

memorandum

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

DATE: FEB 26 2015
REPLY TO:
ATTN OF: Kimberly Davis Lebak
SUBJECT: Los Alamos Field Office Work Force Analysis and Staffing Plan Report for Calendar Year 2014

TO: Karen L. Boardman, Chair, Federal Technical Capability Panel

References:

1. DOE Order 426.1, *Federal Technical Capability*
2. NNSA Memorandum, from Karen L. Boardman, Chair, Federal Technical Capability Panel, to Distribution, Subject: *Annual Workforce Analysis and Staffing Plan Report for Calendar Year 2014*, dated September 23, 2014

Attached please find the Los Alamos Field Office (NA-LA) Work Force Analysis and Staffing Plan Report for Calendar Year 2014. This report identifies the Defense Nuclear Facility (DNF) oversight position staffing prioritization within the overall NA-LA authorized staff headcount. Critical DNF oversight vacancies are identified. Filling of vacancies is prioritized based on specific current needs with consideration given to risk if the position is not staffed and availability of alternate methods for meeting oversight requirements. Hiring restrictions for the past greater than two years and attrition have resulted in NA-LA staffing levels below both the total authorized headcount and the DNF staffing need. Staffing shortages are compensated for through support service contract support, headquarters personnel support, temporary details, and increased reliance on Contractor Assurance System products.

The forthcoming separation of NA-LA into two field offices: one for National Nuclear Security Administration (NNSA) and one for Environmental Management, will alter the included evaluation. When this change occurs, the revised NNSA Field Office staffing needs will be included in later issued Technical Qualification Program Quarterly Reports and the 2015 Work Force Analysis.

If you have any questions or comments regarding this memorandum and the included attachment, please contact Fred Bell at (505) 664-4856.


Kimberly Davis Lebak
Manager

Attachment

cc w/attachment:

J. McConnell, NA-50, NNSA-HQ

D. Chaney, NA-51, NNSA-HQ

J. Roberson, NA-51, NNSA-HQ

J. Yarrington, HS-10, NNSA-HQ

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AMs, NA-LA

F. Bell, OPS, NA-LA

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Records Center, NA-LA

OPS:26FB-614423

Annual Workforce Analysis and Staffing Plan Report as of 12/31/14

Reporting Office: Los Alamos Field Office

SECTION ONE: SITE OR HQs MISSION(S), OUTLOOK, AND CHARACTERISTICS

1. Provide several bullets that frame the types and magnitude of technical capabilities currently needed for safe operations in your sites or Program hazardous facilities or activities (non-nuclear and nuclear facilities including radiological facilities).

The Los Alamos Field 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:

- Approximately \$2.2 billion annual budget;
- Thirteen major operating Category II and III nuclear facilities, 237 radiological facilities, 16 high and moderate hazard facilities, and 919 low hazard facilities including 2 large accelerators, numerous explosive facilities and firing sites, and science facilities supporting lasers, chemicals, physics/material science and biological work;
- 40 square miles (size of Washington, DC), 100 miles of roads, 34 miles of 115KV transmission lines, 58 miles of gas distribution lines, 208 miles of water distribution lines, and 146 miles of steam lines;
- Line Item Construction Projects replacing or upgrading Nuclear Facilities totaling up to \$3.3 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 979 structures on site;
- 8.6 Million gross square feet of facilities;
- 43% of facility square footage is more than 40 years old;
- \$936 Million infrastructure deferred maintenance;
- \$14 Billion replacement plant value;
- Approximately \$6.4 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 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 and is the designated Plutonium Center of Excellence. 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 1000 buildings/facilities, over 60 designated Security Areas, over 800 designated Property Protection Areas and approximately 13,000 employees including subcontractors and Security staff.

The Los Alamos Field 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 \$25M to \$150M, and are listed below:

- TA-55 Reinvestment (TRP) II, Phase C, Total Project Cost (TPC) range is \$75 - 99 Million (CD-2/3 pending)
- TA-55 Reinvestment (TRP) III, TPC Forecast is TBD (Forecast as a FY15 new start)
- TRU Waste Facility, TPC range \$74 - \$124 Million (CD-3 pending)
- Radioactive Liquid Waste Treatment Facility Upgrade (RLWTF-UP), Current Estimated TPC of \$100-\$150 Million (revalidated CD-1, CD-2 pending ESAAB approval)
- TA-3 Substation Replacement, estimated TPC \$28.2 Million, (CD-0, forecast as FY15 New Start).
- Pu Modules, (pre CD-0 (May 2015))
- MaRIE 1.0 (pre CD-0 (Sept 2015))

Currently under consideration by the CWG:

- Energetic Materials Characterization Facility, Current Estimated TPC of \$20-\$70 Million
- Los Alamos Canyon Bridge Upgrades Projects, Current Estimated TPC of \$20-\$33 Million
- Fire Station Replacements, Current Estimated TPC of \$20-\$45 Million
- Electrical Transmission and Distribution System Upgrade, Current Estimated TPC of 22-\$41 Million.

Major programs fiscal year 2015 Presidential Budget Request:

| | |
|--------------------------------------|-------------------------|
| NNSA - Weapons Activities (WA) | \$1,325,000,000 |
| NNSA - Nuclear Nonproliferation (NN) | \$202,000,000 |
| NNSA – Other NNSA Programs | \$116,000,000 |
| DOE - Environmental Management | \$168,141,000 |
| DOE - Other DOE Programs | \$142,000,000 |
| Work for Others (WFO) | \$272,000,000 |
| Total | \$2,225,141,000, |

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

In September 2014, Secretary Moniz directed the Office of Environmental Management (EM) and the National Nuclear Security Administration (NNSA) to develop a plan for the transition of legacy environmental cleanup work at Los Alamos from NNSA to EM. This will result in a division of current NNSA Field Office responsibilities with a new EM Field Office. It is expected that there will be a continuing shared workload as the new Field Office is staffed. Current EM staff will transition to the new Field Office potentially leaving gaps in NNSA oversight that will have to be backfilled. Specific implementation plans have not yet been developed.

Continued escalation in the number of products submitted for Los Alamos Field Office Quality Assurance verification for support to the MOX/ARIES program, RPS program, and NNSA weapon and weapon related materials will require additional FTEs above current allocations to ensure succession planning and the availability of trained and qualified individuals.

Large line-item construction portfolio requires fluctuating FTE needs. The portfolio currently includes TRU Waste Facility, TRP II, and RLWTF projects – all involving Hazard Category 2/3 facilities. Federal Project Directors (FPDs) have transitioned to Acquisition and Project Management (NA-APM) to meet line item project needs. The Los Alamos Field Office is staffing projects through the CD-0/1 stage and requires additional FTEs to cover the increasing demand.

Off-site independent oversight (e.g., DNFSB, DOE-AE, CDNS, DOE-IG, GAO) creates a continuing demand on on-site federal staff to service information requirements, review products and respond to potential issues.

Site Characteristics (Sites ONLY)**Number and Hazard Category (HC) (per DOE Standard 1027) of NUCLEAR Facilities:****HC1** 0 **HC2** 10 **HC3** 3 **Less than HC3** 237**Number of Documented Safety Analyses:** 9**Total Number of Safety Systems credited in Documented Safety Analyses:** 92**Number of High or Moderate Hazard NON-NUCLEAR Facilities:** 15**Number of Low Hazard NON-NUCLEAR Facilities:** 919**Number of Site Contractor FTEs (by Program Office):** 12,920**Number of Federal Office FTEs (by Program Office):** 78 NNSA, 21 EM

SECTION TWO: TECHNICAL STAFFING

| Technical Staffing Summary Table (see Notes below) | | | |
|--|------------------------------------|-------------------------------------|---|
| Technical Capability | For All Facilities ¹ | | Comments |
| | Number of FTEs Needed ¹ | Number of FTEs Onboard ¹ | |
| Senior Technical Safety Managers | 9 | 6 | 6 NNSA Vacancies: AMNSM, DAMO, STSA |
| Safety System Oversight Personnel | 4 | 3 | 2 NNSA, 1 EM Vacancy: FPE SSO |
| Facility Representatives | 12 | 10 | 10 NNSA Vacancy: 2 FR |
| Other Technical Capabilities: | | | |
| Aviation Safety Manager | 0 | 0 | |
| Aviation Safety Officer | 0 | 0 | |
| Chemical Processing | 0 | 0 | |
| Civil/Structural Engineering | 0 | 0 | |
| Confinement Ventilation and Process Gas Treatment | 0 | 0 | |
| Construction Management | 1 | 1 | 1 NNSA |
| Criticality Safety | 1 | 1 | 1 NNSA |
| Deactivation & Decommissioning | 0 | 0 | |
| Electrical Systems/Safety Oversight | 0 | 0 | |
| Emergency Management | 1 | 1 | 1 NNSA Gentile |
| Environmental Compliance | 4 | 4 | 3 NNSA, 1 EM |
| Environmental Restoration | 1 | 1 | 1 EM |
| Facility Maintenance Mgt | 1 | 0 | Incumbent to retiring February 2014 Reassign an FR, counted under FR FTEs On-board |
| Fire Protection Engineering | 1 | 1 | 1 NNSA Frey |
| Industrial Hygiene | 1 | 1 | 1 NNSA Casalina |
| Instrumentation & Control | 0 | 0 | |
| Mechanical Systems | 0 | 0 | |
| NNSA Packaging Cert. Engineer | 0 | 0 | |
| Nuclear Explosive Safety Study | 0 | 0 | |
| Nuclear Safety Specialist | 8 | 6 | 6 NNSA Vacancies: 2 NSS |
| Occupational Safety | 1 | 1 | 1 NNSA |
| Quality Assurance | 4 | 3 | 3 NNSA Vacancy: IQA |
| Radiation Protection | 2 | 2 | 1 NNSA, 1 EM |
| Safeguards & Security | 10 | 6 | 6 NNSA AM departing in January 2015 Vacancies: 4 S&S |
| Safety Software QA | * | * | *secondary qualification under QA |
| Technical Program Manager | 6 | 6 | 6 NNSA |
| Technical Training | 1 | 1 | 1 NNSA |
| Transportation & Traffic Mgt | 0 | 0 | |
| Waste Management | 1 | 1 | 1 NNSA |
| Weapons QA | * | * | *secondary qualification under QA |
| Federal Project Directors ² | 11 | 10 | 2 NNSA, 8 EM (plus 5 APM assigned FPDs) Vacancy: 1 FPD |

Notes:

1. These columns identify the number of FTEs needed to perform the Federal Safety Assurance function for your site or office Defense Nuclear Facilities based on potential facility and operational hazards.
2. Federal Project Managers/Directors are not qualified via the Technical Qualification Program, but are qualified in accordance with the Project Management Career Development Program

Section Three: Current shortages and plans for filling them

Currently four technical vacancies have been authorized for filling: the STSM Senior Technical Safety Advisor, a Facility Representative, and two security specialists.

Several STSM positions are currently filled via detail assignments including the Deputy Manager, Assistant Manager for National Security Missions, and the Deputy Assistant Manager for Operations.

Other vacancies will be filled on a prioritized basis as positions are authorized to be advertised.

Vacancies not authorized for filling are compensated for by a variety of methods including:

- Reduced oversight
- Details within and from outside the Field Office
- Reassignments within the Field Office
- NNSA Office of Safety, Infrastructure & Operations (NA-50) personnel support
- Collaborative assessment with DOE Office of Enterprise Assessment (EA)
- Support Service Contracts
- Collateral duty assignments to current staff
- Utilization of NNSA Graduate Program Interns
- Oversight prioritized to greater risk activities
- Overtime
- Postponement of planned activities
- Additional reliance on the Contractor's Assurance System

Delays in approvals to staff positions and the slow pace of issuing vacancy announcements and taking hiring actions have resulted in attrition outpacing filling of vacancies.

Section Four: Projected shortage/surplus over next five years

Approximately 32% of Los Alamos Field Office staff is currently eligible for retirement. There has been 16% attrition of technical staff since submission of the previous workforce analysis. It is anticipated that the high attrition experienced over the last couple years will continue. Current hiring authorizations have not kept pace with losses due to attrition. The greatest shortages will be as a result of attrition. These shortages will extend across all areas within technical qualification program. Areas of greatest impact will be the many areas identified in Table 2 where there is only one FTE on-board.

Projects in planning stages will require Federal Project Directors to perform project management, in later stages of the projects Nuclear Safety Specialists will be required for safety basis review, approval and management and safety system oversight staff to support design reviews, as the facilities become operable additional facility representatives will be required to provide continuing oversight.

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

Staffing should be evaluated more broadly to make this a more useful tool for senior management. Staffing should be evaluated across the Field Office to include non-technical staff, not just technical staff, since that is how staffing ceilings are set and the group across which hiring priorities must be made; technical staffing would be a subset of that analysis. Additionally, the analysis should be rolled up to the Program office level since some support is provided by Program offices that mitigate the need for hiring at the Field Office level. For the Field Office to report an FTE requirements that the Program office staffs for and reports in their analysis results in double counting of needs. This double counting reflects badly on the department when external groups review the FTEs needed number as compared with the FTEs on-board and identify a deficiency in our ability to perform required safety oversight. Certainly these deficiencies can be overcome by completing a separate complete analysis with this report as input and external concerns explained away but each of these activities results in additional workload and public misperceptions.