



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

22905



Final Report

to

Unido

concerning

**Project US/SRL/01/108
Certification of Companies
in Sri Lanka to ISO 14001
Sri Lanka integrated Programme,
Component 6 - Quality**

Table of Contents

Section 1: General

Section 2: Summary

Section 3: Time Table

Section 4: Original Objectives

Section 5: Situation as found at the outset

Section 6: Analytical account of performed activities

Section 7: Findings

Section 8: Recommendations

Attachment:

- No. 1 Audit reports for ISO 14.001 certification audits at the sites of Lanka Fastener Ltd, Sri Ramco Ltd, Aqua Garden Ltd, Koslanda Estates Ltd, Finitex Textile Ltd.
- No. 2 Conformation of satisfaction for the work performed by Sri Lanka Standard Institute and UNIDO representants
- No.3 Offer of RWTÜV Anlagentechnik GmbH to UNIDO for this project from Nov 30th, 2001
- No. 4 List of Delegates in on-the-job-training seminarsReferences for ISO 14001 Certification performed by RWÜV and related subsidiaries

1. General

This report is by Mr. Udo Kubitz and it gives the result of the UNIDO Project US/SRL/01/108 “Certification of Companies in Sri Lanka to ISO 14.001 – Sri Lanka integrated Programme, Component 6 – Quality”.

2. Time Table

The activities of this project started on July 1st and will be finished with the approval of this report by UNIDO.

Project activities were divided into three steps:

- **Training for SLSI staff in the preparation of an environmental management system certification audit (15th to 19th July 2002):**

Audit-on-the-job-training for individuals from SLSI in the examination of the auditee`s environmental management system documents; Preparation of a Process Analysis; Development of Audit Plan and Audit Check-Lists; Questioning Techniques

- **Performance of ISO 14.001 certification audits**

Performance of ISO 14.001 certification audits by TÜV Cert registered Environmental Lead Auditors from Germany and India.

Lanka Fasteners Ltd.	22, 24, 25 July 2002
Sri Ramco Ltd	26 July 2002
Agro Marine Ltd.	29-30 July 2002
Koslanda Estates Ltd.	1-2 August 2002
Finitex Textile Ltd	7-9 August 2002

Audit-on-the-job-training for individuals from SLSI in the performance of such audits by participation in the on-site audit process as a trainee under the supervision and guidance of a RWTÜV lead auditor.

- **Training in the issue of audit reports (12th – 18th August 2002)**

Audit-on-the-job-training for individuals from SLSI to evaluate audit findings and write environmental management system reports.

3. Original objectives

The original objective was to perform ISO 14.001 Certification audits in five companies of Sri Lanka by involving members of the local Sri Lankan Institute (SLSI). Purpose of the first was to enable the auditee's to demonstrate that they have establish and assess the effectiveness of procedures to set an environmental policy and objectives, achieve conformance with them and demonstrate such conformance to other, including the conformance with legal requirements. Purpose of the latter was to develop a local capability for conducting ISO 14.001 certification audits.

As a result of the certification audits four organizations were recommended for certification and have already received the certificate issued by TÜV Cert / RWTÜV Anlagentechnik GmbH. One company (Sri Lanka Fastener) has to repeat the certification audit process due to the detection of a high range of non-conformities with the ISO 14.001 requirements. Audit reports are attached as attachment no. 1

In total, 14 officers of SLSI were trained by seminars and on the job training for future performance of ISO 14.001 certification audit activities. Attachment 2 gives the confirmation that this activity was done to the satisfaction of SLSI as well as to the representant of the UNIDO organization in Sri Lanka.

As a long term result, these officers can be registered as auditors for TÜV Cert / RWTÜV Anlagentechnik GmbH and perform the surveillance audits in the companies mentioned and in future audits of RWTÜV Anlagentechnik in this region. However, this long term result depends on a future agreement between SLSI and TÜV India, who is the subsidiary of RWTÜV Anlagentechnik in India and fully responsible for all RWTÜV Anlagentechnik activities in the India / Bangla Desh / Sri Lanka region.

4. Situation as found at the outset

A major UNIDO project in Sri Lanka provided assistance to a number of companies in the development and implementation of an EMS that meets the requirements of ISO 14001. This project was completed in the midth 2002.

As a result of the tender for the UNIDO Project: TF/SRL/99/003 (Certification of companies in Sri Lanka to ISO 14001) UNIDO selected RWTÜV Anlagentechnik GmbH as a suitable Third Party Certification Organisation to conduct certification audits in five selected pilot companies, in association with SLSI.

A number of SLSI's environmental and quality specialists had already received training relating to ISO 14001 auditing and had successfully completed an IRCA approved training course.

These specialists should be used during the audits as local experts on the Sri Lankan environmental legislation and simultaneously receive practical audit training by the auditors of RWTÜV Anlagentechnik GmbH.

RWTÜV Anlagentechnik GmbH and SLSI should then find out a common strategy about the possibility to use these trainee auditors for the auditing of additional management systems to further strengthen the capability of SLSI to establish an expanding number of fully qualified EMS auditors.

5. Analytical account of performed activities

Chapter 3 of this report states the two main purposes of the project. For achieving these purposes, it was necessary to divide the project activities chronological into three steps (see chapter 2 of this report). However, from the analytical point of view, there are only two different parts of activities:

- Audit on-the-job-training for individuals from SLSI in the entire audit process,
- Performance of ISO 14.001 environmental management systems certification audits.

5.1 Audit on-the-job-training

Individuals from SLSI received an On-the-job-training in the entire audit process. In particular, they were trained in the following activities:

- Pre-Audit activities, such as Initial Contact and Pre-Audit visit of the auditee to ensure that both parties understand the objectives and scopes of the audit.
- Document Review, to clearly establish if the auditee's documented system adequately addresses the Environmental Management Standard and all relevant legal requirements.
- Initial Preparation, to gain an understanding of the auditee's activities, products or services and their interaction with and change to the environment (environmental aspects, environmental impact). To understand the legal and other requirements to which the auditee subscribes and are applicable to the environmental aspects of its activities, products or services. To finalize the scope of the audit. To decide the composition of the audit team.
- Development of an Audit Plan, to clearly detail which aspects of the auditee's operations are to be subject to the audit activities, for how long and by whom. To indicate to the auditee which members of staff will be required to be available for interview by the auditors.
- Detailed Planning, to create Check-Lists and Plan of Actions to ensure that the audit team is well prepared and know what to look for and where to look to verify conformance to the Environmental Management System Standard and Environmental Legislation requirements.
- On-site Audit activities, such as Opening Meeting, Audit Conduct and Closing Meeting. To introduce the audit team to the auditee, to gather objective evidence by checking documents, conducting interviews and observing activities. To ensure that the auditee's management is aware of and fully understands the findings and associated implications and what they need to do next.
- Evaluating Results, to establish conformance or non-conformance with the Environmental Management System and Legislative requirements.
- Audit Report, to detail findings and conclusions of the audit.
- Follow-Up Activities, to establish formal activities to verify the implementation of corrective actions (if applicable) and the maintenance and effectiveness of already established procedures.

5.2 Performance of ISO 14.001 environmental management systems certification audits

ISO 14.001 certification audits were performed in five Sri Lankian companies. Audit preparation, audit on-site activities and the establishment of audit findings and conclusions were performed in accordance to the offer RWTÜV Anlagentechnik GmbH submitted to UNIDO on November 30th, 2001 (see attachment No. 3) and to what is stated in Chapter 5.1 and to requirements of ISO 14.011:1996 (Auditing of Environmental Management Systems). All audit steps were conducted under the participation of individuals from SLSI.

Details of the audit activities are stated in the respective audit reports (see attachment No. 1).

6. Findings

This chapter gives an overview about the major findings when training individuals from SLSI on the job and all major findings from the certification audits.

6.1 Findings from on-the-job-training activities

The training courses were attended by 14 delegates from SLSI (see attachment No. 4). All delegates were highly motivated and very active during the training period. All delegates had a good theoretical knowledge about the process of ISO 14.001 certification audit but had never participated in a “real” audit before.

During their daily business activities, delegates are mainly involved in testing and administrative activities but only some of them had a minimum of at least two years of appropriate work experience in the activities of the companies to be audited.

The delegates have not had sufficient knowledge about the environmental legislation requirements in Sri Lanka and no knowledge about the so-called “other” requirements, for example

- Ecotex-Label (Finitex Textile Ltd)
- Agreements about the use of Chloramphenicol in prawn breeding industry (Agro Marine Ltd)
- Agreement on the cultivation of organic tea (Koslanda Estates Ltd).

6.2 Findings from the ISO 14.001 certification audits

Findings from the ISO 14.001 certification audits are summarized in the respective audit reports (see attachment xx).

TUV Cert / RWTÜV Anlagentechnik GmbH has established contracts with those companies which received a ISO 14.001 certificate. This includes the obligation for on-going surveillance audits at least once per year.

7. Recommendations

As a result of the project findings it is recommended that

- All participants of the on-the-job-training may receive further training on environmental legislation and additional requirements to which the auditee has to subscribe when establishing an environmental management system.
- All further applicants for becoming Environmental Auditors may have at least two years of work experience in the activities of the organisation to be audited.

Recommendations for the those companies who were audited during this project are stated in the respective audit reports.

Attachment No. 1

Audit reports for ISO 14.001 certification audits at the sites of

- Lanka Fastener Ltd.
- Sri Ramco Ltd.
- Aqua Garden Ltd.
- Koslanda Estates Ltd.
- Finitex Textile Ltd.



Audit report
LANKA FASTNERS



- Pre-audit Surveillance audit Re-audit
 Certification audit Re-Certification audit Extension audit

Audit Dates 22, 24-25th JULY 02 Order No.: _____ Reference No.: _____

Client: Lanka Fastners Limited

MR: Mr. K. Bhanuguptha

Lead auditor: Mr. M. Kullmann, RWTÜV Auditor: Mr. V.S.Reddy, TÜV India

Observer: Ms. S U. Narangoda, SLSI Observer: Mr. D. L. W. Peiris, SLSI

Observer: Mr. S. P. P. A. Wickramasooriya, SLSI

Standard: DIN EN ISO 9002 **ISO 14001:96**

Manual No. and date of issue: EM revision 00

EA Scope: 17.2

Scope of applicability: Manufacture of nut, nut manufacturing tools and ancillaries

Date and issue of audit questionnaire AF-72e
Rev.1/11/96 Size: _____ NCR No.: 09

Examination of the EM documentation and performance of the audit produces in total the following result (overall summarized evaluation):

A document review yielded satisfactory results. Prior to the on-site Certification Audit, the Organisations Environmental Manual was reviewed. Requirements were communicated and corrective actions were satisfactorily evaluated. The company has addressed all applicable clauses of the standard. Audit was carried out covering all environmental related activities. Nine critical non-conformance was observed. Compliance to the documented system was found un-satisfactory as functions such as purchasing, maintenance were not covered.

The Auditors is not satisfied with the present status of documented EMS implementation at this site. Re-audit on above nine NCR.s is recommended.

- Re-audit necessary**
 Issue of certificate recommended

12/08/2002 _____ _____
Date Lead auditor Auditor

Issue of certificate:

Approval by head of certification body rejected _____
Date and signature

Approval of veto person (QS-9000 only) rejected _____
Date and signature

Summary of Findings, Recommendations and Comments

Clause	Description
Dept./sec.	FINDINGS
4.1	<p>General Requirements</p> <p>The Organisation initiated EMS activities in February 2001. All employees underwent Awareness training. Document review was conducted. Compliance to the findings was evidenced.</p> <p>The Organisation has documented and maintains an Environmental Management System in line with ISO 14001.</p> <p>Core operations include surface treatment, wire drawing, nut forming, oil centrifuging, polishing, de-greasing, zinc plating etc.</p>
4.2	<p>Environmental Policy</p> <p>The Organisation has defined and issued a signed Environmental Policy (dated 30 July 2001). The Policy lays emphasis on prevention of pollution, continual improvement, complying with statutory requirements etc. The Policy was found suitable in relation to the operations of the company.</p> <p>Policy is also prominently displayed at various locations on the premises. Local language has been effectively utilised in communication of policy. In random discussions, the policy was found well communicated and understood by all.</p> <p>Areas stressed in policy includes activities related to manufacture of fasteners, resource conservation in carbon steel, water energy etc.</p>
4.3	<p>PLANNING</p>
4.3.1	<p>Environmental Aspects</p> <p>The company prior to installation of EMS has performed an IER (initial environmental review) in July 2001. The IER analysed the processes and activities of the organisation.</p> <p>The Organisation has established a procedure to identify its significant aspects (EP 3.1). All impacts of the activity related to air pollution, water pollution, noise pollution, land contamination, waste generation, resource depletion are identified. Effective input-output relationship on activities is utilised for identification of aspects and associated impacts. Responsibility for identification and rating lies with the concerned HOD's.</p> <p>A significance rating system considers parameters related to probability of occurrence, severity of impact, legal requirements applicable, community issued, company reputation, lack of information improvement potential in determining significance cut off score of 05 is determined. Emergency situations, normal and abnormal activities are also identified.</p>

	<p>Aspects are rated as per stated criteria (3.1 B). Aspects are re-evaluated and updated twice a year.</p> <p>Some of the significant aspects identified are;</p> <ul style="list-style-type: none"> ✓ HCL Sludge from surface treatment ✓ Phosphate sludge ✓ Waste oil generation at nut forming ✓ Oil fumes generation at nut forming ✓ Noise generation at thermo plastic etc. <p>Total of 38 aspects are identified as significant. Records are maintained (3.1 A)</p> <p><i>However it was observed that all applicable aspects such as quenching operation, compressors, cutting chip handling etc are not identified (NCR 4 OF 9 ISSUED)</i></p>
4.3.2	Legal and other Requirements
	<p>The company maintains a "Register of legal requirements".</p> <p>All the rules, acts, regulations are updated based on the information collected from CEA sources. The Organisation has obtained permit from the BOI. The permit lays down the permissible emission levels.</p> <p>Parameters for compliance are specified in the consent letters. The valid consent letters are as follows.</p> <p>Number 30005 Valid up to 17-01-03</p> <p>All common effluents of water are drained into common waste water collection and treatment plant maintained and operated by BOI. Parameters applicable include effluents to meet BOD, COD, O&G, TDS etc in effluent at an frequency of 6 months. Ambient air quality parameters are to be monitored. Phosphating sludge and waste oil are stored at designated areas.</p> <p><i>However it was observed that ambient air monitoring are not monitored as required by BOI EPL: NCR 1 of 9 ISSUED:</i></p> <p><i>Records of monitoring of effluent to common waste treatment plant do not meet the specified requirements of BOD, COD, O&G etc. NCR 02 of 09 raised.</i></p> <p><i>Records of waste generated not maintained as required by hazardous waste rules. NCR 03 of 09 issued.</i></p>
4.3.3	Objectives and Targets (O&T's)
	<p>The top management of the organisation has laid down and approved the Objectives and Targets for the current year. Setting of O&T's considered significant aspects, legal requirements, policy requirements, interested party concerns etc. All the Objectives have been addressed by EMP's.</p>

It includes,

- ✓ Control of reduction of oil fumes by 90%.
- ✓ Reduction of water usage by 5%.
- ✓ Reduction of noise level under BOI regulation.
- ✓ Upgrade ETP to meet BOI discharge,

It was observed that top management is approved all objectives and targets. Monitoring of objectives and targets is undertaken.

4.3.4 Environmental Management Programmes

The organisation has defined the structure of the Environment Management Programs. They contain the Objective, activity, responsibility, resource requirement and target date. In case of programs leading to new or modified activities, the organisation needs to ensure that they are updated to permit achievement of the environment management system requirements.

The organisation has taken up 07 Environmental Management Programs based on the Objectives and Targets decided. Two EMPs have been completed.

It was observed that the status of EMP's is monitored in terms of the activities of the EMP complete. Progress of EMP's is monitored at departments.

Checked for:

Control of OIL Fumes EMP 02: Observed that activities such as analysis of oil content in nut forming, designing of cyclone separator, feasibility study, identification of supplier, placement of purchase order etc are monitored in relation to target dates and records of compliance maintained.

4.4 IMPLEMENTATION AND OPERATION

4.4.1 Structure and Responsibility

Manual details responsibilities and authorities. Individual procedures and specifications detail responsibilities.

During audit it was observed that personnel are well aware of their responsibilities. Organisational chart is effectively utilised to show the inter-relationships. Quality manager has been appointed as Management Review.

Significant aspects in terms of lack of information are evaluated.

However it was observed that resources essential for implementation and control of environmental management system was not evidenced. NCR 07 of 09 issued.

4.4.2	<p>Training, awareness and competence</p> <p>Training needs are identified annually by committee meeting. (meeting held on 16-01-02). Training is imparted to employees based on specific job requirements, long-term company requirements and overall skill development.</p> <p>Training for Personnel performing activities impacting the environment was checked at random and found satisfactory. Employees have been provided training as internal Auditors. Training on on-site emergency, fire fighting to all relevant employees.</p> <p>Planned programs include oil fume reduction, ETP operation, oil spillage etc.</p> <p>The effectiveness of the training and competence of the personnel is checked by means of feedback from the employee at the end of the program and feedback from the reporting officer.</p> <p>Records of training are maintained (ER 4.1 c)</p>
4.4.3	<p>Communication</p> <p>Environmental issues are communicated internally through meetings, memos etc.</p> <p>Internal communication received is entered in internal communication record. Suggestion systems are effectively utilised.</p> <p>The company maintains external communication register. Responsibility for the same lies with GM and MR. All communication from various authorities, external interested parties is entered in this register.</p> <p>None of these external communications resulted in changes to the significant Aspects already identified.</p>
4.4.4	<p>Environment Management System Documentation</p> <p>The organisation has established a three layer documented Environment Management System consisting of Apex Manual, Procedures, Work Instructions, and Forms and Records.</p> <p>Linkages of various documents are satisfactory. The system is structured having one-to-one correspondence with the clauses of the standard.</p>
4.4.5	<p>Document Control</p> <p>A Master list exists covering all three layers of the documented EMS. The responsibility for the revision, approval and issue of the different layers of documents is well defined. Random checks during the audit revealed that the users have in their possession the current valid documents. The obsolete copies were found clearly marked and maintained by the MR.</p> <p>The external documents critical to the organisation's Environmental Management System consist of monitoring records, the national and BOI legislation on the environment. MR independently maintains documents. A master-list of these documents exists along with their revision status. The company updates these documents on a regular basis.</p>

4.4.6

Operational Control

Operational Control Procedures have been documented by the organisation for activities having significant environmental aspects in all the departments.

Some common OCP's have been written which apply to all the departments e.g. safety requirements, handling of wastes, use of protective equipment's etc.

Audit of the various sections of the Organisation was carried out to check implementation of the documented common procedures and operational control procedures. The following observations were made.

Nut Forming

Wire is forged to form a nut. Aspects associated include noise generation, oil leakages, generation of cutting chips, oil emissions etc.

Observed that oil sludge transfer records are maintained (3.1R). Suction system for control of oil emissions is installed. However it was observed that dispersion and collection of oil is inadequate leading to land and air pollution.

Oil Centrifuging

Oil from the nut is removed by centrifuging. Collected oil is re-used. Records of collection are maintained.

Polishing

Nuts are washed and polished in detergent media. Aspects include generation of oil containing effluent, oil trap, etc. MSDS cards for chemicals used for cleaning to be obtained and displayed.

Degreasing

Degreasing through soda bath, polishing chemical, kerosene bath, hot water bath are undertaken to remove strain of oil and wastes. Aspects associated include effluent generation, hot water emissions etc. observed that oil traps for the above exists.

Observed that operational control procedures for oil spillage (EWI-13), solid waste removal (EWI-03), sludge removal (EWI 11) etc are generated.

Surface treatment of Mild steel

HCL, H2O, sulphuric acid, phosphate, oxalic acid, sodium nitrate are used to treat the nuts. Zinc plating is undertaken as per the process sheet.

Observed that MSDS cards for the above chemicals are displayed at the point of use. Protective equipment was used.

All drains are leading to ETP:

Storage and disposal

ETP sludge, waste oil etc are identified and stored at designated areas. Records are maintained. Disposal of sludge and waste is not undertaken. Scope exists for proper storage as seepage was evidenced.

Purchasing

Observed that purchasing activities for items such as HCL, Lub oil, Phosphoric acid etc are not controlled and covered in EMS.

Maintenance

Observed that maintenance activities are not controlled and covered in EMS. (NCR 05 of 09 issued)

It was also observed that untreated effluent was being let out-side the factory at wire drawing. NCR 08 of 09 issued.

4.4.7	Emergency Preparedness and response
-------	-------------------------------------

The organisation has identified all the likely emergency situations through an aspect analysis. Emergencies foreseen are fire.

Addressing these situations the company has drawn up on-site fire management plan. The plan is tested by having mock drills at six monthly intervals. Records of mock drills are maintained.

Responsibility for responding to an emergency situation lies with concerned team as identified. List of the teams with contact numbers are maintained and displayed.

Records for maintenance of hydrants, fire extinguishers were checked and found satisfactory.

4.5	CHECKING AND CORRECTIVE ACTION
-----	---------------------------------------

4.5.1	Monitoring and measurement
-------	----------------------------

Monitoring and measurements are performed at various operating areas, as per the monitoring schedule drawn up. The schedule gives the measurement to be performed, frequency, responsibility and method. All parameters designated by legislation are monitored. **Site Plan indicating various facilities/ installations, ambient air monitoring stations, drainage system etc are to be maintained.**

Monitoring is not carried out for ambient air.

Parameters monitored includes the following;

- ✓ Stack emissions, effluent discharges, oil usage are monitored as required.
- ✓ Effluent records are maintained
- ✓ Monitoring of electricity consumption is done.

	<p>Monitoring of noise, water discharge from ETP (COD, BOD, TDS, TSS, pH etc) is monitored.</p>
4.5.2	<p>Non-conformance and Corrective and Preventive Action</p>
	<p><i>Corrective and preventive actions are not taken to eliminate the cause. E.g records of effluents to common waste water treatment plant indicate that specified parameters are not met. NCR 02 of 09 issued.</i></p> <p>Avenues through which corrective actions can be taken are identified. These include audit results, management reviews, progress of EMP's, monitoring records, suggestion schemes, communication etc.</p>
4.5.3	<p>Records</p>
	<p>Environmental records are generated by the concerned departments and are maintained by them. These include legislation records, communication records, training records, emission monitoring records, calibration records, audit and management review records. The retention periods and location of these records are clearly defined.</p> <p>Checks at the place of work revealed that the records were legible and adequately preserved.</p>
4.5.4	<p>Environment Management System Audit</p>
	<p>The responsibility for the planning and conducting Internal environment audits lies with the MR. Procedure details the responsibilities of the auditor and auditees. Methodology of audits is detailed. The organisation has a pool of trained internal auditors, out of which auditors independent of the function to be audited are selected. Audits covered all the sections of the EMS System.</p> <p>Observed that audit schedule is generated and all the observations are closed.</p> <p>The organisation has developed a checklist for EMS auditing.</p> <p>Review of the records of the audit round just finished revealed that all relevant areas had been covered.</p>
4.6	<p>Management Review</p>
	<p>Reviews are conducted as per plan.</p> <p>Issues discussed includes;</p> <ul style="list-style-type: none"> ✓ Progress of EMP's ✓ Setting, review and achievement of Objectives and Targets ✓ EMS audits findings, ✓ Legal compliance ✓ External communication ✓ Suitability of the Environmental Policy and the documented system is reviewed from time to time.

However it was observed that many agenda points specified in review meeting were not discussed and analysed. E.g. audit findings, training results, progress of objectives and targets. NCR 09 of 09 issued. Records of the review are maintained.

12/08/2002

Date

Ms. S. U. Narangoda, SLSI

Observer

Mr. D. L. W. Peiris, SLSI

Observer

Mr. S. P. P. A. Wickramasooriya,
SLSI

Observer



**Audit report
Ramco Lanka**



- Pre-audit
 Surveillance audit
 Re-audit

 Certification audit
 Re-Certification audit
 Extension audit

Audit Dates 26th JULY 02 Order No.: _____ Reference No.: _____

Client: Sri Ramco Lanka (private) Limited

MR: Mr. P.V.K.K Gunasekara, Chemist

Lead auditor: Mr. M. Kullmann, RWTÜV Auditor: Mr. V.S.Reddy, TÜV India

Observer: Ms. S. Udakara, SLSI Observer: Ms. S. Wickremaratna, ITI

Standard: DIN EN ISO 9002 **ISO 14001:96**

Manual No. and date of issue: EMS REVISION – 01 dated 20.04.2002

EA Scope: 16

Scope of applicability: Manufacture of "Ramco" brand fibre cement
Corrugated sheets, flat sheets and accessories

Date and issue of audit questionnaire AF-72e
Rev.1/11/96 Size: 75 NCR No.: 03

Examination of the EM documentation and performance of the audit produces in total the following result (overall summarized evaluation):

A document review (report to client on 17.07.02) yielded satisfactory results. Prior to the on-site Certification Audit, the Organisations Environmental Manual was reviewed. Requirements were communicated and corrective actions were satisfactorily evaluated at the audit. The company has addressed all applicable clauses of the standard. Audit was carried out covering all environmental related activities of asbestos production. Three critical non-conformances were observed. Compliance to the documented system was found satisfactory.

The Auditors are satisfied with the present status of documented EMS implementation at this site. Re-audit by submission of documents on three NCR.s issued was recommended. The organisation has submitted satisfactory compliance to NCR issued. Closing of NCRs is detailed in the report.

- Re-audit necessary
 Issue of certificate recommended

13/08/2002 _____ _____
Date Lead auditor Auditor

Issue of certificate:

Approval by head of certification body Rejected _____
Date and signature

Approval of veto person (QS-9000 only) Rejected _____
Date and signature

Summary of Findings, Recommendations and Comments

Closing of NCR#s issued:

NCR 01: Some Aspects associated with activities and operations are not identified. E.g. work shop operations, generation of asbestos containing filter media, lead acid batteries etc.

CA: Review of aspects and impacts has been conducted (ER 3.0, rev 01). Identification of aspects associated with workshop, filter media, lead acid batteries etc are identified. Significance is determined as per stated procedure. Study is undertaken to identify control points, person responsible. Work instructions are generated to control the aspects associated.

NCR 02: Some applicable legal laws and regulations are not identified. E.g. hazardous waste management rules, schedule IV, V etc.

CA: Environmental record register ER 3.2 has been reviewed (rev 01). All applicable laws and regulations are identified. Responsibility for monitoring the above has been assigned.

NCR 03:Progress of EMPs are not evidenced. Provision for financial resources for implementation and maintenance of EMS was not evidenced. Significant aspects e.g. waste effluent is not monitored as required by CEA license.

CA: Records of progress of activities in EMP are monitored. Checked for re-use of asbestos waste. Observed that activities such as identification of ball mill technology, approval for budget etc are undertake. Records of compliance against activities are maintained.

Waste effluents, which were disposed off to paddy fields, are now being diverted to re-use in process. The EMP has been approved by GM. Design of site has been approved.

Clause	Description
Dept./sec.	FINDINGS
4.1	General Requirements
	<p>The Organisation initiated EMS activities in February 2001. All employees underwent awareness training. Document review was conducted. Compliance to the findings was evidenced in certification audit.</p> <p>The Organisation has documented and maintains an Environmental Management System in line with ISO 14001.</p> <p>Core operations include handling and transfer of raw materials such as asbestos, cement, slurry mixing operation, sheeting machine operation, recuperation operation, curing and despatch. Support functions include storage, maintenance, generator, testing etc. Observed that all the activities associated with the unit in Makandura Industrial Park are covered.</p>

	<p>Effort is made to have a zero discharge unit. Recycling of process effluents is undertaken. Dust collectors are installed at hoppers and slurry mixers.</p> <p><i>Two manufacturing lines exist. Only one line was functional at the time of audit. Consideration for equipment, technology of two lines were not compared in determining the significance of aspects associated.</i></p>
4.2	Environmental Policy
	<p>The Organisation has defined and issued a signed Environmental Policy (dated 01 July 2001). The policy lays emphasis on prevention of pollution, continual improvement, complying with statutory requirements etc. The policy was found suitable in relation to the operations of the company.</p> <p>Policy is also prominently displayed at various locations on the premises. Local language has been effectively utilised in communication of policy. In random discussions, the policy was found well communicated and understood by all.</p> <p>Areas stressed in policy include activities related to manufacture of asbestos, resource conservation, encourage recycling strategies, operation of pollution control equipment at optimum levels etc.</p> <p>Director of the organisation has signed the policy.</p>
4.3	PLANNING
4.3.1	Environmental Aspects
	<p>The company prior to installation of EMS has performed an IER (initial environmental review) in July 2001. The IER analysed the processes and activities of the organisation.</p> <p>The Organisation has established a procedure to identify its significant aspects (EP 3.1, rev 01). All impacts of the activity related to air pollution, water pollution, noise pollution, land contamination, waste generation, resource depletion are identified. Effective input-output relationship on activities is utilised for identification of aspects and associated impacts. Responsibility for identification and rating lays with the concerned HOD's and EMR.</p> <p>A significance rating system considers parameters related to probability of occurrence, severity of impact, legal requirements applicable, community issued, company reputation, lack of information improvement potential in determining significance cut off score of 10 is determined. Emergency situations, normal and abnormal activities are also identified. Observed that aspects having multiple impacts are combined.</p> <p>Aspects are re-evaluated and updated once a year (September). Review of aspect and impact has been conducted on 29.04.02 (revision 01)</p> <p>Some of the significant aspects identified are;</p> <ul style="list-style-type: none"> ✓ Emission of asbestos fibre ✓ Disposal of asbestos wastes ✓ Noise generation from generators ✓ Dust emissions at pulverization ✓ Asbestos foam generation in decantation tank etc.

However it was observed that all applicable aspects such as waste oil generation, generation of filter media, work shop activities, slurry mixer emissions, asbestos and cement filters etc are not identified (NCR 1 OF 3 ISSUED)

4.3.2 Legal and other Requirements

The company maintains a "Register of legal requirements" (ER 3.2). Procedure for identification is generated (EP 3.1).

All the rules, acts, regulations are updated based on the information collected from CEA sources. The Organisation has obtained permit from the CEA. The permit lays down the permissible emission levels.

Parameters for compliance are specified in the consent letters.
The valid consent letter is as follows.

Number 30005-2002 valid up to december 2002.

The requirements include,

- ✓ Noise levels to be maintained below 70 dbs.
- ✓ Efficiency of pollution control equipment is maintained at 90%.
- ✓ Emissions from fugitive sources during production to be monitored.
- ✓ Industrial wastewater to be recycled.
- ✓ Domestic wastewater to be treated.
- ✓ Control of production wastes to be undertaken.
- ✓ Ambient air parameters to be monitored.

It was observed that records of waste generated are not maintained as required by hazardous waste rules. E.g. schedules IV, V etc. NCR 02 of 03 issued.

4.3.3 Objectives and Targets (O&T's)

The top management of the organisation (GM) has lay down and approved the Objectives and Targets for the current year. Setting of O&T's considered significant aspects, legal requirements, policy requirements, interested party concerns etc. All the Objectives have been addressed by EMP's.

It includes,

- ✓ Elimination of foam generation by installing foam scrapping unit.
- ✓ Designing pulverization system to reduce emissions.
- ✓ Installation of oil separation tank to control process oil and grease.

It was observed that top management is approved all objectives and targets. Monitoring of objectives and targets is undertaken.

It was observed that seven objectives have been achieved and closed. E.g.

- ✓ Installation of chimney for generator.
- ✓ Re-designing storage area etc.

4.3.4	<p>Environmental Management Programmes</p> <p>The organisation has defined the structure of the Environment Management Programs. They contain the objective, activity, responsibility, resource requirement and target date. <i>In case of programs leading to new or modified activities, the organisation needs to ensure that they are updated to permit achievement of the environment management system requirements.</i></p> <p>The organisation has taken Environmental Management Programs based on the Objectives and Targets decided.</p> <p>It was observed that the status of EMP's is monitored in terms of the activities of the EMP complete. Progress of EMP's is monitored at department level.</p> <p>Checked for: <u>Designing a proper system for pulverisation system:</u> Observed that activities such as analysis of present emissions, designing of adequate system, feasibility study, identification of supplier, placement of purchase order etc are planned. However records of compliance and progress are not evidenced.</p> <p><u>Checked for installation of oil separator tank:</u> Observed that records of compliance and progress are not evidenced.</p> <p>NCR 03 of 03 issued</p>
4.4	IMPLEMENTATION AND OPERATION
4.4.1	<p>Structure and Responsibility</p> <p>Manual details responsibilities and authorities. Individual procedures and specifications detail responsibilities.</p> <p>During audit it was observed that personnel are well aware of their responsibilities. Organisational chart is effectively utilised to show the inter-relationships.</p> <p>However it was observed that resources essential for implementation and control of environmental management system was not evidenced. NCR 03 of 03 issued.</p>
4.4.2	<p>Training, awareness and competence</p> <p>Training needs are identified annually. Training is imparted to employees based on specific job requirements, long-term company requirements and overall skill development.</p> <p>Training for personnel performing activities impacting the environment was checked at random and found satisfactory e.g. operation of pneumatic conveyor for asbestos. Employees have been provided training as internal auditors. Training on on-site emergency, fire fighting to all relevant employees is conducted. One day training program for all employees is conducted.</p>

	<p>The effectiveness of the training and competence of the personnel is checked by means of feedback from the employee at the end of the program and feedback from the reporting officer.</p> <p>Records of training are maintained.</p>
4.4.3	Communication
	<p>Environmental issues are communicated internally through meetings, memos etc.</p> <p>Internal communication received is entered in internal communication record.</p> <p>The company maintains external communication register. Responsibility for the same lies with GM and EMR. All communication from various authorities, external interested parties is entered in this register.</p> <p>None of these external communications resulted in changes to the significant aspects already identified.</p>
4.4.4	Environment Management System Documentation
	<p>The organisation has established a three layer documented Environment Management System consisting of Apex Manual, Procedures, Work Instructions, and Forms and Records.</p> <p>Linkages of various documents are satisfactory. The system is structured having one-to-one correspondence with the clauses of the standard.</p>
4.4.5	Document Control
	<p>A master list exists covering all three layers of the documented EMS. The responsibility for the revision, approval and issue of the different layers of documents is well defined.</p> <p>Random checks during the audit revealed that the users have in their possession the current valid documents. The obsolete copies were found clearly marked and maintained by the MR.</p> <p>The external documents critical to the organisation's Environmental Management System consist of monitoring records, the national and CEA legislation on the environment. EMR independently maintains documents. A master-list of these documents exists along with their revision status. The company updates these documents on a regular basis.</p>
4.4.6	Operational Control

Operational Control Procedures have been documented by the organisation for activities having significant environmental aspects in all the departments.

Some common OCP's have been written which apply to all the departments e.g. safety requirements, handling of wastes, use of protective equipment's etc.

Audit of the various sections of the organisation was carried out to check implementation of the documented common procedures and operational control procedures. The following observations were made.

Purchasing:

Purchased items include cement, asbestos, engineering items etc. Procedure for control of purchasing is generated (9.2.1.2 A). Details of dust emissions at loading are monitored and recorded. Feed back to supplier is given. (ER 4.2)

Test for crocidolite asbestos is undertaken. Records of test are maintained. Contract with sub-contractors is undertaken.

Maintenance:

Equipments such as booster pumps, vacuum pump, bag shredder etc are under maintenance schedule. Records of maintenance undertaken are maintained.

Fibre dust filter cleaning schedule is generated. (ER 4.7.1)

Store:

Adequate storage area for storage of asbestos exists. Work instruction for handling exists.

Handling of cement:

Cement is transferred in overhead silos through pneumatic system. Bag filters exist to control emissions.

Production

Asbestos fibre, cement and water are as major raw materials. Mix is converted to required size and cut to desired length. The asbestos sheet is made to cured and dispatched.

The following are the operational control activities observed at the production sit.

- ✓ Handling of raw materials is undertaken through overhead silos.
- ✓ Shredding of asbestos is undertaken in closed system with use of bags being a part of the raw material.
- ✓ Dust extraction system for shredding system and mixing area exist.
- ✓ Monitoring of asbestos in air at floor is undertaken.
- ✓ Recycling of process wastes (cutting wastes, leakages etc) is undertaken.
- ✓ Protective equipment is worn by employees.
- ✓ Waste oil generated in the organisation is re-used for lubricating the templates.
- ✓ Vacuum suction systems are used to control process wastes at crushing, storage and transfer areas.
- ✓ Fibre concentration at slurry mixer is maintained. Observed it to be below permissible limit of 01 F-CC.
- ✓ Effluents are collected and re-used in slurry generator.

✓ Stack for generator exists.

Storage and disposal

Process waste, waste oil etc are identified and stored at designated areas. Records are maintained. Disposal of waste is not undertaken.

The storage of waste and scrap has to be done in a proper way.

4.4.7	Emergency, preparedness and response
	<p>The organisation has identified all the likely emergency situations through an aspect analysis. Emergencies foreseen are fire.</p> <p>Addressing these situations the company has drawn up on-site fire management plan. The plan is tested by having mock drills at six monthly intervals. Records of mock drills are maintained. (February 2002)</p> <p>Responsibility for responding to an emergency situation lies with concerned team as identified. List of the teams with contact numbers are maintained and displayed.</p> <p>Records for maintenance of hydrants, fire extinguishers were checked and found satisfactory.</p>
4.5	CHECKING AND CORRECTIVE ACTION
4.5.1	Monitoring and measurement
	<p>Monitoring and measurements are performed at various operating areas, as per the monitoring schedule drawn up. The schedule gives the measurement to be performed, frequency, responsibility and method. All parameters designated by legislation are monitored. Site Plan indicating various facilities/ installations, ambient air monitoring stations, drainage system etc are to be maintained.</p> <p>Parameters monitored includes the following;</p> <ul style="list-style-type: none"> ✓ Stack emissions, oil usage are monitored as required. ✓ Fibre concentration undertaken at floor ✓ Monitoring of electricity consumption is done. <p>Monitoring of noise, efficiency of air pollution equipment, ambient air etc is monitored.</p>
4.5.2	Non-conformance and Corrective and Preventive Action
	<p>Avenues through which corrective actions can be taken are identified. These include audit results, management reviews, progress of EMP's, monitoring records, suggestion schemes, communication etc.</p>

4.5.3	Records
	<p>Environmental records are generated by the concerned departments and are maintained by them. These include legislation records, communication records, training records, emission monitoring records, audit and management review records. The retention periods and location of these records are clearly defined.</p> <p>Checks at the place of work revealed that the records were legible and adequately preserved.</p>
4.5.4	Environment Management System Audit
	<p>The responsibility for the planning and conducting internal environment audits lies with the MR. Procedure details the responsibilities of the auditor and auditees. Methodology of audits is detailed. The organisation has a pool of trained internal auditors, out of which auditors independent of the function to be audited are selected. Audits covered all the sections of the EMS System.</p> <p>Observed that audit schedule is generated and all the observations are closed. Frequencies of audits are quarterly. Audit was conducted on Jan-Feb 2002.</p> <p>Review of the records of the audit round just finished revealed that all relevant areas had been covered.</p>
4.6	Management Review
	<p>Reviews are conducted as per plan. Reviews are conducted on 25-06-2002 and 15-03-2002.</p> <p>Issues discussed includes;</p> <ul style="list-style-type: none">✓ Progress of EMP's✓ Setting, review and achievement of Objectives and Targets✓ EMS audits findings,✓ Legal compliance✓ External communication✓ Suitability of the Environmental Policy and the documented system is reviewed from time to time. <p>Records of the review are maintained.</p>

13/08/2002

Date

Ms. S. Udakara, SLSI

Observer

Ms. S. Wickremaratna, ITI

Observer



**Audit report
Aqua Garden**



- Pre-audit Surveillance audit Re-audit
 Certification audit Re-Certification audit Extension audit

Audit Dates: 29.30th JULY 02 Order No.: _____ Reference No.: _____

Client: **Aqua Garden (private) Limited**

MR: Mr. J Batuwanaage

Lead auditor: Mr. M. Kullmann, RWTÜV Auditor: Mr. V.S.Reddy TÜV India
Mr. B. Khannan, TÜV India

Observer: Mr. L N Seeneweera, SLSI Observer: Mrs T Wijesuriya, SLSI
Mrs G Sooriyarachi, SLSI

Standard: DIN EN ISO 9002 **ISO 14001:96**

Manual No. and date of issue: EMS Rev 04, dated 10.06.2002

EA Scope: 03

Scope of applicability: Processing, Packaging and Distribution of Prawns and other Seafood.

Date and issue of audit questionnaire: AF-72e
Rev.1/11/96 Size: 150 NCR No.: 02

Examination of the EM documentation and performance of the audit produces in total the following result (overall summarized evaluation):

A document review (report to client on 18.07.02) yielded satisfactory results. Prior to the on-site certification audit, the organisations environmental manual was reviewed. Requirements were communicated and corrective actions were satisfactorily evaluated at the audit. The company has addressed all applicable clauses of the standard. Audit was carried out covering all environmental related activities of seafood processing. Two non-conformances were observed. Compliance to the documented system was found satisfactory.

The Auditors are satisfied with the present status of documented EMS implementation at this site. Re-audit by submission of documents on two NCR.s issued was recommended. The organisation has submitted satisfactory compliance to two NCRs issued. Closing of NCRs is detailed in the report.

- Re-audit necessary
 Issue of certificate recommended

14/08/2002

Date

Lead auditor

Auditor

Issue of certificate:

Approval by head of certification body Rejected _____
Date and signature

Approval of veto person (QS-9000 only) Rejected _____
Date and signature

Closing of NCR's issued

NCR 01: Identification and monitoring of ambient air, TDS in treated effluent, SPM level in stack emissions not undertaken.

CA: *Revision of monitoring plan undertaken. Includes parameters related to ambient air (frequency once a year), effluent parameters.*

Report (NBRO-ENV-26201-2001-29 dated August 13-2001 detailing parameters such as Lead in air, Total Oxidants as Ozone, NOx, SPM etc are monitored and observed to be within specified limits.

Report SS43184 dated August 09-2002 has been generated detailing parameters of effluents such as TDS, BOD, O&G, Chlorides, total chromium etc. parameters are within the specified limit.

NCR 02: Means and methods of achieving objectives and targets through EMP is not adequately evidenced and documented. E.g. HCFC usage, noise level reduction etc do not have activities, time frame and resources defined.

CA: *EMPs have been revised to include means and time frame to achieve the objectives and targets. EMPs are approved by director and includes financial considerations.*

Checked EMP 02 for replacing HCFC. Observed that means such as identification of existing usage, estimation for replacement, financial approval, replacement schedule, responsibility etc are detailed and monitored.

Also checked EMP 05 for minimisation of noise emission. Observed that activities such as identification of testing party, resources required, schedule, responsibility etc are detailed.

Summary of Findings, Recommendations and Comments

General Requirements

The Organisation initiated EMS activities in March 2001. Documented system was implemented in February 2002. All employees underwent awareness training. Document review was conducted on 17-07-2002. Compliance to the findings was evidenced in certification audit.

The Organisation has documented and maintains an Environmental Management System in line with ISO 14001.

Core operations include receipt of shrimps, de-icing, washing and chilling, de-heading, grading, washing, freezing, packaging and dispatch. Support functions include storage, maintenance, generator, lab testing, ETP treatment etc. Observed that all the activities associated with the processing of seafood are covered. Shrimp farming activities are not included in the scope of EMS

Environmental Policy

The Organisation has defined and issued a signed Environmental Policy (dated 06.07.2002 rev 04). The policy lays emphasis on prevention of pollution, continual improvement, complying with statutory requirements etc. The policy was found suitable in relation to the operations of the company.

Policy is also prominently displayed at various locations on the premises. Local language has been effectively utilised in communication of policy. In random discussions, the policy was found well communicated and understood by all.

Areas stressed in policy include activities minimization of wastes, efficient use and conservation of natural resources etc.

Chairman-CEO of the organisation has signed the policy.

Environmental Aspects and Impact study.

The company prior to installation of EMS has performed an IER (initial environmental review). The IER analysed the processes and activities of the organisation. Processes undertaken include de-heading, NBS section, packaging, flake ice plant, QC lab etc.

The organisation has established a procedure to identify its significant aspects (EP 002, rev 01). All impacts of the activity related to air pollution, water pollution, noise pollution, land contamination, waste generation, resource depletion are identified. Effective input-output relationship on activities is utilised for identification of aspects and associated impacts. Responsibility for identification and rating lays with the concerned HOD's and EMR.

A significance rating system considers parameters related to probability of occurrence, severity of impact, legal requirements applicable, community issued, company reputation, lack of information improvement potential in determining significance cut off score of 05 is determined. Emergency situations, normal and abnormal activities are also identified. Observed that aspects having multiple impacts are combined.

Master list of aspects are maintained (SR 2.3). Checked for production, transportation etc.

Aspects are re-evaluated and updated once a year (September).

Some of the significant aspects identified are;

- ✓ Waste water discharge
- ✓ HCFC usage
- ✓ Fuel burning
- ✓ Noise emission
- ✓ Shrimp waste disposal etc.

Total of 13 aspects are considered significant.

However it was observed that scope for improvement exists as some applicable aspects such as transportation of shrimps in reefer tanks, generation of detergent effluents, des-infected effluent,

generation of chemical containers (chlorine, bleaching powder, sodium tri phosphate etc are can identified.

Scope of improvement also exists in controlling activities related to purchasing and control of transporters as good amount of HCFC is used.

Legal and other Requirements

The company maintains a "Register of legal requirements" (SR 6.1). Procedure for identification is generated (EP 006).

All the rules, acts, regulations are updated based on the information collected from CEA sources. The organisation has obtained permit from the BOI. The permit lays down the permissible emission levels.

Parameters for compliance are specified in the consent letters. The valid consent letter is as follows.

Number 466-2002 valid up to 23.04.2003.

The requirements include,

- ✓ Noise levels to be maintained below 70 dbs.
- ✓ Ambient air parameters to be monitored.
- ✓ Effluents from process to be treated to control parameters related to TDS, Boron, chloride, BOD, COD etc.
- ✓ Solid waste, shrimp wastes etc are to be disposed in controlled manner. Schedules of disposal to be maintained.

However it was observed that identification and monitoring of ambient air, TDS in treated effluent, SPM level in stack emissions not undertaken. NCR 01 of 02 issued.

Objectives and Targets (O&T's)

The top management of the organisation has lay down and approved the Objectives and Targets for the current year. Setting of O&T's considered significant aspects, legal requirements, policy requirements, interested party concerns etc. All the Objectives have been addressed by EMP's.

It includes,

- ✓ Replace all HCFC machines to enable enviro-friendly refrigerant by 2020.
- ✓ Reduce electricity consumption by 2.5% per Kg of finished product. Base line is consumption pattern in 2001.
- ✓ Reduce water consumption by 5%.
- ✓ Reduce wastewater discharge by 10% of daily discharge.
- ✓ Proper disposal of shrimp heads by 25%.
- ✓ Reduce usage of ammonia by 10%.

List of Objectives and Targets are maintained (SR 2.4).

It was observed that top management is approved all objectives and targets. Monitoring of objectives and targets is undertaken.

Environmental Management Programmes

The organisation has defined the structure of the Environment Management Programs. They contain the objective, activity, responsibility, resource requirement and target date.

In case of programs leading to new or modified activities, the organisation needs to ensure that they are updated to permit achievement of the environment management system requirements.

The organisation has taken Environmental Management Programs based on the Objectives and Targets decided. 12 EMP's are generated.

It was observed that means and methods of achieving objectives and targets through EMP is not adequately evidenced and documented. E.g. HCFC usage, noise level reduction etc do not have activities, time frame and resources defined. NCR 02 of 02 issued.

Checked for:

EMP T2 for HCFC usage: Observed that means and time frame of activities are not specified. Records of compliance and progress are not evidenced.

EMP T8 for investigate feasibility for reducing insite disposal of shrimp heads by 25%. : Observed that records of compliance and progress are not evidenced.

EMR FUNCTIONS

Structure and Responsibility

Manual details responsibilities and authorities. Individual procedures and specifications detail responsibilities.

During audit it was observed that personnel are well aware of their responsibilities. Organisational chart is effectively utilised to show the inter-relationships.

However it was observed that resources essential for implementation and control of environmental management system was not evidenced. NCR 02 of 02 issued.

Communication

Environmental issues are communicated internally through meetings, memos etc.

Internal communication received is entered in internal communication record. (SR 7.3)

The company maintains external communication register (SR 7.2). Responsibility for the same lies with EMR. All communication from various authorities, external interested parties is entered in this register.

None of these external communications resulted in changes to the significant aspects already identified.

Environment Management System Documentation

The organisation has established a three layer documented Environment Management System consisting of apex manual, procedures, work instructions, and forms and records.

Linkages of various documents are satisfactory. The system is structured having one-to-one correspondence with the clauses of the standard.

Document Control

A master list exists covering all three layers of the documented EMS. The responsibility for the revision, approval and issue of the different layers of documents is well defined.

Random checks during the audit revealed that the users have in their possession the current valid documents. The obsolete copies were found clearly marked and maintained by the MR.

Environment Management System Audit

The responsibility for the planning and conducting internal environment audits lies with the MR. Procedure details the responsibilities of the auditor and auditees. Methodology of audits is detailed. The organisation has a pool of trained internal auditors, out of which auditors independent of the function to be audited are selected. Audits covered all the sections of the EMS System.

Observed that audit schedule (SR 10.3) is generated and all the observations are closed. Frequencies of audits are yearly. Audit was conducted on 11.07. 2002 and 3.05.2002.

Review of the records of the audit round just finished revealed that depth in audits was not evidenced. Frequency of yearly audits analysed in relation to control effectiveness of system. Also observed that all NCR do not have adequate preventive actions proposed.

Management Review

Reviews are conducted as per plan (SR 4.1). Six monthly intervals. Reviews are conducted on 18.07.02 and 31.05.02.

Issues discussed includes;

- ✓ Progress of EMP's
- ✓ Setting, review and achievement of Objectives and Targets
- ✓ EMS audits findings,

- ✓ External communication
- ✓ Suitability of the Environmental Policy and the documented system is reviewed from time to time.

Records of the review are maintained.

Compliance of legal requirements can be included as part of the agenda.

Observed that policy has been revised to include resource depletion.

OPERATIONAL CONTROL

The Operational Control Procedures have been documented by the organisation for activities having significant environmental aspects in all the departments.

Some common OCP's have been written which apply to all the departments e.g. safety requirements, handling of wastes, use of protective equipment's etc.

Audit of the various sections of the organisation was carried out to check implementation of the documented common procedures and operational control procedures. The following observations were made.

Purchasing:

Purchased items include shrimps, reefer truck services, chemicals such as disinfections, ammonia, engineering items etc. Procedure for control of purchasing is generated. (SP 008) .

Communication to reefer truck operators on usage of HCFC is done. Copy of fitness certificate of trucks is maintained. Checked for truck number 227-2723 and observed satisfactory compliance.

Observed that purchasing of shrimps is controlled. Parameters for purchasing are set (SR 8.2)

Maintenance:

Equipments such as cold room machine, generator, blast freezer, steam boiler etc are under maintenance schedule. Records of maintenance undertaken are maintained.

Store:

Adequate storage area for storage of chemicals, engineering items etc exists. Work instruction for handling exists and is displaced at the point of use.

MSDS cards are maintained. Checked for sodium carbonate and observed satisfactory control.

Production

Shrimps received are de-iced, weighted and iced. Washing in sodium meta bi sulphate is undertaken and de-heading of shrimps done. Washed shrimps are chilled and graded. Loading and freezing is undertaken as per customer requirements.

The following are the operational control activities observed at the production site.

- ✓ All drains for effluents are connected to ETP. *However it was observed that effluent from washing at un loading area was not detailed in pipe line lay-out.*
- ✓ Clear collection systems for process wastes (shrimp wastes, polythene bags, other wastes etc). Colour coding is effectively utilised.
- ✓ Protective equipment was worn by employees.
- ✓ Calibration of chlorine tester, pH meter exists.
- ✓ Provision exists for filtering solid particles in floor by installing filter.
- ✓ Checking of chlorine percentage undertaken. Records are maintained.

Support functions controlled include

- ✓ Operational control procedures for generator, compressor and ammonia station are generated.
- ✓ Collection pit for oil spillage at compressor room exists.
- ✓ Containment provision at raw material handling exists.

Checked for progress of EMP at production. Observed compliance through records.

Storage and disposal

Process waste (shrimps, shrimp heads), waste oil etc are identified and stored at designated areas. Records are maintained.

Shrimp wastes are disposed to food industry.

ETP

Process involved includes collection of effluents, aerobic treatment, classification-settling, polishing and re-use-recycle of treated effluents.

Milk powder and cow dung are used as and when required to maintain the slurry concentration in aerobic treatment. Observed that records of slurry levels are maintained. Treated effluents are measured and records maintained.

MONITORING AND MEASUREMENT

Monitoring and measurements are performed at various operating areas, as per the monitoring schedule drawn up. The schedule gives the measurement to be performed, frequency, responsibility and method. All parameters designated by legislation are monitored. **Site Plan indicating various facilities/ installations, ambient air monitoring stations, drainage system etc are to be maintained.**

Parameters monitored includes the following;

- ✓ Stack emissions, oil usage are monitored as required.
- ✓ Chlorine content in foot bath, equipment rinse etc (OR 4.1)
- ✓ Monitoring of electricity consumption is done.
- ✓ Effluent treatment details are maintained.
- ✓ Noise levels at site etc.

However it was observed that all parameters as required are not monitored. E.g. SPM and Ozone in stack, TDS, Chloride, cadmium etc in effluent. NCR 01 of 02 issued.

TRAINING, AWARENESS AND COMPETENCE

Training needs are identified annually as per procedure (SP 12). Training is imparted to employees based on specific job requirements, long-term company requirements and overall skill development. List of training modules is generated (SR 12.2)

Training for personnel performing activities impacting the environment was checked at random and found satisfactory e.g. fire fighting. Employees have been provided training as internal auditors. Training on on-site emergency, fire fighting to all relevant employees is conducted. One-day awareness training program for all employees is conducted.

Training schedule (SR 12.3) is maintained.

The effectiveness of the training and competence of the personnel to be established.

Records of training are maintained.

EMERGENCY, PREPARDNESS AND RESPONSE

The organisation has identified all the likely emergency situations through an aspect analysis. Emergencies foreseen are fire and ammonia spillages.

Addressing these situations the company has drawn up on-site fire management plan. (EP 005). The plan is tested by having mock drills at yearly intervals.

Responsibility for responding to an emergency situation lies with concerned team as identified. List of the teams with contact numbers are maintained and displayed.

Records for maintenance of hydrants, fire extinguishers were checked and found satisfactory.

It was observed that mock drills are conducted only for evacuation. It is suggested that drills for fighting and mitigating impacts associated be conducted and evaluated. It was also observed that external support at emergency is 1 hour away.

14/08/2002

Mr. L N Seeneweera, SLSI

Mrs T wijesuriya, SLSI

Mrs G Sooriyarachi, SLSI

Date

Observer

Observer



Audit report
Koslanda



- Pre-audit Surveillance audit Re-audit
 Certification audit Re-Certification audit Extension audit

Audit Dates 1st & 2nd August 02 Order No.: _____ Reference No.: _____

Client: Koslanda Estate of Maskeliya Plantations Limited

MR: Mr. Ronnie St. Almeida

Lead auditor: Mr. M. Kullmann, RWTÜV Auditor: Mr. V.S.Reddy, TÜV India
Mr. B. Kannan, TÜV India

Observer: Mr K S Kumara, SLSI Observer: Mr S N T Ekanayake, SLSI

Standard: DIN EN ISO 9002 **ISO 14001:96**

Manual No. and date of issue: EMS Rev 1.0 dated 26.03.2001

EA Scope: 03

Scope of applicability: The Production and Processing of Organic Tea.

Date and issue of audit questionnaire AF-72e
Rev.1/11/96 Size: 80 NCR No.: 04

Examination of the EM documentation and performance of the audit produces in total the following result (overall summarized evaluation):

A document review (report to client on 19.07.02) yielded satisfactory results. Prior to the on-site certification audit, the organisations environmental manual was reviewed. Requirements were communicated and corrective actions were satisfactorily evaluated at the audit. The company has addressed all applicable clauses of the standard. Audit was carried out covering all environmental related activities of organic tea processing. Four non-conformances were observed. Compliance to the documented system was found satisfactory.

The Auditors are satisfied with the present status of documented EMS implementation at this site. Re-audit by submission of documents on four NCR.s issued was recommended. The organisation has submitted satisfactory compliance to four NCRs issued. Closing of NCRs is detailed in the report.

- Re-audit necessary
 Issue of certificate recommended

15/08/2002 _____ _____
 Date Lead auditor Auditor

Issue of certificate:

Approval by head of certification body Rejected _____
 Date and signature

Approval of veto person (QS-9000 only) Rejected _____
 Date and signature

Closing of NCR's issued

NCR 01: procedures to identify applicable legal and other requirements in adequate. E.g. license for operation under EPA does not exist.

CA: *CEA has issued license dated 07.08.02 number 07-17-com-02. provision exist to follow CEA general regulations.*

Letter dated 06.08.02 obtained for authorization for operation of tea factory obtained.

NCR 02: EMS audits in-effective .e.g. management reviews not covered, EMR responsibilities not audited, document control not audited.

CA: *Audit plan dated 04.08.02 covering all elements generated and audit conducted. Three NCR has been raised.*

NCR 03: Document control procedure inadequate. E.g. aspect list, objectives and targets not controlled.

CA: Identification of aspects that effect environment (ER 4.3.1A), rating of identified aspects (ER 4.3.1B), list of objectives and targets (ER 4.3.3A) etc are under document control. Master list of documents are updated to include the documents changed.

NCR 04: Frequency of yearly monitoring of process effluent identified as significant aspect in-adequate to control the process.

CA: Zero discharge planned to re-use effluent in compost preparation. Work instruction for collection and disposal of waste water (Ref-emsWI-01, rev 02) is generated.

Organisation:

Koslanda estate manufactures organic tea. Plantations and processing unit are located at Uva province on the eastern slopes of Sri Lanka.

Koslanda estate has obtained certification by IMO and NASAA on organic tea based on EC regulations for organic food products as set out in EEC no. 2092-91.

The unit can be categorised as less polluting unit, as the effluent generated is due to washing of leaves and floor cleaning. Air emissions from generator and wood burned boiler. Effluent is presently treated through rock filter bed. Wood ash is used in compost preparation. Monitoring of stack is undertaken. It has been planned to re-use effluent in compost preparation.

The following were the salient points observed.

✓ Zero discharge emphasised.

- ✓ No polythene zone practised.
- ✓ Training to local residence on EMS provided.
- ✓ Natural stream water utilised for operations.
- ✓ All residences outside the processing unit are provided with soak pits.

Summary of Findings, Recommendations and Comments

General Requirements

The Organisation initiated EMS activities in March 2001. Documented system was implemented in July 2001. All employees underwent awareness training. Document review was conducted on 18-07-2002. Compliance to the findings was evidenced in certification audit.

The Organisation has documented and maintains an Environmental Management System in line with ISO 14001.

Operations include receipt of tea leaves, washing, rolling, drying, ,stacking packaging and dispatch. Support functions include storage, maintenance, generator, lab testing, furnace, compost preparation etc.

Environmental Policy

The Organisation has defined and issued a signed Environmental Policy. The policy lays emphasis on prevention of pollution, continual improvement, complying with statutory requirements etc. The policy was found suitable in relation to the operations of the company.

Policy is also prominently displayed at various locations on the premises. Local language has been effectively utilised in communication of policy. In random discussions, the policy was found well communicated and understood by all.

Areas stressed in policy include optimisation and use of natural resources on a sustainable basis, improve methods of soil conservation, training and community awareness etc.

Managing Director of the organisation has signed the policy.

Environmental Aspects and Impact study.

The company prior to installation of EMS has performed an IER (initial environmental review) on 26-03-01. The IER analysed the processes and activities of the organisation.

The organisation has established a procedure to identify its significant aspects (EP 4.3.1, rev 01). All impacts of the activity related to air pollution, water pollution, noise pollution, land contamination, waste generation, resource depletion are identified. Effective input-output relationship on activities is

utilised for identification of aspects and associated impacts. Responsibility for identification and rating lays with the concerned HOD's and EMR. Records of aspects are maintained (ER 4.3.1).

A significance rating system considers parameters related to probability of occurrence, severity of impact, legal requirements applicable, community issued, company reputation, lack of information improvement potential in determining significance cut off score of 09 is determined. Emergency situations, normal and abnormal activities are also identified.

Master list of aspects are maintained. Checked for production, compost preparation, transportation etc.

Aspects are re-evaluated and updated once a year.

Some of the significant aspects identified are;

- ✓ Disposal of wastes from rolling room.
- ✓ Dust generation in firing room.
- ✓ Leachate from composting.
- ✓ Odour in compost préparation etc.

Total of 38 aspects are considered significant.

Legal and other Requirements

The company maintains a "Register of legal requirements" (ER 4.3.2). Procedure for identification is generated (EP 4.3.2).

All the rules, acts, regulations are updated based on the information collected from CEA sources. The permit lays down the permissible emission levels as per general EPA to be followed..

The requirements include,

- ✓ Noise levels to be maintained below 70 dbs.
- ✓ Ambient air parameters to be monitored.
- ✓ Effluents from process to be treated to control parameters related to TDS, chloride, BOD, COD etc.

Other applicable regulations include

- ✓ Land development ordinance.
- ✓ Forest act
- ✓ Felling of trees act

Objectives and Targets (O&T's)

The top management of the organisation has lay down and approved the Objectives and Targets for the current year. Setting of O&T's considered significant aspects, legal requirements, policy requirements, interested party concerns etc.

Presently six O&Ts are generated. It includes,

- ✓ Proper disposal of rolling room water.
- ✓ Establish and maintain polythene free zones.
- ✓ EMS awareness to all employees and community.
- ✓ Reduction in power consumption to 0.86 units fro units-kg of tea.m 0.89

List of Objectives and Targets are maintained (ER 4.3.3).

Many requirements of policy have been covered.

Objectives attained and closed include

- ✓ Prevent leaching from compost preparation.
- ✓ Proper disposal of refuse tea, saw dust.
- ✓ Filtering of rolling room waste water.

It was observed that top management is approved all objectives and targets. Monitoring of objectives and targets is undertaken. Checked for objectives closed and observed satisfactory compliance.

However it was observed that all documents e.g. list of objectives and targets were not under control. NCR issued.

Environmental Management Programmes

The organisation has defined the structure of the Environment Management Programs. They contain the objective, activity, responsibility, resource requirement and target date.

In case of programs leading to new or modified activities, the organisation needs to ensure that they are updated to permit achievement of the environment management system requirements.

The organisation has taken Environmental Management Programs based on the Objectives and Targets decided. 07 EMP's are generated.

Checked for:

Filtering of rolling room waste water: activities planned include changing of filter bed on weekly basis, monitor of filtered water colour, analysis of water on yearly basis etc. monitoring undertaken and records of compliance are maintained.

EMR FUNCTIONS

Structure and Responsibility

Manual details responsibilities and authorities. Individual procedures and specifications detail responsibilities.

During audit it was observed that personnel are well aware of their responsibilities. Organisational chart is effectively utilised to show the inter-relationships.

Mr Ronnie St Almeida has been appointed as EMR.

Communication

Environmental issues are communicated internally through meetings, memos etc.

Internal communication received is entered in internal communication record. (ER 4.4.1)

The company maintains external communication register. Responsibility for the same lies with EMR. All communication from various authorities, external interested parties is entered in this register.

None of these external communications resulted in changes to the significant aspects already identified.

Environment Management System Documentation

The organisation has established a three layer documented Environment Management System consisting of apex manual, procedures, work instructions, and forms and records.

Linkages of various documents are satisfactory. The system is structured having one-to-one correspondence with the clauses of the standard.

Document Control

A master list exists covering all three layers of the documented EMS. The responsibility for the revision, approval and issue of the different layers of documents is well defined.

Random checks during the audit revealed that the users have in their possession uncontrolled documents. The obsolete copies were found clearly marked and maintained by the MR.

Document control procedure inadequate. E.g. aspect list, objectives and targets not controlled. NCR issued

Environment Management System Audit

The responsibility for the planning and conducting internal environment audits lies with the EMR. Procedure details the responsibilities of the auditor and auditees. Methodology of audits is detailed. The organisation has a pool of trained internal auditors, out of which auditors independent of the function to be audited are selected. Audits covered all the sections of the EMS System.

Observed that audit schedule (ER 4.5.3) is generated and all the observations are closed. Frequencies of audits are yearly. Audit was conducted on May 2002 and July 2002.

Review of the records of the audit round just finished revealed that depth in audits was not evidenced. Frequency of yearly audits analysed in relation to control effectiveness of system. Also observed that all NCR do not have adequate preventive actions proposed.

It was also observed that many elements of the standard are not covered e.g. management reviews not covered, EMR responsibilities not audited, document control not audited. NCR issued.

Management Review

Reviews are conducted as per plan (ER 4.6.1). Six monthly intervals reviews are planned. Reviews are conducted as per plan.

Issues discussed includes;

- ✓ Progress of EMP's
- ✓ Setting, review and achievement of Objectives and Targets
- ✓ EMS audits findings,
- ✓ External communication
- ✓ Suitability of the Environmental Policy and the documented system is reviewed from time to time.

Records of the review are maintained.

OPERATIONAL CONTROL

The Operational Control Procedures have been documented by the organisation for activities having significant environmental aspects in all the departments.

Audit of the various sections of the organisation was carried out to check implementation of the documented common procedures and operational control procedures. The following observations were made.

Production

Leaves received from plantation are washed, rolled, dried and sleeved to desired sizes. The following were the operational control procedures evidenced.

Washing and rolling

Washing and rolling of leaves is undertaken on roll breaker. Effluent is treated in filter bed. Significant aspects identified include generation of effluent. Records of discharges are maintained.

Drier section

Rolled tea leaves are dried in wood fired flue gas drier. Disposal of wood ash to composite exists. Flue gas is monitored. Operating criteria is specified in work instruction e.g. temperature and pressure in furnace.

Sleaving operation

Dried tea is passed through slives of desired sizes. Re-use of collected tea is used. Exhaust system in the room is generated.

Observed that operational control procedure for leaf cutting to reduce dust generation at drier is generated. Parameters such as succutest of leaf, weight of leaf % are specified.

Compost preparation.

Addition of cow dung, grass, dolomite, ERP etc is undertaken and let to form compost. Wormy culture is undertaken.

Observed that compost preparation is undertaken on concrete surface to avoid land contamination. Collection pit for leach exists.

Purchasing:

Purchased items include dolomite, FRP, packaging material, engineering items etc. observed that all purchase items are enviro friendly.

Maintenance:

Equipments such as generator, furnace etc are under maintenance schedule. Records of maintenance undertaken are maintained.

Storage and disposal

Storage area for process waste exists and is satisfactorily maintained.

MONITORING AND MEASUREMENT

Monitoring and measurements are performed at various operating areas, as per the monitoring schedule drawn up. The schedule gives the measurement to be performed, frequency, responsibility and method. All parameters designated by legislation are monitored. **Site Plan indicating various facilities/ installations, ambient air monitoring stations, drainage system etc are to be maintained.**

Parameters monitored includes the following;

- ✓ Stack emissions, oil usage are monitored as required.
- ✓ Colour of effluent.
- ✓ Monitoring of electricity consumption is done.
- ✓ Noise levels at site etc.

TRAINING, AWARENESS AND COMPETENCE

Training needs are identified annually as per procedure. Training is imparted to employees based on specific job requirements, long-term company requirements and overall skill development.

Training for personnel performing activities impacting the environment was checked at random and found satisfactory e.g. fire fighting. Employees have been provided training as internal auditors.



Training on on-site emergency, fire fighting to all relevant employees is conducted. One-day awareness training program for all employees is conducted.

Training schedule is maintained.

The effectiveness of the training and competence of the personnel to be established.

Records of training are maintained.

EMERGENCY, PREPARDNESS AND RESPONSE

The organisation has identified all the likely emergency situations through an aspect analysis. Emergencies foreseen are fire, electrical shock, O&G leakage.

Addressing these situations the company has drawn up on-site fire management plan. (EMS-WI-7.2). The plan is tested by having mock drills at yearly intervals. Mock drill conducted on 30 January 2002 and 07.06.01

Responsibility for responding to an emergency situation lies with concerned team as identified. List of the teams with contact numbers are maintained and displayed.

Records for maintenance of fire extinguishers were checked and found satisfactory.

Observed that fire gaps are detailed on field.

Land slides and fire in plantations should be considered as emergency situations. This is suggested as land slide was evidenced near to koslanda estate.

15/08/2002

Mr K S Kumara, SLSI

Mr S N T Ekanayake, SLSI

Date

Observer

Observer



Certification Audit report



Page 1 of 9

Preliminary audit Surveillance audit Re-audit

Certification audit Repeat audit Extension audit

Date: 7,8,9 August 2002 Order No.: _____ Reference No.: _____

Client: **Finitex Textile Finishing (Pvt) Ltd, Ratmalana, Sri Lanka**

Management representative: Mr Hilary Thiagarajah- Environment Research Engineer

Lead auditor: Mr V.B.Kedar/ Mr M Kullmann Auditor/ Trainee: Mr A K Jana (Auditor)
Mr Tilak Wickremasinghe (Trainee)
Ms Dhammika S Fernando (Trainee)
Mr Sudath J Patabendi (Trainee)

Standard: DIN EN ISO 9001 ISO 14001: 1996 QS 9000 -

Manual No. and date of issue: Environmental Manual Rev 03 dt 25/07/02

EAC/industry: 4: Textile

Scope of applicability: Processing of stitched garments.

Date of issue of audit questionnaire: AF-72e Rev.1/11/96 Size : 626 NCR No. 3

Examination of the EM documentation and performance of the audit produces in total the following result
(overall summarized evaluation):

Finitex Textile Finishing (Pvt) Ltd, Ratmalana (herein after referred to as company) is a joint venture company between Mast Industries Inc of USA and Phoenix Ventures Ltd. The company is involved in the textile finishing related with wet processing of stitched garments. At the request of the company the certification audit was carried out at their works and office on 7, 8 & 9 Aug'02 covering all environment-related activities.

Two on-site pre-audits were carried out by a team of Sri Lanka Standard Institute (SLSI) during April'02 and June'02 under UNIDO assisted program. The pre-audits revealed improvements / corrections required to the documents and system implementation. Prior to the on-site certification audit, the Company's Environmental Manual was again reviewed. The company has addressed all applicable clauses of the standard.

Certification audit revealed three (3) non-conformances (NCR no 01 to 03) of critical nature and also few observations for improvements were identified during the course of the audit. These are detailed in the accompanying pages. Company need to use these observations as a guide and also apply to other places wherever applicable. The documentation was found satisfactory except some areas as detailed in the report. Non-conformances noted and observations made for further improvements have been conveyed to all auditees, MR and Executive Management of Company during audit and closing meeting. Company has already initiated corrective action plan against - NCRs issued and all observations issued during the audit.

The auditors recommend re-audit (submission of documents) against 3 NCRs issued.

Documents for two NCRs were submitted dated 23.10.2002.

All NCR's are closed. The effectiveness of the implemented corrective actions will be inspected on the first monitoring audit.

Closing of NCRs raised:

NCR 01: list of legal and other requirements to be updated to include ozone depleting substances, motor vehicles act, bulk storage rules for furnace and diesel oil etc.
CEA-BOI license does not cover dieing activities carried out at site.
ETP sludge disposal is not in line with CEA-BOI license requirements.

CA: list of applicable legal requirements is updated to include ozone depleting substances, motor vehicles act, bulk storage rules for furnace and diesel oil etc.

BOI license dated 14.08.02 (Ref 5C-18-LE-603) for washing, dieing and finishing of stitched garments exist.

Letter dated 12.08.02 from Moratuwa municipal council for disposal of sludge obtained.

Amendments to Environmental Protection License No. 4066/2001 from the BOI of Sri Lanka dated 19.09.2002-11-08

Letter from Finitex dated 23.10.2002 about meeting with Mayor of the Moratuwa Municipal Council regarding industrial landfill site – fulfilling NEA schedules and carrying out testing of ground water, soil and air quality.

NCR 02: monitoring results of chlorides in treated effluent do not meet specified legal requirements. Ambient air quality not monitored. Boiler stack emission in respect of TPM not monitored. DG stack not monitored for air emissions.

CA: Service order dated 15.08.02 for monitoring of ambient air quality, TPM etc undertaken. ER 2.3.3 for control of chloride generated. Activities planned include identification of current washing styles, organization of machine allocation for bleaching, containment of chloride effluent from chlorination etc.

ITI Test report dated 27.08.2002 about final discharge outlet of effluent treatment plant

Report on monitoring of ambient air quality and stack emissions through Industrial Service Bureau of North Western Province dated 20.08.2002

NCR 03: One complete round of internal audit for all functions is not completed. Evidence for follow up of closed NCR not available.

CA: Audit plan generated for above functions. Audit conducted on 12.08.02. Two NCR have been issued. Analysis of audit finds done. Report of audit findings given to the top management. Corrective actions for the two NCRs are detailed and responsibility assigned.

ORGANISATION BRIEF

Finitex Textile Finishing (Pvt) Ltd was established in Sep'1996 and is involved in stitched garment processing. Currently the plant is operating at 200,000 pieces of garments per week and in the phase of gradual expansion. The major activities include wet processing, dyeing, sand blasting, laser finishing. These activities are supported by maintenance, purchase, marketing, personnel, quality control and process research and development.

The organisation employs at this site 626 personnel including managers, executive, staff & workmen and contractors.

SITE CHARACTERISATION INCLUDING LOCATION AND NEIGHBOURS

The site under consideration is located at 23 km south from Colombo, the Capital of Sri Lanka. The site covers the area of 7395 Sq. meters. The site is situated in an industrial area called Ratmalana Industrial Zone. The neighbouring industry comprises of M/s Gill garments at north, Mayarva Mavatha road at east, Galle Main road at west and M/s Phoenix Fashion (Pvt) Ltd at south. There is no residential area adjacent to the site. The village of Thelawala is located about 1.5 km from the plant . The raw water requirements for the site are provided by onsite groundwater wells as well as city water supply.

MAIN ENVIRONMENTAL FACILITIES

Company has established following environmental protection related facilities:

- Modern wastewater treatment plant (WWTP) with treated water recycling facility.
- Attempt to manufacture cemented bricks out of WWTP sludge.
- Designated waste storage area.
- Raw water treatment plant (RWTP)
- Air pollution control system- Stacks for Boiler, DG set, Cyclone for sand blasting area etc.
- Fire fighting equipments.

Summary of Audit findings, Nonconformances, and Opportunities for further improvements.

4.1 General Requirements

The Organisation initiated EMS activities from Feb'02. All employees have underwent awareness training. The company has appointed Mr Hilary Nath as EMS-MR for the implementation of EMS. Mr Hilary was found having qualification and adequate knowledge of environmental management and EMS. Company has addressed EMS as a fundamental component of business process at all times.

4.2 Environmental Policy

Chief Executive Officer (CEO) of the company, Mr Christopher John, has defined and issued a signed Environmental Policy dated 15th February 2002. The Policy lays emphasis on compliance to ISO 14001:1996 standard requirements - protection of environment, continual improvements in environmental performance, training and education of employees, minimisation of raw materials/wastes and pollution and making EM Policy available to employees and public.

The Policy was found suitable in relation to the operations of the company.

The Policy is also prominently displayed at various locations on the premises. Discussions with employees revealed that the policy was found communicated to all concerned.

Following point to be attended –

- Company to display EM Policy at gate and make copies available on request to interested parties/public.

4.3 PLANNING

4.3.1 Environmental Aspects

An IER (initial environmental review) has been performed by the company during the installation of EMS. The IER has analysed in depth the processes and activities of the Organisation. The Organisation has established a procedure: EP-1.0 & EP-2.0 to identify its significant aspects. All impacts of the activity related to air pollution, water pollution, noise pollution, land contamination, waste generation resource depletion have been identified. A significance rating system based on compliance/non compliance to legislative requirements and score based on Quantity, Occurrence, Severity, Control and Likelihood of Detection is being calculated. The Organisation has defined a value of 1500 as the cut- off, which if

exceeded, the aspect is considered identified as significant. In charge of each section along with EMR were responsible for the identification of the Aspects.

Overall review of Aspects and Impacts has been decided at least once a year or as when product / processes / regulatory requirements changes. List of aspects/impacts with rating is listed – ER-2.1 Rev. 3 dated 18/06/02. Following points to be attended.

- Legal requirements rating system i.e. '1' for incompliance/no legal requirements to be reviewed and corrected. Applicability of legal requirements shall result in identification as significant for monitoring.
- Evaluation procedure shall give consideration to internal and external interested party concerns and emergency situations where applicable.
- Separate listing of significant aspects with reference to monitoring procedures applicable to aspects/O&T and EMP's.

4.3.2 Legal and other Requirements

List of legal and other requirements – ER-20.1 Rev 1 dated 25/07/2002 is maintained. Central Environment Authority and Board of Investment of Sri Lanka Licence Ref No. WE/CM/UMW/TL/H/LE-603/01 dated 1/9/2001 valid up to 31/08/2004 is available for Air, Water and Wastes managements and disposals.

Following points to be attended –

- Ozone depleting substances Rule 2000, Motor Traffic Act. dated 3/5/1994 and National Environmental Act No. 47 of 1980 – Amendment – 23/5/1996 to be included in the list of legal and other requirements (**Refer NCR no 01**).
- Applicable legal requirements for bulk diesel and furnace oil storage to be included in the list (**Refer NCR no 01**).
- CEA/BOI license does not cover drying activities carried out at site (**Refer NCR no 01**).
- ETP sludge disposal is not in line with CEA/ BOI license requirements (**Refer NCR no 01**).
- Process of legal and regulatory requirement changes up-dation to be identified in procedure.
- Analysis of sludge disposed to be undertaken to identify hazardous-non hazardous nature.
- Monitoring of chloride to be undertaken as per the specified frequency to ensure compliance to specified requirements.

4.3.3 Objectives and Targets

Company has established procedure EP-5.0 Rev. 04 for setting objectives & targets. List of Objectives and targets – ER-5.1 Rev. 3 for Jan-Dec 2002 is established. Objectives and targets for water/power and furnace oil conservations, chemical wastes and solid wastes reduction and sand consumption reductions have been set up.

Criteria for selection and management approval of objectives and targets and prioritisation for implementation to be elaborated in the procedure.

All the objectives have been addressed by Environment Management Programs (EMPs).

4.3.4 Environmental Management Programmes

Company has defined the structure of EMPs in its procedure EP-5.0. They contain the objective, activity, responsibility, and target dates. The Organisation has taken up six EMPs based on the Objectives and Targets decided. Present EMP progress reviews is done on monthly basis.

Following points to be attended -

- Procedure for EMP's should address process of EMP implementation, monitoring, conclusions and closing of EMP's with requirement for new/modification of monitoring procedures and employee training where required.
- Company shall set up objective targets and EMP for disposal of ETP sludge as per guidelines of Central Environmental Authority – Board of Investments, National Environmental Act 47 – Amendment dated 23/05/1996 and Moratuwa Urban Council requirements in line with EP Licence –i.e. Guidelines for Generator of Hazardous Wastes – Schedule I of Part II of National Environment (Protection & Quality – regulation No. 1 of 1990 with amendment 924/13 dated 23/5/2002.

4.4 IMPLEMENTATION AND OPERATION

4.4.1 Structure and Responsibility

Company has documented an organisation chart and responsibilities for employees having functions relevant to the Environmental Management System. However, responsibilities for internal/external communication, emergency planning and response and non-conformance/corrective and preventive actions to be defined with clarity.

Mr Hilary has been appointed as Environment Management Representative (EMR). He was found to have adequate knowledge and experience in the field of Environment and EMS. He is overall responsible for co-ordinating with the various departments for EMS implementation and has been made responsible for co-ordination with the regulatory institutions and compliance monitoring, including submission of statements to these bodies concerning all legislative and other requirements.

4.4.2 Training, awareness and Competence

A documented procedure EP-3.0 Rev 02 has been established for this activity. Training needs identification is planned half yearly. Training plan for July '02 – Dec '02 (ER-3.5) has been established and each being monitored for implementation. The company has trained Internal Auditors for EMS.

All employees have been provided awareness training. Training for on-site emergency, waste management, spillage control etc has been provided to all relevant employees.

Following points to be attended -

- Competence criteria to be established at different level/ function of employees and according to be addressed in EP 3.0. Based on which assessment of training requirements to be made.
- All training records to have corresponding set of program/agenda, attendance sheet, module reference.
- Effectiveness of the training to be checked after a reasonable time of training imparted.

4.4.3 Communication

Company has established procedure EP-4.0 Rev 02 for internal / external communications. Environmental issues are communicated internally through meetings, trainings, notice boards, public addressing system. Company needs to maintain an internal communication book (instead of NCRs) which will be placed at a point easily accessible to the employees for their communication and complaints relevant to EMS.

Per EP-4.0 organisation need to communicate externally to the interested parties concerned of regulatory body, members of public, suppliers and contractors and customers. ER-4.2 & ER-4.3 reviewed for any external complaint/communication. So far no complaint received.

Following points to be attended -

- Internal bottom to top communication to be addressed.
- External proactive and reactive communication to be elaborated.
- A periodic summary of the communications received needs to be made and presented to the management for review.

4.4.4 Environment Management System Documentation

The Organisation has established a 4 layer documented Environment Management System consisting of Environmental Manual, Procedures Manual, Additional Environmental Information and Records.

Instructions and procedures at the shop-floor level may be developed in the local language/ dual language for better communication with the user.

All these EMS documents were initially reviewed for adequacy prior to certification audit for various revisions / modifications / corrections made based on findings. These documents found to be addressing requirements of various clauses of ISO 14001:1996 with requisite clarity after modifications and are adequately understood by all concerned. Linkage of these various level documents found satisfactory.

4.4.5 Document Control

Company has established documented procedure EP-6.0 Rev 4 for documents numbering, layout, approvals, amendments, distribution & issue control, retrieval, retention of obsolete and disposal etc. The responsibility for the revision, approval and issue of the different of documents is defined. Random checks during the audit revealed that the users have in their possession the current valid documents. The obsolete copies were found separately maintained by the EMR.

Master Lists (ER 6.7 & 6.1) exists covering the entire documented EMS. Master Lists exists along with their revision status, copyholders.

4.4.6 Operational Control

Operational controls involving purchasing, receipt storage, production - washing/ dyeing/ sand blasting/ laser machine/ finishing /laboratory(R&D), plant maintenance, wastes storage & disposal, raw water& wastewater treatment plants, boiler house, compressor, packaging & Despatch etc. were covered during the audit. Environmental Procedures (Level-2)/ Operational Control Procedures (OCPs), Objective & Targets /EMPs documentation and implementation by various departments against significant & non-significant environmental aspects were verified as sample basis.

Following points to be attended-

- **Purchase:** Formal procedure for purchasing activities to be documented giving details of identification of Hazardous/ Toxic/ Flammable materials, supplier awareness on EMS, supplier compliance with Motor Traffic Act 1994 during transportation of hazardous goods, verification of receipts, initiation of objectives & targets & EMP for reduction, recycling of packaging materials.
Purchasing and R&D department to take responsibility for implementation of code of practice-Requirements from customers e.g. mark and spencer.
- **Receiving & Storage:** Furnace Oil/ Diesel safe unloading instructions to be established. Waste segregation & storage at garment receipt to be ensured. Toxic/ Flammable/Hazardous chemicals to be stored based on their compatibility. Proper spillage containment to be made. Stacking norms for chemical bags to be implemented to avoid any damage.
- **Wet Processing:** MSDS/Work Instruction for handling chemicals/ acids to be displayed /made available to supervisors/operators. Effluents in the gutter outside near wet washing to be protected from going into storm drains.
- **Sandblasting/Laser Machine:** Objective & Targets- EMP on Noise & Dust level reduction in work environment to be initiated as levels are more than allowable TLV ,ie, dust actual is 2.58 mg/M³ (limit is 0.05 mg/M³) and noise actual is 99 dBA (limit is 85 dBA). Operators at Laser machine to be provided with hand & skin protection from laser exposure as per the Machine Supplier's manual.
- **Laboratory:** Chemicals spillage containment/ drainage to be ensured. Chemicals to be stored on the principle of compatibility. Decontamination of hazardous chemicals containers to be ensured.
- **Plant Maintenance:** Monitoring on Fuels/Water/ Electricity consumption is being done and records have been maintained. DG stack emission monitoring to be ensured. Oil containing effluents from compressor to be controlled.
- **Waste Storage & Disposal:** Non- hazardous solid wastes are segregated, stored and disposed. Account of storage and disposal of solid wastes is maintained. ETP sludge (Hazardous waste category no 24) disposal details to be maintained & ensured in line with CEA-BOI rules / guidelines for Hazardous Wastes.
- **Boiler House:** Boiler Stack emission monitoring to be ensured with respect to the specified parameters and units and corresponding records to be maintained.
- **Raw Water & Waste Water Treatment Plants:** Operation Control Procedures/ Work Instructions for monitoring & measurements to be made formal. The level of pathogens in the wet sludge before disposal to be established and accordingly the same can be disinfected, if required.
Treated water test reports reviews, identification of non-conformances and corrective/ preventive actions (CAPA) implementations to be evident.
- **Packaging & Despatch and Compressor House:** Found satisfactory.

4.4.7 Emergency Preparedness and Response

Company has established procedure EP7.0 Rev 02 for emergency preparedness and response. The Emergency Response Plan is made in line with Safety & Health Policy EOM 03 which addresses fire and accidents as emergencies and three zones of assembly. The Organisation has also displayed a detailed Emergency Response Plan giving the evacuation route and assembly zones and also the important telephone numbers in all the shops and strategic locations. Fire and first aid team are formed. So far no fire drill has carried out. Company to attend the following:

- Other likely emergencies, eg, water logging, chemical spillage to be addressed in the corresponding procedure. Company needs to identify all the likely Emergency situations through an Aspect/Impact analysis.
- The procedure needs to spell out in greater detail how the impacts of the Emergency will be mitigated.
- Mock drills for all identified emergencies to be planned and to be conducted as per the specified frequency, ie, 4 times /year.
- EOM 03 needs to be dated with revision number, as it is subject change with time.
- Emergency preparedness and communication needs improvement as discussed. E.g. collaborating with neighbour industries due to common drainage system etc.

4.5 CHECKING AND CORRECTIVE ACTION

4.5.1 Monitoring and measurement

Company has established procedures EP 8.2, EP 12.1, EP 12.2, EP 18 related to monitoring & measurements for RWTP& WWTP performance, utilities consumption, stack analysis, noise and ambient air quality monitoring. Monitoring and measurements are performed at various operating areas, as per the monitoring schedule drawn up. The schedule gives the measurement to be performed, frequency, responsibility and method. Monitoring related to legal compliance is carried out by a approved laboratory – M/s Industrial Technical Institute (ITI). Test reports are maintained. However, **NCR 02** is issued for the following observations:

- Monitoring results for chlorides of treated effluents did not meet legal requirements.
- Ambient air quality not monitored as CEA/ BOI license requirements.
- Boiler stack emission with respect to TPM not monitored.
- DG stacks not monitored for air emissions.

Company also to attend following:

- Site plan indicating storm water, effluent flow lines, ETP location, treated water discharge points, ambient monitoring points, air emission stacks and process vents to be established.
- Monitoring plan for legal and other requirements compliance to be established.

Calibration

The calibration carried out was checked at random. The calibration of pH and DO meter is carried out by R&D as per laid down procedures. The calibration record may include the level of detection and accuracy.

4.5.2 Non-Conformance and Corrective and Prevention Action

Company has established procedure EP 23.0 Rev 0 dt 15/02/02. However, the procedure found to address EMS audit related NCRs & related CAPA.

Company needs to address system & records for identification & handling of non-conformances relevant to interested parties concern, monitoring & measurements & legal/ other requirements compliances etc. under this procedure & clause. EMS audit NCRs & CAPA to be addressed in procedure for internal EMS audits.

4.5.3 Records

Company has established procedure EP 6.0 for identification, preparation, indexing, storage, retention and retrieval of records. Environmental records are generated by the concerned departments and are maintained by them. These include master list of records, training records, measurement and monitoring records, incident reports, EMP status report, internal EMS audit and management review records etc.

4.5.4 Environment Management System Audit

Company has established procedure for internal EMS audits (EP 22.0). Six monthly frequency has been defined. Four personnel have been trained for internal audits. Annual audit plan- ER 22.2 is made. First round of internal audit was carried out during May-July'02. Audit results are recorded in NCRs. Following points to be attended:

- One complete round of internal audit of all functions is not completed, ie, EMR Activity covering 4.3.2, 4.4.3, 4.4.5, 4.5.1, 4.5.2, 4.5.4 (**Ref NCR No 03 Issued**).
- Evidence of follow-up closing NCRs of internal audit not available for 9 NCRs (**Ref NCR No 03 Issued**).
- Audit round summary report preparation to be initiated for function/clause wise NCRs; NCRs of legal nature of current round; and pending /repetitive nature of NCRs of earlier round.
- Audit frequency may be increased as discussed for the first cycle of EMS and reduced in the subsequent cycles.

4.6 MANAGEMENT REVIEW

Company has established procedure EP 24.0 Rev 03 for management reviews. Management reviews are planned at every six monthly intervals. The MRM is held by steering committee members headed by CEO. The last review was held on 17/7/2002. The formal review was carried out as per laid out agenda. Company to attend following:

- Minutes of meeting to record CA with responsibility and target.
- All MoMs to be signed by EMR and CEO to make the involvement of top Management evident.

Re-audit necessary

Issue of certificate recommended

08.11.2002

Date

Lead auditor

Auditor

Issue of certificate:

Approval by head of certification body

rejected

_____ Date and signature

Approval of veto person (QS-9000 only)

rejected

_____ Date and signature

Observers

Mr T. Wickramasinghe, SLSI

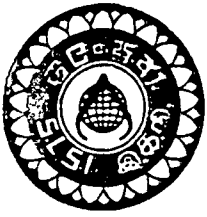
Mrs D. Fernando, SLSI

Mr S.J. Patibendu



Attachment No. 2

Conformation of satisfaction for the work performed by Sri Lanka Standard
Institute and UNIDO representants



ශ්‍රී ලංකා ප්‍රමිති ආයතනය

இலங்கை கட்டளைகள் நிறுவனம்

SRI LANKA STANDARDS INSTITUTION

වැ.පො. த. பெ. P.O BOX	17	අංක 17, වික්ටෝරියා ප්ලාස්, එල්විගලා මාවත, කොළඹ 08. நெ. 17, விக்டோரியா பிளஸ் எல்விගல மாவதம், கொழும்பு 08. NO. 17, VICTORIA PLACE, ELVITIGALA MAWATHA, COLOMBO 08.	දුරකථන தொலைபேசி TELEPHONE	671567-671572	ෆැක්ස් பாக்ஸ் Fax	671579	විදුලි පණිවුඩා ප්‍රමිතිය தந்தி பிறம்கா Telegrams 'Pramika'
-----------------------------	----	--	---------------------------------	---------------	-------------------------	--------	--

ඔබේ යොමුව உமது குறிப்பு Your Ref.	අපේ යොමුව எமது குறிப்பு Our Ref.	දිනය திகதி Date
---	--	-----------------------

19-07-2002
Shirani G Weragoda
Deputy Director General (SLSI)
Sarath Abeyesundara
National Project Coordinator (UNIDO)

RWTÜV Systems GmbH / TÜV India
Langemarckstraße 20
D-45141 Essen

Subject: Training in examination of documents / Seminar for SLSI / ITI Auditors from 15-07.2002 to 19-07-2002 / Services of Mr. M. Kullmann and Mr. Vinta Srinivas Reddy

Dear Sirs,

We herewith like to confirm that Mr. Kullmann and Mr. Reddy have completed the scope of work. Contract terms and conditions as per the above mentioned task of training the auditors from SLSI / ITI in examination of documents and preparing certification audits according to the requirements of ISO 14001 standard and the regulations of the TÜV Cert accreditation board. This work has been done to our satisfaction and within the expected time (15-07 – 19-07 2002).

We herewith submit to you:

- 5 paper copies of the audit questionnaire (high level Checklist)
- 5 paper copies of formats of audit preparation
- 5 paper copies of audit plans

Remaining steps to do:

1. Performance of 5 EM Certification audits
2. Training of SLSI / ITI auditors in audit reporting from 12-08 – 16-08-2002.

Yours sincerely,

Sarath Abeyesundara (UNIDO)

Shirani G Weragoda (SLSI)

Colombo, Sri Lanka
18th July 2002



UNIDO INTEGRATED INDUSTRIAL DEVELOPMENT SUPPORT PROGRAMME

Ministry of Industrial Development
73/1, Galle Road, Colombo 3, Sri Lanka.
Telephone : (+94-1) 325869, 542103, Fax : (+94-1) 325869, E-mail: unidoimt@sltnet.lk

16-08-2002
Shirani G Weragoda
Deputy Director General (SLSI)
Sarath Abeyesundara
National Project Coordinator (UNIDO)

RWTÜV Systems GmbH / TÜV India
Langemarckstraße 20
D-45141 Essen

Subject: - Performance of 5 EMS audit by observation by SLSI / ITI trainees from 22-07.2002 to 09-08-2002 /
- Training of SLSI / ITI auditors in audit reporting from 12.08.2002 to 16.08.2002
Services of Mr. M. Kullmann and Mr. Vinta Srinivas Reddy

Dear Sirs,

We herewith like to confirm that Mr. Kullmann and Mr. Reddy has completed the scope of work. Contract terms and conditions as per the above mentioned task of performing 5 EMS audits by observation by SLSI/ITI trainees according to the requirements of ISO 14001 standard and the regulations of the TÜV Cert accreditation board. Training of SLSI / ITI trainees in audit reporting which took place in the SLSI office.

This work has been done to our satisfaction and within the expected time (part one: 22.07. – 09.08 2002 and part 2: 12.08.- 16.08.2002).

Yours sincerely,

Sarath Abeyesundara (UNIDO)

Shirani G Weragoda (SLSI)

Colombo, Sri Lanka
16th August 2002



Attachment No. 3

Offer of RWTÜV Anlagentechnik GmbH to UNIDO for this project from
Nov. 30th, 2001

Offer

to

Unido

concerning

**Project US/SRL/01/108
Certification of Companies
in Sri Lanka to ISO 14001
Sri Lanka integrated Programme,
Component 6 - Quality**

Table of Contents

Section 1: Self-description (2 pages)

Section 2: Client requirements (1 page)

Section 3: Generalities (2 pages)

Section 4: Response to formal request for proposal (1 page)

Section 5: Technical proposal (6 pages)

Section 6: Time table (2 pages)

Section 7: CV ' s

Section 8: Associated Costs

Attachment: List of References for ISO 14001 Certification performed by RWÜV and related subsidiaries

Approved translation of accreditations of RWTÜV by the German Accreditation Body (TGA)

Terms and Conditions of Services

Information Material

SECTION 1 - Self-description

RWTÜV Certification body

RWTÜV Certification body – in the following called RWTÜV – operates as the official certification department of RWTÜV Anlagentechnik. The latter is located in Essen, Germany, and was founded 130 years ago as „Rheinisch-Westälischer Überwachungsverein (TÜV)“. It's initial purpose as business organization was promoting guide-lines for self-help to industry. Since this time the RWTÜV offers services for the German industry.

Since 1980 the RWTÜV Anlagentechnik also offers it's services to other countries. For a further progressive development of the company, subsidiaries in more than 30 countries have been founded.

Main focal point of our services for the producing Industry and for service enterprises are environmental protection, as well as quality and safety. In Order to provide a high level of expertise and quality in our services, the RWTÜV employs more than 2000 experts, mostly engineers and scientists.

Certification services, especially certification of management systems according to ISO 9001:2000 or ISO 14.001:1996 will be performed by TÜV CERT-Certification office of RWTÜV.

TÜV Zertifizierungsgemeinschaft e.v. (TÜV CERT)

The TÜV CERT-Certification offices of RWTÜV for management systems is – like all other QM-certification offices of the „Technischer Überwachungsverein“ in Germany – part of the TÜV CERT umbrella association.

TÜV CERT will set guide-lines for an uniform certification system to which the certification body of RWTÜV was accredited by the „Trägergemeinschaft für Akkreditierungen“ (TGA). Accreditations also include certification of environment management systems.

The certificate of accreditation is enclosed.

TÜV India Private Limited (TUVI)

TÜV India is the subsidiary of RWTÜV Anlagentechnik in India. It was founded in 1989 and offers full range of services through it's offices in Mumbai (Head office), Delhi, Chennai, Bangalore, Hyderabad, Calcutta, Pune, Baroda and Trichy. TUVI has focussed it's activities in the following areas:

- Certification of Quality Management Systems (ISO 9000) and Environmental Management Systems (ISO 14.000)
- Training and awareness programmes for quality management systems
- Training programmes for internal quality auditors

As a member of TÜV CERT – one of the leading German Certification Bodies – TUVI can offer a complete package of services including preliminary assessment, certification assessment and surveillance assessment.

TUVI has 40 professionally qualified and industry-experienced auditors and inspectors located at different sites in India.

TUVI is currently one of the leading players in the field of certification and has certified more than 1500 companies to ISO 9000 and 65 companies to ISO 14.000.

SECTION 2 - Client requirements

Task: Performance of ISO 14.001 Certification audits in selected companies of Sri Lanka, involving members of the local Sri Lankan Institute (SLSI). Purpose of the latter is to develop a local capability for conducting ISO 14.001 certification audits.

The offer, drafted by RWTÜV, will ensure the following short-term and long-term results:

Short-term results:

1. Certification of five companies in Sri Lanka.
2. On-Job-Training of selected members of SLSI

Long-Term results:

3. Appointment of at least four members of SLSI to auditors
4. Qualification of these auditors to perform the surveillance audits in the companies mentioned
5. Qualification of these employees to participate in future audits of RWTÜV and TÜV India as auditors.

Through this measures, the RWTÜV is looking for the possibility to establish a long-term business relationship with SLSI. For this reason, the RWTÜV is willing to share all it's experiences, gained in international certification business, and to train SLSI's member in all international regulations and procedures concerning ISO 14.000. This will give SLSI's employees the possibility to participate in international certification projects, as already performed between RWTÜV and TÜV India since 1989 (see section 1.)

In the following section all major steps for performing these main activities (task 1 – 2) will be described in details.

In the following all activities will be described which are necessary to receive the desired short-term results. These services represent the technical offer of RWTÜV to the UNIDO-project.

Overview of required measures

Task 1

Initial preparation of certification audits
Examination of environmental management documentation
Development of Audit Plans
Performance of the audit

- opening meeting
- interviews, observations, verification

Preparation of audit report
Audit follow-up and re-audits
Issue and approval of certificates
Surveillance audits

Task 2

Audit-on-the-job-training for individuals from SLSI, including participation in the entire audit process under the supervision and guidance of a RWTÜV lead auditor.
Training in examination of documents
Training in audit performance
Training in the issue of Audit reports

The time table for the project performance will be displayed in section 6.

SECTION 3 – General:

Performance of ISO 14.001-certification audits

RWTÜV Anlagentechnik has the capacity and the technical know-how necessary to perform the desired certification of companies in Sri Lanka according to ISO 14.001 in a cheap and a time-effective way. For this reason, RWTÜV Anlagentechnik would conduct these audits in cooperation with its own auditors and auditors from our Indian subsidiary – TÜV India (Section 5, task 1.). During these audits, employees of SLSI would be trained in the practical performance of Environmental Management System-Audits (Section 5, task 2). Additional cost wouldn't be charged.

In this context, RWTÜV will appoint a person responsible for the project performance and a lead auditor.

The project manager supplied by RWTÜV will assume responsibility for the effective performance of all activities and will act as contact person to all bodies participating, i.e. for UNIDO, SLSI, Nigel Bauer and Associates and FICCI Quality Forum.

An employee of RWTÜV will be named as lead auditor and will be responsible for the performance of all audits. Where-ever necessary, either an employee of TÜV India will participate in the audit as auditor or an expert for the branch to which the company to be audited belongs to.

CV's of the auditors and their respective roles and abilities within the project will be attached in section 8.

TÜV India has already established contacts with SLSI in 1997. It is common objective of RWTÜV and TÜV India to form a long-range partnership with SLSI in the area of management certification. Proposals for a common development of this partnership will be outlined in the section concerning the implementation of these activities in section 5, task 2.

The further procedure – as stated in section 5, task 1 – corresponds to the requirements outlined in the ISO 14.011:1996-standard (Guidelines for environmental auditing – audit procedures – auditing of environmental management systems) but will be harmonized with the particular needs of the company to be audited.

Control and Surveillance of this procedure will be carried-out according to ISO Guide 66 (General requirements for bodies operating assessment and certification/ registration of environmental management systems (EMS))

Audit on job training for members of SLSI

For the afore mentioned certification project, RWTÜV and TÜV India are willing to train employees of SLSI in the practical performance of environment management system-audits.

Employees of SLSI already have received theoretical training in regulations and requirements of ISO 14.001-standard as well as in the performance of environmental management system-audits due to agreements reached in prior projects. The employees selected also have the education and work experience, which are a necessary basic requirement for auditors (as outlined in ISO 14.012, chapter 4).

During each audit RWTÜV and TÜV India will employ two members of SLSI as trainees. These SLSI employees will be able to act as auditors in future audits, together with lead auditors of RWTÜV and TÜV India. In these audits, other qualified employees from SLSI can also participate as trainees.

In addition, the members of SLSI will also have the possibility to perform the annual surveillance audits in the companies named by UNIDO. The latter will benefit of such a solution since travel and audit expenditures of Sri Lankan auditors will be lower than those of auditors from Germany or India.

All members of SLSI, who will participate as trainees for at least ten audit days, gain the possibility to be approved as auditors by RWTÜV. Insofar, selection of personnel should be carefully agreed between UNIDO, SLSI, RWTÜV and TÜV India.

Members of SLSI, who will participate as auditors in at least five audits, may be approved as lead auditors by RWTÜV.

As soon as SLSI has it's own; RWTÜV-approved lead auditor, it can perform certification of environmental management systems according to ISO 14.001 and in line with the documented procedures supplied by RWTÜV for the following reason: SLSI auditors will receive their approval through RWTÜV. Accordingly, any further certification procedure has to be performed in line with RWTÜV regulations.

Also, audited companies who will successfully demonstrate the effectiveness of their environmental management system will receive a TÜV CERT-certificate by the RWTÜV (see section 1). This procedure would permit SLSI to act as a representant of RWTÜV and to perform certification of environmental management systems.

In section 5, task 2, all necessary training measures and seminars to be conducted during the certification project will be discribed.

Final report:

After the project, RWTÜV will prepare a final report for UNIDO. It will summarize the results of the certification audits and the training measures.

Section 4 – Response to formal request for proposal:

RWTÜV has prepared this proposal in full recognition of the RFP, general terms of condition and terms of reference, UNIDO's draft contract and standard conditions of contract. In particular, RFP paragraph 5.3. "A" requirements are addressed within this proposal and additionally in response to items "i" through to "x":

i) RWTÜV Anlagentechnik GmbH – in the following called RWTÜV – is the name given to the Ltd-activities of RWTÜV and is able to enter into contractual relationships for service contracts.

ii) RWTÜV Anlagentechnik GmbH has provided certification audits and training for auditors in relation to ISO 9001-Quality Management Systems since 1991 and in relation to ISO 14.001 Environmental Management Systems in 1996 to clients from all industrial sectors and countries. Due to it's accreditations, RWTÜV Anlagentechnik applies approved training methods for his auditors. All auditors in the project mentioned will be either approved auditors or approved technical experts.

iii) Full explanations of the work to be performed are detailed in section 5 of this document.

iv) RWTÜV is accredited by the German Accreditation Board (TGA), which ist part of the IAF. The certificate of accreditation is enclosed in annex 1.

v) RWTÜV is prepared to start activities immediately, however is dependent on the timing of UNIDO contract award date and the ability of various involved consultants/trainers to reach agreement for exact dates of initial activities with UNIDO project management.

vi) It is considered that this contract only requires services of employees of RWTÜV and it's subsidiary TÜV India.

vii) CVs of involved auditors are included in section 7.

viii) The work plan and bar charts are included in sections 5 and 6 of this document.

ix) Firm fixed all-inclusive prices are detailed in section 8 of this document.

x) RWTÜV has carefully reviewed the UNIDO Model Contract and UNIDO General Conditions of Contract (Appendix 4) and accepts these with the exception of those aspects detailed in section 10 of this document "general terms and conditions" which specifically override Annex A.

Section 5 – Technical Proposal:

Task 1

Task 1, step 1: Initial preparation of certification audits:

At first, the project manager and the lead auditor will determine the companies' area of scopes, the extent of the audit and the members of the audit team.

Time necessary for audit will be determined according to regulations in EA EMS Guidance on auditor times. Entire length of audit procedure (task 1, step 5) – calculated for each company – is itemized in the table displayed in section 7. For the particular on-site-audits (task 1, step 4), our company will fix 70 percent of the amount mentioned.

Please note, that it is principal rule of RWTÜV to perform certification audits for companies with more than 100 employees by employment of an audit team. The latter will be composed of an environmental lead auditor and an environmental auditor. A list of possible team members is enclosed in section 8. Curriculum vitae of these persons are also included here.

In principle, only environmental auditors appointed by RWTÜV who fulfill the requirements of DIN EN ISO 14012 will be employed for the project. This ensures that the members of the audit team will be able to cover all the fields mentioned below.

- a) environmentally related science and technology
- b) technical and environmentally relevant aspects with operational activities
- c) environmental acts, ordinances and similar documents
- d) environmental management systems and standards
- d) audit procedures, processes and techniques.

Audit dates will be planned in a way, that five audits can be performed in one group.

Task 1, step 2: examination of environmental management documentation

After determining the auditors, their names will be submitted to the companies concerned as well as to UNIDO and Nigel Bauer. The companies will be asked to submit the following documents to the lead auditor, the auditor and the selected trainees (see task 2):

- Declaration regarding company's environmental policy,
- List of environmental aspects
- List of legal demands
- Environmental objectives and programmes
- Environmental Management documentation

Examination of the afore mentioned records will be documented by the lead auditor in the RWTÜV-audit questionnaire. This document is developed as High-level check list, which displays the requirement of ISO 14.001 in questions. The lead auditor will examine the company's environmental management documentation and will then evaluate whether it sufficiently explains how the afore mentioned requirements are met in the environmental management system.

Examination of documents will be closed five days after document's receipt. The Report concerning the examination of documents will be received by the client one week later (at latest), so that possible differences or misunderstandings could be cleared early. The lead auditor will be responsible for carrying out the above mentioned tasks. In the report concerning the examination of documents, observations of non-conformities also have to be documented.

Completeness of audit questionnaire as well as efficiency of EM-documentation will be a prerequisite for audit performance. Note that the audit can only be performed if any question in the audit questionnaire is rated as "fulfilled".

Certification will be performed two weeks after submission of the report concerning the examination of EM-documents by RWTÜV.

Task 1, step 3: Development of audit plans

Together with the examination of documents, the lead auditor will draft an audit plan, which contains the following elements:

- all normative demands that have to be checked in the audit,
- the organization units to be audited, and
- a time table for the audit.

The auditor will submit this documents to the client together with the report concerning the examination of environmental management documents.

Afterwards, the lead auditor will coordinate the audit plan with the audit representative of the client company and – after reaching an agreement – will inform all participating co-auditors and the trainees.

Task 1, step 4 – Performance of the audit

Four weeks after the lead auditor receives the quality management documentation, the certification audit will be performed.

The audit will be carried-out according to the regulations of DIN EN ISO 14.011, chapter 5.

The audit begins with a introduction meeting. The RWTÜV and TÜV India auditors will introduce themselves to the company's management and will outline the further audit procedure.

During Audit itself, the auditors will evaluate the effectiveness of the company's EMS in comparison with ISO 14.001-standards. The afore mentioned High Level audit questionnaire will serve as a general guideline for audit performance. The questions will be specified according to the company's organization structure, according to the main production processes and in accordance with the environmental effects, which are linked to them.

Audit evidence will be gathered through interviews, examination of documents and observation of activities and conditions. Information gained through interviews will be verified by acquiring supporting information from independent sources, such as observations, records and results of existing measurements.

Before communicating the audit results to the management, the audit team will review all of their audit evidences and will determine wether the EMS conforms to the EMS audit requirements.

The audit evaluation will be performed according to the same principles as applied in the examination of the environmental management documentation.

Then the audit team will ensure that observed non-conformities are documented in a clear and concise manner. Auditors will always document where they have recognized a special observation and why they evalute it as non-conformity. Auditors will use the ISO 14.001-standard or the environmental management documentation as reference for this task.

Following the audit, an audit conclusion meeting will take place. During this meeting, the lead auditor will inform company's management about positive and negative audit results.

The time frame for the audits will be rated to 70 percent of the value displayed in the section 7, table 1. Depending on the company to be audited, 25 to 35 audit-days have to be charged.

Task 1, step 5 – Preparation of audit reports

Issue of audit reports will be carried-out by the lead audtior in Sri Lanka immediately after performance of the fifth audit. It will be performed on four days of work.

Completed audit reports will be submitted to the audited company for information.

The audit report will contain the audit observations as well as an audit summary with reference to supporting evidence. Also included will be the following requirements as stated in ISO 14.011 chapter 5.4.2:

- identification of the organization audited and of the client
- agreed objectives, scope and plan of the audit
- agreed requirements, including a list of reference documents against which the audit was conducted
- audit dates
- identification of the audit representatives participating in the audit
- identification of the audit team's members
- statement of the confidential nature of the contents
- a summary of the audit procedure (including any obstacles encountered)
- audit conclusions such as
 - Environmental Management System (EMS) conformity or non-conformity to the audit requirements
 - Whether the quality management system is properly implemented and maintained
 - Whether the internal management review process is able to ensure the continuing suitability and effectiveness of the EMS.

Task 1, step 6 – Audit follow-ups and re-audits

Further follow-up activities will be necessary, if the auditors observe any non-conformities from audit requirements during the audit (i.e. ISO 14.001-standards or own requirements defined in the quality management documentation). In this case, the organization shall take action to eliminate the cause of the non-conformities in order to prevent recurrence.

Evidence of corrective actions must be submitted to the lead auditor or – if required – to the project manager for examination. This should be carried out 30 days after the audit.

For non-conformities of relatively minor nature, the project manager will only perform an evaluation of the new documents submitted. This will be carried-out one day after their receipt. The implementation and effectiveness of the corrective action will be checked later, i.e. in the following surveillance audit. This will take place twelve month later.

In case of major non-conformities, a re-audit has to be performed. The extent of this audit will be limited to the areas, processes and organization units, where the non-conformity was observed.

Otherwise, the re-audit will apply the same methods and tools like a certification audit.

Note: Expenditure for re-audits are not charged in the current offer. They have to be charged seperately according to audit extent.

Since the companies' environmental management systems have been introduced and implemented by experienced environmental management consultants, it is unlikely that major non-conformities will be observed during the audits.

Task 1, step 7 – Issue and approval of certificates

The project manager will recommend issue of certificate for the company under the the following conditions:

- no non-conformities will be observed in the audit
- all non-conformities have been removed by successful performance of corrective actions. (Corrective actions have to be checked by auditor either formal or by re-audit on-site.)

Certificates will be issued by RWTÜV and will remain valid for three years. The maintenance and application of environmental management system will be checked in annual surveillance audits.

Task 1, step 8 – Surveillance audits

Surveillance audits will be carried-out annually. Extent of surveillance audit is amounted to 50 percent of a certification audit. The methods used in a surveillance audit comply with those applied in certification audits.

Note: The performance of a surveillance audit is not element of this offer. RWTÜV intends to employ those members of SLSI in surveillance audits, which also participated in the corresponding certification audits, i.e. who received their auditor's training here (for more details see task 2.)

TASK 2

Task 2, step 1 – Training in examination of documents

As mentioned under task 1, the audit process starts with the examination of the environmental management documentation. For this reason, SLSI's trainees will receive a copy of the documents submitted by the client. The trainees have to examine the documents and have to evaluate whether they fulfill ISO 14.001-requirements. As a practical guideline the trainees will receive the RWTÜV's high-level check list. The latter has to be completed by the them as far as possible. In addition, the trainees have to draft a plan for audit performance.

Before the start of the audits on-site, the results of the afore mentioned tasks will be discussed between the participating lead auditors of RWTÜV and TÜV India and the trainees. For this reason, a seminar will be performed two days before audit performance. The trainees will present the results of their work.

These will be analyzed by the auditors, and – if required – proposals for improvements will be given. Also, the auditors will discuss their own approach to audit procedure and will outline strength and weaknesses of the audit documentation submitted. Finally, the auditor will inform the trainees about the further activities concerning the audits.

Task 2, step 2 – Training in audit

Chosen employees of SLSI will participate as trainees during the audits of this certification project. The trainees will have the possibility to perform interviews with employees of the client's company after their initial questioning by RWTÜV and TÜV India auditors.

Audit observations will be discussed immediately or in the auditor's meeting mentioned above. The auditors will explain their observations and evaluations to the trainees. This is of special importance where audit findings are rated as non-conformities.

Never the less any official evaluation of the company's environmental management system will only be performed by RWTÜV's and TÜV India's auditors.

Task 2, step 3 – Training in the issue of Audit reports

As explained in task 1, the lead auditor will draft the audit reports already on-site in Sri Lanka. For this reason, the trainees will also draw an audit report immediately after audit performance, basing on the technics acquired in the recent IRCA-seminars. These reports will be checked by the lead auditor and will be returned to the trainees with appropriate comments and explanations.

SECTION 6 – Time table



		Measures	Output	Target date (in weeks after submission of order or documents)
Task 1	Step 1	Initial preparation of certification audits	Selection of audit team member	Immediately
	Step 2	Examination of environmental management documentation	Issue of a report concerning the examination of environmental management documentation	2 nd week
	Step 3	Development of audit plans	Issue of an audit plan, displaying the details of certification audit	Runs parallel to step 2, 2 nd week
	Step 4	Performance of the audit	Evaluation of the company's management system	Starts in 4 th week
	Step 5	Preparation of audit reports	Issue of an audit report	Will be finished in 8 th or 10 th week
	Step 6	Audit follow-ups and re-audits	Corrective actions concerning possible non-conformities	9 th or 11 th week
	Step 7	Issue and approval of certificates	Issue and submission of certificates to the client	13 th or 15 th week
	Step 8	Surveillance audits	Evidence of continuous appliance of the companies environmental management system	14 th or 16 th week

Task 2

Step 1

Measures
Training in the examination of environmental management documentation**Output**
Trainees learn to understand environmental management documentations**Target date (in weeks after submission of order or documents)**3rd week

Step 2

Training in audit performance

Trainee learn to perform environmental management-audits

See Task 1, step 4

Step 3

Training in issue of audit reports

Trainee learn to write audit reports

See Task 1, step 5

SECTION 7

Enclosed in this section are the curriculum vitae for the auditors responsible for project management and audit performance.

Responsibility and duties will be defined as follows:

Project management: Udo Kubitz
(Description of tasks: see section 3)

Lead auditor: Manfred Kullmann
(Description of tasks: see section 3)

Auditors: Ashock Chopra
Prakash Dhoot
Valmik B. Kedar
Pankaj D. Patel
Anil S. Rairikar
A. C. Ranade
K. Subramanian
E. Sundar

Auditors will be employed in compliance with the EAC scope of the company to be audited as well as in compliance with company's size.

SECTION 8

Prices for the audits to be performed will be itemized according to company in table 1.

All travel expenditures have been divided by 5.

The prices determined this way will be distributed among the companies to be audited.

Included in the prices quoted are possible expenditures for hotel reservations and dining. For this purpose an overall amount of \$ 100.-- per auditor has been added to audit prices.

Currently, we can **not** display a total price, since it is currently unknown which of the companies will participate in the audits.

Other prices as those displayed in this section will not be charged. The prices displayed in section 5, task 2 will not be charged separately.

Alle prices quoted are exclusive of value added tax.

Department
International Certification

-Thies-

-Kubitz-

Table 1 : Costs

According to the before mentioned information, the rules of the standard(s) require(s) the following man-days(see EAEMS Guidance on auditors time)

	Company Name	Days*	Cost of return from origin	Costs for Certification	TOTAL FEE
1	Prime Polymers	6 ₄	1,000.—	5,100.—	6,100.—
2	Link Natural Products	7 ₅	1,000.—	5,100.—	6,100.—
3	Hands International	8 _{5.5}	1,100.—	5,650.—	6,750.—
4	Bandraranayake Exports Ltd.	1	800.—	1,300.—	2,100.—
5	Agro-Marine Ltd.	6 ₄	1,000.—	4,500.—	5,500.—
6	Lanka Fasteners Ltd.	9 ₆	1,700.—	6,200.—	7,900.—
7	Finitex Washing Plant	7 ₅	1,200.—	5,100.—	6,300.—
8	Harrischandra Mills	9 ₆	1,200.—	6,200.—	7,400.—
9	Koslanda Estates Ltd.	4 ₃	1,000.—	3,300.—	4,300.—
10	Sri Ramco Ltd.	2	800.—	1,700.—	2,500.—

All quoted prices in USD

* Bold numbers indicate mandays for total audit procedure. Small numbers indicate mandays for the on-site audits.

Attachment No. 4

List of Delegates in on-the-training seminars References for ISO 14001
Certification performed by RWTÜV and related subsidiaries

LIST OF ISO 14000 TRAINED OFFICERS OF SLSI

1. Mr. L N Senaweera, D(SC)
2. Mr. T Wickramasinghe, AD (T&G)
3. Mr. K S Kumara, AD (SC)
4. Mr. D L W Peiris, S/TO
5. Mrs. S Narangoda S/E
6. Mr. S N T Ekanayake S/TO
7. Mrs. Dhammika Fernando S/TO
9. Ms. Sujeewa Udakara S/TO
10. Mr. SPPA Wickramasuriya S/TO
11. Mrs. T Wijesuriya S/TO
12. Mr. S J Patabendi S/TO
13. Mrs. S G S Sooriyarachchi S/TO
14. Ms. Shamini Wickramarathne (ITI)