

# memorandum

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

DATE: JAN 26 2016  
REPLY TO:  
ATTN OF: Kimberly Davis Lebak  
SUBJECT: Los Alamos Field Office Work Force Analysis and Staffing Plan Report for Calendar Year 2015

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

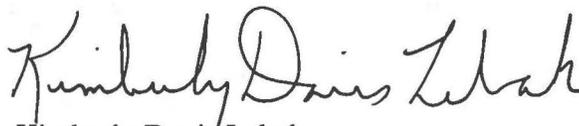
Reference:

- 1.) Memorandum from Karen L. Boardman, Chair, Federal Technical Capability Panel, to Distribution, Subject: *Annual Workforce Analysis and Staffing Plan Report for Calendar Year 2015*, dated October 14, 2014

Attached please find the Los Alamos Field Office (NA-LA) Work Force Analysis and Staffing Plan Report for Calendar Year 2015. This report identifies the Defense Nuclear Facility (DNF) oversight position staffing prioritization within the overall field office 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. The lifting of hiring restrictions in FY15 has allowed for filling of some of the critical NA-LA vacancies, however, attrition rates continue to hinder our ability to maintain levels at our authorized ceiling. Staffing shortages have been compensated for through support service contract support, headquarters personnel support, temporary details, and increased reliance on Contractor Assurance System products.

This past year, the separation of NA-LA into two field offices, one for National Nuclear Security Administration (NA-LA) and one for Environmental Management (EM-LA), was realized. A Memorandum of Understanding (MOU) is currently in place to provide continued NA-LA support until EM-LA completes its hiring actions and qualifications. When EM-LA is fully staffed and qualified, the revised NNSA Field Office staffing needs will be included in Technical Qualifications Program Quarterly Reports and 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

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# Annual Workforce Analysis and Staffing Plan Report as of 12/31/15

**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 billion annual budget;
- Thirteen major Category II and III nuclear facilities, over 200 radiological facilities, 16 high and moderate hazard facilities, and over 900 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 assignments for pit manufacturing, detonators, heat sources, plutonium oxide for Mixed Oxide Fuel (MOX), and medical isotopes;
- Research and production of high explosive components, including dynamic experiments;
- 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 980 structures on site;
- 8.6 Million gross square feet of facilities;
- Over 40% of facility square footage is more than 40 years old;
- Approximately \$1 Billion infrastructure deferred maintenance;
- Approximately \$14 Billion replacement plant value;
- Approximately \$6 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 and the NNSA Acquisition and Project Management (APM) 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 over \$3B, and are listed below:

- TA-55 Reinvestment (TRP) II, Phase C, Total Project Cost (TPC) \$92.7 Million (in construction)
- TA-55 Reinvestment (TRP) III, TPC Forecast is TBD (CD-1 Forecast 2<sup>nd</sup> QTR FY17)
- TRU Waste Facility (TRU) Phase B, TPC \$99.2 M (in construction)
- Radioactive Liquid Waste Treatment Facility Upgrade (RLWTF-UP), TPC \$82.7 M (in construction)
- TA-3 Substation Replacement, estimated TPC \$28.2 Million, (CD-2/3 forecast 2<sup>nd</sup> QTR FY16).
- Transuranic Liquid Waste (TLW). Estimated TPC \$81 M, (CD-2 forecast 4<sup>th</sup> QTR FY17)
- RLUOB Equipment Installation (REI2), Estimated TPC cost range \$505M to 675M, (CD-2/3 forecast 3<sup>rd</sup> QTR FY16)
- PF-4 Equipment Installation (PEI), Estimated TPC Cost Range \$995 M to \$1.365 B, (CD-2/3 forecast 3<sup>rd</sup> QTR FY16)
- Pu Modules, Estimated TPC Cost Range \$1.3 to \$3.0 B, (CD-0 approved November 2016)
- MaRIE Estimated TPC \$1.9 to \$3.7 B (CD-0 pending)

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 2016 Presidential Budget Request (approximate amounts):

NNSA - Weapons Activities (WA)	\$1,426,000,000
NNSA - Nuclear Nonproliferation (NN)	\$218,000,000
NNSA – Other NNSA Programs	\$115,000,000
DOE - Environmental Management	\$185,000,000
Work for Others (WFO)	\$6,000,000
<b>Total</b>	<b>\$1,950,000,000</b>

**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 resulted in a division of current NNSA Field Office (NA-LA) responsibilities with a new EM Field Office (EM-LA) which was stood up in September 2015. A Memorandum of Understanding (MOU) is in place to allow for resource sharing until the EM-LA office is fully staffed. Identification of long-term NA-LA resources needed to compliment EM-LA staff is currently being analyzed/developed. Los Alamos National Securities LLC (LANS) performs legacy waste activities for EM-LA under a Bridge Contract pending selection of a new contractor; currently forecasted by the end of FY-17.

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, TRP III, RLWTF, TLW, REI2, PEI, Pu Modules, MaRIE, and TA-3 Substation Replacement projects – most projects involve 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 237Number of Documented Safety Analyses: 9Total Number of Safety Systems credited in Documented Safety Analyses: 92Number of High or Moderate Hazard NON-NUCLEAR Facilities: 15Number of Low Hazard NON-NUCLEAR Facilities: 919Number of Site Contractor FTEs (by Program Office): 12,920Number 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 <sup>1</sup>		Comments
	Number of FTEs Needed <sup>1</sup>	Number of FTEs Onboard <sup>1</sup>	
Senior Technical Safety Managers	10	8	8 NNSA (also support EM via MOU); Vacancy: 2 EM
Safety System Oversight Personnel	3	3	2 NNSA, 1 EM (Also supported by Fire Protection Engineer)
Facility Representatives	14	10	9 NNSA, 1 EM; Vacancy: 1 NNSA FR, 3 EM 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	2	1	1 NNSA (Detail Assignment to support increased FY16 Workload) (also support EM via MOU)
Deactivation & Decommissioning	0	0	
Electrical Systems/Safety Oversight	0	0	
Emergency Management	1	1	1 NNSA (also support EM via MOU)
Environmental Compliance	4	2	3 NNSA, 1 EM
Environmental Restoration	1	1	1 EM
Facility Maintenance Mgt	1	0	FR assigned, counted under FR FTEs On-board (also support EM via MOU)
Fire Protection Engineering	2	1	1 NNSA, also supports SSO activities (Detail Assignment to support FY16 workload) (also support EM via MOU)
Industrial Hygiene	2	1	1 NNSA (also support EM via MOU) Vacancy: 1 EM
Instrumentation & Control	0	0	
Mechanical Systems	0	0	
NNSA Packaging Cert. Engineer	0	0	
Nuclear Explosive Safety Study	0	0	
Nuclear Safety Specialist	9	8	8 NNSA (also support EM via MOU); Vacancy: 1 EM
Occupational Safety	1	1	1 NNSA (also support EM via MOU)
Quality Assurance	5	3	3 NNSA (also support EM via MOU) Vacancy: 1 NNSA, 1 EM
Radiation Protection	2	1	1 NNSA (also support EM via MOU); Vacancy: 1 EM
Safeguards & Security	10	9	Vacancies: 1 S&S (also support EM via MOU)
Safety Software QA	*	*	*secondary qualification under QA
Technical Program Manager	6	6	6 NNSA
Technical Training	1	1	1 NNSA(also support EM via MOU)
Transportation & Traffic Mgt	0	0	
Waste Management	2	1	1 NNSA, Vacancy: 1 EM
Weapons QA	*	*	*secondary qualification under QA
Federal Project Directors <sup>2</sup>	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 six NNSA vacancies have been authorized for filling within an authorized headcount ceiling of 85 FTE's: (1) Facility Representative, (1) Security Specialist, (2) General Engineers for National Security Missions, (1) General Engineer/Physical Scientist for Quality Assurance, (1) Contractor Assurance.

An MOU is in place to compensate for EM-LA vacancies. The new EM-LA office has recently completed a staffing analysis and has received authorization for its staffing plan. EM-LA Hiring actions will continue through FY16.

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

NA-LA has requested an increase to its current authorized ceiling of 85 FTE's.

### **Section Four: Projected shortage/surplus over next five years**

In September 2015, NA-LA conducted a detailed staffing analysis to evaluate and update roles, responsibilities and authorities with emphasis on effectiveness of M&O contract oversight while fulfilling our organizational responsibilities. Additionally, the analysis responded to Judgement of Needs from the DOE Accident Investigation Board (AIB) review stemming from the February 14, 2014 incident involving a LANL waste drum at the Waste Isolation Pilot Project (WIPP). NA-LA evaluated federal staffing levels needed to support contractor oversight in key safety areas.

The analysis identified the following actions to address opportunities and challenges:

1. Reduce oversight of non-nuclear industrial activities
2. Improve Field Office management systems and systems discipline
3. Increase bench strength in Quality Assurance (QA) to meet planned increases in weapons production
4. Support the early phases of capital projects
5. Support enduring waste management responsibilities voided when EM-LA withdrew staff assigned to NA-LA
6. Restore Facility Representative (FR) coverage to levels closer to the NNSA standard
7. Improve NA-LA Line oversight

8. Enhance Safeguards and Security team coordination effectiveness
9. Support short-term needs for WIPP CAP and plutonium operations restart workload
10. Convert all NA-LA Excepted Service staff to a common Human Resource (HR) approach under the EN pay plan

Approximately 30% of Los Alamos Field Office staff is currently eligible for retirement and the annual attrition rate remains at approximately 12% for technical staff. It is anticipated that the high attrition experienced over the last couple years will continue. This past year, hiring authorizations have kept pace with losses due to attrition and a significant number of vacancies have been filled. Areas of concern remain where there is only one FTE on-board for critical positions such as Fire Protection and Criticality Safety Engineers.

As the EM-LA office is staffed, NA-LA should realize some relief in its current workload, however, NA-LA staffing needs are not expected to correspondingly decrease. This is due to the startup of new NNSA nuclear facilities such as the Transuranic Waste Facility and plans to convert the Radiological Laboratory, Utilities and Office Building (RLUOB) from a radiological facility to a Hazard Category 3 nuclear facility.

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.