

memorandum

National Nuclear Security Administration
Los Alamos Site Office
Los Alamos, New Mexico 87544

DATE: JAN 23 2012
REPLY TO:
ATTN OF: Kevin W. Smith
SUBJECT: Los Alamos Site Office Workforce Analysis and Staffing Plan Report for Calendar Year 2011

TO: Karen Boardman, Chairperson, Federal Technical Capability Panel, HS-70, National Training Center

Reference:

1. Memorandum, from Karen L. Boardman, Chairperson, Federal Technical Capability Panel, for distribution, Subject: *Annual Workforce Analysis and Staffing Plan Report for Calendar Year 2011*, dated October 13, 2011.

Attached please find the Los Alamos Site Office (LASO) Annual Workforce Analysis and Staffing Plan for Calendar Year 2011. Authorized Federal Full Time Equivalent (FTE) allocation remains less than the number of FTEs required to perform the oversight identified necessary by the analysis results reported. Staffing shortfalls are compensated for through support service contract support, Albuquerque Complex personnel support, and increased reliance on Contractor Assurance System products.

If you have any questions regarding this memorandum, please contact Fred Bell at (505) 665-4856.



Kevin W. Smith
Manager

Attachment

cc w/attachment:

D. Cook, NA-10, HQ/FORS
J. McConnell, NA-17, HQ/FORS
J. Griego, OOM, LASO
J. Krepps, FO, LASO
C. Keilers, SO, LASO
I. Valdez, NSM, LASO
A. Swanson, SAS, LASO
G. Rael, EPO, LASO
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F. Bell, FO/SET, LASO
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Records Center, LASO
Official Contract File, LASO

FO/SET:31FB-411785

**Annual Workforce Analysis and Staffing Plan Report
as of December 31, 2011
Reporting Office & Organization: Los Alamos Site Office**

Section One: Current Mission(s) of the Organization and Potential Changes

The Los Alamos Site Office provides contract management and oversight of the Los Alamos National Laboratory (LANL), a large complex multi-program Laboratory supporting diverse DOE and other government agency missions. Facility statistics and ongoing work activities include:

- Greater than \$2.5 billion dollar annual budget;
- Thirteen major operating Category II and III nuclear facilities and 237 Radiological facilities (includes Environmental Sites), 19 high and moderate hazard facilities which include 2 large accelerators, and numerous explosive facilities and firing sites, as well as science facilities supporting lasers, chemicals, physics/material science and biological work;
- Approximately 40 square miles (size of Washington, DC), 100 miles of roads, 30 miles of 115KV transmission lines, and 120 miles of gas transmission lines;
- Line Item Construction Projects replacing or upgrading Nuclear Facilities totaling over \$4.0 billion;
- Production mission supporting Pit and detonator Manufacturing, Pu Oxide, and Medical Isotope Production;
- Research and Development supporting Materials and Particle Physics, Medical Isotope Research, Stockpile Stewardship, Nuclear Nonproliferation, Hydrodynamic Testing, Explosive Research, Plutonium Operations, Radiological Waste Processing, Homeland Security Work, and Work for Others;
- Approximately 1170 buildings;
- 9 Million gross square feet of facilities;
- 43% of Space is more than 40 years old;
- \$928 million infrastructure deferred maintenance;
- Approximately \$6 Billion in federal assets;
- Approximately \$1.7 Billion in environmental liability;
- Over \$600 Million spent annually to maintain and improve these assets;
- NNSA owns and operates electric and generation facilities at LANL (37 MW); and
- Allocation of hydroelectric power (35 MW) from Western Area Power Administration.

LANL conducts a wide variety of radiological activities in the following areas:

- research, development, production, and testing associated with nuclear weapons;
- radiochemistry and metallurgy with radioactive materials;
- fabrication of radioisotope thermoelectric generators and heat sources;
- accelerator-based nuclear physics research and applied technologies;
- mixed fission and activation product production and analysis, including hot cell work;
- materials science and testing involving radioactive materials and accelerators;
- dynamic testing with radioactive materials;
- tritium research and applications;
- use of radiation generating devices and radioactive sealed sources;
- biomedical research using radiotracers and irradiators;
- nuclear criticality experimentation;
- research, development, and applications in support of nuclear fuels;

- work in support of nonproliferation, counterterrorism, and homeland security;
- emergency response;
- transportation of radioactive material;
- radioactive and mixed waste treatment, storage, and disposal;
- decontamination and decommissioning of facilities;
- environmental sampling and restoration; and
- other miscellaneous research, development, and operations involving ionizing radiation and/or radioactive materials.

The Los Alamos National Laboratory (LANL) is one of three designated NNSA laboratories supporting plutonium operations, nuclear weapons design, stockpile stewardship, nuclear energy research, nuclear forensics, nuclear safeguards, and counterterrorism. LANL is the only DOE/NNSA facility designated for the manufacturing of plutonium weapons components. As a Security Category 1B facility within the Nuclear Weapons Enterprise, LANL sets the standard in providing the optimal balance of personnel and technologies necessary to provide a highly effective and efficient security posture over approximately 40 square miles of DOE-owned land that contains approximately 1200 buildings/facilities, over 60 designated Security Areas, over 800 designated Property Protection Areas and approximately 12,000 employees including contractors.

The Los Alamos Site Office manages a variety of Construction Line Item projects, which are significant within the Construction Working Group (CWG) and are all critical within the NNSA projects portfolio; these projects are at different stages of development and range in value from \$16M to \$250M, and are listed below:

- TA-55 Reinvestment (TRP) II, TPC \$99 Million (Overall CD-1, CD-3A and CD-2B)
- TA-55 Reinvestment (TRP) III, TPC Forecast of \$100-200 Million (Forecast as a FY15 new start)
- TRU Waste Facility, CD-1 TPC range \$74 - \$124 Million (CD-1 overall, CD-2A)
- Radioactive Liquid Waste Treatment Facility Upgrade (RLWTF-UP), Current Estimated TPC of \$200-\$250 Million (CD-1)
- Nuclear Materials Safeguards and Security Project (NMSSUP), Phase II, TPC of \$213 Million (CD-3)
- South Mesa (SM) 43 Demolition Project, TPC \$20.7 Million (CD-4 in process)
- Sanitary Effluent Reclamation Facility (SERF) Expansion, TPC \$16.1 Million (CD-3)
- Energetic Materials Characterization Facility, TPC Forecast of \$40 to 80 Million (Forecast as a FY15 new start)
- TA-3 Substation Replacement, estimated TPC \$25 Million, (CD-0, forecast as FY14 New Start)
- CMRR Nuclear Facility (NF) Currently in CD-1. Acquisition Strategy is “chunking” non-nuclear infrastructure and long lead procurement for design and nuclear construction. Non-nuclear infrastructure and long lead procurement currently scheduled for CD-2/3 1st QTR FR-12. NF scheduled for CD-2/3 FY-13. Construction complete 2020; and turn over to ops 2022.
- CMRR RLUOB TPC \$164 M. Tailored CD-4 for structure. Beneficial occupancy currently achieved 4th QTR FY-11, in process of outfitting labs via RIE subproject.
- CMRR REI TPC \$199.5M. Currently CD-3 with readiness for rad operability 3rd QTR FY-12; 1 year ahead of schedule.

Major programs fiscal year 2012 Presidential Budget Request:

| | |
|--------------------------------------|-------------------------|
| NNSA - Weapons Activities (WA) | \$1,593,863,000 |
| NNSA - Nuclear Nonproliferation (NN) | 233,331,000 |
| DOE - Environmental Management | 372,000,000 |
| DOE - Other DOE Programs | 200,220,000 |
| Work for Others (WFO) | 323,400,000 |
| Total | \$ 2,722,814,000 |

Describe any potential or probable changes to the mission that may significantly affect technical staffing needs.

Additional Federal Project Directors and waste specialists will be assigned to the acceleration of TRU waste disposal from TA-54 Area G. This scope of work is being prioritized as a result of the environmental risk due to wild fires experienced in 2011 and the emphasis placed by the New Mexico Governor.

CMRR Project Funding affects the number of federal staff required. A Federal Project Director is assigned and a core group of Federal Staff is detailed to the Project from within LASO; staffing need variations are managed through support contracts with the US Army Corps of Engineers and Albuquerque Complex task requests.

Increases in products submitted for LASO Quality Assurance acceptance for support to the MOX/ARIES program, RPS program, and NNSA weapon and weapon-related materials will require an additional 3 FTEs above current allocations.

In addition to CMRR, large line-item construction portfolio require fluctuating FTE needs include TRU Waste Facility, TRP II, and RLWTF projects – all involving Hazard Category 2/3 facilities.

Increasing off-site independent oversight (e.g., DNFSB, DOE-HS, CDNS, DOE-IG) that is creating an increasing demand on on-site federal staff to service their information requirements.

Section Two – Technical Staffing Summary Table

| Technical Capability | For All Facilities | | Comments |
|-----------------------------------|-----------------------|------------------------|--|
| | Number of FTEs Needed | Number of FTEs Onboard | |
| Senior Technical Safety Managers | 10 | 8 | LASO Deputy Manager vacancy is being filled; Senior Technology and Engineering Advisor position recently approved to fill by NA-10 |
| Safety System Oversight Personnel | 5 | 5 | 4 NNSA, 1 EM |
| Facility Representatives | 16 | 14 | 2 FR FTEs not allocated; 13 NNSA, 1 EM |
| Other Technical Capabilities: | | | |
| Aviation Safety Manager | | | |
| Aviation Safety Officer | | | |
| Chemical Processing | | | |
| Civil/Structural Engineering | | | |
| Construction Management | 2 | 2 | |
| Criticality Safety | 1 | 1 | |
| Deactivation & Decommissioning | | | |
| Electrical Systems | 0.2 | 0 | FTE not allocated |
| Emergency Management | 2 | 1 | 1 FTE not allocated |
| Environmental Compliance | 3 | 2 | 2 NNSA FTEs filled; 1 EM vacancy to be filled in FY12 |
| Environmental Restoration | 2 | 2 | 1 NNSA, 1 EM |
| Facility Maintenance Management | 1 | 1 | |
| Fire Protection Engineering | 1 | 1 | |
| Industrial Hygiene | 1 | 1 | |
| Instrumentation & Control | | | |
| Mechanical Systems | | | |
| NNSA Packaging Cert. Engineer | | | |
| Nuclear Explosive | | | |
| Nuclear Safety Specialist | 10.5 | 10.5 | |
| Occupational Safety | 1 | 1 | |
| Quality Assurance | 3.5 | 2.5 | 2 QA positions not allocated including SSQA & Weapons QA, one of these positions is staffed with an FLP intern |
| Radiation Protection | 2 | 2 | 1 NNSA; 1 EM |
| Safeguards & Security | 11 | 9 | S&S Assistant Manager position being filled, 1 FTE not allocated |
| Safety Software Quality Assurance | 1 | .5 | See QA comment above |
| Technical Program Manager | 13 | 12 | 1 FTE not allocated |
| Technical Training | 1 | 0 | 1 FTE not allocated |
| Transportation & Traffic Mgmt | | | |
| Waste Management | 4 | 2 | 1 NNSA, 1 EM; 2 EM vacancies to be filled in FY12 |
| Weapons QA | 2.5 | 2 | See QA comment above |
| Federal Project Directors | 19.5 | 19.5 | 11.5 NNSA; 8 EM |
| Totals | 113.2 | 99 | 6 vacancies are to be filled; 8.2 FTEs are not allocated |

Notes:

1. All positions are NNSA unless otherwise noted.

Section Two - SITE CHARACTERISTICS TABLE

Number of Hazard Category 1, 2, or 3 Nuclear Facilities:

HC1 0 **HC2** 10 **HC3** 3

Number of Radiological Facilities¹: 237

Number of High or Moderate Hazard Non-Nuclear Facilities: 19

Number of Low Hazard Non-Nuclear Facilities: 713

Number of Documented Safety Analyses: 9

Number of Safety Systems²: 87

Number of Site Contractor FTEs: 11,737

Number of Federal Office FTEs: 135 (107 NNSA, 28 EM authorized)

Notes:

1. Radiological Facilities are defined in 10 CFR 830 as below Hazard Category 3 Facilities. Hazard Category 1, 2 or 3 Nuclear Facilities should not be double counted as Radiological Facilities.
2. Safety Systems must be credited in a Documented Safety Analysis.

Section Three: Current shortages and plans for filling them

Vacancies within the authorized staffing allocations are advertised and filled through the OPM hiring process. Senior positions are filled through details until positions are permanently staffed.

- The Deputy Site Manager position selection has been made, pending SES panel reviews.
- The Senior Technology and Engineering Advisor position was just authorized to be filled by NA-10; vacancy filling actions being initiated.
- The Safeguards and Security Assistant Manager selection made, pending offer negotiations.
- The two vacant waste management positions, in support of the TRU campaign, will be recruited by fourth quarter of FY2012.
- The vacant environmental compliance (NEPA) position will also be recruited by fourth quarter of FY2012.

The 8.2 FTE technical personnel shortages that cannot be filled due to the ceiling in FTE allotments are compensated for through a variety of methods including:

- Albuquerque Complex personnel support
- Headquarters personnel support
- Support Service Contracts
- Collateral duty assignments to current staff
- Utilization of Future Leaders Program Interns
- Oversight prioritized to greater risk activities
- Overtime
- Postponement of planned activities
- Additional reliance on the Contractor's Assurance System
- Reassigning staff from non-Defense Nuclear Facility positions into technical positions.

Section Four: Projected shortage/surplus over next five years

Approximately 32% of LASO staff will be eligible for retirement in 2012. Budget uncertainty for CMRR specifically, and all NNSA work generally, discourages hiring to anticipate and prepare for future workloads. FTE reallocations sometimes prevent recovery from attrition. The same concerns minimize the number of positions filled by younger graduates to be groomed to fill voids due to retirement and attrition.

Increasing off-site independent oversight (e.g., DNFSB, DOE-HS, CDNS, DOE-IG) that is creating an increasing demand on on-site federal staff to service their information requirements. This may require dedicated on-site federal staffing to support.

Federal Training and Qualification is currently performed via support subcontract. LASO is considering the advantages and disadvantages of assigning federal staff dedicated to this function, as well as to oversight of the contractor's training and qualification program.

Section Five: General comments or recommendations related to the Technical Staffing

The FTCP must remain vigilant in minimizing the increase in size of functional area qualification standards (FAQS). The FAQS cannot become a document that perfectly suits all sites' needs. Technical competencies that do not specifically support most sites should be left to site-specific standards.

Methods to cost effectively develop subject matter experts to the expert level need to be developed. The challenge is that there are many areas where there is only one SME (1 FTE or less) at a site for a specific subject area. We effectively hire qualified staff and facilitate initial TQP qualification but have limited methods to further develop staff to the expert level.

Technical positions should be filled prior to the date of technical need to allow time for achieving TQP interim qualification prior to performing technical field oversight.