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Institutional Training Services Organizational Profile

P.1.a(1): The Institutional Training Services (ITS) Group of the Service Innovation (SI) Division provides personnel training and development products and services at Los Alamos National Laboratory (LANL).

These products and services include:

- designing, developing, delivering, and documenting Environmental, Safety and Health (ES&H) classroom training;
- procuring and managing vendor-delivered classroom courses;
- providing testing and proctoring services;
- designing, developing, and managing institutional online training; and
- providing training program development, audit, and consulting services to the Laboratory.

All of these activities play important roles in the continuing success of SI-ITS. To achieve this success, SI-ITS operates in five functional areas: Training Development and Delivery, Instructional Design, Project and Program Support, Operations and Training Support, and Deployed Support. Working in these areas, the SI-ITS staff supports and maintains almost 250 institutional courses, while annually training approximately 15,000 workers in the classroom and 40,000 workers online.

In the area of Training Development and Delivery, SI-ITS instructors develop and deliver health and safety training, including General Employee Training (GET), Cardiopulmonary Resuscitation (CPR) and first-aid classes, and Radiological Worker qualification, as well as environmental protection and hazardous material transportation training. As employees of a federal nuclear facility, all personnel must take a GET course to qualify as Laboratory workers according to Department of Energy (DOE) Order 426.2, *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*.

To produce classroom training that satisfies a broad range of regulatory requirements, the ITS staff works with subject matter experts (SMEs) from other Laboratory organizations, including the Occupational Safety and Health Division, Radiation Protection Division, and Environmental Protection Division, to ensure compliance with the DOE, Occupational Safety and Health Administration (OSHA), and Environmental Protection Agency (EPA) requirements. SI-ITS also partners with the Los Alamos Fire Department to provide training to firefighters on hazards specific to Laboratory facilities.

Under the Instructional Design function, the SI-ITS staff provides course design and development services for the Laboratory's growing number of online training

courses. Using the Systematic Approach to Training (SAT), SI-ITS writers, editors, graphic designers, and web developers follow a formalized process for analyzing, designing, developing, implementing, and evaluating electronic (or e-learning) course content. The Instructional Design team also oversees the Laboratory's Training Staff Qualification Program (TSQP), which trains and qualifies LANL workers to perform specific training roles such as instructor, training manager, training specialist, instructional technologist, and training coordinator.

In the area of Project and Program Support, SI-ITS personnel conduct institutional assessments of LANL training staff and programs, provide consulting services, and oversee the Institutional Management Qualification Standard. Institutional assessments are designed to ensure that LANL training and qualification programs meet regulatory requirements, including scheduled DOE-STD-1070-94 *DOE Standard Guidelines for Evaluation of Nuclear Facility Training Programs* assessments of nuclear facility training programs, as well as other assessments and reviews. The Institutional Management Qualification Standard defines training and qualification requirements for all LANL managers. SI-ITS training programs implemented under this standard include the Management Academy, which provides basic training about Laboratory business systems and management tools, and the Nuclear Manager and Supervisor Training (NuMAST) program, which is provided for managers and supervisors who work in or support nuclear facilities. In addition to training materials, SI-ITS develops Laboratory policies, procedures, and plans to support institutional training activities.

The SI-ITS Operations and Training Support staff provides administrative, procurement, building maintenance, and computer support for ITS products and services. In addition to reproducing training materials for classroom courses, SI-ITS personnel use the UTrain Learning Management System (LMS) to deliver, record, and administer training. The UTrain LMS provides online registration and a course catalog, delivers quizzes and exams in a Web-based format that provides immediate feedback, enters test results, and tracks training completion. The Operations and Training Support staff also manages the SI-ITS computers and servers, as well as a computer-based-training classroom with 15 workstations and a pilot program to study the use of mobile computer tablets to provide course manuals for trainees taking quizzes in the testing room. The Deployed Support function of SI-ITS provides consulting services and training tools to other organizations, including on-the-job training, qualification standard development, and training administration — all tailored to meet the needs of the organizations to

which they are deployed, including the Office of the Chief Information Officer; Maintenance and Site Services Division; Logistics Division; Weapons Facilities Operations; Environment, Safety, and Health Directorate; and Associate Directorate for Mission Assurance, Security, and Emergency Response.

P.1.a(2): SI-ITS's mission is to provide innovative, quality training that enables LANL workers to excel at world-changing science in a safe, secure, compliant, and efficient manner. SI-ITS implements this mission by providing environmental protection, safety, health, transportation, and radiological training mandated by federal, state, and Laboratory requirements. In this role, SI-ITS contributes not only to worker safety and environmental protection, but also to sustaining the Laboratory's core values of stewardship and of safety and security.

To achieve its mission, SI-ITS maintains a vision that supports and aligns with the Laboratory's national security science priorities. The SI-ITS vision is to enable the Laboratory and its organizations to attain and sustain a level of operational excellence commensurate with the scientific and technological excellence for which Los Alamos is already recognized.

In addition to having an organizational mission and vision, SI-ITS also follows four core values:

- maintaining a safe, respectful, and empowering working environment for our employees;
- valuing a diverse workforce;
- accepting the responsibility of spending the tax payers' money wisely; and
- supporting a business climate that will be customer oriented.

SI-ITS's core competencies lie principally in its staffing. The group employs a broad range of staff members whose education, professional experience, subject matter technical expertise, and creative content development expertise support the mission and values.

P.1.a(3): ITS employs 50 workers, including 3 employees permanently assigned to the group from other divisions, and 4 undergraduate students. This number is an increase from previous years after eight staff members joined the group in 2013 when another Laboratory training group was dissolved. With the exception of 12 employees deployed on assignment to other Laboratory divisions or directorates, all ITS staff members work at the White Rock Training Center (WRTC). No organized bargaining units represent SI-ITS employees.

P.1.a(4): SI-ITS delivers training in classrooms at the WRTC, the Canyon School Complex and Central Park Square buildings in Los Alamos, and the Otowi Main

Gate Conference Room on the Laboratory's central campus. Each learning space has classrooms of various numbers, capacities, and configurations, all having capabilities for presenting video and digital media via projection systems or multiple-display, large-format (72 in. or more), liquid-crystal displays (LCDs).

The WRTC serves as the Laboratory's core institutional training facility, offering eight classrooms for personnel training and education, with room capacities ranging from 10 in the smallest room up to 48 in the largest, and including one classroom dedicated to Radiological Worker training and qualification. The WRTC also provides a dedicated space for proctored testing at 27 computer stations connected to a local server, as well as offices for computer support personnel and a secure location for server hardware.

Serving as the principal site for providing GET, the Otowi Main Gate Conference Room provides space for up to 60 students in a typical classroom (tables and desks) setting. The room has both static and portable whiteboards, three Internet-connected computer workstations, and two 72-inch LCD flat-panel displays for the presentation of digital media. A smaller conference room adjacent to the main learning space can be used for small-group meetings and student tutoring.

Canyon School Complex is a former Los Alamos County school building located in the townsite. The facility supports the SI-ITS mission with the use of 4 traditional classrooms with room capacities ranging from 16 to 36 students and all equipped with whiteboards, Internet-connected instructor's computers, and projection systems for presentation of digital media. Courses taught at Canyon Complex are generally less technical in nature than those taught at either the WRTC or Central Park Square. Located in downtown Los Alamos, the Central Park Square facility occupies part of the main floor of a commercial office building. The facility has two training rooms that are used almost exclusively for providing computer software training to LANL employees. Both of the training rooms are equipped with 15 Internet-connected computer workstations.

The presentation of training at LANL is supplemented in almost every instance by a broad range of instructional technologies that include electronic self-study and course-support documents, PowerPoint presentations, video, and interactive digital technologies (computer simulations and walkthroughs). The entire learning process is supported by the UTrain LMS, the Laboratory's official system of record for employee training.

The LANL UTrain system is a localized version of a Plateau System's (now SAP SuccessFactors Learning) product. UTrain's Web-based features allow LANL employees to register for courses, take courses and

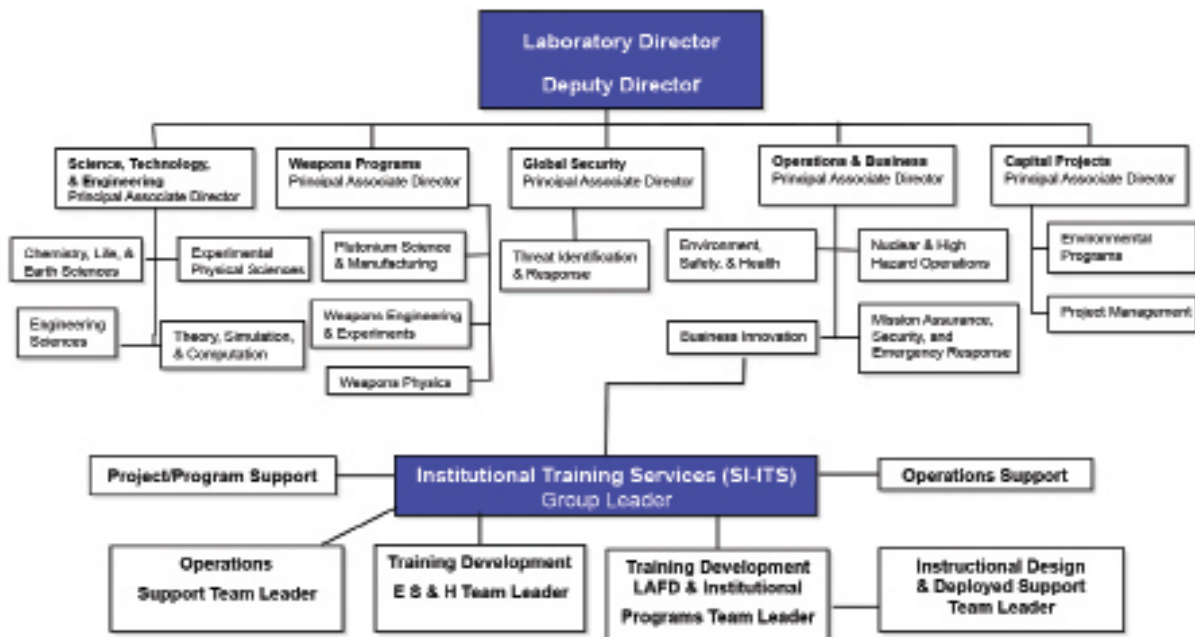
examinations online, and track their personal training and qualification progress. The system gives training staff the ability to electronically create exams, courses, and curricula; track the progress of employees; and facilitate learning and knowledge activities throughout the organization. The Web-based tool allows the alignment of training and learning objectives with Laboratory program, project, and business objectives to ensure regulatory compliance. UTrain facilitates the development and management of classroom, web-based, on-the-job (OJT) and instructor-led learning, as well as the resources and processes associated with each, and allows ITS staff to manage the tracking of learning resources and scheduled courses associated with the multiple categories of learning, including traditional instructor-led training. UTrain also allows training staff to track the progress of user's competency profile, skill gaps, and qualification deadlines.

P.1.a(5): As part of a federal nuclear facility, SI-ITS operates in a highly regulated environment. As such, all training activities are governed by one or more regulatory vehicles, including DOE Order 426.2, *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*, which sets forth specific worker training requirements at nuclear facilities; DOE Standard 1070-94, *DOE Standard Guidelines for Evaluation of Nuclear Facility Training Programs*, which provides guidance on components of training to comply with DOE Order 426.2; and P781-1, the Laboratory's *Conduct of Training Procedure*. SI-ITS ES&H courses are also driven by requirements

set forth by OSHA and the EPA in the Code of Federal Regulations. Additional drivers for SI-ITS courses include the New Mexico Environment Department; 10 CFR 835, the DOE regulation that governs radiation work; and DOE Order 231.1, *Conduct of Operations*

P.1.b(1): LANL is owned by the DOE and operated under contract by Los Alamos National Security LLC (LANS). Although LANL has offered health and safety training to its employees since its inception, the ES&H training organization was formally established only in 1992. Shortly thereafter, the WRTC was established at its current location in White Rock. With the assignment of the Laboratory's management contract to LANS in 2005, the WRTC and its staff were combined with other training organizations at the Laboratory as the ITS group within the Central Training Division. In 2013, when the Central Training Division was dissolved, ITS became a new, larger group within the Laboratory's Service Innovation Division. The Laboratory follows a governance system that provides a formalized flow of information, issues resolution, and decisions along the management chain. LANL is headed by a Director, who directs a leadership team comprised of principal associate and associate directors. The organizational chart below shows the relationship of ITS to the Service Innovation Division and the SI Division as a unit of the Business Innovation (BI) Directorate under the Principal Associate Directorate of Operations and Business (one of the directorates that compose the tier directly under the Laboratory Director).

LANL and Institutional Training Services (ITS)



P.1.b(2): SI-ITS’s key customers are essentially all Laboratory workers and subcontractors; other training groups at the Laboratory; and other government groups, such as the Department of Defense (DoD). SI-ITS provides training expertise in support of programmatic organizational training and develops training at both nuclear and nonnuclear Laboratory facilities. Table P-1 below shows a matrix of SI-ITS customers and their various requirements and expectations.

| Table P-1. SI-ITS Key Customers | |
|---|---|
| Key Customer | Requirements & Expectations |
| LANL workforce (employees, subcontractors, students, and visiting scientists) | <ul style="list-style-type: none"> • Classroom and online training in areas of environmental protection, safety, health, transportation, and radiological safety, • Ensured compliance of courses with federal, state, and LANL requirements • Current and complete knowledge-based training in preparation for work • Accessibility of instructors for questions and/or help to augment learning |
| Other LANL divisions and training groups | Online course development. <ul style="list-style-type: none"> • Expectations: high-quality content development, short turnaround time Training program support <ul style="list-style-type: none"> • Laboratory training policy development • Audits and assessments of LANL training groups |
| DoD | Radiological safety courses |
| DOE | National Training Center reciprocal courses Regulatory compliance (Conduct of Training) |

Three key stakeholder groups are (1) DOE, NNSA, and Laboratory leadership; (2) family and friends of LANL workers; and (3) general public, including the surrounding community and tribal neighbors. The DOE, NNSA, and Laboratory leadership group represents the group’s obligation to provide effective, relevant, and cost-effective training to LANL employees. For stakeholder group 2, SI-ITS provides safety and health training to enable workers to return home safely after each workday. For the third group, SI-ITS teaches workers how to protect the New Mexico natural and historic environment and perform work safely in accordance with state and federal regulations.

P.1.b(3): Suppliers include Laboratory organizations and individuals who partner with SI-ITS as SMEs to provide OJT and classroom instruction. These suppliers include organizations the Industrial Safety and Hygiene group, the Occupational Medicine Group, and the Radiation Protection Division, as well as the Software and Applications Engineering Division Business Systems Solutions Center, which maintains the UTrain servers and provides system support. Other commercial and nonprofit vendors providing regulatory training include the International Chemical Workers Union Council Center for Worker Health & Safety Education, which is funded by a federal grant to the National Institute of Environmental Health Sciences.

P.1.b(4): Meetings, email, and telephone constitute SI-ITS communication mechanisms with key suppliers within the Laboratory and customers, such as SMEs. Communications with vendors are managed through formal correspondence, including formal agreements, meetings, email and telephone.

P.2.a(1): LANL is the United States’ premier nuclear weapons-design facility, with the nation’s largest and most diverse scope of scientific and technical work in that domain. Training occupies a critical role in Laboratory operations because of the regulatory requirements by which LANL must abide and the broad range of ES&H, radiation, and operations management courses and training required. Offering training and services that are not provided by other Laboratory training groups, SI-ITS is the designated sole-source provider of institutional training, policy development, and training audit services for the organization.

To maintain this responsibility, SI-ITS personnel stay abreast of training developments at other federal nuclear laboratories. SI-ITS leadership maintains an active role in the Energy Facility Contractors Group Training Working Group (FCOG-TWG), an organization chartered to leverage the expertise and experience of DOE contractors to ensure complex-wide collaboration and integration of training in the operation of DOE facilities and projects. However, because LANL differs from other federal nuclear facilities in the size of its workforce and diversity of its operations, any statistical comparisons between SI-ITS training at LANL and other nuclear facilities lack validity.

P.2.a(2): The principal factors that determine SI-ITS success are a combination of

- instructor qualifications and backgrounds, with strong supervisory input from team leaders in the course development process;
- the use of the SAT course development process;
- consistency of training products and the use of customer feedback;

- close association with customers, partners, and stakeholders to meet their changing needs;
- the continued, optimal use of UTrain; and
- a shared group culture of customer service and the sharing of information and expertise among the workforce at all levels.

Principal factors that could affect SI-ITS's future success include changes in the mission and operational focus of the Laboratory; changes in the regulatory environment; and changes in electronic technology, such as increased Web-based course delivery.

P.2.a(3): Key sources of comparative and competitive data come internally from Laboratory organizations and through an extensive information network within the DOE. Lessons learned, performance metrics, assessments, and other data on training, environment, safety, and security performance are available through websites and publications. These sites publish DOE as well as DOE contractor information, which is then incorporated into training materials, as well as internal performance improvement processes. SI-ITS has supported process improvement efforts (Black-Belt Projects) performed by its internal customer, the Environmental, Safety and Health Directorate.

SI-ITS offers eight courses that have been certified by the DOE National Training Center for reciprocity around the DOE complex. To certify a course for reciprocity, a thorough assessment is conducted of the site's training program, course materials, testing methods, classroom facilities, policies and procedures, recordkeeping, and personnel qualifications. Among the national laboratories, SI-ITS offers one of the highest number of courses for reciprocity in the DOE complex. SI-ITS group leadership maintains an active role in the FCOG-TWG, an organization chartered to leverage the expertise and experience of DOE contractors to ensure complex-wide collaboration and integration of training and to assist in improving performance in the operation of DOE facilities and projects.

Comparative data from outside the DOE complex are available at industry organizations. ITS course managers maintain memberships and certifications in organizations such as the American Society for Training and Development, the Board of Certified Safety Professionals, and other professional organizations.

P.2.b: One of SI-ITS's key ongoing challenges is to provide courses that meet the current needs of its customers in an environment of new and changing federal requirements. This challenge not only requires the development and production of courses in a short time cycle, but is also dependent on having qualified personnel to produce and deliver the courses and on the scheduling and availability of classroom space.

Another strategic challenge associated with organizational growth and stability is the securing of adequate funding to ensure that SI-ITS can maintain sufficient highly qualified personnel to produce and deliver the essential training required by LANL and the DOE.

P.2.c: SI-ITS follows a goal of continuous course, process, and professional improvement through the use of evaluative audits and assessments. Performance improvement is continuously measured through the use of metrics tracked by SI-ITS in UTrain that address all Laboratory organizations training performance (e.g., percentage of complete training plans). In addition, SI-ITS assesses the Laboratory's nuclear and nuclear support facilities for compliance with DOE Order 426.2 every 3 years. Corrective actions for any resulting findings, recommendations, and opportunities for improvement are tracked through completion in the Laboratory's corrective action database.

Internal and external assessments of Laboratory training programs are entered into the institutional corrective action database, and SI-ITS is instrumental in assisting the Laboratory in addressing these issues through closure. SI-ITS conducts monthly management observations (MOVs) of its training facilities. Any issues resulting from these facility MOVs are entered into the Laboratory's maintenance database to ensure timely corrective action.

SI-ITS course managers regularly update training using the Laboratory's weekly lessons-learned e-mail, quarterly *Mirror* publication (a summary of ES&H events throughout the DOE Complex), and regular searches of the DOE lessons-learned system for updates in their areas of expertise.

Recently, SI-ITS established a UTrain Review Board (URB) to provide oversight over new course development and course changes in UTrain. The URB consists of a course manager, IT specialist, quality and performance assurance specialists, and editorial staff.

As a contributor of courses to the DOE's National Training Center (NTC) curriculum, SI-ITS undergoes rigorous quality assessment audits before NTC accepts any courses. SI-ITS also engages, on an *ad hoc* basis, the expertise of organizational consultants trained in applying the Six Sigma methodology for improvements to group administrative practices and processes. Training courses, as required by the Conduct of Training Procedure (P781-1) and SAT course development procedure, are revised on a 3-year cycle or as new information needs to be added under a continuous improvement goal. ITS offers opportunities for professional development for all individuals in the organization, from administrative personnel to managers, with employees attending training at LANL, as well as workshops and conferences outside the Laboratory.