

**More Efficient Organization
Summary
For
National Institute of Environmental Health Sciences
Repair of Laboratory, Research and Other Equipment
In support of the
National Institutes of Health**

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Medical and Dental Equipment**

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1 Executive Summary

The National Institute of Environmental Health Sciences (NIEHS), a component of the National Institutes of Health (NIH), proposes a More Efficient Organization (MEO) as the Government's organizational entity for performing the scope of work and tasks required for Repair of Laboratory, Research, and Other Equipment at NIEHS located in Research Triangle Park, North Carolina. The NIEHS Biomedical Equipment Repair mission is to repair biomedical and laboratory equipment and provide technical support for the NIEHS Intramural Research Program. NIEHS Biomedical Equipment Repair includes the following functions:

- Instrumentation
- Pipette Repair
- Electronics Maintenance
- Repair Support

This report documents how the proposed MEO was developed. The "As-is" organization is described to reveal how the 2.100 Full Time Equivalents (FTE) are currently positioned and how they interact with other entities within NIEHS. Through analysis and review, by the MEO development team, a recommendation to reduce the FTE count by 0.850 will bring the proposed total to 1.250 FTE. Recommendations and justifications are provided to substantiate this reduction. Finally, a detailed plan on how the proposed MEO would perform in compliance with the Requirements Document (RD) is discussed, as well as the proposed organizational structure and staffing that would be in place. Although developing the MEO required streamlining the existing organizational structure, identifying cost reductions, and determining process improvements, operational efficiency and the ability to respond to routine or emergency repairs will be maintained.

Development of the MEO was accomplished through review of the RD, analysis of workload and process flows, and evaluation of the requirements by management staff currently responsible for the required functions. Emphasis was placed on identifying areas for improving efficiency, gaining effectiveness, and re-engineering business processes in an effort to develop their own best practices.

2 MEO Approach

The objective of the MEO development effort was to identify organizational structures, cost reductions, and process improvements associated with performance of activities required by the RD.

After gathering information from appropriate sources and documents, the workflow process was assembled and the organization structure identified.

2.1 Analysis

The RD outlined the magnitude and scope of work that would be performed by the MEO. Each section of the RD was reviewed in detail by subject matter experts from each specified area. Combined with analysis, a review of historical workload measures, technology, and process improvements was used to identify possible gains in efficiency and effectiveness..

The current organizational structure (which includes functions not required by the RD) was found to meet the mission for NIEHS Biomedical Equipment Repair as defined by the RD and was an excellent basis for the development of the MEO. The MEO is structured to maintain the relationships with existing organizations and activities that were not in the scope of this study and to continue to provide a balanced and effective work environment.

2.2 Current Organization and Staffing

The current organization and staffing are displayed in Figure 1: “Current NIEHS Organization”, along with the higher level organizational structure to illustrate the position of the Biomedical Instrumentation Group within the NIEHS. Table 1: “NIEHS Biomedical Equipment Repair Organization Staffing,” exhibits the current staffing levels. Design and Fabrication of Laboratory Equipment tasks, as well as tasks that are considered to be inherently governmental, are not required by the RD and do not comprise the 2.100 FTE that currently perform the functions stated in the RD.

Figure 1: Current NIEHS Organization (including shaded areas not in-scope)

Table 1: NIEHS Biomedical Equipment Repair Organizational Staffing.

Branch	Budget	On Board	Vacant
NIEHS Biomedical Equipment Repair	2.100	1.830	0.270
Total	2.100	1.830	0.270

Currently, Biomedical Equipment Repair functions are performed by three different positions (4 staff members). The first position, a GS-802-11 Biomedical Engineering Technician, performs design and fabrication of experiment-specific laboratory devices which are tasks not required by the RD. There are two GS-856-11 Electronic Technician positions that perform laboratory equipment maintenance and repair, as well as additional functions that are not required by the RD. Finally, there is one GS-802-07 Biomedical Engineering Technician position that primarily performs pipette refurbishment and calibration as well as providing limited design services to support the facility management staff.

2.3 Analysis of Current Operations

Workload Analysis: The MEO development team cited two reasons to institute a “top-down” approach to workload analysis. The current organization is small and is easier to analyze than a larger function. Secondly, the nature of a streamlined competition does not afford sufficient time to perform an in-depth, bottom-up analysis.

3 Recommendations and Justification for Change

The NIEHS Biomedical Equipment Repair function has not changed its business practices over the past several years to adapt to a changing environment. The MEO development team proposes that current and projected demands of this functional area be met with more efficient operations utilizing current staff that includes the management of new sub-contracted efforts. The MEO will implement changes to existing business processes while recognizing the importance of interacting with other entities of the NIEHS. Thus, based upon projected and actual, improvements and conditions, the proposed MEO will reduce the current staffing level by 0.850 FTE, to bring the total MEO staffing to 1.250 FTE.

3.1 Fundamental Changes and Justification

The primary change proposed by the MEO is a reduction in workforce of 0.850 FTE. This reduction was justified by the following assumptions:

- Efficiencies will be gained using some of the existing staff to concentrate efforts within the functional area defined by the scope of the RD;
- Recent improvements in the work management system will support the functions defined by the scope of the RD;
- Implementation of newly identified sub-contracting mechanisms;

- Recent implementation of the new performance measurement and monitoring program will further enhance efficiency.

It is the conclusion of the MEO development team that the incumbent General Schedule (GS) grades are appropriate for the positions and the functions performed in the NIEHS Biomedical Equipment Repair function. This determination is supported through review of the information provided in the RD, which underscores appropriate scopes of work that are commensurate with these position grades. It is recognized that the NIEHS Biomedical Equipment Repair staff is most familiar with the work in-scope and therefore is best able to accomplish the requirements. Therefore, it is advantageous to retain these trained and experienced staff to achieve a fluid transition to the MEO implementation.

4 More Efficient Organization

The overall guidance and leadership of the Biomedical Instrumentation Group, including the MEO, will continue to be provided through the Security and Operations Program Director. Though that position is not part of the MEO, it is integral to its success.

The proposed MEO will be located within the current NIEHS Biomedical Instrumentation Group. The MEO functions include instrumentation, pipette repair, and electronics maintenance and repair support for the NIEHS laboratory and scientific research equipment that will provide the services identified within the RD. Those services include: servicing laboratory and scientific research equipment; providing medical, dental, laboratory equipment supply support; providing customer service; and supporting other assigned functions within the NIEHS.

The MEO within the NIEHS Biomedical Instrumentation group will be responsible for the maintenance and repair of the equipment identified within the RD. This work is to be performed on the NIEHS Campus located in Research Triangle Park, North Carolina. Although the work is primarily performed in Building 102, this function is responsible for supporting the needs of the NIEHS Intramural Research Program on the NIEHS Campus.

4.1 Proposed Management Organization

The MEO will implement an organizational structure that will administer performance of the requirements in a way that will minimize cost and maximize service to the customers. The structure will utilize the same functional management approach as the current organization. Figure 2: “The Proposed MEO”, presents the proposed MEO.

Figure 2: The Proposed MEO (including the shaded areas not in-scope)

Regarding management, the MEO will replicate the current organization. Therefore the proposed MEO is not a completely stand-alone entity with its own management structure. As a result, the MEO will maintain a close relationship with the Continuing Government Activity (CGA) and will provide detailed reporting.

4.1.1 Staffing

Staffing for the MEO was developed from the “As-Is” organization, but has been adjusted for the reduction of 0.850 FTE.

Table 2: “Composite MEO Staffing,” displays the MEO staffing details. The MEO will be comprised of 1.250 FTE.

Table 2: Composite MEO Staffing

IC	Position	Pay Schedule	Grade	Step	Series	FTE Count
NIEHS	Electronics Technician	GS	11	5	856	0.900
NIEHS	Engineering Technician	GS	7	5	802	0.350
Total						1.250

5 Glossary

CGA	Continuing Government Activity
FTE	Full Time Equivalent(s)
GS	General Schedule
MEO	More Efficient Organization
NIEHS	National Institute of Environmental Health Sciences
NIH	National Institutes of Health
RD	Requirements Document