registers), Asset Management Improvement Program, SRP, Water Quality Management Manual, Chlorine Management Manual, Workpacks, CMS (contractor management system), and individuals are required to assess risks for any given task under Hamersley Iron's OHS polices. The probability and consequences of asset failure are assessed in the SRPs. Risks associated with planned outages to the water supply are considered for example means of providing a temporary water supply to various residents.

The SRP's contain contingencies and treatment systems. A system wide version is now being developed which sits above the other SRP's, and bundles together a high level overview of the major risks and responses.

5.17.9 CONTINGENCY PLANNING

Contingency plans document the steps to deal with the unexpected failure of an asset.

The IEMS covers responses to such environmental emergencies. Key contingency plans are tested to confirm their operability and to cover higher risks, carried out by emergency management teams (FESA in Dampier and Hamersley Iron's EMO's in Paraburdoo and Tom Price). Exercises include a simulated chlorine leak and responses to spills.

5.17.10 FINANCIAL PLANNING

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.

As an ongoing part of major mining operations, Hamersley Iron will ensure that water and sewerage services (provision of housing and town infrastructure in general) remain adequate and funded as an integral part and cost of their mining operations. This is done through the operations, maintenance and capital expenditure systems to reflect strategies and actions to achieve the objectives.

The financial details for water/wastewater services are included in overall Infrastructure Financial Planning, which identifies Mine Revenue as the funding source for Capital expenditure. The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets) and predictions on income for the next five years and reasonable indicative predictions beyond this period (noting that revenue from potable water is a minor income).

The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services. Significant variances from budget are met on an "as required" basis since a significant disruption to the town services (water sewer) has the potential to also cause subsequent disruption to the mining operations.

5.17.11 CAPITAL EXPENDITURE PLANNING

The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure over the next five or more years.

The capital expenditure plan covers issues to be addressed, actions proposed, responsibilities and dates. The planning is at a high level first and then moves into the blue sheet - CEA and CAPS (capital approval process) providing justification for capital expenditure and timing of expenditure. Not necessarily all the funds for projects put forward are approved, for example, a high-level expenditure on sewer upgrades was reduced in the 2009 capital plan, only a fraction of the requested budget was approved. The capital expenditure plan is based (mainly) on replacement of underperforming assets, as identified. These are 'in plan' works, but if a major problem occurred, then an 'out-of-plan' works would be approved to ensure no disruption to customers (and hence mining operations). The capital expenditure plan is produced annually after following the required Hamersley Iron procedures, but there are also quarterly reviews of 'in plan' projects which may be substituted as required.

5.17.12 REVIEW OF AMS

The Hamersley Iron AMIP (asset management improvement plan) is regularly updated / reviewed, last in January 2010.

In addition, independent reviews by the Perth based Hamersley Iron corporate asset management group ('MRU') are becoming more involved in the non-mining assets of the towns. For example, an Imhoff tank (sewer treatment) 40 years old is to be structurally checked by the group. Either the corporate group or local operations staff on-site can propose or consider options that may be required on the capital expenditure plan. A Perth-based project team delivers the capital projects. One of the improvements undertaken in asset management is that the water and waste water is now controlled by an operating division, not just a support division. Hamersley Iron suddenly realised that the water / waste water is just as important as the mining infrastructure, and are now turning their attention to that as well.

5.17.13 CONCLUSION

The AMS is well established. Hamersley Iron is extending the life of its mining operations (and the life of 3 towns) due to strong demand for iron ore. Hamersley Iron have been reviewing asset condition and responding with action plans and works (planned works) to lessen reactive emergency work and meet statutory KPI requirements.

The Asset Management System has reached some point of maturity, but is still a work in progress. A number of improvements to systems are implemented of considered. The employment of more Hamersley Iron field staff will allow better emergency response time for example. The collection of 'Disturbance Data' now (power / water / sewer outage in towns / mine sites) is also an improvement and allows for better monitoring, action and reporting as required. The Asset Management Improvement Plan / Reliability Plans require completion, in particular the operations plans (Equipment Maintenance Strategies and Maintenance Work Management). Ongoing, these documents should adequately incorporate the processes and knowledge of operational staff, and be available to field staff for day-to-day running of the asset management systems for consistent service levels.

APPENDIX A RESPONSE TO PREVIOUS RECOMMENDATIONS

APPENDIX A: RESPONSE TO 2007 RECOMMENDATIONS

Item No.	Recommendations from the previous 2007 audit report	Action taken by the licensee to address the recommendations; and any further action needed to address issues not satisfactorily resolved
1	CONTRACTORS INFORMATION PACK: It is recommended that the contract information pack containing relevant information on responsibilities for consultation with residents, and information on the requirement for recording the residences that are interrupted, and the length of time, be updated to meet operating licence conditions.	This recommendation related to the possibility that contractors may not be "across" HI's obligations in this regard. The information is contained in the information pack and discussion with contractors and the HI CMS (Contract Management Supervisors) indicate an understanding of consultation requirements and the KPI's required. HI needs to remain alert given the remote environment and changes in staff and contractors. Assessment: Closed out
2	REPORTING YEARS: It is recommended that Pilbara Iron consider (with ERA) an alignment of the audit timetable and the reporting timetable.	An alignment of the audit timetable and the reporting timetable was approved by ERA (to 3 yearly intervals, next in 2013, and year ending June each year. Assessment: Closed out
3	CUSTOMER COMPLAINTS: It is recommended that PI continue to develop the Customer Call Centre and the associated training / scripting to ensure the accuracy of the information recorded.	The Customer Call Centre has moved to Perth and is now matured by three years. It is understood that the system is working effectively, but see further recommendations. Assessment: Closed out
4	CUSTOMER COMPLAINTS: It is recommended that PI continue to encourage field staff not to let the system be bypassed, to understand the operating licence requirement of 21 days, and to report back to the call centre as soon as possible to allow the call centre to be more effective in liaison with complainants.	Staff generally only know the 1800 Perth number and the system generally tends not to be bypassed or is allowed to be bypassed. The operating licence requirement of 21 days is recognized. The impression obtained was that consultation is good in the field, that is directly with the affected customers, but feedback to the call centre with updates and timing is less effective. See further recommendations.
5	CUSTOMER CONSULTATION: It is considered that Pilbara Iron carries out this function well. It is recommended that range of consultation continue, and that Pilbara Iron continues to align themselves with the State Government and Water Corporation message.	It is considered that the Customer Service officers in Dampier carries out this function well, much customer material is provided to customers, the HI branding is now becoming universal, but awareness among customers remains low, based on the 2010 survey results. See recommendations
7	CUSTOMER COMPLAINTS AND SURVEYS: It is recommended that Pilbara Iron continues the policy of sending a survey questionnaire to each new customer, and collating and recording the results.	HI has continued the policy of sending survey questionnaires out and collating and recording the results. The survey results generally indicate that awareness is generally quite low, perhaps but partly due to the number of brand names used (previously) by HI, changes in staff (i.e. customers) and satisfaction with the services provided. See recommendations

Item No.	Recommendations from the previous 2007 audit report	Action taken by the licensee to address the recommendations; and any further action needed to address issues not satisfactorily resolved
8	LEVELS OF SERVICE STANDARDS, PERFORMANCE INDICATORS AND REPORTING REQUIREMENTS: Some performance criteria will not be met in the next annual report. It is recommended that Pilbara Iron continues to be proactive in assessing and dealing with issues that prevent compliance with the operating licence.	Three years after the last audit, some performance criteria will not be met in the next annual report. This is largely to do with the aging water sewer systems, the decision that the life of the towns will be extended indefinitely, and the ongoing proactive in assessing and dealing with issues that prevent compliance with the operating licence has led to service interruptions. See recommendations.
9	LEAN: It is recommended that Pilbara Iron continues to utilise the LEAN board system, and encourage the use of KPI's in operational areas that directly reflect the KPI requirements of operational licence (where appropriate). Specifically, the LEAN system could compliment existing monitoring regimes for pressure, flow, leaks, bursts, blockages and overflows in the drinking water wastewater systems as appropriate.	The LEAN has continued unabated and the direct observation is that the LEAN board in each town is the centre of a before work meeting every morning and displays important and up-to-date (daily) KPI's of all facets of the business including the town water and sewer. This allows transparency to all staff of key point indicators, allows issues to be upgraded if persistent. Assessment: Closed out.
10	WATER QUALITY SAMPLING: It is recommended that further effort is taken to communicate and ensure sampling staff are fully knowledgeable of the new procedures clearly outlined in the manual. This may be an ongoing, periodic process due to the high turnover of staff.	There has been no problems in this regard, HI generally undertake all the sampling themselves (as opposed to contractor). It is recommended that further effort is taken to communicate and ensure sampling staff are fully knowledgeable of the new procedures clearly outlined in the manual. This may be an ongoing, periodic process due to the high turnover of staff.
11	WATER QUALITY SAMPLING (CONTRACTORS): It is recommended that key points from the water quality training are included in the Contractor Information Pack where applicable, so that contractors can refresh their knowledge easily.	Complete. However it is noted that the great majority of water sampling is done by HI staff. Assessment: Closed out.
12	ASSET RELIABILITY PLANS: These plans are referenced in this Asset Management Improvement Plan, and are to be completed in 2007. It is recommended that the Asset Reliability Plans be completed (in conjunction with operational staff), and be driven out to field staff.	All Site Reliability Plans have been completed and form the basic descriptions and risk assessment of each system. Assessment: Closed out.
13	MAINTENANCE WORK MANAGEMENT: It is recommended that Equipment Maintenance Strategies and Maintenance Work Management objectives / service levels required are documented in the Asset Management Improvement Plan / Reliability Plans are completed, reviewed as required by the Plan, and linked aligned with day to day operations (Planners and SAP)	SRP's are complete and contain the basic maintenance procedures required and the implementation is via the SAP / PMO system via Planners. The PMO's are the link for costing of day to day operations tasks. Much of the regular maintenance is programmed automatically into the SAP / PMO system, for regular maintenance orders to be issued at the appropriate time. Emergency works also require a PMO raised at the time. Assessment: Closed out.

Item No.	Recommendations from the previous 2007 audit report	Action taken by the licensee to address the recommendations; and any further action needed to address issues not satisfactorily resolved
14	ASSET MANAGEMENT INFORMATION SYSTEM : It is recommended that the asset management information system as documented in the Asset Management Improvement Plan / Reliability Plans be completed, and be available to planners / field staff for day-to-day running of the asset management system.	The Asset Management Improvement Plan / Reliability Plans are complete and form the basis for day-to-day running of the asset management system. Assessment: Closed out.

APPENDIX B OPERATING AUDIT COMPLIANCE SUMMARY

APPENDIX B: 2010 OPERATING LICENCE RISK ASSESSMENT & COMPLIANCE MATRIX

RISK ASSESSMENT CHECKLIST

Compliance Element	Operating Licence		Consequence (1=minor, 2=moderate, 3=major)	Likelihood (A=likely, B=probable, C=unlikely)	Inherent Risk (Low, Medium, High)	Adequacy of Existing Controls (S=strong, M=moderate, W=weak)	Compliance Rating						
	Schedule	Clause					1	2	3	4	5	N/A	N/R
COMPLIANCE													
Has HI complied with any applicable legislation?		*5.1*	2	B	Medium	S					✓		
MEMORANDUM OF UNDERSTANDING													
Has HI entered into a Memorandum of Understanding (MoU) with Department of Health (DoH) no later than three months of the licence commencement date?		*9.1*	2	B	Medium	N/A							✓
Does the MoU include the provision that it is specifying the MoU is a legally binding document between HI and the DoH?		*9.2*	2	C	Medium	N/A							✓
Does the MoU include a provision defining : (i) Text; (ii) Schedules; (iii) Binding Protocols; (iv) Water Quality Management Processes and Procedures?		*9.2*	2	C	Medium	N/A							✓
Does the MoU include a provision requiring HI and DoH to review and renew the MoU not less than once every 3years?		*9.2*	2	C	Medium	N/A							✓
Does the MoU include a provision requiring HI to provide a complete a copy of the MoU to ERA within one month of entering into any amendments to the MoU?		*9.2*	1	C	Low	N/A							✓
Does the MoU include a provision specifying quality requirements for potable water be approved by the Minister for Health?		*9.2*	3	C	High	N/A							✓
Does the MoU include a provision specifying a water quality monitoring plan to ensure that potable water quality requirements are met?		*9.2*	3	C	High	N/A							✓
Does the MoU include a provision specifying a notification procedure for the reporting by HI of information of events which may have risk for public health?		*9.2*	3	C	High	N/A							✓
Does the MoU include a provision requiring an audit by the DoH on compliance by HI with its obligations under the MoU at least once every 3years and the provision of the audit report to ERA?		*9.2*	2	C	Medium	N/A							✓
Has HI complied with the terms of the MoU?		*9.4*	3	C	High	N/A							✓
Has HI published the Text and Schedules of the MoU and any amendments to the Text and Schedules of the MoU within one month of entering into the MoU or making amendments to the Text and Schedules of the MoU?		*9.5*	1	C	Low	N/A							✓
Has HI published the (DoH) Audit Report on HI's website within one month of completion of the audit? HI has advised no audit has been completed.		*9.6*	1	B	Low	N/A							✓
Has HI published its Potable Water Quality Reports quarterly, or at a reporting frequency specified by the DoH?		*9.7*	1	B	Low	N/A							✓
ACCOUNTING RECORDS													
Has HI and any related body corporate maintained accounting records that comply with the Australian Accounting Standards Board Standards or Equivalent International Accounting Standards?		*15.1*	1	B	Low	S					✓		
OPERATIONAL AUDIT													
Has HI, unless otherwise notified in writing by ERA, provided ERA with an operational audit within 24 months after the commencement date, and every 24 months thereafter?		*16.1*	2	B	Medium	S					✓		
Has HI complied with, and required the auditor to comply with, ERA's standard audit guidelines dealing with the operational audit, including any minimum requirements relating to the appointment of the auditor, the scope of the audit, the conduct of the audit and reporting the results of the audit?		*16.2*	2	B	Medium	S					✓		
Has the independent auditor nominated by HI been approved by ERA?		*16.4*	1	B	Low	S					✓		

RISK ASSESSMENT CHECKLIST														
Compliance Element	**Operating Licence**		**Consequence** (1=minor, 2=moderate, 3=major)	**Likelihood** (A=likely, B=probable, C=unlikely)	**Inherent Risk** (Low, Medium, High)	**Adequacy of Existing Controls** (S=strong, M=moderate, W=weak)	**Compliance Rating**						
	Schedule	Clause					1	2	3	4	5	N/A	N/R
ASSET MANAGEMENT SYSTEM													
Has HI provided for, and notified ERA of, an asset management system in respect of HI's assets within two business days from the commencement date unless otherwise notified in writing by ERA?		*17.1*	2	B	High	S					✓		
If any material changes have been made to the asset management system, has ERA been informed within 10 days?		*17.2*	1	C	Low	S							✓
Has HI, unless otherwise notified in writing by ERA, conducted an asset management system review within 24 months of the commencement date and every 24 months thereafter?		*17.3*	2	B	Medium	S					✓		
Has HI, unless otherwise notified in writing by ERA, provided ERA with a report on the Asset Management System Review within 24 months of the commencement date and every 24 months thereafter?		*17.3*	1	B	Low	S					✓		
Has HI complied with, and required their expert to comply with, ERA's standard guidelines dealing with the Asset Management System, Review, including any minimum requirements relating to the appointment of the expert, the scope of the review, the conduct of the review and the reporting results of the review?		*17.4*	2	B	Medium	S					✓		
Has the independent expert nominated by HI been nominated by ERA?		*17.6*	2	B	Medium	S					✓		
PROVISION OF INFORMATION													
Has HI provided the Authority with any information that the Authority has required in connection with its functions under the Act in the time, manner and form specified by the Authority?		*21.1*	2	B	Medium	S					✓		
OPERATING AREAS													
Is HI providing water services only within the designated operating areas?	*2*		2	C	Medium	S					✓		
CUSTOMER SERVICE CHARTER													
Has HI customer service charter in place that accords with ERA's review guidelines and that is drafted in 'plain English'?	*3*	*2.1-2.2*	2	B	Medium	S					✓		
Has HI customer service charter in place that accords with ERA's review guidelines, and that addresses all of the service issues that are reasonably likely of concern to all its customers? (Different parts of the customer service charter may be expressed to apply to different classes of customers).	*3*	*2.1-2.3*	2	B	Medium	S					✓		
Has any proposed amendment to the customer service charter been forwarded to ERA for approval?	*3*	*2.4*	2	B	Medium	S					✓		
Has HI made the customer service charter available to its customers by prominently displaying it in those parts of HI offices to which customers regularly have access?	*3*	*2.5*	1	C	Low	S					✓		
Has HI made the customer service charter available to its customers by providing a copy, upon request, and at no charge, to the customer?	*3*	*2.5*	1	C	Low	S					✓		
Has HI made the customer service charter available to its customers by sending a current copy, or a summary document approved by ERA, every 3 years or as agreed with ERA?	*3*	*2.5*	1	C	Low	S					✓		
Has the customer service charter been reviewed by HI at least once in every 3 year period or as agreed with ERA?	*3*	*2.6*	2	B	Medium	S					✓		
Has HI provided services in a way which is consistent with its customer service charter? (This condition is not intended to create a statutory duty nor provide any third party with a legally enforceable right or cause of action).	*3*	*2.7*	3	B	High	S				✓			

RISK ASSESSMENT CHECKLIST														
Compliance Element	**Operating Licence**		**Consequence** (1=minor, 2=moderate, 3=major)	**Likelihood** (A=likely, B=probable, C=unlikely)	**Inherent Risk** (Low, Medium, High)	**Adequacy of Existing Controls** (S=strong, M=moderate, W=weak)	**Compliance Rating**						
	Schedule	Clause					1	2	3	4	5	N/A	N/R
CUSTOMER COMPLAINTS													
Has HI in place a properly resourced process for effectively receiving , recording and (where possible) resolving customer complaints within a timeframe of 15 business days?	*3*	*3.1*	2	B	Medium	S				✓			
Has HI established a system for providing each aggrieved customer with a unique identifying complaint number?	*3*	*3.2*	2	B	Medium	S					✓		
Has HI provided an appropriate number of designated officers who are trained to deal with customer complaints and who are authorised to, or have access to officers who are authorised to make necessary decisions to settle customer complaints or disputes, including where applicable, approving the payment of monetary compensation?	*3*	*3.2*	2	B	Medium	S					✓		
Has HI established a complaint resolution protocol which is designed to resolve customer complaints within 15 business days of being notified of their existence?	*3*	*3.2*	2	B	Medium	M					✓		
Has HI provided a system for accurately monitoring the number, nature and outcome of complaints in order to fulfill the requirements to provide information set out in the licence?	*3*	*3.2*	2	B	Medium	S		✓					
Where a dispute has not been resolved within 15 business days, has HI informed the customer of the option of referring their complaint to the Department of Water?	*3*	*3.4*	1	B	Low	S							✓
Where a dispute arises between the customer and HI regarding a provided or requested water service, the customer may refer the dispute to the Department of Water (DoW) (who may conciliate the dispute or direct HI or the customer to binding arbitration). During the process of investigation and conciliation, has HI made every endeavour to promptly cooperate with the DoW's requests, which may include the expeditious release of any information or documents requested by DoW and the availability of the relevant staff of HI?	*3*	*3.6*	2	B	Medium	S							✓
Has HI, on request, provided the DoW with details of complaints made, names and addresses of customers who have made complaints and the manner in which the complaint was resolved?	*3*	*3.7*	2	B	Medium	S				✓			
CUSTOMER CONSULTATION													
Has HI established ongoing customer consultation processes which both informs customers and proactively solicits customer opinion on HI's operations and delivery of services?	*3*	*4.1*	1	B	Low	S					✓		
Has HI established a customer council, and does HI consult with the customer council to facilitate community involvement in issues relevant to the exercise of HI's level of service, or does HI fulfill the condition listed below?	*3*	*4.1*	1	B	Low	S					✓		
Has HI instituted at least two of the following processes: (i) Meeting on a regular basis with customers to seek comment on issues relevant to the exercise of HI's level of service under the licence; (ii) Publishing a simple newsletter providing basic information about HI's operations; and/or (iii) Establishing other forums for consultation to enable community involvement in issues relevant to HI's obligations under this licence.	*3*	*4.1*	1	B	Low	S					✓		
Has ERA been consulted in respect to the type and extent of customer consultation provided by HI?	*3*	*4.2*	1	B	Low	S					✓		
If requested by ERA, has HI established other forums for consultation, to enable community involvement in issues relevant to the exercise of HI's obligations under the licence?	*3*	*4.3*	1	C	Low	N/A						✓	

RISK ASSESSMENT CHECKLIST														
Compliance Element	**Operating Licence**		**Consequence** (1=minor, 2=moderate, 3=major)	**Likelihood** (A=likely, B=probable, C=unlikely)	**Inherent Risk** (Low, Medium, High)	**Adequacy of Existing Controls** (S=strong, M=moderate, W=weak)	**Compliance Rating**						
	Schedule	Clause					1	2	3	4	5	N/A	N/R
CUSTOMER CONTRACTS													
If HI has entered into any agreement with a customer to provide water services that exclude, modify or restrict the terms and conditions of the licence, has the agreement been approved by ERA prior to its commencement?	*3*	*5.2*	2	C	Medium	N/A							✓
If HI has entered into any agreement with a customer to provide water services that exclude, modify or restrict the terms and conditions of the licence, has approval been obtained from ERA prior to any amendment being made to the agreement?	*3*	*5.2*	2	C	Medium	N/A							✓
If HI has entered into an agreement which restricts the terms and conditions of the licence, has HI published a report annually that includes the number of agreements entered into by HI during the reporting period, categorised by location and the type of exclusion, modification or restriction?	*3*	*5.4*	1	C	Low	N/A							✓
If HI has entered into an agreement which restricts the terms and conditions of the licence, has HI published a report annually that includes the total number of agreements entered into by HI, categorised by location and land use? HI has advised no such agreement has been entered into.	*3*	*5.4*	1	B	Low	N/A							✓
CUSTOMER SURVEYS													
If required by ERA, not more frequently than 12 months, has HI commissioned an independent survey addressing and conforming to the conditions and parameters set out in writing by ERA?	*3*	*6.1*	1	B	Low	S						✓	
CUSTOMER SERVICE STANDARDS													
Has HI provided an emergency telephone advice system such that customers need only make one telephone call to report an emergency?	*4*	*1.1*	2	C	Medium	S					✓		
Were 90% of customers requiring a response advised of the nature and timing of the action to be taken by HI within one hour of the emergency being reported?	*4*	*1.1*	2	B	Medium	M				✓			
Were 90% of customer complaints resolved within 15 business days?	*4*	*1.2*	1	B	Low	M		✓					
POTABLE WATER SUPPLY													
Has HI ensured that customers connected to its water systems shall have, at the outlet of the water meter to their property minimum head 15m, maximum head 100m and flow minimum 20L/s?	*4*	*2.1*	2	B	Medium	S					✓		
Over each 12 month period have at least 90% of customers had, at the outlet of the water meter to their property minimum head 15m, maximum head 100m and flow minimum 20L/s?	*4*	*2.1*	2	B	Medium	S					✓		
Over each twelve month period have at least 75% of properties not experienced a complete interruption of supply (no flow), exceeding 1 hour, to the supply standard set out in Section 2.1 of the licence?	*4*	*2.2*	2	B	Medium	M		✓					
POTABLE WATER SUPPLY													
Has there been fewer than 20 leaks or bursts per 100km of pipe in 12 months?	*4*	*2.2*	2	B	Medium	S				✓			
SEWERAGE SERVICES													
In the preceding 12 months were there fewer than 40 blockages per 100km of sewer main?	*4*	*3.1*	2	B	Medium	M				✓			
As a performance indicator for percentage of connected properties experiencing wastewater overflows, in the preceding 12 months period did 90% of customers receive the standard for HI's schemes?	*4*	*3.1*	2	B	Medium	S				✓			

RISK ASSESSMENT CHECKLIST														
Compliance Element	**Operating Licence**		**Consequence** (1=minor, 2=moderate, 3=major)	**Likelihood** (A=likely, B=probable, C=unlikely)	**Inherent Risk** (Low, Medium, High)	**Adequacy of Existing Controls** (S=strong, M=moderate, W=weak)	**Compliance Rating**						
	Schedule	Clause					1	2	3	4	5	N/A	N/R
BENCHMARKING AND PERFORMANCE MONITORING INFORMATION													
Has HI provided ERA with data required for performance monitoring purposes as set out in the "Water Compliance Reporting Manual" as amended from time to time?	*5*	*2.1*	2	C	Medium	S					✓		
Has HI provided the data required by Schedule 5 clause 2.1 for the previous financial year by 31 October each year?	*5*	*2.2*	2	C	Medium	S						✓	
OBLIGATIONS TO CUSTOMERS: AVAILABILITY AND CONNECTION TO SERVICES													
Has HI set out in writing its 'conditions for connection' and make that information available to all applicants for connection and to people enquiring about connection?	*6*	*2.3*	1	B	Low	S					✓		
Has HI ensured that its services are available for connection on request to any land situated in the Operating Areas, subject to the applicant meeting any conditions HI has determined to ensure safe, reliable and financially viable supply of services to land in the Operating Areas in accordance with this licence and any Water Acts? Satisfactory compliance with the conditions of connection is to be taken as forming and essential requirement of gaining approval for connection to HI's schemes.	*6*	*2*	2	B	Medium	S					✓		

RISK ASSESSMENT CHECKLIST														
Compliance Element	**Operating Licence**		**Consequence** (1=minor, 2=moderate, 3=major)	**Likelihood** (A=likely, B=probable, C=unlikely)	**Inherent Risk** (Low, Medium, High)	**Adequacy of Existing Controls** (S=strong, M=moderate, W=weak)	**Compliance Rating**						
	Schedule	Clause					1	2	3	4	5	N/A	N/R
"OLD FORM" OPERATIONAL LICENCE													
DRINKING WATER SYSTEM STANDARDS													
Has HI supplied water, designated as drinking water that is safe for human consumption and which complies with directions made from time to time by the Minister for Health?	*8*	*2.1*	3	B	High	S					✓		
Has HI provided reports on a quarterly basis on health related quality as prescribed by the Environmental Health Service of the DoH for the consideration of the Purity of Water Committee?	*8*	*2.1*	2	C	Medium	S					✓		
Has HI made every endeavour to ensure no customer shall have more than three interruptions which exceed one hour in any one year?	*8*	*2.4*	2	B	Medium	M				✓			
Has the drinking water supply complied with guidelines as defined in the DoH MoU and *Guidelines for Drinking Water Quality* 1987?	*8*	*3.1*	3	C	High	S					✓		
Is there evidence that HI has endeavoured to meet non health related characteristics of the Guidelines, as far as practicable?	*8*	*3.1*	2	B	Medium	S					✓		
Has HI operated its services such that the presence of amoebae is minimised and no sample should contain any Naegleria species which can tolerate temperatures greater than 42deg C and above, and to achieve an annual compliance for no less than 95% of the time?	*8*	*3.2*	3	B	High	S					✓		
REPORTING - INFO PROVIDED TO ERA													
Has HI provided ERA with a report at the end of each twelve month period (July-June) containing: the names and address of the persons who have made complaints in relation to HI's services provided under the licence?	*6*	*2.1*	2	C	Low	S							✓

APPENDIX C ASSET MANAGEMENT EFFECTIVENESS SUMMARY

APPENDIX C: 2010 ASSET MANAGEMENT EFFECTIVENESS SUMMARY

Operating Area	AMS Process & Policy Definition Adequacy Rating	AMS Performance Rating
Asset planning		
Have strategic objectives for assets been identified?	A	1
Have lifecycle costs of owning and operating assets been assessed?	A	1
Have funding options been evaluated?	A	1
Have costs been justified and cost drivers identified?	A	1
Have likelihood and consequences of asset failure been predicted?	A	1
Have plans been regularly reviewed and updated / need for new assets identified?	A	1
Asset creation/acquisition.		
Have full project evaluations been undeHIaken for new assets, including comparative assessment of non-asset solutions?	A	1
Did evaluations include all life-cycle costs?	A	1
Did projects reflect sound engineering and business decisions?	A	1
Were commissioning tests documented and completed?	A	1
Were ongoing legal/environmental/safety obligations of the asset owner assigned and understood?	A	1
Asset disposal.		
Were under-utilised and under-performing assets identified as paHI of a regular systematic review process?	A	1
Were the reasons for under-utilisation or poor performance critically examined with corrective action or disposal undeHIaken?	A	1
Were disposal alternatives evaluated?	A	1
Is there a replacement strategy for assets?	A	1
Environmental analysis.		
Were oppoHIunities and threats in the system environment assessed?	A	1
Were performance standards (availability of service, capacity, continuity, emergency response, etc) measured and achieved?	A	2
Has compliance with statutory and regulatory requirements been achieved?	A	1
Were customer service levels achieved?	A	2
Asset operations.		
Were operational policies and procedures documented and linked to service levels required?	A	1
Was risk management applied to prioritise operations tasks?	A	1
Were assets documented in an Asset Register including asset type, location, material, plans of components, an assessment of assets' physical/structural condition and accounting data?	A	2
Were operational costs measured and monitored?	A	1
Did staff receive training commensurate with their responsibilities?	A	2
Asset maintenance		
Were maintenance policies documented and linked to service levels required?	A	1
Were regular inspections undeHIaken of asset performance and condition?	A	1
Were maintenance plans (emergency, corrective and preventative) documented and completed on schedule?	A	1
Were failures analysed and operational/maintenance plans adjusted where necessary?	A	1
Was risk management applied to maintenance tasks?	A	1
Asset Management Information System (MIS)		
Was adequate system documentation provided for users and IT operators?	A	1
Did input controls include appropriate verification and validation of data entered into the system?	A	1
Were logical security access controls adequate, such as passwords?	A	1
Did physical security access controls appear adequate?	A	2
Did data backup procedures appear adequate?	A	2
Were key computations related to licensee performance repoHIing materially accurate?	A	1
Were management repoHIs adequate for the licensee to monitor licence obligations?	A	1
Risk management		
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
Are risks being documented in a risk register and treatment plans being actioned and monitored?	A	1
Are the probability and consequences of asset failure regularly assessed?	A	1
Contingency planning		
Are contingency plans documented, understood and tested to confirm their operability and to cover higher risks?	A	1
Financial planning		
Does the financial plan state the financial objectives and strategies and actions to achieve the objectives?	A	1
Does the financial plan identify the source of funds for capital expenditure and recurrent costs?	A	1
Does the financial plan provide projections of operating statements (profit and loss) and statement of financial position (balance sheets)?	A	1
Does the financial plan provide firm predictions on income for the next five years and reasonable indicative predictions beyond this period?	A	1
Does the financial plan provide for the operations and maintenance, administration and capital expenditure requirements of the services?	A	1
Have significant variances in actual/budget income and expenses been identified and corrective action taken where necessary?	A	1

Operating Area	AMS Process & Policy Definition Adequacy Rating	AMS Performance Rating
Capital expenditure planning		
Is there a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates?	A	1
Does the plan provide reasons for capital expenditure and timing of expenditure?	A	1
Is the capital expenditure plan consistent with the asset life and condition identified in the asset management plan?	A	1
Is there an adequate process to ensure that the capital expenditure plan is regularly updated and actioned?	A	1
Review of AMS		
Is the asset management system regularly reviewed and updated?	A	1
Is a review process in place to ensure that the asset management plan and the asset management system described therein are kept current?	A	1
Have independent reviews (e.g. internal audit) been performed of the asset management system?	A	1

APPENDIX D RATING TABLES

APPENDIX D: RATINGS TABLES

The Audit Guidelines: Electricity, Gas And Water Licences 2009 gives clear criteria and instructions for the risk assessment process. Risk is associated with the ramifications of non-compliance with any conditions of the licence or any additional standards or agreements made between stakeholders and RT.

A five point rating scale is used to assess the level of compliance of operations (Table 1). A compliance rating of 5 indicates a well managed operational process. Ratings of 3-4 acknowledge satisfactory performance, but will entail some recommendations for system improvement. A Rating of 1-2 indicates non-compliance.

Table 1 Types of Compliance Risk (ERA, 2009)

Type of Risk	Examples
Non-compliance with supply quality	Public health and safety issues, quality not fit-for-purpose.
Non-compliance with supply reliability	Delays in new connections, disruptions to supplies, insufficient supplies.
Non-compliance with consumer protection	Customer service levels not met, higher prices charged.
Non-compliance with legislation/licence	Breach of industry Acts and regulations, other licence conditions not met, e.g. performance reporting to the Authority.

The type of non-compliance influences the nature of risk. Table 2 outlines four types of non-compliance which will be used in the audit to differentiate between the severity of non-compliance events.

Table 2 Operational Compliance Rating Scale (ERA, 2009)

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 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

A three point rating scale is then used to quantify the consequences of the non-compliance.

1 Minor
2 Moderate
3 Major

Considerations used to determine consequence are threat to health and livelihood, restriction to services, duration of non-compliance, customer complaints, financial burdens incurred by customers and re-occurrence of non-compliance events. In general, it is suggested that the

consequences of supply quality and reliability are rated higher than consumer protection issues and breaches of reporting protocol.

The likelihood of this non-compliance is then determined for the risk analysis checklist using criteria in Table 3.

Table 3 Likelihood Ratings (ERA, 2009)

	Level	Criteria
A	Likely	Non-compliance is expected to occur at least once or twice a year
B	Probable	Non-compliance is expected to occur once every three years
C	Unlikely	Non-compliance is expected to occur once every 10 years or longer

The above information is then used to give an inherent risk rating for the non-compliance event (Table 4). This risk rating also conforms to a three point scale (High, Medium, Low) as defined in Table 5.

Table 4 Inherent Risk Rating (ERA, 2009)

Likelihood	Consequence		
	1. Minor	2. Moderate	3. Major
A. Likely	Medium	High	High
B. Probable	Low	Medium	High
C. Unlikely	Low	Medium	High

Table 5 Description of Inherent Risk Rating (ERA, 2009)

Level	Description
High	Likely to cause major damage, disruption or breach of licence obligations
Medium	Unlikely to cause major damage but may threaten the efficiency and effectiveness of service
Low	Unlikely to occur and consequences are relatively minor

RT has the potential to influence both the likelihood and scale of consequence for a potential non-compliance through their operational management process. In this regard, and to encourage a pro-active approach to risk-management, strategies developed and utilised by RT to minimise risk will also be assessed according to the three point scale of Table 6.

Table 6 Adequacy ratings for Existing Controls (ERA, 2009)

	Level	Description
3	Strong	Strong controls that are sufficient for the identified risks
2	Moderate	Moderate controls that cover significant risks; improvement possible
1	Weak	Controls are weak or non-existent and have minimal impact on the risks

The inherent risk and the adequacy of controls are then used to identify the areas of priority on a scale of 1 – 4. (Table 6)

Table 7 Assessment and Audit Priority (ERA, 2009)

		Adequacy of existing controls		
		Weak	Moderate	Strong
Inherent Risk	High	Audit priority 1	Audit priority 2	
	Medium	Audit priority 3	Audit priority 4	
	Low	Audit priority 5		

The asset management system is evaluated using the two tables presented below.

Table 8 Asset Management Process and Policy Definition Adequacy Ratings (ERA, 2009)

Rating	Description	Criteria
A	Adequately defined	• Processes and policies are documented. • Processes and policies adequately document the required performance of the assets. • Processes and policies are subject to regular reviews, and updated where necessary • The asset management information system(s) are adequate in relation to the assets that are being managed.
B	Requires some improvement	• Process and policy documentation requires improvement. • Processes and policies do not adequately document the required performance of the assets. • Reviews of processes and policies are not conducted regularly enough. • The asset management information system(s) require minor improvements (taking into consideration the assets that are being managed).
C	Requires significant improvement	• Process and policy documentation is incomplete or requires significant improvement. • Processes and policies do not document the required performance of the assets. • Processes and policies are significantly out of date. • The asset management information system(s) require significant improvements (taking into consideration the assets that are being managed).
D	Inadequate	• Processes and policies are not documented. • The asset management information system(s) is not fit for purpose (taking into consideration the assets that are being managed).

Table 9 Asset Management Performance Rating

Rating	Description	Criteria
1	Performing effectively	• The performance of the process meets or exceeds the required levels of performance. • Process effectiveness is regularly assessed, and corrective action taken where necessary.
2	Opportunity for improvement	• The performance of the process requires some improvement to meet the required level. • Process effectiveness reviews are not performed regularly enough. • Process improvement opportunities are not actioned.
3	Corrective action required	• The performance of the process requires significant improvement to meet the required level. • Process effectiveness reviews are performed irregularly, or not at all. • Process improvement opportunities are not actioned.
4	Serious action required	• Process is not performed, or the performance is so poor that the process is considered to be ineffective.

APPENDIX E RECOMMENDATIONS

APPENDIX E: RECOMMENDATIONS

OPERATIONAL AUDIT RECOMMENDATIONS					
Operating Licence		**Comment**	**Compliance Rating**	**Recommendation**	**Reference**
Sched.	Clause				
	5.1	The licensee must enter into a MoU with the Department of Health as soon as practicable, but delays by DoH have prevented this.	*N/R*	It is recommended that the HI works towards a MoU with the DoH expeditiously.	Report Sect. 5.3
3	*4.1*	HI informs and proactively solicits customer opinion on its operations and delivery of services. However surveys show a low awareness of HI as service provider and minimum stds of services.	*5*	It is recommended that HI continues to provide information, consistent branding and summarising minimum standards.	Report Sect. 5.12.5
4	*1.1*	90 % of customers within one hour of reporting an emergency shall be advised of the nature and timing of the action to be undertaken by the licensee.	4	It is understood that this situation is often handled (well) on site by direct customer liaison, but that reporting back to the call centre for interim progress or close out is more problematic. It is recommended that HI continue it encourage maintainers to update the call centre and close the loop	Report Sect. 5.12.2
3 *4*	*3.2* *1.2*	The licensee must have in place, a properly resourced process for effectively receiving, recording and (where possible) resolving 90% of customer complaints within 15 business days. HI has attained 59% in the last 12 months.	2	HI is confident in stating that customer services has resolved all complaints within the designated timeframe. The issue relates to recording data and update the history and progress associated with the complaint. This provides the detailed records of responses to calls. However, it is apparent all users are not doing this overall and hence without these detailed records and supporting documentation, HI was not able to state that all issues were resolved within 15 days. It is recommended that HI seeks to improve this by engaging with other groups.	Report Sect. 5.12.2
4	*2.2*	HI has attained the KPI of < 20 leaks or bursts per 100km of pipe. This has dropped from 22.6 in 07/08, 20.8 in 08/09, to 15.1 in 09/10.	*4*	It is recommended that HI continues to be proactive in its preventative maintenance of the water systems to preserve its success.	Report Sect. 5.13.3
4	*2.2*	HI has not met the KPI that over each 12 month period, at least 75% of connected properties shall not experience a complete interruption of supply (no flow), exceeding 1 hour.	2	It is recommended that HI continues to be proactive in its preventative maintenance of the water systems to acquire this KPI.	Report Sect. 5.13.3
4	*2.2*	HI has not met the criterion that over each 12 month period, at least 75% of connected properties shall not experience a complete interruption of supply (no flow), exceeding 1 hour	4	HI intends to provide additional staff to take over (from Contractors) some of the (emergency) maintenance tasks. This should reduce emergency response times. It is recommended that HI monitor (anecdotally) the impact of this initiative in meeting 'disruption' KPIs.	Report Sect. 5.13.3

OPERATIONAL AUDIT RECOMMENDATIONS

Operating Licence		Comment	Compliance Rating	Recommendation	Reference
Sched.	Clause				
4	*3.1*	HI met the KPI for wastewater overflows with >90% of customers receiving the standard. However HI advise they only report overflows due to (poor) asset condition and not overflows due to blockages by customer products. HI advise the majority of blockages are customer products (even though HI informs customers proactively on this issue).	4	It is recommended that Hamersley Iron's approach to reporting sewer blockage / overflows be modified in accordance with ERA's requirements. It is also recommended that HI continues to try and reduce customer related blockages and overflows, and that HI liaise with ERA such that provision be made in the annual reporting to differentiate between asset based breaks / chokes / spills and those caused by customer products, so that sewer system management practices can continue to be assessed.	Report Sect. 5.13.4

ASSET MANAGEMENT REVIEW RECOMMENDATIONS

Comment	AMS Process Policy Def. Adequacy Rating	AMS Performance Rating	Recommendation	
While HI carries out training commensurate with staff responsibilities, staff turnover (in Contractors as well) appears to be relatively high (given the nature and locations of the business).	A	2	It is recommended that HI ensures the KPIs and HIs obligations to its customers are fully understood by all (especially new) staff	Report Sect. 5.17.5
While there is no specific (computerised) AMS, the SAP system data base records costs against broad brush asset cost centres (locators / IDs). HI suggested that it is considering refining these cost centres (i.e. narrowing them down) and this will enable better geographical tracking in the various town sectors	A	2	HI is encouraged to further explore this avenue as an improvement to the AMS	Report Sect. 5.17.6
Much of the collated data relating to the potable water quality and KPI reporting system is filed in an office at Paraburdoo Mine Site. While the access to the mine site is controlled (gate house), ready access to the records or fire could make it difficult to reconstruct the records and put HI in breach of compliance	A	2	It is recommended that HI considers some additional security with regard to this information (this may include ensuring key documents are stored electronically and /or storing key paper copies of key documents in another location	Report Sect. 5.17.7

APPENDIX F SUPPORTING INFORMATION (ATTACHED AS A SEPARATE DOCUMENT)