PRELIMINARY
PROJECT EXECUTION PLAN

Revision No: 0
Revision Date: June 21, 2001

EMERGENCY OPERATIONS CENTER

PROJECT I.D. NO. 100143

UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO 87545

CONTROL COPY NO. ____________
Approvals

For Los Alamos National Laboratory:

Original Signed By ___________________________ Date: ____________

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______________________________ Date: ____________

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For U.S. Department of Energy:

______________________________ Date: ____________

Herman LeDoux
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U.S. Department of Energy, Los Alamos Area Office
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Project Execution Plan Update/Revision Procedure

1. **Purpose:** This Project Execution Plan (PEP) documents the plan, means, methods, and controls that will be used to achieve the EOC Project objectives. The PEP has the following purposes:

- Describe the project.
- Describe the established project baselines.
- Document the plans, organization, structure, systems, and methodology that will be used to manage the project.
- Guide the technical, managerial, and administrative participants in the project.

This PEP is a living document and is required to be updated as often as necessary to ensure that the project and associated baselines, including the project organizational structure, procedures, systems, and methodologies remain current and accurate.

2. **Distribution and Revisions:** Once approved, a copy of this PEP will be distributed to each member and organization of the Emergency Operations Center (EOC) project as shown in Figure 4.1.2. Controlled distribution of the PEP will be performed by the Los Alamos National Laboratory (LANL) Project Team Leader (PTL). The PEP is to be maintained in a three-ring binder to facilitate incorporation of changes and revisions. This PEP is to be reviewed at a minimum, annually and may be modified as often as required in accordance with the following procedures:

   a. Annual reviews of the PEP will be initiated in July of each year.

   b. The LANL PTL is responsible for initiating and coordinating review and updates to this PEP. Reviews and updates to the PEP must be coordinated with the signatory offices to this PEP, and include the following organizations:

      - Keith R. Orr, Project Management Division, Project Team Leader, CGRP
      - James L. Holt, NW-IFC: Infrastructure, Facilities, and Construction, Project Director, CGRP
      - Herman C. LeDoux, DOE LA-AO, Federal Project Manager, CGRP
      - Dennis M. Miotla, DOE-HQ, Program Sponsor, CGRP

   c. Revisions and updates to this PEP are classified into three categories:

      1. Minor Administrative Changes: Minor changes such as administrative, organizational, grammatical errors, etc., identified through annual reviews may be identified by any member of the project team and brought to the attention of the LANL PTL. These minor corrections, revisions, etc., will be incorporated into the appropriate PEP sections by the LANL PTL utilizing a redline/strikeout system. Deleted text will be highlighted with a strike out, and added text will be indicated utilizing the redline function. The affected pages of the PEP will then be transmitted to the respective team members/organizations for review. Upon closure of the review process, the changes will be incorporated in the text of the PEP, and new pages with an alpha character suffix added to the original page number will be generated. As an example, several minor changes to Page 15 of the original PEP would be reflected in a final revised PEP Page 15-A. The revised PEP pages will also be annotated with a footer indicating the Revision No. and current date of the revision. A summary of the PEP revisions and changes will also be documented in the PEP Change Log located on page iii of this document. The LANL PTL is responsible to ensure that distribution of the final PEP changes to all project team members/organizations that maintain controlled copies of the PEP, are made. The LANL PTL will be responsible for maintaining a complete documented history of the PEP and any changes or modifications, to include reviews and review comments. Approval of these changes requires approval from the appropriate level of management within the Project Team. Cover sheets for each revision to the PEP will accompany the revision package and when approved, will accompany the final revision package issued by LANL. These approval cover sheets are to be filed in the PEP with the PEP Change Log.

      2. Project Baseline Changes: For changes to the project associated with or driven by the Baseline Change Control Procedures, the affected portions of the PEP will be modified for the proposed
changes in accordance with paragraph 2.c.1. above, and included with the BCP. Upon disposition of
the BCP, the appropriate changes to the PEP will be incorporated as required to reflect any changes
to the project and revised PEP pages will be issued to all project team members/organizations that
maintain controlled copies of the PEP. As for minor changes, the approval level for these changes
will be commensurate with the BCP approval. Cover sheets indicating approval of PEP changes
associated with BCPs will also be used to document approval of BCP driven changes to the PEP as
described in paragraph 2.c.1. above.

3. Major Changes: Major changes to the PEP will be processed in the same manner as described in
paragraphs 2.c.2. above with the exception that in such cases, LANL PTL will initiate a complete
revised PEP for the review process. For major revisions, the revised PEP will be handled and
reviewed as if it were being initiated as a new PEP.

d. The review process for updates/revisions to this PEP may be completed either through normal hard-
copy/mail distribution or electronically via computer, at the discretion of the LANL PTL. In all cases, the
most expeditious efficient method shall be selected.
### Project Execution Plan Change Log

<table>
<thead>
<tr>
<th>Revision No.</th>
<th>Date</th>
<th>Change Description</th>
<th>Pages Changed</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>06/21/01</td>
<td>Preliminary PEP.</td>
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Acronyms and Abbreviations

A/E  Architect/Engineer
AL  Albuquerque Operations Office (DOE)
BCP  Baseline Change Proposal
BCCB  Baseline Change Control Board
BUS  Business Operations Division
CD  Critical Decision
CDBG  Baseline Change Control Board
CPM  Construction Program Manager
D-B  Design-Build
DOE  U.S. Department of Energy
EOC  Emergency Operations Center
EM&R  Emergency Management and Response
ERO  Emergency Response Organization
ESH  Environment, Safety, and Health
FAR  Federal Acquisition Regulation
F&ORs  Functional and Operational Requirements
FY  Fiscal Year
HQ  Headquarters (DOE)
LAAO  Los Alamos Area Office (DOE)
LAC  Los Alamos County
LANL  Los Alamos National Laboratory
MCC  Multi-Channel Communications System
NEPA  National Environmental Policy Act
NW-IFC  Nuclear Weapons-Infrastructure, Facilities, and Construction
PC  Performance Category
PEP  Project Execution Plan
PFMD  Project and Facilities Management Division (DOE)
PHA  Preliminary Hazards Analysis
PTL  Project Team Leader
PM  Project Manager
PQMP  Project Quality Management Plan
RPM  Requirement Program Manager
SF  Square Footage
SWFASR  Site-Wide Fire Alarm System Replacement
TA  Technical Area
WBS  Work Breakdown Structure
1. Introduction

The purpose of the Emergency Operations Center project, Project ID No. 100143, is to design and construct a replacement Emergency Operations Center (EOC) at Los Alamos National Laboratory (LANL). Response and recovery from the Cerro Grande Fire that burned through LANL and Los Alamos County (LAC) in May 2000 demonstrated the inadequacy of the existing EOC facility. The goal of this project is to provide a new state-of-the-art facility that consolidates the LANL Emergency Management and Response (EM&R) and LAC police, fire, and 911 dispatching activities into one primary location to enable the best possible response and management of anticipated emergencies.

This Preliminary Project Execution Plan (PEP) has been prepared in accordance with US Department of Energy (DOE) Order DOE O 413.3, Program and Project Management for the Acquisition of Capital Assets. The PEP is used to guide both project execution and project control, and has been prepared to support the request for CD-1 approval. This PEP has been tailored to meet the specific needs and complexities unique to this project. In accordance with the DOE O 413.3 draft manual, information required in the PEP that exists in other project documents has been summarized and referenced.

2. Mission Need Justification

DOE is charged with maintaining the capability and capacity required to support the United States nuclear deterrent policy. LANL, as a Government Owned Contractor Operated entity, is required to provide the facilities necessary for safe, long term stewardship, and management of associated nuclear materials in a way that protects the public and worker health and safety, and the environment. This charter is especially true in an emergency event.

DOE O 151.1, Emergency Management Systems, establishes requirements for a Comprehensive Emergency Management System containing an integrated departmental Emergency Response Organization (ERO). Worker safety and environmental concerns drive the base program established by DOE O 151.1. These requirements mandate that the site or facility have the ability to properly notify, take protective actions, and maintain accountability of affected employees in the event of an emergency.

As a result of the Cerro Grande Fire a qualitative analysis determined the existing EOC was inadequate. In order to mitigate risk against future loss, replacement and relocation of the EOC is required. A more detailed discussion of the mission need can be found in the Mission Need Statement for the Emergency Operations Center (CGRP-0012-001, R0).

3. Project Description

3.1. Project Overview

LANL will construct a new EOC at Technical Area (TA)-69. The new EOC will be designed as a state-of-the-art multi-use facility housing about 30 fulltime LANL staff and LAC (or their contractors) staff. The new EOC will house LANL and LAC personnel on a seven days per week, 24 hours per day basis. Under normal operating conditions, the facility will serve as the LAC fire, police, and 911-dispatch center and the administrative offices for the LANL EM&R staff. Up to about 120 LANL, Federal, State, Local, and Tribal representatives may be accommodated at the EOC in the event of an emergency on the general scale of the Cerro Grande Fire. The new EOC will be designed in accordance with DOE O 420.1, Facility Safety and its associated Guides and Standards to meet and withstand, to the extent practical, any anticipated emergency such that emergency response actions will not likely be compromised by the emergency itself. Such emergencies could include natural phenomena events in which occupants may be sustained for up to 14 days with filtered air and backup building services.
3.2. Technical and Functional Performance

The EOC project addresses comprehensive emergency management system deficiencies at LANL. The EOC project will provide:

- A modern, efficient, and accessible facility for the EOC staff and other agencies required to mitigate emergency situations.
- A facility that meets all current codes and standards for an emergency control center.
- A self-sustaining facility that can be occupied for long periods of time without inducing unnecessary stress on its occupants.
- A facility that is large enough to accommodate the emergency participants from neighboring jurisdictions such as other Federal, State, Tribal, and Community agencies involved in the emergency response.
- State-of-the-art equipment, software, and systems to allow the EOC staff to access necessary information, make informed decisions, and to accurately record those decisions.

A more detailed discussion of the technical and general functional requirements is described in the approved Program Requirements Document for the Emergency Operations Center (CGRP-0012-002, R0). The Functional and Operational Requirements for the Emergency Operations Center (CGRP-0012-003, R0) and the Design Criteria for the Emergency Operations Center (CGRP-0012-005, R0) provide specific technical and functional performance requirements.

Site Improvements

Improvements to land, which are part of the EOC Project include:

- State Road 501 will be used for access to the EOC. An existing abandoned road will be reconstructed to connect State Road 501 with the EOC drive and parking facilities. The EOC drive will provide access to the fuel tank, emergency generator, and communications antenna.
- A 100 vehicle parking area will be constructed.
- Concrete walkways will be constructed.
- The EOC site will be enclosed with a standard 8-foot security fence.
- The site will have low maintenance, native landscaping.
- Potable water will be obtained from the existing distribution system and a potable water storage tank will be constructed.
- A sanitary sewer forced main will be extended to the site and a lift station and overflow waste storage tank will be constructed.
- An elevated storage tank will be constructed on site to provide fire suppression water.
- Storm sewers are not required.
- Electrical power for the EOC will be from the existing 13.2 kV overhead distribution system.
- Telephone and communication utilities will be from the existing “S” site duct bank via newly constructed duct systems to the EOC.

Building Features

Salient features of the facility include:

- Foundations that are designed to conform to the recommendations of a Geotechnical investigation specific to the site.
- Basement walls of reinforced cast in place concrete if required.
- Superstructure construction to meet natural phenomenon, functional and operational requirements (F&ORs).
- Building services designed to meet the expected occupancy.

The new EOC will, to the extent practical, be furnished by relocating existing equipment from LANL and LAC facilities.
3.3. Environment Safety and Health

A preliminary Environment, Safety, and Health (ESH) Plan has been prepared for this project in accordance with PMD Procedure 408, Starting the ESH Process for FSS-6 Projects and PMD Procedure 404, Preparing the ESH Plan and Safety Strategy. The ESH Plan identifies the ESH activities associated with the project. Because some preliminary safety related activity had already occurred to allow the ESH Plan to be developed, there exists some accomplished work. The ESH Plan gathers both the past and future activity to provide an integrated look at the expectations for the ESH aspects of the project.

A Safety Strategy has been prepared to summarize the project ESH approaches and deliverables. The Safety Strategy is based on and documented in the ESH Plan. A brief summary of the Safety Strategy elements is presented below.

- Facility Hazard Classification. The new EOC has been classified as a low hazard facility. This classification is based primarily on standard industrial hazards routinely encountered and accepted by the public (LIR 200-00-05.1). The Facility Hazard Classification has been documented in the Preliminary Hazards Analysis (PHA).

- Performance Category. The new EOC has been designated as a performance category (PC) PC-2 facility based on the hazard classification and the requirements of DOE-STD-1021-93. This performance category will be updated if required as the design proceeds. The performance category has been documented in the PHA.

- Preliminary Hazards Analysis. A PHA has been prepared for this project. The purpose of this analysis is to identify the hazards associated with both normal and abnormal operations at the facility as well as to identify potential interface hazards associated with the EOC. The PHA contains or references the operation and design plans, identifies the systems that serve to promote safety, and provides commitments for achieving the safety objectives identified in the PHA. For more detailed information, see the Preliminary Hazards Analysis for the Emergency Operations Center Project (CGRP-0012-009, R0).

A more detailed discussion of the ESH approach and safety strategy is provided in the EOC Project ESH Plan and Safety Strategy for the Emergency Operations Center (CGRP-0012-006, R0).

3.4. Security

Security Approach

As part of the CGR Project, the security approach for the EOC project follows the overall security approach established for the CGR Project. The Cerro Grande Rehabilitation Project Integrated Safeguards and Security Management Plan (CGR-Plan-004, R.0) dated February 23, 2001 provides details of the integrated safeguards and security management (ISSM) approach for all CGR Projects.

Based on “lessons learned” from several recent LANL projects, a security representative has been incorporated into the EOC project team. The security representative, or his delegate has worked closely with the EOC project team to determine specific security requirements for the different phases of the project. The following discussion summarizes the approach to be taken regarding security.

A project-specific security plan is not required until the design-build (D-B) contract is awarded. The D-B contractor may need a facility plan to operate. A construction security plan will not be required until security systems are introduced into the construction site. If a security area is penetrated as part of the project, security measures must be implemented, such as escorts for uncleared workers and physical security support if a security fence line is temporarily taken down. A facility security plan will be developed once the Laboratory takes ownership of the building.
During the actual facility design work, LANL will provide the security system locations. Activity will be identified as a project hold point. The D-B contractor will install conduit and boxes, and LANL will install the alarm system and access control.

Acceptance criteria will be based on compliance with DOE Directives, the Site/Project TEMPEST Plan to be developed by LANL, the Site COMSEC Plan (if required), and the PTS Plan to be developed by LANL (if required). Construction verification of design drawings and a security compliance inspection, including photographs taken by LANL, will be required. Specific requirements will be identified during the final design, prior to construction. At a minimum, LANL will need to inspect and photograph the concrete pour for the vault, security system conduit runs, PTS (if installed behind sheetrock), and all rebar/barriers for penetrations. If STC 45 or 50 is installed, they too need to be inspected and photographed. These will also be identified as hold points.

Security Design

The security representative, or his delegate, for this project has been involved in the reviews of all conceptual design documents. The following discussion provides information regarding technical and physical security at the EOC based on discussions with and review comments provided by the security representative.

Security will be provided at the new EOC in order to limit facility access to authorized personnel, maintain property protection, and protect the classified vault. The facility will be surrounded by a perimeter fence that will encompass all facility buildings, structures, and parking lots. Access for vehicles and personnel will be through gates actuated by access control hardware or remotely controlled from the Administrative Area or the Dispatch Center. The perimeter of the facility and the parking areas will have security lighting. If a separate communications tower is needed, it will be located inside a separately fenced area within the outer perimeter fence.

Building access will be controlled with access control hardware at the main entry doors. All personnel traffic will flow past a main administrative reception area where personnel and visitors can be processed as necessary.

Interior spaces of the EOC are divided into three major security areas:

1. LANL spaces (This is the majority of the building including the EOC itself, EOC support spaces, staff offices, communications electrical and mechanical rooms, and the classified vault).
2. LAC Spaces (This is primarily the Dispatch Center and its associated spaces).
3. Common or shared spaces (This includes toilets, break room, storage, etc).

The LANL spaces will be configured so that access into these spaces can be controlled as necessary and limited to personnel with the proper access authorization. The classified vault area will be constructed and controlled to meet DOE security requirements for a vault. The vault is essentially a security island within the LANL space.

The LAC spaces will also be configured so that access into these spaces can be controlled as necessary and limited to personnel with the proper access authorization. Once inside the EOC main entrance, access to the common or shared spaces will require, at most, key access through a locked door, but many of these spaces will be open access. Entering the LANL or County spaces from the common areas will require passage through an access control device.

This facility will eventually be connected to the ARGUS Security System. It is unclear at this time whether the ARGUS System will be ready to accept the EOC connection when the EOC construction is substantially complete. If the EOC cannot be initially connected to ARGUS, a stand-alone system will be installed, and the classified vault will be connected the existing LANL BRASS System. In any case, ARGUS compatible raceways and cabling will be specified and installed.

EOC Project Execution Plan
June 21, 2001
3.5. Relationship to Other Projects

This project is part of the overall Cerro Grande Rehabilitation (CGR) Project established to upgrade specific facility and systems infrastructure to restore operability and reliability of the TAs, facilities, and capabilities lost as a result of the Cerro Grande Fire. The EOC project is directly related to two other CGR Project subprojects. The primary interface is with the Site-Wide Fire Alarm System Replacement (SWFASR) project. A joint LAC police, fire, and 911-dispatch area will be located in the EOC. To support that effort, replacement of the existing LANL fire alarm system and tie-in to the head end equipment in the new EOC will be provided by the SWFASR project.

There will be space provided in the EOC for the new multi-band radio system as well as communications conduits to receive various forms of data that will be provided as part of the Multi-Channel Communications System (MCC) project. The EOC project will provide the space and communications conduits, while the MCC project will provide the physical radio and data management equipment/integration to all communication devices that are MCC-specific. All other CGR Project data inputs such as drone and helicopter surveillance will be coordinated through the MCC project.

4. Project Management Approach

4.1. General

The EOC project is a congressionally approved line item project being executed as a part of the CGR Project. The CGR Project was formed to address near-term and long-term activities required for LANL to fully recover from the Cerro Grande Fire. The leadership of the CGR Project will be provided by the Program Director or designee from the Nuclear Weapons-Infrastructure, Facilities, and Construction (NW-IFC) Program Office with oversight from an Executive Steering Committee. As part of the CGR Project, the project management approach for the EOC project follows the overall project management approach established for the CGR Project. The Cerro Grande Rehabilitation Project Execution Plan (CGR-Plan 001 Rev.0) dated August 18, 2000 provides greater detail about interface management control techniques that will be utilized and procedures for resolving conflicts between responsible organizations. It also identifies specific management tools to support management in planning and controlling the project.

DOE has assigned a Program Sponsor, DOE Headquarters (HQ), and a Federal Project Manager, DOE-Los Alamos Area Office (LAAO). They will maintain close communications and coordination with the LANL project team to provide the support, guidance, and approval required to assure success of the project. Figure 4.1.1 provides a graphical representation of the CGR Project organization.

The EOC project is one of thirty subprojects making up the CGR Project. Successful completion of the EOC project requires a team effort with clear definition of roles, responsibilities, interfaces, and open communication among all participants. This is especially true considering the critical nature, magnitude, and speed of execution of this project. In accordance with the Federal Project Manager, the Integrated Project Team will be identified in the final PEP. The day-to-day leadership of the EOC project will be provided by the LANL EOC Project Team Leader (PTL). He will have a full time, dedicated team of professionals to manage all aspects of the project. The project team will also include representation from DOE. Professional construction management subcontractors will be used to augment this team. A number of the organizational attributes of this team are the result of incorporating lessons learned from successful and failed projects from within the DOE weapons complex. Figure 4.1.2 is a graphical representation of the EOC project team.
Figure 4.1.1: CGR Project Organization

Executive Steering Committee (also Baseline Change Control Board)
Dick Burick, DLD-OPS
Tony Stanford, FWO
Mike Baker, E
Joe Vozella, DOE-LAAO
Nancy Simpson, BUS
Deve Post, PM

Project Director
Jim Holt
Carolyn Zerkle
NW-IFC

DOE Program Sponsor
Dennis Motla
DOE-HQ

Federal Project Manager
Herman LeDoux
DOE-LAAO

DOE Project Rep.
TBD
DOE-LAAO

DOE Project Sponsor
Dennis Motla
DOE-HQ

Directorate, POCs
Tom Gunderson
D Ops

Deputy Project Director
Institutional Activities
Ming Moy

Deputy Project Director
Infrastructure Activities
Tori George

Financial Reporting & Project Controls Team

Project Execution Team

Construction Projects Manager
Keith K. Orr

Figure 4.1.2: EOC Project Team

EOC Project Execution Plan
June 21, 2001
4.2. CGR Project Organization

This section provides descriptions of each of the key CGR Project DOE and LANL positions:

Department of Energy Headquarters

Program Sponsor: The DOE Program Sponsor, with a small-dedicated project staff and matrix support from within Defense Programs and Department of Energy Field Elements, is responsible and accountable for overall effective management and execution of the CGR Project. The CGR project-related responsibilities of the DOE Program Sponsor include the following:

- Expected to be delegated as the acquisition executive for all construction subprojects >$5M.
- Provide oversight of project policy through the PEP and formal project direction.
- Maintain overview of project cost, schedule, and technical performance via the reporting system, project status review meetings, and regular communications with the Federal Project Manager and LANL CGR Project Director.
- Establish and serve as the chairperson of the CGR Project Level 0 Baseline Change Control Board to coordinate the DOE-HQ review, assessment, and action on all proposed baseline changes that are at the Level 1 approval threshold or decision points and oversee all congressional notification requirements.
- Coordinate the DOE Advisory Committee.
- Periodically visit the site and attend project meetings.
- Coordinate monthly reviews and preparation of executive reports for Madelyn Creedon, DP-1, and General Thomas Gioconda, DP-2.
- Act as interface to DOE-CFO office.

Department of Energy Los Alamos Area Office

Federal Project Manager, DOE-LAAO: The Federal Project Manager (PM) is responsible for the DOE project-related onsite management and field actions. This person is the single DOE point of contact for the project. No DOE direction should go to the LANL CGR Project team without the knowledge and consent of the Federal Project Manager. In addition, the Federal PM is responsible for the review and approval of DOE subproject baselines and the execution of and reporting on DOE subprojects, which are not in the scope of this PEP. Consistent with the formal project direction and funding authorization provided by DOE-HQ, the Federal PM responsibilities include the following:

- Review, concur, or approve submittals requiring Project Approval Authorities. Approvals can be done electronically by fax or email.
- Assure that all construction activities are reviewed by Captain Bruce Scott to assure they support the ongoing infrastructure initiative established in the DP-1 memo of May 12, 2000, *Infrastructure Assessment for the Defense Complex*.
- Secure resources, and issue DOE Project Work Authorizations and overall formal project and technical guidance, and direction to the DOE Project Representative.
- Provide DOE project management, including monitoring of all aspects of the project phases relative to the scope, cost, and schedule baselines, and ensure adequacy of the project management system.
- Provide a DOE representative with the CGR Project team to expedite the project authorization approvals and resolution of issues.
- Establish and serve as the chairperson for the Level 2 Baseline Change Control Board, establish the Board membership to coordinate the DOE Field review, assessment, and action on all proposed baseline changes that are within the Level 2 approval thresholds, and transmit all proposed baseline changes that exceed the Level 2 approval thresholds with recommendations to the Level 1 Board.
- Coordinate with DOE Field matrix organizations, as required, to obtain support of project management activities, including the review and concurrence of DOE-required safety and environmental documents.
- Function as the formal communications channel between DOE and the LANL CGR Project management team. Interface with DOE-AL BRMD. Approve the release of funding from DOE-AL to LANL.
- Provide direct involvement with the community and stakeholders concerning the Project's mission and issues of operational performance.
- Oversee formal project monthly reviews.

**DOE Project Representative:** The DOE Project Representative is responsible for the day-to-day DOE project-related onsite management and field actions. The DOE Project Representative’s responsibilities include the following:

- Provide DOE daily onsite project management, including monitoring all aspects of the project phases relative to the scope, cost, and schedule baselines, and ensuring adequacy of the project management system.
- Function as the full-time CGR Project team member, co-located with the project team.

The DOE Project Representative will be identified when the Integrated Project Team is defined in the final EOC PEP.

**LANL Project Director/Program Office**

The LANL Project Director has the overall contractor authority and responsibility for the project’s execution, overall technical direction, and allocation of funds. The CGR Project Director fills the key role for the physical realization of the facility, and has responsibility for implementing all plans for achieving the project activities. Responsibilities include the following:

- Review, concur, or approve submittals to DOE.
- Monitor progress and effect necessary corrective actions, where required, to resolve problems and conflicts that affect project implementation.
- Establish and maintain baselines (technical, cost, and schedule) in accordance with the CGR PEP and routinely report their status to DOE, with the Deputy Project Directors.
- Control the CGR Project configuration.
- Chair the CGR Project Level 3 Baseline Change Control Board to coordinate the Laboratory review, assessment, and action on all proposed changes. Transmit all proposed baseline changes that exceed the Level 3 approval thresholds with recommendations to the Level 2 Baseline Change Control Board.
- Participate as a member of the Level 1 and Level 2 Change Control Boards, as the recording secretary.

**LANL Deputy Project Directors**

CGR Deputy Project Directors are responsible for execution of the Project within scope, cost, and schedule baselines. Responsibilities include the following:

- Integrate planning, performance tracking, and reporting to ensure adequate control of all participants’ activity.
- Monthly briefings to DOE-AL and DOE-Headquarters.
- Execute the project and ensure that activities are properly defined and controlled.
- Interface as needed with the DOE Federal Project Manager and DOE Project Representative.
- Provide for the contracting, management, and technical direction of the Architect/Engineers, Engineering Support Contractors, Design-Build Contractor, and other contractors/vendors.
- Conduct project work in accordance with the applicable DOE Orders, institutional standards, requirements, and procedures.
- Implement DOE assurance requirements for environment, safety and health; quality assurance; and security.
• Prepare all reports and documentation for approval of Critical Decisions, Validations, and other approvals as needed to execute the project.
• Make presentations regarding the project when necessary.
• Create and disseminate monthly project reports and maintain performance metrics using the Earned Value Method.
• Ensure that all facility commissioning, acceptance, and occupancy requirements are met prior to occupant move-in.
• Complete the final cost report and ensure that as-built drawings are complete.

The roles and responsibilities of other CGR Project team members are described in the Cerro Grande Rehabilitation Project Execution Plan.

4.3. EOC Project Team

This section defines the key construction project management roles and responsibilities that shall be followed at the Laboratory for the EOC project. The Team Appointment Letter for the EOC Project identifies the individuals appointed to the EOC project team. The EOC Roles and Responsibilities matrix identifies specific tasks assigned to the EOC project team members. This matrix was distributed to the EOC project team members on May 2, 2001 and will be revisited and revised at each phase of the project, as needed.

Project Team Leader: The LANL EOC Project Team Leader (PTL) has the overall contractor authority and responsibility for the project’s execution, overall technical direction, and allocation of funds. The EOC PTL fills the key role for the physical realization of the facility, and has responsibility for implementing all plans for achieving the project activities. Responsibilities include the following:

• Review, and concur or approving submittals.
• Integrate planning, performance tracking, and reporting to ensure adequate control of all participants’ activity.
• Execute the project and ensuring that activities are properly defined and controlled. Monitor progress and effect necessary corrective actions, where required, to resolve problems and conflicts that affect project implementation.
• Interface as needed with the Federal Project Manager and DOE Project Representative, and freely communicate with the Construction Project Manager.
• Establish and maintain baselines (technical, cost, and schedule) in accordance with the PEP and report their status to the DOE.
• Provide for the contracting, management, and technical direction of the Architect/Engineer (A/E), Engineering Support Contractors, Design-Build Contractor, and other contractors/vendors.
• Conduct project work in accordance with the applicable DOE Orders, institutional standards, requirements, and procedures.
• Implement DOE assurance requirements for environment, safety and health; quality assurance; and security.
• Prepare all reports and documentation for approval of Critical Decisions (CDs), Validations, and other approvals as needed to execute the project.
• Make presentations regarding the project when necessary.
• Create and disseminate monthly project reports and maintain performance metrics using the Earned Value Method.
• Ensure that all commissioning, acceptance, and occupancy requirements are met prior to occupant move-in.
• Manage contingency to ensure that an adequate level is maintained throughout the project life.
• Complete the final cost report and ensuring that as-built drawings are complete.

The EOC Project Team Leader is also the CGR Project Construction Projects Manager.
**Technical Project Leader**: The Technical Project Leader (TPL) shall provide the technical leadership required regarding emergency management and response activities. The TPL will be responsible for providing technical direction in the development of execution of the project.

**Facility Owning Division Representative**: The Facility Owning Division Representative has a primary role to insure the needs and operational requirements of the users are met. For the EOC project, the Technical Project Leader and the Facility Owning Division Representative is the same individual.

**Engineer/Procure/Construct (EPC) Project Leader**: The EPC Project Leader responsibilities include the following:

- Coordinate subcontract procurement and conceptual design reviews by LANL Subject Matter Experts.
- Coordinate, prepare, and review EOC project documents.
- Provide construction safety support to the technical user overview.
- Coordinate inspection and facilities engineering activities.
- Provide construction management oversight.

**Support Services Project Leader**: The Support Services Project Leader responsibilities include the following:

- Coordinate and provide technical support for ESH and NEPA activities.
- Coordinate, prepare, and review EOC project documents.
- Ensure compliance with Laboratory Implementation Requirements and EOC project procedures.
- Coordinate project schedule preparation and provide input as necessary to maintain the schedule.

**Environmental, Safety, and Health (ESH)**: ESH shall support the project by developing and evaluating project documentation to ensure incorporation and implementation of all applicable requirements pertaining to ESH issues.

**Business Operations Division (BUS)**: The BUS representative shall provide contracting, contract management, and financial and property management support to the project through the assigned project representative.

**Project Controls**: Project Controls responsibilities include the following:

- Prepare routine and special project management reports.
- Maintain contingency use logs.
- Prepare authorization documentation supporting the invoicing process, as required by BUS-5 and others.
- Coordinate the change control function for the EOC PTL.

**Shared Responsibilities**: All EOC Project Team members share the responsibilities listed below. During the planning phase:

- Provide input for the PEP by identifying work, specifying performance objectives, estimating costs and schedules, and identifying interfaces.
- Help develop, review, and approve the PEP during the implementation phase.
- Promote teamwork and a safe work environment.
- Attend or send delegates to attend project meetings.
- Evaluate technical progress at project meetings.
- Provide peer review.
4.4. Other Organizations

**Design-Build Consultant (D-B Consultant, Holmes and Narver/Raytheon):** The D-B Consultant, during the design-build RFP documentation development, will be responsible for the following:

- Project System Descriptions.
- F&ORs.
- Design Criteria.
- Design-Build Performance Specifications.
- All supporting activities including site verification data, performance specifications, fire hazard analysis, incorporation of LANL EOC-specific seismic evaluation and criteria, security analysis, cost estimating, and scheduling.

**Design-Build Contractor (To be determined):** The Design-Build Contractor and their subcontractors are responsible for the design and construction of the facility and utilities in accordance with the terms and conditions of the design-build contract documents.

**Support Services Subcontractor:** The support services subcontractor will make all connections to existing utility systems and make any required modifications to other operating systems.

4.5. Project Management Division Procedures

The following list identifies the Project Management Division (PMD) procedures that have been identified for planning and execution of the EOC project. The list is currently under development and review by the EOC project team.

- PMD Procedure 102, Rev. 3 – Request for Project Authorization
- PMD Procedure 104, Rev. 1 – Risk Assessment and Management
- PMD Procedure 107, Rev. 1 – Configuration Change Control
- PMD Procedure 109, Rev. 3 – Project Controls
- PMD Procedure 113, Rev. 1 – Assessments
- PMD Procedure 114, Rev. 0 – Lessons Learned
- PMD Procedure 201, Rev. 3 – Procedure Development, Revision, and Implementation
- PMD Procedure 204, Rev. 2 – Personnel Qualification
- PMD Procedure 206, Rev. 2 – Document Control
- PMD Procedure 207, Rev. 3 – Project Records Management
- PMD Procedure 302, Rev. 1 – Statement of Work
- PMD Procedure 308, Rev. 3 – Design Review
- PMD Procedure 313, Rev. 1 – Nonconformance Reporting
- PMD Procedure 401, Rev. 1 – ESH-ID Process
- PMD Procedure 404, Rev. 1 – Preparing the Project ESH Plan and Safety Strategy
- PMD Procedure 408, Rev. 0 – Starting the ESH Process
- PMD Procedure 504, Rev. 0 – Supplier Evaluation and Qualification
- PMD Procedure 602, Rev. 0 – Constructability Review
- PMD Procedure 603, Rev. 0 – Construction Planning and Scheduling
- PMD Procedure 604, Rev. 0 – Construction Safety
- PMD Procedure 605, Rev. 1 – Contract Administration
- PMD Procedure 606, Rev. 1 – Project Acceptance and Closeout
- PMD Procedure 703, Rev. 0 – Acceptance Inspection and Testing

Procedure Implementation Agreements are being prepared for each procedure to identify modifications to the procedures, such as updating outdated references, and applicability to the EOC project.
5. Work Breakdown Structure

5.1. Work Breakdown Structure Table

This Work Breakdown Structure (WBS) was developed in a manner to support the direct management of work as it has been assigned to the key personnel. WBS Level 1 is the entire EOC project; containing both the capital and expense funded work elements. Level 2 divides the work by whether it is capital or expense funded. Level 3 is used to define the work elements by single points of accountability. In addition to this WBS, the PRISM and Primavera Project Planner software have conversion tables that allow for the lowest elements of the WBS to be rolled up in a manner that is required to report in the standard DOE CPDS, OMB A-11, and other required government formats. Figure 5.1.1 shown below summarizes the WBS for the EOC project.

**Figure 5.1.1: Work Breakdown Structure to Level 3**

<table>
<thead>
<tr>
<th>WBS No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EOC Project</td>
</tr>
<tr>
<td>1 1</td>
<td><em>Other Project Costs (OPCs)</em></td>
</tr>
<tr>
<td>1 1 1</td>
<td>Project Management</td>
</tr>
<tr>
<td>1 1 2</td>
<td>Project Development</td>
</tr>
<tr>
<td>1 1 3</td>
<td>A/E Support</td>
</tr>
<tr>
<td>1 1 4</td>
<td>LANL Engineering Support</td>
</tr>
<tr>
<td>1 1 5</td>
<td>ES&amp;H</td>
</tr>
<tr>
<td>1 1 6</td>
<td>JCNNM Support</td>
</tr>
<tr>
<td>1 1 7</td>
<td>Acceptance Testing/Startup</td>
</tr>
<tr>
<td>1 1 8</td>
<td>External Reviews</td>
</tr>
<tr>
<td>1 1 9</td>
<td>OPC Contingency</td>
</tr>
<tr>
<td>1 2</td>
<td><em>Total Estimated Cost (TEC)</em></td>
</tr>
<tr>
<td>1 2 1</td>
<td>Project Management</td>
</tr>
<tr>
<td>1 2 2</td>
<td>Design-Build Contract</td>
</tr>
<tr>
<td>1 2 3</td>
<td>LANL Design Support</td>
</tr>
<tr>
<td>1 2 4</td>
<td>LANL Construction Management</td>
</tr>
<tr>
<td>1 2 5</td>
<td>Construction Management Oversight</td>
</tr>
<tr>
<td>1 2 6</td>
<td>ES&amp;H</td>
</tr>
<tr>
<td>1 2 7</td>
<td>LANL Construction</td>
</tr>
<tr>
<td>1 2 8</td>
<td>JCNNM Support</td>
</tr>
<tr>
<td>1 2 9</td>
<td>TEC Contingency</td>
</tr>
</tbody>
</table>
5.2. Graphical Representation of Work Breakdown Structure

Figure 5.2.1 provides a graphical representation of the WBS.

**Figure 5.2.1:** Graphical Representation of Work Breakdown Structure to Level 3.
The following text describes the major WBS elements down to the Control Account (Level 3). All work shall be consistent with CGR Project Office requirements for executing and reporting EOC as part of the overall CGR Project. For additional details, see Section 5.0 of this document and the Cerro Grande Rehabilitation Project Execution Plan.

5.3. Work Breakdown Structure Dictionary

The WBS Dictionary for the EOC Project is provided below. The Control Account Dictionary has been developed to Level 3 of the WBS. The Dictionary is placed under change control without formal Change Control Board approval. The contractors performing work at Level 4 and below of the WBS will develop the dictionary covering these levels.

WBS 1.1 Other Project Costs (OPCs)
This is a Level 2 WBS element, which includes all of the OPC (expense funded) activities related to the EOC project. This level includes all of the costs and effort associated with the conceptual phase and the closeout phase of the project. Included are Project Management, Project Development, A/E Support, LANL Engineering Support, JCNNM Support, Acceptance Testing/Startup, External Reviews, and OPC Contingency. The Control Account and Work Package Dictionaries that fall under this element will further define scope, cost, and schedule.

Control Account (CA) 1.1.1 Project Management
This element includes all work related to the management of the EOC project during the conceptual phase and closeout phase. Costs for LANL labor including the PTL, EPC Project Leader, S.S. Project Leader, project administration, FWO support, and project controls support will be collected in this account. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.1.2 Project Development
This element includes the LANL support to accomplish work associated with project development as required by LIR 220-01-01, “Construction Project Management”. Included are the costs and effort required by LANL personnel to produce the Mission Need Statement, Program Requirements Document, Management Level Determination, PEP, Roles and Responsibilities Assignments, Issuance of the Team Formation Letter, and Development of the Acquisition Plan. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.1.3 A/E Support
This element includes the A/E support to accomplish work associated with project development as required by LIR 220-01-01.4, Construction Project Management. Included are the costs and effort required by A/E personnel to produce the Conceptual Design Report (CDR) including producing the F&ORs, Project System Descriptions (PSDs), Design Concept, cost and schedule, and Acquisition Plan, and conducting the Design Charette. Production of the Design-Build Performance Specifications (D-B Specs), Request For Qualifications (RFQ), Request For Proposal (RFP) is also included. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.1.4 LANL Engineering Support
This element includes the LANL support to accomplish the technical work associated with the development of the CDR. Included are the peer reviews by LANL Subject Matter Experts (SMEs) of the CDR and D-B Specs. Additionally, LANL support for producing the Risk Analysis, conducting Independent Cost Reviews, Safeguards and Security requirements development, and any required seismic analysis support is included. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

EOC Project Execution Plan
June 21, 2001
Control Account (CA) 1.1.5 ESH Support
This element includes the LANL ESH support to accomplish the work associated with the conceptual phase of the project and the development of the CDR. Included are the peer reviews by LANL ESH SMEs of the CDR and D-B Specs. Additionally, LANL ESH support is required for producing the PHA, completing the required National Environmental Policy Act (NEPA) documentation, producing a preliminary ESH Plan and Safety Strategy, and preparing a Waste Minimization Plan. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.1.6 JCNNM Support
This element includes the JCNNM support to accomplish the work associated with the conceptual phase of the project and the development of the CDR. Included are site investigation and site survey activities to support the site selection process. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.1.7 Acceptance Testing/Startup
This element includes the LANL support to accomplish the acceptance testing and startup activities necessary to turn the completed facility over to the owning division for its intended use. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.1.8 External Reviews
This element includes all costs and effort required to prepare for or respond to any required external reviews such as the Defense Nuclear Facilities Safety Board (DNFSB) and the required DOE internal and external independent reviews. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.1.9 OPC Contingency
This element includes the contingency amounts as determined by the risk analysis. The Work Package Dictionaries that fall under this account will further define scope and budget.

WBS 1.2 Total Estimated Costs (TEC)
This is a Level 2 WBS element which includes all of the TEC (line item funded) activities related to the EOC project. This level includes all of the costs and effort associated with the design-build phase and Title III phase of the project. Included are Project Management, Design-Build Contract, LANL Design Support, LANL Construction Management, Construction Management Oversight, ESH, LANL Construction, JCNNM Support, and TEC Contingency. The Control Account and Work Package Dictionaries that fall under this element will further define scope, cost, and schedule.

Control Account (CA) 1.2.1 Project Management
This element includes all work related to the management of the EOC project during the design and execution phase. Costs for LANL labor including the PTL, EPC Project Leader, S.S. Project Leader, project administration, FWO support, and project controls support will be collected. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.2.2 Design-Build Contract
This element includes the scope and budget for the D-B contract necessary to accomplish the design and construction of the EOC. Included are the costs and effort required to produce an acceptable design and schedule, prepare any required ESH plans such as a storm water pollution prevention plan, construct the new facility, implement project status reporting, and perform required tests and inspections. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.
Control Account (CA) 1.2.3 LANL Design Support  
This element includes the LANL support associated with technical reviews of the proposed design, design substantiation, and required submittal reviews. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.2.4 LANL Construction Management  
This element includes the LANL construction management support during the execution of the design and construction activities. Included are constructability reviews of the design, construction inspection, coordination of LANL interfaces, and witnessing of contractor performed inspection and acceptance testing. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.2.5 Construction Management Oversight  
This element includes the scope and budget for the Construction Management Oversight (CMO) contract. Included are the costs and effort required to manage the Design-Build contractor, provide necessary oversight, coordinate contractor activities, and assist in technical inspection. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.2.6 ESH  
This element includes the LANL ESH support to provide safety support during the construction phase of the project. Included are any ESH reviews of designs, safety plans, and work procedures. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.2.7 LANL Construction  
This element includes the LANL costs and effort to perform installation of the required communications systems, security systems, and data systems. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.2.8 JCNNM Support  
This element includes the JCNNM costs and effort to perform installation of required utility tie-ins and any required assistance in obtaining permits. The Work Package Dictionaries that fall under this account will further define scope, cost, deliverables, performance measurement techniques, and schedule.

Control Account (CA) 1.2.9 TEC Contingency  
This element includes the contingency amounts as determined by the risk analysis. The Work Package Dictionaries that fall under this account will further define scope and budget.

6. Resource Plan  
The following resource plan provides a short description of funding and expenditure plans for the EOC project. The information provided is preliminary and based on the Construction Project Data Sheet for Fiscal Year (FY) 2001 and beyond. This section will be revised for the CD-2/CD-3 request to reflect cost estimates provided by respondents to the RFP for the design-build contract.
6.1. Total Project Cost Profile

(Dollars in Thousands)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Estimated Budget Authorized (BA)</th>
<th>Actual Budget Authorized (BA)</th>
<th>Budget Outlay (BO)</th>
<th>Costs</th>
<th>Beginning of Year (BOY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>$20,000</td>
<td>$19,956</td>
<td>$19,956</td>
<td>$1,260</td>
<td>-</td>
</tr>
<tr>
<td>2002</td>
<td>-</td>
<td>-</td>
<td>$19,830</td>
<td>$10,000</td>
<td>$9,830</td>
</tr>
<tr>
<td>2003</td>
<td>-</td>
<td>-</td>
<td>$9,830</td>
<td>$8,696</td>
<td>$1,134</td>
</tr>
</tbody>
</table>

*Original appropriation was $20,000,000. This was reduced by $44,000 for a rescission enacted by Section 1403 of the FY 2001 Consolidated Appropriations Act. All funding was received at the beginning of this project. Therefore, the actual budget authorized for FY 2001 is equal to the total appropriation for this project.*

6.2. Budget by Funding Category

(Dollars in Thousands)

<table>
<thead>
<tr>
<th></th>
<th>FY 2001</th>
<th>FY 2002</th>
<th>FY 2003</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Estimated Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>$1,260</td>
<td>$3,000</td>
<td>$0</td>
<td>$4,260</td>
</tr>
<tr>
<td>Construction</td>
<td>$0</td>
<td>$7,000</td>
<td>$8,696</td>
<td>$15,696</td>
</tr>
<tr>
<td><strong>Total Estimated Costs (TEC)</strong></td>
<td>$1,260</td>
<td>$10,000</td>
<td>$8,696</td>
<td>$19,956</td>
</tr>
<tr>
<td>Other Project Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conceptual Design</td>
<td>$595</td>
<td>$0</td>
<td>$0</td>
<td>$595</td>
</tr>
<tr>
<td>NEPA Documentation</td>
<td>$190</td>
<td>$30</td>
<td>$10</td>
<td>$230</td>
</tr>
<tr>
<td>Other Project-Related Costs</td>
<td>$457</td>
<td>$410</td>
<td>$750</td>
<td>$1,635</td>
</tr>
<tr>
<td><strong>Other Project Cost (OPC)</strong></td>
<td>$1,260</td>
<td>$440</td>
<td>$760</td>
<td>$2,460</td>
</tr>
<tr>
<td><strong>Total Project Cost (TPC)</strong></td>
<td>$1,855</td>
<td>$10,440</td>
<td>$9,456</td>
<td>$22,416</td>
</tr>
</tbody>
</table>

6.3. Total Project Life-Cycle Cost Plan

(Dollars in Thousands)

<table>
<thead>
<tr>
<th></th>
<th>FY 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Facility Operating Costs a</td>
<td>$3,252</td>
</tr>
<tr>
<td>Annual Facility Maintenance and Repair Costs b</td>
<td>$272</td>
</tr>
<tr>
<td>Programmatic Operating Expenses Directly Related to the Facility c</td>
<td>$1,000</td>
</tr>
<tr>
<td>Utility Costs</td>
<td>$250</td>
</tr>
<tr>
<td><strong>Total Related Annual Funding (Operating from FY 2003 through FY 2023)</strong></td>
<td>$4,774</td>
</tr>
</tbody>
</table>

*a When the facility is operational in the 4th quarter of FY 2003, costs will average $3,252,000 for labor and material per year. An average of 15.0 staff years will be required to operate the facility.

*b Based on projected annual costs for LANL site services subcontractor as derived from historical maintenance and repair costs for the existing EOC.

*c Annual programmatic operating expenses are not expected to be required for other than emergency situations and would be event specific. For this reason, annual programmatic costs are estimated as a lump sum of $1,000,000 at this time.

7. Project Baselines

A project baseline contains three elements: (1) the technical baseline, (2) the schedule baseline, and (3) the cost baseline. The technical baseline is developed first and describes the desired configuration, performance, and characteristics of the end product. The scope of work necessary to provide the end product is determined using the technical baseline. The scope of work is divided into elements that become the WBS, and is the basis for the schedule and cost baselines.
The following text presents the key bounding project assumptions for this project. These assumptions will be verified and as necessary, updated during the development of the project.

### Technical
- The project does not require unusual security restrictions during the planning, or design. Some features of the EOC may be subject to classification restrictions during construction.
- The Management Level (ML) for this project has been determined to be ML 3.
- The project shall be managed in accordance with the Construction Project Management Laboratory Implementation Requirements Document, LIR 220-01-01.4, April 27, 2000.
- The conceptual efforts will include related fieldwork to adequately develop the conceptual design elements of this project. Fieldwork will include such activities as characterization of existing soils and site surveys.
- An Environmental Assessment (EA) will be required for this project. Preparation of the EA is assumed to be a critical path activity.

### Cost
- This project is anticipated to include expense and capital funding. Expense funding for conceptual design and start up efforts and capital funding for definitive design and construction.
- Other project costs including conceptual design cost for the EOC shall not exceed $2.46 Million.
- General and Administrative (G&A) will be applied only to B line labor at a rate based on the funding determination for this project. Materials, JCNNM, and recharge labor are exempt from G&A.
- Group tax will only be applied to B line labor at the rate of the Group of the employee.
- Division tax will only be applied to B line labor at the rate of the Division of the employee; employees must charge to their line management Division.
- Procurement tax will be applied on all procurements.
- As the FY02, FY03, and FY04 burden structure (G&A, and Group and Division taxes) has not been finalized at the time of this writing, burdens will be assumed to be similar to those in FY01.
- LANL labor costs are determined in part by DOE-approved LANL accounting practices. A change in the accounting practices could affect the cost of the work performed.
- Costs associated with any programmatic delays resulting from any work on the EOC project are not included (i.e. building residents who are not assigned to this project will not charge the project for delays which may result for project activities).
- Lost time due to labor disputes, safety, unusual weather conditions, or security-related conditions have not been included.

#### 7.1. Technical Baseline

The scope (technical) baseline has been established from which work can be accomplished and performance can be measured. This baseline has been developed based on the EOC project’s established mission need, technical objectives, and functional requirements. As specified in DOE O 413.3, the specifics of the technical baseline are documented formally in the Conceptual Design Report for the Emergency Operations Center.

#### 7.2. Schedule Baseline

The schedule baseline has been developed to be consistent with the WBS and integrated with the cost estimate, and represents all project work scope. Activity logic was developed to depict all work scope, constraints, and decision points.

Figures 7.2.1 and 7.2.2 present the preliminary summary and detailed schedules (respectively) for completing the proposed scope of work. The projected date for completion of all conceptual design is June 2001. This aggressive schedule is proposed to allow sufficient time for Title II design to begin in FY01 immediately following FY01 funding and authorization. An overall project schedule that includes design, construction, startup, and turnover will be provided by the respondents to the Request for Proposal and will be provided in the Final PEP.

EOC Project Execution Plan
June 21, 2001
Table 7.2.1: Summary Project Schedule

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Description</th>
<th>Orig Dur</th>
<th>Res ID</th>
<th>Budgeted Cost</th>
<th>Early Start</th>
<th>Early Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. DESIGN PHASE</td>
<td>+ A.1 Engineering Design</td>
<td>154</td>
<td>1</td>
<td>350,000.00</td>
<td>01 OCT 01</td>
<td>02 JUL 02</td>
</tr>
<tr>
<td></td>
<td>+ A.2 Management</td>
<td>154</td>
<td>1</td>
<td>700,000.00</td>
<td>01 OCT 01</td>
<td>02 JUL 02</td>
</tr>
<tr>
<td>B. CONSTRUCTION PHASE</td>
<td>+ B.1 Improvements To Land</td>
<td>213</td>
<td>2</td>
<td>357,746.00</td>
<td>02 MAR 02</td>
<td>02 JUL 02</td>
</tr>
<tr>
<td></td>
<td>+ B.2 Building Construction</td>
<td>204</td>
<td>2</td>
<td>10,022,300.00</td>
<td>02 APR 02</td>
<td>02 JUL 02</td>
</tr>
<tr>
<td></td>
<td>+ B.3 Utilities</td>
<td>189</td>
<td>2</td>
<td>13,906,227.25</td>
<td>01 OCT 01</td>
<td>02 JUL 02</td>
</tr>
<tr>
<td></td>
<td>+ B.5 Insp., Proj. Liaison, Test, Check, Accept</td>
<td>33</td>
<td>2</td>
<td>720,000.00</td>
<td>02 MAR 02</td>
<td>01 JUL 03</td>
</tr>
<tr>
<td></td>
<td>+ B.6 Construction Management</td>
<td>39</td>
<td>2</td>
<td>900,000.00</td>
<td>02 MAR 02</td>
<td>31 JUL 03</td>
</tr>
<tr>
<td>C. ESCALATION</td>
<td>+ C.1 Design Phase</td>
<td>197</td>
<td>2</td>
<td>39,770.00</td>
<td>01 OCT 01</td>
<td>02 JUL 02</td>
</tr>
<tr>
<td></td>
<td>+ C.2 Construction Phase</td>
<td>202</td>
<td>2</td>
<td>660,524.00</td>
<td>02 JUL 02</td>
<td>31 JUL 03</td>
</tr>
<tr>
<td>D. LABORATORY BURDENS</td>
<td>+ D.1 Procurement Tax and G&amp;A</td>
<td>479</td>
<td>2</td>
<td>630,848.00</td>
<td>01 OCT 01</td>
<td>02 JUL 03</td>
</tr>
<tr>
<td>E. CONTINGENCY</td>
<td>+ E.1 Design Phase</td>
<td>197</td>
<td>2</td>
<td>355,807.00</td>
<td>01 OCT 01</td>
<td>02 JUL 02</td>
</tr>
<tr>
<td></td>
<td>+ E.2 Construction Phase</td>
<td>202</td>
<td>2</td>
<td>3,039,846.00</td>
<td>02 JUL 02</td>
<td>31 JUL 03</td>
</tr>
</tbody>
</table>
7.3. Major Events

Table 7.3.1 lists the major events of the EOC project. The list has been developed using information from the project schedule. Actual completion dates will be added to this list during annual revisions.
Table 7.3.1: Major Events of the EOC Project

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Scheduled Date of Completion</th>
<th>Actual Date of Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Decision (CD) – 0</td>
<td></td>
<td>February 28, 2001</td>
</tr>
<tr>
<td>Request Critical Decision (CD) – 1</td>
<td>June 26, 2001</td>
<td></td>
</tr>
<tr>
<td>Select Design-Build Contractor</td>
<td>September 10, 2001</td>
<td></td>
</tr>
<tr>
<td>Award Design-Build Contract</td>
<td>September 28, 2001</td>
<td></td>
</tr>
<tr>
<td>D-B Design Concept Approved</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Start Construction</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Site Work Complete</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Building Complete</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Special Systems Complete</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Utility Work Complete</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Substantial Completion</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Critical Decision 4 (CD-4) Complete</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Final Cost Report</td>
<td>TBD</td>
<td></td>
</tr>
</tbody>
</table>

7.4. Critical Activities

The critical activities will be provided in the final PEP to reflect the schedules provided by respondents to the RFP for the design-build contract.

7.5. Cost Baseline

The cost baseline scope for Levels 1, 2, and 3 of the WBS are defined in the WBS Control Account Dictionaries defined in Section 5 of this document. The following cost baseline is preliminary and based on the 95% Conceptual Design Report. This section will be revised for the final PEP to reflect cost estimates provided by respondents to the RFP for the design-build contract.

The total project cost (TPC) and the preliminary cost breakdown for the project is shown in Table 7.5.1.
Table 7.5.1: Total Project Costs (TPC)

<table>
<thead>
<tr>
<th>A. DESIGN PHASE</th>
<th>% Subtotal “Construction Cost”</th>
<th>$ (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1 Engineering Design</td>
<td>3.2%</td>
<td>$1303,184</td>
</tr>
<tr>
<td>A.1 Prelim. Design-Title I (A/E)</td>
<td>3.2%</td>
<td>$456,115</td>
</tr>
<tr>
<td>A.1.2 Final Design-Title I (A/E)</td>
<td>5.9%</td>
<td>$847,070</td>
</tr>
<tr>
<td>A.2 Management</td>
<td>2.8%</td>
<td>$409,956</td>
</tr>
<tr>
<td>A.2.1 Title I &amp; II Design Mgmt. (LANL)</td>
<td>1.3%</td>
<td>$184,214</td>
</tr>
<tr>
<td>Design Management (LANL)(Title I &amp;II)</td>
<td>1.0%</td>
<td>$138,974</td>
</tr>
<tr>
<td>Conceptual Design-LANL Engineering Support</td>
<td>0.2%</td>
<td>$24,420</td>
</tr>
<tr>
<td>Design-Build LANL Engineering</td>
<td>0.1%</td>
<td>$20,820</td>
</tr>
<tr>
<td>A.2.2 Project Management (LANL)</td>
<td>1.6%</td>
<td>$225,742</td>
</tr>
<tr>
<td>Conceptual Phase</td>
<td></td>
<td>$225,742</td>
</tr>
</tbody>
</table>

B. CONSTRUCTION PHASE

| B.1 Improvements to Land | $803,153 |
| B.2 Building Construction | $9,461,280 |
| B.3 Site Utilities | $2,098,776 |
| B.4 LANL Construction | $543,330 |
| B.4.1 Safeguards and Security | $167,000 |
| B.4.2 Communications | $376,330 |
| B.5 JCNNM Construction | $115,000 |
| B.5.1 Utility Tie-Ins | $100,000 |
| B.5.2 Fire Alarm Tie-Ins | $15,000 |
| B.6 Capital Equipment | $1,458,288 |
| B.6.1 Special Equipment | $672,222 |
| B.6.2 Standard Equipment/Furniture | $786,066 |

Subtotal “Construction Cost” B.1 through B.6 Above = $14,479,827

| B.7 Inspection, Proj. Liaison, Testing, Checkout & Acceptance | 2.0% | $289,597 |
| B.7.1 Title III Design (A/E) | | $289,597 |
| B.8 Management | 4.0% | $1,088,404 |
| B.8.1 Project Management (LANL) | | $578,825 |
| Capital Phase – Design-Build | | $578,825 |
| B.8.2 Construction Management (LANL) | 0.5% | $75,185 |
| Construction Inspection Services | | $55,594 |
| Safety Inspection Services | | $19,591 |
| B.8.3 Construction Management Oversight Contract | 3.0% | $434,395 |

C. ESCALATION @ 4.57%

| C.1 Design Phase | $38,364 |
| C.2 Construction Phase | $765,101 |

D. LABORATORY BURDENS (See summary of Burdens, Escalation, and Contingency in 95% CDR) | $350,590 |

E. CONTINGENCY | $3,581,838 |

E.1 Design Phase | $405,731 |
E.2 Construction Phase | $3,176,107 |

TOTAL ESTIMATED COST (TEC) | $22,306,862 |

OTHER PROJECT COSTS (OPC) | $976,195 |

Conceptual Design | $634,000 |
Design-Build RFP | - |
NEPA and Other Environmental Assessments | $230,000 |
Other ESH Costs | $76,828 |
Other Project Costs | $30,277 |
Project Closeout | $5,290 |

TOTAL ESTIMATED COST (TEC) | $23,283,057 |
A life cycle cost analysis has been performed for this project. The factors that were considered include the initial cost of the structure, the periodically recurring renovation costs, and the annual costs. Table 7.5.2 summarizes the estimated life-cycle costs. The initial cost for the structure was the TEC figure of $22,306,862. The recurring costs for major renovations expected over a 40-year life cycle for the building are expected to run 10% of the initial construction cost and occur every ten years. The annual costs were based on a gross square footage (SF) of 33,768. The net present value of the recurring and annual costs was calculated using a 3.5% discount rate. A more detailed discussion of the life cycle cost analysis can be found in the 95% CDR.

Table 7.5.2: Life-Cycle Cost Analysis

<table>
<thead>
<tr>
<th>Life-Cycle Cost item</th>
<th>$/SF</th>
<th>Total Cost for New Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INITIAL COSTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Estimated Cost (TEC)</td>
<td>$688.73</td>
<td>$22,306,862</td>
</tr>
<tr>
<td><strong>RECURRING COSTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacement Costs Every 10 Years</td>
<td>$42.99</td>
<td>$1,447,983</td>
</tr>
<tr>
<td><strong>ANNUAL COSTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td>$4.00</td>
<td>$135,072</td>
</tr>
<tr>
<td>Preventive Maintenance</td>
<td>$2.00</td>
<td>$67,536</td>
</tr>
<tr>
<td>Grounds Maintenance</td>
<td>$0.75</td>
<td>$25,326</td>
</tr>
<tr>
<td>Janitorial Services</td>
<td>$1.75</td>
<td>$59,094</td>
</tr>
<tr>
<td><strong>TOTAL ANNUAL COSTS</strong></td>
<td>$8.50</td>
<td>$287,028</td>
</tr>
<tr>
<td><strong>NET PRESENT VALUE OF ANNUAL &amp;</strong></td>
<td></td>
<td>$8,771,922</td>
</tr>
<tr>
<td><strong>RECURRING COSTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LIFE CYCLE COST</strong></td>
<td></td>
<td>$31,078,784</td>
</tr>
</tbody>
</table>

8. Project Controls Systems and Reporting

8.1. System Description

The project controls and reporting management systems have been developed to meet or exceed the requirements stated in DOE O 430.1A, *Life-Cycle Asset Management*, Joint Program Office Direction on Project Management (dated March 30, 1998), and the Construction Management Program Plan (DP-10, dated June 1, 1999). As part of the CGR Project, the project controls approach for the EOC project follows the overall project controls approach established for the CGR Project, which is documented in the *Cerro Grande Rehabilitation Project Execution Plan*. The processes discussed in this section have been proceduralized by the project team with additional operational details.

The project control system is integrated with the baseline change control and work authorization processes, and will provide the required status and variance analysis for the specified reporting period. The EOC project has an integrated and proven project control system to provide effective planning and reporting, as well as day-to-day management capabilities. This system will:

- Clearly identify and organize the EOC scope required to complete the project.
- Provide the means to break the work scope into activities, with a time-phased budget and resource plan.
- Allow execution of work only with a controlled authorization process.
- Maintain an accurate accounting of costs for performed work.
- Accurately analyze and report performance at least monthly to identify what has been accomplished and at what cost.
- Accurately forecast, on a monthly basis, the schedule and costs to complete the project.
- Provide the basis for project budget submissions and validations.
- Manage changes to the baseline in accordance with approved procedures.
The EOC project is using industry standard project management software, including Primavera Project Planner scheduling software and PRISM Cost Management software to plan, track and report on this project. Figure 8.1.1 provides a graphical representation of the computer related tools that are used to produce schedules, reports, and other documents.

**Figure 8.1.1: Project Controls Computer System Configuration**

![Diagram showing the integration of various systems for project controls](image)

### 8.2. Progress and Status Reporting

Monthly reports will be prepared and distributed to DOE based on the integration of monthly information obtained from all project participants. These reports will be part of the monthly CGR Project reports distributed by the 23rd of each month for the previous month’s report. The monthly project reports to DOE will include the following information regarding the EOC project:

- **Financial**: Current fiscal year and cumulative to-date amounts for obligated funds at WBS Level 1 (EOC project level)
- **Cost**: Current cumulative to-date planned and incurred costs and estimate at completion at WBS Level 1 (EOC project level).
- **Schedule**: Status of schedule milestones, baseline, UC Performance Measures, and planned dates vs. actual/forecast dates.
- **Technical**: Current status comparing the technical requirements with a determination of progress and problems towards meeting the technical requirements.
- **Work Execution**: Evaluation of schedule, technical, financial, and cost progress and problems including variance analysis and corrective actions.
- **Accomplishments and Issues**: Any issues that may need Departmental attention relating to the execution of project work.
- **Corrective actions for cost or schedule variances exceeding control threshold.**
The EOC project team will attend monthly project status meetings to monitor work performed on the EOC project. The PTL will conduct the project status meetings with the participation of all team members. Each WBS Manager will be responsible for briefing the project team on progress, issues, and planned activities for his or her task as well as cost and schedule information. The project controls office will summarize this information and distribute it to the EOC project team and management. DOE will be invited to attend the monthly progress meetings and will receive progress updates to stay current on action items and key project issues.

Funds received for the project are reconciled in the scope of work associated with those funds, and any discrepancies are documented through the baseline management process. Procedures in place ensure that funds received are used for the specific scope of work identified for the funding. These controls will prevent costs in excess of authorized funding.

A more detailed discussion of the monthly reporting, and performance measurement and analysis identified for the CGR Project is provided in the *Cerro Grande Rehabilitation Project Quality Management Plan*.

### 8.3. Baseline Change Control

Establishment and maintenance of baselines are the most important aspects of project control. Changes to baselines will be carefully controlled to avoid loss of control and distortion in performance reporting. The purpose of the project change control system is to assure that:

- Action on all change requests is deliberate and without undue delay, but carried out without interfering disproportionately with project progress.
The scope, schedule, and technical impacts of proposed changes are developed and considered by all appropriate parties. The collected evaluations are considered in the approval or rejection of the proposed changes. All appropriate parties are informed of proposed changes and their disposition. Baseline documentation is controlled and updated as appropriate to reflect approved changes.

Scope, cost, and schedule baselines established upon approval of this PEP will be subject to BCCB review process established for the CGR Project. CGR Project BCCBs have been established at three levels to approve, disapprove, or endorse (i.e., recommend approval to a higher-level BCCB) all proposed baseline changes. The three levels, governing baseline change control for the CGR Project, are as follows:

- Level 1, DOE-HQ – Chairperson – Program Sponsor (Dennis M. Miotla)
- Level 2, DOE LAAO – Chairperson – Federal Project Manager (Herman LeDoux)
- Level 3, LANL – Chairperson – Project Director (Jim Holt)

The BCCB process is shown in Figure 8.3.1 and change control thresholds are listed in Table 8.3.1. Each lower-level board that approves a baseline change will provide the next higher-level board with a copy of the approved baseline change package and will endorse all proposed changes to be considered by the next higher-level board. This process ensures proper oversight of all proposed changes, which can originate at any level in the project, but must be fully evaluated at Level 3. The thresholds determine the appropriate management approval level.

**Figure 8.3.1: Baseline Change Control Board Process**
of a requested change without conducting a board meeting. The LANL Executive Steering Committee will serve as the LANL (Level 3) BCCB.

For directed changes, the DOE-HQ directive will be the authorization for implementing the change (directed changes do not require change board approval). The EOC PTL will be responsible for determining and documenting the resulting impacts to other baselines, when appropriate, and will provide information copies of the change impacts to appropriate management levels.

Table 8.3.1: Change Control Thresholds

<table>
<thead>
<tr>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANL BCCB</td>
<td>DOE-LAAO BCCB</td>
<td>DOE-HQ BCCB</td>
</tr>
<tr>
<td>CGR Project Director</td>
<td>Federal Project Manager</td>
<td>Program Sponsor</td>
</tr>
<tr>
<td>Chairperson: Jim Holt</td>
<td>Chairperson: Herman LeDoux</td>
<td>Chairperson: Dennis Miotla</td>
</tr>
</tbody>
</table>

| Scope | Addition of subtraction of “subtasks” within individual CGR subprojects. | Changes to scope of multiple CGR subprojects, but that are within congressional control level designations. | Changes to scope that impact congressional control level designations. |
| Schedule | Any schedule changes to milestones listed in the CGR PEP Appendix C, Project Milestone Schedule, that are \( \leq 4 \) months. | Any schedule changes to milestones listed in the CGR PEP Appendix C, Project Milestone Schedule, that are > 4 months but \( \leq 8 \) months. | Any schedule changes to milestones listed in the CGR PEP Appendix C, Project Milestone Schedule, that are > 8 months. |
| Cost | All changes to tasks within CGR subproject that does not affect CGR subproject TEC. | Any changes in CGR subproject TECs that do not affect congressional control levels. | Any change that affects congressional control levels. |

If changes (either approved or directed) exceed congressionally mandated thresholds, congressional notification is required prior to approval and authorization to proceed. All congressional notifications must be coordinated through the Chief Financial Officer prior to submission in accordance with DOE Order 135.1, *Budget Execution – Funds Distribution and Control*.

9. Risk Management

Risk is an inherent part of all activities, whether the activity is simple and small, or large and complex. Risk management is necessary to determine and control risks to an acceptable level. A risk assessment has been completed to determine the schedule and cost risks associated with the EOC project. The risk assessment was conducted using the 95% Conceptual Design Report for the EOC.

The overall risk management process that will be employed for EOC is depicted in Figure 9.1. The process is similar to that employed by LANL on other major projects and follows the guidance given in numerous DOE and LANL standards and procedures.
The results of the risk assessment will be used to prepare a risk management plan to minimize the occurrence and consequences of the identified risks. For further details, please refer to the Emergency Operations Center Project Risk Assessment.

10. Acquisition Strategy and Acquisition Plan

This section provides a discussion of the proposed method of accomplishing the project, including the use of contract labor and the type of contract vehicles. A Memorandum of Understanding (MOU) on the Required Documents and Process of Obtaining DOE Approvals for Line-Item Construction Projects under the Cerro Grande Rehabilitation Project using a Design/Build Construction Approach, dated June 8, 2001 has been prepared to define the required documents and process for obtaining critical decisions from DOE for the CGR Line Item Projects.

10.1. Acquisition Strategy

As stated in the MOU, CD-0 was approved by David Crandall, Assistant Deputy Administrator of Research, Development, and Simulation for Defense Programs on February 20, 2001, for all the CGR Project line-item construction projects. Therefore, the Acquisition Strategy is to proceed with the execution of the CGR Project line-item construction projects through the University of California, hence a separate Acquisition Strategy document will not be created.

10.2. Acquisition Plan

An Acquisition Plan has been prepared in accordance with Federal Acquisition Regulation (FAR) Subpart 7.1, Acquisition Plans, and DOE O 413.3, Program and Project Management for the Acquisition of Capital Assets. The purpose of the plan is to ensure that the government meets its needs in the most effective, economical, and timely manner. The EOC Project is an "Other Project" in the terminology of DOE O 413.3 with TEC less than $100 M and greater than $20M. The acquisition authority for the EOC Project is as follows:

- The Acquisition Executive (AE) duties are delegated to the cognizant Program Manager.
- The DOE-LAAO Field Office Manager has approval authority for the CDR, the PEP, and the Acquisition Plan. He has Level 2 baseline change approval authority and appoints the Federal Project Manager from the DOE-LAAO staff.
- The Federal Project Manager is an active member of the Integrated Project Team that executes the project.
- The PTL is a project management specialist drawn from the LANL Project Management Division and appointed by the S-Division leader.

The team has been appointed according to the requirements of LANL LIR 220-01-01.4, Construction Project Management. The team consists of a PTL, a Quality Assurance Specialist, a Health Safety and Environment Specialist, a Procurement and Contracts Specialist, a Cost and Schedule Analyst, a Construction Manager, an Emergency Operations Specialist, a Security Specialist, and Project Administrative Support.
A more detailed discussion of the acquisition plan for this project can be found in the Acquisition Plan for the Emergency Operations Center (CGRP-0012-011).

11. Technical Considerations

11.1. Value Engineering

As the design-build evaluation is to be based on a best value procurement process in which independent design solutions are proposed, this best value approach will be considered equivalent to a value engineering review. This approach to value engineering is documented in the MOU with DOE dated June 8, 2001.

11.2. Configuration Management

Successful accomplishment of any project requires that all participants be provided accurate information on the project and its end product(s) during any point in the project life cycle. As a project proceeds through its life cycle, the number of participants grows significantly and the volume of information grows exponentially. As part of the CGR Project, the configuration management approach for the EOC project follows the overall configuration management approach established for the CGR Project in the Cerro Grande Rehabilitation Project Execution Plan.

11.3. Project Quality Management

As part of the CGR Project, the quality management approach for the EOC project follows the overall quality management approach established for the CGR Project. The Cerro Grande Rehabilitation Project Quality Management Plan (CGR Plan-002, R.0) provides details of the quality management approach for all CGR Projects.

A tailored Project Quality Management Plan (PQMP) is being prepared for the EOC project. The Project Quality Management Plan for the Emergency Operations Center (CGRP-0012-007, R.0) will specifically address the 10 criteria of DOE Order 414.1 arranged in three categories; quality planning, quality assurance, and quality control. The PQMP for the EOC project is being prepared to ensure that quality management will be achieved throughout the life of the project and that "lessons learned" will be documented for future projects.

11.4. Integrated Safeguards and Security Management Plan

As part of the CGR Project, the integrated safeguards and security management approach for the EOC project follows the overall integrated safeguards and security management approach established for the CGR Project. The Cerro Grande Rehabilitation Project Integrated Safeguards and Security Management Plan (CGR-Plan-004, R.0) dated February 23, 2001 provides details of the integrated safeguards and security management (ISSM) approach for all CGR Projects. A more detailed discussion of the security approach for the EOC project is provided in Section 3.4, Security.

11.5. Integrated Safety Management Plan

As part of the CGR Project, the integrated safety management approach for the EOC project follows the overall integrated safety management approach established for the CGR Project. The Cerro Grande Rehabilitation Project Integrated Safety Management Plan (CGR-Plan-005, R.0) dated February 12, 2001 provides details of the integrated safety management approach for all CGR Projects.
11.6. Project Closeout and Transition to Operations

Project closeout begins after CD-4 is received. Project closeout will be completed once the final cost closing statement and final cost report, which are part of the Project Closeout Package, are approved by DOE. Project closeout and turnover and acceptance activities will be conducted in accordance with PMD Procedure 606, Project Acceptance and Closeout.

Test and performance verification criteria will be prepared, reviewed, and approved by the Facility Owning Division. The Facility Owning Division will participate in the actual testing and concur in test results. Acceptance testing and start-up activities will be completed in accordance with the procedures and criteria set forth in the Integrated Test and Acceptance Plans developed during final design.

12. References

DOE Documents
- DOE M 413.3 (Draft), Project Management Practices, October 2000.
- Construction Management Program Plan (DP-10), June 1, 1999.

LANL Documents

CGR Project Documents
- CGR-Plan 001, Rev. 0, Cerro Grande Rehabilitation Project Execution Plan, August 18, 2000.

EOC Project Documents
- CGRP-0012-003, R0, Functional and Operational Requirements for the Emergency Operations Center, (refer to CDR).
- CGRP-0012-005, R0, Design Criteria for the Emergency Operations Center, (refer to CDR).
- CGRP-0012-006, R0, EOC Project ESH Plan and Safety Strategy (DRAFT).
- CGRP-0012-011, R0, Acquisition Plan for the Emergency Operations Center.
- EOC Project Quality Management Plan (DRAFT).