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State of Georgia - AIP Implementation Report
Progress Report

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Atlanta, Georgia

January - March 1996

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g sent to Tonia Smith, ER

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State of Georgia AIP Implementation Report

January - March 1996

Summary

Scope of Work/Objectives

To ensure the citizens of the State of Georgia that health, safety and the environment are being protected through existing DOE programs at the Savannah River Site (SRS), through a vigorous program of independent monitoring and oversight by Georgia officials.

Total Projected Expenditures - \$ 143,745

Approximate Actual Expenditures - \$ 143,745

Emergency Preparedness and Response

Scope of Work/Objectives

GEMA and EPD, in cooperation with DOE, will annually review and update Annex C (Savannah River Site) to the Georgia Radiological Emergency Plan (REP).

GEMA and EPD, in cooperation with DOE, will conduct training for state and local emergency response personnel whose services may be required in the event of a radiological incident at the Savannah River Site.

GEMA, in cooperation with DOE, will test the Emergency Notification Network (ENN), used to notify GEMA and EPD of radiological incidents at the Savannah River Site.

EPD will maintain a capability to respond to non-radiological hazardous materials incidents at the Savannah River Site which may impact on the State of Georgia. EPD, in cooperation with DOE, will upgrade its capability to perform assessments of off-site radiation doses due to airborne or waterborne releases of radioactive materials from the Savannah River Site, and will, on a periodic basis, compare calculational results with DOE.

EPD, in cooperation with DOE, will upgrade its capability to perform field assessments of radioactive materials which may be released from the Savannah River Site, in particular tritium (^3H).

GEMA and EPD, in cooperation with DOE and the Burke County Emergency Management Agency, will maintain and operate a Forward Emergency Operations Center (FEOC). This FEOC will be used by State personnel in the event of

a radiological incident at the Savannah River Site of sufficient severity to warrant the relocation of State personnel to the incident scene.

GEMA, in cooperation with DOE, will maintain and operate a State Emergency Operations Center (EOC) in Atlanta. This EOC will be used by State personnel in the event of an incident at the Savannah River Site affecting the State of Georgia, and will provide backup to the FEOC should the presence of State personnel be required in the field.

EPD, in cooperation with DOE, will maintain and operate a Mobile Radiation Laboratory (MRL) capable of relocation and operation at the state FEOC in the event of a radiological release from the Savannah River Site. The MRL shall also be capable of self-sustained operations at any temporary location in the State, if dictated by monitoring requirements.

GEMA and EPD will participate in periodic radiological emergency response exercises at the Savannah River Site.

GEMA and EPD will conduct periodic meetings of the Radiation Working Group (RWG) to enhance coordination on emergency response issues. Savannah River Site staff are encouraged to participate fully in these meetings.

GEMA and EPD will provide to DOE periodic reports on emergency preparedness and response activities related to the Savannah River Site. This reporting requirement may be satisfied by posting such information on a computer bulletin board and providing DOE access to this system.

Accomplishments

Both the joint DNR/GEMA Communications Center and the Burke County Emergency Management Agency (EMA) participated in monthly tests of the primary and backup Emergency Notification Network (ENN) systems.

Two (2) associates from GEMA attended an exercise planning meeting at Plant Vogtle on January 24, 1996.

Three (3) EPD associates participated in a Consequence Assessment Workshop held at the SRS Consolidated Training Facility on January 23-25, 1996.

One (1) GEMA associate attended the 6th Annual National Radiological Emergency Preparedness (REP) conference in Seattle, Washington February 12-14, 1996. The conference included a presentation by DOE-HQ (EM) regarding the transportation of radioactive waste, including high-level waste, spent fuel and transuranic waste (TRU).

Two (2) EPD associates observed and participated in a single shipment of spent highly-enriched uranium (HEU) research reactor fuel from the Georgia Tech Research Reactor to SRS on February 16-18, 1996.

Four (4) EPD and four (4) GEMA associates participated in the Mirrored Image nuclear terrorism command post exercise (CPX) in Atlanta on March 6-7, 1996. DOE personnel from headquarters, Las Vegas, Sandia National Laboratory and Savannah River Site were vital in the success of this exercise. During this exercise, EPD demonstrated the ability to overlay digital data (in the form of plume outlines and/or footprints) provided by DOE onto MapInfo base maps, and to manipulate the resulting datasets to support decision-making activities.

The EPD Environmental Radiation Program Manager chaired a joint meeting of the SSEB Advisory Committee on Radioactive Materials Transportation and the SSEB Transuranic Waste Transportation Working Group in Nashville, Tennessee on March 13-14, 1996. Topics of discussion at this meeting included activities of the Office of Civilian Radioactive Waste Management (OCRWM), upcoming foreign research reactor and other EM spent fuel shipments (e.g. Brookhaven to SRS, HIFR to SRS), shipments of transuranic waste from SRS and Oak Ridge to the Waste Isolation Pilot Plant (WIPP) in New Mexico and shipments of cesium-137 capsules from Virginia to Hanford.

EPD associates are currently beta-testing the Windows NT version of the SRS Puff-Plume (PFPL) radiological consequence assessment model under Windows 95. As a result of the first round of testing, system programmers changed the user interface to allow the use of screen resolutions of less than 1280x1024 with PFPL.

EPD associates have had several discussions with DOE and Westinghouse associates regarding the upcoming HANDSHAKE II exercise at SRS. Despite the proximity to the 1996 Olympic Games, EPD plans to participate fully in this exercise, including deployment of the Mobile Radiation Laboratory (MRL).

EPD associates completed procurement activities for eight (8) real-time radiation monitoring stations. It now appears that four (4) of these monitors will be installed near Plant Hatch, two (2) near Plant Farley, and at least one (1) monitor will remain in the Atlanta metropolitan area. EPD currently has four (4) monitors operational in the field (one at the Burke County Emergency Management Agency in Waynesboro) and two (2) in the office for testing and acceptance purposes. These systems will provide EPD with the capability of obtaining real-time direct radiation (gamma) measurements for both emergency and routine environmental monitoring needs. EPD has approached DOE-SR with a request for funding to procure additional monitors specifically for SRS during FY97.

EPD associates performed statewide dispatch radio communications tests using Southern LINC handheld radios during March, 1996. Southern LINC is an 800-MHZ trunked radio system build by Southern Company Services (SCS), a subsidiary of the Southern Company. Southern LINC uses the Motorola Integrated Dispatch Enhanced Network (iDEN) system, and covers the entire state of

Georgia (as well as most of Alabama, the Florida panhandle and southeastern Mississippi. EPD testing was successful, and efforts are underway to obtain Southern LINC service for the Environmental Radiation Program and the Emergency Response Program.

Significant Changes from Intended Activities

None

Significant Issues

The State of Georgia is of the opinion that state activities related to current and/or anticipated site-specific transportation activities at SRS should be eligible for reimbursement from DOE, perhaps through the AIP. Examples of such site-specific shipments are:

Shipments of Mark-42 spent fuel assemblies from SRS to Battelle Northwest.

Shipments of foreign research reactor spent fuel to SRS.

Shipments of domestic research reactor spent fuel to SRS.

Shipments to/from SRS as a result of DOE spent fuel management activities pursuant to the Programmatic spent fuel EIS.

Shipments of transuranic (TRU) waste to the Waste Isolation Pilot Plant in Carlsbad, New Mexico.

Recommendations

None

Approximate Actual Expenditures

\$61,747

Environmental Monitoring/Sampling

Scope of Work/Objectives

1. Monitoring of Surface Water and Related Media

a. Surface Water Discharges

EPD will augment its current monitoring program to include continuous sampling downstream of all site streams from which radioactive materials may enter the Savannah River, at U.S. Highway 301 and in Savannah, and upstream of SRS at Augusta. At a minimum, samples will be collected biweekly.

EPD will continue to collect aquatic species (fish) samples at the mouths of SRS site streams, as well as upstream and downstream of the Savannah River Site. EPD will collect fish samples a minimum of twice annually.

EPD, in cooperation with DOE, will continue its current monitoring activities related to aquatic vegetation and sediment from the Savannah River.

EPD, in cooperation with DOE, will review the current monitoring system related to surface water and associated media and will recommend needed improvements. EPD will continue activities related to review of DOE-generated data.

b. Public Drinking Water

1. Port Wentworth

EPD will, in cooperation with the City of Savannah, collect weekly composite water samples at Port Wentworth, and will, at a minimum, analyze such samples for ^3H .

EPD, in cooperation with DOE and the City of Savannah, will review the current monitoring of drinking water at Port Wentworth, and will recommend needed improvements. EPD will continue activities related to review of DOE-generated data.

2. Other Users

EPD, in cooperation with DOE, will, on a periodic basis, determine if additional water users may be effected by discharges from the Savannah River Site, and will recommend modifications to the monitoring program to address these users.

2. Ground Water Monitoring

EPD and DOE will review the current EPD groundwater monitoring system and associated activities in the vicinity of the Savannah River Site and will determine if additional actions or improvements are needed. The review will include examination of the location, depth, sampling practice and quality of the wells used for monitoring. EPD will continue its current activities related to review of DOE-generated groundwater monitoring data.

3. Air Monitoring

To supplement existing DOE monitoring, EPD will establish a minimum of three (3) new air/rain sampling stations in the immediate vicinity of the Savannah River Site, and one (1) air/rain sampling station in the Savannah area.

At a minimum, EPD will collect air samples biweekly at all air sampling stations used to monitor the Savannah River Site.

EPD will establish the capability to monitor for airborne tritium (^3H) at all air sampling stations used to monitor the Savannah River Site.

EPD, in cooperation with DOE, will conduct a review of the current air monitoring system with regard to radioactive materials, and will recommend needed improvements. EPD will continue its current activities related to review of DOE-generated data.

4. Crops and Milk

To supplement existing DOE monitoring, EPD, in cooperation with the Georgia Department of Agriculture, will establish a program to collect milk and crop samples from the 12-county area within the Savannah River Site 50-mile Ingestion Pathway Emergency Planning Zone (EPZ).

EPD will establish a minimum of eight (8) new milk sampling locations and will collect a minimum of one (1) milk sample monthly from each of these stations.

EPD will collect various crop samples at the time of harvest from Richmond, Burke and Chatham counties.

5. Soil and Vegetation / Direct Radiation

EPD, in cooperation with DOE, will review the current environmental monitoring system around Savannah River Site, and will recommend needed improvements.

To supplement existing DOE monitoring, EPD will establish a minimum of eight (8) new soil and vegetation monitoring stations within the 12-county area within the Savannah River Site 50-mile Ingestion Pathway Emergency Planning Zone (EPZ).

EPD will monitor direct radiation at each of the newly established soil/vegetation stations using thermoluminescent dosimeters (TLDs).

EPD will collect quarterly vegetation samples and annual soil samples at each of the new soil/vegetation monitoring locations.

6. Environmental Monitoring Program and Report

EPD will provide to DOE details of the current environmental monitoring program in the vicinity of the Savannah River Site, and will provide DOE the opportunity to collect split samples.

EPD will produce periodic reports of its monitoring and analysis activities and its findings of the quality and effectiveness of environmental monitoring, surveillance and control programs. Such reporting requirements may be

satisfied by posting such data on a computer bulletin board and providing access to this system.

Monitoring activities and analyses shall be governed by applicable state and federal standards and practices.

EPD will participate fully in the Inter-agency Data Exchange working group related to radiological monitoring in the Savannah River basin.

EPD will prepare a plan for improvements to the environmental monitoring program in the vicinity of the Savannah River Site, including a review of the need for real-time radiological measurements; such plans shall be provided to DOE for review and consultation. EPD will provide DOE the opportunity to collect split samples.

Accomplishments

EPD associates exchanged fifty-three (53) thermoluminescent dosimeters (TLDs) in the SRS/VEGP network, and collected ten (10) vegetation samples and seven (7) surface water samples for radiochemical analysis during routine quarterly monitoring.

Through a contractual arrangement with local government, EPD collected sixty-six (66) air filters, sixty-six (66) air cartridges and thirty-three (33) rainwater samples for radiochemical analysis through routine semi-monthly servicing of sampling equipment.

EPD associates collected samples once every four (4) weeks from five (5) surface water monitoring stations on boats at the mouths of SRS effluent bearing streams (Upper Three Runs, Beaver Dam, Four Mile, Steel and Lower Three Runs Creeks) and two (2) land-based surface water monitoring stations at the New Savannah Bluff Lock and Dam (Augusta) and at U.S. Highway 301.

Three (3) EPD associates participated in a meeting with DOE, Westinghouse Savannah River Company (WSRC), EPD and the South Carolina Department of Health and Environmental Control (DHEC) in Aiken, South Carolina on February 6, 1996 regarding radioactive contaminants in fish collected from the Savannah River adjacent to SRS.

Development work for an independent tritium-in-air sampling and analysis capability continues. EPD associates deployed two (2) sampling systems (Waynesboro and River Road), and will be evaluating results from these systems prior to full scale deployment.

EPD now receives electronic copies of the SRS Monthly Radioactive Release Reports via electronic mail, and the Program Manager routinely exchanges

electronic mail with both DOE and WSRC personnel at SRS, as well as DOE Headquarters staff. The Program Manager also utilized electronic mail to exchange graphical information with Sandia National Laboratory (SNL) and the University of New Mexico in preparation for the Mirrored Image exercise. In addition, the Program Manager routinely reviews the content of a number of DOE Internet Sites (e.g. the DOE, DOE-EM, DOE-EH, WIPP, DOE-NV, and DOE-SR home pages). EPD will continue to discuss and foster the electronic exchange and publication of environmental monitoring data and reports, emergency response data, NEPA documents and related information with contacts at SRS.

Significant Changes from Intended Activities

None

Significant Issues

None

Recommendations

None

Approximate Actual Expenditures

\$81,998