

**USDA \ ARS Tifton, GA**  
**Environmental Management System 2009 Management Review**

The foundation of the EMS program is established by the location specific EMS manual and policy statement. The EMS program serves three separate research units: Crop Protection and Management Research Unit, Crop Genetics and Breeding Research Unit, and Southeast Watershed Research Unit. The EMS committee developed objectives and targets for 2009 based on our activities, aspects, and impacts. The objectives for 2009 were to reduce the number of mercury containing devices found in federal facilities, revise our end-of-life management policies for electronics, and to determine the feasibility of biodiesel production at the Tifton location. All targets set for FY2009 were achieved.

**I. Significant Environmental Aspect: Priority Chemical Reduction**

**Objective:** Reduce the number of mercury containing devices found in federal facilities.

**Target:** Replace mercury thermostats in federal buildings based on the FY08 inventory.

**Summary:** A survey of all federally owned buildings on the campus and farms for mercury switch thermostats was completed on September 2, 2008. If a building is not listed, then no such thermostats were found there. On August 21, 2009, 19 programmable thermostats and 6 non-programmable thermostats were purchased from the C.C Dickson Company at a cost of \$1458.96. These new mercury free thermostats will replace the older thermostats and the programmable features of most will allow for greater energy savings over time.

| Research Unit | Building No. | No. of Mercury-Switch Thermostats |
|---------------|--------------|-----------------------------------|
| CPMRU         | 2            | 2                                 |
| CPMRU         | 4            | 1                                 |
| CPMRU         | 6            | 1                                 |
| CPMRU         | 8H           | 1                                 |
| CPMRU         | 13           | 1                                 |
| CPMRU         | 15           | 9                                 |
| CPMRU         | 31           | 1                                 |
| CPMRU         | 32           | 2                                 |
| SEWRU         | 16           | 4                                 |
| SEWRU         | 17A          | 1                                 |
| SEWRU         | 35           | 1                                 |
| SEWRU         | 43           | 2                                 |

The location also had a universal waste shipment on November 19, 2008. At a cost of \$829.84, we safely disposed of 450 4 ft. fluorescent bulbs, 36 8 ft. fluorescent bulbs, 15 lb. of NiCad batteries, 50 lb. of alkaline mercury batteries, 311 lb. of sealed lead acid batteries, and 10 lb. of lithium ion batteries. Since that time, items continue to be collected and stored until the next universal waste shipment that is tentatively scheduled for November 2009.

**II. Significant Environmental Aspect: Use of Electronic Equipment**

**Objective:** Participate in the Federal Electronics Challenge

**Target:** Revise our end-of-life management policies for electronics to comply with the mandates of E.O. 13423.

**Summary:** On January 9, 2008, the Tifton location joined the Federal Electronics Challenge (FEC). By joining the FEC, we committed to reduce our environmental footprint by changing the way that we manage electronic assets. The decision was made to continue making progress with electronics reform in FY09 since the FY08 experience with FEC was favorable. The focus for FY09 was electronics end-of-life policies or recycling procedures. The USDA\ARS Tifton Location Electronic Products Reuse, Recycling, and Disposal Directive, TIF-EP-05C, was created to provide clear guidance to personnel on the proper reuse,

recycling, and disposal of electronic products for the various units at the location. The directive was distributed to all employees via email and posted on the EMS website for future reference. One benefit that resulted from the creation of TIF-EP-05C is that it outlined step by step procedures for recycling and disposal of electronic items.

Although we did not apply for an award with FEC for FY09, the progress made in our electronics recycling efforts was still very good as the location end-of life policies were revised. By using FEC guidelines however, we learned that recycling through Tift County Recycling may not be the best means of disposal as federal facilities should have clear documentation of the final destination of anything recycled. We continue to look at UNICOR as a possible vendor for recycling. UNICOR is the vendor of choice for our FEC partnering facility, the Federal Law Enforcement Training Center (FLETC). FLETC has provided us with contact information to UNICOR and offered to include our shipments with theirs if cost becomes an issue for our facility. We will continue to look at these recycling issues in FY10.

### III. Significant Environmental Aspect: Motor Vehicle Activities

Objective: Investigate the feasibility of biodiesel production at the Tifton Location.

Target: Determine diesel usage across the Tifton Location.

Summary: In order to determine the amount of diesel fuel used by the USDA\ARS units in FY08, a records review was conducted. This consisted of reviewing purchase logs and fuel receipts of ARS employees that purchase diesel fuel. Vehicle logs were also reviewed for all on-road diesel vehicles to determine how much on-road diesel was purchased. In addition, fuel records from the research farms of the University of Georgia/College of Agricultural and Environmental Sciences were also reviewed. The UGA requires that all fuel that is pumped from tanks at farms be documented. Therefore, a review of these records provided the amount of diesel fuel consumed by ARS personnel at the farms. The total shown is the best estimate that can be acquired with the records that were kept for fiscal year 2008. The total is a conservative amount due to the fact that some of the fuel consumed to produce the research of the USDA units is not contained in records. For instance, some diesel fuel used for the irrigation of USDA plots on UGA owned farms is not represented because UGA doesn't maintain records that would indicate how much fuel was used to irrigate this type of shared plot.

Tifton Location Diesel Usage FY08 (gallons)

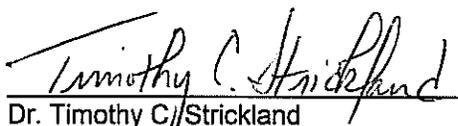
|       |      |
|-------|------|
| CPMRU | 2005 |
| CGBRU | 1912 |
| SEWRU | 671  |
| Total | 4588 |

There was a total amount of 4,588 gallons of petroleum diesel used by the location. Of this amount, 1,627 gallons were for on-road usage and 2,961 gallons were for off-road use in research efforts. This information can be used as a baseline in the future to determine the feasibility of biodiesel production in Tifton if the demand and cost of fuel continues to rise.

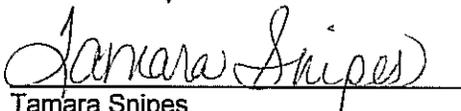
#### FY09 Highlights

- On January 21, 2009, the FEC Bronze Award application package was submitted for our efforts in FY08. In April 2009, we were notified that the Tifton Location had won the Bronze Level Award from the Office of the Federal Environmental Executive through the Federal Electronics Challenge.
- On January 9, 2009, Georgia Power Company provided an energy audit of buildings 1, 16, and 54/55.

- The revised USDA/ARS Tifton Electronics Acquisition and Procurement Directive to include the instructions for the new CATS software was sent to all employees via email and posted on the EMS website.
- The EMS/Safety Audit and Annual Training was held this year from March 10-12, 2009. The audit and training were provided by Beth Anderson, Environmental Protection Specialist and Earl Griffin, Area Safety, Health and Environmental Manager from the area office in Athens. Most employees attended this training. Those that were not in attendance received on line training. All training was completed by June 2, 2009.
- On April 11, 2009, we recycled 50 computers, 36 monitors, 9 keyboards, 21 printers, 11 UPS/backup batteries, 4 scanners, 6 speakers, 3 telephones, 3 fax machines, 4 cameras, 2 copiers, 1 mouse, 2 shredders, 20 pieces of lab equipment, and 1 dictation machine as part of the Tifton Recycles Event. All these items were taken at no cost to the location.
- The USDA/ARS Tifton Location Electronics Products Reuse, Recycling, and Disposal Directive was drafted and distributed to all employees in July 2009. The directive was also posted on the EMS webpage for future reference.
- The Tifton Location Pesticide Operating Procedures was completed on September 15, 2009. This was a first year EMS goal and it was great to finally have a completed manual.
- The EMS Newsletter continued to be produced with three new editions in 2009. The quarterly newsletter is intended to keep employees aware of that is happening or changing with the EMS.
- The location purchased several new vehicles with year end funding to replace older, less fuel efficient models.
- The EMS committee met four times during FY09; October 22, 2008, January 28, 2009, May 8, 2009, and September 17, 2009.

  
 Dr. Timothy C. Strickland  
 Location Coordinator

12/8/09  
 Date

  
 Tamara Snipes  
 Chemist/EMS Coordinator

12/28/09  
 Date