

THE DOE NATIONAL ANALYTICAL MANAGEMENT PROGRAM

John S. Morton
USDOE

ABSTRACT

The National Analytical Management Program (NAMP) is a national program operated within The Office of Environmental Management (EM) of the Department of Energy (DOE). It was established by EM to promote best practices and develop management tools that will result in effective, efficient, and reliable analytical data and services for all of EM. This paper provides an overview of the NAMP program including the role it plays in EM, the projects it operates, its major successes and accomplishments, and its future direction.

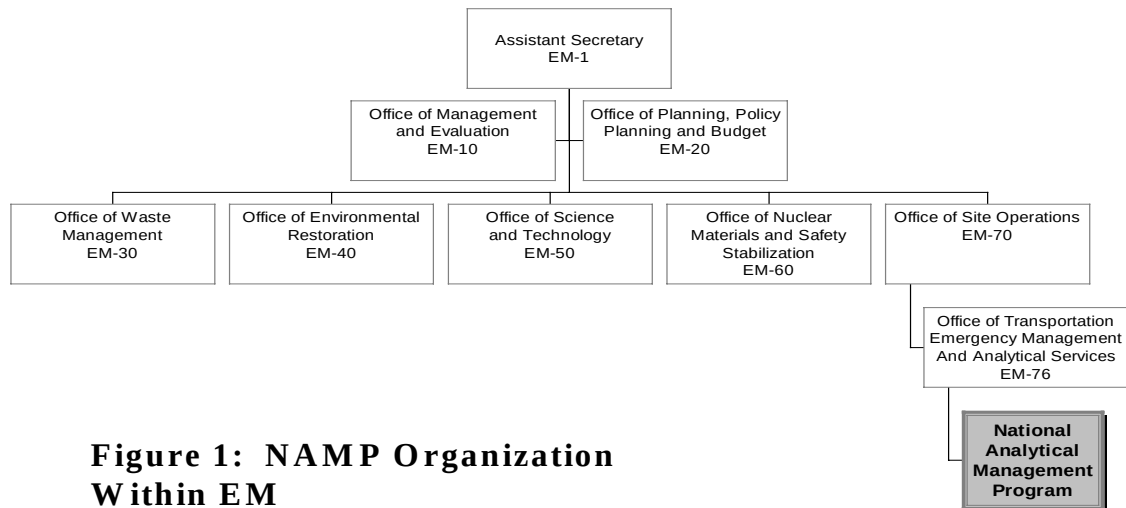
INTRODUCTION

The Office of Environmental Management (EM) within the Department of Energy (DOE) was created in 1989 to manage the waste and clean up the contamination generated as a result of nuclear weapons production over nearly half a century. This enormous task involves addressing nearly 10,000 remediation projects, almost one million cubic meters of radioactive waste and materials, and over 7,000 contaminated buildings at over 130 DOE sites across the nation.

Critical to accomplishing the EM mission are analytical services, which provide the data necessary to demonstrate successful completion of every individual project within the overall program. Analytical services are estimated to cost EM several hundred million dollars per year. The National Analytical Management Program (NAMP) was established by EM to promote best practices and develop management tools that will result in effective, efficient, and reliable analytical data and services for all of EM. This paper describes the NAMP program including the projects it operates, its major successes and accomplishments, and its future direction. Additional information on NAMP, including current NAMP news and activities, can be found on its world wide web page located at <http://www.em.doe.gov/namp/>.

PROGRAM DESCRIPTION

The NAMP is a national program operated within EM's Office of Site Operations (EM-70) of the Department of Energy (Figure 1). It was created following redeployment of the program from DOE Headquarters to the Idaho Falls Operations Office in a Memorandum of Agreement approved by the Assistant Secretary for Environmental Management on July 17, 1997. It was assigned the mission of promoting quality in the planning, management, and performance of sampling and analysis activities which generate characterization and monitoring data in support of DOE environmental quality initiatives.



The NAMP is developing its program with the intention of becoming a dynamic cross-cutting program that provides leadership in many environmental analytical services issues across the DOE Complex. (See Figure 2). In this capacity, it performs the following functions for EM:

- Establishment of national policy;
- Development of Complex-wide technical guidance;
- National clearinghouse for resolution of EM analytical services issues; and
- Providing forums for collection, discussion, and dissemination of information on DOE analytical services.

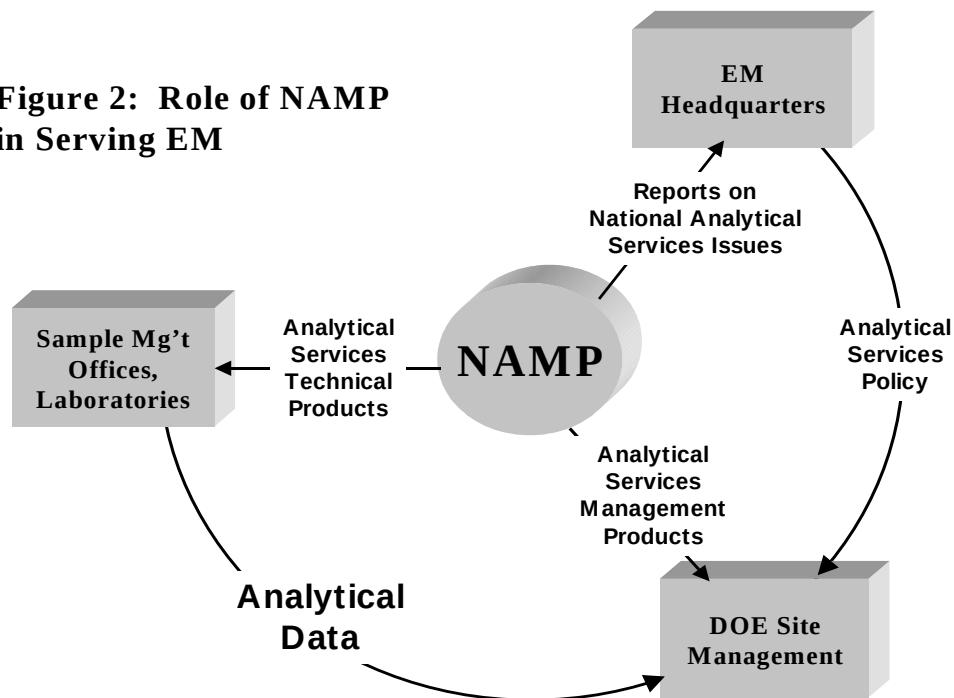
The NAMP operates with a small staff of Federal DOE-ID staff supported by a core team of project leaders who provide recommendations and guidance to the NAMP Director. The NAMP also maintains a network of Federal contacts in the Field who work with their respective sample management organizations to implement NAMP products in the Field, as well as to provide input and feedback on NAMP activities.

NAMP PROJECTS

The projects operated under NAMP were selected based on the need to satisfy customer requirements through cooperation with other EM programs, interactions with other Field organizations, and cooperation with other agencies. They were designed to meet the following objectives:

- Establish protocols to ensure that analysis data meets internal and external data quality requirements;
- Promote cost efficiency in sample analysis; and

Figure 2: Role of NAMP in Serving EM



- Provide national direction and leadership to DOE analytical services organizations

The projects NAMP conducts are organized according to eight broad program areas as shown in Table I and are described briefly here.

The Program Management area includes projects involved in planning, managing, and reporting on the NAMP program. This includes formulating long-term direction for the NAMP as well as the development of web page materials, and organization of major NAMP meetings. The Resource Management program area includes projects associated with the coordination, planning, and cost-effective management of EM analytical services. A major focus here lies with the use of laboratories for providing analytical services, especially their selection, cost, and contractual relationships with sample management offices that distribute analytical samples to laboratories.

Collecting and reporting Complex-wide information on the EM providers and requestors of analytical services permits NAMP and EM management with the critical data to make decisions on their programs. The Information Systems area includes projects for collecting and distributing such information, for example, on laboratories' scores in multiple performance evaluation programs. Analytical data is the principle product generated by analytical services providers, and the Data Handling program area includes projects that permit greater automation and standardization of analytical data generation, transmission, and reporting.

A major responsibility of the NAMP is to ensure that laboratories generate analytical data of acceptable quality to EM at reasonable cost. NAMP's projects under the Accreditation program area are involved with streamlining the processes used to audit laboratories through consolidation of multiple audits and use of novel alternative procedures such as requiring participation of laboratories in third-party accreditation programs. Under the Quality Assurance/Quality Control program area, NAMP is responsible for providing guidance and direction to EM's analytical laboratory performance evaluation programs. It is also developing a program for ensuring traceability of performance evaluation programs and materials to standards produced by the National Institute of Standards and Technology (NIST). (See Figure 3).

In the Technical Development program area, NAMP has projects related to the collection and, where necessary, development of analytical methods and protocols used in determining radiological analytes in environmental samples. Some of NAMP's activities are performed in collaboration with other Federal organizations to leverage the combined resources of multiple government agencies, and these projects are grouped under the Interagency Cooperation program area. They include, for example, participation in a data quality task force and as an accrediting body in the National Environmental Laboratory Accreditation Conference (NELAC).

Table I: List of NAMP Projects
Program Management Strategic Planning Systems Engineering Internal Steering Committee External Advisory Board Program Integration General Outreach
Resource Management Laboratory Strategies Directed Planning Laboratory Waste Management Laboratory Price Survey Procurement Issues
Information Systems Integrated Performance Evaluation Program (IPEP) Directory of EM Sampling and Analysis Resources (DEMSAR)
Data Handling DOE EM Electronic Data Deliverable Master Specification (DEEMS)
Accreditation Audit Consolidation National Cooperation for Laboratory Accreditation (NACLA)
Quality Assurance/Quality Control NIST Traceability Integrated Performance Evaluation Program (IPEP) Mixed Analyte Performance Evaluation Program (MAPEP) Quality Assessment Program (QAP)
Technical Development DOE Methods Compendium Multi-Agency Radiation Laboratory Analytical Protocols (MARLAP)
Interagency Cooperation Environmental Technology Verification (ETV) National Environmental Laboratory Accreditation Conference (NELAC) EPA Data Quality Task Force

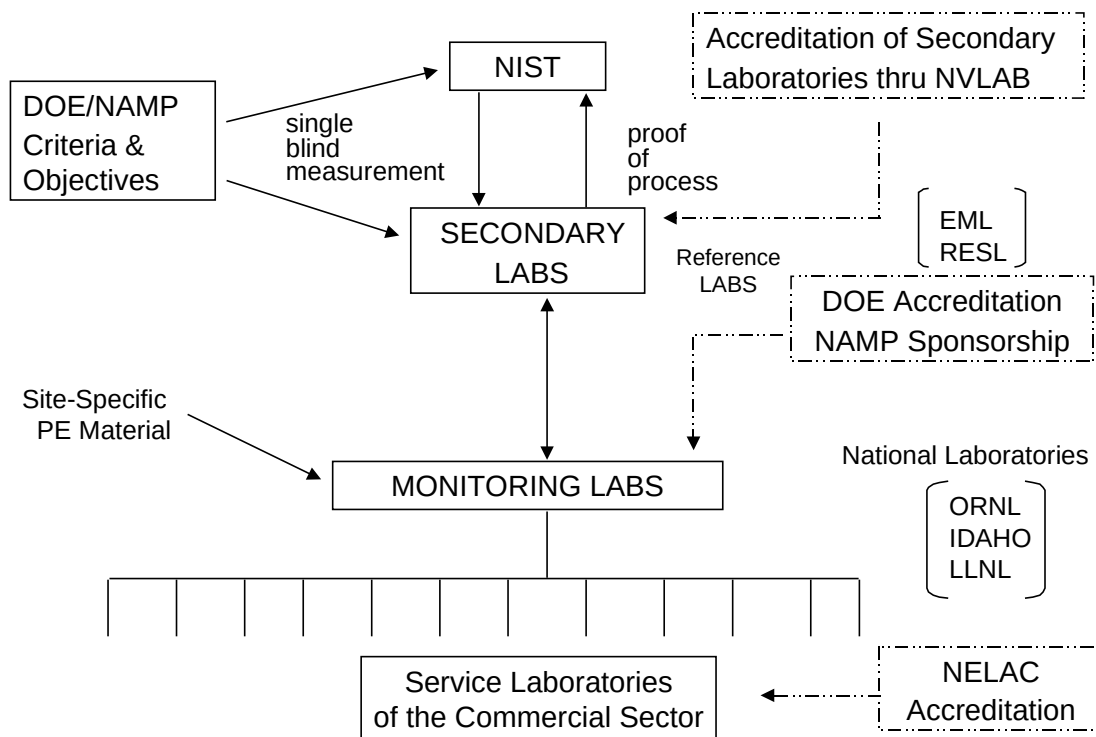


Figure 3: Process for Traceability of Analytical Performance Standards

NAMP ACCOMPLISHMENTS

In the 18-month period since the EM analytical services national program was deployed to the DOE-ID Operations Office, NAMP can boast a number of significant achievements. These include:

- Successful transition of a national program from DOE Headquarters to an Operations Office demonstrating that such a program may be managed from the Field without any detriment to EM;
- Maintenance of technical projects key to EM within NAMP;
- Signing of a number of memoranda of understanding with Field organizations to ensure continuation of technical input to the program from around the Complex;
- Preparation of several forums, such as the NAMP □98 national conference and NAMP web page for disseminating the objectives and capabilities of the NAMP;
- Establishment of new technical projects such as the preparation of guidelines for

analytical measuring processes and standards traceable to NIST that fill critical voids in ensuring that quality data is supplied to EM; and

- Active support to analytical services projects in other DOE and Federal organizations such as the Integrated Contractor Procurement Team (ICPT) operated under DOE's Office for Procurement and Assistance Management (HR-5) and the Inter-Agency Data Quality Task Force (IDQTF) managed by the US Environmental Protection Agency (EPA).

NAMP FUTURE

The NAMP is now fully established as a national program and will continue to ensure that environmental analyses performed by the analytical laboratories within the DOE Complex are of sufficient quality to: meet the needs and requirements of EM and the regulatory community; to be scientifically and legally defensible; to provide the basis for returning the DOE environment to the public domain; and to assist in meeting the objectives of EM's Accelerated Cleanup Plan. As EM faces its enormous environmental cleanup task in the 21st Century, the NAMP is constantly reviewing the critical needs of EM and has established the following goals for the future:

- Establishment of an analytical laboratory accreditation program for all laboratories doing business with EM;
- Increase data reliability and defensibility by implementing a program to provide traceability for all reference laboratories to NIST;
- Increase the quality and reliability of the analytical data by implementing a common electronic reporting format;
- Establishment of a comprehensive informational database to identify baseline information for EM analytical services;
- Decrease costs for analytical services by sharing laboratory audit information and improving contracting mechanisms with laboratories; and
- Decrease turn-around times for critical analyses by ten percent.