EPA INDUSTRY COMPLIANCE AUDIT REPORT FOR THE SURFACE COATING SECTOR

JUNE 2008

EPA
South Australia

EPA Industry Compliance Audit report for the surface coating sector

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ISBN 978-1-921125-72-0

June 2008

Printed on recycled paper

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BACKGROUND

A three-tiered licensing system was developed to place Environment Protection Authority (EPA) licences into one of three categories based on an assessment of risk and to enable EPA's regulatory effort to better reflect environmental risk posed by the licensed facility.

In order to place EPA licences into an appropriate category, EPA operational staff complete a scored checklist to determine the environmental risk posed by the activities carried out at a licensed site. Geographical location and cumulative effects are considered in using this checklist. Licences are then classified into one of the following tiers:

- Tier 1 licences—high risk to the environment. Requires a lot of attention. Very specific licence conditions eg monitoring.
- Tier 2 licences—medium risk to the environment. Requires attention but not to the same degree as Tier 1. Have site-specific licence conditions.
- Tier 3 licences—low risk to the environment. Can be managed by a model licence with industry generic licence conditions.

The lower risk of Tier 3 licences allows for a more generic approach to their management. An Industry Compliance Auditing System (ICAS) has been developed to address this need and primarily as a tool for managing Tier 3 licensed industries.

INTRODUCTION

Purpose of this report

This report presents the key findings of the compliance audit program conducted on a sample of Tier 3 premises licensed for **surface coating**.

The report details the justification for choosing this industry sector, the methodology used to conduct the audits, and the findings and outcomes resulting from the audit program.

The EPA will use this report to address the issues identified during the audit program, and will develop and implement a plan for follow-up actions that will include a process for monitoring the progress of the implementation of these actions. This report can also be used by the industry sector to improve the overall environmental performance of this group.

Selection of the industry sector

Industry sectors targeted in the EPA's Industry Compliance Audit Program are selected based on a variety of criteria. These may include an assessment of environmental risks, community concerns, EPA strategies, geographic location or availability of technical expertise.

Individual premises within the industry sector are chosen for an audit based on a selection process. This may relate to resources, potential risks or community concerns.

Description of the industry sector

The surface coating sector includes all industries that carry out metal finishing such as electroplating, spray painting, powder coating or hot dip galvanising. These activities are included in Schedule 1 of the *Environment Protection Act 1993* (the EP Act). An excerpt is detailed in Appendix A.

The EPA currently licenses a total of 65 premises in SA that carry out surface coating activities under the EP Act. Of these, 33 premises have been assessed as a Tier 3 licence.

The details of the individual licensees audited in this program are listed in Appendix B.

AUDIT PLANNING

Objectives

The objectives of the audit program were to:

- determine the level of compliance of Tier 3 licensees for surface coating activities (hot dip galvanising, spray painting and powder coating) with:
  - the EP Act, associated regulations and policies
  - current licence conditions.
- determine if standard licence conditions produced by the Licensing and Regulatory Services (LARS) Branch are appropriate and uniformly applied to surface coating licences
- determine if tier assessment checklists have been completed for all audited sites
- identify learnings for EPA's development assessment responses relating to these activities.

Scope

A total of 10 Tier 3 licensed sites were audited as part of this project. This represents approximately 30% of Tier 3 surface coating sites licensed with the EPA.

The auditees (listed in Appendix B) were identified as priority premises based on the following risk-based criteria:

- whether the site has ever been inspected by the EPA
- whether the site was inspected by the EPA in the past three years
- whether the site poses the greatest potential for environmental harm when compared to the other sites licensed for surface coating. This assessment was based on knowledge previously obtained by audit team members.

Criteria

This audit project was primarily aimed at reviewing administrative and on-site practices that specifically involve surface coating activities at each licensed premises. Auditors assessed the compliance of the premises with the EP Act and relevant associated regulations and policies. However, on-site compliance issues identified as surface coating activities and could not be resolved on site were followed up by the lead auditor and not documented as part of these audits.

The audits involved the following criteria:

Administrative

- verify whether annual returns have been completed correctly and submitted on time
- verify whether waste tracking forms and waste transport certificates have been completed correctly and submitted on time
- verify whether site and contact details are correct, and all other reports and documents have been submitted correctly and on time
- verify whether all mandatory standard and general conditions for surface coating are included in the licence

- verify whether all licence variations, notifications and communications are up to date and correct.

On-site practices

- assess for compliance with licence conditions (in particular pollution control equipment, and bunding and spill management)
- assess for compliance with the general provisions made in the EP Act
- assess for compliance with *Environment Protection (Waste Management) Policy 1994*
- assess for compliance with EPA Bunding and Spill management guidelines
- assess for compliance with *Environment Protection (Air Quality) Policy 1994*
- assess for compliance with *Environment Protection (Water Quality) Policy 2003*
- preliminary assessment with *Environment Protection (Industrial Noise) Policy 1994* and *Environment Protection (Machine Noise) Policy 1994*.

The audits were limited to a review of each licensee's compliance with requirements under the EP Act.

AUDIT METHODOLOGY

EPA compliance audits were performed on the selected premises in accordance with the procedures and protocols in the *EPA industry compliance audit handbook* (2007). The audit process is presented in the diagram below. On completion of individual audits a summary of audit findings and recommendations was presented in a report to the auditee. The findings provided in this report are a collation of those presented in the individual compliance audit reports.

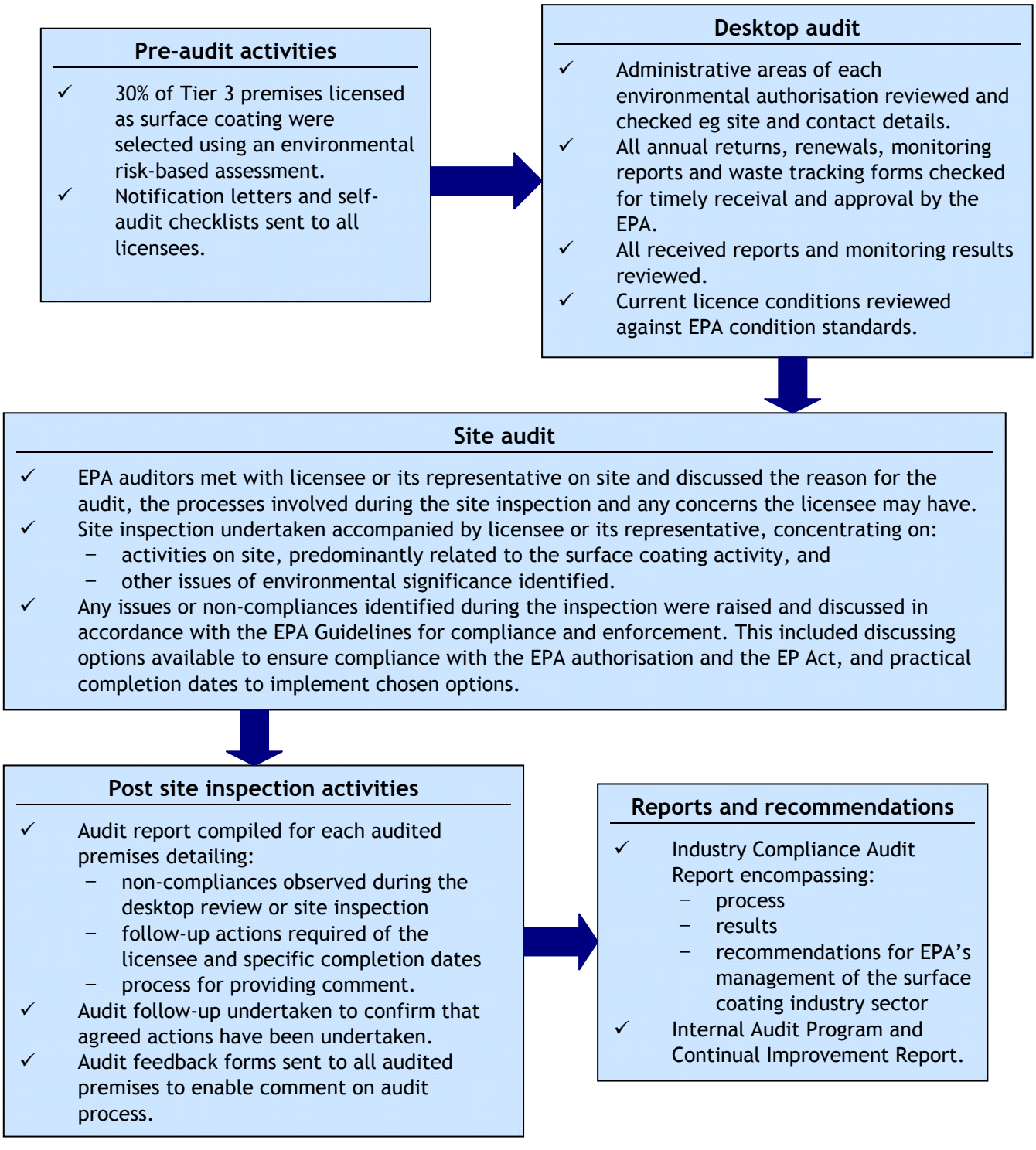

Figure 1 Audit process

FINDINGS

The audit process identified at least one non-compliance at each of the premises. These non-compliances were in relation to one or more aspects of the EP Act, associated regulations and policies, or current licence conditions.

Compliance against the conditions of the authorisation issued and with the EP Act have been assessed and reported in the compliance audit reports prepared for each auditee. Based on these findings, this report details issues for the whole sector, and specific categories of issues have been developed and summarised in Figures 2 and 3.

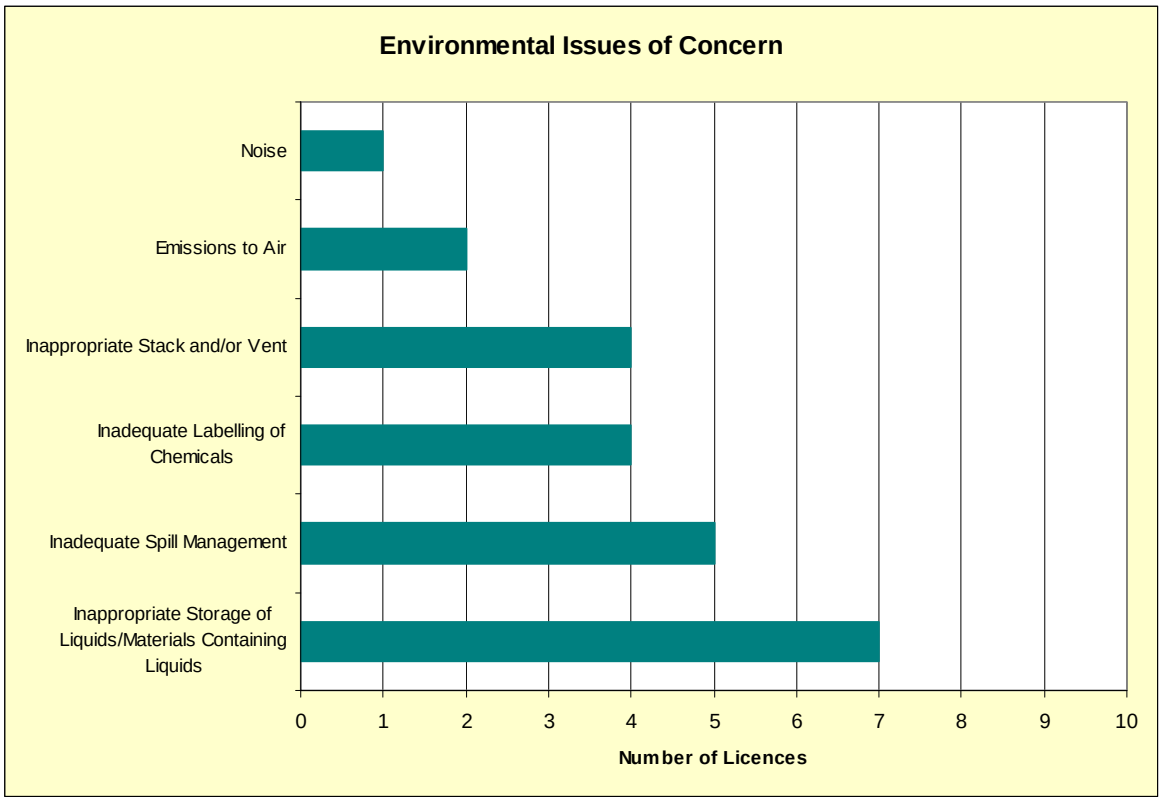

Figure 2 Environmental issues of concern

The most common environmental issues found during this audit were of minor environmental risk and often resulted from poor housekeeping, a lack of knowledge regarding appropriate stack construction[1] (Plates 1 and 2), inappropriate storage of liquids and waste (Plates 3 and 4) and poorly maintained emissions capture systems (Plates 5 and 6).

[1] As a general rule, exhaust vents must be at least three metres above the highest point within a radius of 30 metres with an exit velocity no less than 10 metres per second. Conical caps or similar fittings that inhibit vertical movement of the discharge should not be used (*EPA Guideline: Spray painting booth—control of air and noise emissions, 2007*).

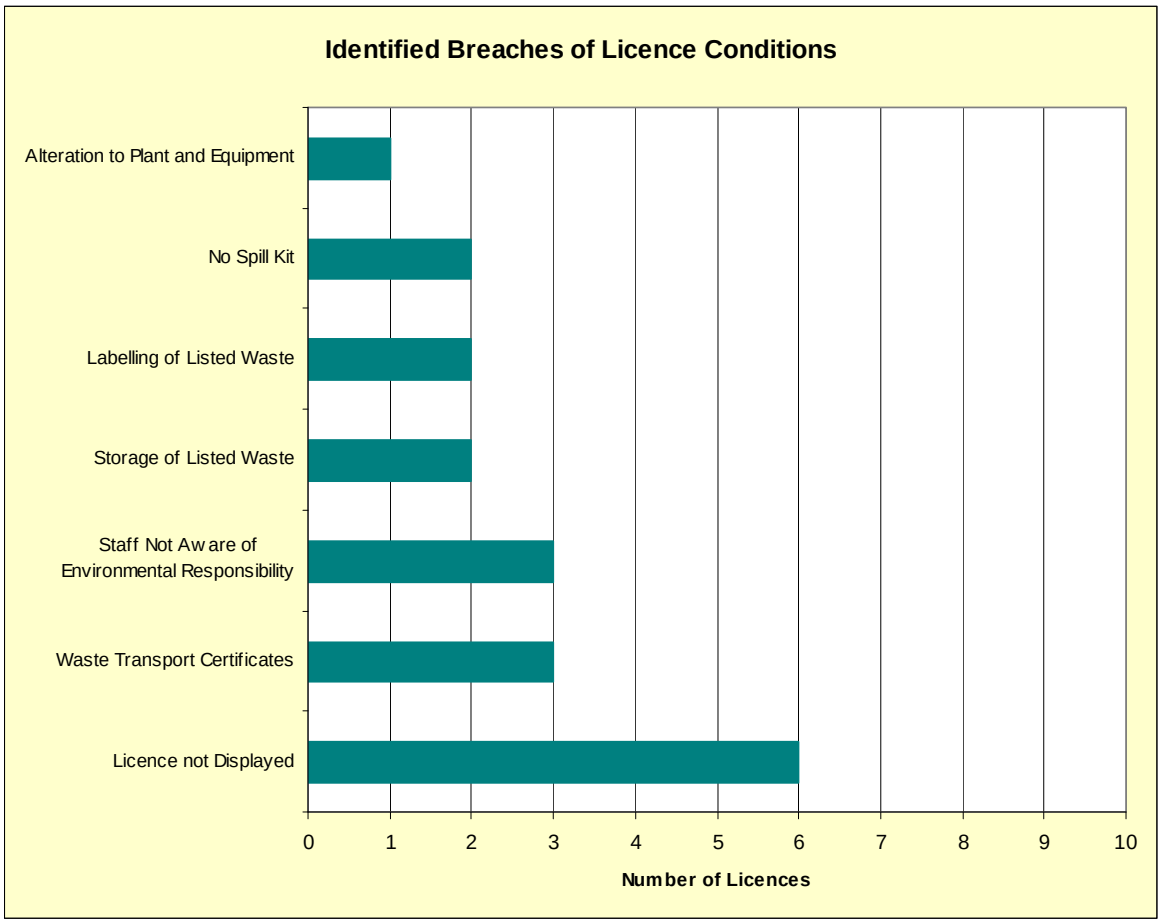

Figure 3 Identified breaches of licence conditions

The majority of the identified breaches of licence conditions were of an administrative nature, such as the non-display of licence, and incorrectly or not completed waste transport certificates.

The audit determined that LARS-produced standard licence conditions were appropriate for surface coating licences, yet they were not uniformly applied across the industry sector. Seven of the 10 audited licences required alterations to their conditions. Many of these licences did not contain the current standard conditions for surface coating activities. In addition, many of the licences were also lacking the current standard administrative conditions and the current standard conditions for producing listed waste (an activity which is often ancillary to many other activities).

All environmental issues identified were raised with the licensee during the audit and recorded in the site-specific audit reports. These reports also included an action list and timelines for compliance with the EP Act and licence conditions. Follow-up inspections confirmed that licensees had completed approximately 70% of all required actions. The outstanding actions include administrative issues such as display of licence and correct completion of waste transport documentation, as well as revision of bunding requirements for liquid storage. These actions will be followed up by EPA licence coordinators.

Some examples of the identified environmental issues of concern

Plates 1 and 2 **Inappropriate venting of air stacks must be vertical and 'hats' are known to hinder the stack exit velocity.**

Plates 3 and 4 **Liquid materials stored outside and not bunded.**

Plates 5 and 6 **Emissions capture infrastructure requiring maintenance—split bags and unsealed joins in ductwork.**

Comments from auditees regarding the audit process

Following the completion of the audit program each auditee was given the opportunity to anonymously complete an audit feedback form. This feedback form was a chance for auditees to supply comment on the suitability and fairness of the audit process and its effectiveness as a tool to help licensees comply with their licence conditions and responsibilities under the EP Act. Four of the 10 auditees took the opportunity to offer comment on the audit process and a collation of their responses are detailed in Figure 4. Additional comments offered indicated that auditees found the audit process to be useful and informative, fair and reasonable, and that the contact made during the audit process has opened a line of welcome useful communication.

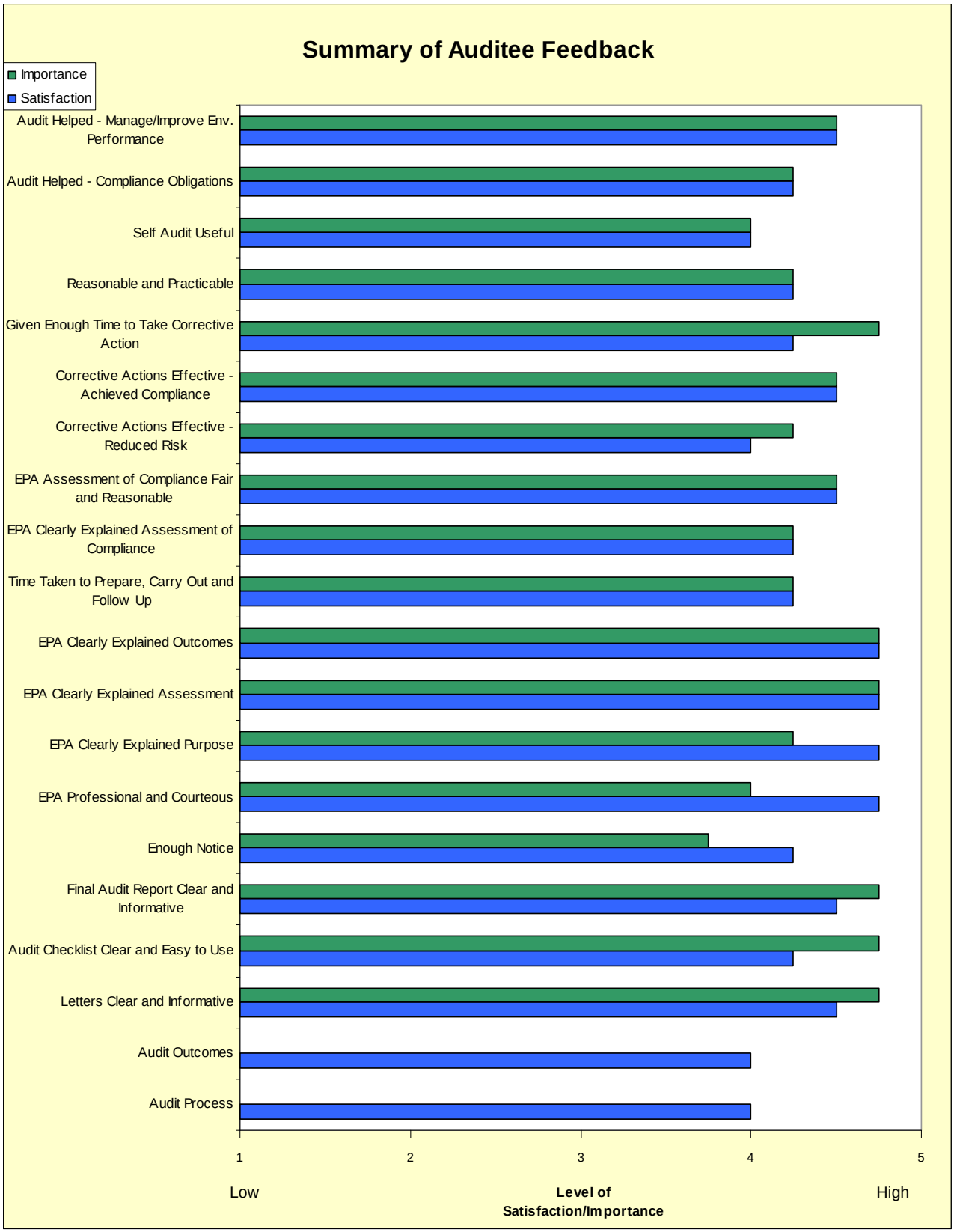

Figure 4 Summary of auditee feedback

CONCLUSION

The audit program identified issues of non-compliance at most premises. Typically these issues presented a low level of environmental risk and were corrected within a month of the completion of the audits. The audit program highlighted that licence-holders displayed a general lack of knowledge about their regulatory requirements under the EP Act and the conditions of their EPA authorisation, which is a concern.

In addition, the majority of auditees required considerable review and amendment of their licences. It is recommended that EPA conduct a desktop review of the remaining Tier 3 surface coating licences, and initiate and implement variations to licences where it is required.

The audit findings are a summary of results from approximately 30% of all premises licensed for surface coating. As such, this sector audit does not provide information about all aspects of environmental performance of the surface coating industry. However, having selected sites from within the industry sector that were identified as having the greatest potential environmental risk, the EPA considers the greatest areas of risk have been identified and will be used to inform further action requirements.

The EPA will also use the findings to determine how best to manage its regulatory function to address the issues identified. This may include non-regulatory actions such as educational programs and administrative tools.

RECOMMENDATIONS

The following learnings and improvements for licensees and the EPA as the regulator, are based on the findings of the audit program and designed to address the most frequently occurring compliance issues as well as those which pose the higest environmental risk.

Licensees

Administration

- Informing the EPA of any changes to licensed sites, operational or contact person details as soon as possible. This can be done by sending written notification of change in details (eg name, address or contact details) to:

  Licensing and Regulatory Services
  Environment Protection Authority
  GPO Box 2607, Adelaide SA 5001

- Completing and submitting the *Application for changes to process emissions or waste form* found at <www.epa.sa.gov.au/pdfs/06_process_change.pdf>. This is required when there are changes to operating processes that may increase the emissions, or alter the nature of pollutants or waste currently generated by or from the activity, or has the potential to cause environmental harm.
- Completing and submitting the *Application for alteration to plant and equipment form* found at <www.epa.sa.gov.au/pdfs/06_equipment_change.pdf>. This is required when installing or altering plant or equipment that may increase the emissions, or alter the nature of pollutants or waste currently generated by or from the activity, or has the potential to cause environmental harm.
- Ensuring all conditions of the licence are understood, and that all staff and contractors on site are aware of their responsibilities under the EP Act.
- Ensuring all waste transport certificates and/or waste tracking forms are completed and submitted correctly. Guidelines are available from the EPA website at <www.epa.sa.gov.au/pdfs/guide_wastetransport.pdf> and <www.epa.sa.gov.au/pdfs/guide_wastetracking.pdf>.

Operational

- Ensuring all stores of liquids that have the potential to contaminate land or water is bunded in accordance with the *EPA Guideline: Bunding and spill management guidelines* (2007). These guidelines can be downloaded from the EPA website at <www.epa.sa.gov.au/pdfs/guide_bunding.pdf>.
- Implementing and maintaining an adequate housekeeping program to minimise the risk of any environmental harm.

EPA

Administration and education

- Undertaking more frequent communication and education campaigns to ensure all licensees are aware of their responsibilities under the EP Act.
- Ensuring licensees know how to contact EPA officers when necessary.
- Developing and making available a simple self-audit package to operators of licensed and non-licensed sites that conduct surface coating activities. This will assist site operators in identifying areas of operation that present a risk to the environment and implementing risk reduction measures.
- Applying standard conditions for surface coating activities to all new licence applications, as well as ensuring these are reflected in responses to development applications.
- Undertaking a desktop review (subject to available resources and priorities) of the 23 remaining Tier 3 surface coating licences, and to initiate and implement variations to licences where it is required to ensure consistent application of licence conditions.

REFERENCES

EPA (2006), *Internal Operating Procedure IOP 028: A system for managing industry compliance audits*, Environment Protection Authority, Adelaide.

EPA (2007), *Draft Industry Compliance Audit Handbook*, Environment Protection Authority, Adelaide.

EPA Guidelines available at <www.epa.sa.gov.au>:

- Spray painting booths—control of air and noise emissions
- Bunding and spill management
- Waste tracking form
- Waste transport certificate.

APPENDIX A ENVIRONMENT PROTECTION ACT 1997—1/7/2005

Schedule 1—Prescribed activities of environmental significance

2—Manufacturing and Mineral Processing

(12) Surface Coating

the conduct of—

(a) works for metal finishing, in which metal surfaces are prepared or finished by means of electroplating, electrolyse plating, anodising (chromating, phosphating and colouring), chemical etching or milling, or printed circuit board manufacture, being works producing more than 5 kilolitres per day of effluent; or

(b) works for hot dip galvanising; or

(c) works for spray painting and powder coating with a capacity to use more than 100 litres per day of paint or 10 kilograms per day of dry powder.

APPENDIX B LIST OF SITES SELECTED FOR THE COMPLIANCE AUDITS

Licensee Name	Industry type	Suburb
AS Marshall Holdings Pty Ltd.	Powder coating	North Plympton
AVK Australia Pty Ltd	Powder coating	Wingfield
Artmetal Coatings Pty Ltd	Spray painting	Holden Hill
Electrolux Home Products Pty Ltd	Powder coating	Dudley Park
JM & BS Pascoe Pty Ltd	Spray painting	Stepney
Lonsdale Powder Coaters Pty Ltd	Powder coating	Lonsdale
LOSCAM LTD	Spray painting	Wingfield
Molnar Engineering Pty Ltd	Powder coating	Brompton
RPG (SA) Pty Ltd	Spray painting	Kilburn
WF Building Services Pty Ltd	Powder coating	Elizabeth South