

Century Pulp And Paper Mills's Approach Towards ISO-14001 Certification

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ABSTRACT

ISO-14001 Certification stipulates establishment of an "Environmental Management System" (EMS) under International standards to formulate policy and objectives to meet all legal requirements and improve the Environmental Performance of a company.

Based on the Environmental Management practised, Century Pulp And Paper was selected as a "Model" unit by Confederation of Indian Industry/ International Resources Group for implementation of EMS as per ISO-14001 guidelines under USAID sponsored programme. The scheme offered all the Training, guidelines for implementation of the requisite systems, Periodic - Reviews and Pre-Audits to facilitate the company being certified for ISO-14001 by KPMG under the Dutch Council for Accreditation.

The paper outlines the approach followed by the company towards successful implementation of ISO-14001 EMS and its efforts to synchronise it with ISO-9002 QMS.

INTRODUCTION

There has been a growing concern to achieve and demonstrate sound environmental performance on account of stringent environmental legislation and mounting public pressure. While the environmental laws do promote environmentally responsible behaviour, the best course is to explore and adopt cleaner practices towards sustainable development. Establishment of an 'Environmental Management System' under ISO-14001 format offers an elaborate method of planning, identifying and implementing such measures and proves to be an important tool towards continual improvement of the Environmental performance of a company.

BACK GROUND

Under the auspices of USAID Environment Programme, Century Pulp And Paper was selected as a

Model Unit by Confederation of Indian Industry/ International Resources Group (CII-IRG) for offering technical assistance to the company for implementing/ systematizing the Environmental Management system toward ISO 14001 Certification. Under the scheme, CII was to impart the necessary training and guidelines by the experts from India & abroad. The USAID programme also included sponsorship for deputing company representative to United States for studying the Environmental practices followed there. The only pre-condition set for the company was to go for ISO-14001 certification after completion of the programme. This of course, Century was already attempting and striving for.

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GETTING STARTED

The first step was conduction of an 'Appreciation Programme' by CII for all the Departmental and sectional heads at the company premises during April, 1998. This offered an insight to the ISO-14001 series of standards, and outlined the Modalities of the implementation of requisite EMS. The following steps were taken to initiate the activities:

- Planning the schedule for implementation of various activities.
- Formation of Management Review Committee.
- Formation of Core-group.
- Identification & Training for Internal Trainers.

ENVIRONMENTAL POLICY

As per the ISO-14001 requirement, an Environmental Policy to be declared by the Top Management, is to be documented, implemented, maintained and communicated to all employees and is to be made available to Public. The Policy should show company's commitment for continual improvement of the EMS and to comply with relevant environmental legislation & regulations.

A unique way was adopted in formulating the Environmental Policy by way of each member of the Management Committee listing out the key policy elements and then selecting the most suitable ones. Essentially, this involvement and a sense of contribution goes a long way in successful implementation of any programme.

Besides display of the policy at prominent places within and outside the factory premises, the same is distributed in form of pocket calendar and leaflet hand outs. Century's Environmental Policy is appended in Annexure-I.

TRAINING

Training formed an integral part of the whole exercise, with each & every employee of the company subjected to the 'Awareness Programme' by the HRD Deptt. Through a group of Internal Trainers.

Regular Programmes at a frequency of 2-3 per month are still ongoing even after ISO-14001 Certification. This is important to keep all concerned abreast of the latest development and to maintain their deep involvement. Some very useful suggestions and tips came from the personnel operating from the shop floor at junior ranks.

ANNEXURE-I

CENTURY PULP AND PAPER

ISO-14001 : SUMMARY OF IMPLEMENTATION PLAN

S.No.	Objective	Target	Scope	Responsibility	Time	Status
Environment Management System						
1.	Formulation/Display of Environmental Policy	Environmental Awareness to employees & interested Party	Mill-wide	Jt. President (W) & MR.		Declared on Oct. 1998
2.	Documentation	All Depts.	Mill-wide	MR/Core Group/ Deptt.	Six Months	Completed : June ' 99
3.	Internal Auditors training	Performing Internal Audit of EMS ISO-14001	--do--	MR/CII	Six Months	Completed : July ' 99
4.	Internal EMS Audit	All Depts.	--do--	MR/CII and Internal Auditors	Ten Months	Completed : July ' 99
5.	Pre-Audit/Final Assessment	All Depts.	--do--	MR/CII	Twelve Months	Completed : Dec ' 99

ANNEXURE-II

CENTURY PULP AND PAPER
ISO-14001 : SUMMARY OF IMPLEMENTATION PLAN

S.No.	Objective	Target	Scope	Responsibility	Time	Status
Environment Management System						
1.	Reduction of Elemental Chlorine in Pulp Bleaching	Reduce Cl ₂ Consumption /AOX generation by incorporating Bio-technology (Enzyme Pre-Bleaching)	Initiate with paper Plant (WPP) Cover RGP & Bagasse	Concerned depts./R&D	July 2000	Successful trials completed in WPP-Being practised Trials in RGP/ Bagasse planned Oct. 2000
2.	Reduction of Air pollution at Bagasse Depither	Installation dust extraction system	Bagasse Depither	Deptt.	June 2001	Under implementation
3.	Control of land contamination in Bagasse Pad	Repairing of Pad (Continuous Process)	Bagasse Pulp Mill	Civil/Deptt.	Yearly	In Progress
4.	Air Pollution Control at BSW & Multistage bleaching	Installation of hood	Bagasse Pulp Mill	Project/Deptt.	Nov. 2000	Under implementation
5.	Fresh Water Conservation	Collection of sealing water in tank (Clear Water)	PM-III	Deptt.	March 2000	Completed
6.	Control of land contamination-Reduction of moisture in wet pith	Installation of New equipment (Fan separator) Screw Press/Concrete Pad	Bagasse Pulp Mill	Deptt.	Dec. 2000	Under implementation
7.	Minimising water pollution during water boiling	Installation of a line from new evaporator to BVF Reactor	New Evaporator	Deptt./Manager ETP/WTP	Oct. 1999	Completed
8.	Air Pollution Control during feeding of salt cake	Modification of drive mechanism	BHEL Rec. Boiler	Deptt./Mech. Maint.	Aug. 1999	Completed
9.	To avoid spillage of Acid/Alkali	Construction of Dyke Wall	HCL/NaOH Tank at WTP	Deptt./Maint.	Sept. 2000	Under Process
10.	Reduction Water Consumption in chipper (RGP)	Water Reclamation	5m ³ /MT of pulp	Deptt.	Nov. 2000	Completed
11.	Reduction of Cl ₂ Consumption (RGP)	Replacement of Cl ₂ Mixer	4 kg/MT of pulp	Deptt.	Dec. 1999	Completed
12.	Bagasse pith Utilization	Burning of pith in boilers (400 MT/D approx.)	Power House	Deptt	Dec. 2000	Conveyor system under erection.

DOCUMENT PREPARATION

Due care was taken while initiating Document Preparation by involving persons from different section so that the documents are 'owned' by them. This aspect is extremely important for a successful implementation; as any ready-made set of Procedures/Work Instructions cannot be imposed to the concerned workmen in their sphere of activities. The documentation were made in two stages:

- EMS Apex Manual
- EMS Departmental Manual

The Apex Manual describes the procedures prescribed under various clauses of ISO- 14001 standards and their linkages to the Departmental activities. The Manual also contains the EMS Organisational Chart listing the responsibilities of personnel involved.

The Manual under controlled format is distributed as per guidelines framed with proper recordings.

The Departmental Manual contains list of Aspects & Impacts, Operational Control Procedures, Work Instructions, Objectives & Targets Environmental Management Programmes related to the Department and an Organisation Chart showing the structure & responsibility of personnel.

The documentation incorporates various procedures for operational control of Significant Environmental Aspects, Emergency Preparedness & Response, Monitoring & Measurement, Non Conformances and Corrective & Preventive Actions etc.

OBJECTIVES AND TARGETS

Specific objectives & targets have been established sectionwise at different levels, the available technological option are critically examined for their economic viability and practical applicability. For example, technological option for reduction of chlorine consumption or water consumption may vary from plant to plant based on the Bleaching sequence followed and recycling of Back water practicable. Targets are generally based on a Quantum reduction by a specified time. The analysis also incorporates investment if any, and a payback time indication.

A well designed format for Assessing/Seeking

Approval for objectives & targets is in place with details like activity, significant environment aspect and impact, Technical & Financial Viability, Investment & Payback, proposed target with names of proposer etc.

Few examples of objectives & targets are:

- Reduction of Air Pollution in Bagasse Handling Plant by installing a Dust Extraction system by Mid-2001.
- Reclamation of Chipper House Drain Water by Nov. 2000 with performance indicator as reduction of 5m³ water per ton of pulp.
- Pith Burning to the extent of 400 T/day by Dec. 2002 with Performance Indicator as coal saved due to pith burning.
- Noise level within permissible limits (during steamline charging) by avoiding any steam venting and achieving 75% reduction in Noise level by Nov. 2000.

The objectives and targets identified are compiled in a well designed Environmental Management Programme (EMP) format with scope and responsibilities clearly identified, the Performance Indicator and the review of the progress made for each set of activities. A summary of few important EMPS covered under ISO-14001 Implementation Plan is given in Annexure II

ENVIRONMENT AUDITS

Environmental Audit is a systematic, objective method of reviewing the system and controls to verify that the Environmental standards - both company and regulatory are being met.

The Audits do really act as catalyst and give impetus to the whole exercise. With initial audit conduction, there was an overwhelming response from all concerned with a hub of activities to set things in order.

An internal Auditor course was conducted and a pool of trained Environmental auditors was developed. A Periodic Audit does facilitate identifying weak areas and bring about further improvement.

CII also conducted a Pre-assessment Audit to review company's preparedness and offering guidelines to improve for the final Assessment.

MANAGEMENT REVIEW

Management Reviews are held under the Chairmanship of the Chief Executive once in month to review the progress of the EMS, findings of the Environmental Audits, Non-conformances and to discuss any changes or sanctions that may be required to comply with the policy elements.

Any action required to be taken by a concerned Deptt. is communicated by means of Corrective & Preventive Action Procedures.

EFFORTS TOWARDS SUSTAINABILITY

Continual Improvement are pursued towards sustaining the activities and the system requirements. This is achieved by taking the following steps:

- Regular Training Programmes in the H.R.D. Centre.
- Periodical Internal Audits in various Depts. by a pool of Internal Auditors as per pre-determined schedule.
- Periodical Management Review i.e. every two months to review progress of the system.

BARRIERS FACED IN IMPLEMENTATION

Being an ISO-9002 certified company, the implementation of ISO-14001 was generally facilitated in terms of document preparation where many cross-linkages could be established. However, before the Awareness & Training Programmes, the ideas and concepts were not clear and the exercise was considered an addition burden.

Some constrains were encountered on the financial front where EMPS requiring some capital investment were delayed.

Another stumbling Block was a lock out for about two months towards end 1999, which delayed the certification.

ISO-9001 QMS: ISO 14001 EMS: SYNCHRONISATION:

The Quality system under ISO-9000 Series has a good correlation with ISO-14001 in terms of

terminology & contents. The proposed revision of Quality system as per Draft ISO/DIS 9001:2000 offers enhanced compatibility with ISO-14001.

For the Quality and Environmental Auditing Guidance standards (ISO-10011 and ISO-14010-12) the responsible ISO technical committees (TC -176 and TC -207) are preparing a single common auditing standards. It is under stood that the new Auditing standard (ISO-19011) will be applicable for both Quality and Environmental Management Systems and the existing separate standards will be deleted.

RECERTIFICATION

The present certification is valid for three years. Surveillance Assessments will be conducted every six months by the Certifying Agency to ensure total compliance towards the system and reviewing the progress made in implementing various EMPS identified.

CONCLUSION

Century Pulp And Paper's Environmental - Performance got an impetus by adopting ISO-14001 standards which advocated establishment of a well - defined 'Environmental Management System' to systematically control and continually improve on this front. The benefits derived can be summarised as:

- Enhancement of company's image with various Government Bodies in lieu of an open and explainable EMS.
- Enhancement of good public/community relations through commitment shown in Environmental Policy.
- Improvement of Work Environment, health of employees and safety standards.
- Identifying waste areas, unexplored earlier.
- Above all, involvement of all the employees across the company instead of a section responsible for Environment matters.

The Paper Industry in general, can benefit immensely by adopting this standard apart from contributing positively towards Environmental Protection.

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