

ABENGOA BIOENERGY

ABENGOA BIOENERGY CORPORATION



Science. Solutions. Service.

ISO and Ethanol: The User's Perspective

Overview

- ✦ Introduction to ISO
- ✦ Applicable Standards to Ethanol
- ✦ Benefits of an ISO Certified Workplace.
- ✦ Commitments
- ✦ Summary

Introduction to ISO

- ✦ International Organization for Standardization (ISO)
- ✦ Established in 1926 as the International Federation of the National Standardizing Associations (ISA).
- ✦ ISA was disbanded in 1942; reestablished in 1946 as ISO

Introduction to ISO Cont'd

- ✦ ISO is a network of the national standards institutes of 157 countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system.
- ✦ Intended to facilitate the international coordination and unification of industrial standards.
- ✦ ISO provides the framework around which you build your "Management System".

Standards Applicable to Ethanol

- ✦ ISO 9001:2000
 - ✦ Quality Standard;
 - Quality Management System
- ✦ ISO 14001:2004
 - ✦ Environmental Standard;
 - Environmental Management System
- ✦ OHSAS 18001:1999
 - ✦ Safety Guideline;
 - Safety Management System

Benefits of an ISO Certified Workplace

✦ For the Employee

- ✦ Communication
 - Bottom up / top down communication
- ✦ Resources
 - Adequate resources are required
- ✦ Established Procedures / Standards
 - Procedures should represent reality
- ✦ Continuous Improvement
 - Employees encouraged to effect change

Benefits of an ISO Certified Workplace Cont'd

✦ For the Business

- ✦ Established Management System
 - Bottom up / top down communication
- ✦ Established Procedures / Standards
 - Consistency between groups of employees / facilities
 - Allow for employee training in a consistent manner
- ✦ Audits
 - Identify areas of ineffectiveness and procedure deviations
 - Instill the need for adherence to standards
- ✦ Corrective / Preventative Actions
 - Corrective - Correct known deficiencies
 - Preventative - Identify and correct potential deficiencies
- ✦ Vendor Quality
 - Vendor Evaluations
 - Quality Surveys
- ✦ Recognized by Federal Agencies
 - EPA Promotes Certification to the Environmental Standard

Benefits of an ISO Certified Workplace Cont'd

✦ For the Customer

- ✦ Established Quality Standards
 - Externally audited on an annual basis
 - Certification required
- ✦ Quality Guarantee
 - Peace of mind
- ✦ Customer Satisfaction
 - Periodic measurement
 - Requires customer feed back and documented response
 - Continual improvement

Benefits of an ISO Certified Workplace Cont'd

✦ For the Regulator

✦ Established Environmental Standards

- Environmental awareness / training
- System is externally audited on an annual basis
- Periodic measurement
- Continual improvement

Commitments

⊕ Financial Commitment

- ⊞ Human resources
 - New responsibilities
 - System maintenance
 - Annual training
- ⊞ Registration / Recertification
 - Initial
 - Annual thereafter

Commitments Cont'd

✦ Management commitment

▣ Support / Integration

- ISO management representative
- Management review
 - Communication
- Continuous change
- Adherence to procedure

Commitments Cont'd

✦ Cultural commitment

✦ Bottom-Up acceptance

- Documentation
- Procedural driven
- Continual improvement
- Acceptance of change

Why ISO?

- ✦ Internationally Recognized
- ✦ Product Guarantee
- ✦ Commitment to Improvement

Thank You!

Source: <http://www.iso.ch/iso/en/ISOOnline.frontpage>