

CCP-HSP-014

Revision 1

Health and Safety Program Implementation for CCP

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Larry Porter

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RECORD OF REVISION

Revision Number	Date Approved	Description of Revision
0	07/15/2009	Initial Issue.
1	10/22/2010	Rewrite throughout to provide additional information, and to incorporate CCP-HSP-007, <i>CCP Health and Safety Program Plan for Operations at LANL</i> . CCP-HSP-007 will be obsoleted.

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1.0 PURPOSE

This Central Characterization Project (CCP) Health and Safety Program (HSP) is issued to clearly communicate Washington TRU Solutions (WTS) expectations with respect to safe performance of CCP work at host sites. WTS seeks to achieve a safe and healthful work place which has appropriate controls for recognized hazards for WTS employees and WTS subcontractors who work at waste generator host sites.

This document is meant to be used as an overall health and safety program description applicable to all CCP operations at host sites, supported in detail by CCP equipment descriptions, procedures, host site Interface Agreements, Statements of Work (SOW), host site HSPs, job hazard analyses (JHAs), and work packages as required by host site Conduct of Operations. The host sites have primary safety and health oversight for CCP operations at their sites, as indicated in the respective interface agreements.

1.1 Scope

This HSP includes WTS and host site Integrated Safety Management System (ISMS) core function requirements for working safely, and WTS's expectations for CCP managers' leadership and employee involvement, worksite hazard analysis, hazard prevention and control, and safety and health training.

This HSP applies to each CCP host site operation.

2.0 REQUIREMENTS

2.1 References

NOTE

Host site HSPs should be consulted for details regarding the respective health and safety programs and requirements of each site. Host site HSPs are not included in the references listed below. They may be obtained from the host sites upon request.

Baseline Documents

- Integrated Safety Management System Description, Washington TRU Solutions LLC, 2008
- MP 1.28, *Integrated Safety Management*
- WP 12-IS.01-6, *Subcontractor Safety*
- 10 Code of Federal Regulations (CFR) 835, *Occupational Radiation Protection*
- 10 CFR 850, *Chronic Beryllium Disease Prevention Program*
- 10 CFR 851, *Worker Safety and Health Program*
- 29 CFR Part 1910, *Occupational Safety and Health Standards*
- 48 CFR Part 970, *DOE Management and Operating Contracts*
- MP 1.12, *Worker Protection Policy*
- MP 1.2, *Work Suspension and Stop Work Direction*
- MP 1.21, *Management Responsibility and Accountability*
- MP 1.26, *Workplace Substance Abuse*
- DOE P 450.4, *Safety Management System Policy*
- DOE 970.5223-1, *Integration of Environment, Safety, and Health into Work Planning and Execution*
- CCP-CM-001, *CCP Equipment Change Authorization and Documentation*

- CCP-PO-005, *CCP Conduct of Operations*
- WP 12-SA3130, *Occupational Injuries, Illness and Close Calls*
- WP 15-GM.02, *Worker Safety and Health Program Description*
- WP 15-GM.03, *Integrated Safety Management System Description*

2.2 Introduction

- 2.2.1 As indicated in WP 15-GM.03, *Integrated Safety Management System Description*, protection of the environment, the public, and the safety and health of employees is the number one priority for WTS conduct of operations wherever the work may be located.

ISMS defines five core functions for working safely: define the scope of work; identify and analyze hazards; identify and implement controls; perform the work safely; and provide feedback to facilitate continuous improvement. An ISMS is required at all U.S. Department of Energy (DOE) sites. In addition to the WTS ISMS, each host site requires its employees and subcontractors to utilize the ISMS core functions of its own ISMS when planning and executing work on site.

In accordance with WP 15-GM.03, this CCP HSP indicates how CCP provides implementation at host sites by coordinating with host site health and safety programs. The host sites have primary health and safety oversight for CCP activities conducted at their sites, and must provide for a safe workplace throughout their operations, including the work of subcontractors. In some instances, CCP may supplement host site health and safety program requirements with its own additional requirements.

- 2.2.2 Per 10 CFR §851.11, *Worker Safety and Health Program*, Section 11, if a contractor such as WTS is responsible for more than one covered workplace at a DOE site, the contractor must establish and maintain a single worker safety and health program for the covered workplaces for which the contractor is responsible. The rule and therefore the WTS Worker Safety and Health Program (WP 15-GM.02) apply to the conduct of WTS and its subcontractors' activities at CCP host sites.

2.3 Management Expectations

- 2.3.1 WTS expects CCP managers to ensure that all CCP activities are conducted to fulfill the CCP mission while protecting the worker, the public, and the environment. This expectation is consistent with the DOE P 450.4, *Safety Management System Policy*, and the DOE Acquisition Regulation Clause 970.5223-1, *Integration of Environment, Safety, and Health into Work Planning and Execution*.
- 2.3.2 CCP commits to participating in the WTS Voluntary Protection Program (VPP), the WTS ISMS, and the WTS Worker Protection Program (WPP) throughout its operations network. Protection of the safety and health of CCP employees, subcontractors, visitors, and the public is the number one priority for the conduct of CCP operations (MP 1.12, *Worker Protection Policy*) wherever they occur.
- 2.3.3 Any CCP employee or subcontractor becoming aware of a potential safety concern or unsafe condition affecting worker safety, the safety of the environment, or the quality of an activity has the responsibility and authority to suspend work for an activity that may compromise these principles. The CCP employee or subcontractor who suspended the work will present that concern to the person in charge of the suspended activity for resolution of the concern (MP 1.2, *Work Suspension and Stop Work Direction*).
- 2.3.4 CCP managers shall continuously improve the safety of their processes, encourage safe behaviors, and reinforce responsibility for safety throughout all levels of the organization (MP 1.12, WP 15-GM.03).
- 2.3.5 The manufacture, possession, sale, distribution, or use of alcohol or illegal drugs in the workplace or while on duty; or manifesting evidence of those substances, are viewed as serious offenses and are prohibited. WTS promotes employee assistance, training of employees and managers, and substance abuse testing (MP 1.26, *Workplace Substance Abuse*).
- 2.3.6 CCP managers, workers, and subcontractors must fully understand their responsibilities and will be held accountable for the activities conducted and decisions made within their areas of responsibilities (MP 1.21, *Management Responsibility and Accountability*).

2.3.7 CCP managers shall flow down the expectations and requirements of this HSP, the WTS ISMS, and the WTS Worker HSP to CCP subcontractors to ensure that the applicable 10 CFR 851 requirements are understood and met by the subcontractors.

2.4 Line Managers are Accountable for Safety

2.4.1 CCP managers include Program and Project Managers (PMs). Vendor Project Managers (VPMs) represent the Project and Program manager for technical supervision in field operations and are included in the CCP management team. References in this HSP document to CCP managers include these line managers and the CCP managers located in Carlsbad, New Mexico, and their designees.

2.4.2 CCP host site organizational structures, including management and support functions, are outlined in the Interface Agreements for respective host site operations. CCP organizational structure is outlined in the Retrieval, Characterization, and Transportation (RCT) Department organization chart.

2.4.3 CCP managers at all levels are responsible for providing a safe and healthful workplace, free of recognized hazards, for CCP workers and subcontractors, the public and the environment. This is achieved by interfacing closely with host site management and service providers to correct deficiencies as they are recognized.

2.4.4 CCP managers shall ensure that provisions for safe practices have been incorporated into the operating procedures, and any changing work conditions, modifications, and/or proposed modifications are evaluated with regard to safety. CCP managers ensure that safe work practices are followed and enforced.

2.4.5 CCP managers shall ensure that new hires or transferred CCP and CCP subcontractor employees at host site operations receive a briefing on the host site's safety requirements, and on the JHAs (or equivalent) for the work they will be performing.

2.4.6 CCP managers shall ensure that new or transferred CCP and CCP subcontractor employees at host site operations receive all required site safety training, including host site emergency response procedures, before performing work activities. Training received elsewhere may not be acceptable to the host site; most

host sites require that their own training is utilized by personnel working at their sites.

2.4.7 CCP managers shall:

- Ensure that occupational medical services are available to CCP employees and subcontractors.
- Accompany an injured or ill worker to the designated host site medical facility and remain with the employee until the employee is released, a member of the employee's immediate family or designated contact person arrives at the medical facility, or the employee is admitted to a hospital for treatment.
- Be directly involved in the preparation of host site incident report for the injury or illness.

2.4.8 CCP managers shall notify the designated contact person of an injured or ill employee if additional professional medical attention is necessary and/or the employee cannot return to work once released. If the employee is a CCP subcontractor, the subcontract company's Human Resources representative must also be contacted.

2.4.9 CCP managers shall perform safety walk-arounds of their operational areas at least monthly to identify hazards or changed conditions, and shall notify Carlsbad CCP Management, and the host site's safety department of the new hazards so they can be mitigated in a timely manner. If the correction of the deficiency requires assistance from site facility engineering and/or maintenance, the host site's maintenance work request/work package system must be utilized.

2.4.10 CCP managers shall ensure that periodic safety meetings are conducted to review safety topics, and raise awareness of hazards in the work place. Abnormal events which could occur during operation, lessons learned from events at other sites, and host site safety issues and concerns should be discussed.

2.4.11 CCP managers shall utilize host site safety and health professionals, and WTS safety and health professionals as appropriate, for hazard identification, prevention, mitigation and control, for resolving safety issues, for personnel exposure monitoring, and for the performance of management safety assessments and incident investigations.

2.4.12 CCP managers shall ensure that medical and industrial hygiene (IH) monitoring is provided to CCP employee and subcontract workers as required by regulation or host site HSP, in accordance with the interface agreements. Typically, the IH monitoring includes noise level and air contaminant sampling to determine workplace exposure levels, and is performed by host site occupational IH. The medical monitoring of individuals includes audiograms, pulmonary function testing for respirator use, and beryllium exposure monitoring, as applicable, and is usually performed by host site occupational medicine unless indicated otherwise by the interface agreement.

CCP managers shall ensure that copies of medical monitoring for CCP employees and subcontractors that are performed by host site occupational medicine or other medical services as indicated in the interface agreements are forwarded to WTS Safety & Health Department, in addition to any IH monitoring of CCP work areas or personnel by host site IH, to satisfy WTS IH recordkeeping requirements.

2.4.13 CCP managers shall ensure that host site radiation protection and control programs' requirements are adhered to by CCP employees, subcontractors and visitors, and that the appropriate host site radiation worker training is received by personnel prior to commencing work in or entering radiation areas.

2.4.14 Performance evaluations of CCP managers shall include an evaluation of the manager's performance in providing visible safety leadership by coaching, mentoring, conducting regular safety meetings, performing safety reviews, and reinforcing and rewarding safe behaviors.

2.4.15 CCP managers shall ensure that CCP employees and subcontractors know the actions to be taken in the event of a medical, operational, or site emergency, in accordance with the host site emergency response program and CCP operating procedures. Most circumstances will require equipment emergency shutdown prior to evacuation.

2.5 Clear Roles and Responsibilities

2.5.1 Responsibilities of CCP operations management functions/positions are documented in the Interface Agreements for respective CCP host sites. Responsibilities of managers in general are described in MP 1.21, *Management Responsibility and Accountability*.

2.5.2 Use of management designee positions require that the designee maintain the same qualification as the position for which the designee represents.

2.5.3 The WTS Safety & Health Department provides safety oversight and support to CCP in areas not limited to:

[A] Interpretation of safety codes, standards, and regulations.

[B] Review of equipment, facilities, designs, and design changes for inclusion of safety and health requirements, and for hazard identification and elimination or mitigation.

[C] Liaison with host site safety and health personnel to resolve issues, provide information and assist CCP personnel in understanding and complying with host site safety and health requirements.

[D] Review of CCP procedures, job hazard analyses, scopes of work, interface agreements, and other CCP-related documents to assure incorporation of appropriate safety requirements.

2.6 Competence Commensurate with Responsibilities

2.6.1 Personnel, who have met the training requirements of CCP training programs, shall be allowed to operate equipment and shall have documented evidence in his/her training record that the individual has been informed of the hazards associated with the activities performed.

2.6.2 CCP managers shall ensure that workers are not assigned responsibilities or duties for which the workers are not qualified.

2.6.3 CCP managers shall maintain a current list of qualified individuals who work under their management.

2.6.4 Continuous learning is to be sustained through the training and qualification program, and through participation in event investigations, lessons learned program, and procedure validation.

2.6.5 CCP managers shall foster a questioning attitude in CCP employees and subcontractors, especially with regard to changing conditions.

2.6.6 CCP managers shall ensure that CCP employees and subcontractors are fit for duty in accordance with MP 1.26.

2.7 Balanced Priorities

2.7.1 CCP managers shall require safe and compliant work performance.

2.7.2 Conduct of Operations principles shall be followed in the performance of CCP operations.

2.7.3 Safety, quality, and continuous improvement (and continuous improvement in safe work behaviors) shall receive full consideration in work planning activities.

2.8 Identification of Safety Standards and Requirements

2.8.1 CCP managers shall ensure that all host site and CCP safety requirements identified for their respective areas of operation are communicated to affected CCP employees and subcontractors, and are understood and implemented by CCP employees and subcontractors. Both host site and CCP HSP requirements must be satisfied.

2.8.2 Compliance with this HSP, host site Technical Safety Requirements and host site Health and Safety Plans applicable to the areas in which CCP operates, is mandatory.

2.8.3 CCP managers shall ensure that the Integrated Safety Management activities described in WP 15-GM.02 and host site ISMS are incorporated into work activities at CCP host sites.

2.9 Hazard Controls Tailored to Work Being Performed

2.9.1 CCP shall perform scheduled management assessments to ensure that work is being performed within the scope of the project, to identify safety issues/problems in the field, and to evaluate the implementation and effectiveness of hazard controls.

2.9.2 CCP operations shall be designed and controlled to eliminate hazards, where possible, and to mitigate hazards as they are identified. Tools, equipment and the work site shall be maintained in a safe and healthful condition.

2.9.3 CCP shall not allow work to be performed until the hazards analyses are complete, controls are in place, and personnel have been trained to operate within the controls.

2.9.4 JHAs and operating procedures shall be prepared with the assistance and input of the personnel performing the work and/or operating the equipment. Host sites each have their own format for content of JHAs, and require that their JHA system be used to assess operational hazards prior to initiating work activities. CCP management at host sites actively participates in developing JHAs for their operations along with host site safety and health personnel. WTS Safety and Health Department should be consulted when developing new or revising JHAs, and is available to review host site JHAs for CCP activities as applicable.

2.10 Operations Authorization

2.10.1 CCP employees and subcontractors located at host sites shall comply with the work authorization requirements of the respective host site.

2.10.2 CCP managers shall be knowledgeable of the authorization process for work commencement and termination at the site where they are located.

2.10.3 CCP managers shall ensure that CCP operations employees and subcontractors at host sites are informed in a timely manner of events, incidents and/or accidents that occurred within CCP operations.

2.10.4 Radiation safety, industrial hygiene and industrial safety issues shall be prioritized, tracked, and resolved in a timely manner.

2.10.5 CCP managers shall ensure that operational, radiation, industrial hygiene, and industrial safety options include a safety basis that reduces risk to workers, to the public, and to the environment.

2.10.6 All CCP facilities/activities or modifications to existing facilities/activities shall be analyzed for potential hazards and be subject to the host site's unreviewed safety question determination process.

2.10.7 Safety systems shall not be disabled except as authorized under host site work control procedures for maintenance or reconfigurations.

2.10.8 CCP managers shall utilize the principles of Integrated Safety Management by conducting pre- and post-job briefings (for new or modified operations and/or changed conditions at a minimum) with CCP employees and subcontractors in order to jointly identify the hazards and apply controls to maximize worker safety. CCP managers shall ensure that job hazard analyses have been approved, are current, and are reviewed monthly with workers.

2.10.9 Pre-job briefings for new or modified work shall include the following actions and discussions:

- Define the scope of work (so it is clear to all who must perform the work).
- Analyze the hazards and develop/review the job hazard analyses (JHAs or equivalent) for the work to be performed.
- Develop and implement hazard controls which are effective and practical.
- Perform work within the controls.
- Provide feedback for continuous improvement of such things as tool selection, procedure steps, behaviors, and work environment.

2.11 Individual Attitude and Responsibilities for Safety

2.11.1 CCP employees and subcontractors shall recognize and accept responsibility for their own safety and the safety of others in their respective work areas. This includes:

- [A] Performing only those tasks for which they are trained and qualified
- [B] Following CCP and host site procedures
- [C] Maintaining their work area, tools and equipment in a safe condition
- [D] Performing pre-use inspections and using tools and equipment correctly and safely
- [E] Performing assigned tasks using safe work practices

- [F] Using personal protective equipment (PPE) in a manner consistent with the training and instruction received for its use
- [G] Correcting unsafe conditions or actions under their control that can be accomplished without endangering their own or others' safety
- [H] Reporting unsafe conditions or actions outside of their control to management
- [I] Exercising work suspension authority when encountering unsafe conditions and/or hazardous situations, and reporting them to management
- [J] Considering natural hazards such as wind, ice, snow, etc. and take steps to ensure safety while performing work activities in adverse weather conditions

2.11.2 CCP employees and subcontractors shall demonstrate a questioning attitude by challenging assumptions, questioning changing work conditions, investigating anomalies, and considering potential adverse consequences if the change were to continue without planned intervention.

2.11.3 CCP employees and subcontractors shall be mindful of work conditions which may impact safety and assist each other in preventing unsafe acts and behaviors.

2.11.4 CCP employees and subcontractors shall promptly report errors, accidents, incidents, events, and other operational anomalies to their respective manager.

2.12 Operational Excellence

2.12.1 CCP shall achieve and sustain high levels of operational performance to meet mission, safety, productivity, quality, and regulatory compliance goals.

2.12.2 High reliability shall be achieved through a focus on operations, conservative decision making, open communication, deference to expertise, and by a systematic approach to eliminating or mitigating error-likely situations.

2.12.3 CCP managers identify critical performance elements, monitor them to assure their achievement, and ensure safe work practices and requirements are followed and enforced.

2.12.4 Engineered barriers and controls, operating procedures, and safe work permits shall provide multiple layers of defense, recognizing that people are fallible.

2.13 Oversight for Performance Assurance

2.13.1 CCP managers shall establish and maintain a list of management assessments to be performed at CCP work locations each fiscal year.

2.13.2 CCP managers shall report CCP employee and subcontractor occupational injuries and illnesses to the Carlsbad CCP managers, WTS Managers, to appropriate host site safety and health personnel, and to the WTS Safety and Health Department so they may be tracked with other Safety and Health (S&H) statistics. Host sites each have their own incident, occupational injury and occupational illness reporting form(s) that must be used to document these events in accordance with host site procedures. Copies of completed host site incident/injury/illness forms for CCP personnel shall be sent to WTS Safety and Health Department for safety performance tracking. The WTS incident reporting form used at the WIPP site is not used for CCP incidents occurring at CCP host sites.

2.13.3 WTS maintains the Occupational Safety and Health Administration (OSHA) 300 Log for recordable occupational injuries and illnesses which occur to WTS CCP employees working at CCP host sites. CCP subcontractor companies maintain their own OSHA 300 Logs as applicable for their employees who work for CCP at host sites.

2.13.4 Due to the difference in CCP and host site responsibilities with respect to CCP operations, reporting of operational injuries, illnesses, and/or operational events on the National Tracking System or on the Computerized Accident Injury Reporting System (DOE recordkeeping) may be made by both WTS and the affected host site after coordination between the two sites, or as delineated in the Interface document.

2.13.5 CCP PM or VPM shall assure that at least one safety metric is posted at the CCP host site work area to communicate their current degree of success in safe work performance.

2.13.6 CCP employees and subcontractors shall notify CCP managers of near misses and other safety issues.

2.13.7 CCP managers shall investigate near misses as though an injury or operational event had occurred.

2.14 Organizational Learning for Performance Improvement

2.14.1 CCP managers shall ensure that effective root cause analyses are performed during incident and near miss investigations in order to generate corrective actions that prevent recurrence, examining all possible system and operational causal factors.

2.14.2 CCP managers shall cultivate a continuous learning environment by participating in performance monitoring, by implementing Integrated Safety Management principles, through resolution of safety issues and concerns, and by implementing the lessons learned program.

2.14.3 CCP employees and subcontractors are encouraged to participate in host site and WTS safety and health initiatives.

2.15 Employee Involvement

2.15.1 Employee involvement at all levels and functions is the key to an effective safety and health program.

2.15.2 CCP managers shall ensure that there are always effective means of communicating worker-manager safety and health issues, concerns and resolutions, and that safety and health concerns are addressed in a timely manner.

2.15.3 CCP workers at host sites shall participate in host site emergency response drills and exercises.

2.15.4 CCP employee and subcontractor involvement in host site safety programs and initiatives is expected and shall involve activities most appropriate for each host sites' programs. Areas of participation to be considered include (but are not limited to):

- Safety and health committees
- Site inspections and self-assessments
- Routine hazard analyses and safety walk-arounds

- Accident investigations
- Development of safe operating procedures and job hazard analyses (or equivalent) and their revisions
- Safety mentors and safety observers
- Performing pre- and post-job briefing and safety walk-arounds
- Presentation of safety topics and personal lessons learned
- Participation in the host site and WTS ISMS and VPP activities as applicable

2.16 Worksite Analysis

- 2.16.1 CCP managers shall ensure that work area safety inspections and walkthroughs, workplace monitoring and exposure assessments are performed by host site Safety and IH personnel in accordance with host site programs to identify and mitigate hazards, and protect CCP workers from the hazards identified within their respective areas of operation. CCP managers shall request copies of the workplace monitoring and exposure assessments that are conducted for CCP operations, and provide copies to WTS Safety and Health Department.
- 2.16.2 When assessing hazards, mitigations and control measures for CCP operations, Attachment 1, Guide for General Hazards and Controls, may be used as a guide.
- 2.16.3 Host site JHA shall be used to assess hazards and control measures for CCP operations in accordance with the respective host site JHA program. Hazard analyses shall be updated as needed, particularly when conditions or equipment change, or per host site requirements for annual or other periodic review.

2.17 Hazard Prevention and Control

- 2.17.1 Hazard prevention and controls shall be identified and implemented for CCP operations during equipment design, design modifications, receipt of equipment, installation and setup, and in the development of equipment operating procedures. Any new CCP facilities or modifications to existing CCP facilities must be assessed for potential hazards.

2.17.2 Operational and potential hazards shall be considered during the selection and purchasing of equipment, products and services. Considerations shall include but not be limited to:

- Health hazards
- Operating noise
- Operating temperatures and limitations
- Point-of-operation guards/shielding
- Lockout/tagout provisions
- Presence of hazardous materials
- Electrical hazards
- Training workers for safe operation
- Ergonomic designs including worker/machine interfacing
- Maintenance requirements
- Hazards associated with equipment location/positioning including such things as floor loading, hazards from adjacent operations, and workplace congestion

2.17.3 If hazards cannot be eliminated, controls implemented should be commensurate with the risk level identified through a risk assessment.

2.17.4 The preferred methods of hazard prevention and control in order of priority include:

- [A] Elimination of the hazard and use of alternative designs or chemicals
- [B] Engineering controls
- [C] Engineering controls supplemented with work practices and administrative controls
- [D] Work practices and administrative controls supplemented with PPE

- 2.17.5 CCP Managers shall protect workers from imminently dangerous conditions. Some options include:
- [A] Removing the worker from the hazard
 - [B] Shutting down equipment and operations
 - [C] Preventing entry into the hazardous area
 - [D] Promptly soliciting professional assistance in the elimination and/or control of the hazard
- 2.17.6 CCP managers shall ensure the utilization of appropriate shielding and containment (engineering controls) as a first defense against potential radiation exposure/uptake and shall apply the principle of As Low As Reasonably Achievable (ALARA) when developing operating procedures for work where occupational radiation exposure is possible.
- 2.17.7 Visitors to CCP operations at host sites shall be escorted by a knowledgeable CCP worker and must meet host site safety requirements which may include radiation work permit (RWP) review and signature, dosimetry, and/or PPE.
- 2.17.8 Material Safety Data Sheets (MSDSs) for chemicals used in CCP processes shall be obtained and provided to CCP workers and the host site safety organization prior to bringing chemicals/materials onto the host site.
- 2.17.9 MSDSs for chemicals used in CCP processes shall be readily available to CCP workers, in or near the area where the materials are used.
- 2.17.10 The host site provides and places necessary barricades, barriers and signs in accordance with its safety programs. CCP employees and subcontractors shall comply with all such signs and area control barriers or markings.
- 2.18 Safety and Health Training
- 2.18.1 CCP managers shall ensure that CCP employees and subcontractors receive appropriate host site and any other safety training necessary for their respective duties and the hazards associated with the work they will be performing. This training must include host site requirements for access to work areas, safe performance of work, and emergency response procedures.

- 2.18.2 Training may include formal classroom training, on-the-job training, and/or mentoring by a CCP subject matter expert per the CCP training program.
- 2.18.3 Host site program training and qualification shall include the hazards associated with the work to be performed at that site and the safe performance of the work under anticipated operational conditions. Only documented trained and qualified personnel shall operate CCP equipment and perform CCP activities.
- 2.18.4 Host site program training shall include what a worker is to do when abnormal events occur, either operationally or due to emergency situations at the host site, and how to report/investigate/follow up such events.
- 2.18.5 Training can also include safety awareness reminders, posters, formal classes, and briefings covering various topics including but not limited to:
- How to respond to emergency situations in accordance with the host site emergency plan
 - How to summon emergency response personnel
 - Where to obtain medical care
 - Accident prevention
 - Housekeeping
 - Home safety
 - Driving safety
 - Weather condition safety
 - Heat and cold stress
 - Health maintenance and disease prevention
 - First aid and cardio-pulmonary resuscitation
 - Electrical safety
 - Human performance improvement

- Reporting of injuries/incidents
- Lessons learned from accident investigations and those involved in accidents
- ALARA principles and Radiation Worker Training
- Poison prevention
- Lock-out/Tag-out procedures
- PPE selection, fitting, training and maintenance
- Hazardous waste management requirements (permit requirements)
- Use and maintenance of safety equipment including fire extinguishers, warning lights and alarms, eye wash stations and safety showers.

2.19 Personal Protective Equipment (PPE)

- 2.19.1 CCP operations personnel exposure monitoring is the responsibility of the host sites. A specific request for additional or supplemental exposure monitoring may be made to the WTS Safety and Health Department by CCP managers.
- 2.19.2 Exposure assessment data is factored into the hazard identification process, and drives the selection of PPE.
- 2.19.3 Host sites provide the PPE required for the hazards identified for CCP operations, except for prescription safety glasses and safety shoes, which are provided by WTS. The host site must ensure that the PPE provided by the host site fits the individual.
- 2.19.4 PPE shall be worn by CCP employees and subcontractors as required by the host sites or Carlsbad CCP management.
- 2.19.5 Safety glasses and safety shoes as a minimum shall always be worn by CCP employees and subcontractors within operational areas at host sites, and any other areas where the host site requires them to be worn. Safety glasses shall be worn by CCP employees when outside hard control rooms within operational areas at host sites. Safety glasses may be removed in hard control rooms for computer and console work, if allowed by the host site JHA. Additional minimal PPE will be required if

additional hazards warranting additional PPE are present in their work environment. Example: Gloves worn when hand hazards are present.

2.20 Working Alone

2.20.1 No CCP employee or subcontractor shall be assigned, allowed, or required to perform work alone in any CCP area where potentially hazardous conditions exist.

2.20.2 The decision regarding working alone shall consider the hazards identified for the area and the potential consequences of equipment failure and human error. This decision shall be made by CCP management.

2.21 Lockout/Tagout (LO/TO)

2.21.1 CCP employees and subcontractors performing maintenance, repairs, adjustments, or any other work on machinery and equipment shall be protected from unexpected energization or start-up of such machinery, or the release of stored energy, by adhering to the host site's Lockout/Tagout (LO/TO) program requirements.

2.21.2 Under no circumstances will lockouts or tagouts be ignored, bypassed, or otherwise defeated.

2.21.3 Host site trained and qualified personnel shall perform all LO/TO on CCP equipment. CCP personnel, when appropriately trained in accordance with host site requirements, may be allowed to perform zero voltage checks.

2.21.4 Key control may be used in place of LO/TO ONLY for specific tasks (such as specific minor adjustments of certain equipment by the operator) which involve ONLY one person who has the control panel key in their sole possession during the task, AND key control for that specific work is authorized by the host site. The use of key control is acceptable for activities that are not within the scope of the OSHA Lockout/Tagout Standard (worker's hands/body not at a point of operation).

2.22 Machine Guarding

2.22.1 CCP managers shall assure the equipment operated by CCP personnel is compliant with the requirements of 29 CFR 1910, *Occupational Safety and Health Standards*, Part 212 and Part 219, Machine Guarding.

- 2.22.2 Where guarding at the point of operation is impractical, barriers or other interlocks shall be used to provide equivalent protection.
 - 2.22.3 Administrative controls are not an acceptable substitute for machine guarding. However, administrative controls in addition to engineering controls are acceptable.
 - 2.22.4 Equipment that should be guarded, but is not guarded, shall be prevented from being operated and be tagged out of service until appropriate guarding is provided.
- 2.23 Other CCP Safety Requirements
- 2.23.1 Headphones for listening to music (I-pods, radios, etc.) or speaking (cell phones), that are not required for the tasks being performed, shall not be worn/used by CCP personnel while working in operational areas, including control rooms, at host sites. These devices may be worn/used in administrative areas provided that all alarms and emergency notifications can be heard while these devices are in use, and that they do not create a nuisance to others in the area.
 - 2.23.2 CCP employees and subcontractors, in accordance with WTS company policy, shall not talk, text or otherwise use a cellular telephone while driving a motor vehicle within host sites, or on company business.

3.0 SUBCONTRACTOR SAFETY

3.1 Subcontractor HSP

CCP subcontractors are under the same obligations to conform to host site and CCP safety and health requirements as WTS CCP employees. Under 10 CFR 851.11, *Worker Safety and Health Program Development*, subcontractors are responsible for coordinating with other contractors responsible for work at the DOE covered workplaces to ensure that there are clear roles, responsibilities and procedures to ensure the safety and health of workers at multi-contractor workplaces.

Subcontractor safety programs and policies that meet or exceed host site and CCP requirements are acceptable provided there are no conflicts. In the event of a conflict, the host site and CCP HSPs preside. Host site forms, procedures and training shall be utilized where required, such as for Lockout/Tagout, incident reports, JHAs and work packages.

Subcontractor work performed under these requirements includes:

- Regular operation of mobile characterization units, equipment and instrumentation
- Equipment installation, servicing, troubleshooting and maintenance
- Repairs and alterations of equipment
- Contract maintenance, such as third party calibration, cleaning or special maintenance work

3.2 Training and Qualification

Subcontractors shall perform only those tasks for which they are trained and qualified. In addition to providing documentation of task-related training and qualification necessary for the subcontract work, applicable host site and CCP-required training (such as for operating procedures, LO/TO, confined space entry, etc.) must be completed prior to commencing work activity. Subcontractors will complete host site required equipment training before using host site equipment (ladders, fall protection equipment, tools, etc.).

3.3 Work Authorization

Subcontractors shall perform only those tasks for which they are authorized under the host site approved JHA and task work packages. Any additional work needed, as determined during servicing, maintenance or troubleshooting, requires the preparation and approval of an additional

JHA and work package for the new task(s).

3.4 PPE

Subcontractors shall provide and ensure proper use of any specialized PPE needed for the task(s) they will perform. The host site provides basic PPE for the work area (non-prescription safety glasses, gloves, respiratory protection equipment, etc.). Personal PPE such as prescription safety glasses and safety shoes must be provided by the subcontractor, unless other agreements have been made with the host site or CCP. CCP requires safety glasses with side shields and safety toe shoes as a minimum for all CCP operations areas.

3.5 Equipment and Materials Control

3.5.1 Subcontractors are responsible for adequately controlling materials and equipment to ensure that no suspect/counterfeit items or parts are brought onto the worksite.

3.5.2 Copies of MSDSs for each chemical to be brought onsite by a subcontractor must be submitted to CCP management for forwarding to the host site for safety review prior to the chemical entering the site.

3.5.3 Subcontractors are responsible for control and removal of all unused chemicals and hazardous materials they brought onsite.

3.5.4 Chemical spills, releases to the environment, and other non-normal events involving chemicals must be immediately reported to the host site and CCP management in accordance with host site reporting procedures. The subcontractor may be responsible for costs associated with cleaning up spills or releases of chemicals generated by subcontractor actions.

3.5.5 Any and all property damage caused by a subcontractor during the course of work must be reported to CCP management.

3.6 Pre-Work Briefing

Prior to the start of work, subcontractors must attend a pre-work safety briefing. The safety briefing informs subcontractors of applicable host site and CCP safety programs and requirements, coordinates and clarifies project-specific information such as job hazard analyses and controls, and discusses issues pertaining to the scheduled work.

Host sites may require that their own qualified personnel (electricians, etc.) perform work under the direction of the subcontractor, rather than allowing the subcontractor to perform the actual work.

4.0 RECORDS

4.1 No records are generated as a result of this HSP.

Attachment 1 – Guide for General Hazards and Controls

Hazard Description	Controls
<p>1. Radiological hazards</p>	<p>ALARA design reviews Use of shielded containers RWP compliance Postings compliance Segregated storage Barricades Radiation Worker Training Access control Radiological Control Technician monitoring Maximum inventory limits Use of distancing tools (extensions) Emergency response and evacuation procedures Radiation work permits Minimize time in area of waste PPE Emergency shut offs for X-ray systems & source controls Calibration and collimation for X-ray systems Source control program with routing leak checks Interlocks for hazard access control Alarms and lights when X-ray equipment is energized Air and external radiation monitors with alarms Air filtration systems Shielded X-ray vaults</p>
<p>2. Resource Conservation and Recovery Act (RCRA) hazardous waste and hazardous materials</p>	<p>Container integrity Label containers Follow precautions Segregated storage Barricades Hazardous Waste Operations and Emergency Response (HAZWOPER) training RCRA permit requirements Use of appropriate tools as indicated in the procedures Emergency response and evacuation procedures PPE Beryllium safety training Spill response measures Emergency spill kits Air filtration systems Secondary containment Emergency egress clearance</p>
<p>3. Fire or explosion potential</p>	<p>Drum vents Control of ignition sources No smoking policy Fire safe disposal devices Life safety code compliance Electrical Safety Program Personnel Training and Qualification Program Use of sprinkler systems Posted emergency response telephone numbers Fire department availability Fire extinguisher availability and training Emergency response procedures, training, and drills PPE Housekeeping Label containers First aid training</p>

Attachment 1 – Guide for General Hazards and Controls (Continued)

<p>4. Material handling hazards</p>	<p>Lifting assist tools Forklifts Rolling carts Spotters Two-person rules Movement startup alarms Backup alarms Warning signs and postings Clear obstacles from rollers and wheels Distance postings Traffic flow pattern marked Personnel Training and Qualification Program Preoperational checks/monthly inspections Use of appropriate tools including drum carts and rollers Training in proper lifting techniques Inspect for sharps PPE Emergency procedures, training, and drills First aid training</p>
<p>5. Electrical hazards</p>	<p>Personnel Training and Qualification Program Electrical Safety Program Interlocks and position switches Fire and life safety code compliance Combustible loading controls and safety walk around assessments Flame resistant clothing and gloves Insulated tools and gloves Cable pulls Safety glasses with side shields for hazard potential Hard hats per ANSI Z89.1, <i>Industrial Head Protection Standard</i>, Class EE Labels and warning signs Special work permits for repair Lockout/tagout procedures and training Electrical equipment meets National Electrical Code (NEC) Emergency stops Routine inspections Preventive maintenance Cardiopulmonary resuscitation (CPR)/automated external defibrillator (AED) and first aid training</p>
<p>6. Slip, trips, and falls</p>	<p>Handrails and safety chains Good housekeeping Salt and sand on ice Barriers and signs Use of non-skid surfaces Use of non-skid shoes Ladder inspection and ladder safety training Remove damaged ladders and stairs from service Cover floor/ground holes Inspect and remove sharps Re-engineering Sufficient lighting Unobstructed and even walkways First aid training</p>
<p>7. Pinches points/moving parts</p>	<p>Use of appropriate tools Guard access to pinch points Barriers and signs Leather gloves Machine guards Access control Startup alarms Inspect equipment and remove sharps Emergency stops Powered assist systems</p>

Attachment 1 – Guide for General Hazards and Controls (Continued)

<p>8. Oxygen deficient atmospheres</p>	<p>Oxygen monitors with remote viewing Oxygen monitors with alarms Postings Portable survey equipment with extensions Supplied air capability Open doors and windows Good ventilation system Evacuation procedures, training, and drills</p>
<p>9. Cryogenics</p>	<p>Barriers and signs Access control Use of insulated gloves, aprons, and face shields Training in safe handling Good ventilation Thermal insulation Oxygen monitors Proper storage and segregation Volume limitations Proper labeling with warning signs First aid training Cylinder pressure gauge Cylinder pressure relief valve and system vents</p>
<p>10. Gas cylinders</p>	<p>Caps installed when not in use Secured to prevent falling Pressure gauge, cap on refill valve, line rating Leak check, inspections Certified gases Stored in < 125 degrees F & protected from direct sunlight No smoking signs around combustible/flammable gases Safety Requirements – combustible loading and fire safety walk around assessment Routine maintenance No flammable gas cylinders >50ft³ allowed in building Personnel Training and Qualification Program Emergency response and evacuation procedures and drills Eliminate ignition sources for flammable gases Segregation of flammable and nonflammable gases Good ventilation</p>
<p>11. Office/Ergonomic</p>	<p>Ergonomic work stations Computer glasses Adequate sanitary facilities Adequate temperature control Self closing file drawers No stacking on top of storage shelves Chairs that fit the person Adequate lighting Emergency evacuation procedures and drills First aid training</p>
<p>12. Vehicle safety</p>	<p>Preventive maintenance on vehicles Wheel chocks Seat belts Set parking brake when on hill Traffic control – speed limits, marked/painted pavement/barriers Designated parking areas Designated walkways Expanded rear view mirrors Backup alarms Backup cameras No cell phone use while driving on company business</p>