Conventional Facilities Group

Organization, Staffing and Contractor Support

Jon Ives
NLC Conventional Facilities

What's our Target?
NLC Conventional Facilities

Bullet-Proof CDR by March 2001!
CDR goal for conventional facilities:

Adequately define scope, cost & schedule, so we can:

fully execute our design & construction within the baselines established from CDR.
NLC Conventional Facilities

Info Required for CDR

• Generic site layout
• Concept designs, outline specs, & cost estimates - each conventional facility
• Energy Management Plan
• Detailed schedule for design/construction
Info Required for CDR (cont.)

• Cost estimates for ED&I
• Risk analysis and contingency
• Design criteria for facilities
• Definitive Site Selection Criteria for DOE
• Identification of candidate sites
NLC Conventional Facilities

Near-Term NLC Facilities Group

- **Geotechnical Team**
  - Subsurface Investigations
  - Tunnels
  - Shafts & Ramps
  - Klystron Galleries
  - IR Halls
  - Ground Motion
  - Long Term Stability

- **Civil/Structural Team**
  - Site Development
  - Roads & Parking
  - Rail
  - Water Supply
  - Storm Drainage
  - Sanitary Sewers & Waste Treatment
  - Fuel Storage/Distribution
  - Spoils Disposal
  - Berms
  - Structural Engineering

- **Architectural Team**
  - Laboratory/Auditorium
  - Heavy Assembly Bldgs
  - Shop Bldgs
  - Warehouses
  - Emergency Services Bldgs
  - Security Bldgs.
  - Landscaping
  - Fencing

- **Electrical/Mechanical Team**
  - Electrical System
  - Communications
  - Emergency Power
  - Heat Transfer Studies
  - Tunnel Cooling
  - Building HVAC Systems
  - Elevators
  - Cranes, Hoists & Conveyances

- **Project Controls & Admin Spt**
  - Cost Estimating (All Disciplines)
  - Scheduling
  - Admin Support
NLC Conventional Facilities

Proposed Organization for Execution Phase

- **Conventional Facilities**
  - Jon Ives

- **ES&H**
- **Quality Assurance**

- **Conventional Project Controls**
  - Cost Control
  - Scheduling
  - Budget
  - Reports
  - Administration

- **Engineering**
  - Geotechnical
  - Civil
  - Electrical/Mechanical
  - Architectural
  - Cost Estimating
  - CAD

- **Construction**
  - Construction Safety
  - Resident Engineer #1
  - . . .
  - Resident Engineer #n
# NLC Conventional Facilities

## Conventional Facilities Staffing Plan, FY 99 - 00

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Oct-Dec</th>
<th>Jan-Mar</th>
<th>Apr-Jun</th>
<th>Jul-Sep</th>
<th>FTE</th>
<th>Oct-Dec</th>
<th>Jan-Mar</th>
<th>Apr-Jun</th>
<th>Jul-Sep</th>
<th>FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group Leader</strong></td>
<td>Ives</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Special Projects</strong></td>
<td>Youngman (Part-Time)</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td><strong>Electrical/Mechanical Team</strong></td>
<td>Corvin</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mechanical Engineer</td>
<td>Sevilla</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>0.25</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Geotech Team</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geotech Engineer</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0.75</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Geotech Engineer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Civil/Structural Team</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil Engineer</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0.75</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Structural Engineer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Architectural Team</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Architect</td>
<td></td>
<td>1</td>
<td>1</td>
<td>0.5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Architect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Project Controls/Admin Team</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Controls</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0.75</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Admin Support</td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.375</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
NLC Conventional Facilities

- A-E/CM not available until 3rd Qtr, FY-02
- A-E support needed during CDR, site selection, NEPA process, etc.
Propose “interim” A-E support via task order contract
Interim A-E available until A-E/CM is mobilized
NLC Conventional Facilities

Interim A-E Contract

• Cost reimbursable, task order contract
• $50k minimum; one year + 4 option years
• Individual tasks NTE $250,000
• Professional services
• Work authorized by individual task
Interim A-E Contract (cont.)

- Initial Task: Comparative Cost Study of three beamline housing alternatives:
  - Cut and cover
  - Shallow mechanically excavated tunnel
  - Deep bored tunnel
### Estimated Contract Cost:

<table>
<thead>
<tr>
<th>FY</th>
<th>99</th>
<th>00</th>
<th>01</th>
<th>02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$0.5M</td>
<td>$1 M</td>
<td>$1.5</td>
<td>$2.0</td>
</tr>
</tbody>
</table>
## NLC Conventional Facilities Budget Plan

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Program Element</th>
<th>FTE</th>
<th>M&amp;S ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>1.9 Conventional Facilities</td>
<td>6.6 FTE</td>
<td>$520</td>
</tr>
<tr>
<td></td>
<td>1.9.1 In-House Costs</td>
<td>6.6 FTE</td>
<td>$20</td>
</tr>
<tr>
<td></td>
<td>1.9.2 A-E Support</td>
<td></td>
<td>$500</td>
</tr>
<tr>
<td>2000</td>
<td>1.9 Conventional Facilities</td>
<td>12.5 FTE</td>
<td>$1,040</td>
</tr>
<tr>
<td></td>
<td>1.9.1 In-House Costs</td>
<td>12.5 FTE</td>
<td>$40</td>
</tr>
<tr>
<td></td>
<td>1.9.2 A-E Support</td>
<td></td>
<td>$1,000</td>
</tr>
</tbody>
</table>
NLC Conventional Facilities

CDR

Are we on the right track?