

# STRATEGIC PLAN 2002 2007



**Environmental Measurements Laboratory**

**U.S. Department of Energy | Chicago Operations Office | April 2002**

## ***Message From The Director***



*Secretary Abraham has set forward a vision of the Department as one in which DOE enjoys a reputation for excellence. The Environmental Measurements Laboratory is a distinguished government-owned and government-operated (GOGO) laboratory with more than 50 years of a tradition of excellence in environmental radiation and radioactivity applied research. I agree with the Secretary that excellence is achieved by setting high standards of performance, setting priorities and being focused on our mission. During FY 2001, Senior Management met several times to develop a strategic direction for the Laboratory.*

*This Strategic Plan sets broad Goals and associated Objectives intended to guide EML management and staff in conducting our work scope activities, pursuing current and new business portfolios, and enhancing customer relations. Our plan includes a number of Strategic Initiatives that will focus on business and administrative challenges that we believe to be critical to our success as an organization.*

*As a member of the Chicago Executive Committee, I am committed to working together with the leadership of the Chicago Operations Office in a concept we call "One Chicago." We identify ourselves and our work with the One CH principles. We strive to communicate openly, value contributions of our peers and employees, and treat everyone with dignity and respect. We are committed to excellence in our work and to meeting the needs of the public we serve.*

*I am pleased to present this Strategic Plan 2002-2007. I am convinced we are capable of achieving these objectives. We welcome this opportunity to show how the Laboratory plans to meet its mission and support the missions of the Chicago Operations Office, the Office of Environmental Management and the Department.*

A handwritten signature in black ink that reads "Mitchell D. Erickson". The signature is written in a cursive, flowing style.

*Mitchell D. Erickson, Director*

# STRATEGIC PLAN 2002 2007

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## ***Introduction***

EML, as an element of the Chicago Operations Office (CH), utilizes a performance-based management system. The performance-based system integrates strategic planning, performance analysis and evaluation, and resource management. The Strategic Plan provides both the path forward for the Laboratory and also integrates our goals with CH Strategic Goals. It also provides an opportunity for us to share our vision and goals with those we serve. We are committed to providing quality in radiation and radioactivity measurements into the 21<sup>st</sup> Century.



## ***Mission***

EML is a federal technical resource that addresses environmental radiation and radioactivity issues for environmental quality, science and national security.

## ***Vision***

Within its mission, EML:

- ▶ Provides DOE and other federal agencies with an unbiased and responsive technical capability to assure quality in sampling, measurements and analyses, and risk assessments of human exposure to radioactivity and other energy-related pollutants.
- ▶ Conducts scientific investigations and develops technologies related to environmental restoration, site and facility characterization, and environmental surveillance and monitoring.
- ▶ Provides DOE and other federal agencies with an in-house, high quality scientific capability to address important issues related to national security such as nonproliferation.

## ***Core Values***

- ▶ We are customer driven.
- ▶ We value public safety and respect the environment.
- ▶ We believe people are our most important resource and should be treated with fairness, respect and dignity.
- ▶ We value creativity and innovation.
- ▶ We are committed to excellence.
- ▶ We work as a team and advocate teamwork.
- ▶ We recognize that leadership, empowerment and accountability are essential.
- ▶ We pursue the highest standards of ethical behavior.
- ▶ We are good neighbors and model community citizens.



*EML Diversity outing to Chinatown*

## ***Organization Background***

EML is a distinguished government-owned and government-operated (GOGO) laboratory with a rich history in environmental applied research. It is an internationally recognized laboratory for environmental radiation measurements and monitoring systems and Quality Assurance(QA) programs in nuclear measurements. The Laboratory is a direct descendant of the Manhattan Project. Established in 1947 as the Medical Division, its original staff consisted of industrial hygienists and health physicists who assisted Atomic Energy Commission contractors with problems in health protection related to the processing of uranium and beryllium, as well as external radiation exposures.

Throughout the succeeding years, the Laboratory continued to play a major role in the programs of world-wide collection and documentation of radioactive fallout and other pollutants in the atmosphere, on land, and in the sea. In 1996, EML was designated as a DOE Environmental Management (EM) laboratory and shifted its technical focus towards technical support of the Department's Closure Programs.

# Role of EML Today

## Field Technical Support

- ▶ As federal technical experts, EML supports EM closure activities by demonstrating and deploying advanced radiological measurement and survey methods; by assisting in the collection, interpretation and modeling of contaminant data in special low-level situations; and by promoting regulatory and industry acceptance of field radiation measurement technologies.

## National Security

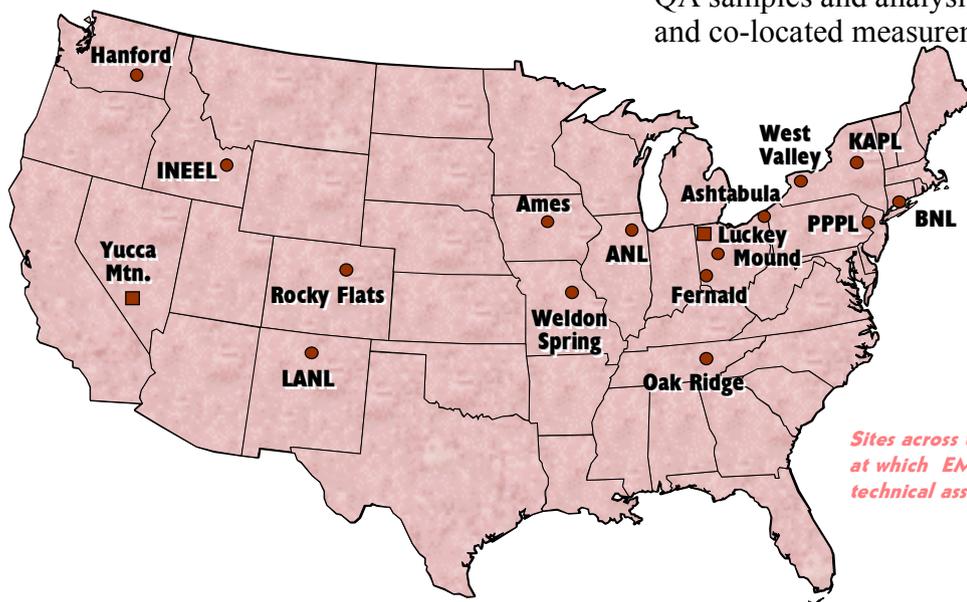
- ▶ EML carries out R&D of field and laboratory based advanced techniques to identify nuclear threats and to provide consultation on environmental measurements and signatures.

## Instruments and Methods Development

- ▶ EML's current efforts in technology development are applied to EM characterization and monitoring for long-term stewardship and national security programs. EML also develops methodology for environmental sampling, low-level radiation field measurements and analytical determination of radionuclide content of environmental media.

## Quality Assurance

- ▶ EML develops QA methodology and implements programs to assess and improve complex-wide performance of field survey measurements and radioanalytical services. EML provides performance testing and intercomparison programs, customer-specific QA samples and analysis, and simultaneous and co-located measurements.



## ***Core Capabilities***

Utilizing its core capabilities in radiation and radioactivity measurements, EML has made valuable contributions to improving analytical measurements and reducing the risks associated with environmental cleanup and other issues facing the Department. Activities to which our core competencies are applied include:

- ▶ Cleanup Criteria
- ▶ Radiation Survey Planning
- ▶ Design and Fabrication of Instruments
- ▶ Real-Time Measurements
- ▶ Laboratory Analyses
- ▶ Sampling of Environmental Media
- ▶ Assessment of Radiation Dose to Humans
- ▶ Measurement Quality Assessment
- ▶ Database Development and Management
- ▶ Program Management



*Recognized capabilities -  
EML-designed instruments  
and EML-developed  
radiochemistry methods*



## ***Technology Partnering***

The Laboratory recognizes its unique resources and their potential to solve technology problems for other entities. EML is committed to cooperation with other DOE laboratories and sites, other federal agencies, universities, private industry and foreign scientific organizations to support the DOE mission, enhance capabilities, and promote technology transfer. EML seeks to provide its expertise in radiation and radioactivity technology on technical assistance teams to address DOE site closure problems. Laboratory R&D collaborations with other DOE laboratories and sites often lead to much broader collaborations with regulators and standards organizations to improve business and operations practices. EML provides test services for radiation and radioactivity related hardware and software. EML actively partners with commercial industry and academia in R&D in an effort to promote the transfer of federally-funded technology and expertise to the private sector.

## ***Facilities***

- ▶ Environmental Chamber
- ▶ Neutron and Gamma-Ray Calibration Facility
- ▶ Pulse Ionization Chambers for Radon Measurements
- ▶ Chemistry Laboratories
- ▶ Gamma-Ray Analysis Laboratory
- ▶ Thermoluminescent Dosimeter Reader Facility
- ▶ Electronics Assembly and Test Area
- ▶ Machine Shop
- ▶ Sample Preparation Facilities



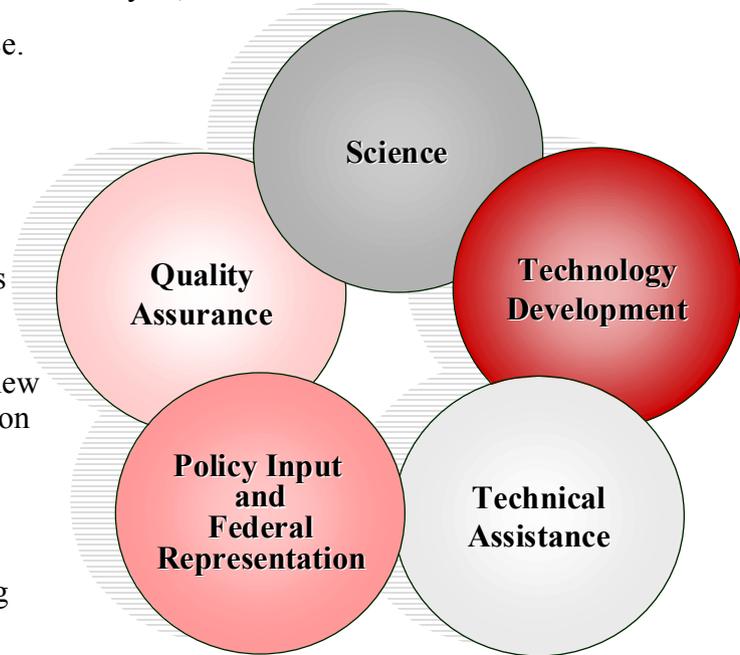
*EML Environmental Chamber and Calibration Facility – two user facilities available to other researchers for testing and calibration of nuclear instruments.*

## ***Product Lines***

To fulfill its mission and accomplish its goals, EML has integrated its projects into three product lines:

- ▶ Radiation and radioactivity (R&R) instrument and methods development and deployment;
- ▶ Specialized R&R measurements and data analysis; and
- ▶ Management and technical assistance.

EML applies an integrated approach. Core capabilities in radiation and radioactivity allow the staff to assess and address R&D needs; to develop instruments and methods from concept through field testing and deployment; to provide assistance to potential users and DOE sites to advance new technologies; to represent the Department on interagency workgroups and to work with federal regulators and standards setting organizations; and to provide Quality Assurance through proficiency testing, intercomparisons and comparability testing to evaluate data integrity.



## ***Designated Programs***

- ▶ The Laboratory was selected by the U. S. Delegation to the Preparatory Commission for the Treaty Organization, Vienna, Austria, as the U.S. Radionuclide Laboratory to be incorporated into the International Monitoring System (IMS).
- ▶ The Department's National Analytical Management Program (NAMP) signed a Memorandum of Agreement with EML designating EML as a reference laboratory for the DOE Radiological Traceability Program.
- ▶ EML was also selected by the World Meteorological Organization (WMO) as the World Calibration Center for Radioactivity in its Global Atmosphere Watch (GAW) Program.

## Customers

In addition to EM, EML's primary customer, the Laboratory partners with a broad range of federal customers that require applied research or operational capability in environmental radiation and radioactivity measurements, quality assessment, and technical data management. Current customers include:

### Department of Energy

- ▶ Office of Environmental Management (EM)
- ▶ Office of Science (SC)
- ▶ National Nuclear Security Administration (NA)

### Other Federal Agencies

- ▶ DoD Air Force (AF)
- ▶ DoD Defense Threat Reduction Agency (DTRA)
- ▶ DoD Army Corps of Engineers (ACE)
- ▶ Environmental Protection Agency (EPA)
- ▶ Nuclear Regulatory Commission (NRC)



*EML publications and vendor display*



# Goals And Objectives

## Customer Relations Goal:

EML will be customer focused.

- ▶ *Objective 1:* EML products will be recognized by its customer.
- ▶ *Objective 2:* EML products will be geared to the customer.



*Laboratory Directors sign agreement to provide leadership on EM Science and Technology*

## Preferred-Provider Status Goal:

EML is recognized as a value-added asset to DOE/EM.

- ▶ *Objective 1:* Establish EML as the preferred R&R provider to EM Programs.
- ▶ *Objective 2:* Establish EML as the Reference Laboratory for R&R Technology.

**CH STRATEGIC  
PARTNERSHIP GOAL:  
DEMONSTRATE  
SUCCESSFUL STRATEGIC  
PARTNERSHIPS TO  
LEVERAGE SCIENCE AND  
TECHNOLOGY.**

## Marketing Goal:

EML will develop closer relationships with its EM and CH customers.

- ▶ *Objective 1:* Align firmly with EM.
- ▶ *Objective 2:* Align firmly with CH.

# Goals And Objectives

## Customer Portfolio Goal:

EML will maintain its strategic relationships and increase its customer portfolio.

- ▶ *Objective 1:* Increase customer portfolio in EM programs.
- ▶ *Objective 2:* Increase customer portfolio in non-EM programs.
- ▶ *Objective 3:* Increase Work for Others Programs.



*Participation in the CH Executive Committee*

## Enhanced Budget Management Goal:

EML will be managed using a proactive budget process aligned with DOE, DOE/EM and CH budget and planning processes.

- ▶ *Objective 1:* Align work effort with funding levels, resources and products.

## Resources Goal:

EML will be staffed to support all product lines.

- ▶ *Objective 1:* Establish appropriate mix of technical personnel to support the growth in all product lines.
- ▶ *Objective 2:* Augment existing technical staff to accommodate new work above existing FTE ceiling levels.

**CH CORPORATE  
MANAGEMENT GOAL:  
DEMONSTRATE EXCELLENCE  
THROUGH THE APPLICATION  
OF PERFORMANCE-BASED  
MANAGEMENT PRINCIPLES**

## ***Goals And Objectives***

**CH SCIENCE & TECHNOLOGY DELIVERY GOAL:  
WE ARE RECOGNIZED AS A FULL PARTNER, ONE WHO  
IS IMPORTANT TO THE SUCCESSFUL EXECUTION OF  
THE DEPARTMENT'S MISSION.**

### **Product Lines Goal:**

EML will increase its level of funding from DOE and non-DOE customers for all of its product lines.

- ▶ *Objective 1:* Increase work scope/funding in the R&R Instrument and Methods Development and Deployment Product Line by DOE Long-Term Stewardship (LTS) Program, National Security Programs and EM Programs.
- ▶ *Objective 2:* Increase funding in Specialized R&R Measurements and Data Analysis Product Line for DOE Programs and National Security Programs.
- ▶ *Objective 3:* Increase work scope/funding in the Management and Technical Assistance Product Line.



*EML participates in the EM Core Laboratory Working Group*

## ***Initiatives***

### **Human Resources (HR) Plan:**

An HR Plan will be developed as a planning tool for the long-term viability and vitality of the Laboratory's core competencies. It will address critical skills, mentoring and recruitment.

### **Annual Implementation Plan:**

An annual Implementation Plan will be developed to: (1) provide project work scopes that detail project resources, deliverables and schedules; (2) maintain and grow the budget; and (3) link projects with the EML Unit Performance Plan. EM support-funded contractors' projects, deliverables and schedules are well documented in Technical Task Plans (TTPs). EM projects funded through the program direction account do not require documentation of planned work. The annual Implementation Plan would provide this information.

### **Independent Advisory Group:**

EML will establish an external, independent group of advisors to the Laboratory Director. Such a group will provide EML with strategic, directional guidance and ensure that its programs embody a sound programmatic and management approach. They will help the Laboratory to achieve a broader, more objective perspective on Laboratory issues; challenge the Laboratory to explore new directions; and, ultimately, to rise to new levels of excellence.



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**ENVIRONMENTAL MEASUREMENTS LABORATORY**