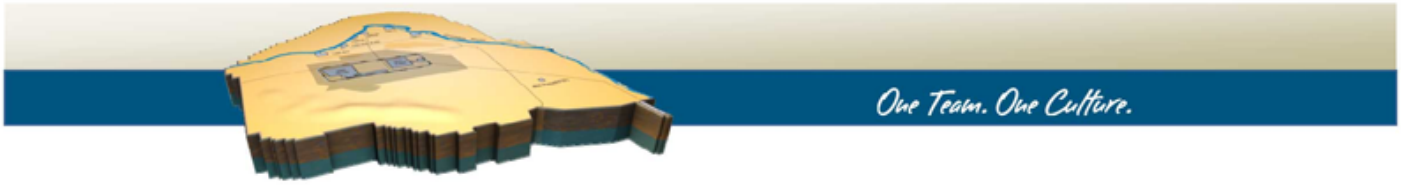

Management Plan

PRC-MP-TQ-011

CH2M HILL Plateau Remediation Company (CHPRC) Qualification and Training Plan

Revision 3, Change 0

Published: 01/16/2019
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Rev. 3, Chg. 0

Change Summary

Description of Change

Significant revision; includes additional information and detail on topics that had been previously addressed in other training documents (e.g., the TIM). Additional clarity provided when needed.

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1.0 INTRODUCTION

The CH2M HILL Plateau Remediation Company (CHPRC) Qualification and Training (Q&T) Plan describes a training management system to meet the technical, organizational, and professional development training requirements, regulations, and directives specified in the CHPRC contract with the U.S. Department of Energy (DOE). The CHPRC Q&T programs are designed to promote adherence with the Integrated Safety Management System/Environmental Management System (ISMS/EMS), support the Voluntary Protection Program (VPP), and promote a strong, safe work environment. This Q&T Plan applies to the CHPRC scope of work and describes how training is accomplished to maintain a qualified and trained workforce capable of performing assigned work activities safely and compliantly. The Q&T Plan directly supports the following related documents:

- CHPRC-00073, *CHPRC Radiological Control Manual*
- CRD O 426.2, *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*
- DE-AC06-08RL14788, *CH2M HILL Plateau Remediation Company Management Contract*
- PRC-MP-EP-40182, *Environmental Management System Manual*
- PRC-MP-MS-003, *Integrated Safety Management System/Environmental Management System Description (ISMSD)*
- PRC-MP-MS-19361, *CH2M HILL Plateau Remediation Company Project Execution Plan*
- PRC-MP-QA-599, *Quality Assurance Program*

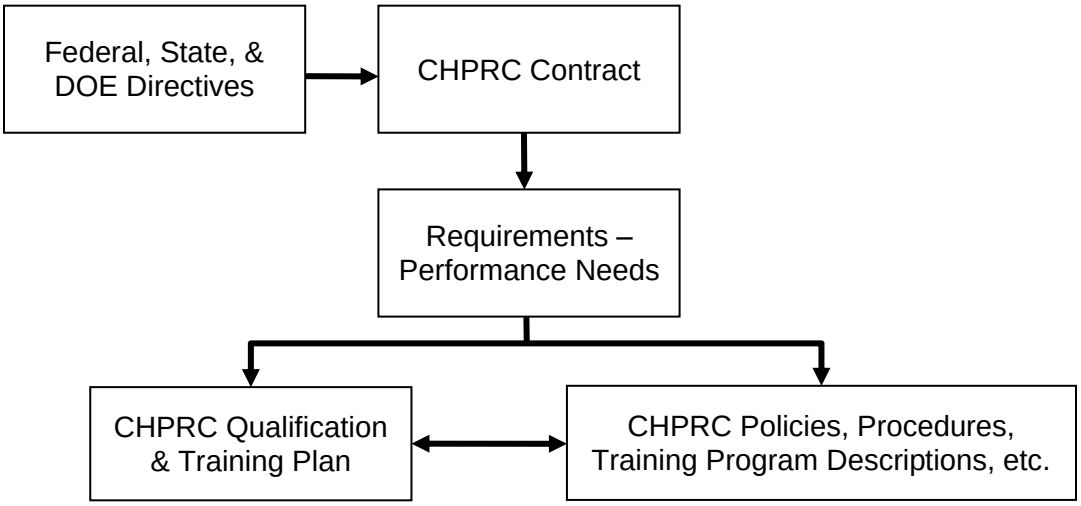
1.1 Requirements Identification, Flow Down, and Implementation Process

The CHPRC is required by PRC-MP-QA-599 to meet the following objectives:

- Train and qualify personnel to be capable of performing their assigned work.
- Provide continuing training to personnel to maintain their job proficiency.

The CHPRC document hierarchy flows the requirements down from source documents specified in the CHPRC's contract into a set of plans, procedures, and other documents that implement the requirements. This structure is depicted in Figure 1, *CHPRC Training Requirements Flowdown Model*.

Figure 1 – CHPRC Training Requirements Flowdown Model



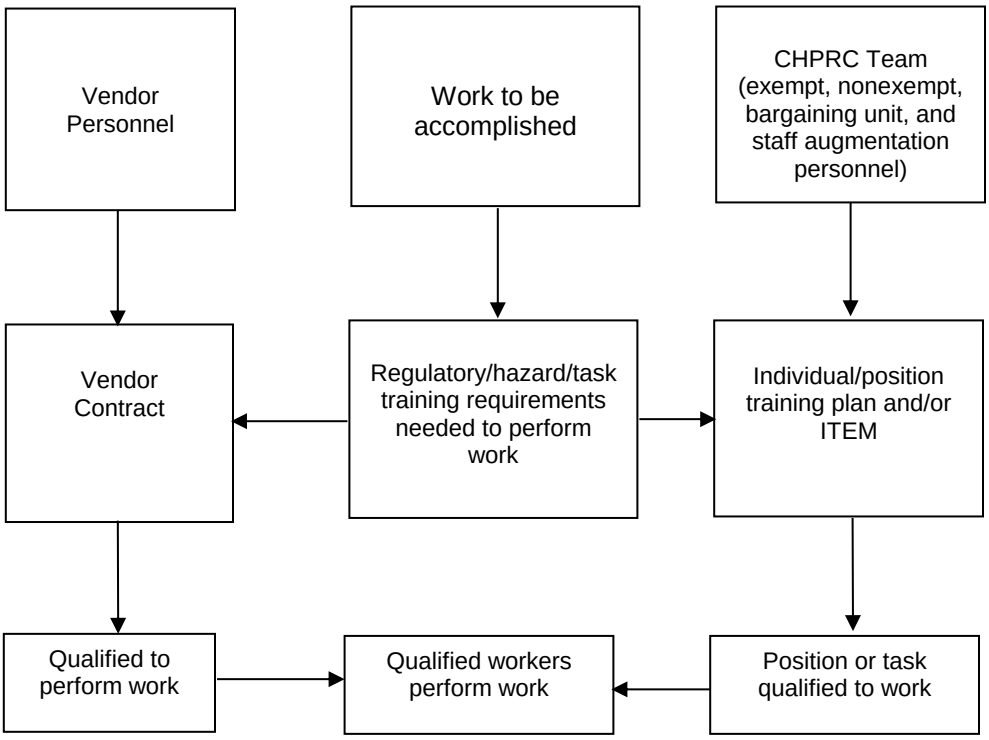
Examples of document types to address training requirements and processes include:

- Policies – Policies are guiding principles that influence or determine decisions or actions. Policies are used to present a broad statement of values, principles, and acceptable business practices. Policies do not typically contain requirements to complete specific training courses. However, a policy may indicate topics that should be included in training courses.
- Management Plans – Management plans are used to present a program or system description. They may vary in content but generally address the contractual drivers, major functions or systems, personnel roles and responsibilities, and interfaces with other programs or organizations. Management plans do not typically contain requirements to complete specific training courses. However, a management plan may indicate topics that should be included in training courses.
- Procedures – Procedures are documents that present a series of steps to be followed or applied. It is preferred that procedures do not contain requirements to complete specific training courses. However, there are situations when a procedure may be the only appropriate document to institutionalize a training requirement.
- Training Program Descriptions – Training program descriptions are the preferred mechanism for institutionalizing training requirements. Additional information on the contents of a training program description is located in Section 3.2.3.

1.2 Personnel Required Training Identification Process

Personnel are trained in accordance with approved procedures and policies that address the CHPRC contractual training requirements. Also, management may establish additional training requirements to meet specific performance or developmental needs of their organization. An overview of this process is depicted in Figure 2, *Training Requirements Identification Process*.

Figure 2 - Training Requirements Identification Process



1.3 Graded Approach

A graded approach is applied to the administration of CHPRC training. Graded Approach is defined as the level of detail applied for analyses, documentation, and actions necessary to comply with requirements and performance needs and is commensurate with:

- the relative importance to the safety of people, equipment, and the environment
- the magnitude of any hazard involved
- the life cycle stage of a facility
- the programmatic mission of a facility
- the particular characteristics of a facility
- other relevant factors

Satisfactory personnel performance is the method used to determine if the appropriate level of the graded approach has been applied. Monitoring of personnel is part of the feedback and management assessment processes and training activities are adjusted as necessary.

1.4 Training Implementation Matrix

The CHPRC is required to have an approved Training Implementation Matrix (TIM) for a nuclear facility. A TIM identifies which requirements of CRD O 426.2 are applicable and allows exceptions when clarification has been provided. Initial TIMs are approved by DOE prior to operation of new nuclear facilities. The CHPRC TIM is periodically reviewed at least every 2 years to ensure the document is applicable to current facility conditions and meets the requirements of CRD O 426.2. Subsequent changes to the TIM, if editorial in nature per the DOE Richland Operations Office (DOE-RL) guidance, are forwarded to DOE for information. Changes in implementation requirements or affected positions within the TIM require DOE-RL approval.

1.5 Dangerous Waste Training Plan

The Dangerous Waste Training Plan (DWTP) describes how the CHPRC meets the requirements of WAC 173-303-330, *Dangerous Waste Regulations, Personnel Training*. DWTP documentation is prepared and managed as described in PRC-PRO-TQ-459, *Environmental Training*.

2.0 ROLES AND RESPONSIBILITIES

2.1 U.S. Department of Energy

The DOE-RL is the regulatory authority for compliance with CRD O 426.2 and has oversight responsibility of the CHPRC training programs. DOE-RL reviews and approves CHPRC TIM(s) prior to operation of new nuclear facilities, and changes to CRD O 426.2 when transmitted to CHPRC by the DOE Contracting Officer.

2.2 CHPRC Management

CHPRC management has overall responsibility and authority for the content and effective conduct of the training and qualification program(s) within their functional areas. CHPRC management assigns subject matter experts (SME) to assist Training in the development of training material and procedures for their respective functional areas.

Management ensures sufficient resources are available to support the training effort and ensures attendance at required training sessions. Management ensures approved policies, plans, and procedures are implemented and promote a graded approach to training. Training provided by outside training suppliers (e.g., subcontractor, vendor, other Hanford contractor) in support of CRD O 426.2 specified qualification or certification meets the same basic requirements for development, implementation, student evaluation, and documentation as the training provided by the CHPRC.

CHPRC managers are responsible for ensuring the following:

- Personnel are qualified to perform the assignment and maintain their qualification and proficiency.
- Communicate management training expectations for job performance.
- Approve tasks related to training.
- Interface with the Training Organization through project/facility points of contact and management interfaces or other effective methods.
- Review and analyze facilities' operating performance related to training.
- Provide feedback to CHPRC Training and facilities/projects’ training on employee work performance.
- Help determine if training is the appropriate method for correcting identified performance deficiencies.
- Participate in training assessments or evaluations as identified in the program plans.

2.3 Subject Matter Experts

SMEs identify new or revised requirements for training, and approve training materials developed by the Training Organization.

2.4 Training Manager

The Training Manager is responsible to implement training processes across the CHPRC project. The Training Organization provides the Facility Managers with the necessary support to ensure that the requirements of CRD O 426.2 are adequately implemented for the Operating Organization. The Training Organization implements other training as necessary, to provide employees with the skills and knowledge to perform new tasks and assignments in support of DOE initiatives for environmental restoration, or to improve employee performance and effectiveness.

The Training Manager is responsible for the following:

- Ensuring individual training records, program plans, and course information are easily auditable.
- Coordinating vendor provided training, e.g., Hanford Site Training Contract.
- Acting as the principal liaison with DOE-RL for the training functional area.
- Establishing, maintaining, and assessing the training management systems and administrative processes.
- Establishing instructor qualifications.
- Ensuring instructional staff, including subcontract personnel, are qualified.
- Maintaining a process for course scheduling and student training registration.
- Ensuring the systematic approach to training (SAT) is applied for training CRD O 426.2 required training programs.
- Assisting training lead and line management in identifying individual and position training requirements.
- Performing management assessments using applicable DOE-STD-1070-94, *Guidelines for Evaluation of Nuclear Facility Training Programs*, objectives and criteria.
- Incorporating management expectations into training materials.
- Monitoring instructional and technical performance of instructors.

The Training Manager is the TA for the CRD O 426.2 related training and qualification functional area.

- The Training Manager reviews and concurs with the updates and revisions of the facilities' TIMs.
- The Training Manager also serves as the Functional Manager for CHPRC training administration and processes.

2.5 CHPRC Project/Facility Training Specialists

The CHPRC project/facility Training Specialists:

- Assist line management in identifying training needs based on requirements, TIM, DWTPs, hazards, tasks, and/or performance needs.
- Prepare and create training materials, incorporating relevant requirements and management expectations, per CHPRC procedures and other related guidance.
- Arrange and conduct training as needed.
- Ensure update of training material to reflect changes such as modifications to the facility, safety requirements, procedures, and regulations, and pertinent lessons learned prior to instruction.
- Identify and document training needs and provide feedback for program improvements.
- Ensure trainees meet prerequisites to participate in training.
- Monitor training effectiveness and evaluate trainees.
- Monitor performance and ensure qualification of facility instructional staff.
- Participate in the periodic review of training procedures and documents
- Perform designated functions as delegated by the Training Manager.
- Assist line management in ensuring subcontractors providing services to their facility meet specified requirements.

2.6 CHPRC Personnel

CHPRC personnel are responsible for completing their required training and monitoring qualification status to ensure required training elements do not lapse.

2.7 Other CHPRC Organizations

Some training activities will be prepared and presented by non-training organizations (Human Resources, Safety, Security, Quality Assurance, Supply Chain, etc.). These organizations are responsible for the respective training provided in those areas.

2.8 CHPRC Training Interface

The Training Organization has yearly training and qualification program reviews via the Executive Safety Review Board, and conducts periodic training meetings with respective management at the project/facility level to review expectations, priorities, and upcoming commitments to ensure the following attributes are met:

- Implement standard and consistent CHPRC processes to support training and procedures needs.
- Ensure continuous improvement is applied to the training administration and processes.

- Provide a forum and process for resolving training issues.
- Monitor training standards and regulations.
- Enhance information exchange between CHPRC training groups.

2.9 Hanford Site Training Center of Expertise

The Hanford Site Training Center of Expertise (TCOE) is a forum for the site contractors to communicate and identify common training opportunities for improvement where time and cost can be reduced and quality increased. The CHPRC supports this forum by providing a knowledgeable representative at the TCOE meetings and act as chair/co-chair on a rotational basis.

3.0 TRAINING PROGRAM ADMINISTRATION AND IMPLEMENTATION

3.1 Training Policy

The CHPRC training policy, PRC-POL-TQ-11337, *Employee Training*, conveys a corporate message that training directly supports the ISMS/EMS Guiding Principle of: "Competence Commensurate with Responsibility", the VPP tenets, and promotes a Safe Work Environment. A full description of this policy is described in PRC-POL-TQ-11337.

3.2 Personnel Qualification and Training Process

3.2.1 Personnel Selection

The personnel selection process ensures that an individual's previous background, education, and experience meet the minimum entry-level education and experience for a job position. The manager determines the minimum education and experience requirements using requirement references and evaluation of operational needs.

Personnel who do not meet these requirements may be placed in the position provided the manager provides a justification in accordance with PRC-PRO-TQ-40164, *Personnel Training and Qualification.* Alternatives to education and experience requirements are considered on a case-by-case basis in accordance with administrative procedure PRC-PRO-TQ-179, *Obtaining Training Equivalencies, Exceptions, and Extensions.* In all cases, sufficient facility-specific instruction is provided to enable the candidate to perform job requirements.

3.2.2 General Employee and Visitor Training

General Employee Training (GET) is designed to orient employees with the company, its policies, safety culture, and basic job-related knowledge. Examinations are administered, when required. GET also provides refresher training when there are significant changes and annually or biennially based on requirement drivers. Typically, GET consists of a combination of Hanford General Employee Training (HGET), Employee Orientation, CHPRC-specific General Employee Training (CGET) and the respective Facility Orientation. Changes that affect GET are incorporated into continuing training programs, updated within GET, and/or distributed to employees through bulletins, etc.

HGET/CGET includes the following elements applied commensurate with the job duties of personnel:

- General description of facilities
- Job related policies, procedures, and instructions
- Radiological Health and Safety programs
- Facility emergency plans
- Industrial safety/hygiene program
- Fire protection program
- Security program
- Quality Assurance program
- Criticality Safety

Visitors, contracted personnel, and temporary personnel must be under continuous escort while at the facility, unless they have been trained in appropriate areas from the above list to the extent necessary to ensure safe execution of their duties. For persons requiring long-term (e.g., more than 7 working days) access, understanding of the information provided by the GET program must be evaluated by administering a written examination (includes computer and web-based training examinations). Additional facility-specific training (Facility Emergency Hazards Identification Checklist, or FEHIC) may also be required. The GET examination covers areas selected for training and is of sufficient difficulty to ensure persons have adequate knowledge of general site programs. When combined with any required FEHIC, personnel do not need to be escorted when entering the facility. All hazard identification and safety signage on the written examination must be identical in appearance and language as exists at the facility. Persons who do not pass this examination are not permitted access without a continuous escort.

3.2.3 Training Program Descriptions

Training program descriptions (TPD) provide an overview of the elements of a training program or the means to achieve qualification for a respective position or function. They typically apply to select CRD O 426.2 qualification areas, specialized functions, or are required by sitewide standard programs. Training program descriptions typically have the following elements, as applicable, to the respective program:

- Entry-level education and experience
- Initial training and qualification requirements
- Continuing training requirements
- Requalification requirements
- Examination requirements
- Remediation process
- Disqualification limitations
- Medical requirements
- Proficiency requirements

TPDs aid managers in identification of required training that is included in individual training plans. The CHPRC is contractually required to utilize a select set of training courses or program elements associated with sitewide standards. CHPRC works closely with the other Hanford contractors to ensure these training elements are consistent with the CHPRC needs and requirements. Liaison activities include a joint review of the specified training programs/ elements and modification of the TPDs, as necessary.

The following sitewide standard training program descriptions have been endorsed by CHPRC and are available in the PRC Procedure System (PPS)

- DOE-0355 (TPD-0015), *Hanford Standardized HAZWOPER Training*
- DOE-0356 (TPD-0048), *Hanford General Employee Training*
- DOE-0357 (TPD-0049), *Hanford Site Radiological Worker*
- DOE-0358 (TPD-0047), *Hanford Site Core Radiological Control Technician Qualification*
- TPD-0002, *Beryllium*
- TPD-0016, *Hoisting and Rigging*
- TPD-0032, *Respiratory Protection Training Program Description*
- TPD-0038, *Lockout/-Tagout*
- TPD-0039, *Fall Protection*
- TPD-0040, *Electrical Safety*

Additional training program descriptions for CHPRC can be found in the training and qualification virtual manuals section of PPS; (http://prc.rl.gov/pps/virtualManual.cfm/topicalAreas/TQ).

3.2.4 Individual Training Plan

The responsibility to define the required training for a particular position or function lies with the manager. The identified required training is input into the learning management system (LMS) to build an individual training plan for their subordinates. The LMS is a database that, among other functions, tracks required training to ensure personnel remain current for training necessary to perform work safely and effectively. The responsibility for completing required training identified in the training plan lays with the individual and his/her respective manager/supervisor. Line management identifies tasks employees will perform, training required to perform those tasks, and ensures those personnel complete the training before being assigned to perform those work activities independently.

Much of the training at Hanford is requirements-driven by various laws, regulations, and DOE directives. Examples of this include industrial safety training, hazardous and radioactive material handling training, and nuclear operations training. The required training to meet these requirements is identified and approved by the various technical authorities (TA). The training required is determined by potential hazard exposure and/or the tasks being performed.

In addition to regulatory training, management may identify other training activities to ensure employees are cognizant of various legal ramifications associated with work assignments or conduct. Examples of this type of training include subjects on Human Resources (e.g., sexual harassment) and Industrial Relations (e.g., working hours). Senior and/or line management will identify which individuals should attend such training. The decisions are generally based on the individual's duties.

Managers may also assign other needs-driven training in areas such as professional development to improve an employee's efficiency and effectiveness or prepare them for career advancement. Examples of this type of training include administrative professionals who need to maintain proficiency with the latest software, engineers who need to understand new technology, and managers who need to improve communication skills. Other examples are training for personnel changing assignments or classes on subjects such as time management. The driver for these classes is management directed to improve personnel performance.

3.2.5 Initial Training

Initial training is designed to provide personnel the knowledge and skills to perform their respective job in a safe and efficient manner, and is listed in their training plan. Personnel are typically identified as "in training" for the first 6 months while completing initial training.

Personnel who are in training for a CRD O 426.2 qualification program or function are not allowed to independently make decisions or take actions that could affect facility safety, nor be placed in such positions. However, they may independently perform specific tasks or job assignments for which they are qualified.

3.2.6 Continuing Training

Continuing training programs must be established to maintain and enhance the knowledge and skills of operating contractor personnel who perform functions associated with engineered safety features as identified in the facility Documented Safety Analysis (includes operations, maintenance, and technical support personnel). Continuing training is structured commensurate with the specific performance needs and designed to maintain job proficiency on a cycle not to exceed 2 years. Continuing training may include retraining on complex or infrequently performed tasks or refresher for safety and regulatory training, and is a method for personnel to stay current on such things as:

- Changes to regulatory requirements
- Changes to the job position
- Significant changes in procedures
- Changes in plant systems or equipment
- Applicable GET program topics / areas
- Fundamentals
- Lessons learned

As applicable, periodic examinations are administered and documented throughout the cycle on material included in the Operations training programs.

3.2.7 Student Evaluation

Students are evaluated, as necessary, to assure mastery of objectives or training content by using written or oral examinations, on-the job-training (OJT) evaluations, performance demonstrations, and quizzes. These evaluation methods are based on learning objectives and administered consistently, controlled, and documented per CHPRC procedures. Mastery of some training courses or content is determined through group activities or by instructor questioning. Additional guidance on written and oral examinations is provided in PRC-PRO-TQ-40163*, Examination Administration and Control,* and PRC-PRO-TQ-40172*, Oral Board Administration*. Additional guidance on On-The-Job Training, On-The-Job Evaluation, and performance demonstrations is provided in PRC-PRO-TQ-40170*, On-The-Job Training and Evaluation*.

3.2.8 Student Remediation and Suspension of Personnel Qualification

For personnel who are in formal qualification programs that experience difficulty in meeting the associated standards, the CHPRC provides varying degrees of remediation to aid the student's learning process. Also, there are occasions where an individual may not achieve or maintain performance standards and a qualification or certification must be revoked. Reinstatement is allowed after meeting the standards. This process is described in PRC-PRO-TQ-40164.

3.3 Training Types and Delivery Methods

3.3.1 Formal Training

Formal training is required to be completed to be qualified to perform specific tasks. Formal training also requires completion to be recorded and tracked to ensure personnel remain qualified for assignment. Formal training may be identified as a requirement for all personnel in a certain role or implemented as "just-in-time" training for personnel performing specialized tasks.

3.3.2 Informal Training

Management may provide informal training in the form of "all hands" meetings, briefings, familiarization walkthroughs, etc., on an as-needed basis. Informal training is not considered to be required training and therefore may not be tracked in the training records system.

3.3.3 Training Delivery

For CRD O 426.2 positions, training must consist of a combination of classroom type and OJT, and include simulator and laboratory training as applies to the position. Classroom-type training may include a variety of presentation techniques such as lectures, seminars, computer-based training, and structured self-study activities. Examinations are included, when necessary, to ensure mastery of learning objectives or training content and documented when required. The training delivery method is normally determined by the instructor based on the course content and target audience.

3.3.4 On-The-Job Training

OJT is designed to prepare personnel for job performance through training and performance testing that is conducted by qualified OJT trainers in a setting as close to the actual work environment as possible. OJT provides hands-on experience, and has the advantage of providing training for tasks that are of immediate need to the trainee. While classroom training focuses on the delivery of knowledge for a task, or set of tasks, OJT focuses on the skills necessary to successfully perform work. A graded approach is taken to allow the student adequate practice to meet the level of proficiency required to perform the specific task correctly and safely. OJT is limited to those situations where it is administratively and physically possible to conduct the training (i.e., where facilities are adequate, where OJT can be conducted without significant interference with facility operations, and where qualified personnel are available to conduct and manage the OJT program). OJT is conducted in accordance with PRC-PRO-TQ-40170.

3.3.5 Vendor Provided Training

Training provided by an outside organization (e.g., subcontractor, vendor, other Hanford contractor) in support of the CRD O 426.2 qualification or other required certification of personnel must meet the same basic requirements for development, implementation, testing, and documentation of training provided by CHPRC training organizations. For vendor provided training outside of CRD O 426.2 scope, the training material only needs to meet the expectations of the procuring manager. Vendor provided training is administered through PRC-PRO-TQ-40164 and PRC-PRO-TQ-40184, *Contractor Provided and Procured Training*.

3.3.6 Team Training

Team training is provided when there are multiple interfacing organizations needed to perform complex work on safety systems or other safety important activities. In many instances, team training involves the use of mockups or other practical methods. The determination for team training is typically made in conjunction by the Functional and Training Manager/Lead.

3.3.7 Emergency Response Drills

Facility qualification programs include training and drills for emergency or abnormal conditions. From a sitewide perspective, Emergency Management is maintained by the Mission Support Contractor (MSC) for DOE. CHPRC's role is limited to event contractor or "other site contractor."

3.4 Qualification Programs

Qualification is a process to ensure identified positions or functions have the requisite knowledge and skill to perform safely and effectively (to include instruction in the use of facility systems to control or mitigate accidents, including both classroom and training conducted in the facility.). Qualification is granted and documented by management based on education, experience, training, examination, and any special requirements necessary for the performance of assigned responsibilities in accordance with administrative procedure PRC-PRO-TQ-40164. Qualification programs are developed using the graded, systematic approach to training as described in PRC-PRO-TQ-40165, *Training Program Administration*. Qualification may require completion of classroom and in-plant, OJT as specified in CHPRC training procedures.

Qualification may be granted only after assuring that all qualification requirements (including training and examinations as required) and other specified requirements (e.g., medical examination) have been satisfactorily completed. Persons not trained (or current) in required safety training (e.g., Radiological Worker, Respiratory Protection, Mask Fit, Confined Space, Fall Protection) shall not perform tasks as either a qualified person or under the supervision of a qualified person until the required training is met. These safety courses are required to protect workers from the hazards in radiological and industrial settings where, even if supervised or teamed with a qualified person, the worker is not afforded the protection commensurate with the hazards involved.

Qualification of nuclear chemical operators and their immediate supervisors is valid for a period not to exceed 2 years unless revoked for cause (e.g., medical disqualification or performance deficiencies).

Even though applied broadly to personnel in the operating organization, the term qualification has a different application for managers and technical staff personnel. These personnel may be considered qualified by virtue of meeting the education and experience requirements associated with the position and by completing applicable position-specific training. A comprehensive examination need not be administered to determine their qualification. Continuing training and professional development programs should be established to meet the needs of the individual and the position, and to ensure programs are implementing the latest regulatory requirements, and are aware of relevant lesson's learned and technological advancements.

Qualification applies to positions identified in the CHPRC TIM, Quality Assurance personnel, select positions within the scope of DOE/RW-0333P, *Office of Civilian Radioactive Waste Management Quality Assurance Requirements and Description*, or other specific requirements, when identified. In many instances for new equipment or processes, it is necessary to initially qualify a SME through equivalency based on previous education and experience; the SME then can qualify other personnel.

3.4.1 Technical Staff Training and Qualification Standards

Training requirements for technical staff are identified in their respective TPDs and the applicable job task analyses. In addition, each identified employee will have a position-specific electronic training plan that captures all of the training elements required for their position and tasks. Technical staff employees must complete the position- or task-specific portions of the assigned training for their area of expertise prior to performing independently in their job function.

Entry-level technical staff personnel who provide technical support to the operating organization must be trained in the following facility-specific subject areas as appropriate to the position, unless they provide official transcripts of coursework that adequately covers the topics:

1. Facility organization;
2. Facility fundamentals; (a. Heat transfer, fluid flow, and thermodynamics; b. Electrical science; c. Nuclear Physics; d. Chemistry/ chemistry controls; e. process controls);
3. Facility systems, components, and operations;
4. Simulator training (for facilities that have a simulator);
5. Environment, Safety, and Health Orders;
6. Codes and standards overview;
7. Facility document system;
8. Documented Safety Analysis, Technical Safety Requirements, and safety basis documentation;
9. Nuclear criticality control;
10. Material maintenance, and modification control;
11. ALARA and radwaste reduction program; and
12. Quality Assurance / Quality Control practices.

Technical staff personnel are assigned qualification requirements and standards per the following documents:

- HNF-7098, *Criticality Safety Program*
- PRC-PRO-QA-40102, *Quality Assurance Engineer Training and Qualification Program*
- PRC-STD-TQ-40175, *Engineering Training Program Description*
- PRC-STD-TQ-40178, *Radiological Control Training Program Description*
- PRC-STD-TQ-40221, *Environmental Compliance Officer Training Program Description*
- PRC-STD-TQ-40260, *Transportation Safety Training Program Description*
- PRC-STD-TQ-40263, *Nuclear Safety Training Program Description*
- PRC-STD-TQ-40530, *Laboratory Technician and Scientist Training Program Description*
- PRC-STD-TQ-52758, *Unreviewed Safety Question Training Program Description*

3.4.2 Requalification

Requalification (continuing qualification) for personnel (including operations, maintenance, and technical support personnel) and their immediate supervisors is typically conducted on a 2-year cycle and is accomplished by demonstrating successful completion of appropriate continuing training, examinations, and/or performance demonstrations, as determined by Difficulty, Importance and Frequency (DIF) analysis, and/or required by the respective program. Management indicates by signature that the person has successfully completed the requalification program and is formally re-qualified.

Training on emergency procedures and abnormal plant conditions is conducted annually as required through the emergency preparedness program.

3.5 Certification Programs

Certification is required for select specialized functions that are specified in regulations and requirements such as welding, quality assurance, fissile material handling, etc. CRD O 426.2 requires certification for fissile material handlers and their supervisors who manipulate or handle significant quantities of fissionable materials, or manipulate the controls of equipment used to produce, process, transfer, store, or package significant quantities of such materials. Certified fissile material handler positions/task functions are identified within the *CHPRC Training Implementation Matrix*. Any additional positions that will be certified based on facility hazards and operational complexity shall be similarly identified in the *CHPRC Training Implementation Matrix*.

Certification may be granted only after all qualification requirements (including written and oral examinations and operational evaluations) and other specified requirements (e.g., medical examination) have been satisfactorily completed, and management has assured that the person is capable of safely performing all functions of the position.

CHPRC determines whether personnel are required to be certified as fissile material handlers or qualified as fissile material operators using a graded approach based on the hazards involved and the risk associated with the operation of the facility or activity. Criticality safety analyses are performed for all operations or activities involving greater than an exempt quantity of fissile material in accordance with DOE-STD-3007-2007, *Guidelines for Preparing Criticality Safety Evaluations at Department of Energy Nonreactor Nuclear Facilities*. If these analyses show that a criticality is double contingent, operators are required to be certified. If these analyses show

that a criticality is not credible, there is reduced risk of an operator affecting a critical condition. Accordingly, when consideration is given to risk, operators performing work that involves significant quantities of fissile material for activities where documentation shows that a criticality is not credible do not require certification. In all cases, personnel handling greater than an exempt quantity of fissile material are required to be qualified.

Continuing training programs for certified operators and supervisors consists of preplanned classroom-type training, OJT, and operational evaluations on a regular and continuing basis. At a minimum, continuing training for certified operators and supervisors must include:

1. Training and examination covering abnormal facility procedures and emergencies must be provided at least annually;

2. Operational drills conducted in the facility or on a simulator must be provided at least biennially. (Facility evacuation drills are not considered operational drills.) Training drills conducted in the facility must not lead to or have the potential for safety concerns;

3. Instruction in the use of facility systems to control or mitigate accidents. Such training must include both classroom-type training and training conducted in the facility;

4. Personnel who are responsible for developing and delivering training may be excused from continuing training for the area of primary administrative responsibility; and

5. Training, as applicable to the position, in the following subjects where examinations and experience (industry and facility-specific) or other evidence indicates additional emphasis in scope and depth of coverage is needed:

    a. Theory and principles of facility operation;
    b. General and specific facility operating characteristics;
    c. Facility instrumentation and control;
    d. Facility protection systems;
    e. Engineered Safety Features;
    f. Normal, abnormal, and emergency procedures;
    g. Radiation control and safety; and
    h. Documented Safety Analysis and Technical Safety Requirements.

Certification programs outside of CRD O 426.2 are specified in other respective CHPRC procedures.

3.5.1 Recertification

Recertification, where applicable, is accomplished on a 2-year cycle after an individual has completed requalification. Management endorses and documents that the continued qualification and other specified requirements (e.g., written or oral examinations, operational evaluations, and medical examinations) have been satisfactorily completed for those individuals in positions identified as requiring certification.

3.5.2 Proficiency

Certified personnel shall actively perform job functions to maintain proficiency in accordance with the respective TPD and CHPRC administrative procedures.

Actively performing job functions associated with certification means that the certified individual has a position on the shift crew, and that the individual carries out and is responsible for the day-to-day duties of the certified position.

If certified operators, fissionable materials handlers, or supervisors are absent from activities associated with the certified position for extended periods of time, their abilities and readiness to perform at a high level of vigilance can reasonably be expected to decrease. (Extended absences are addressed in PRC-PRO-TQ-40164. Active status is addressed in PRC-STD-TQ-40179.)

Nuclear facility management is responsible for ensuring proficiency is maintained by personnel in certified positions.

3.5.3 Drill Program

Operational drills specified in CRD O 426.2 (Chapter I, Section 7.b) apply to certified operators and supervisors. Implementation of the Operational Drill Program is described in PRC-PRO-EM-40317, *Operational Drill Program*.

3.6 Systematic Approach to Training

The systematic approach to training (SAT) process is required by CRD O 426.2 for positions identified in the TIM. This model applies the elements of Analysis, Design, Development, Implementation, and Evaluation, referred to as the ADDIE model. A graded approach is applied to the degree necessary to ensure efficiency, but still provides adequate training and qualification for the workforce. The SAT process may be applied to other training programs as deemed necessary by CHPRC training management and instructional staff. Guidance for application of the SAT process is in PRC-PRO-TQ-40165.

3.7 Training Equivalency, Exceptions, and Extensions

CHPRC training programs apply equivalency processes that recognize previous education, experience, and training to ensure cost effectiveness and efficiency without reducing quality or safety culture.

Equivalencies, exceptions, and extensions for other training programs or courses are handled in accordance with PRC-PRO-TQ-179 as allowed by the respective TPD, Training Manager for affected course, or other implementing standard.

3.8 Subcontractors

Subcontracted personnel training requirements are identified in the respective request for proposal or statement of work. A technical review is conducted to determine whether the prospective subcontractor meets the specified training requirements. Subcontractor personnel who fulfill a CRD O 426.2 position or function must meet the qualification requirements for that position or function. Determination of subcontractor personnel is performed in accordance with PRC-PRO-TQ-40164.

3.9 Training Program Evaluation

The CHPRC training organizations and/or line management perform periodic evaluations of the Project's training program(s) in accordance with CHPRC procedures and DOE-STD-1070-94, *Guidelines for Evaluation of Nuclear Facility Training Programs*. Feedback acquired from students, line managers, training personnel, and DOE personnel is used to modify and improve program content and delivery.

A 3-year training assessment plan that addresses the objectives in DOE-STD-1070-94 is developed and implemented per this requirement.

Evaluations of training programs provide reasonable assurance that the programs are producing competent employees who are capable of performing their jobs safely and efficiently. This assurance benefits the line organizations through increased productivity, increased worker and facility safety, and decreased costs of operation.

3.9.1 Internal Assessments

Internal assessments consist of both management assessments and independent assessments. Management assessments are conducted by or for management to assist managers in identifying strengths and to correct weaknesses affecting performance deficiencies in the operating organizations. Management assessments will be scheduled, planned, and conducted according to PRC-PRO-QA-246, *Management Assessment*.

3.9.2 Nuclear Facility Evaluations

Systematic evaluations of nuclear training programs are conducted at least every 3 years to provide reasonable assurance that the program is remaining compliant and effective in producing competent employees. The TIM must be included in the systematic evaluations to ensure the document reflects current facility conditions and meets the requirements of CRD O 426.2. If the TIM is no longer fully applicable to current facility conditions or no longer meets the requirements of CRD O 426.2, the TIM must be updated and submitted to DOE-RL for approval prior to implementation.

Assessments are performed using specific lines of inquiry from DOE-STD-1070-94 and conducted in accordance with PRC-PRO-QA-246.

3.9.3 External Assessments

External assessments are periodically conducted by organizations external to the CHPRC (RL, Defense Nuclear Facilities Safety Board [DNFSB], etc.). These assessments are scheduled by the appropriate authority and supported by CHPRC Training.

3.10 Change Control

CHPRC's change control process requires that changes to the facility, processes, Documented Safety Analysis, Technical Safety Requirements, procedures, and regulations, are reviewed to determine whether the existing training and qualification programs are consistent with planned facility operations and/or process conditions.

CHPRC change control processes include the impact analysis described in PRC-PRO-MS-589, *CH2M HILL Plateau Remediation Company Procedures*; the requirements management process described in PRC-PRO-MS-40117, *Requirements Management Process*; the independent verification process per PRC-PRO-OP-40123, *Independent Verification*; Nuclear Safety processes described in PRC-PRO-NS-8317 *Safety Basis Implementation and Maintenance*, and PRC-PRO-NS-062, *Unreviewed Safety Question Process*; and Engineering change processes described in PRC-PRO-EN-2001, *Facility Modification Package Process*, PRC-PRO-EN-8016, *Design Change Notice Process*, PRC-PRO-EN-20050, *Engineering Configuration Management*, and PRC-PRO-EN-40357, *Engineering Software Management*.

3.10.1 Changes to the Training Program

Changes to the training program may be initiated as a result of facility modifications, safety or environmental analyses, administrative changes, operating experience, internal and external evaluations, and lessons learned from industry experience feedback. Any person who identifies a need for changes to training materials or courses may submit a written request to the Training Manager that defines the scope of the proposed modification. After the line manager and/or course point of contact (POC) has authorized the change, the request is assigned to training staff for processing. Revisions to training programs are subject to appropriate review and approval.

If training and qualification changes are necessary, the changes must be evaluated to determine if the TIM remains applicable to current facility conditions and meets the requirements of CRD O 426.2. If the TIM is no longer fully applicable to current facility conditions or no longer meets the requirements of CRD O 426.2, the TIM must be updated and submitted to DOE-RL for review and approval prior to implementation.

3.11 Corrective Action Tracking and Closure

Concerns, observations, opportunities for improvements, and findings submitted by workers or discovered during an evaluation, surveillance, or assessment are dispositioned in accordance with the CHPRC Condition Reporting and Resolution System (CRRS) per PRC-PRO-QA-052, *Issues Management.*

3.12 Training Records

Training records are required by numerous regulatory drivers. CHPRC utilizes the MSC for a system to track and archive training records in accordance with contractual and regulatory requirements. The MSC also maintains the structure and data integrity of Individual Training Electronic Matrix (ITEM), and provides customer support for the use and operation of the system for training coordinators and other users. These requirements are implemented in accordance with PRC-PRO-TQ-249, *Training Records Administration*. Personnel education, experience, and employment histories are on file with Human Resources in each individual's personal record file. Health evaluation records are maintained by the current Hanford Site medical contractor.

Records associated with the DOE/RW-0333P are implemented in accordance with PRC-PRO-QA-19579, *OCRWM Records Management*.

4.0 FORMS

None

5.0 RECORD IDENTIFICATION

None

6.0 SOURCES

6.1 Requirements

CHPRC-00073, *CHPRC Radiological Control Manual*
CRD O 426.2*, Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*
DE-AC06-08RL14788, *CH2M HILL Plateau Remediation Company Management Contract*
DOE/RW-0333P, *Office of Civilian Radioactive Waste Management Quality Assurance Requirements and Description*
DOE-STD-1098-2008, *Radiological Control*
PRC-MP-EP-40182, *Environmental Management System Manual*
PRC-MP-MS-003, *Integrated Safety Management System/ Environmental Management System Description (ISMSD)*
PRC-MP-MS-19361, *CH2M HILL Plateau Remediation Company Project Execution Plan*
PRC-MP-QA-599, *Quality Assurance Program*
WAC-173-303-330, *Dangerous Waste Regulations, Personnel Training*

6.2 References

DOE-STD-1070-94, *Guidelines for Evaluation of Nuclear Facility Training Programs*
DOE-STD-3007-2007*, Guidelines for Preparing Criticality Safety Evaluations at Department of Energy Nonreactor Nuclear Facilities*
DOE-0355 (TPD-0015), *Hanford Standardized HAZWOPER Training*
DOE-0356 (TPD-0048), *Hanford General Employee Training*
DOE-0357 (TPD-0049), *Hanford Site Radiological Worker*
DOE-0358 (TPD-0047), *Hanford Site Core Radiological Control Technician Qualification,*
HNF-7098, *Criticality Safety Program*
PRC-POL-TQ-11337*, Employee Training*
PRC-PRO-EM-40317, *Operational Drill Program*
PRC-PRO-EN-2001, *Facility Modification Package Process*
PRC-PRO-EN-8016, *Design Change Notice Process*
PRC-PRO-EN-20050, *Engineering Configuration Management*
PRC-PRO-EN-40357, *Engineering Software Management*
PRC-PRO-MS-589, *CH2M HILL Plateau Remediation Company Procedures*
PRC-PRO-MS-40117, *Requirements Management Process*
PRC-PRO-OP-40123, *Independent Verification*
PRC-PRO-NS-062, *Unreviewed Safety Question Process*
PRC-PRO-NS-8317 *Safety Basis Implementation and Maintenance*
PRC-PRO-QA-052*, Issues Management*
PRC-PRO-QA-246*, Management Assessment*
PRC-PRO-QA-19579, *OCRWM Records Management*
PRC-PRO-TQ-179*, Obtaining Training Equivalencies, Exceptions and Extensions*

PRC-PRO-TQ-249*, Training Records Administration*
PRC-PRO-TQ-459, *Environmental Training*
PRC-PRO-TQ-40163*, Examination Administration and Control*
PRC-PRO-TQ-40164*, Personnel Training and Qualification*
PRC-PRO-TQ-40165*, Training Program Administration*
PRC-PRO-TQ-40170*, On-The-Job Training and Evaluation*
PRC-PRO-TQ-40172*, Oral Board Administration*
PRC-STD-TQ-40175, *Engineering Training Program Description*
PRC-STD-TQ-40178, *Radiological Control Training Program Description*
PRC-PRO-TQ-40184, *Contractor Provided and Procured Training*
PRC-STD-TQ-40221, *Environmental Compliance Officer Training Program Description*
PRC-STD-TQ-40260, *Transportation Safety Training Program Description*
PRC-STD-TQ-40263, *Nuclear Safety Training Program Description*
PRC-STD-TQ-40530, *Laboratory Technician and Scientist Training Program Description*
PRC-STD-TQ-52758, *Unreviewed Safety Question Training Program Description*
TPD-0002, *Beryllium*
TPD-0016, *Hoisting and Rigging*
TPD-0032, *Respiratory Protection Training Program Description*
TPD-0038, *Lockout/-Tagout*
TPD-0039, *Fall Protection*
TPD-0040, *Electrical Safety*

6.3 Bases

DOE-HDBK-1118-99, *Guide to Good Practices for Continuing Training*

Appendix A - Glossary

Term	*Definition*
Assessment	The act of reviewing, evaluation, inspecting, testing, checking, surveillance, auditing, or otherwise determining and documenting whether items, processes, systems, or services meet specified requirements and are performing effectively.
Certification	The process by which contractor management endorses and documents in writing, the satisfactory achievement of qualification of a person for a position. Certification follows the completion of the qualification program for those positions identified as requiring certification. The notable difference between certification and qualification is that certification requires official contractor management endorsement of an individual's qualification to ensure senior management involvement in the qualification of key operations positions (i.e., operators and supervisors). Other significant differences between qualification and certification are the requirements associated with continuing training, examination, and reexamination for re-certification. Certification may be granted only after all qualification requirements (including written and oral examinations and operational evaluations) and other specified requirements (e.g., medical examination) have been satisfactorily completed, and management has assured that the person is capable of safely performing all functions of the position.
Graded Approach	The process by which the level of detail in analyses, documentation, and actions necessary to comply with requirements is commensurate with: the relative importance to safety, safeguards, and security; the magnitude of any hazard involved; the life cycle stage of a facility; the programmatic mission of a facility; the particular characteristics of a facility; or any other relevant factors.
Integrated Safety Management System/Environmental Management System (ISMS/EMS)	A single, defined safety and environmental management system that integrates environmental, safety and health requirements into work planning and execution processes to collectively protect the worker, the public, and the environment.
Qualified	An employee who is current in all qualification groups defined for the job. An individual for whom any job qualification has lapsed is automatically disqualified for that job and will not be allowed to perform functions associated with that qualification until requalification has been achieved.

Appendix A - (Cont.)

Term	*Definition*
Qualification	A defined requirement determined by a company designated authority to be either prerequisite to independent performance of a task or to be fulfilled by a job incumbent to promote competent performance of job duties. Qualifications are normally defined in terms of education, experience, examination, training, or other special requirements. Examples: High school diploma (educational qualification), two years' experience in a nuclear facility (experience qualification), facility orientation (training qualification), satisfactory completion of a biennial operator examination (examination qualification), or mask fit card (medical qualification). Qualification may be granted only after assuring that all qualification requirements (including training and examinations as required) and other specified requirements (e.g., medical examination) have been satisfactorily completed.
Subcontractor	An inclusive term for subcontractors and lower tier contractors.
Technical Authority (TA)	Is an individual(s) who possesses significant knowledge and experience in a process, regulation, or function, and to whom management has assigned responsibility for technical aspects of the process, regulation, or function.
Training	A presentation of detailed information, using classroom, laboratory, or simulation devices, in which the knowledge level of objectives learned, can be measured. Training is normally presented by a qualified instructor using an approved lesson plan.
Training Program Description (TPD)	TPDs are documents used to identify the training processes required for employees to perform work activities. TPDs will typically include the prerequisites for entry into the training program and describe the process for initial training, continuing training, examination pass/fail criteria, remediation training, programmatic evaluations, and other information as appropriate for the respective training program.

Appendix A - (Cont.)

Acronyms

ADDIE	Analysis, Design, Development, Implementation, and Evaluation
CHPRC	CH2M HILL Plateau Remediation Company
CRD	Contractor Requirements Document
CRRS	Condition Reporting and Resolution System
DNFSB	Defense Nuclear Facilities Safety Board
DOE	Department of Energy
DO-RL	DOE Richland Operations Office
DWTP	Dangerous Waste Training Plan
GET	General Employee Training
HGET	Hanford General Employee Training
ISMS	Integrated Safety Management System
ITEM	Individual Training Electronic Matrix
MSC	Mission Support Contractor
OCRWM	Office of Civilian Radioactive Waste Management
OJE	On-the-Job Evaluation
OJT	On-the-Job Training
Q&T	Qualification and Training
RCRA	Resource Conservation and Recovery Act
SAT	Systematic Approach to Training
TA	Technical Authority
TCOE	Training Center of Expertise
TIM	Training Implementation Matrix
TPD	Training Program Description
VPP	Voluntary Protection Program
WAC	Washington Administrative Code