

A Report for
SP AusNet
from
AMCL Pty Ltd

Version 1.0
2nd November 2011

**PAS 55 : 2008 Re-certification
Report
Electricity Transmission Network**

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Executive Summary

This report details the findings of a Re-certification Audit of SP AusNet's Asset Management System, as applied to its Electricity Transmission network, from the requirements of BSI PAS 55-1:2004 to the new requirements of BSI PAS 55-1:2008. This audit led to the re-certification of SP AusNet's Electricity Transmission network to BSI PAS 55-1:2008, as detailed in Section 5.3 of this report. This has brought the Electricity Transmission network into the existing BSI PAS 55-1:2008 certification awarded to SP AusNet on the 24th March 2011 (for its Asset Management System as applied to the Electricity and Gas Distribution networks) and is valid for three years from that point.

The AMCL audit team needed to satisfy itself that SP AusNet had not only retained the level of compliance it achieved in against BSI PAS 55-1:2004, but that it has also met the additional scope of BSI PAS 55-1:2008. The audit plan was therefore designed using a risk-based approach, focusing on the most critical elements of SP AusNet's Asset Management System (as applied to the Electricity Transmission Network) for demonstrating compliance to BSI PAS 55-1:2008. The prioritised audit areas were:

- 1) Electricity Transmission network Asset Management Strategy, Objectives and Plans, including their development and alignment to the Asset Management Policy and SP AusNet's corporate objectives.
- 2) A focus on the differences in BSI PAS 55:2004 and BSI PAS 55:2008 (hereafter referred to as PAS 55), particularly in the areas of change management and the management of the supply chain.
- 3) A focus on the minor non-conformances identified during the first certification, namely the management and control of diagrams in Objective, calibration of tools and equipment, and change control within projects.
- 4) All other clauses were assessed through documentation review, with site visits and interviews scheduled as SP AusNet deemed appropriate to demonstrate its compliance.

The Re-certification Audit was completed between the 19th and 22nd September 2011. This utilised the AMCL Asset Management Excellence Model™ (AMEM) as a source of evidence for the evaluation of SP AusNet's compliance to PAS 55. This approach enables AMCL to present an Asset Management 'process maturity' view of SP AusNet's Asset Management capabilities in addition to specific PAS 55 compliance (see Section 4). This assessment continues to indicate that SP AusNet has an advanced level of Asset Management process maturity.

No additional Minor Non-conformances were identified. However the first surveillance visit of the Electricity and Gas Distribution Networks was undertaken immediately subsequent to the Re-certification Audit, and three of the five Minor-Non-conformances identified in March 2011 were kept open based on evidence presented during both the Re-certification and Surveillance Audits. These Minor-Non-conformances relate to Clauses 4.3.2 (Asset Management Objectives), 4.5.2 (Tools, Facilities & Equipment) and 4.6.6 (Records), and are detailed in Section 5.1.

In conclusion, SP AusNet remains an effective, efficient and competent Asset Manager. It operates an appropriate and effective Asset Management System which is now developing a good level of consistency across the Electricity Transmission, Distribution and Gas Distribution Networks under its control.

Thanks are extended to SP AusNet for the professional and comprehensive support of the PAS 55 audit process, and the professional engagement of their staff and resources in completing the audit.

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1 Introduction

SP AusNet owns, operates and maintains the Electricity Transmission network in the state of Victoria, Australia, and also the Gas Reticulation network in the western half of Victoria and the Electricity Distribution network in the eastern half. In total it has approximately \$6.8bn of assets under its management.

The Electricity Transmission network interconnects generators, distributors, high voltage customers and the transmission systems of neighbouring New South Wales, South Australia and Tasmania. It serves an estimated five million Victorians living in an area of approximately 227,600 square kilometres.

The Gas Reticulation network serves approximately 570,000 customers across the western half of Victoria, and comprises a Gas Transmission network operating at a pressure of 2,800kPa, and a Gas Distribution network operating at three reduced pressures of 7kPa (low pressure), 7kPa to 200kPa (medium pressure) and 140kPa to 1,050kPa (high pressure).

The Electricity Distribution network serves more than 600,000 customers across eastern half of Victoria, and comprises 2,300km of sub-transmission lines, 30,000km of MV feeders, and 9,800km of LV circuits feeding the customers.

This report details the findings of a Re-certification Audit of SP AusNet's Asset Management System, as applied to its Electricity Transmission network, from the requirements of BSI PAS 55-1:2004 to the new requirements of BSI PAS 55-1:2008. AMCL undertook this in accordance with its Asset Management Assessment & Certification process, which is accredited under the Institute of Asset Management's (IAM's) Endorsed Assessor Scheme. This re-certification brought the Electricity Transmission network into the same PAS 55 certification awarded to SP AusNet in March 2011 for its Electricity and Gas Distribution networks.

In addition to the PAS 55 Re-certification Audit findings, this report contains an assessment of the maturity of SP AusNet's Asset Management practices against the PAS 55 elements – possible because of the nature of the AMCL Asset Management Excellence Model™ (AMEM) assessment methodology used (see Section 3).

2 Activities & Scope

The scope of this Re-certification Audit was SP AusNet's Asset Management System as applied to its Electricity Transmission network. The activities completed to draft this report were:

- 1) Communicating the base audit verification requirements to SP AusNet and agreeing the overall audit plan with them. The Re-certification Audit visit occurred between the 19th and 22nd September 2011 inclusive. The audit sessions are detailed in Appendix A, and were prioritised, using a risk based approach, according to the following requirements:
 - a) Electricity Transmission network Asset Management Strategy, Objectives and Plans, including their development and alignment to the Asset Management Policy and SP AusNet's corporate objectives.
 - b) A focus on the differences in BSI PAS 55:2004 and BSI PAS 55:2008 (hereafter referred to as PAS 55), particularly in the areas of change management and the management of the supply chain.
 - c) A focus on the minor non-conformances identified during the first certification, namely the management and control of diagrams in Objective, calibration of tools and equipment, and change control within projects.
 - d) All other clauses were assessed through documentation review, with site visits and interviews scheduled as SP AusNet deemed appropriate to demonstrate its compliance.
- 2) Reviewing key Asset Management System documentation in advance of and during the Certification Audit site visit (see Appendix B).
- 3) Interviewing the staff listed in the sessions listed in Appendix A.
- 4) Scoring SP AusNet using the PAS 55 question set within the AMEM – see Section 3 for a brief overview of this methodology.
- 5) Preparing this report using the findings and drawing conclusions with respect to the level of SP AusNet's compliance with the requirements of PAS 55.

The format of the assessment was aligned with the Certification Audit process described within Version 2.0 of AMCL's Assessment & Certification Manual. It was based on assessing interviews and other evidence (including documentation). The findings, conclusions and recommendations in this report reflect AMCL's objective interpretation of this evidence against PAS 55.

3 The AMCL Asset Management Excellence Model™

3.1 Overview

The AMEM, which is shown in Diagram 1 below, enables clients to assess their Asset Management capability maturity and benchmark it against world best practice. It is built around 23 activities which span the range of technical, organizational and human capabilities needed to achieve world-class Asset Management. The AMEM tests the existence, completeness, effectiveness and integration of these activities and is applicable to any organization operating in an asset intensive, highly regulated environment.

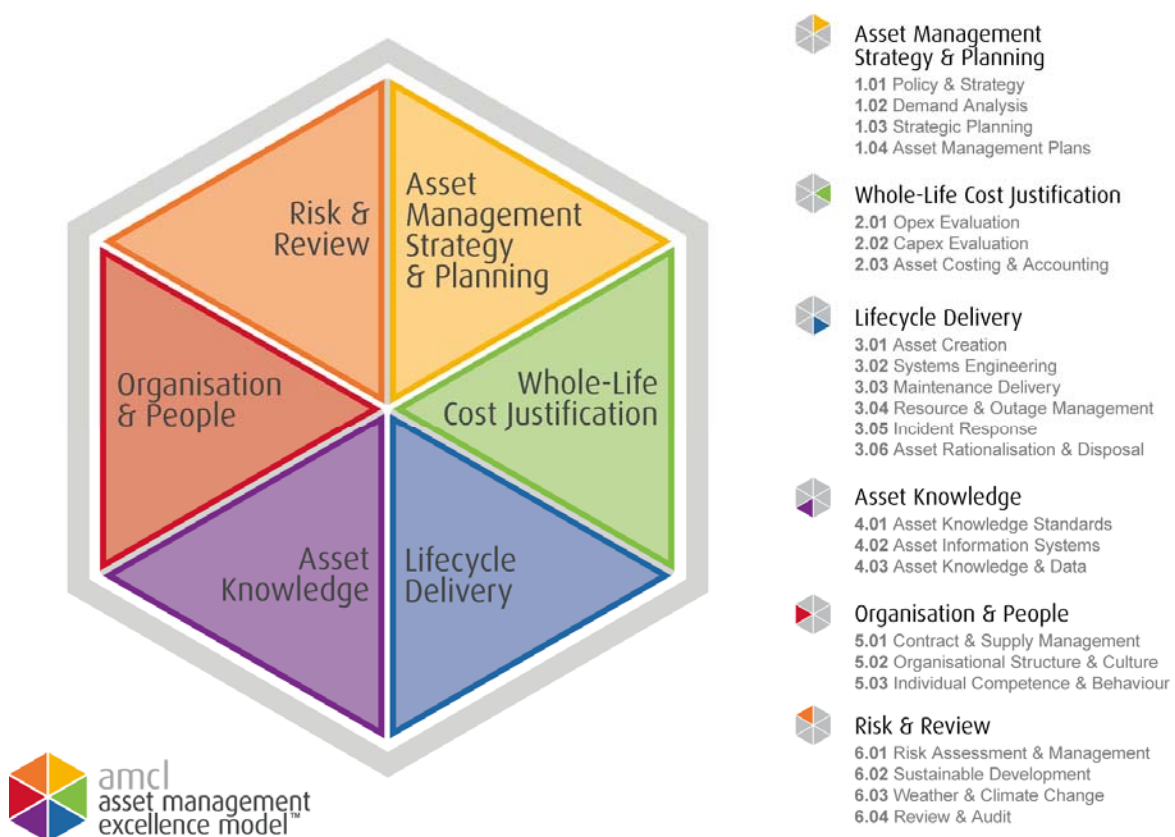
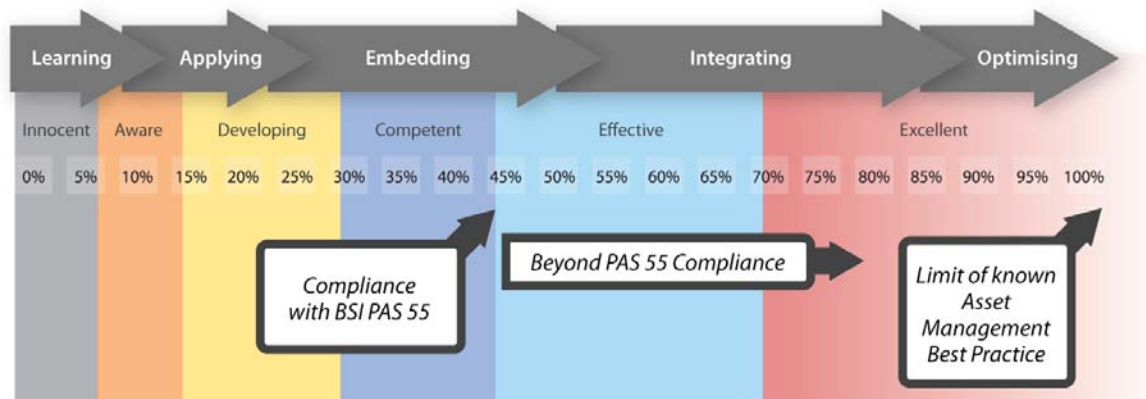


Diagram 1 The AMCL Asset Management Excellence Model™ (AMEM)

Organizations are scored against each of the 23 AMEM activities using a range of assessment criteria and questions. The scores are presented using the maturity scale shown in Diagram 2, which in turn is based on the one described in the International Infrastructure Management Manual¹. Improvement actions are identified based on the criticality of each activity to the organization, the current scores for the assessment criteria that make up each activity, and the

¹ The International Infrastructure Management Manual (IIMM) is published in the UK by the Institute for Asset Management (The IAM) see www.theiam.org

targets an organization and its stakeholders wish to set themselves for each activity. AMEM results are used to identify and prioritize improvements based on where an organization sits relative to world best practice, including PAS 55.



The maturity scale has six maturity states as follows:

1	Innocent	The organisation is starting to <i>learn</i> about the importance of Asset Management activities
2	Aware	The organisation is aware of the importance of the Asset Management Activities and has started to <i>apply</i> this knowledge
3	Developing	The organisation is developing its Asset Management Activities and <i>embedding</i> them
4	Competent	The organisation's Asset Management Activities are developed, <i>embedded</i> and are becoming effective
5	Effective	The organisation's Asset Management Activities are fully effective and are being <i>integrated</i> throughout the business
6	Excellent	The organisation's Asset Management Activities are fully <i>integrated</i> and are being continuously improved to deliver <i>optimal</i> whole life value

Diagram 2: The AMEM Asset Management Maturity Scale

The AMEM is fully mapped to the requirements of PAS 55 and covers everything that the IAM's PAS 55 Assessment Methodology (PAM) tool does, but to a greater depth. This means assessments using the AMEM are entirely consistent with those undertaken using the PAM but AMEM allows organisations to assess and plan to improve their capabilities 'beyond PAS 55 compliance' if required.

The AMEM can be used in a number of assessment modes. For PAS 55 Certification Audits and Certification Audits the output is presented by PAS 55 clause. The concepts of the existence, completeness, effectiveness and integration of processes ensure the maturity assessment effectively identifies PAS 55 compliance on the maturity scale already introduced.

To be in the 'competent' band or above, an organization must have demonstrated that processes exist and are complete. This is broadly the equivalent of PAS 55 compliance. If the organization can demonstrate its processes are effective and integrated, it will begin to demonstrate 'aspiring' or 'excellent' maturity.

3.2 Interpreting PAS 55 Certification Audit Results

Non-Conformances against the requirements of PAS 55 are graded into three types, with the grades validated through the maturity assessment process as scored using the AMEM. These grades are described below, with the maturity validation described in italics.

- 1) **Major Non-Conformance:** The absence of a process or procedure, or a total systematic breakdown in the operation or management of that process or procedure, which if effective would have met a specific requirement of PAS 55. *This is likely to be validated by a sub 30% maturity score against the relevant PAS 55 clause.*
- 2) **Minor Non-Conformance:** A deficiency in a process or procedure, or evidence of a significant failure (or multiple failures) in the operation or management of that process or procedure, which otherwise meets a specific requirement of PAS 55. *This is likely to be validated by sub 30% maturity scores against some specific questions within a PAS 55 clause, but may not significantly affect the overall maturity score for that clause.*
- 3) **Observation:** Either a single (isolated) failure in the operation or management of a process or procedure, or a finding of conformance that is not fully substantiated by evidence. *Observations will be recorded within the maturity scoring commentaries against questions within a PAS 55 clause.*

In addition, **Good Practice** is identified, i.e. a specific area of identified good practice, which will be recorded within the maturity scoring commentaries against questions within a PAS 55 clause.

3.3 Certification Criteria and Terms

Certification depends on the number of Major Non-Conformances discovered and the organisation's proposed actions to rectify them. Recertification would be required after three years. Certification to PAS 55 is awarded, monitored and withdrawn after a Certification or Re-certification Audit, as follows:

- **Full Certification** – no Major Non-Conformances against the requirements of PAS 55 found. Certification lasts for a maximum period of three years. Surveillance visits will be scheduled

annually to ensure the progress of Minor Non-Conformances is being satisfactorily managed.

- **Conditional Certification** – one or more Major Non-Conformances against the requirements of PAS 55 found, but with substantiated evidence that rectification plans are in place. Certification is awarded subject to a surveillance visit within 6 months where these plans are checked for completeness. At this stage certification could be withdrawn or confirmed for a period of 18 Months.
- **No Certification** – one or more Major Non-Conformances found with no rectification plans in place.

4 PAS 55 Certification Audit Findings

Based on the evidence presented during the Re-certification Audit, SP AusNet is compliant with the requirements of PAS 55 with no Major or Minor Non-conformances identified. Table 1 below shows the level of compliance against each of the PAS 55 clauses summarised according to the definitions set out in Section 3.2.

PAS 55 Clause	Number of:		
	Observations	Minor Non-conformances	Major Non-conformances
4.1 General Requirements	0	0	0
4.2 Asset Management Policy	1	0	0
4.3.1 Asset Management Strategy	3	0	0
4.3.2 Asset Management Objectives	2	0	0
4.3.3 Asset Management Plans	1	0	0
4.3.4 Contingency Planning	1	0	0
4.4.1 Structure, Authority and Responsibilities	1	0	0
4.4.2 Outsourcing of Asset Management Activities	1	0	0
4.4.3 Training, Awareness and Competence	1	0	0
4.4.4 Communication, Participation and Consultation	1	0	0
4.4.5 Asset Management System Documentation	0	0	0
4.4.6 Information Management	2	0	0
4.4.7 Risk Management	1	0	0
4.4.8 Legal and other requirements	0	0	0
4.4.9 Management of Change	1	0	0
4.5.1 Lifecycle Activities	1	0	0
4.5.2 Tools, Facilities and Equipment	1	0	0
4.6.1 Performance and Condition Monitoring	0	0	0
4.6.2 Investigation of Asset-related Failures, Incidents and Non-conformities	0	0	0
4.6.3 Evaluation of Compliance	0	0	0
4.6.4 Audit	0	0	0
4.6.5 Improvement Actions	0	0	0
4.6.6 Records	1	0	0
4.7 Management Review	0	0	0
Totals	19	0	0

Table 1 Summary of Compliance

Diagram 3 on the following page shows SP AusNet's Asset Management System maturity against each of the requirements of PAS 55 as evidenced through this Re-certification Audit. The top of the 'competent' maturity band (45% on the scale) represents the level where an organisation is broadly compliant with PAS 55. As discussed in Section 3.2, this does not mean an organisation might not receive Minor-non Conformances for the clause if the level of compliance with each individual requirement within the clause merits this. Therefore this chart provides an overview of the relative strengths and weaknesses within SP AusNet's *Asset Management System*.

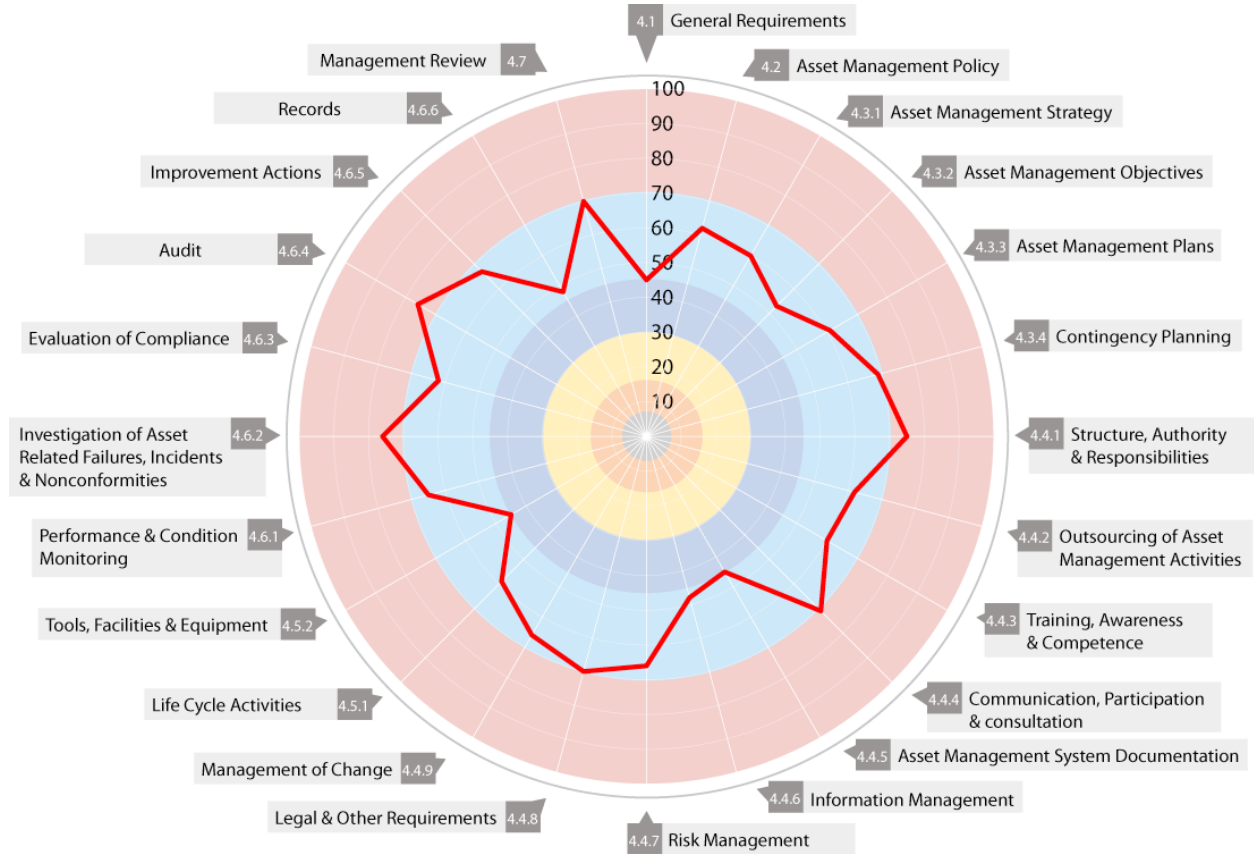


Diagram 3 Maturity Scores by PAS 55 clause

The following sections detail the main findings under each PAS 55 clause giving more information on the observations and other general findings or good practice. It is written primarily from the point of view of the Re-certification Audit, but also takes in relevant elements of the overall Asset Management System certification. Within these sections defined terms from PAS 55 are capitalised and italicised – for example *Asset Management System*.

4.1 General Requirements

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

The following general findings and good practice were observed against this clause

AMS 01-01 has now been issued to Version 4 (15th September 2011), which has rectified the observations made in March 2011 concerning Section 6.6 on Information Management and Section 6.3 on Learning, Development & Training.

AMS 01-01 is now sufficient to provide the focus for SP AusNet's continuing *Asset Management* development and continual improvement.

4.2 Asset Management Policy

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

It was observed during the site visits that the versions of SP AusNet's *Asset Management Policy* attached to notice boards are not always the most current version.

There were no general findings or good practice observed against this clause

4.3 Asset Management Strategy, Objectives and Plans

4.3.1 Asset Management Strategy

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

The Electricity Transmission *Asset Management Strategy* has had a number of minor revisions since 2008, and is currently undergoing a major revision as part of the transmission network price reset process. It was reported that this will include rationalisation of the underpinning plant strategies, and of the content of the main document, including the potential removal of long-term work volume and output (performance / risk) information. It is recommended that these long-term views are retained as they underpin the long-term nature of the document.

Within each of the *Asset Management Strategies* SP AusNet demonstrates a good understanding of the criticality of the assets within each network. However, there is no overall criticality to help compare and prioritise activities and expenditures between and across the three networks, and SP AusNet may wish to consider developing such an approach based on all asset types (from all networks) ranked by annualised total cost of ownership to the business.

The total cost of ownership criticality will also be useful in prioritising analysis and justification efforts within the Electricity Transmission network. As SP AusNet migrates its plant risk models to the Availability Workbench environment (see commentary below), the criticality analysis will guide the organisation in determining the level of analysis and defining the proportionate amount of effort for each type of plant.

The following general findings and good practice were observed against this clause

Concerns were raised in March 2011 with respect to the consistency of approach in the development of the *Asset Management Strategies* and the way they interface with other key documentation within SP AusNet's *Asset Management System*. The *Gas Asset Management Strategy* has now been fully revised, and the *Electricity Distribution Asset Management Strategy* had been revised to incorporate the corporate STEM (Strengthen, Transform, Extend, Modernise) initiatives, as reported in March 2011.

Clear 'line of sight' is a key strength of the way SP AusNet structures and continuously improves its *Asset Management Strategies* and this approach was first developed with the Electricity Transmission network. This was again demonstrated during the Re-certification Audit as the process for major revision was explained. Implementation of the 2008 *Asset Management Strategy* required replacement of air-blast circuit breakers to complete by 2012/13, which has broadly been completed. This achievement and the impact on circuit breaker reliability and work order generation has justified moving to a new focus on SF6 circuit breakers, all of which is recorded in the relevant plant strategy (AMS 10-54). The risk models associated with these decisions are being updated to reflect the anticipated changes to risk performance over the next price control period.

SP AusNet is also planning further step-wise improvements in its asset information and intervention analysis approaches. These include a move away from qualitative to more quantitative condition assessment techniques, and the adoption of Availability Workbench (utilised by the gas network to optimise inspection regimes) for the next generation of risk models. The existing spreadsheet-based risk models have fulfilled their purpose and provided a clear set of requirements which SP AusNet now believe can be implemented in Availability Workbench analyses.

4.3.2 Asset Management Objectives

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

During the March 2011 certification two observations were highlighted, which are repeated in this Re-certification Audit:

- Incorporation of the STEM objectives was not yet complete or consistent across the *Asset Management Strategies*; and
- Existing *Asset Management Objectives* within the *Asset Management Strategies* are generally narrowly focused, covering only technical Network objectives.

Both these concerns are being addressed. The Gas *Asset Management Strategy* has now been fully revised (to support the GAAR) and now represents the SP AusNet model for clearly incorporating the STEM objectives into an *Asset Management Strategy*. As discussed in Section 4.3.1 the Transmission *Asset Management Strategy* has had minor revisions since

2008, including a superficial inclusion of the STEM objectives, but is now going through a major revision in preparation for the next price reset. At this stage it was reported that the STEM objectives would be properly incorporated. The Minor Non-conformance in this area remains open until this is demonstrated (see Section 5.2).

With respect to the second concern, PAS 55 requires a broader set of objectives to include development of the *Asset Management System* itself, rather than only the *Assets* under management. The objectives set out in the new departmental business plans cover this aspect well, although they are not necessarily considered to be *Asset Management Objectives*. As suggested in March 2011, SP AusNet may wish to consider defining a 'top-ten' set of *Asset Management Objectives*, derived from existing objectives, which the Asset Management Committee (AMC) can monitor for the defined *Asset Management System*.

Apart from these concerns, which are both being addressed, the Transmission *Asset Management Strategy* and the current process for defining and delivering *Asset Management Objectives* are broadly compliant with the requirements of PAS 55, but will continue to be monitored through the Minor Non-conformance detailed in Section 5.2.

The following general findings and good practice were observed against this clause

Overall, the STEM approach is gradually being adopted and embedded. The new departmental business plans clearly link all their objectives into STEM, of which a sub-set are included in the Electricity Transmission *Asset Management Strategy*.

4.3.3 Asset Management Plan(s)

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

SP AusNet might like to consider bringing some consistency to the long-term (strategic) planning of the work volumes and costs required to keep its networks sustainable. At the moment the focus appears to be on the next regulatory period (usually about five years). Although there is a long-term view expressed in the network 'Vision' documents, these deal with potential scenarios and future business challenges, rather than what impact these may have on the long-term work volumes, costs and risks related to the networks. To an extent the *Asset Management Strategies* begin to shape these, but there do not appear to be network level

'strategic plans' that, to the extent that it is possible, detail the long-term work volumes, costs and risks required to demonstrate long-term sustainable *Asset Management*.

The following general findings and good practice were observed against this clause

The summary *Asset Management Plan* for all three networks was in the process of being signed-off in March 2011, and it was reported during this audit that this had been completed. The Electricity Transmission element of this plan was observed to be compliant in March 2011, and as evidenced and described in other parts of this audit SP AusNet has clear capital and operational plans in place for all stages in the lifecycle.

All phases of the lifecycle are considered within the summary *Asset Management Plans*, and the detailed plans and strategies which sit under these are clearly aligned with the higher *Asset Management System* documentation. This is clearly evident within the Electricity Transmission *Asset Management Plan* (see Clause 4.3.1 for example evidence).

4.3.4 Contingency Planning

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

The observation made in the March 2011 certification audit is extended to include the Electricity Transmission network. SP AusNet may wish to consider scheduling emergency exercises on a more formal basis with the aim of methodically covering each of the nine Gas Distribution, nine Electricity Distribution, and six Electricity Distribution emergency scenarios detailed within the contingency planning documents.

The following general findings and good practice were observed against this clause

No specific issues were raised against Clause 4.3.4 during March 2011 Certification Audit, which concentrated on testing the application of the SP AusNet Integrated Response And Contingency System (SPIRACS) and its integration with the Gas and Electricity Distribution contingency plans. In essence, the separate Gas and Electricity Distribution contingency plans set the context for application of SPIRACS for the individual networks.

The same process applies to the Electricity Transmission Network Contingency Plan (Version 6 dated 2nd September 2011, although no formal AMP reference), which contains information on

the general management of emergency incidents on the Electricity Transmission network and specific guidance on dealing with six specific scenarios. This is aligned with the approach SP AusNet has taken for the other two networks, as summarised above. It is aligned with the SPIRACS and it is understood that at least one exercise is undertaken annually as part of an Australian Energy Market Organisation (AEMO) requirement.

However, under normal operations, Level 2 SPIRACS incidents are quite common because of bushfires and floods, and this is considered sufficient practice for the organisation. Evidence of this was reviewed in March 2011. The Electricity Transmission network has an annual 'Summer Preparedness' process to prepare the network for summer bushfire risks.

4.4 Asset Management Enablers and Controls

4.4.1 Structure, Authority and Responsibilities

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

SP AusNet might wish to consider providing a focus within its organisation for *Asset Information Management*. Whilst it was noted during the audit that although SP AusNet has information systems that are PAS 55 compliant, there is an opportunity to provide a clearer focus for the ownership of *Asset Information* within the organisation (see Clause 4.4.6).

The following general findings and good practice were observed against this clause

It was noted that the 'committee' structure continues to provide an effective way of ensuring cross-functional communication, focus and coordination of critical activities, including the AMC.

The focus on Asset Management Process, and the concept of 'Asset Owners' operating within a common Asset Management System are acknowledged good practice in this area.

4.4.2 Outsourcing of Asset Management Activities

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

As noted in March 2011, the rationales for the outsourcing of *Asset Management* activities have not been reviewed since the Strategic Value Delivery Model (SVDM) (an outsourcing review) was undertaken in 2007. This is equally applicable to the Electricity Transmission network and SP AusNet may wish to consider the advantages of a review of this to ensure the needs of the *Asset Management System* are being properly fulfilled.

The following general findings and good practice were observed against this clause

The SVDM is considered to be a good practice approach to the definition of outsourcing requirements, but see observation above about its review cycle. With specific respect to the Electricity Transmission network, the PowerCorp contract appears to be professionally run, with

a number of lessons learnt from the previous contract form and contractor now successfully incorporated into the latest approach.

The relationship with PowerCorp appears to be an effective partnership, with clear demarcations of responsibility and a well-specified flow of information across the contractual boundary. The division of work scopes into fixed overheads, unitised 'scheduled' activities, and target cost emerging 'unscheduled' activities, leads to effective management of PowerCorp's inputs and performance through a properly balanced set of contractual KPIs.

4.4.3 Training, Awareness and Competence

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

SP AusNet has spent time recently developing competence frameworks to support its new grade classification project (see below) using industry standard competence management frameworks. It may wish to consider incorporation of the Institute of Asset Management's 2008 Competence Framework within this development.

The following general findings and good practice were observed against this clause

In general, SP AusNet has concise roles and responsibilities defined, with aligned performance and development reviews held. However, SP AusNet has recently initiated the Classification Plan within NSD which has the objective of defining a new set of role classifications to meet the organisation's future development plans. A key aspect of this work is the inclusion of competences derived from external best-practice frameworks, and the recognition of 'technical' and 'leadership' promotion bands to ensure the full range of skills that SP AusNet requires in the future are properly structured and incentivised. This work is described in more detail as an example of the management of change (see Clause 4.4.9), and is still in the early stages of development. Its progress and impact on *Asset Management* activities will be monitored for during the next Surveillance Audit.

4.4.4 Communication, Participation and Consultation

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

The following general findings and good practice were observed against this clause

It was noted during the certification audit that, as has been noted in previous audits, SP AusNet clearly communicates and consults with internal and external stakeholders. This is achieved internally through a range of mechanisms, including 'Team Meetings', as InSite, the weekly electronic newsletter 'Connect', and the quarterly magazine 'Energise', and externally with the safety and economic regulators, Energy Safe Victoria (ESV) and the Australian Energy Regulator (AER) respectively.

The strength of the 'committee' structure in establishing important cross-functional communication (e.g. Asset Management Committee, Audit & Risk Management Committee, Bushfire Management Committee) was again noted, with particular respect to the Asset Management Committee.

4.4.5 Asset Management System Documentation

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

No general findings and good practice were observed against this clause

As was noted in March 2011, the bringing together of the management of the networks under the Network Strategy and Development (NSD), meant that there was an opportunity to rationalise documentation. The rationalisation process that is underway to consolidate documentation across the management systems used by SP AusNet was described during the Certification Audit. It is understood that this process will be focused on aligning the various management system documentation which SP AusNet currently maintains to ensure documentation is as efficient as possible, and will be monitored during Surveillance Audits.

4.4.6 Information Management

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

As noted in March 2011, although compliant with the requirements of PAS 55, the way SP AusNet manages its *Asset Information* requirements could be improved. SP AusNet might like to consider:

- Providing a clearer strategic direction to the development of its *Asset Information* systems which is clearly linked into the requirements of its *Asset Management System* and *Strategies*, through the development of an Asset Information Strategy. This could be an element of the existing *Asset Management Strategy* but the key requirement is that it is driven by the overall needs of the *Asset Management System* rather than technology or IT requirements.
- Providing a focus within its organisation for *Asset Information Management*. There is an opportunity to provide a clearer focus for the ownership of *Asset Information* within the organisation, which is at present the overall accountability of the Asset Owner, but has no single person responsible for all *Asset Information* requirements. This would provide a defined interface between the IT function and the Asset Owner with a specific remit to manage the translation of Asset Owner requirements into effective and efficient IT software and systems. This role would own the Asset Information Strategy proposed above.

The following general findings and good practice were observed against this clause

In general SP AusNet's *Asset Information* management systems provide an adequate level of information for management of the three networks. The general conclusion with respect to the Gas and Electricity Distribution networks from March 2011 was that more focus could be brought onto the overall management of *Asset Information*, and that the development of an Asset Information Strategy (or similar) would facilitate SP AusNet's development in this area. The observations set out above build on this.

The main systems for Electricity Transmission are Maximo, RADAR, TRESIS and Objective. It was reported during this audit that the Data Management Strategy discussed during March 2011 had been implemented, and that the Data Quality Index was now a key measure. The baseline in March 2011 was about 30, with the index now close to its target value of 70. The

index is made up of 12 elements monitoring correlation between systems, completeness within systems, and timeliness of updates, and continues to be improved through a number of data improvement projects.

During a site visit to West Melbourne Terminal Station a sample of the Maximo asset database was reviewed and found to have unique and accurate entries demonstrating a sufficient level of detail for the asset item. The sample included, but was not limited to transformers, protection systems such as circuit breakers, and capacitor systems for power factor correction.

The Objective system was again assessed in some detail, and was also shown live during March 2011. The system continues to be available to all the necessary organisations and people involved with the review and amendment of network drawings and designs. It holds all Electricity Transmission network engineering controlled copy drawings. Access to the system was shown to be controlled with respect to permissions to change files and documents. A special project to assess the accuracy of the plans and drawing in Objective from a Transmission perspective (see Section 0) was reported. This is an initiative to start to ensure accuracy of the documents but also to holistically review SP AusNet's on site documentation requirements. At this stage evidence was shown of multiple sites under review with a systematic approach being employed.

The overall approach to the continual improvement and development of *Asset Information* systems was described as the collation of incremental changes and enhancements, reviewed on a weekly basis, and the 'top-down' identification of larger changes or system requirements. The current major project is the potential introduction of SAP to replace the current main *Asset Information* systems with a system compatible with Singapore Power's approach. Whereas this may or may not be appropriate for SP AusNet, the overall needs of the *Asset Portfolio* do not appear to be paramount in the evidence presented and the discussions completed with relation to this decision.

4.4.7 Risk Management

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

If the observations on *Asset Management Objectives* are adopted (see Section 4.3.2) SP AusNet should consider incorporating 'top down' risk assessments of the *Objectives* to validate the coverage of its risk management approach.

The following general findings and good practice were observed against this clause

As per the findings in March 2011 it was noted that SP AusNet has some good practice risk management *Processes* and *Procedures* in place which appeared to be consistently and effectively applied. As noted in March 2011, SP AusNet's Risk Management Framework is based on the recently introduced standard ISO 31000:2009 'Risk Management – Principles and Guidelines', which are recognised as international best practice, and the Risk Management Framework appears to be applied consistently at the corporate and operational levels.

Evidence was seen during the Re-certification Audit of how this is consistently applied across the business, with some specific examples drawn from the Electricity Safety Management System (ESMS). All these risks are listed in the relevant safety case, and all Level 1 and Level 2 risks are escalated to Cura. However, the current *Asset Management Strategy* and its associated Plant Strategies do not at the moment explicitly reference the ESMS or Cura links, although it was reported that this is being rectified as part of the *Asset Management Strategy* revision (see Section 4.3.1).

4.4.8 Legal and other Requirements

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

The following general findings and good practice were observed against this clause

The March 2011 Certification Audit reported the position with respect to SP AusNet and its legal and regulatory operating environment. The Gas Safety Case and the Electricity Safety Management System is in part the definition of the legal and compliance requirements. It was

demonstrated that the documents, compliance and audits processes provide the control required over SP AusNet's legal and compliance position.

This Re-certification Audit provided further evidence that SP AusNet has a good understanding of its obligations and is able to plan and present to key *Stakeholders* how it should respond, including the development and delivery of its *Asset Management Plans*.

4.4.9 Management of Change

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

The observation made under Clause 4.4.3 also applies here.

The following general findings and good practice were observed against this clause

No specific issues were raised against Clause 4.4.9 during the March 2011 Certification Audit, and there was clear evidence presented during the Certification Audit that change management is well embedded within SP AusNet. The role of the Asset Management Committee (AMC) which has an overall governance role for the *Asset Management System* was described. This includes overall management review (see Clause 4.7 for details) and as part of this all periodic changes (such as revisions to *Asset Management Policy, Strategy, Objectives* and *Plans*) are scrutinised and endorsed by the AMC.

The example of change management examined in this Re-certification Audit focused on the NSD 'People Plan', and particularly the 'Classification Plan'. This is a broad based plan aimed at improving employee engagement and incentives, including re-design of the grade classification structure. The plan acknowledges that SP AusNet faces a challenge over the coming years, common across its industry, in attracting, retaining and developing key technical and managerial personnel within an increasingly competitive environment. The classification structure includes both 'technical' and 'leadership' streams to the top levels, thus recognising the importance of both sets of competences for the successful future of the organisation. This is only just beginning to be rolled out for designated top performers within the company, with next steps to include performance management, career planning, training and development, and reward and recognition elements.

Although early in implementation the NSD 'People Plan' appears to demonstrate SP AusNet's continued focus on the clear specification, development and introduction of change to its organisation, and its progress will be monitored in subsequent Surveillance Audits.

4.5 Implementation of Asset Management Plan(s)

4.5.1 Life Cycle Activities

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

SP AusNet may wish to consider more formal management of its project requirements through the new Programme Management Office (PMO) organisation where the criticality of the project work is high (see discussion on PMO below). There is no standard for the management of requirements for the electricity industry, although these do exist for other industries (such as rail – EN50126, or elements of the NASA Systems Engineering Handbook, freely available from NASA's website).

The following general findings and good practice were observed against this clause

From the original 2008 certification audit of the Electricity Transmission network, and the more recent March 2011 certification audit, SP AusNet has demonstrated that it has, in general, good control over all aspects of the delivery of its *Asset Management Plans*. During the Certification Audit a number of Electricity Transmission work activities were observed. These were:

- Mt Dandenong Zone Substation: This is to be renewed, and an assessment of the potential options was made available which demonstrated the detailed decision making process for managing change to the assets. The position had not been concluded at the time of the review.
- Brooklyn Terminal Station: Insulator washing work was observed, and appeared to be delivered according to the available paperwork and known requirements. It was noted that no competency or identification paperwork was carried by the Team Leader, and the water purification test unit was out of calibration, although the washer hose was found to be within test date (see Clause 4.5.2 below).
- Thomastown: This terminal station has almost completely been renewed. The worksite appeared to be well organised, with the 'Hazard Control Board' central to the management of the various teams and projects over an extended period of time. Hand back ('Clearance' and 'Inspection Test Plan') paperwork was examined, and competence records for staff on the site reviewed. However, some local copies of design drawings were found not to have

been locally issued (see Clause 4.6.6 for comments on an outstanding Minor Non-conformance against Records).

Overall the completion of work appeared to be professionally and competently done. Regardless of whether the work was being completed by sub-contractors or SP AusNet internal staff, teams were correctly equipped and prepared for the work in hand.

The CEOT (Customer and Energy Operations Team), was not assessed in detail on this occasion, as it has been assessed in detail in 2008 and March 2011. However, the PMO was discussed and described to a greater level of detail. It is clear from the implementation of the PMO that SP AusNet is benefitting from the focus it brings to the management of the project lifecycle. It has accountability for the delivery of the CapEx budget, and achieved this in the last financial year. The needs of the Asset Owner are now clearly described in business cases early on in the project lifecycle, and the formal appointment of Project Sponsors (from April this year) has improved the accountability for delivery of projects from start to finish.

The 'Authority to Proceed' (A2P) approach has been replaced by a business case requirement, which sets out clearly at the beginning of a project the expected business benefits. However, it is a little less clear how these requirements are managed through the project lifecycle. A number of requirements management approaches were described (for example, constructability reviews and post implementation reviews). Personnel are also now involved in more project lifecycle phases (for example maintenance and operations staff involved in design activities). None of these approaches, however, appear to be formally recognised within the PMO process as a coherent requirements management approach, with the decomposition and integration of requirements managed within a formal process of verification and validation. Whereas this kind of approach is most appropriate only for complex project, SP AusNet may wish to consider defining an appropriate and explicit level of requirements management within its PMO process.

4.5.2 Tools, Facilities and Equipment

There were no Major Non-conformances identified against this clause

The following Minor Non-conformance was identified against this clause

The following observations were made against this clause

SP AusNet has an outstanding Minor Non-conformance for its overall *Asset Management System* related to calibration (see Section 5.2), and it was observed at Brooklyn Terminal Station that a water purity test unit was out of date and in use by the insulator washing team.

The following general findings and good practice were observed against this clause

It was reported at the Electricity Distribution and Gas Certification in March 2011 that CalNet had been fully rolled out for the Electricity Transmission Network and partially rolled out for Electricity Distribution. This was not anticipated to be complete for another six months at least, as all equipment comes up for re-calibration and is processed through the CalNet system. Up until this point calibration is still the responsibility of the local organisations.

The CalNet system was shown to be populated with 276 items. This is a significant increase from March 2011. The control of the system, including its user group, and the use of the information by Select Solutions appears to be appropriate for SP AusNet's purposes, although a review of the entries was considered appropriate to remove the ones where no calibration is required. It was seen that the level of detail clearly identifies the person responsible for the item of equipment. The recent move to identify nominated persons allows an email to be sent informing the user of the upcoming need to calibrate the equipment.

A principle of continuous improvement is being applied to the governance of the system. The move to a person responsible for the entered items on CalNet will allow the enhancement of an automated email to be sent to the user of the equipment to be notified prior to the date of required calibration.

4.6 Performance Assessment & Improvement

4.6.1 Performance and Condition Monitoring

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

The following general findings and good practice were observed against this clause

No specific issues were raised against Clause 4.6.1 in March 2011. Evidence was sought during this Certification Audit that SP AusNet has a sufficient range of performance indicators in place to ensure adequate monitoring of:

- The performance of the *Asset Management System*; and
- The performance and / or the condition of the *Assets* and / or *Asset Systems*.

SP AusNet monitors a wide range of performance indicators. As discussed in March 2011 they fall into the following high-level groups:

- Required by Regulation – these are reported in respective ‘Comparative Performance Reports’;
- Corporate – these are presented in the Corporate and Departmental Business Plans, and are now being aligned to STEM (see Clause 4.3.2);
- Operational – a range of performance indicators which track plan attainment and other operational data is monitored in monthly and bi-weekly reports.

For the Electricity Transmission network and Assets reliability is the primary driver. The level of performance and condition monitoring appeared appropriate for SP AusNet’s operations.

4.6.2 Investigation of Asset-related Failures, Incidents and Nonconformities

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

The following general findings and good practice were observed against this clause

No specific issues were raised against Clause 4.6.2 during the Re-certification Audit. A visit was made to the Customer and Energy Operations Team (CEOT) in Melbourne which has the responsibility for managing all network faults. An overall description of the operation of the CEOT was given during the March 2011 Certification Audit.

During the original Electricity Transmission Certification Audit in 2008 it was reported that 'overall, the management of asset related failures and the closing out of corrective and preventive actions is effective within SP AusNet', and that 'clear procedures govern the categorisation of failures and incidents, which are managed in the SIRS / DARS systems and ultimately in Maximo'. During this audit the SIRS and DARS process continued to demonstrate that this is the approach SP AusNet use to monitor incidents and failures. It was evident that the reporting process of the SIRs and DARs is embedded in the business.

The investigations were stated now to be time bound with a clear understanding of the process and who should be involved. It was also demonstrated that continuous improvement principles are being applied by the potential implementation of an extension to the tracking of issues process beyond the SIRs and DARs via the IMS system. This allows any outstanding technical issues to be monitored to a more detailed conclusion.

4.6.3 Evaluation of Compliance

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

The following general findings and good practice were observed against this clause

The March 2008 Certification Audit did not identify any areas of concern with respects SP AusNet's evaluation of compliance with legal and other regulatory or absolute requirements. This view was again substantiated by the evidence reviewed as part of this audit.

4.6.4 Audit

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

The following general findings and good practice were observed against this clause

It was reported in the March 2011 Certification Audit that there are a number of management systems (including PAS 55) which require audit, and that some rationalisation of the three-year *Audit* plan may be possible. It was reported that this is being undertaken and a combined *Audit* plan is being produced, although this has not yet been completed.

It was reported during this Re-certification Audit that the *Asset Management System* is increasingly covered as part of the overall audit plan. The commonalities across the range of management systems have been detailed to help identify efficiencies in the *Audit* process, and it was demonstrated that the *Audit* plan provides the coverage required. The process used to define the *Audit* requirements using risk assessments is in accordance with the Risk Management Framework and Policy and appears to be effective and an area of good practice.

4.6.5 Improvement Actions

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

The following general findings and good practice were observed against this clause

No specific issues were raised against Clause 4.6.5 during the March 2011 audit. It was demonstrated during this Re-certification Audit that the Issue Management System (IMS) continues to be the system that SP AusNet uses for the improvements process. The proposed integration of the SIRs and DARs process into the IMS again demonstrates the improvement culture within with in SP AusNet. It was noted and previously reported that since the Transmission Audit in 2008 additional functionality has been developed to expand the sources of improvement actions it can log, and this should provide a clear specification for the replacement system (mentioned during the March 2011 certification).

IMS continues to support the entire improvement action workflow, and within the system the type of action can be selected from a drop-down which covers both the *Corrective* and *Preventive Actions* required by PAS 55.

With the Asset Management Committee now embedded in the business a clear culture of continuous improvement is evident.

4.6.6 Records

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

The following observations were made against this clause

Electricity Transmission diagrams were found at Thomastown which had been issued for local distribution, but had not been updated, and there was no evidence that the diagrams had been locally issued. The control of drawings through the Objective system has been an issue for SP AusNet on previous certifications in 2008 and 2011, and remains an open Minor Non-conformance (see Section 5.2).

The following general findings and good practice were observed against this clause

The Objective system, as demonstrated in March 2011, continues to be the focal source of records for the Electricity Transmission Network. It has well defined controls and functions to ensure the documents are formatted and strictly controlled through the project delivery process.

However, a sample of project delivery designs were checked on site that were issued via the Objective system and the drawings were found to out of date. The project level distribution and control of the documentation appeared to be incorrect on the reviewed sample (see observation above).

4.7 Management Review

There were no Major Non-conformances identified against this clause

There were no Minor Non-conformances identified against this clause

There were no observations were made against this clause

The following general findings and good practice were observed against this clause

It was reported during the March 2011 certification audit that the Asset Management Committee (AMC) has now become a pivotal focus for the governance, continuous improvement and review of SP AusNet's *Asset Management System*. This was again demonstrated during this certification audit.

Of particular note was the recently completed 'AMC Effectiveness Review' which reported on the AMC's Charter requirement to '... consider its performance and measure the degree to which the Asset Management Strategies meet their objectives and the business objectives, reporting outcomes to the ELT.'

The findings of the review were that:

- *'Broad consensus among members that the AMC is a high performing committee and is evolving well*
- *Opportunities exist to:*
 - *Shift the AMC's focus to strategic AM planning and leadership*
 - *Improve relationships with subcommittees & ELT*
 - *Improve general awareness of AMC within the organisation*
 - *Implement process improvement opportunities to enhance AMC effectiveness'*

This resulted in three recommended areas for improvement:

- To shift the AMC's focus from compliance to a more strategic, leadership role;
- To improve the AMC's relationships with the ELT and other sub-committees, and to improve the general awareness with in SP AusNet; and
- To fine-tune the AMC process to ensure, for example, that review activities are aligned better with business requirements.

Overall it appears that the AMC is working well as an overall management review process, and that, as raised during the March 2011 audit, a focus on the future, rather than just managing the current and immediate past, is recognised as an important future development opportunity.

5 Conclusions

5.1 Summary of Re-certification Audit Findings

This Re-certification Audit was planned around four main priorities, against which the following conclusions can be drawn:

- 1) Electricity Transmission network Asset Management Strategy, Objectives and Plans, including their development and alignment to the Asset Management Policy and SP AusNet's corporate objectives.

SP AusNet's core Electricity Transmission Asset Management documentation has been periodically adjusted and revised since the 2008 certification audit, and the Electricity Transmission Asset Management strategy is now undergoing a major revision to meet the requirements of the next price reset. Overall, there is sufficient evidence to demonstrate that this core documentation is effective within the organisation, and actively revised and updated. Some misalignments exist between the Asset Management strategy and the corporate STEM objectives, and the recently defined Asset Management strategy format, but it is reported that the current major revision will remedy these (see Section 5.2 on outstanding Minor Non-conformance).

- 2) Focus on the differences in BSI PAS 55:2004 and BSI PAS 55:2008 (hereafter referred to as PAS 55), particularly in the areas of change management and the management of the supply chain.

SP AusNet has demonstrated, both during this Re-certification Audit and the March 2011 Certification Audit, that the differences between BSI PAS 55:2004 and BSI PAS 55:2008 are managed effectively within their Asset Management System with significant commonality between the three networks.

- 3) Focus on the minor non-conformances identified during the first certification, namely the management and control of diagrams in Objective, calibration of tools and equipment, and change control within projects.

Although SP AusNet performs well in general with respect to implementing its Asset Management plans, the management and control of diagrams in Objective, the calibration of tools and equipment, and change control within projects are still the subject of Minor Non-conformances (see Section 5.2).

- 4) All other clauses were assessed through documentation review, with site visits and interviews scheduled as SP AusNet deemed appropriate to demonstrate its compliance.

Sufficient evidence was provided by SP AusNet to demonstrate continued compliance with the requirements of PAS 55 with specific respect to its Electricity Transmission network.

No additional Minor Non-conformances were identified. However, Minor-Non-conformances related to Clauses 4.3.2 (Asset Management Objectives), 4.5.2 (Tools, Facilities & Equipment) and 4.6.6 (Records), remain (see Section 5.2).

Nineteen Observations against the requirements of PAS 55 were identified, as detailed in Section 4. These include the observations presented at the closing meeting on 'beyond PAS 55 compliance' thoughts. In general, the Observations should be considered as opportunities for improvement.

A number of additional findings and specific areas of Good Practice were noted against the requirements of PAS 55, as detailed in Section 4. These should be considered as opportunities for dissemination into other areas of SP AusNet's business, where this has not already been completed.

In conclusion, SP AusNet remains an effective, efficient and competent Asset Manager. It operates an appropriate and effective Asset Management System which is now developing a good level of consistency across the Electricity Transmission, Distribution and Gas Distribution Networks under its control.

5.2 Summary of Surveillance Audit Findings

The statuses of the five Minor Non-conformances identified in March 2011 are:

- 4.3.1 – Asset Management Strategy:

The Gas Asset Management Strategy is not yet compliant with SP AusNet's defined Asset Management System although the GAAR project plan is intended to rectify this by June 2011 (see also Minor Non-conformance for Clause 4.3.3).

This Minor Non-conformance is now closed.

- 4.3.2 – Asset Management Objectives:

The corporate STEM approach to defining and setting objectives is not yet clearly embedded in SP AusNet's Asset Management Strategies or other key Asset Management documentation.

This Minor Non-conformance remains open until the approach seen within the Gas Asset Management Strategy (prepared for the GAAR) is adopted for the other networks.

▪ 4.3.3 – Asset Management Plans:

The Gas Asset Management Plan is not yet compliant with SP AusNet's defined Asset Management System although the GAAR project plan is intended to rectify this by June 2011 (see also Minor Non-conformance for Clause 4.3.1).

This Minor Non-conformance is now closed.

▪ 4.5.2 – Tools, Facilities & Equipment:

The CalNet system is not yet fully effective in managing Electricity Distribution zone substation equipment, with a proportion (exact percentage unknown) still to be processed.

This Minor Non-conformance remains open until current calibration project is demonstrably completed, and no further out-of-calibration items are observed.

▪ 4.6.6 – Records:

Although the Objective system has been implemented as the controlled source of Electricity Distribution diagrams, there is clear evidence that sites contain modified diagrams not recorded in Objective. A specific example of this was seen at Woori Yallock zone substation where diagrams VX10/81/33A and VX11/149/110G have been modified on site but have not been updated in Objective.

This Minor Non-conformance remains open until current records project is demonstrably completed, and no other un-controlled diagrams are observed.

5.3 Certification Audit Result and Terms

AMCL is pleased to confirm that SP AusNet has achieved the standard required for full certification to PAS 55 : 2008. This certification applies to SP AusNet's Asset Management System, with specific respect to the Electricity Transmission Network.

- This Certification is valid until March 2014, and re-certification will be required within this time.
- Under the IAM's Endorsed Assessor Scheme annual surveillance visits are required. These surveillance visits will monitor the progression and close-out of any Minor Non-conformances, focus on specific areas to be agreed and allow AMCL to remain current with SP AusNet's overall development.

- Plans for the rectification of the Minor Non-conformances prior to the surveillance visits are required, and should be submitted, monitored and closed out in correspondence with AMCL.

Thanks are extended to SP AusNet for the professional and comprehensive support of the PAS 55 audit process, and the professional engagement of their staff and resources in completing the audit.

Appendix A Certification Audit Sessions

Organisation: *SP AusNet – Transmission, Gas and Electricity Distribution*

Assessment Type: *PAS 55:2008 Part 1 Certification*



Lead Assessor: Andrew Sharp / Assessor: Paul Furniss



SP AusNet Team Leaders – Derek Postlethwaite and John Allen

Date of certification audit:
19 September 2011 – 23 September 2011



Date / Time	Team 1 – Andrew Sharp	Location / Guide / Interviewee(s)	Team 2 – Paul Furniss	Location / Guide/Interviewee's
Monday 19/09//2011 AM	Opening meeting Involves Team 1 and Team 2 1 Confirmation of Audit Plan.	Kinglake Room Level 31 Freshwater Place Session 1 - 10.00 am to 11.00pm <i>SP AusNet Team Leader</i> Derek Postlethwaite Manager Strategy and Planning Electricity John Allen PAS 55 Project Manager Andrew Maticka, Network Owner Transmission	Sessions 1 to 3 and 6 Agenda same as Team 1	
	2 Introductory session with SP AusNet's Senior Managers in Asset Management Area.	Session 2 - 11.00am to 12.00pm <i>SP AusNet Team Leader</i> Derek Postlethwaite Manager Strategy and Planning Electricity John Allen PAS 55 Project Manager Andrew Maticka, Network Owner Transmission Alistair Parker, Director Strategy and Network Development		
Monday 19/09//2011 PM	3 Overview/Update of SP activities since Transmission Surveillance Audit Primarily clauses: 4.3 Asset Management Strategy, Objectives and Plans 4.3.1 Asset Management Strategy	Session 3 – 1.00pm – 2.30pm <i>SP AusNet Team Leader</i> John Allen PAS 55 Project Manager Andrew Maticka, Network Owner Transmission Derek Postlethwaite Manager Strategy and Planning Electricity	Primarily clauses: 4.5 Implementation of Asset Management Plans 4.5.2 Tools, Facilities and Equipment Same as Team 1	Westgate Room Level 31 Session 5 – 2.30pm to 4.30pm <i>SP AusNet Team Leader</i> John Allen PAS 55 Project Manager Anthony Dyke, Select Solutions Mark Nevins Manager Central Region
	Review of Days Activities/Follow-up issues/Way forward/	Session 4 – 2.30pm – 4.30pm <i>SP AusNet Team Leader</i> Derek Postlethwaite Manager Strategy and Planning Electricity Rod Jones , Strategy and Planning Electricity		
		Session 6 - 4.30pm to 5.00pm The AMCL/SP AusNet Representatives		

Date / Time	Team 1 – Andrew Sharp	Location / Guide / Interviewee(s)	Team 2 – Paul Furniss	Location / Guide/Interviewee's
<p>Tuesday 20/09/2011 AM</p>	<p>Primarily clauses: 4.3 Asset Management Strategy, Objectives and Plans 4.3.2 Asset Management Objectives 4.3.3 Asset Management Plans</p> <p>Primarily clauses: 4.4 Asset Management Enablers and Controls 4.4.7 Risk Management</p>	<p>SP AusNet Southbank offices. Bondi Room, Level 31</p> <p>Session 7 – 9.00am to 10.30pm <i>SP AusNet Team Leader</i> Derek Postlethwaite Manager Strategy and Planning Electricity Andrew Maticka Network Owner Transmission Rod Jones , Strategy and Planning Electricity</p> <p>Session 9 – 11.00am to 12.00pm <i>SP AusNet Team Leader</i> Derek Postlethwaite Manager Strategy and Planning Electricity Rod Jones , Strategy and Planning Electricity David Meade Asset System Analyst</p>	<p>Primarily clauses: 4.3 Asset Management Strategy, Objectives and Plans 4.3.4 Contingency Planning</p> <p>Primarily clauses: 4.6 Performance and Assessment Improvement 4.6.1 Performance and Condition Monitoring</p>	<p>SP AusNet Southbank office. Kakadu Room, Level 31</p> <p>Session 8 - 9.00am – 10.30am <i>SP AusNet Team leader:</i> John Allen PAS 55 Project Manager Kelvin Gebert Network Owner Distribution Luke Clough Asset Strategy Engineer</p> <p>Session 10 - 10.30 am – 12.00pm <i>SP AusNet Team leader:</i> John Allen PAS 55 Project Manager Branko Colavizza Quality Manager P&S Nilma Bapat Principal Engineer Network Performance Gus Frandina, Works Planning and Performance Manager</p>
<p>Tuesday 20/09/2011 PM</p>	<p>Primarily clauses: 4.7 Management Review</p> <p>Primarily clauses: 4.4 Asset Management Enablers and Controls 4.4.9 Management of Change</p> <p>Review of Days Activities/Follow-up issues/Way forward/</p>	<p>Session 11 – 1.00pm to 2.30pm <i>SP AusNet Team Leader</i> Derek Postlethwaite Manager Strategy and Planning Electricity Alistair Parker, Director Strategy and Network Development Rod Jones , Strategy and Planning Electricity</p> <p>Session 13 – 3.00pm to 4.30pm <i>SP AusNet Team Leader</i> Derek Postlethwaite Manager Strategy and Planning Electricity Duncan Hewitson , People Services Manager NSD</p> <p>Session 6 - 4.30pm to 5.00pm The AMCL/SP AusNet Representatives</p>	<p>Primarily clauses: 4.6 Performance Assessment and Improvement 4.6.2 Investigation of Asset-related failure, incidents and non-conformances</p> <p>Primarily clauses: 4.6 Performance and Assessment Improvement 4.6.4 Records</p> <p>Same as Team 1</p>	<p>Westgate Room, Level 31 Session 12 - 1.00pm – 2.30pm <i>SP AusNet Team leader:</i> John Allen PAS 55 Project Manager Phillip Bryant Team lead Distribution Asset Strategy Nilma Bapat Principal Engineer Network Performance</p> <p>Session 14 - 3.00pm – 4.30pm <i>SP AusNet Team leader:</i> John Allen PAS 55 Project Manager John Kearns, Team Leader Drawing Mgt NSD Ken O'Brien Work Group Leader Central Region</p>

Certification Audit Plan		Version 1.2	 	
Organisation: <i>SP AusNet – Gas and Electricity Distribution</i>		Assessment Type: <i>PAS 55:2008 Part 1 Certification</i>		
Date / Time	Team 1 – Andrew Sharp	Location / Guide / Interviewee(s)	Team 2 – Paul Furniss	Location / Guide/Interviewee's
Wednesday 21/09/2011 AM	<p>Primarily clauses: 4.5 Implementation of Asset Management Plans 4.5.1 Life Cycle Activities Includes management of the supply chain</p> <p>Primarily clauses: 4.4 Asset Management Enablers and Controls 4.4.6 Information Management</p>	<p>SP AusNet Southbank offices. Bondi Room, Level 31</p> <p>Session 15 - 9.30am to 11.00am <i>SP AusNet Team leader: John Allen</i> (PAS 55 Project Manager) Gus Frandina, Works Planning and Performance Manager Rod Hughan, Manager Program Management Office Andrew Ryan Contract Officer Central Region Debi Jena Category Management Lead Logistics and Procurement, INS</p> <p>Session 17 - 11.00am to 12.00pm <i>SP AusNet Team leader: John Allen</i> (PAS 55 Project Manager) Adam Klebanowski Design Standards Manager Stephen Halliday, Asset System Manager</p>	<p>Primarily clauses: 4.6 Performance Assessment and Improvement 4.6.3 Evaluation of Compliance 4.4.6 Audit</p> <p>Primarily clauses: 4.6 Performance and Assessment Improvement 4.6.5 Improvement Actions</p>	<p>SP AusNet Southbank offices. Kakadu Room, Level 31</p> <p>Session 16 - 9.30pm –10.30am <i>SP AusNet Team leader: Phillip Bryant</i> Team lead Distribution Asset Strategy Branko Colavizza Quality Manager P&S</p> <p>Session 18 - 11.00am – 12.00pm <i>SP AusNet Team leader: Phillip Bryant</i> Team lead Distribution Asset Strategy Branko Colavizza Quality Manager P&S</p>
Wednesday 21/09/2011 PM	<p>Primarily clauses: 4.5 Asset Management Enablers and Controls 4.4.2 Outsourcing of Asset Management Activities</p> <p>Assessors Review Time</p>	<p>Session 19– 1.00pm – 2.30pm At Freshwater Place</p> <p><i>SP AusNet Team leader: John Allen</i> (PAS 55 Project Manager) Joey Costantino Regional Manager Northern Dale Moss, Business Support Officer Northern</p> <p>Session 21 – 2.30pm – 4.30pm At Freshwater Place Assessors Time. Includes any requests for follow-up/clarification by SP AusNet Project Manager and SP AusNet Team</p>		<p>Field Visit – Mt Dandenong Session 20- 1.00m – 4.30pm <i>SP AusNet Team leader: Phillip Bryant</i> Team lead Distribution Asset Strategy</p>

Certification Audit Plan	Version 1.2		
Organisation: <i>SP AusNet – Gas and Electricity Distribution</i>		Assessment Type: <i>PAS 55:2008 Part 1 Certification</i>	

Date / Time	Team 1 – Andrew Sharp	Location / Guide / Interviewee(s)	Team 2 – Paul Furniss	Location / Guide/Interviewee's
Thursday 22/09/2011 AM	Electricity Distribution and Gas Surveillance Review – Non Conformance issues	SP AusNet Southbank offices. Bondi Room, Level 31 Session 22 - 9.00am – 12.00pm <i>SP AusNet Team Leader</i> - John Allen (PAS Project Manager) Derek Postlethwaite (Manager Strategy and Planning Electricity) Rob Amphlett Lewis Network Owner, Gas,		Field Visit Session 23 - 9.00am – 12.00pm <i>SP AusNet Team Leader</i> – Luke Clough Transmission Lines project is at Brooklyn Terminal Station Asset Verification at West Melbourne Terminal Station
Thursday 22/09/2011 PM	Field Visit Moorabool Terminal Station <ul style="list-style-type: none"> ▪ Outsourced Contract Management ▪ Tools, facilities and equipment ▪ Performance management ▪ Audit and performance review 	Field Visit Same as team 2 Session 24 - 1.00pm – 5.00pm		Field Visit Session 25 - 2.00pm – 5.00pm Project Work at Thomastown Terminal Station <i>SP AusNet Team Leader</i> - John Allen (PAS Project Manager) Andrew Ryan is to lead visit.

Certification Audit Plan	Version 1.2		
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Date / Time	Team 1 – Andrew Sharp	Location / Guide / Interviewee(s)	Team 2 – Paul Furniss	Location / Guide/Interviewee's
Friday 23/09/2011 AM		<p>SP AusNet Southbank offices. Bondi Room, Level 31</p> <p>Session 26 – 9.00am – 9.30am At Freshwater Place Covers requests for follow-up/clarification by SP AusNet Project Manager and SP AusNet Team</p> <p>Session 27 – 9.30am – 12.00pm At Freshwater Place Assessors Time.</p>	Same as team 1	
Friday 23/09/2011 PM		<p>Session 28 – 12.00pm – 12.30pm At Freshwater Place Covers requests for follow-up/clarification by SP AusNet Project Manager and SP AusNet Team</p> <p>Session 29 – 12.30pm – 2.30pm At Freshwater Place Assessors Time. – Includes run through findings with SP AusNet Representatives</p> <p>Session 30 – 2.30pm to 3.00pm At Freshwater Place Presentation to Members of ELT</p> <p>Session 31 – 3.00pm At Freshwater Place Finalisation of Audit and “where to from here”</p>		

Appendix B Documents Reviewed

Ref	Document Description (Gap Analysis)
SPA-200	AMC Effectiveness Review Agenda
SPA 201	AMC Effectiveness Review
SPA-202	AMC Annual Review of Asset Management Strategies Agenda
SPA-203	NSD Divisional Business Plan 2011/12 to 2015/16
SPA-204	Asset Management System Overview v4 (AMS 01-01)
SPA-205	Asset Management Strategy (AMS 10-01)
SPA-206	Circuit Breakers AMS (AMS 10-54)
SPA-207	Crossarms AMS (AMS 20-57)
SPA-208	AMS Framework Review v0.4
SPA-209	BusinessReview - A Fresh Pperspective on Energy
SPA-210	Gas AMS
SPA-211	Environmental Manual (EMS 10-01)
SPA-212	Environmental Aspects Register (EMS 21-51-2)
SPA-213	Environmental Monitoring and Measurement (EMS 21-59)
SPA-214	Electrical Safety - Formal Safety Assessment (ESMS 10-02)
SPA-215	Electrical Safety - Formal Safety Assessment (Transmission Network) (ESMS 20-02)
SPA-216	Transmission Network Asset Maintenance Audit
SPA-217	Glenrowan Terminal Station Rebuild (Business Case)
SPA-218	Service Level Agreement INS/NSD
SPA-219	Maximo Data - TTS 220kV CBs
SPA-220	Corporate Business Plan 2011-12 to 2015-16_extract 1 Apr 11
SPA-221	Network Contingency Plan for Electricity Transmission Network - Issue 6
SPA-222	Network Strategy and Planning (RNS Business Plan 2011-12)
SPA-223	PMO Business Plan Final 12 May 2011 version 2.0
SPA-224	Project Scope for Updating Drawings within terminal stations
SPA-225	Internal Audit Report - Asset Maintenance
SPA-226	Risk Management Framework
SPA-227	Service Level Agreement - Select Solutions/NSD
SPA-228	Role Description - Project Initiator (SOP 15-09)
SPA-229	Role Description - Project Sponsor (SOP 15-12)
SPA-230	Program Project Lifecycles Process Map CC Overlay (SOP 17-16)
SPA-231	Program Project Lifecycles Process Map (SOP 17-16)
SPA-232	Program Project Lifecycle ALL (SOP 18-50)

Ref	Document Description (Gap Analysis)
SPA-233	Program Project Lifecycle AE (SOP 18-51)
SPA-234	Program Project Lifecycle PMO (SOP 18-53)
SPA-235	Infrastructure Assets Apporval Committee - Authority to Proceed (Example)
SPA-236	Mount Dandenong Asset Register
SPA-237	NSD Five Year Strategy 2011 to 2015 & Annual Business Plan poster
SPA-238	NSD Classification Plan Update L2 Presentation
SPA-239	NSD Classification Plan Update L3 Presentation
SPA-240	P&S Five Year Focus Areas and Annual Initiatives
SPA-241	P&S Five Year Objectives & Measures
SPA-242	Risk Assessment for 'Poor implementation of Engineering Classification Model'
SPA-243	Engineering Classification Matrix
SPA-244	Workforce Planning Profile for Asset Engineering
SPA-245	'Knowledge Capture Exercise with our Technical Experts' template
SPA-246	SP AusNet Engineering Technical Council Diagram (July 21st 2011)
SPA-247	Example Career Development Plan
SPA-248	Improvements since the 2008 Accreditation Audit - September 2011
SPA-249	'A Sustainable Perspective on Energy' - Sustainability Review 2011
SPA-250	'A Fresh Perspective on Energy' - Business Review 2011
SPA-251	PET Overlay - Program / Project Lifecycle Process Diagram (SOP 17-16)
SPA-252	Project Scope for 'Updating Drawings within Terminal Stations and Zone Substations'
SPA-253	CalNet output - current status of calibrate equipment - 5th August 2011
SPA-254	Note for AMC - Progress Report on PAS 55 Improvement Initiatives
SPA-255	Business Driver Selection (SOP 15-02)
SPA-256	F6 Enterprise Wide Program Management
SPA-257	Thomastown 'Document Transmittals' TTS-079, TTS-080, TTS-081, TTS-035
SPA-258	Thomastown 'Clearance to place electrical apparatus into service' TTS-006
SPA-259	Thomastown 'Site Erection Test Sheet' SP110a for SP Contract No. X785 (16/05/11)
SPA-260	ELT Business Strategy Committee Paper June 2011 - Electricity Transmission Network 'Maturity of Asset Management Practices'
SPA-261	Extract from Gas Access Arrangement Review - Asset Management Plan 2012-2017
SPA-262	Asset Management Strategy - Gas Distribution Network
SPA-263	NSD Resource Forecast

Ref	Document Description (Gap Analysis)
SPA-264	Cura Risk Records - 'Explosive failure of primary plant' and 'Major transmission failure or failure to provide adequate capacity'
SPA-265	Risk Register Template - Transmission ESMS (Communications)
SPA-266	Risk Management Guide
SPA-267	'Energise' Issue 5 - Spring 2011