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Personnel Assurance Program*

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Definitions

Access	Proximity to a nuclear explosive that affords a person the opportunity to tamper with it or to cause a detonation. This definition implies hands-on work assignments.
Nuclear explosive duty	Duties that require an employee to perform work that affords both technical knowledge of and access to nuclear explosives sufficient to enable him/her to cause a high-explosive or nuclear detonation.
Nuclear explosive	Any assembly or subassembly containing fissionable or fusionable materials in proximity to main charge high-explosive parts or propellants capable of producing a nuclear detonation. Note: Included in this definition are nuclear weapons and devices utilizing nuclear energy that are principally for use as or for the development of an explosive device, an explosive device prototype, an explosive test device, or a peaceful nuclear explosive.
Personnel Assurance Program (PAP)	A Department of Energy (DOE) program to establish requirements, responsibilities, and documentation for screening, selecting, and continuously evaluating individuals being considered for assignment or who are assigned to nuclear explosive duties.
PAP Certification	Certification issued by the DOE Oakland Operations (DOE-OAK) Defense Programs Office signifying an individual's suitability and reliability to perform nuclear explosive duties.

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Personnel Assurance Program

1.0 Introduction

U.S. Department of Energy (DOE) Rule 10 CFR 711, "Personnel Assurance Program," and DOE Order 452.2A, *Safety of Nuclear Explosives Operations*, establish requirements and responsibilities for selecting and continuously evaluating individuals who perform work that affords sufficient technical knowledge of and access to nuclear explosives to enable them to cause a high-explosive or nuclear detonation or the dispersal of plutonium from a nuclear explosive. This definition is expanded to cover individuals at LLNL who control and certify fissile components for nuclear explosive-like assemblies (NELAs). This program is called the Personnel Assurance Program (PAP), and the work is known as nuclear explosive duty. Individuals who are certified under the PAP may perform Personnel Security Assurance Program (PSAP) duties, as described in Document 50.3, "Personnel Security Assurance Program," in the *ES&H Manual*. However, individuals having PSAP authorization may not perform nuclear explosive duties. Normally an individual will not be simultaneously enrolled in both the PAP and PSAP.

2.0 Objective

The objective of the PAP is to minimize the possibility of a high-explosive or nuclear detonation resulting from inadvertent or unauthorized personnel actions. This objective is accomplished through a documented program of selecting, instructing, training, and reviewing individuals to ensure their suitability and reliability for nuclear explosive duty.

3.0 Responsibilities

All workers and organizations shall refer to Document 2.1, "Laboratory and ES&H Policies, General Worker Responsibilities, and Integrated Safety Management" in the *ES&H Manual* for a list of general responsibilities. This section describes specific responsibilities of LLNL organizations and workers who have key safety roles.

3.1 Laboratory Director

The director of LLNL has assigned administrative responsibility for the PAP to the Livermore site manager. The Livermore site manager has appointed the Laboratory assurance manager to serve as the PAP management official, who is responsible for implementing the program and overseeing performance of the duties described in this document.

3.2 Managers

Program and payroll managers are responsible for ensuring that individuals certified for nuclear explosive duty understand the PAP tasks assigned to them and possess the necessary mental and physical capabilities to take positive measures to prevent an accidental or unauthorized high-explosive or nuclear detonation. These managers are responsible for (1) designating supervisory personnel, who in turn are responsible for observing PAP individuals assigned to nuclear explosive duties, (2) ensuring that these supervisors receive the required PAP supervisor training, and (3) assuring that individuals performing nuclear explosive duties are trained and qualified to perform those duties.

Program managers are responsible for ensuring that at least two knowledgeable PAP-certified individuals are present during all operations that afford access to a nuclear explosive potentially capable of producing a high-explosive or nuclear detonation. Payroll managers are responsible for promptly advising the PAP Coordinator when an individual is no longer assigned to nuclear explosive duty.

Organizations that provide the technical expertise for PAP training are responsible for ensuring that such training is periodically reviewed and updated and that training is offered at a frequency sufficient to meet PAP training needs.

Each payroll organization having PAP employees shall maintain a PAP file containing selection records and reviews of each individual certified for nuclear explosive duty.

3.3 Health Services Department

The Health Services Department head, acting as the site occupational medical director, is responsible for ensuring that PAP medical and psychological assessments are performed. Examinations are required prior to initial PAP certification and annually during the period of PAP certification. Psychological assessments require an initial and triennial written psychological test, usually the Minnesota Multiphasic Inventory (MMPI) and an annual semistructured interview. The Health Services Department is responsible for either performing or providing technical oversight of contractors and

services used in the performance of medical assessments, including designating the clinical psychologists to be used in PAP psychological assessments.

The Health Services Department head appoints a physician to serve as the medical review officer in the drug-testing program.

The Health Services Department is responsible for ensuring that physicians and clinical psychologists who perform or who supervise other health care professionals that perform PAP medical examinations or psychological assessments have received the required PAP training. DOE Headquarters must approve designated physicians and clinical psychologists.

3.4 PAP Management Official

The PAP management official is designated by Laboratory management to direct the PAP program. The management official is authorized to certify for the Laboratory that an individual has completed the requirements for PAP certification. The management official has overall management responsibility for directing the certification process and the drug testing program.

The PAP management official's duties may be delegated to the LLNL drug test program manager or the PAP Coordinator.

3.5 Drug Testing Program Manager

The drug testing program manager is responsible for staffing, training, equipping, and preparing procedures for the Laboratory's capability for urine and breath testing for substances of abuse on a 24-hour, 7-day-a-week basis. The drug testing program manager ensures this testing, including selection algorithms, specimen analyses, record keeping, data collection and reporting, and privacy safeguards comply with federal codes and regulations.

3.6 PAP Coordinator

The PAP Coordinator is responsible for routing requests for PAP certification and annual recertification for reviews and approvals, as described in this procedure, and for maintaining a consolidated file to substantiate this process. The PAP Coordinator maintains a current roster of individuals certified to perform PAP duties and distributes updated rosters to affected LLNL program and payroll managers. The PAP Coordinator assists the DOE Oakland Operations Office (DOE-OAK) in the verification that all certification and qualification requirements have been met for each individual performing nuclear explosive duty.

The PAP Coordinator is responsible for ensuring that nominees for initial PAP certification have satisfactorily completed a preassignment drug test and that PAP-certified individuals are enrolled in a program to test for illegal drugs on an unannounced basis at a frequency not to exceed one year between consecutive tests. The PAP Coordinator administers the selection and notification process and monitors the tests to ensure that those who are scheduled for testing complete the test. The PAP Coordinator is advised of pass/fail drug test results by the Health Services Department and is responsible for reporting these results as described in this procedure.

The PAP Coordinator is responsible for promptly advising DOE-OAK Defense Programs and Personnel Security Branches of the removal by LLNL of a PAP-certified individual from nuclear explosive duty.

4.0 General Procedure

Payroll supervisors select individuals who, by observation, are considered qualified for nuclear explosive duty. The supervisor then nominates the individuals to his/her payroll manager.

Payroll managers review the PAP certification or annual recertification recommendations and, if they concur, submit the names of nominees to the PAP Coordinator. The PAP Coordinator initiates reviews with the Health Services Department and LLNL Safeguards and Security. After internal LLNL reviews and approvals, the PAP Coordinator processes a request for certification or recertification to DOE-OAK and advises the payroll manager of the outcome.

While on duty, PAP-certified employees are subject to the LLNL alcohol and substance abuse policies. These policies provide for supervisory behavioral observation, drug and alcohol testing of employees if on-the-job impairment is detected, and medical evaluations in cases of deteriorating performance where substance abuse or emotional problems may be involved.

In addition, PAP-certified employees are subject to drug testing and to work-related rules governing the consumption of alcohol. PAP-certified individuals are tested at a frequency not to exceed one year between tests.

5.0 Training

Payroll managers ensure that employees are properly trained and technically qualified prior to and during PAP assignments through initial training and, when appropriate, refresher training. The effectiveness of training may be evaluated through written or

oral examinations or by conducting and documenting drills and exercises to evaluate training in key areas. Hands-on training with nonnuclear configurations may be used for initial training or to ensure PAP employees remain proficient in the duties for which they are qualified. Proficiency in subjects related to nuclear explosive duty may be assured through written or oral examinations, if appropriate. Individual records of PAP training and examinations are maintained by the employee's payroll management.

In advance of initial PAP certification or annual recertification, payroll managers advise the PAP Coordinator of the completion of required PAP training and retraining using form LL-3881 (Personnel Assurance Program Certification/Recertification Request Form). Evidence of completed training is forwarded with the request form to the PAP Coordinator.

5.1 Briefings and General Training

Prior to initial PAP certification and biennially for PAP recertification, individuals are given orientation briefings covering, at a minimum, the following subjects:

- The purpose, policies, objectives, and responsibilities of the PAP.
- The purpose, objective, and responsibilities of the two-person concept for operations.
- Responsibilities associated with custody of, control of, and access to nuclear explosives.
- General safety rules.

The PAP certification and recertification course number is PA0001, Personnel Assurance Program Overview Briefing. This course is required to be completed biennially.

5.2 Task-Specific Training

Programs employing PAP personnel are responsible for developing the task-specific training requirements and for ensuring this training is conducted as required. The records for task-specific training are kept by the employee's payroll management. As a minimum, task-specific training consists of the following:

- Operational procedures to be performed.
- Proper use of equipment and tools required for nuclear explosive operations.
- Use of specific nuclear explosive safety rules associated with nuclear explosive operations.

- Immediate-action and emergency procedures associated with nuclear explosive operations.

5.3 Supervisor Training

Designated supervisors of PAP personnel receive the same PAP orientation briefing as that provided to individual PAP certification nominees. This training includes orientation on the importance of the process for timely reporting of security concerns to appropriate personnel. In addition, designated PAP supervisors receive training on the following PAP subjects, as a minimum:

- Orientation on the early identification of behavior, attitude, and/or job performance that indicates a risk of degradation in reliability or judgment.
- Orientation on the early identification of alcohol or drug abuse.

All LLNL supervisors are required to take ED 7020, Alcohol and Substance Abuse Prevention (A.S.A.P.) Education Program, now available on CD ROM and on the LLNL website at https://www-ais.llnl.gov/llnl_only/docs/hr/catalog/.

5.4 Physician and Clinical Psychologist Training

The PAP Coordinator will assure that designated PAP physicians and PAP clinical psychologists receive a PAP Physician and Medical Staff Orientation Briefing (PA0004). This briefing is similar in content to that provided to individual PAP certification nominees. In addition, they are provided orientation briefings and/or tours on nuclear explosive operations and the work environment in areas where nuclear explosive operations are performed.

6.0 Certification, Recertification, and Decertification

6.1 Nomination for Initial PAP Certification

Payroll managers must ensure that individuals nominated for nuclear explosive duty are qualified and suitable for these duties by conducting a thorough review of each individual's education, prehire experience, related training and work experience, attendance and leave records, performance appraisals, disciplinary actions, records of reliability, and motivation. They must certify that no potential disqualifying derogatory information about the nominee exists in the employee's personnel file.

Individuals nominated should normally have been employed at LLNL for a minimum of 1 year; exceptions may be granted for related experience at other DOE facilities.

Conclusions regarding suitability of the nominee and a listing of required training that the nominee has completed are recorded on form LL-3881 by the payroll manager. The applicant acknowledges that he/she has been interviewed and briefed on the purpose, policies, objectives, and requirements of the PAP; the two-person concept for operations; and the responsibilities associated with custody, control, and access to nuclear explosives. The applicant reads and signs the Authorization for Use or Disclosure of Personnel Information and Records Form.

Employees who are requested by supervisors to participate in the PAP and who refuse must do so in writing using form LL-3881.1. The supervisor receiving the refusal shall also sign the form.

After the forms are signed by the applicant, the originals are sent to the PAP Coordinator. The individual's payroll manager should retain a file copy to substantiate the initial review.

6.2 Assessments for Initial PAP Certification

On receipt of a request for PAP processing, the PAP Coordinator distributes a memo requesting a medical assessment to the Health Services Department and an information copy to the LLNL Personnel Security Branch, the DOE-OAK Personnel Security Branch, and the DOE-OAK Defense Programs Office.

6.2.1 Medical Assessment

The Health Services Department medical director ensures that preplacement assessments are performed to determine the nominee's emotional and mental stability and physical capability to perform nuclear explosive duty in the PAP. These assessments include a comprehensive physical examination, psychological assessment, and evaluation of drug and alcohol abuse. An applicant for a PAP position is administered a preassignment drug test before PAP approval.

The psychological assessment consists of, as a minimum, a generally accepted psychological test (such as Minnesota Multiphasic Personality Inventory or 16 Personality Factors Test) and a structured interview by a designated clinical psychologist. The Health Services Department maintains appropriate files to substantiate each part of this medical assessment.

6.2.2 PAP Coordinator File Review

The PAP Coordinator verifies that the nominee has completed the required PAP training, passed a preassignment drug test, satisfactorily completed a medical examination, and satisfactorily completed a psychological assessment.

6.3 Request for DOE Certification

Upon satisfactory completion of all required LLNL reviews and briefings, the PAP Coordinator formally requests DOE certification using the Personnel Assurance Program Certification Document Form.

The PAP Coordinator notifies the payroll manager involved when PAP certification is received from the DOE-OAK manager or his/her designee indicating that the individual is approved for nuclear explosive duty. The PAP Coordinator periodically distributes a roster of certified individuals to LLNL affected payroll and program managers.

6.4 Recertification

At the time of the initial PAP certification, files are established within the Health Services Department, LLNL Safeguards and Security, and DOE-OAK to perform annual updates to these respective assessments. The annual medical assessment consists of a physical examination and structured interview with a designated clinical psychologist, including the triennial written test. The PAP Coordinator ensures that drug testing has been accomplished. Programs and LLNL teaching organizations conduct required PAP training throughout the year. As each of these requirements is satisfied, appropriate records are sent to the PAP Coordinator for review and filing.

Payroll managers are responsible for ensuring that all personnel in PAP are reviewed annually at least 30 days in advance of expiration of the annual DOE PAP certification. A summary of each individual's on-the-job experience and certification of all required briefings and general training completed since the time of the previous certification or recertification are recorded on form LL-3881. Copies of this form are retained in the individual's file in the payroll organization, and the originals are sent to the PAP Coordinator.

Upon satisfactory completion of all required LLNL reviews and briefings, the PAP Coordinator formally requests DOE certification or recertification using the Personnel Assurance Program Certification Document Form.

6.5 Decertification

6.5.1 Conclusion of PAP Assignment

As soon as possible, when an individual is no longer assigned to nuclear explosive duty, the payroll manager must notify the PAP Coordinator, who then notifies LLNL Safeguards and Security, the Health Services Department, and DOE-OAK so that the individual's name can be removed from the PAP list.

6.5.2 Review of Potentially Disqualifying Information

If potentially disqualifying information comes to the attention of the Health Services Department, LLNL Safeguards and Security, or the individual's payroll division prior to processing a PAP recertification request to DOE, the matter is referred to the PAP Coordinator. The PAP Coordinator convenes a panel consisting of the Health Services Department, LLNL Safeguards and Security, Staff Relations, and the individual's department. The panel reviews the facts in the case, using whatever resources are deemed necessary to resolve the matter, including interviewing the affected individual, and then determines whether to recommend recertification to DOE.

6.5.3 Removal from PAP Assignment

If an individual is removed from PAP duties for a possible security concern or other cause, the DOE-OAK Office of Defense Programs will be notified immediately via telephone with a written follow-up. The program supervisor will immediately remove the individual from his nuclear explosive duty and prevent the individual from returning to the area.

7.0 Alcohol Use and Substance Abuse Testing

PAP-certified individuals are subject to urine drug testing before their initial PAP certification and on a frequency not to exceed one year between tests. PAP-certified individuals are subject to LLNL's policy guidelines on substance abuse, which prohibits the use of alcohol while on duty and allows possible substance testing by the Health Services Department.

Supervisors will direct an employee to the Health Services Department if one of these occurs:

- Behavior is observed that may pose an immediate threat to the health and safety of the employee or other employees and there is cause to believe that substance abuse is a factor.
- The unauthorized use or possession of drugs or alcohol has been observed in the workplace.
- A work-related accident occurs where there is cause to believe the use of controlled substances or alcohol may have been a contributing factor.

If the medical professional performing a PAP medical or psychological examination has reason to suspect substance or alcohol abuse, Health Services Department may elect to administer additional tests or examinations, which may include further psychological assessment. If there is reasonable indication of substance or alcohol use by a PAP-

certified individual, the Health Services Department shall notify the PAP management official, who will notify DOE-OAK.

Individuals certified to perform nuclear explosive duty are required to abstain from the consumption of alcohol for at least 8 hours preceding a scheduled tour of work in which PAP duties may be performed and during such a period of work.

Employees called in to perform an unscheduled PAP working tour are required to indicate prior to reporting if they have consumed alcohol within 8 hours of the anticipated PAP duty. The supervisor performing the call-in shall ask the individual if they have abstained from alcohol for 8 hours. As a general rule, employees who have consumed alcohol within 8 hours of unscheduled PAP duty will not be requested to report. These special PAP rules regarding disclosure of use of alcohol prior to duty apply only to PAP individuals called in to perform PAP duties.

8.0 DOE Annual Review

At quarterly intervals throughout each year, DOE-OAK reviews LLNL files to verify that the requirements of 10 CFR 711 and DOE O 452.2A for initial PAP certification and annual PAP recertification have been met.

9.0 Critical Duty Activities at Other Facilities

After approval for PAP certification, DOE-OAK will notify LLNL, the DOE Nevada Field Office, and the Amarillo Area Office so that LLNL individuals can be entered on the appropriate access lists.

LLNL personnel certified in PAP are occasionally assigned to nuclear explosive duty at offsite facilities such as the Nevada Test Site (NTS) and Pantex Plant. Procedures to ensure safety and define responsibility for these operations involving nuclear explosives are authorized by the cognizant DOE office and/or other government office. LLNL employees must complete required training and perform their assigned duties in accordance with those procedures.

10.0 Work Standards

10 CFR 707, "Workplace Substance Abuse Programs at DOE Sites."

10CFR 711, "Personnel Assurance Program."

DOE O 452.2B, "*Safety of Nuclear Explosive Operations*," paragraph 4.e.(11)(a) – Electrical Testers and Equipment Requirements and paragraphs 4.e.(14 & 15) [and the technical criteria established in ALSD 452.2B, paragraphs 4.e.(14 & 15)] – Nuclear Explosive-Live Assembly Requirements and Marking Instructions.

11.0 Resources for More Information

11.1 Contacts

- Laboratory Assurance Office
- Health Services Department
- Safeguards and Security Department