McGill Engineering Services Pty Ltd

Engineering, Adjudication & Arbitration Services ABN 45 106 691 169

WESFARMERS KLEENHEAT GAS PTY LTD
GAS DISTRIBUTION LICENCE GDL 9
ASSET MANAGEMENT SYSTEM REVIEW

Prepared By Kevan McGill
Date 30 August 2010

McGill Engineering Services Pty Ltd

Engineering, Adjudication & Arbitration Services ABN 45 106 691 169

Rory Shepherdson
Sales Manager South West
Wesfarmers Kleenheat Pty Ltd
Murdoch WA 6000

Dear Mr Shepherdson

Asset Management System Review Distribution Gas Licence GDL 9

The fieldwork on the asset management system review Gas Distribution licence GDL 9 for the review period (1 February 2009 to 31 March 2010) is complete and I am pleased to submit the report to you. The report reflects my findings and opinions.

In my opinion, the licensee has improved control procedures from the last review in relation to the Distribution licence (GDL 9) for the review period on the relevant clauses referred to within the scope section of this report. However there are still improvements to be made to have effective controls.

In my opinion, the Licensee has improved its asset management system but there is scope for further improvement as set out in the review report attached.

Yours sincerely

Kevan McGill
Director

Date 30 August 2010

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Executive Summary

This asset management review was conducted in accordance with the guidelines issued by the Economic Regulation Authority (*Authority)* for the review period (1 February 2009 to 31 March 2010).

The Licensee has gas distribution systems at Margaret River, Albany, Leinster and Hopetoun where it distributes LPG gas from bulk supply tanks. The distribution gas business is small when compared to the bottled gas supply of the company. There has been a temporary tank added to Margaret River with the interconnection between the separate parts of the system yet to be made. Gas supply arrangements at Leinster changed in the audit period with gas now sold bulk into the tanks meaning that it ceased to be a distribution system as no gas is transported to customers and Leinster became a consumers' installation. The caravan park at Hopetoun was recognised as such with bulk supply to the site only and was no longer a licensed distribution system. Gas supply arrangements at Hopetoun changed in the audit period with gas now sold bulk into the tanks meaning that it ceased to be a distribution system as no gas is transported to customers and Hopetoun became a consumers' installation.

OVERALL CONCLUSION

In my opinion, the licensee has improved control procedures from the last review in relation to the Distribution licence (GDL 9) for the review period on the relevant clauses referred to within the scope section of this report. However there are still improvements to be made to have effective controls.

In my opinion, the Licensee has improved its asset management system but there is scope for further improvement as set out in the review report attached.

ASSET MANAGEMENT SYSTEM REVIEW

A summary of the findings of the asset management system review is:

RATINGS

The assessment of both the process and policy definition rating and the performance rating for each key process in the licensee's asset management system using the scales described is shown below.

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 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).

Asset management review effectiveness rating scale

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.

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

Effectiveness in asset management review reports is shown below.

Asset management effectiveness summary

ASSET MANAGEMENT SYSTEM	Asset management process and policy definition adequacy rating	Asset management performance rating
Asset planning	C	3
Asset creation/ acquisition	B	2
Asset disposal	B	Not Rated
Environmental analysis	B	2
Asset operations	B	2
Asset maintenance	C	3
Asset Management Information System	B	2
Risk management	B	2
Contingency planning	C	3
Financial planning	B	2
Capital expenditure planning	B	2
Review of AMS	D	4

CORRECTIVE ACTIONS REQUIRED

Asset Planning	**Process/Policy rating** C	**Effectiveness rating** 3
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).		
Recommendation		
That the Licensee enhances the Asset Management Plan (AMP) by including an endorsement by senior management, firm service levels are set and monitored, set out the scope of the plan, a description of the assets covered, the business models and risk processes and to include testing of emergency plans. A review process for the asset management system is required.		

Asset operations	Process/Policy rating B	Effectiveness rating 2
5. Asset operations Operations functions relate to the day-to-day running of assets and directly affect service levels and costs.		
Recommendation		
Remote monitoring should be commissioned at Hopetoun when gas is supplied. Regular, planned and scheduled monitoring of pressures and flows at strategic points in all systems should take place each peak load season. While this may have taken place there is no documentation to provide good controls. Further research has taken place but the industry standard detects hydro carbons but not specifically those heavier than air. As this system is not very effective for LPG this should be continually monitored for technology improvements and in the mean time close monitoring of unaccounted for gas should be pursued. Regular and scheduled exercises of the emergency plans should take place and consequent updates are actioned and documented.		

Asset Maintenance	Process/Policy rating C	Effectiveness rating 3
6. Asset maintenance Maintenance functions relate to the upkeep of assets and directly affect service levels and costs.		
Recommendation		
The maintenance procedures manual has scheduled reviews and consequent upgrades. The maintenance manual is to ensure that comprehensive refurbishment of bulk containers takes place routinely. Implement maintenance procedures required by EnergySafety – which requires procedures to cover the activities regularly performed on the network. For maintenance, these include leak survey, leak classification and repair and meter / regulator servicing and replacement.		

Risk management	Process/Policy rating B	Effectiveness rating 2
8. Risk management Risk management involves the identification of risks and their management within an acceptable level of risk.		
Recommendation		
Develop risk registers to cover specific assets.		

Contingency planning	Process/Policy rating C	Effectiveness rating 3
9. Contingency planning Contingency plans document the steps to deal with the unexpected failure of an asset.		
Recommendation		
A contingency planning process is implemented and specific contingencies documented.		

Capital expenditure planning	Process/Policy rating B	Effectiveness rating 2
11. Capital expenditure planning The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure on each over the next five or more years. Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates.		
Recommendation		
A capital expenditure plan should be developed, even if the amounts are relatively small and the planning horizon is short.		

Review of AMS	Process/Policy rating D	Effectiveness rating 4
12. Review of AMS The asset management system is regularly reviewed and updated.		
Recommendation		
The licensee should put in place a scheduled review of the AMS. In particular the appropriateness of the AMS should be assessed, consistent with the action under asset planning.		

ASSET MANAGEMENT SYSTEM REVIEW

ASSET MANAGEMENT SYSTEM REVIEW OBJECTIVES

Under section 11Y of the *Energy Coordination Act 1994* (the Act), a gas distribution licensee must develop and maintain an asset management system to manage the significant asset base for ongoing service delivery to its customers. The Act requires a review of the asset management system every two years (or other time approved by the *Authority)*.

This report is an impartial review of the licensee's asset management effectiveness under the ERA guidelines.

The review conducted between June and August 2010 examined the asset management processes used by the Licensee in delivering the services to its customers. These services include lifecycle processes for:

- Asset planning;
- Asset creation/acquisition;
- Asset disposal;
- Environmental analysis;
- Asset operations;
- Asset maintenance;
- Asset management information system (AMIS);
- Risk management;
- Contingency planning;
- Financial planning;
- Capital expenditure planning; and
- Review of the asset management system.

As well as the processes, the asset management supporting systems were tested as to their use and effectiveness. Data used by the Licensee was also examined with respect to its effectiveness for asset management and the delivery of outcomes.

The recommendations identified in the previous review were examined and the outcomes included in this report.

Tests were undertaken through interviews and investigation of the processes to assess whether they were being performed as documented.

The Licensee appointed McGill Engineering Services Pty Ltd to conduct the review of its Gas Distribution Licence with approval from the Authority. A preliminary assessment was conducted with the Licensee's management to determine the inherent risk and the state of control for each compliance element of the Licence obligation. McGill Engineering Services Pty Ltd then prioritised the review coverage based on the risk profile of the

Licensee with an emphasis on providing greater focus and depth of testing for areas of higher risk to provide reasonable assurance that the Licensee had complied with the standards, outputs and outcomes under the Licence obligations.

REVIEW (AUDIT) PERIOD

The review (audit) period is 1 February 2009 to 31 March 2010.

SCOPE LIMITATION

The review was undertaken by examination of documents, interviews with key persons and observations and is not a detailed inspection of physical items.

PREVIOUS REVIEW

The previous review recommendations and follow actions are set out below.

RECOMMENDATIONS - PREVIOUS REVIEW

The systems are small and while sophisticated asset management systems may not be required, the licensee's systems are very basic some improvements are recommended. These improvements are:

1. The licensee should develop a basic asset management plan to improve assurance of outcomes. The addition of formalised processes rather than ad hoc procedures has a greater assurance of success. The plan should reflect the risks to the systems.
2. Establish remote monitoring of the bulk supplies to improve security of supply.
3. Establish processes for regular scheduled monitoring of pressures at strategic points in the networks to ensure service standards are achieved.
4. Ensure that an effective leak detection system is in place to mitigate safety issues.
5. Conduct regular and scheduled exercises of the emergency plans and action consequent updates.
6. The maintenance procedures manual has scheduled reviews and consequent upgrades.
7. While the asset management system is small it should be periodically reviewed. The licensee should put in place a scheduled review of the AMS.

FOLLOW UP ACTIONS

1. This action has been pursued but not completed and there is a 6 months timetable for implementation of an adequate system.

2. Remote monitoring has been established at Leinster, Margaret River as required and also at new site in Albany. The new site at Hopetoun has been developed for remote monitoring but improved mobile telephone service or a satellite service has to be examined and implemented (if a licence is still required).

3. This action is not complete.

4. This action is not complete.

5. This action is not complete.

6. This action is incomplete and a timetable for completion is required.

7. This action has been pursued but not completed and there is a 6 months timetable for implementation of an adequate system.

NEW RECOMMENDATIONS LAST REVIEW

1. That the Licensee puts in place a basic asset management plan that responds to the key environmental issues the system faces.
2. The Licensee puts in place a process for reviewing usefulness of assets.
3. Update emergency (site) plan at Leinster and Margaret River.
4. The maintenance procedures manual has scheduled reviews and consequent upgrades. New tank at Leinster needs painting.
5. A risk management process is implemented for commercial matters.
6. A contingency planning process is implemented.
7. A financial plan should be developed.
8. A capital expenditure plan should be developed, even if the planning horizon is short.

POST REVIEW IMPLEMENTATION PLAN

Item	Action	Responsible	When	Action taken Further Recommendations
1	The Licensee will implement a basic asset management plan. The system will be well documented including procedures and the asset registers.	Technical Services Manager	Dec 2009	Partially complete. An asset management plan (AMP) has been developed but does not have the authority of approval by senior management, is not detailed to setting

				performance measures but indicating the types of performance measures that can be set. The review of the AMS needs development. The Licensee was subject to an Inspectors order by EnergySafety on system maintenance. This inspectors order has been removed. The Asset management plan should be enhanced to address the shortfalls.
2	A process of reviewing the usefulness of assets is put in place.	Technical Services Manager	Dec 2009	Complete. A process is outlined in the AMP. No further action required.
3	That the Licensee puts in place a basic asset management plan that responds to the key environmental issues the system faces.	Technical Services Manager	Dec 2009	Complete. An assessment of external issues is given. There is a section on regulatory compliance which would include Department of Environment, Energy*Safety* and ERA. The brief descriptions in the AMP should be developed into documented response plans.
4	The licensee will commission remote monitoring at Hopetoun, subject to a licence being required.	Technical Services Manager	Oct 2009	Complete. A licence is not required. Energy*Safety* to be consulted for their requirements.
5	The licensee will implement regular (annual), planned and scheduled monitoring of pressures and flows at strategic points in all systems each peak load	Technical Services Manager	Oct 2009	Incomplete. The Licensee reported that that a reoccurring annual task had been set up. There is no documentation of the field actions taken on this item.

	season.			Implement regular (annual), planned and scheduled monitoring of pressures and flows at strategic points in all systems each peak load season.
6	The licensee will conduct regular (at least annual) and scheduled exercises of the emergency plans and consequent updates are actioned.	Technical Services Manager	Nov 2009	Incomplete. While there was advice that tests had occurred, there is no documentation of exercises of emergency plans. The site plans have been updated. The licensee will conduct regular (at least annual) and scheduled exercises of the emergency plans and consequent updates are actioned.
7	An accurate leak detection process will be used by the Licensee to confirm that heavier than air LPG is being properly detected	Technical Services Manager	Dec 2009	Complete. There is action to deal with leaks. The industry is unable to detect small quantities of LPG (unlike the very light Natural Gas – about 50% of density of air, LPG is heavier than air). The customer information gives indicators to likely leak symptoms such as bubbling gas in wet/marshy areas. Implement systems when available to detect LPG in small quantities.
8	Site plans at Margaret River and Leinster are updated	Technical Services Manager	Aug 2009	Complete. Plans updated. No further action required.
9	The Licensee will conduct scheduled reviews of the maintenance procedures manual and make consequent upgrades. Tank at Leinster is to be	Technical Services Manager	Dec 2009	Partially complete. Regular reviews are scheduled. Licensee is subject to an Inspectors order by Energy*Safety* on system maintenance. The order has been lifted. A manual has been

	painted.			developed but feedback not yet obtained from Energy*Safety*. The tank at Leinster has been painted.
				Obtain the confidence of Energy*Safety* on the maintenance manual.
10	A risk management process is implemented for commercial matters.	Technical Services Manager	Nov 2009	Complete. The AMP details a risk management process.
				No further action required.
11	A contingency planning process is implemented.	Technical Services Manager	Nov 2009	Partially complete. The Licensee claims that they are able to deal with any contingency that may arise.
				Contingency plans should be documented and tested.
12	A financial plan should be developed.	Technical Services Manager	Nov 2009	Distribution does not have separate financial plans from the larger LPG. Projects are individually justified and monitored. This seems adequate for the scale of the work.
				No further action required.
13	A capital expenditure plan should be developed, even if the planning horizon is short.	Technical Services Manager	Nov 2009	Distribution does not have separate financial plans from the larger LPG. Projects are individually justified and monitored. However capital planning could be better documented.
				A capital expenditure plan should be developed, even if the amounts are relatively small and the planning horizon is short.

14	The licensee should put in place a scheduled review of the AMS.	Technical Services Manager	Dec 2009	Review of AMS is not comprehensively addressed. Schedule a review of AMS.

The report to the licensee and the *Authority* clearly expresses the opinion of the reviewer in respect of the findings of the review.

The key contacts were:

- Licensee
  - Rory Shepherdson [Sales Manager South], Ian Allison [Technical Services Manager], Phil Cockayne [Business Representative, South West], Tim Harris [Compliance Manager], David Andrews [Reticulation Manager]
  - Cornelius De Groote Principal Engineer Gas Supply Energy*Safety;* David Robertson, Principal Engineer Gas Utilization Energy*Safety*
- McGill Engineering Services Pty Ltd
  - Kevan McGill,

The audit was conducted during June and August 2010.

Stage	**Auditor**	**Standard**
1. Risk & Materiality Assessment Outcome - Operational/ Performance Audit Plan	K McGill	ASA 300 Planning ASA 315: Risk Assessments and Internal Controls AUS 808: Planning Performance Audits AS/NZS 4360:2004: Risk Management ERA Guidelines
2. System Analysis	K McGill	AUS 810: Special Purpose Reports on Effectiveness of Control Procedures
3. Fieldwork Assessment and testing of; • The control environment • Information system • Compliance procedures • Compliance attitude	K McGill	AUS 502: Audit Evidence AUS 806: Performance Auditing
4. Reporting	K McGill	ASA 300 Planning AUS 806: Performance Auditing

FINDINGS

The conclusions of each of the elements of the licence are summarised in the following table. The review risk as determined for each licence condition is also shown. The details of the review can be seen in Review results (Page 19)

LICENCE ISSUES

The Licensee has gas distribution systems at Margaret River, Albany, Leinster and Hopetoun where it distributes LPG gas from bulk supply tanks. Gas supply arrangements at Leinster changed in the audit period with gas now sold bulk into the tanks meaning that it ceased to be a distribution system as no gas is transported to customers and Leinster became a consumers' installation. The caravan park at Hopetoun was recognised as such with bulk supply to the site only and was no longer a licensed distribution system. Gas supply arrangements at Hopetoun changed in the audit period with gas now sold bulk into the tanks meaning that it ceased to be a distribution system as no gas is transported to customers and Hopetoun became a consumers' installation.

The Energy Coordination Act 1994 (the Act) defines distribution licence and distribution system as:

***"distribution licence**" means a licence having the classification referred to in section 11D(1)(a);*

*"**distribution system**" means —*

(a) a system of pipelines, mains, and gas service pipes, designed to operate at a pressure of less than 1.9 megapascals, for the transportation of gas to customers; or

(b) any other part of the gas distribution system (as defined in section 90 of the Gas Corporation Act 1994 repealed by section 93 of the Gas Corporation (Business Disposal) Act 1999) at the time when a distribution licence is first issued for all or any part of that system (regardless of the pressure at which it is designed to operate),

and any associated apparatus, facilities, structures, plant, or equipment;

and S 11D(1)(a) says:

*11D. **Classification of licences***

(1) Licences are classified as follows —

(a) distribution, which authorises the licensee —

(i) to construct a distribution system and to transport gas through the system; or

(ii) to transport gas through an existing distribution system, and if required for that purpose to make alterations to the system,

and to operate and maintain the system; or

From these definitions it follows that a distribution licence is for a distribution system (the Licensee is not associated with the Gas Corporation) and to construct, transport gas and

operate and maintain the system. Further a distribution system is to transport gas to customers. A customer is not defined in the Act so the dictionary definition of a buyer applies. Where the gas is sold in the bulk tank and not transported to customers there is no licensed distribution system as gas is not transported to customers. The installation becomes a consumer installation (as it would on a domestic premise after the meter) subject to the requirements of Energy*Safety*. The gas is purchased at the bulk tank and used on private land or a mine site under the control of the purchaser of the bulk gas.

In these circumstances the works at Leinster ceased to require a distribution licence from the time gas ceased to be sold from the distribution system. A similar position exists for the Hopetoun sites. The caravan park became a bulk supply and should be treated the same as other caravan parks (unlicensed) and the town site (which has had no gas supplied anyway) will be a bulk supply to the land owner who will not sell gas to his users.

Accordingly, the licence could be modified to remove these areas from the licence or leave the expansion capacity available and explain in reviews/audits that there are no licensed assets at those places.

ENERGY*SAFETY* REQUIREMENTS

Under the Gas Standards (Gas Supply and System Safety) Regulations 2000 Energy*Safety* require (by 2011) gas network operators to have a “safety case” for network safety. The Safety case is to be to AS 4568 –preparation of safety and operating plan for gas networks. This plan has many elements that are common with asset management in that design, construction, operating and maintaining and decommissioning the network are elements. There is also a requirement on hazard and risk assessment. Energy*Safety* are in the process of obtaining an agreed plan with the Licensee. When in place this will be a complementary requirement and for regulatory efficacy should be aligned as much as possible.

Energy*Safety* have an inspector’s order current with this Licensee for the maintenance of their distribution networks. The Licensee is required to comply with an inspector’s order. This order has been lifted (outside the review period).

REVIEW EVIDENCE

The following review evidence has been considered.

- Gas Distribution Licence
- Asset Management Plan
- Gas quality test certificates
- Call centre statistics
- Notification of Hopetoun/Leinster gas supply arrangements to ERA
- Kleenheat Gas inspection plan for Energy*Safety*
- Margaret River /Albany asset register

- Margaret River lease
- Reticulation connection procedure
- OSH policy
- Compliance policy
- Environmental policy
- EMS review summary

ASSET MANAGEMENT SYSTEM REVIEW RESULTS AND RECOMMENDATIONS

Asset Planning	**Process/Policy rating** C	**Effectiveness rating** 3

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).

Observations

Asset management process and policy definition

Process	☒	Policy	☒	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Asset management Plan.

Asset management performance

Process	☑	Documentation	☒	Availability	☒	Use	☒

The Licensee has gas distribution systems at Margaret River, Albany, Leinster and Hopetoun where it distributes LPG gas from bulk supply tanks. The distribution gas is small when compared to the bottled gas supply of the company. There has been a temporary tank added to Margaret River with the interconnection between the separate parts of the system yet to be made. Gas supply arrangements at Leinster changed in the audit period with gas now sold bulk into the tanks meaning that it ceased to be a distribution system as no gas is transported to customers and Leinster became a consumers' installation. The caravan park at Hopetoun was recognised as such with bulk supply to the site only and was no longer a licensed distribution system. Gas supply arrangements at Hopetoun changed in the audit period with gas now sold bulk into the tanks meaning that it ceased to be a distribution system as no gas is transported to customers and Hopetoun became a consumers' installation.

Approval within financial limits is given by the General Manager Kleenheat Gas, and then by Wesfarmers Management.

The existing systems are appropriately planned for their size using appropriate materials such as PE piping for the coastal region and uPVC for Leinster. Most of the mains are 40 & 63mm PE for the Margaret River region and 50mm uPVC & 40mm PE for Leinster. Hopetoun Wave Crest (out of town village) is uPVC and Eco Village (Hopetoun town) and Albany is PE.

Evaluation Criteria summary

- Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning

Response: The Licensee's business is LPG sales and distribution although the majority of the business is with bottled gas rather than reticulated gas. The Asset Management Plan (AMP) sets out a planning/business process.

- Service levels are defined

Response: Typical service levels are described but not enunciated as specific targets.

- Non-asset options (e.g. demand management) are considered

Response: The standard option is bottled gas without developing an asset. The option of reticulated service is only taken where financially viable and not in competition with natural gas.

- Lifecycle costs of owning and operating assets are assessed

Response: Lifecycle costs of owning and operating assets are assessed as part of AMP. Any decision to proceed with a reticulated scheme requires a full commercial evaluation. The financial position of existing assets is assessed monthly. The life of gas reticulation equipment is very long with very little service required to maintain condition. None of the existing assets are close to life cycle replacement of assets. The review process should detect increasing maintenance costs and cause a review of ongoing viability.

- Funding options are evaluated

Response: Development proposals are evaluated with funding options given the potential funding restraints. The land developers provide the in ground services and the Licensee the bulk storage and pressure control. The business model is opportunistic and only where the land developers make a proposal is the viability of a reticulated option developed and assessed.

- Costs are justified and cost drivers identified

Response: Costs of the systems is routinely monitored and assessed. Any indication that indicators are outside accepted ranges will initiate a review of business drivers.

- Likelihood and consequences of asset failure are predicted

Response: There are risk assessments of asset failure and consequences in the risk management plan. For example a major issue is a gas escape and response processes are indicated. These plans need to be tested.

- Plans are regularly reviewed and updated

Response: The Licensee has managers assigned for to review and update plans.

Issues

The Leinster distribution system is in place and distribution mains are not currently being extended. The Leinster system should not be subject to a distribution licence.

For Margaret River/ Albany no systemic planning is occurring and system expansions being considered on a case by case basis for each sub-development. When expansion has been considered the capacity requirements have been addressed and provision made to provide additional supply points and interconnect these supplies. The Hopetoun systems should not be subject to a distribution licence.

Customers are being connected in accordance with the licence requirements.

The distribution pressures are low at 35 kPa and allow additional capacity by raising the distribution pressures. The Margaret River region piping is tested in accordance with regulatory requirements to allow it to operate at 200 kPa but the regulators are 70 kPa rated so that would be the practical limit. Leinster has mainly uPVC mains installed and would thus be limited to 70kPa anyway.

The Licensee has upgraded storage capacity at both Leinster and Margaret River sites and this will not only increase then allowable time between deliveries but the vaporisation rates available and improved security of supply.

The last review required the development of an AMP which has been developed but is a basic plan with broad outline of the required topics. It needs to be supported by a policy framework indicating senior management endorsement of the philosophies in the plan, set out the scope of the plan, a description of the assets covered, the business models and hard performance indicators set and monitored. There should be reference to the supporting documentation and procedures that implements the AMP.		
Recommendation		
That the Licensee enhances the Asset Management Plan (AMP) by including an endorsement by senior management, firm service levels are set and monitored, set out the scope of the plan, a description of the assets covered, the business models and risk processes and to include testing of emergency plans. A review process for the asset management system is required.		
Rating		
Asset Planning	**Process/Policy rating** C	**Effectiveness rating** 3

Asset Creation	Process/Policy rating B	Effectiveness rating 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.

Observations

Asset management process and policy definition

Process	☑	Policy	☑	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Asset Management Plan.

Asset management performance

Process	☑	Documentation	☑	Availability	☑	Use	☑

The licensee has a very basic asset management system. Asset creation is on a case by case basis.

For the Margaret River and Albany system expansions being considered on a case by case basis for each sub-development. When considered the capacity requirements have been addressed and provision made to provide additional supply points and interconnect these supplies.

There is a commercial evaluation of each case.

Evaluation Criteria summary

- Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions

Response: The Licensee undertakes full project evaluation of new assets versus use of bottled gas. The business model is to only provide reticulated assets where the developer provides the in ground services and Natural gas is not available.

- Evaluations include all life-cycle costs

Response: Life cycle costs are considered in evaluation. The life of reticulated assets is long and only the bulk tanks have shorter life issues. The Licensee routinely monitors maintenance costs closely as part of asset assessment.

- Projects reflect sound engineering and business decisions

Response: Projects reflect sound engineering and business decisions with structured approval depending on costs. The engineering is not demanding for the scale of the assets.

- Commissioning tests are documented and completed

Response: Commissioning tests are routinely documented and completed. The risks are too high for safety and performance to do otherwise.

- Ongoing legal/environmental/safety obligations of the asset owner are assigned and understood

Response: Legal/environmental and safety obligations are assigned in policy documents and employment contracts and environmental and safety audits are

conducted on an ongoing basis.		
Issues		
The Leinster distribution system is in place and distribution mains are not currently being extended, so there is no asset creation taking place. The system (and Hopetoun) should not be subject to a distribution licence. For the other regions, management approval is required for capital extensions with the General Manager Kleenheat Gas, and then the Managing Director Wesfarmers Energy having delegated approval to a limit and above that Wesfarmers Board approval is required. Customers are being connected in accordance with the licence requirements.		
Recommendation		
None		
Rating		
Asset Creation	**Process/Policy rating** B	**Effectiveness rating** 2

Asset Disposal	Process/Policy rating B	Effectiveness rating Not Rated

3. Asset disposal

Effective asset disposal frameworks incorporate consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets. Alternatives are evaluated in cost-benefit terms.

Observations

Asset management process and policy definition

Process	☑	Policy	☑	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Asset Management plan

Asset management performance

Process	☑	Documentation	☒	Availability	☑	Use	☐

The licensee has a basic asset management system. The systems other than Leinster are relatively new there are no items that are obsolete or under-performing required disposal or to demonstrate the behaviour for disposal. There is an asset disposal process documented in the AMP but it is brief and covers the disposal decision but not a detailed process. The in ground assets have a very long life and would not need to be removed in the event of disposal. The Licensee regularly moves bulk tanks (such as for Leinster) but at least reference to a documented procedure is required in the AMP. Hopetoun Wave Crest (out of town village – caravan park) system is owned by park owner.

Evaluation Criteria summary

- Under-utilised and under-performing assets are identified as part of a regular systematic review process

Response: The Licensee now examines underutilized and under-performing plant.

- The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken

Response: The Licensee now critically examines underutilized and under-performing plant. There have been no assets in need of disposal to assess performance.

- Disposal alternatives are evaluated

Response: Disposal options are evaluated. There have been no disposal actions to assess performance.

- There is a replacement strategy for assets

Response: The Licensee has options for replacement plant (bulk tanks) subject to the funding availability.

Issues

The systems other than Leinster are new, so there is no asset disposal taking place to form an opinion about the processes. Regular reviews of the usefulness of the assets are now in place. For the Leinster system an asset maintenance process is taking place but no asset disposal to form an opinion.

Recommendation		
The Asset Management Plan needs to be enhanced to include reference to disposal procedures.		
Rating		
Asset Disposal	**Process/Policy rating** B	**Effectiveness rating** Not Rated

Environmental analysis	Process/Policy rating B	Effectiveness rating 2

4. Environmental analysis

Environmental analysis examines the asset system environment and assesses all external factors affecting the asset system.

Observations

Asset management process and policy definition

Process	☒	Policy	☒	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Asset Management Plan

Asset management performance

Process	☑	Documentation	☒	Availability	☒	Use	☒

The licensee is carrying out statutory environmental management process to the extent required for the regulation of bulk storage sites.

The principal external threats are extension of Natural Gas (NG) to reticulated areas and cost of LPG. The extension of NG is unlikely in the remote areas but may be possible in Albany or Margaret River. Any NG extension will take time and allow the Licensee to make orderly plans which is most likely to be a withdrawal of LPG and switching remaining customers to bottled gas. The cost of LPG is governed by world prices and may be exported rather than be supplied locally. This is will need to be monitored by the Licensee. The decision by BHP Billiton to abandon Ravensthorpe would have been very hard to anticipate.

Evaluation Criteria summary

- Opportunities and threats in the system environment are assessed

Response: Opportunities/threats for the Licensee are included in the Asset Management Plan.

- Performance standards (availability of service, capacity, continuity, emergency response, etc) are measured and achieved

Response: Performance standards are routinely measured and achieved. KPIs are monitored monthly and subject to managerial review. The AMP should have these targets documented.

- Compliance with statutory and regulatory requirements

Response: The Licensee's policy documents require compliance with statutory and regulatory obligations. There have been no environmental breaches.

- Achievement of customer service levels

Response: Reliability and cost are the key customer service levels. Costs are routinely monitored by managers.

Issues

The AMP sets out an approach to environmental issues. The principal external threats are set out in the risk section of the AMP.

Recommendation		
None		
Rating		
Environmental analysis	**Process/Policy rating** B	**Effectiveness rating** 2

Asset operations	Process/Policy rating B	Effectiveness rating 2

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

Observations

Asset management process and policy definition

Process	☒	Policy	☒	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Asset Management Plan, EnergySafety Inspection Plan.

Asset management performance

Process	☑	Documentation	☒	Availability	☒	Use	☒

The licensee has a basic asset operation system. Failures at the source cause total system failures and therefore needs monitoring. Remote monitoring is installed at Leinster, Albany and Margaret River have been developed but is not installed at Hopetoun pending recommencement of gas supply with new owners.

System pressure and flows are not monitored to see if they are kept in acceptable ranges. Gas quality and odorant levels are monitored regularly at source and locally to confirm odorant is reaching the consumer.

While there have been statements about gas leakage testing being carried out there is no documentarian that could be sourced to confirm the results.

Emergency plans exist but while regular scheduled reviews may have taken place there is no documentation of exercising the plans.

The Licensee uses licensed gas fitters for system operation (and maintenance) which gives a good base skill set for operatives. Training is provided for employed and contracted resources. Energy*Safety* has reviewed the training manual but any outcomes will be in the next review period.

The Licensee uses spreadsheets for the asset registers but these are not otherwise documented.

Evaluation Criteria summary

- Operational policies and procedures are documented and linked to service levels required

Response: The Licensee has indicated service standards and KPIs. Operational procedures are documented and designed to meet the required service standards and gathering of information for KPIs. The recording of data for KPIs is a now an area of focus.

- Risk management is applied to prioritise operations tasks

Response: This criterion is satisfied with operations (maintenance predominantly) based on risk assessment.

- Assets are documented in an Asset Register including asset type, location, material,

plans of components, an assessment of assets' physical/structural condition and accounting data

Response: Asset registers are contained with the appropriate information in the FPe IT system and spreadsheets.

- Operational costs are measured and monitored

Response: Operational costs – gas, equipment, staffing, contracts and materials are measured and monitored.

- Staff receive training commensurate with their responsibilities

Response: Staff receive training commensurate with their responsibilities.

- Performance measures such as unplanned outages

Response: There have been no outages. Unaccounted for gas is not monitored with any confidence as it relies on estimates of tank fill levels. Given the difficulty of detection of gas leaks, unaccounted for gas is a good indicator of leaks.

Issues

There have been no operational issues that could raise concerns about operational standards.

The process is currently operating effectively but is growing to a point where remote alarming and regular monitoring of pressures and flows should be undertaken to guarantee service standards. Remote monitoring at Hopetoun should be commissioned as soon as gas is supplied at any reasonable level. The current usage is low with 150 days supply in the tank.

Monitoring of pressures and flows at strategic points of the networks at peak load periods would provide confidence that the systems have the capacity to provide the service quality required.

The systems have emergency plan but these need to be exercised to ensure that the plans are adequate and up to date.

The site plans at Leinster and Margaret River have been updated to include the new tanks.

With appropriate instrumentation, monitoring of flows should be able to be used for unaccounted for gas.

Recommendation

Remote monitoring should be commissioned at Hopetoun when gas is supplied.

Regular, planned and scheduled monitoring of pressures and flows at strategic points in all systems should take place each peak load season. While this may have taken place there is no documentation to provide good controls.

Further research has taken place but the industry standard detects hydro carbons but not specifically those heavier than air. As this system is not very effective for LPG this should be continually monitored for technology improvements and in the mean time close monitoring of unaccounted for gas should be pursued.

Regular and scheduled exercises of the emergency plans should take place and consequent updates are actioned and documented.

Rating		
Asset operations	**Process/Policy rating** B	**Effectiveness rating** 2

Asset Maintenance	Process/Policy rating C	Effectiveness rating 3

6. Asset maintenance

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

Observations

Asset management process and policy definition

Process	☒	Policy	☑	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Facilities maintenance reticulation manual, Asset Management Plan, EnergySafety Inspection Plan

Asset management performance

Process	☑	Documentation	☒	Availability	☑	Use	☒

The licensee has documentation of its asset maintenance system, with a substantial maintenance procedures manual. Maintenance of the system is contracted to local gas fitters. The maintenance manual needs to be made more current, as it is not complete as distribution code changed and some update still required including that arising from AS 4645 (which is required by Energy*Safety* regulations). EnergySafety require procedures to cover the activities regularly performed on the network. For maintenance, these include leak survey, leak classification and repair and meter / regulator servicing and replacement. These have been provided to EnergySafety as part of the work with the Inspectors Order which has subsequently been lifted.

Evaluation Criteria summary

- Maintenance policies and procedures are documented and linked to service levels required

Response: The Licensee has indicated service standards but these should be explicitly stated. Maintenance policies and procedures are documented and linked to service standards principally leakage detection and management.

- Regular inspections are undertaken of asset performance and condition

Response: Regular inspections are undertaken for leakage management and bulk containers maintenance.

- Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule

Response: Maintenance plans are documented and completed on schedule. The Oracle eAM module system is used to schedule and monitor progress of maintenance plans and contains the documentation of the work.

- Failures are analysed and operational/maintenance plans adjusted where necessary

Response: Failures are routinely analysed and adjustments made where necessary.

- Risk management is applied to prioritise maintenance tasks

Response: Risk management is the key method of prioritising maintenance tasks and to minimize failures of bulk containers.

- Maintenance costs are measured and monitored

Response: Maintenance costs are routinely measured and monitored.

- System maintenance strategy, including the methodology used to maintain the system and frequency of maintenance activities.

Response: System maintenance strategies are closely managed by area managers. Oracle eAM monitors and highlights when required.

- Performance measures such as unplanned outages

Response: There have been no outages. Unaccounted for gas is not monitored with any confidence as it relies on estimates of tank fill levels. Given the difficulty of detection of gas leaks, unaccounted for gas is a good indicator of leaks.

Issues

Energy*Safety* has issued an Inspector's order on the Licensee about maintenance procedures. This was not be approved by Energy*Safety* until after the audit period but is a serious issue for Energy*Safety* to consider such a move. The order has been lifted outside the audit period. The performance cannot be judged as satisfactory for the review period if EnergySafety considered this step necessary.

Recommendation

The maintenance procedures manual has scheduled reviews and consequent upgrades. The maintenance manual is to ensure that comprehensive refurbishment of bulk containers takes place routinely.

Implement maintenance procedures required by EnergySafety – which requires procedures to cover the activities regularly performed on the network. For maintenance, these include leak survey, leak classification and repair and meter / regulator servicing and replacement.

Rating

	Process/Policy rating	**Effectiveness rating**
Asset Maintenance	C	3

Asset Management Information System	Process/Policy rating B	Effectiveness rating 2

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.

Observations

Asset management process and policy definition

Process	☒	Policy	☒	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: AMP and on line demonstration of systems.

Asset management performance

Process	☑	Documentation	☒	Availability	☒	Use	☒

A variety of systems exist which support the effective management of the reticulated network, these are:

FPe – This system is used to record and maintain information on breaches, events and corrective actions. It utilises a hierarchical system so that if actions are not completed by the due date they are escalated to the most appropriate manager.

Oracle CRM – This system is used to record customer and billing information

Oracle EAM – This system is used to record assets and to ensure they are appropriately maintained.

IPFX – This system is used to record phone statistics e.g. the level of customer service that is achieved.

The licensee uses EAM and spreadsheets for his asset register which is backed up during regular backups of the server. Graphical information is used to manage the customer data base.

The system has been developed to an adequate level of sophistication appropriate for a network of this scale and complexity. Service standards are collected and can be reported to the *Authority.*

Evaluation Criteria summary

- Adequate system documentation for users and IT operators

Response: The Oracle eAM system is well documented and is only used for reference requirements as the system is user friendly and as such documentation is not required routinely by users.

- Input controls include appropriate verification and validation of data entered into the system

Response: The system is easy to use with a maintenance focus rather than a database focus and includes appropriate verification and validation of data entered into the system.

- Logical security access controls appear adequate, such as passwords

Response: Logical control is adequate with hierarchical access by password.

- Physical security access controls appear adequate

Response: Physical security is adequate with the system on access controlled offices.

- Data backup procedures appear adequate

Response: Data is backed up daily and recovery is tested routinely with switch over to disaster recovery sites also tested. Data is backed up daily via tapes. A monthly restore is performed on all servers.

- Key computations related to Licensee performance reporting are materially accurate

Response: Key computations related to Licensee performance reporting are materially accurate, to the extent possible to assess with visual inspection.

- Management reports appear adequate for the Licensee to monitor licence obligations

Response: Management reports appear adequate for the Licensee to monitor licence obligations to the extent possible to assess with visual inspection.
Reports covering dollars spent on each site for maintenance, new connections, number of work orders raised, details of all preventative (and breakdown) maintenance performed, what was scheduled versus performed, gas metered through the system, gas delivered to the storage.

Issues

None.

Recommendation

None

Rating

Asset Management Information System	**Process/Policy rating**	**Effectiveness rating**
	B	2

Risk management	Process/Policy rating B	Effectiveness rating 2

8. Risk management

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

Observations

Asset management process and policy definition

Process	☒	Policy	☒	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Asset management plan

Asset management performance

Process	☑	Documentation	☒	Availability	☒	Use	☒

There are procedures for employees and for contractors but there is no system risk management taking place other than that for regulation of bulk storage sites.

Evaluation Criteria summary

- Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system

Response: There is an assessment of risks documented in the of risk management plans section of the AMP. Risks are assessed and drive maintenance in particular.

- Risks are documented in a risk register and treatment plans are actioned and monitored

Response: The risk registers are part of AMP. The risk registers should be developed to cover specific assets.

- The probability and consequences of asset failure are regularly assessed

Response: The probability and consequences of asset failure are regularly assessed by area mangers and going forward by the reticulation manager.

Issues

The basic asset management plan incorporates some basic system risk management.

Risk management of physical assets takes place as well as workplace safety risk management and now some risk management occurs for commercial issues.

Recommendation

Develop risk registers to cover specific assets.

Rating

Risk management	Process/Policy rating B	Effectiveness rating 2

Contingency planning	Process/Policy rating C	Effectiveness rating 3

9. Contingency planning

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

Observations

Asset management process and policy definition

Process	☒	Policy	☒	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Asset management plan

Asset management performance

Process	☑	Documentation	☒	Availability	☒	Use	☒

The AMP states that the company has the resources to handle any contingency arising from the risk assessment. This may be so but responses to assessed risks should be documented and tested so that there is assurance that the risk can be managed effectively.

- Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks

Response: There are no documented contingency plans.

Issues

The licensee has such a small system relative to the resources of the owner and has no contingency plan.

As a consequence of Varanus Island gas emergency, gas was imported by ships and the licensee would import gas from other states where required. These gas shortage strategies are informal rather than planned contingencies.

Contingency plans should be developed for identified risks and tested.

Recommendation

A contingency planning process is implemented and specific contingencies documented.

Rating

Contingency planning	Process/Policy rating C	Effectiveness rating 3

Financial planning	Process/Policy rating B	Effectiveness rating 2

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.

Observations

Asset management process and policy definition

Process	☒	Policy	☒	

Evidence: Interviewed Rory Shepherdson And Listed Staff On Site. Documents: Include Asset management plan.

Asset management performance

Process	☑	Documentation	☒	Availability	☒	Use	☒

No systematic financial planning is taking place. Extensions are judged on an as needs basis. The distribution areas do not have separate financial reports from the larger LPG section as a whole.

New reticulated LPG networks are dependent on land developers approaching the Licensee with an expression of interest for the Licensee to become involved with the development in regard to the inclusion of a reticulated gas as part of their development.

The extension of the existing reticulated LPG network is dependent on land developers opening up additional land adjacent to the existing network and a suitable and acceptance commercial arrangement and return.

Once the initial capital investment is approved the ongoing financial viability of the reticulated network is assessed on a monthly basis by analysis of the profit and loss information.

Evaluation Criteria summary

- The financial plan states the financial objectives and strategies and actions to achieve the objectives

Response: The distribution areas do not have separate financial reports from the larger LPG section as a whole. Financial matters are controlled on a project by project basis.

- The financial plan identifies the source of funds for capital expenditure and recurrent costs

Response: Individual projects identify the source of funds for capital expenditure and recurrent costs.

- The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)

Response: Individual projects are monitored for profitability.

- The financial plan provide firm predictions on income for the next five years and reasonable indicative predictions beyond this period

Response: The financial plan for LPG provides predictions on income for the next five years and indicative predictions beyond this period.

- The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services

Response: The financial plan for LPG provides for the operations and maintenance, administration and capital expenditure requirements of the services and agreed with the Board.

- Significant variances in actual/budget income and expenses are identified and corrective action taken where necessary

Response: Significant variances in actual/budget income and expenses are identified and corrective action taken where necessary.

Issues

The system is small and not complex and is performing financially so the need for a financial management plan is not high. However, a financial plan should be developed. The budget cycle is typically annual and for the scale of systems is not unreasonable but income and cost projection for the out years (5) would improve the system.

Recommendation

A financial plan should be developed.

Rating

Financial planning	**Process/Policy rating** B	**Effectiveness rating** 2

Capital expenditure planning	Process/Policy rating B	Effectiveness rating 2

11. Capital expenditure planning

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

Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates.

Observations

Asset management process and policy definition

Process	☒	Policy	☒	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Asset management plan

Asset management performance

Process	☑	Documentation	☒	Availability	☒	Use	☒

Extensions are assessed on an as needs basis and no systematic capital expenditure planning is taking place.

Once the initial capital investment is approved the ongoing financial viability of the reticulated network is assessed on a monthly basis by analysis of the profit and loss information.

Future capital spend is taken into account during the initial investment decision by accumulating the depreciation amounts and assuming the re-investment of the same into new capital and/or repair and renewal costs.

Annual capital and R&R budgets are prepared which incorporate requirements for all reticulated networks, however the financial requirements of our reticulated networks are of an insignificant value that they are often not separately identified at a line item level, but rather incorporates into a sundry line item.

Ad-hoc or unplanned capital or financial requirements (those exceeding $5,000 or satisfying the definition of Capital) are authorised once a business case has been approved. Up to $25K by the Senior Manager, up to $100K can be approved by the General Manager Kleenheat Gas, up to $5M can be approved by the Managing Director Wesfarmers Energy subject to review by Wesfarmers Energy Business development, and approval over $5M is subject to approval by the board of Wesfarmers.

Evaluation Criteria summary

- There is a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates

Response: Plans are done informally on an as needs basis.

- The plan provide reasons for capital expenditure and timing of expenditure

Response: Plans are done informally on an as needs basis with relevant size and timing

specified.

- The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan

Response: Plans are done informally on an as needs basis with no specific assets detailed. In ground asset life is very long and condition of bulk tanks would be a consideration.

- There is an adequate process to ensure that the capital expenditure plan is regularly updated and actioned

Response: There are ongoing reviews.

Issues

The licensee has such a small system relative to the resources of the owner hence the need for a capital expenditure plan is currently low. However, a capital expenditure plan should be developed, even if the planning horizon is short.

Recommendation

A capital expenditure plan should be developed, even if the amounts are relatively small and the planning horizon is short.

Rating

Capital expenditure planning	**Process/Policy rating** B	**Effectiveness rating** 2

Review of AMS	Process/Policy rating D	Effectiveness rating 4

12. Review of AMS

The asset management system is regularly reviewed and updated.

Observations

Asset management process and policy definition

Process	☒	Policy	☒	

Evidence: interviewed Rory Shepherdson and listed staff on site. Documents: Include Asset management plan

Asset management performance

Process	☑	Documentation	☒	Availability	☒	Use	☒

The AMS is simple straightforward but there are no explicit reviews planned. There is oversight by senior management of the operations but not of the AMS.

Evaluation Criteria summary

- A review process is in place to ensure that the asset management plan and the asset management system described therein are kept current

Response: there is no review of the AMS indicated.

- Independent reviews (e.g. internal audit) are performed of the asset management system

Response: Other than oversight of the operations no review is contemplated.

Issues

While the asset management system is small it should be periodically reviewed.

Recommendation

The licensee should put in place a scheduled review of the AMS. In particular the appropriateness of the AMS should be assessed, consistent with the action under asset planning.

Rating

Review of AMS	Process/Policy rating D	Effectiveness rating 4