


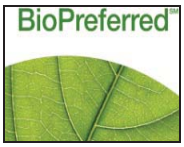












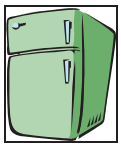

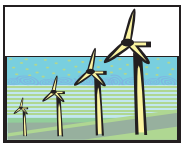

SOUTHERN REGIONAL RESEARCH CENTER

ENVIRONMENTAL MANAGEMENT SYSTEM

June 2011 until June 2012

Southern Regional Research Center's
Environmental Management System

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Southern Regional Research Center's
Environmental Management System

Agricultural Research Service

Research, Education, and Economics
United States Department of Agriculture

SUBJECT: Center Director's Support
SRRC Environmental Management System (EMS) 2012 Policy Statement

TO: SRRC Personnel

FROM: Dr. Thomas E. Cleveland /s/
Center Director

The policy of the Southern Regional Research Center (SRRC) continues to fully support and comply with Executive Order (EO) 13514, "Federal Leadership in Environmental, Energy, and Economic Performance," which was signed by President Obama on 5 October 2009. EO 13514 requires Federal agencies to set a 2020 greenhouse gas emissions reduction target within 90 days; increase energy efficiency; reduce fleet petroleum consumption; conserve water; reduce waste; support sustainable communities; and leverage Federal purchasing power to promote environmentally-responsible products and technologies. This EO does not rescind/eliminate the requirements of EO 13423, instead it expands on the energy reduction and environmental performance requirements (Sustainability requirements) for Federal agencies.

Executive Order (E.O.) 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" requires SRRC to continually develop/revise and implement an EMS. An EMS is the framework that allows our organization to consistently address the effects its operations may have on the environment. The foundation of a successful EMS at the SRRC includes the development and maintenance of an effective policy statement and education of our employees. SRRC's conforms to a nationally accepted standard (ISO), requiring 2nd party audits every 3 years (outside auditor), requiring 1st party reviews/audits annually using Agency audit checklist, all Non-conformance with the standard requires action plan to correct deficiency(s).

The attached policy statement establishes the foundation of a successful EMS at the SRRC. David Daniels will coordinate the SRRC efforts towards the implementation of our Environmental Management System.

I challenge each of you to be better stewards of our environment and make pollution prevention and the concept of Sustainable an essential part of your daily operational decision practices.

Director Signature: _____

Date: _____

Center Director's Office
Southern Regional Research Center
New Orleans, Louisiana

Southern Regional Research Center's Environmental Management System "Policy Statement"

It is the policy of the United States that Federal agencies conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and **sustainable** manner.

The Southern Regional Research Center, SRRC, conducts research to develop solutions to agricultural problems. In conjunction with this mission, the SRRC is committed to protecting human health and the environment; meeting or exceeding Federal, State, and local laws, regulations, codes, and guidelines; and employing sustainable pollution prevention practices. Whenever feasible, the SRRC will utilize pollution prevention and sustainable concepts/initiatives as the means for achieving compliance.

The Southern Regional Research Center continues to minimize our impacts and continually improve our environmental by implementing Executive Order 13514 "Federal Leadership in Environmental, Energy, and Economic Performance", and following Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management", The Energy Policy Act of 2005, and The Energy Independence and Security Act. SRRC will utilize our EMS' as the means to monitor/document progress towards meeting environmental compliance and pursue progress on the sustainability goals.

Executives Orders and Energy Laws that the Federal Government must follow:

1. Executive Order 13514 "Federal Leadership in Environmental, Energy, and Economic Performance"

Guidance, Recommendations, and Plans:

- Measure report and reduce green house gas emissions from direct and indirect activities
- Conserve and protect water through efficiency reuse and storm water management
- Reduce potable water consumption intensity by 2% per year through FY 2020 or 26% by the end of FY 2020 from a FY 2007 baseline
- Reduce industrial, landscaping and agricultural water consumption by 2% annually or 20% by the end of FY 2020 from a baseline of FY 2010
- Eliminate waste, recycle, and prevent pollution
- Divert at least 50% of nonhazardous solid waste including construction waste and demolition debris by the end of FY 2015
- 95% of new contract actions for products and services should use energy efficient, water efficient, bio-based, environmentally preferable, EPEAT certified, non-ozone depleting, recycled content, and non-toxic/less toxic alternatives
- Promote electronics stewardship
- Beginning in 2020, design all buildings to be zero-net-energy by 2030
- Strengthen viability and livability of communities in which federal facilities are located
- Consider energy impacts and alternative energy in NEPA EAs

In addition to guidance, recommendations, and plans which are due by specific dates, EO 13514 lays out the following numerical targets for agencies:

- Reduce petroleum consumption by 2% per year through FY2020 (applies to agencies with fleets of more than 20 vehicles) (Baseline FY2005)
- Reduce by 2% annually:
  - Potable water intensity by FY2020 (26% total reduction) (Baseline FY2007)
  - Industrial, landscaping, and agricultural water intensity by FY2020 (20% total reduction) (Baseline FY2010)
- Achieve 50% or higher diversion rate:
  - Non-hazardous solid waste by FY2015
  - Construction and demolition materials and debris by FY2015
- Ensure at least 15% of existing buildings and leases (>5,000 gross sq ft) meet the Guiding Principles by FY2015, with continued progress towards 100%
- Ensure 95% of all new contracts, including non-exempt contract modifications, require products and services that are energy-efficient, water-efficient, bio-based, environmentally preferable, non-ozone depleting, contain recycled-content, non-toxic or less-toxic alternatives

Non-numerical targets that agency must reach, including:

- Increase renewable energy and renewable energy generation on agency property
- Pursue opportunities with vendors and contractors to reduce GHG emissions (i.e., transportation options and supply chain activities)

- Reduce building energy intensity
- Ensure all new Federal buildings that enter the planning process in 2020 and thereafter are designed to achieve zero-net-energy standards by 2030
- Use low GHG emitting vehicles, including AFVs, and optimize the number of vehicles in agency fleets
- Implement water management strategies including water-efficient and low-flow fixtures
- Implement source reduction to minimize waste and pollutant generation
- Decrease use of chemicals directly associated with GHG emissions
- Participate in transportation planning and recognize existing infrastructure in regions / communities
- Ensure procurement preference for EPEAT-registered electronic products

Specific management strategies to ***improve sustainability***:

- Develop and implement innovative, agency-specific policies and practices to reduce scope 3 GHG emissions in agency operations
- Manage existing buildings to reduce energy, water, and materials consumption
- Implement and achieve objectives in EPA's Storm water Management Guidance (§14)
- Reduce paper use and acquire paper containing at least 30% postconsumer fiber
- Minimize the acquisition, use, and disposal of toxic and hazardous materials
- Employ environmentally sound practices for the disposition of all agency excess or surplus electronic products
- Procure Energy Star and FEMP-designated electronic equipment
- Continue implementation of existing EMS programs.

2. Executive Order 13423 "Strengthening Federal Environmental, Energy, and Transportation Management"

Guidance, Recommendations, and Plans:

- Use the 5 guiding principles and incorporate into all new designs and remodeling

Numerical targets for agencies

- Reduce energy consumption 3% per year
- Reduce potable water consumption 2% per year based on 2007
- Reduce fleet petroleum consumption by 2% annually through 2015
- Purchase or produce renewable energy Renewable Energy means energy produced by solar, wind, biomass, landfill gas, hydrokinetic, ocean (including tidal, wave, current, and thermal or geothermal resources.
  - 3% of electric cost 2006-2009
  - 5% of electric cost 2010-2012
  - 7.5% of electric cost in 2013

Non-numerical targets that agency must reach

- Reduce fossil fuels, increase alternative fuels, and purchase AFVs and hybrid
- Purchase Energy Star® and FEMP designated energy efficient products

- Practice electronics stewardship in acquisition, use, and disposal. Use the EPEAT website for procurement
- Purchase bio-based products
- Reduce ozone depleting compounds
- Reduce hazardous chemicals

Specific management strategies to ***improve sustainability***

- Have 15% of existing building inventory sustainable by 2015
- Recycle and purchase recycled products
- Use beneficial landscaping
- Use Environmental Management Systems
- Incorporate sustainability into lease provisions

3. Energy Policy Act of 2005

- Install advanced electric meters where cost effective - 10,000 SF or larger buildings
- New buildings must be 30% more efficient than ASHRAE 90.1-2004
- Routinely use alternative fuels in dual fueled vehicles

4. Energy Independence and Security Act

- Reduce petroleum consumption in vehicles 20% by 10/1/2015 from a 2005 baseline
- Increase vehicle alternative fuel use 10% by 10/1/2015 from a 2005 baseline
- Increase use of hybrids, Neighborhood Electric Vehicles and more fuel efficient vehicles
- Have at least one renewable fuel pump at each Federal fueling center
- Have energy efficiency and renewable energy in lease language
- Use energy efficient new and replacement lighting and bulbs
- Reduce energy consumption in buildings by 30% by 2015
- Have an energy manager for each facility. The energy manager will perform facility energy and water surveys and re-commissioning every 4 years
- Reduce fossil fuel generated energy consumption in new buildings and major renovations by:
  - 55% in 2010
  - 65% in 2015
  - 80% in 2020
  - 90% in 2025
  - 100% in 2030
- Use a green building certification system
- Install advanced meters for natural gas and steam in buildings 10,000 SF or larger by 2016 where cost effective
- Lease only Energy Star® buildings over 10,000 SF
- Provide solar hot water heaters for 30% of hot water demand in new buildings where cost effective
- Purchase appliances requiring only 1 watt of standby power
- Purchase Energy Star® and FEMP designated energy efficient products

The Southern Regional Research Center's Plan to Implementing Executives Orders and Energy Laws

Maintaining a policy of commitment to environmental excellence

Commitment: It continues to be the policy of the SRRC to demonstrate its commitment to environmental protection and management through the following:

- Adherence to applicable regulations of Federal, State, and local Governments, Policies and Procedures of the U.S. Department of Agriculture and Agricultural Research Service, and Executive Orders, and
- Advancement of stewardship of natural resources by using sound management systems and conducting research to reduce impacts of agricultural production in the MSA, integral with the Pollution Prevention Program Executive Order 13514 and 13423 are the foundation of this policy

Develop Annual Goals, Objectives, and Targets to advance the Southern Regional Research Center's Program performance in terms of both regulated and unregulated impacts

- Purchase smaller 250 ton high efficiency Trane Centrifugal Water Chiller to be used in mild weather seasons, **(Engineering Office),** should be installed before mild weather in 2012.
- An inventory of R22 equipment was taken **(EMS Coordinator and Contractor by Nov 14, 2001)** and sent to Area Office. This equipment will be replaced with equipment using ozone-friendly HCFC refrigerants when feasible. Source of information can be found at: http://www.epa.gov/ozone/title6/phaseout/22phaseout.html. The goal is to eliminate this equipment and implement this guidance throughout the Mid South Area.
- Perform a first party environmental audit. **(EMS Coordinator).**
- "Icynene Insulation"; Bio-based spray foam insulation to the "Administration Wing" Attic". **(Engineering Office),** should be completed by December, 2011. This will improve "Indoor Air Quality" for those suffering from allergies, asthma or other respiratory problems, offers the ability to completely seal the building envelope. This allows SRRC to develop a controlled indoor environment (design our heating and cooling equipment to maximize air quality). Humidity can be better controlled so to eliminate the health concerns about mold and mildew.
- Convert all of the remaining old magnetic T12 ballast luminaries with electronic T8 luminaries and when possible install T-5. **(Engineering Office),** awarded a contract to replace these this year.
- Replace defective steam traps with more reliable ones. **(Engineering Office),** replace two as of Nov, 2011.
- Continue to improve and expand the SRRC recycling through training and communication and proceeds that the location can now keep. **(EMS-Recycling Committee).**
- Continue to educate employees on acquisition of recycled and recyclable products and environmentally preferable products and services through reminder e-mails. **(EMS-Procurement Committee).**

Consider Environmental Impacts when making Policy, Planning, Purchasing, and Operating Decisions

- **Affirmative Procurement**: An Affirmative Procurement Program has been established at the SRRC. This program requires all credit card holders to be trained in their responsibilities. RCRA 6002 insures compliance with the requirements established by the EPA for procurement of environmentally preferable products.
- **EMS Committee:** This committee will annually re-evaluate the Location's environmental aspects and impacts based on current and new operations. The goal will be to concentrate on incorporating systems and procedures to eliminate or minimize any negative impacts to the environment. Necessary revisions will be incorporated into the SOP of the operation, and written report will be complied and filed in the Location's Safety Office.

- **NEPA Compliance**: All elements of the National Environmental Policy Act are considered to insure full compliance. Any construction projects at the SRRC undergo an environmental analysis before construction begins. Repair and Maintenance (R&M) Projects are analyzed on an individual basis by the Location Coordinator, and if appropriate, a Categorical Exclusion (CATEX) decision is made by the Area Director. All R&M Projects and other construction projects not qualifying for the CATEX will undergo either an Environmental Assessment or Environmental Impact statement, whichever is pertinent

Identify and Comply with Pertinent Requirements in Federal, State, and Local Laws and Regulations; Permits; Department of Agriculture, Agricultural Research Service, and MSA Policies and Procedures; and Industry Codes that the SRRC must adhere to

- **Environmental Compliance:** Failure to comply with legal requirements and Executive Orders can have serious consequences for the SRRC, the MSA and the Agency. Line management accountability for environmental performance is an integral component of this Policy. All SRRC personnel must act within the scope of their duties to be eligible for the legal protection of the Agency. Violation of any Federal, State, or local law or regulation is not within the scope of any employee's duties. Violations can result in civil or criminal actions and disciplinary action up to and including removal from the Federal Service

- **Policy:** It is the policy of the United States that Federal agencies conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and sustainable manner

- **Goals for Agencies:** The head of each agency shall:

  Improve energy efficiency and reduce greenhouse gas emissions of the agency, through reduction of energy intensity by (i) 3 percent annually through the end of fiscal year 2015, or (ii) 30 percent by the end of fiscal year 2015, relative to the baseline of the agency's energy use in fiscal year 2003;

  Ensure that (i) at least half of the statutorily required renewable energy consumed by the agency in a fiscal year comes from new renewable sources, and (ii) to the extent feasible, the agency implements renewable energy generation projects on agency property for agency use;

  Beginning in FY 2008, reduce water consumption intensity, relative to the baseline of the agency's water consumption in fiscal year 2007, through life-cycle cost-effective measures by 2 percent annually through the end of fiscal year 2015 or 16 percent by the end of fiscal year 2015;

  Require in agency acquisitions of goods and services (i) use of sustainable environmental practices, including acquisition of bio-based, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and (ii) use of paper of at least 30 percent post-consumer fiber content;

  Ensure that the agency (i) reduces the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of by the agency, (ii) increases diversion of solid waste as appropriate, and (iii) maintains cost effective waste prevention and recycling programs in its facilities;

  Ensure that (i) new construction and major renovation of agency buildings comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (2006)*, and (ii) 15 percent of the existing Federal capital asset building inventory of the agency as of the end of fiscal year 2015 incorporates the sustainable practices in the Guiding Principles;
  Ensure that, if the agency operates a fleet of at least 20 motor vehicles, the agency, relative to agency baselines for fiscal year 2005, (i) reduces the fleet's total consumption of petroleum products by 2 percent annually through the end of fiscal year 2015, (ii) increases the total fuel consumption that is non-petroleum-based by 10 percent annually, and (iii) uses plug-in hybrid (PIH) vehicles when PIH vehicles are commercially available at **3920 Federal Register** / Vol. 72, No. 17 / Friday, January 26, 2007 / Presidential Documents a cost reasonably comparable, on the basis of life-cycle cost, to non-PIH vehicles; and

  Ensure that the agency (i) when acquiring an electronic product to meet its requirements, meets at least 95 percent of those requirements with an Electronic Product Environmental Assessment Tool (EPEAT)-registered electronic product, unless there is no EPEAT standard for such product, (ii) enables the Energy Star feature on agency computers and monitors, (iii) establishes and implements policies to extend the useful life of agency

electronic equipment, and (iv) uses environmentally sound practices with respect to disposition of agency electronic equipment that has reached the end of its useful life.

Request the Necessary Resources to successfully carry out our Goals, Objectives and Targets

- **Resources:** In order to successfully carry out our goals, objectives, and targets of our EMS, the SRRC must request the necessary resources. One way this is accomplished is through the Annual ARMP process. During the ARMP process, the SRRC engages in an extensive review at the Location level followed by a review at the Area level. Requests are made for the following pertinent Programs:

  - Hazardous Waste Disposal/Removal
  - Employee Assistance Program
  - Occupational Medical Surveillance Program
  - Safety and Health Training
  - Personal Protective Equipment
  - Safety and Health Equipment

Making personnel aware of their environmental roles and responsibilities, providing appropriate training, and holding employees accountable for their performance and actions, including recognizing them for outstanding performance

- A copy of the SRRC EMS plan will be posted in the mailroom and electronic copy will be posted on the SRRC's intranet
- Informational emails which provide EMS awareness information will be developed and distributed to Location personnel
- The EMS Coordinator shall direct personnel to various types of EMS training, but specifically it is a requirement for all employees to complete the awareness training Online at Ag-Learn
- All new employees receive new employee orientation which contains a segment on environmental management and the Location's environmental management system
- The MSA has in place procedures for recognizing employees for outstanding performance through a variety of awards. Also, the SRRC plans to issues an annual EMS award which includes procedures for nominating employees for outstanding performance in environmental management

Effectively communicating with employees, partners, stakeholders, customers, and the general public, our commitment to the environment and soliciting their input in developing and achieving our goals and objectives.

- **Right-To-Know and Pollution Prevention:** The SRRC informs the public and its employees of possible sources of pollution resulting from facility operations through timely planning and reporting under the Emergency Planning and Community Right-to-Know Act (EPCRA) and through collection of chemical inventories and Material Safety Data Sheets (MSDSs)
- **Pollution Prevention** program is all-encompassing and includes nutrient management, chemical management, sustainable agriculture, energy conservation, research related to reducing the impacts of agricultural production on the environment within the Mid South Area, and education/outreach activities
- **Location Safety Meetings –** EMS is a topic at all (Bi-monthly) Safety Committee meetings

Routinely monitoring our environmental operations and conducting periodic inspections, audits, and reviews to ascertain that we meet applicable standards and to evaluate our program effectiveness

- **EMS Review and Revision:** It is the policy of the MSA that the Area and Location EMS's be reviewed annually on or before June 30, beginning June, 2006. Necessary revisions should be incorporated and a written report should be compiled. At the SRRC, committee members of the EMS will conduct a first party audit annually

- **Environmental Audit –** The Location has conducted a precursory environmental audit and used that information to enhance the Location EMS. Also, during the "Annual Safety Inspection" by Mr. Darrell Williamson, a second party audit is completed annually
- **Annual Safety Inspections –** Each Location is inspected at least once annually by Area Safety, Health and Environmental personnel. Within each written report of annual Area "Safety" inspections, EMS is listed as a heading with observations, comments, and/or discrepancies
- **Additionally,** during Location self-inspections, environmental elements receive focus and consideration
- **CARE Team Reviews –** Periodic reviews are conducted by CARE Teams

Correcting identified deficiencies in a timely manner and taking appropriate steps to prevent their recurrence.

- **Environmental Audit Response –** After completing the latest environmental audit, SRRC began to immediately address issues. Sound environmental management principals are employed to engage in corrective action and to initiate new programs if needed
- **Safety Inspection response –** When environmental issues are noted during annual inspections, timetables are established for corrective action. Recommendations and or directives are issued to prevent recurrence

Clearly documenting and reporting the progress and achievements related to this policy.

- **Written Report after Annual Review** – After the review of the EMS, conducted annually on or before June 30 (beginning June 30, 2006) a written report is prepared which clearly documents the progress and achievements related to the respective EMS

Evaluation of this Policy Statement will be conducted annually and revised if necessary.

Policy Statement will be evaluated annually and revised if necessary.

The Policy Statement will remain posted on the Location's Safety Bulletin Board for the viewing purposes of employees and contractors.

ADDITIONAL ELEMENTS AND PROGRAMS IN THE SRRC EMS

- **Environmentally and Economically Beneficial Landscaping:** Cost-effective and environmentally sound landscaping practices are employed to reduce adverse impacts to the environment. The policy of the MSA is to use native vegetation in landscaping projects. Because native trees, plants, grasses, etc. are endemic to the environment, a more natural impact results from their use. Naturally occurring vegetation is situated and located within SRRC facilities to need less watering, maintenance, and other activities that have negative connotations regarding environmental impact
- **Recycling Program:** SRRC strives to establish and maintain recycling programs for any recyclable material. Special focuses are placed on catalogs/magazines, newspaper, paper, batteries, metals, oils, printer cartridges, aluminum cans and plastics
- **Reduction in Ozone-Depleting Substances:** The SRRC has practically eliminated its use of ozone-depleting substances. The remaining equipment, which uses EPA-approved R-12 refrigerant, will be phased out considering life-cycle length and available funds
- **Toxic Chemical Release Reduction**: The SRRC reduces its releases and transfers of toxic chemicals through innovative pollution prevention and effective facility management and acquisition and procurement practices
- **Toxic Chemical and Hazardous Substance Use Reduction:** The SRRC reduces the use of specifically selected toxic chemicals, hazardous substances, and pollutants through identification of proven substitutes and established or advanced facility management practices. The SRRC has specifically targeted the following five chemicals:

- Mercury
- Cadmium
- Lead
- PCBs
- Naphthalene

- Utilization of Bio-based Products**:** Whenever possible and feasible, the SRRC utilizes bio-based products including the following:
  - Bio-diesel in backup generators and other diesel fueled equipment.
  - Lubricants, oils, and other petroleum products.
  - Carpet and other building materials.
  - Cleaning supplies.
  - Recycled paper products.

- Pesticide Program: It is the policy of the SRRC to comply with all Federal, State and local laws governing the use and application of pesticides. Employees engaged in pesticide application are required to be trained and certified according to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Pesticide use and storage is strictly monitored and SRRC has written policies and/or standard operating procedures within specific pesticide programs.

- Chemical Hygiene Program: The SRRC has initiated laboratory chemical hygiene programs. The utilization of written chemical hygiene plans and Location Chemical Hygiene Officers supports chemical management, hazardous waste management and contributes to waste minimization.

- Infectious Waste/Biological Waste**:** The SRRC labs that generate biological waste have programs in place to properly dispose of that waste. Pertinent Federal, State and local laws are strictly adhered to.

- Radiological Safety Program: At the SRRC, Radiological Safety Programs are in place. The Location Radiological Protection Officer is appointed by the Location Coordinator and the Radiological Officer routinely interacts with the USDA Radiation Safety Office to insure compliance with all pertinent Federal, State and Local regulations. Proper maintenance and disposal of radiological material is a high priority at all Locations utilizing radiological material in research.

Southern Regional Research Center's
Environmental Management System

Recommendations/Responsible Party for Southern Regional Research Center's Environmental Management Systems (EMS) 2011/2012

- Purchase smaller 250 ton high efficiency Trane Centrifugal Water Chiller to be used in mild weather seasons, **(Engineering Office),** should be installed before mild weather in 2012.
- An inventory of R22 equipment was taken **(EMS Coordinator and Contractor by Nov 14, 2001)** and sent to Area Office. This equipment will be replaced with equipment using ozone-friendly HCFC refrigerants when feasible. Source of information can be found at: http://www.epa.gov/ozone/title6/phaseout/22phaseout.html. The goal is to eliminate this equipment and implement this guidance throughout the Mid South Area.
- Perform a first party environmental audit. **(EMS Coordinator).**
- "Icynene Insulation"; Bio-based spray foam insulation to the "Administration Wing" Attic". **(Engineering Office),** should be completed by December, 2011. This will improve "Indoor Air Quality" for those suffering from allergies, asthma or other respiratory problems, offers the ability to completely seal the building envelope. This allows SRRC to develop a controlled indoor environment (design our heating and cooling equipment to maximize air quality). Humidity can be better controlled so to eliminate the health concerns about mold and mildew.
- Convert all of the remaining old magnetic T12 ballast luminaries with electronic T8 luminaries and when possible install T-5. **(Engineering Office),** already awarded a contract to replace these this year. Replace old T-12/VHO fluorescent light fixtures containing magnetic ballasts with new high bay T-5 fluorescent light fixtures that will save energy and utility costs plus improve the lighting in large areas. The new light fixtures will save over $2,000 annually and pay for themselves in a little less than 1 year. However, if replace T-12 lamps and magnetic ballasts with T-8 lamps and electronic ballasts and reduce energy consumption by about 30%. Depending on the installation price available, the payback period could be from 1.5 to 5 years.
- Replace defective steam traps with more reliable ones. **(Engineering Office),** replace two as of Nov, 2011.
- Continue to improve and expand the SRRC recycling through training and communication and proceeds that the location can now keep. **(EMS-Recycling Committee).**
- Continue to educate employees on acquisition of recycled and recyclable products and environmentally preferable products and services through reminder e-mails. **(EMS-Procurement Committee).**
- Continue to purchase products that are Electronic Product Environmental Assessment Tool (EPEAT)-registered, ENERGY STAR® labeled, or Federal Energy Management Program (FEMP)- designated equipment. **(EMS-Procurement).** Purchase equipment in the upper 25% of energy efficiency and check the Energy Guide label. The yellow and black Energy Guide labels on appliances can be used to determine how efficient they are compared to other appliances in their category.
- Continue to install occupancy sensors. **(Engineering Office).**
- Rainwater capturing system is being considered for landscaping irrigation. **(Engineering Office).**

The goals and objectives have been prioritized and assigned by the EMS Coordinator.

I approve the above recommendations from the EMS committees and **when feasible** they will have my full support for continual improvement.

Director: _____

Date: _____

Accomplishments in 2010/2011

1. The Safety Officer and Administrative Officer requested the necessary resources to successfully carry out our goals, objectives and targets.
2. Safety Committee- Ensured the SRRC improved on chemical waste minimization.
3. Safety Committee and EMS-Procurement- Ensured continued Affirmative Procurement.
4. All Employees- Maintained programs like Hazardous Waste Management, Chemical Inventory, Waste Minimization, Chemical Sharing and Chemical Hygiene; the Mid South Area insures that chemical management plays a major role in our environmental management system.
5. Supervisors, Safety Officer, Administrative Officer- Ensured correcting deficiencies in a timely manner, and document by pictures, "Hazardous Condition Reports" and emails.
6. EMS-Procurement Committee- Ensured contractor follow the SRRC's EMS.
7. EMS-Procurement- Ensured employees Purchased Energy Star products when feasible/possible.
8. Safety Committee- Ensured Senior managers were aware of any EMS communication or complaints.
9. EMS-Coordinator- Ensured continued EMS sub-committees: EMS-Energy, EMS-Recycling and EMS-Procurement.
10. EMS-Recycling Committee- Improved and expanded SRRC recycling through training and communication.
11. EMS-Coordinator- EMS training for new employees and existing employees.
12. EMS-Procurement Committee- Ensured acquisition of more recycled and recyclable products and environmentally preferable products and services.
13. EMS-Procurement Committee- Ensured continued acquisition/procurement practices for "Beneficial landscaping" to create a positive and natural impact on our environment.
14. EMS-Energy Committee- Continued to educate employees to turn off their lights when not in use and close their blinds at the end of each day.
15. EMS-Energy Committee- Continued to monitors electrical usage thereby measured the operations of significant environmental impacts.
16. Safety Committee- Continued to have employees make suggestion on how to improve the EMS.
17. EMS-Energy Committee- Ensured the old magnetic ballast T12 luminaries are replaced with electronic T8/T5 luminaries.
18. EMS-Energy Committee- Identified and are replacing the remaining equipment using ozone-depleting substances; these will be phased out considering life-cycle length and available funds.
19. Safety Committee and EMS-Coordinator- Expanded on EMS training.
20. EMS-Coordinator- Performed a first party environmental audit.

Accomplishments in 2010/2011 (Continued)

21. EMS Coordinator- Participated in Web based "EMS Training".
22. EMS-Coordinator- Ensured EMS documents are maintained in the Safety office.
23. Safety Committee- Ensured testing and documentation of emergency procedures.
24. EMS-Energy Committee - Continued the "Free Cool Operation" program on cool weather days.
25. EMS-Energy Committee - Ongoing installation of motion sensors in laboratories and offices.
26. EMS-Energy Committee - Programmed Holiday schedule into the "Building Automation System" (B.A.S.) to reduce the ventilation and lighting.
27. EMS-Energy Committee - Installed Environmental Window Tinting.
28. Commissioning was done in October/November, 2010, including balancing.
29. Checked steam traps monthly, replaced two this year.
30. All incandescent lamps in the building have been replaced with CFLs except the elevator cab which has a small wattage bulb.
31. Light levels have been checked in the Administrative Wing.
32. Chillers, boilers and the HVAC system controlled by EMS.
33. Advanced electric meters have been installed.