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ENVIRONMENTAL MANAGEMENT POLICY MANUAL

PALM BAY OPERATIONS



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1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

PURPOSE:

This Manual describes the Environmental Management System (EMS) policy directives to fulfill requirements as stated in the Environmental Policy and ISO 14001:2004. The manual also describes the policy, objective and responsibilities applicable to Renesas Electronics America Inc. Palm Bay Manufacturing operations.

SCOPE: THE ENVIRONMENTAL MANAGEMENT SYSTEM OF RENESAS ELECTRONICS AMERICA INC. LOCATED IN PALM BAY, FL. ASSOCIATED WITH THE MANUFACTURING AND TEST OF SEMICONDUCTOR DEVICES.

1.2 MANUAL CROSS-REFERENCE TABLES

General

This section links each requirement from the following standards to applicable section(s) of this Manual:

ISO 14001: 2004 International Standard 'Environmental management systems- Requirements with guidance for use'

Corporate Environmental Policy

REFERENCE DOCUMENTS

QOP-ISL-001 Quality Systems Manual



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ISO 14001:2004 Cross-References

ISO 14001 Element	Description	Applicable Documents Palm Bay
4.1	General requirements	EMPM-PB-001
4.2	Environmental policy	EMPM-PB-001
4.3	Planning	EMPM-PB-001
4.3.1	Environmental aspects	897039
4.3.2	Legal and other requirements	897036, 897035, 999039
4.3.3	Objective, Targets, and Environmental Programs	897039 EMPM-PB-001, 897033, 897034, 897035, 897038, 897039, 897040, 897041, AFE, Facilities Checklist
4.4	Implementation and Operation	EMPM-PB-001
4.4.1	Resources, Roles, Responsibilities and Authority	EMPM-PB-001 - Chart A
4.4.2	Competence, training, and awareness	897036, 897029, 897033, 897034, 897038, 897040, 897041, 990031, 880012, 880012-PBFABS, 880012-Plant_Services, Job Descriptions
4.4.3	Communication	Web Pages (Intranet / Extranet), EMPM-PB- 001, 897035, 897039, 897036, 880041, 880041-001
4.4.4	Documentation Environmental Management System	EMPM-PB-001
4.4.5	Document control	999011, 999053, 990031, 897035, 897036, DOC-XXXX
4.4.6	Operational control	897036, 897037, 897033, 897034, 897035, 897038, 897040, 897041, 990031, 897029
4.4.7	Emergency preparedness and response	880041, 880041-001, 897033, 897034, 897035, 897038, 897040, 897041
4.5	Checking and Corrective Action	EMPM-PB-001
4.5.1	Monitoring and measurement	999039, 897035, 897036, 897037, 990031, 897039
4.5.2	Evaluation of legal compliance	897035, 897036, 240113
4.5.3	Nonconformance and corrective and preventive action	240113, , 990032
4.5.4	Records	880037, 240113 *
4.5.5	Environmental management system audit	240113
4.6	Management review	EMPM-PB-001

* Area specific record requirements are included in the applicable process procedure.

2.0 FUNDAMENTALS OF PALM BAY BUSINESS OPERATIONS

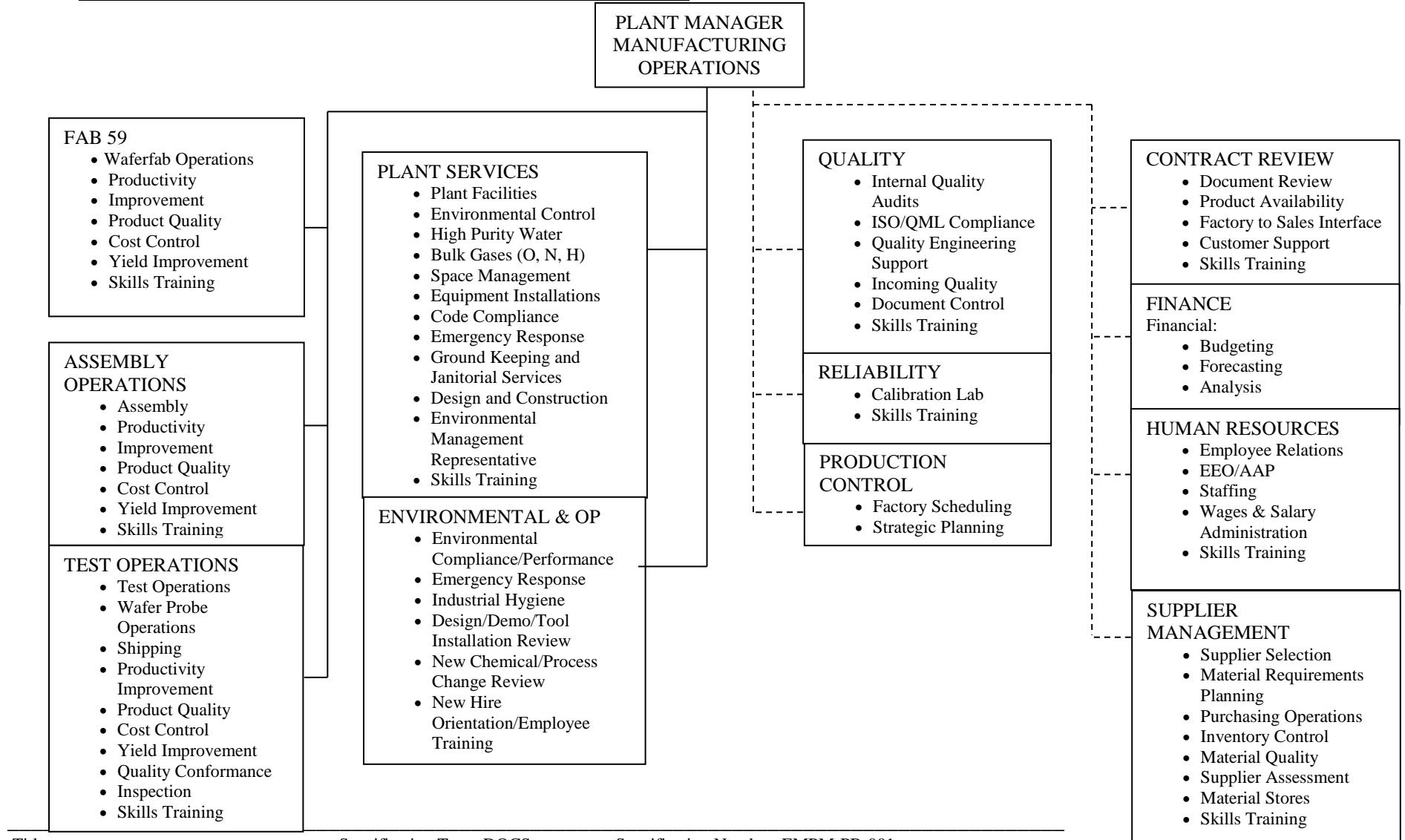
The fundamentals of Renesas Electronics America Inc. (hereafter referred to as REA) business operations are included in the
QOP-ISL-001 - Quality Systems Manual

REFERENCE DOCUMENTS Document QOP-ISL-001 - Quality Systems Manual



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3.0 PALM BAY MANUFACTURING ORGANIZATION





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4.0 ENVIRONMENTAL MANAGEMENT SYSTEM REQUIREMENTS

4.1 GENERAL REQUIREMENTS

The organization shall establish and maintain an environmental management system compliant to ISO 14001:2004

4.2 ENVIRONMENTAL POLICY

PALM BAY MANUFACTURING ENVIRONMENTAL POLICY

Palm Bay Manufacturing and its employees are committed to ensuring that the company's operations comply with both the letter and the intent of all applicable environmental laws and regulations and follow practices that are consistent with the principles of environmental stewardship. REA will continuously improve its environmental performance through economically sound and technologically practicable processes that produce meaningful and measurable environmental improvements.

Administration Guidelines:

Palm Bay Manufacturing will implement this policy by establishing and maintaining an environmental management system, which will ensure that:

- Its operations comply with applicable national, state, and local environmental laws and regulations.
- Necessary training programs are conducted to inform employees of this policy and their respective responsibilities for environmental compliance and management.
- Environmental considerations are integrated into business planning and decision making at existing locations and in planning new operations.
- Meaningful and measurable goals for environmental performance are established and progress toward these goals is tracked through the KRE and TQM review process.
- Its environmental management systems and environmental performance will pursue continuous improvements through such practices as pollution prevention and efficient use of resources
- Periodic self-evaluations of its compliance and environmental management systems are conducted and the results are reviewed with top management.

Responsibilities:

REA employees are expected to understand their responsibilities for environmental compliance and management. They must comply with the letter and the intent of this policy and the environmental laws and regulations relevant to their respective jobs.

Note 1 This is an official policy approved by management (policy bulletin #PB4-02)



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4.2.1 POLICY OBJECTIVES

The Environmental Policy Objectives are to

- (I) Improve Continually (On environmental performance and minimize the impact to the environment)
- (P) Prevent Pollution (Minimize waste and the consumption of natural resources)
- (O) Obey the Law (Comply with all environmental regulations and requirements)

4.3 PLANNING

OBJECTIVE:

To ensure that activities affecting the environment are planned in order to minimize their impact. The priorities are in order for the reduction, reutilization, recycling and proper disposal of materials where required.

REQUIREMENTS:

General

The following provides an overview of the various elements of a functional Environmental Management System.

4.3.1 ASPECTS ANALYSIS

Palm Bay maintains procedures to identify the environmental aspects of its activities, products or services including new and modified activities that have a significant impact and that it can control, and over which it can be expected to have an influence.

The Aspects Analysis information is kept up-to-date and a list of significant impacts is maintained.

REFERENCE DOCUMENTS:

897039 Environmental Aspects Analysis Procedures



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4.3.2 LEGAL AND OTHER REQUIREMENTS ANALYSIS

Palm Bay Manufacturing maintains a procedure to identify and have access to legal and other requirements to which the organization subscribes, that are applicable to the environmental aspects of its activities, products and services. This includes but is not limited to online Internet access to all EHS regulatory standards, and notification or participation on Semiconductor Industry Association environmental initiatives.

Legal requirements are taken into account in establishing, implementing and maintaining the Environmental Management System

REFERENCE DOCUMENTS:

897036	EMS Operational Control Summary
897035	EHS EMS Specification
999039	Environmental Health and Safety

4.3.3 OBJECTIVES, TARGETS, and PROGRAMS

Palm Bay manufacturing establishes and maintains documented objectives and targets that are updated regularly and are coherent with the policy. These objectives take into account the legal and other requirements, significant environmental aspects, technological options and financial, operational and business requirements, and the views of the interested parties.

Programs for achieving Palm Bay Manufacturing's objectives and targets are established and maintained. Programs include the designation of responsibility for major activities and the means and time frame by which they are to be achieved. These programs have the flexibility to be amended at all times and are applied to new projects. Reference Environmental Aspect Analysis Procedure, 897039, for requirements.

The Capital Request (CR) system, including the Facilities Checklist, is used to document expenditures and facilities work that may impact the EMS Program. The CR forms are located at [Capital Request Form](#). In addition, Equipment / Process Change Forms are required to be completed and routed to / approved by EHS representative. Equipment / Process Change Forms are located on the Shared (S:) drive in the FORMS folder.

REFERENCE DOCUMENTS

EMPM-PB-001	Environmental Policy and Objectives
897033	Wafer Fab EMS Specification
897034	PAT EMS Specification
897035	EHS EMS Specification
897038	Purchasing EMS Specification
897039	Environmental Aspect Analysis Procedure
897040	Plant Services EMS Specification
897041	On-Site Labs EMS Specification
	AFE System / Facilities Checklist



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4.4 IMPLEMENTATION AND OPERATION

4.4.1 STRUCTURE AND MANAGEMENT RESPONSIBILITY GENERAL

Management establishes the requirements and responsibility for the Environmental Management Systems by setting policy directives and defining authority, responsibility, interactions, and assigning resources.

All personnel who manage, perform, and verify work that significantly affects the environment have the responsibility and authority to

- Initiate action to prevent non-conformity or non-compliance to environmental policy.
- Report environmental related issues.
- Initiate, recommend, or provide solutions through designated channels.
- Verify the implementation of solutions.
- Control the processing, delivery or use of non-conforming material until the non-conforming condition has been corrected.

Chart A and the organizational charts in the Environmental Management Policy Manual include the responsibility and authority information and the interrelation of personnel who manage, perform, and verify this work.

The principles of employee involvement and continuous improvement have resulted in an empowered work force where any employee can identify EMS problems, identify solutions, and recommend corrective actions.

MANAGEMENT REPRESENTATIVES

The EMS Manager is the appointed management representative responsible to ensure that the environmental management system requirements are established, implemented and maintained. *Currently the name of the Palm Bay site ISO 14001-2004 Management Representative is Steve Browne of our Facilities Organization. Steve can be reached at 321-724-7605.* The TQM Steering Committee designates this responsibility.

The EMS Manager is responsible for reporting the performance of the environmental management system including recommendations for improvement to the TQM Steering Committee and responding to external queries.

RESOURCES

Implementation and control of the Environmental Management System are shared by cross functional organizations, including but not limited to Quality, Human Resources, Plant Services, and Manufacturing,. Management insures that resources are available to support improvement projects as defined.

REFERENCE DOCUMENTS

EMPM-PB-001 Reference Chart A "Responsibility and Authority"



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4.4.2 COMPETENCY, TRAINING, and AWARENESS

OBJECTIVE:

To ensure that every Palm Bay Manufacturing Operations employee can contribute to the success of the Company.

REQUIREMENTS:

Systems are maintained for the identification, evaluation, recording and fulfillment of training needs. Personnel, including contract employees whose work may create a significant impact upon the environment receive appropriate training.

Competence of employees being considered for positions of significant responsibility that relates to the EMS (i.e., EHS/Plant Services Engineering / Management) is evaluated by the hiring supervisor. Any additional training / education or skills needed are addressed and documented by the employee's supervisor using the Performance Development Summary (PDS) system which is updated annually at a minimum.

All Palm Bay Manufacturing Operations employees receive EMS and Regulatory training pertinent to their job function per the applicable document(s) referenced below. Subcontractors that could have a significant impact on the environment also receive training on REA requirements in addition to state regulation requirements for licenses.

REFERENCE DOCUMENTS:

897036	Operational Control Summary
897029	Contractor EMS Specification
897033	Wafer Fab EMS Specification
897034	PAT EMS Specification
897035	EHS EMS Specification
897038	Purchasing EMS Specification
897040	Plant Services EMS Specification
897041	On-Site Labs EMS Specification
990031	PMs and Procedures (Plant Services) System
880012	Manufacturing/Quality Training and Certification Specification
880012-Plant_Services	Plant Services Training and Certification
	Job Descriptions maintained by Human Resources
880012-PBFABS	Manufacturing Training and Certification for Palm Bay Fab



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4.4.3 COMMUNICATION

OBJECTIVE:

To ensure that Palm Bay Manufacturing Operations Environmental Management System is communicated internally and externally.

REQUIREMENTS:

- I Ensure that the Environmental Management Policy Manual is maintained in the electronic document control system and posted on the web page for viewing.
- II Communicate policy and manual availability via bulletin board postings, internet, and employee meetings.
- III All employees will refer internal and external inquires to the EMS Palm Bay Manager.
- IV Communications with public authorities regarding emergency planning and other relevant issues are addressed within the Site Emergency Response Plan and/or the Operational Controls Summary and applicable EMS specifications. Posting of environmental aspects accomplishments results and goals will be posted for the previous year on the intranet web page, EHS, ISO14001 awareness.
- V The Environmental Health & Safety Engineer and EMS Manager are responsible for:
 - a) Receiving, documenting, and responding to relevant communication requests from internal and external sources. A log will be maintained to record external inquiries. This will include, but is not limited to name, date, subject, and the action/response. Records of internal communications will also be maintained (copy of e-mail, memo, etc.).
 - b) Communicating general EMS information to employees, contractors, suppliers, customers and the community when appropriate.
 - c) Utilizing appropriate resources to respond to communication request, i.e. Legal, Public Relations, Human Resources.
 - d) A communication system for providing information to all applicable employees for the following:
 - ISO 14001 Awareness
 - Site Hurricane Plan (880041-001)
 - Environmental issues

Communication may be conducted via the method determined appropriate for the occasion. Available methods include but are not limited to newsletters, electronic mail, routine employee meetings, promotions, videos, etc.

REFERENCE DOCUMENTS:

- Web Page (extranet): [Environmental Web Site](#);
- iShare Web Page (intranet): [Environmental, Health & Safety](#);

EMPM-PB-001	Environmental Policy and Objectives
897035	EHS EMS Specification
897039	Environmental Aspects Analysis Specification
897036	Operational Controls Summary
880041	Site Emergency Plan
880041-001	Site Hurricane Plan



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4.4.4

ENVIRONMENTAL MANAGEMENT SYSTEM DOCUMENTATION

OBJECTIVE:

To establish and maintain information in paper or electronic form to describe the core elements of the Management System and their interaction and provide direction to related documentation.

REQUIREMENTS:

The environmental management system has documented policies and procedures consistent with the ISO 9001 and ISO 14001:2004 elements.

The documentation includes but is not limited to

Scope Statement

Policy

Objectives and Targets

REFERENCE DOCUMENTS

EMPM-PB-001	Environmental Policy and Objectives
DOC-PROC-ALL	Procedural Specification



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4.4.5 DOCUMENT CONTROL

OBJECTIVE:

To ensure relevant documentation is available, controlled and maintained to current revision at points of use.

REQUIREMENTS:

Essential documentation affecting environmental issues is reviewed for adequacy and approved by authorized personnel before its release. Changes to documents are reviewed and approved by the same functions that performed the original review.

Documentation control procedures are established to preclude the use of non-applicable specifications or reference material and to ensure that the current issues are readily available in all areas.

Changes to documentation mentioned above are documented and maintained by the appropriate function. Process and control specifications are controlled by the document control system (INTREPID) for change and approval history.

REFERENCE DOCUMENTS

DOC-PROC-ALL	Procedures Specification
Doc-Approval	Authorization Approval Authority Listing
DOC-XX	Specification Control Series of Specifications
999011	Control of Reference Standards
999053	Intrepid Application
990031	PMs and Procedures (Plant Services) System
897035	EHS EMS Specification
897036	Operational Control Summary
240114	Contract Review



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4.4.6 PROCESS / OPERATIONAL CONTROL

OBJECTIVE:

To establish and maintain documented procedures for operations and activities where their absence could lead to deviation from the environmental policies, objectives, and targets for the organization's activities, and contractors and suppliers.

REQUIREMENTS:

Palm Bay Manufacturing establishes and maintains environmental policies and procedures to assure achievement of the objectives and targets of the environmental policy.

The system defines procedures for communication of the established EMS policy and EMS procedures to applicable internal and external personnel the established policies and procedures.

REFERENCE DOCUMENTS:

897036	Operational Control Summary
897037	Contract Service Laboratories for EMS
897033	Fab EMS Specification
897034	PAT EMS Specification
897035	EHS EMS Specification
897038	Purchasing EMS Specification
897040	Plant Services EMS Specification
897041	On-Site Labs EMS Specification
990031	PMs and Procedures (Plant Services) Systems
897029	Contractor EHS



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4.4.7 EMERGENCY PREPAREDNESS AND RESPONSE

OBJECTIVE:

To establish, implement and maintain procedures to identify potential for, and respond to accidents and emergency situations, and for preventing and mitigating the significant environmental impacts that may be associated...

REQUIREMENTS:

Palm Bay Manufacturing Operations establishes and maintains procedures that identify the potential for and response to accidents and emergency situations, and for preventing and mitigating the environmental impacts that may be associated.

Palm Bay Manufacturing Operations reviews and revises, where necessary, its emergency and preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations.

These procedures are periodically tested where practicable.

REFERENCE DOCUMENTS

880041	Site Emergency Response Plan
880041-001	Site Hurricane Plan
897033	FAB EMS Specification
897034	PAT EMS Specification
897035	EHS EMS Specification
897038	Purchasing EMS Specification
897040	Plant Services EMS Specification
897041	On-Site Labs EMS Specification



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4.5 CHECKING AND CORRECTIVE ACTION

4.5.1 MONITORING AND MEASUREMENT

OBJECTIVE:

To establish and maintain documented procedures to monitor and measure, on a regular basis, the key characteristics of its operations and activities that can have significant impact on the environment and progress to identified environmental aspects improvement plans.

REQUIREMENTS:

Environment monitoring equipment is calibrated against reference standards whose calibration is certified as being traceable to nationally recognized standards.

Outside Analytical Laboratory services may be engaged for monitoring and measurement. The performance of sub-contracted analytical labs is assessed as appropriate.

Documented procedures are maintained for periodically evaluating compliance with relevant environmental legislation and regulations.

Progress to continual improvement plans as identified per the environmental aspects analysis results are present at the TQM review.

REFERENCE DOCUMENTS

897035	EHS EMS Specifications
897036	Operational Control Summary
897037	Contract Service Laboratories for EMS
990031	PMs and Procedures (Plant Services) Systems
897039	Environmental Aspect Analysis Procedure
895729	Calibration Procedures

4.5.2 EVALUATION OF LEGAL COMPLIANCE

OBJECTIVES

To define, evaluate and maintain a system to assess relevant legal requirements and compliance status to the applicable requirements for Palm Bay manufacturing.

REQUIREMENTS:

A team approach consisting of quality, plant services, EMS engineering and other applicable support personnel is used to conduct a comprehensive site audit/self assessment for relevant regulatory and customer requirements for environmental impact review.

REFERENCE DOCUMENTS

240113	Internal Audit Procedures
897035	Environmental Management System
897036	Operational Control Summary



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4.5.3 NONCONFORMANCE, CORRECTIVE AND PREVENTIVE ACTION

OBJECTIVE:

To establish and maintain procedures for defining responsibility and authority for handling and investigating nonconformance, taking action to mitigate any impacts caused and for initiating and completing/documenting corrective actions to prevent reoccurrence.

Identify potentials for an environmental impact situation and implement preventive action plans.

REQUIREMENTS:

Palm Bay maintains procedures for the assessment, reporting, analysis and corrective actions of environmental related problems.

The responsible personnel will review the reported problems and assign the responsibility for analyzing the problem, determining its root cause, and initiating corrective actions. The responsible personnel also monitor implementation and will verify the effectiveness of the corrective actions.

Employees or Customers can request corrective actions as a result of a detected non-conformance using the same system described above.

Preventive actions addressing potential non-conformities are documented and tracked using the same system.

REFERENCE DOCUMENTS

240113	Internal Quality Audit Procedures
990032	Plant Services Corrective and Preventive Action Procedures



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4.5.4 CONTROL OF ENVIRONMENTAL RECORDS

OBJECTIVE:

To establish and maintain procedures for the identification, storage, protection, maintenance retrieval, retention and disposal of environmental records that document results achieved, provides evidence of activities performed or as required to fulfill legal requirements.

REQUIREMENTS:

Environmental records are identified, maintained, and controlled to make them readily available for review.

REFERENCE DOCUMENTS

880037 Environmental Document Retention Guidelines

240113 Internal Quality Audit Procedure

Note: Area specific record requirements are included in the applicable process procedure.

4.5.5 INTERNAL ENVIRONMENTAL MANAGEMENT SYSTEM AUDIT

OBJECTIVE:

To establish and maintain programs and procedures for periodic Environmental Management System audits to determine the EMS compliance to ISO14001:2004 and to legal requirements.

REQUIREMENTS:

The environmental management systems and operations described in this document are periodically and systematically scheduled and reviewed by qualified personnel to ensure their effectiveness and continued suitability in meeting the requirements.

REFERENCE DOCUMENTS:

240113 Internal Quality Audit Procedure

897035 EHS/EMS Specification



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4.6 MANAGEMENT REVIEWS

OBJECTIVE:

The TQM Steering Committee is defined as top management and reviews the suitability, effectiveness, and conformance to the EMS described in this manual.

REQUIREMENTS:

The review will be conducted at least once per fiscal year and include the following minimum topics.

- Environmental Objectives
- Internal Audit Results and Compliance Evaluations
- Applicable Customer Audits/Surveys or by Compliance Agencies
- Environmental Policy
- Concerned external parties (e.g./ community concerns/issues)
- Continual Improvement status as applicable
- Needs for change to the EMS system based on
 - Lessons learned from incidences
 - Production Changes
 - Advances in Science and Technology
- Follow-up from previous reviews

Review records

- Management Review records are defined as the meeting minutes and all data presented. The records shall be maintained for a minimum of five years.
- The records shall include attendance, meeting minutes, and relevant supporting documentation.
- Action items in the minutes shall provide the path for corrective action and follow-up.
- Electronic records shall be maintained on the shared drive accessed from each server. The TQM leader and a designated alternate shall have read/write privileges for records maintenance. All other REA personnel shall have read only access to the shared drive
- The TQM leader or designated alternate has the responsibility for record disposal at any time after the minimum retention time is completed.

REFERENCES DOCUMENTS:

EMPM-PB-001 Environmental Policy and Objectives



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CHART A RESPONSIBILITY AND AUTHORITY

Responsible Personnel	Responsibility	Authority
TQM Steering Committee	<ul style="list-style-type: none"> • Define Policy and Objectives • Define Responsibility and Authority • Provide Adequate Resources to accomplish EMS objectives • Conduct Management Reviews • Appoint Management Representative for ISO 14001 	<ul style="list-style-type: none"> • Take actions to ensure the EMS is maintained to improve site environmental performance and minimize environmental impact to stakeholders.
(ISO 14001 Management Representative)	<ul style="list-style-type: none"> • Ensure ISO 14001 and Environmental Policy Manual requirements are implemented and maintained • Present EMS updates to management through TQM Steering Committee 	<ul style="list-style-type: none"> • Recommend and implement changes to the Environmental Manual and Policy
Internal Quality / EMS Auditors	<ul style="list-style-type: none"> • Perform audits on the EMS as per ISO 14001 • Report results • Monitor corrective actions 	<ul style="list-style-type: none"> • Take appropriate action to audit discrepancies
Product and Process Engineers Plant Services / EHS Engineers Section Leaders / Managers/ Technicians and Operators	<ul style="list-style-type: none"> • Set specifications for product / process to achieve environmental objectives and targets • Develop and upgrade product and processes considering environmental performance • Ensure that Palm Bay's objectives are implemented, monitored, and actions taken • Maintain production equipment in excellent working condition • Provide technical direction for process operation • Process products per specification • Compliance with Federal, State and local environmental laws and regulations. • Conservation of natural resources and energy. • Minimization of waste through reuse, recycling and other environment management practices. • Documenting, implementing and maintaining a system to assure and verify compliance with this policy. • Train, sensitize, and empower employees to minimize impact of their work on the environment. • Establishing objectives for the continuous improvement of the environmental management system and the prevention of pollution. 	<ul style="list-style-type: none"> • Make decisions on product and process quality considering environmental performance • Recommend/specify corrective actions • Take actions to ensure EMS standards are met • Ensure corrective actions are implemented • Shut down a process not meeting the specification • Shut down or release equipment