

CONSTRUCTION SAFETY MANUAL

Requirements for Construction, Remodel, and Demolition on UNM Property



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UNIVERSITY OF NEW MEXICO

The UNM Construction Safety Manual has been reviewed and approved by the UNM Construction Safety Committee.

Zachary Peterson Chair of Construction Safety Committee Manager of Safety Environmental Health & Safety



DOCUMENT REVISION LOG

Document: Construction Safety Manual

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1	4/29/2020	Split Section 11 into Mandatory Inclusions (11) and Potential Inclusions (12) for clarity.	N/A	ZP



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1	4/29/2020	To avoid confusion, all references to "employees" refer to UNM personnel, and all references to "workers" refer to contractor personnel.	N/A	ZP
1	4/29/2020	Terms "Environmental Health & Safety" and "Safety, Health and Environment" were used interchangeably throughout the document. Updated so all references are now EH&S.	N/A	ZP
1	4/29/2020	Section 10.02 Contractor EH&S Representation allows for three types of on-site Safety Representatives: 1. Safety Professional 2. Safety Specialist 3. Safety Representative To avoid confusion, changed the third option to "Safety Delegate".	N/A	ZP
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2	1/11/23	Updated Section 7: How to Use This Document to reflect removal of the Construction Safety Risk Evaluation process	N/A	ZP
2	1/11/23	Updated Construction Manual Implementation Flow Chart to reflect removal of the Construction Safety Risk Evaluation process.	N/A	ZP



2	1/11/23	Removed Section 8: <i>Construction Safety Risk Evaluation</i> and Construction Safety Risk Evaluation attachments.	Page 10	ZP
2	1/11/23	Updated Section 9: CSP General Requirements to reflect changed from requiring a Contract Specific Safety Plan (CSSP) to instead require a Contractor Safety Plan (CSP). Changed references from CSSP to CSP throughout.	N/A	ZP
2	1/11/23	Removed Contractor Aids from program.	N/A	ZP
2	1/25/23	In Section 9.02 Contractor EH&S Representative Requirements, specified that the UNM PM and EHS may determine category level required. Also added that Category C is the minimum requirement for all UNM Projects.	N/A	ZP



TERMS AND DEFINITIONS

AAP	Asbestos Abatement Plan
AHJ	Authority Having Jurisdiction
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASP	Associate Safety Professional
ATV	All-Terrain Vehicle
ВМР	Best Management Practices
CAA	Clean Air Act
CAIH	Certified Associate Industrial Hygienist
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
	(also known as Superfund)
CFR	Code of Federal Regulations
CGA	Compressed Gas Association
CGP	Construction General Permit
CHST	Construction Health Safety Technician
CIH	Certified Industrial Hygienist
CPR	Cardiopulmonary Resuscitation
CSP	Certified Safety Professional
CSP	Contractor Safety Plan
CWA	Clean Water Act
Daisy Chain	Connecting (several devices) together in a linear series.
DOT	Department of Transportation
ECP	Exposure Control Plan
EH&S	Environment, Health, and Safety
EPA	Environmental Protection Agency
FM	Facility Management
GFCI	Ground Fault Circuit Interrupter
HAZCOM	Hazardous Communications
HEPA	High Efficiency Particulate Air
HVAC	Heating, Ventilation, Air Conditioning
IH	Industrial Hygiene
JHA	Job Hazard Analysis
LEED	Leadership in Energy and Environmental Design
LO/TO	Lock Out/Tag Out
MSF	Motorcycle Safety Foundation
MUTCD	Manual on Uniformed Traffic Control Devices
NESHAP	National Emission Standard for Hazardous Air Pollutants
NFPA	National Fire Protection Agency
NMAC	New Mexico Administration Code
NMED	New Mexico Environment Department



NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NRTL	Nationally Recognized Testing Laboratory
NTP	Notice to Proceed
OHST	Occupation Hygiene and Safety Technician
OSHA	Occupational Safety and Health Administration
PATS	Parking and Transportation Services
PELs	Permissible Exposure Limits
PIC	Person in Charge
PIT	Powered Industrial Trucks
PLHCP	Physician or Other Licensed Health Care Professional
PM	Project Manager
PPE	Personal Protective Equipment
PTPs	Pre-Task Plans
QLFT	Qualitative fit test
QNFT	Quantitative fit test
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
SDS	Safety Data Sheet
SME	Subject Matter Expert
SOP	Standard Operating Procedure
SOW	Scope of Work
SPCC	Spill Prevention Control and Countermeasure
EHS	Environmental Health & Safety
SWPPP	Storm Water Pollution Prevention Plan
TBD	To Be Determined
TCP	Traffic Control Plan
TSCA	Toxic Substances Control Act
UL	Underwriters Laboratory
UNM	University of New Mexico
UNMHS RS	UNM Health Sciences Radiation Safety
WAC	Waste Acceptance Criteria



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Section 1. Purpose

This Construction Safety Manual describes the University of New Mexico (UNM) safety standards for all UNM facilities and locations involved in work that is construction and construction-like (hereafter referred to as construction work). This manual has been prepared to provide uniform construction safety standards and guidance for UNM installations in order to reduce the risks associated with construction industry activities. It was developed for activities that Occupational Safety and Health Administration (OSHA) regulates as a construction activity, whether performed by a contractor or inhouse, as opposed to work under the OSHA General Industry Standard (such as much of the repair and maintenance work) that may be performed at UNM facilities.

The objective of this manual is to enhance construction safety awareness and mitigate hazards associated with construction work activities to employees, workers, UNM, the public, and the environment. The goal of this manual is to ensure compliance with all Federal, State and Local requirements.

Because this manual is a summary of the regulatory requirements that may apply to a project, it may not be complete. Nothing in this manual should be construed to be a substitute for full regulatory requirements.



Section 2. Scope

For the purposes of this document:

- Employees are UNM employees and work under accepted standard operating procedures, UNM policies and the UNM Construction Safety Manual.
- Contractors are those who work under an approved Contractor Safety Plan (CSP). CSP.
- Subcontractors, hired by the Contractor, are subject to compliance with the Contractor's approved CSP and applicable Laws, regulations, and policies.
- Workers are any employees of the Contractor or Subcontractors that are involved with the contracted project.

This manual contains a summary and interpretation of the applicable codes, standards, regulations, and UNM policies. Situations not addressed in this manual should be referred to EHS.

The provisions of the OSHA, EPA, and NMED standards contained in this manual are to be complied with at all UNM-controlled premises. These standards have specific requirements that apply to all construction work.

Each employee and contractor is responsible for compliance with **all** applicable requirements that govern their work at UNM facilities, including any consensus standards incorporated therein by reference.

This manual also contains attachments, forms that represent the minimum information required for documentation, and instructions/examples to assist employers in understanding what needs to be included in the CSP. Employees and contractors may use these forms or comparable equivalents.

In addition, contractors may be asked to prepare certain job-specific submittals (e.g., an asbestos work plan, lockout and tag out procedure, etc.) for review by the applicable UNM PM and EHS.



Section 3. APPLICABILITY

Provisions contained in this manual are applicable to all employees and contractors who are engaged in construction work, which is defined as "Any combination of erection, installation, assembly, demolition, or fabrication activities involved to create a new facility or to alter, add to, rehabilitate, dismantle or remove an existing facility." The construction work also includes the alteration and repair (including dredging, excavating, and painting) of buildings, structures, or other real property, as well as any construction, demolition, and excavation activities conducted as part of environmental restoration or remediation efforts. This includes but is not limited to:

- Facility modifications or repair
- Demolition
- Drilling
- New construction
- Remodeling
- Multi-task order agreements



Section 4. OWNERSHIP

UNM EHS owns this document.

This manual contains excerpts and references to numerous regulations, codes, and standards, including the following documents:

- OSHA 29 CFR (Code of Federal Regulations) 1910 and CFR 1926
- American National Standards Institute (ANSI)
- National Fire Protection Association (NFPA)
- UNM Policy
- Documents, policies, standards incorporated by the above references

This manual does not state the requirements of these regulations, codes, and standards in their entirety.

4.01 Mandatory and Advisory Standards

The standards presented in this manual are either mandatory or advisory. Mandatory standards, denoted by the words **shall**, **must**, or **will** are requirements that must be followed unless written authority for exemption is granted by UNM or alternate equivalent standards are approved by the Authority Having Jurisdiction (AHJ). Advisory standards denoted by the words **should** or **may** are recommended best practices that help ensure safe construction work. If a standard does not say **should** or **may**, it implies **must**, **will**, or **shall**. Any questions about mandatory or advisory standards can be directed to EHS.



Section 5. ROLES AND RESPONSIBILITIES

5.01 Construction Management

All levels of management have the responsibility to provide a workplace where the risks from hazards that cause injury, illness, or death are as low as reasonably achievable, and the activities meet regulatory requirements. Managers shall ensure all employees and workers comply with these regulations.

5.02 UNM Directors, Senior Managers, and Department Managers

UNM Directors, senior managers, and department managers shall be responsible for:

- 1. Providing a workplace that is free from unmitigated hazards to employees and contractors.
- 2. Ensuring that employees and contractors are trained and qualified in areas, as warranted by their duties, including instruction on appropriate emergency procedures, such as Cardiopulmonary Resuscitation (CPR) and first aid.
- 3. Ensuring that the required training records are kept and maintained.
- 4. Ensuring that operating procedures and Job Hazard Analyses (JHAs) are established and implemented for construction work.
- 5. Ensuring that employees and contractors use the Personal Protective Equipment (PPE) appropriate for their assigned task.
- 6. Ensuring that employees and contractors using PPE are trained in their proper use and medically qualified to use PPE.
- 7. Ensuring that all equipment is inspected, operated, and maintained in accordance with the manufacturer's instructions.
- 8. Ensuring that the required equipment maintenance and inspection records are kept and maintained.

5.03 Employees and Contractors

Employees and contractors shall comply with the parts of this manual that apply to their own actions and conduct. This includes immediately reporting of unsafe conditions to management. A copy of this manual and the Contractor Safety Plan (CSP) developed by contractors must be made available to their workers and subcontractors.

Contractors must comply with all Federal, State, Local, and UNM safety requirements, and assure that all of their workers performing work on UNM property have been suitably trained and licensed.



5.04 Person in Charge (PIC)

The project manager or delegate (a department manager, team leader, project leader, facility owner, journeyman technician, or a person appointed by the project manager) is designated as the Person In Charge (PIC). The PIC may be either a UNM employee for UNM performed construction work or a contractor employee for contracted construction work.

Specific responsibilities of the PIC include the following:

- 1. Ensure that UNM rules and policies are followed.
- 2. Brief all members of the workforce on the safety concerns and precautions regarding their work assignment and discuss specific hazards where unexpected hazards may exist.
- 3. Select and ensure the proper placement of safety signs, symbols, and accident prevention tags.
- 4. Ensure the contractors and workers complete safety awareness training courses appropriate for the work being supervised.
- 5. Take necessary corrective actions to address the concerns of workers and contractors who report perceived hazards.
- 6. Notify workers and contractors of work condition changes and limit the work area only to authorized individuals who are familiar with the work.
- 7. Review and approve the selection of PPE.
- 8. Whenever protective systems must be bypassed or otherwise rendered inoperative, the work must be preapproved.
- 9. Ensure compliance with all required equipment maintenance practices and procedures.

5.05 EHS

EHS is responsible for developing, implementing, and administering the Construction Safety Manual. This involves:

- 1. Developing and maintaining the written program, training programs, and other training resources that can be used by University employees.
- 2. Maintaining centralized records of training, energy work procedures, and inspection data and reports.
- 3. Providing technical assistance to University employees.
- 4. Evaluating the overall effectiveness of the Construction Safety Program on an annual basis.



Section 6. Construction Safety Program Principles

The UNM Construction Safety Program is based on the following principles:

- 1. UNM clearly defines the scope of the project in a set of project specifications and expectations prior to proceeding with any construction.
- Qualified contractor creates a bid by translating mission into work; setting expectations; identifying, prioritizing, and sequencing tasks; and allocating resources for work (including compliance with OSHA, EPA, NMED, DOT, NRC, UNM, and other relevant regulations and requirements).
- 3. The Contractor analyzes hazards, identifies controls (by activity) to be put into place to complete the job (in JHAs).
- 4. The Contractor submits the CSP and receives UNM EHS approval before notice to proceed is provided. CSP
- 5. The Contractor communicates the relevant parts of the CSP and JHA to the workers prior to work being performed.
- 6. UNM EHS gathers feedback information on the adequacy of controls, identifies opportunities for improving the definition and planning of work, and conducts line and independent oversight.



Section 7. How To Use this Document

The UNM project manager shall request and/or develop a Scope of Work (SOW).

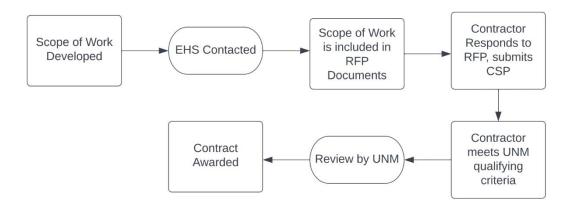
7.01 The Contractor performing construction work

- 1. The UNM Project Manager (UNM PM) notifies EHS of the SOW.
- 2. The bid package is provided to qualified potential contractors.
- 3. Bids and CSP are received by UNM.
- 4. The contract is awarded.
- 5. Work begins and oversight by UNM starts.

7.02 UNM employees performing construction work

- 1. A SOW is developed.
- 2. The EHS SME develops a list of applicable requirements based on the SOW.
- 3. The applicable requirements shall be distributed to employees by the UNM PM. Standard Operating Procedure (SOP), work plan, JHA are developed to address the requirements
- 4. The work begins and oversight by EHS starts.

Figure 1. EHS Construction Safety Manual Implementation Flow Chart.



Process for for flow-down of Safety, Health and Environmental liablity from UNM to Construction Contractors while working for UNM through the implementation of the Contractor Safety Plan (CSP)



Section 8. Contractor Safety Requirements

8.01 Key Terms

For the purpose of this Construction Safety Manual:

- 1. EH&S protection encompasses safety, industrial hygiene, and environmental protection, compliance, pollution prevention, and waste management/minimization.
- 2. The term Contractor includes the primary contractor, its workers, and any sub-tier contractors and their workers.
- 3. The term UNM applies to the University of New Mexico employees and contractors employed to represent UNM.

8.02 Implementation of the CSP

The Contractor shall have sole responsibility for implementing the written CSP as approved by UNM EHS. UNM shall **not** be responsible for supervising the implementation of the Contractor's CSP, and UNM shall **not** have responsibility for the safety and environmental compliance of the Contractor, its workers, or its lower-tier suppliers, contractors, and their workers.

8.03 CSP is a Contractually Required Document

The Contractor shall not commence work on the site until the Contractor's written CSP is approved by UNM EHS and a Notice to Proceed has been received by the Contractor.

8.04 Contractor Responsible for EH&S Compliance under Contract

When performing work at sites controlled/managed by UNM, the Contractor shall comply with all applicable Federal, State, and local laws and regulations protecting workers, air, water, and soil, and those governing land use, waste management/disposal, and chemical and pesticide usage.

8.05 Applicable Regulations and Standards

The requirements for the CSP, in accordance with United States regulatory requirements and UNM requirements, are contained in this manual. Nothing in this manual must be construed as relieving the Contractor from complying with any additional specific safety and health requirements that the Contractor determines to be necessary to protect the safety and health of workers. Even if not specifically set forth in this manual, the Contractor is required to comply with the following regulations and safety and health standards that are applicable to the hazards associated with its work:

- 1. 29 CFR Part 1904.4 through 1904.11, 1904.29 through 1904.33, 1904.44, and 1904.46: Recording and Reporting Occupational Injuries and Illnesses
- 2. 29 CFR Part 1910: Occupational Safety and Health, including 1910.1096: Ionizing Radiation



- 3. 29 CFR Part 1926: Safety and Health Regulations for Construction
- 4. ANSI Z88.2: Respiratory Protection
- 5. ANSI Z136.1: Safe Use of Lasers
- 6. ANSI Z49.1: Safety in Welding, Cutting and Allied Processes, Sections 4.3 and E4.3
- 7. NFPA 70: National Electric Code
- 8. NFPA 70E: Standard for Electrical Safety in the Workplace
- 9. American Society of Mechanical Engineers (ASME): *Boilers and Pressure Vessel Code*, Sections I through XII, including applicable Code Cases
- 10. ASME B31 Codes (ASME Code for Pressure Piping)
- 11. 40 CFR: Air, Water, Waste Regulations
- 12. UNM Administrative Policies and Procedures Manual, Policy 6100: Risk Management

8.06 OSHA General Duty Clause

In accordance with the Occupational Safety and Health Act of 1970, the Contractor must provide a place of employment that is free from recognized hazards that are causing or have the potential to cause death or serious physical harm.

8.07 Responsibility for Compliance

The Contractor shall have sole responsibility for taking such action as is deemed necessary to assure compliance with the Clean Water Act (CWA), Clean Air Act (CAA), Resource Conservation and Recovery Act (RCRA), and Toxic Substances Control Act (TSCA), as well as the 20.4.1 New Mexico Administration Code (NMAC) and 20.9.2-10 NMAC regulations.

8.08 Costs for Non-Compliance

In the event of any Contractor's non-compliance, including environmental or waste management violations, all such measures taken by UNM to correct the violations shall be at the Contractor's expense. The cost thereof, including any stipulated penalties resulting from non-compliance, shall be deducted from payments otherwise due to Contractor.

8.09 Worker Rights and Responsibilities

In accordance with the Occupational Safety and Health Act of 1970, the Contractor shall inform workers of their rights and responsibilities by appropriate means, including posting the OSHA Worker Rights poster in the workplace where it is visible to all workers.



In accordance with OSHA requirements, the Contractor will make available to all workers the Worker Contract Specific Safety Program for the covered workplace, the standards, controls, and procedures applicable to the covered workplace, and limited information on any recordkeeping log (OSHA Form 300). The Contractor shall designate a location for the contact information for workers to obtain this information.

8.10 Integrated EH&S

In accordance with UNM's Risk Management Policy (Policy 6100), the Contractor is committed to implementing the safety systems in the approved CSP in an integrated fashion. The objective is to systematically integrate safety and environmental compliance into management and work practices at all levels, so that employees, workers, the public, and the environment are protected while assigned projects are accomplished.

In accordance with the Occupational Safety and Health Act, OSHA, EPA, New Mexico, and other referenced regulations, the Contractor shall perform work in a safe and compliant manner that ensures adequate protection for employees, workers, the public, and the environment, and shall be accountable for safety and environmental compliance. The Contractor shall exercise a degree of care commensurate with the work and the associated hazards/risks. The Contractor shall ensure that the management of EH&S functions and activities become an integral and visible part of the Contractor's work planning and execution processes.

8.11 Construction Organizational Principles

The following principles must be adhered to:

- 1. Line management is responsible for the protection of employees, the public, and the environment. Line management includes the Contractor's workers managing or supervising workers performing work.
- 2. Clear and unambiguous lines of authority and responsibility for EH&S matters are established and maintained at all organizational levels.
- 3. Workers shall possess the experience, knowledge, skills, and abilities that are necessary to fulfill their responsibilities.
- 4. Resources are effectively allocated to address EH&S, programmatic, and operational considerations. Protecting employees, workers, the public, and the environment is a priority whenever activities are planned and performed.
- 5. Before work is performed, the associated hazards/risks are evaluated. An agreed-upon set of EH&S controls and requirements is established, which, if properly implemented, provide adequate assurance that employees, workers, the public, and the environment are protected from adverse consequences. A workplace JHA form or its equivalent will be used to document the hazards and protective methods that will be employed.



- a. If remodeling/demolition/construction work involves existing structures which have been laboratory, Research and Development (R&D) facilities, or other facilities where hazardous materials may have been used or stored during the life of the structure, and in particular if the contract involves demolition or tie-ins to existing ceilings, partitions and equipment, fire protection system, plumbing (risers, vents, etc.), mechanical system (HVAC, exhaust ventilation systems, plenums, etc.), equipment piping, lighting, electrical/power, fire alarm, telecommunications, laboratory furnishings (ovens, hoods, casework, storage cabinets, sinks, etc.), UNM will compile and provide all data available on the potential and actual chemical hazards which may be encountered.
 - i. The Contractor is responsible for acknowledging if the work involves a laboratory, R&D, or related facility, and therefore during demolition, construction or tie-ins may encounter hazardous residues resulting from these historical laboratory operations. As such, the Contractor will be responsible for assessing the hazards sufficiently to protect their workers (and those of their subcontractors), for each activity that will be performed.
 - ii. Protections will be put in place by the Contractor for compliance with OSHA regulations, EPA regulations, NM regulations, and UNM policy.

8.12 Hierarchy of Controls

As outlined in OSHA, administrative and engineering controls to prevent and mitigate hazards shall be tailored to the work being performed and the associated hazards.

Controls are established according to the following hierarchy:

- 1. Hazard elimination by process modification
 - a. Substitution of a less hazardous substance, if available
- 2. Application of engineering controls, such as enclosures, machine guards, interlocks, or similar devices
- 3. Application of administrative controls, such as training, lockout/tagout, and procedures
- 4. Use of PPE

8.13 Agreement of Terms

The conditions and requirements to be satisfied for operations are established and agreed-upon by UNM and the Contractor. These agreed-upon conditions are requirements of the contract and are binding upon the Contractor. The extent of documentation and level of authority for agreement shall be tailored to the complexity, hazards, and environmental requirements associated with the work.



8.14 Compliance Inspections

UNM reserves the right to perform announced and unannounced inspections and assessments of the Contractor's operations, equipment, and materials to verify compliance with the requirements of this subcontract. The Contractor shall cooperate with and accommodate oversight assessments, audits, and inspections performed by UNM. UNM has the authority and responsibility to pause or stop work in accordance with UNM Administrative Policy 6110.

8.15 Stop Work Authority

The Contractor shall ensure that their workers have the authority, responsibility, and encouragement to Stop Work when they discover unsafe conditions or other hazards. The Contractor shall ensure that work does not resume until the EH&S concerns associated with that activity are resolved. The restart of work activities may not occur, except as follows:

- 1. The worker shall correct the hazardous condition and restart the activity or operation without notifications if (1) the condition does not pose an imminent danger, (2) the condition can be corrected immediately, and (3) the worker has the resources to correct the condition and restart work.
- 2. In all other cases, the worker must notify the Contractor EH&S Representative prior to restart.
- 3. If the Contractor EH&S Representative is notified of a Stop Work initiated by a worker, the EH&S Representative shall notify UNM's Contract Management and Environmental Health & Safety offices.
- 4. UNM has the authority and responsibility to pause or stop work in accordance with UNM Administrative Policy 6110

8.16 Worker Involvement

The Contractor should provide mechanisms to involve workers and their elected representatives in the development of the Worker Safety and Health Program goals, objectives, and measures, as well as the identification and control of hazards in the workplace. The following are some ways to involve workers:

- 1. EH&S committees,
- 2. safety observers,
- 3. ad hoc health and safety problem-solving groups,
- 4. EH&S training of other workers,
- 5. analysis of job hazards, and
- 6. committees that plan and conduct EH&S awareness programs.

8.17 Improvement-Reporting Reinforced

In accordance with the Occupational Safety and Health Act of 1970, the Contractor shall establish procedures for workers to report, without reprisal, job-related fatalities, injuries, illnesses, incidents,



and hazards, and to make recommendations about appropriate ways to control hazards. The Contractor must provide prompt response to such reports and recommendations in accordance with OSHA 29 CFR 1904.

8.18 Worker Imminent Risk Response

In accordance with OSHA, the Contractor's workers shall have the right, without reprisal, to decline to perform an assigned task because of a reasonable belief that, under the circumstances, the task poses an imminent risk of death or serious physical harm to the worker, coupled with a reasonable belief that there is insufficient time to seek effective redress through normal hazard reporting and abatement procedures.

8.19 Contractor EH&S Accountability

In the UNM Risk Services Policy (6110), the ultimate responsibility for safety must be with the line organization, which includes contracted construction work. As such, the Contractor shall assign worker safety and health responsibilities, evaluate worker performance, and hold both management and workers accountable for worker safety and health performance.

8.20 UNM Notification for Suspension or Termination

If the Contractor, or any lower-tier contractor, independently, either suspends or terminates a worker for unsafe acts resulting from the performance of work under this subcontract, the Contractor shall immediately provide written notification to the UNM Contract Management Office and EHS with information about the action.



Section 9. CSP GENERAL REQUIREMENTS

- 1. To perform subcontract work at UNM, the Contractor is required to comply with the requirements outlined in this manual. This manual contains additional EH&S requirements that UNM considers necessary for the performance of work at their facilities. Further, the Contractor shall supplement the requirements of this manual with such additional EH&S elements, if any, as the Contractor considers necessary to protect the safety and health of the workers and the environment, and so certify to UNM that this manual, together with any additional elements, constitute the Contractor's CSP. The Contractor shall consolidate the EH&S plan elements and submit the complete CSP to UNM for review and approval. The Contractor's CSP must be approved by EHS prior to the issuance of a Notice to Proceed.
- The Contractor is responsible for compliance with the EH&S requirements applicable to this contract regardless of the performer of the work. The Contractor's CSP shall specify how safety requirements will flow down to workers and sub-tier contractors.
- 3. The Contractor will ensure that workers have access to the CSP and that workers comply with the requirements in the plan respectively.
- 4. The Contractor's CSP shall include copies of any documents specified in the sections of this manual that follow.
- 5. Changes to the Contractor's CSP require re-submittal and approval by UNM EHS, or for minor changes, pen-and-ink changes signed and dated by the Contractor PIC and EHS.

9.01 Contractor and Lower-Tier Sub-contractor Minimum Performance Eligibility Factors

This section is **not applicable** to this contract or contained elsewhere in the contract. Consult UNM Project Management for clarification.

9.02 Contractor EH&S Representative Requirements

The Contractor shall designate an on-site EH&S SH&E Representative for all tasks conducted under this subcontract. This person shall assist with the Contractor's supervision of the implementation of the Contractor's approved CSP and the Contractor's site requirements. The UNM PM, in coordination with EHS, may require certain qualifications based upon the complexity and size of the scope of work.

General categories of Contractor EH&S Representative qualifications are Options A, B, and C, as follows with Option C being a minimum requirement for all scopes of work:

A. Full-time EH&S Professional

The Contractor shall provide a full-time dedicated EH&S Professional on-site, who shall work closely with UNM management to implement and administer the Contractor's approved CSP. This shall be the EH&S



Professional's sole responsibility. The dedicated EH&S Professional shall meet the following minimum acceptance criteria or pre-approved equivalent:

- 1. Certification (or eligible for certification) by the American Board of Industrial Hygienists, Board of Certified Safety Professionals, or equivalent nationally recognized organization
- 2. A bachelor's degree (or equivalent) in safety engineering, industrial hygiene, or an equivalent technical field
- 3. Three to five years of full-time work experience in the field of EH&S
- 4. A minimum of 40 hours of formal, environmental training in erosion control, waste management, other environmental disciplines, or pre-approved equivalent having other environmental related training and/or job experience
- 5. Current training in CPR and First Aid

The Contractor shall submit the EH&S Professional's qualifications to UNM and must receive approval prior to issuance of Notice to Proceed.

The Contractor's EH&S Professional's duties shall include, but are not limited to:

- 1. Manage the implementation of the Contractor's approved CSP, including a review of integrated work documents.
- Cease work and take immediate action, as necessary, to remove UNM employees, other site workers, or third parties from hazardous areas if their safety or health is jeopardized by the Contractor's work activities. They must notify the UNM PM.
- 3. Cease work and take immediate actions, as necessary, to address environmental compliance issues. They must notify the UNM PM.
- 4. Interface with UNM EHS Management and the UNM PM to resolve EH&S issues.
- 5. Provide hazard-specific training for new workers and orientations for visitors.
- 6. Ensure EH&S requirements and goals have been identified and presented to workers.
- 7. Ensure compliance with the UNM Emergency Response Plans (including evacuation alarms, accountability rosters, and assembly points).
- 8. Continuously evaluating the site for any hazards not previously identified or adequately controlled, as well as initiate measures required to protect employees, workers, the public, and the environment and revise documents accordingly.
- 9. Conduct safety and pre-job briefings as required by this manual.
- 10. Attend progress meetings held by UNM.



- 11. Represent the Contractor in incident investigations and/or critiques scheduled by UNM.
- 12. Maintain First Aid and OSHA 300 logs, report accidents and injuries to the EHS immediately, conduct accident/incident investigations as required, and report results to UNM PM within two (2) working days.
- 13. Ensure that proper hazard postings are in place, are legible, and are removed when the project is complete.
- 14. Conduct all operations to mitigate adverse environmental impacts (e.g., spill containment, erosion control, etc.).
- 15. Establish and maintain the Hazard Communication Program (including Safety Data Sheets [SDSs, formerly known as MSDS], inventory, and training).
- 16. Conduct and document EH&S inspections in accordance with the requirements of this manual.

The EH&S Professional shall be at the worksite whenever the Contractor's workers are working. On occasions when the EH&S Professional must be away from the worksite, the UNM PM must be notified and a UNM approved alternate shall be identified to act on the EH&S Professional's behalf.

B. EH&S Specialist

The Contractor shall provide a full-time dedicated EH&S Specialist on-site and shall work closely with UNM management to implement and administer the Contractor's approved CSP. The dedicated EH&S Specialist shall meet the following minimum acceptance criteria or pre-approved equivalent:

- 1. Occupation Hygiene and Safety Technician (OHST), or Construction Health Safety Technician (CHST) certification, or equivalent nationally recognized organization; or eligible for certification
- 2. An associate degree (or equivalent) in safety engineering, industrial hygiene, or an equivalent technical field
- 3. At least three (3) years of full-time work experience in the field of EH&S
- 4. A minimum of 40 hours of formal environmental training in erosion control, waste management, other environmental disciplines, or pre-approved equivalent having other environment-related training and/or job experience
- 5. Current training in CPR and First Aid

Contractor's EH&S Specialist's duties shall include, but are not limited to:

- 6. Manage the implementation of the Contractor's approved CSP, including the review of integrated work documents.
- 7. Cease work and take immediate action, as necessary, to remove UNM employees, other site workers, or third parties from hazardous areas if the safety or health is jeopardized by the



Contractor's work activities. They must notify UNM PM.

- 8. Cease work and take immediate action, as necessary, to address environmental compliance issues. They must notify the UNM PM.
- 9. Interface with UNM EHS Management and the UNM PM to resolve EH&S issues.
- 10. Provide hazard-specific training for new workers and orientations for visitors.
- 11. Ensure EH&S requirements and goals have been identified and presented to workers.
- 12. Ensure compliance with UNM Emergency Response Plans (including evacuation alarms, accountability rosters, and assembly points).
- 13. Continuously evaluate the site for any hazards not previously identified or adequately controlled, as well as initiate measures required to protect employees, workers, the public, and the environment and revise documents accordingly.
- 14. Conduct safety and pre-job briefings as required by this manual.
- 15. Attend progress meetings held by UNM.
- 16. Represent the Contractor in incident investigations and/or critiques scheduled by UNM.
- 17. Maintain First Aid and OSHA 300 logs, report accidents and injuries to the EHS immediately, conduct accident/incident investigations as required, and report results to UNM PM within two (2) working days.
- 18. Ensure that proper hazard postings are in place, are legible, and are removed when the project is complete.
- 19. Conduct all operations to mitigate adverse environmental impacts (e.g., spill containment, erosion control, etc.).
- 20. Establish and maintain the Hazard Communication program (including Material Safety Data Sheets, inventory, and training).
- 21. Conduct and document EH&S inspections in accordance with the requirements of this manual.

The EH&S Specialist shall be at the worksite whenever the Contractor's workers are working. On occasions when the EH&S Specialist must be away from the worksite, the UNM PM must be notified and a UNM approved alternate shall be identified to act on the EH&S Specialist's behalf.

C. EH&S Delegate

The Contractor shall provide an EH&S Delegate. (This is an alternative option for contractors with lower risk factors and smaller project dollar values).

The EH&S Delegate shall have formal EH&S training, such as the following:



- 1. A minimum of 30 hours of formal EH&S training in OSHA standards, or a pre-approved equivalent (i.e., having other EH&S related training certificates and/or job experience appropriate to the work being performed).
- 2. Formal environmental training and/or job experience in erosion control, waste management, or other environmental disciplines
- 3. Current training in CPR and First Aid

The Contractor shall submit to, and receive approval from, UNM on the EH&S Delegate's qualifications prior to issuance of a Notice to Proceed.

Contractor's EH&S Delegate's duties shall include, but are not limited to:

- 4. Promote and assist the implementation of the Contractor's CSP, including review of JHAs, Pre-Task Plans (PTPs), and permits.
- 5. Cease work and take immediate action, as necessary, to remove UNM employees, other site workers, or third parties from hazardous areas if the safety or health is jeopardized by the Contractor's work activities. They must notify UNM PM.
- 6. Continuously evaluate the site for any hazards and environmental compliance issues not previously identified or adequately controlled, as well as initiate measures required to protect employees, workers, the public, and the environment and revise documents accordingly.
- 7. Participate in the EH&S and pre-job briefings, as required.
- 8. Conduct and document EH&S inspections in accordance with the requirements of this manual.

The Contractor's assigned EH&S Delegate may also have other duties, as long as they will not interfere with or prevent the workers from performing the above-stated responsibilities.



Section 10. CSP MANDATORY INCLUSIONS

The following sections shall be included in the CSP regardless of scope.

10.01 Incident Reporting

- The Contractor shall maintain accurate accident and injury/illness logs in accordance with 29
 CFR 1904. Logs shall be available for review by UNM upon request. The Contractor must enter
 each recordable injury and illness on the Contractor's OSHA 300 Log and the 301 Incident Report
 within seven (7) calendar days of receiving information that a recordable injury or illness has
 occurred.
- 2. In accordance with this manual, the Contractor is required to immediately report to UNM EHS all job-related injuries beyond First Aid (as defined by 29CFR1904.7(b)(5)(ii)). See Attachment 1 for an acceptable reporting form. The Contractor shall also provide an investigation report using the OSHA 301 form (or equivalent) within two (2) working days. Included on the investigation report shall be:
 - a. Location where the injury/illness occurred
 - b. Date and Time of injury/illness
 - c. Name of worker(s) with recordable injuries/illness
 - d. Home address for the worker(s) with recordable injuries/illness
 - e. Body part(s) injured
 - f. Nature of injury
 - g. Medical treatment administered
 - h. Root cause of the accident
 - i. Corrective actions
 - j. Restrictions
 - k. Estimated number of days the worker will be hospitalized
 - I. Estimated workdays lost
 - m. Estimated number of restricted workdays

Prior to the injured or ill worker(s) returning to work, copies of the attending physician(s)'s report releasing the worker(s) to full or limited duty shall also be submitted to the UNM PM.

- 3. The Contractor shall maintain the reports and documentation required by Federal, State, and Local regulations. This includes all hazard inventory information, hazard assessments, exposure measurements, and exposure controls. These reports and documentation shall be submitted to UNM upon request. The Contractor shall not conceal or destroy any information concerning non-compliance or potential noncompliance with the requirements.
- 4. For purposes of clarification, any Contractor worker(s) involved in a job-related injury should not file a workers' compensation claim with The University of New Mexico. Contractor workers involved in a job-related injury should pursue any workers compensation claim through their



respective employer's workers' compensation insurance carrier.

10.02 Worker Training

- 1. In accordance with applicable requirements, which include Federal, State, and Local codes, standards, and regulations, as well as UNM policies, the Contractor shall ensure that workers are properly trained and qualified to safely perform all assigned tasks. This includes training workers in hazards to which they may be exposed so they can perform their duties in a safe and healthful manner. This must include initial, periodic, and additional training to provide information on each hazard before or at the time of initial assignment to a job involving exposure hazards. The Contractor must provide the training and information to workers who have worker safety and health program responsibilities that are necessary for them to carry out those responsibilities.
- The Contractor shall conduct or provide training and maintain records of other specific training required to perform work safely. Training records shall be retained on-site or be available in electronic form for the duration of the contract and made available to UNM upon request.
- 3. The Contractor's workers shall complete any facility-specific training required and provided by UNM.
- 4. The training identified shall be completed prior to the start of work related to the respective training subject.

10.03 Daily Job Briefings/PTP

- 1. In accordance with this manual, the Contractor shall provide regular communication with workers about workplace safety and health matters.
- 2. Prior to the commencement of work, all Contractor workers, either initially or as they are introduced to the site, shall attend a pre-job briefing performed by the Contractor. All initial pre-job briefings must be formally documented. This documentation must be available for review by UNM upon request. The initial pre-job briefing, at a minimum, shall cover:
 - a. the scope of the subcontract,
 - b. the associated hazards and environmental requirements,
 - c. the steps that will be taken to mitigate those hazards and assure environmental compliance, and
 - d. the roles and responsibilities of UNM, the Contractor, and its workers.
- 3. The Contractor and its associated sub-tier Contractors shall provide a daily briefing for its workers that specifically addresses the hazards and mitigates controls for work to be performed that day. This daily briefing or pre-task planning briefing shall be documented. The Contractor will conduct worker EH&S meetings as necessary.
- 4. A record of attendance and topics covered at all briefings and worker EH&S meetings shall be



documented and maintained on the job site for the duration of the subcontract.

10.04 EH&S Inspections

- The Contractor shall conduct and record initial and other periodic inspections of the work areas
 to monitor compliance with EH&S regulatory requirements. UNM will also perform periodic
 inspections, including compliance monitoring/sampling of the work areas, and provide a written
 report to the UNM PM who will communicate issues to the Contractor.
- 2. The Contractor shall promptly initiate action to correct all identified hazards, deficiencies, or compliance issues that the Contractor is responsible for.
- 3. The Contractor shall report all identified hazards, deficiencies, or compliance issues not under the control of the Contractor to the UNM PM.
- 4. The Contractor shall take all necessary steps to ensure the protection of employees, workers, the public, and the environment until the hazards, deficiencies, or compliance issues are corrected.
- 5. The Contractor shall ensure that workers have the right, without reprisal, to request and receive results of investigations and inspections.
- 6. Regulatory agencies, such as the NMED and the U.S. EPA, will make unannounced visits to work areas and perform periodic environmental compliance inspections. The Contractor shall notify UNM PM immediately if a regulatory agency schedules a visit/inspection of the site or arrive at the site unannounced.

10.05 Housekeeping

Good housekeeping practices are an integral component in maintaining a safe work environment. The Contractor shall always keep all work areas neat and orderly by providing the necessary resources and by implementing the housekeeping practices detailed in this section.

- 1. Keep tools and materials properly stored when not in use and remove all materials that are no longer needed.
- 2. Ensure trash, scrap materials, and waste are placed in appropriate disposal or recycling containers. Place containers strategically throughout the work area to promote use.
- 3. Keep floors clear of trip and slip hazards, including hoses, welding leads, electric cords, liquids, and other obstacles. Keep walkways, roadways, and other locations clear of cords, hoses, and leads to avoid exposure to damage.
- 4. Properly store and dispose of paint, solvents, oil-soaked rags, and debris, etc., in approved containers in accordance with the appropriate waste management regulatory requirements.



- 5. Ensure that protruding nails, screws, staples, and other sharp objects are protected or removed and do not present a hazard.
- 6. Always provide and keep eating and sanitary facilities maintained in a clean and sanitary condition, including adequate washing facilities with soap and disposable towels.
- 7. Provide clean, potable drinking water for workers in a safe, hygienic manner at all worksites. Single-use cups shall be provided in a sanitary dispenser. Cups shall be replenished, as needed, during the day and trashcans provided for their disposal. Community or common use cups shall not be used.
- 8. Unless specified elsewhere in the subcontract, the Contractor shall provide and maintain its own sanitary toilet facilities for its workers.

Attachment 2: *Housekeeping Inspection Form* is attached for guidance on good housekeeping issues and to assist in documenting site housekeeping conditions.

10.06 Emergency Preparedness

- The Contractor must comply with UNM site-specific emergency response requirements, which
 are provided in the contract agreement and the facility-specific training for the facilities and
 buildings in which they work. Emergency response and/or emergency actions listed in this
 document, OSHA and EPA regulations communicate emergency response requirements to the
 Contractor.
- Unless specified otherwise, communication of site-specific emergency response requirements to the Contractor's workers who do not attend the initial communication briefing described in <u>Section 10.03</u>, <u>Daily Job Briefings/PTP</u>, must be performed by the Contractor and formally documented. This documentation must be available for review by UNM.
- 3. The Contractor is responsible for defining emergency procedures specific to the site in the Contractor's CSP. These emergency procedures must be written and communicated to the Contractor's workers. At a minimum, Contractor will include the following information:
 - a. protective actions,
 - b. shelter-in-place procedures,
 - c. evacuation of workers procedures,
 - d. notification procedures,
 - e. emergency signals,
 - f. evacuation routes,
 - g. assembly area locations, and
 - h. Worker accountability expectations.
- 4. An annual evacuation drill is required with documented results available for UNM review.



5. The Contractor is responsible for ensuring that all workers entering the site are informed of the emergency procedures for that site.

10.07 Personal Protective Equipment

- 1. The Contractor shall provide, use, and maintain PPE to protect the Contractor's workers from hazards directly related to the work. See 29 CFR 1910.132(a) and NFPA 70E.
- 2. The Contractor shall perform a required workplace hazard identification and assessment in accordance with this manual to determine the required controls, including PPE.
- 3. The Contractor shall provide training to each worker who is required to use PPE. Each worker shall be trained to know:
 - a. when PPE is necessary,
 - b. which PPE is necessary,
 - c. how to properly don, doff, adjust, and wear PPE,
 - d. the limitations of the PPE, and
 - e. the proper care, maintenance, life, and disposal of PPE.
- 4. When protecting workers from site hazards, the Contractor shall provide PPE, including respiratory protection. UNM shall not be responsible for training the Contractor's workers for any PPE.
- 5. When required by the work being performed, the Contractor shall require workers to wear eye protection equipped with hard side shields (safety glasses) manufactured to a recognized standard (ANSI Z87). This requirement also applies to prescription eyewear.
- 6. Welders shall wear welding hoods or a hardhat/welding hood combination manufactured to a recognized standard while welding.
- 7. When required by the work being performed, the Contractor's workers shall wear safety shoes or boots manufactured to a recognized standard (ANSI).
- 8. The Contractor's workers who handle chemicals or harmful substances shall be trained and shall wear appropriate PPE per the chemical manufacturer's recommendations or as determined by an exposure assessment.
- 9. When required by the work being performed, Hardhats manufactured to a recognized standard shall be worn.
- 10. Gloves shall be specified and worn when required to protect workers from hazards.
- 11. In accordance with applicable requirements, workers performing electrical lockout activities shall wear properly rated electrical protective gloves and arc flash PPE (if required by NFPA 70E) while verifying the absence of energy. The Contractor workers performing diagnostics and



- testing work and/or work with energized equipment within the NFPA 70E defined arc flash boundary shall wear arc flash PPE.
- 12. Conforming to the requirements of NFPA 70E, the Contractor's workers performing such work within the restricted approach boundary (defined in NFPA 70E) are required to wear voltage-rated PPE.
- 13. As the minimum work-clothing requirement for worksites, the Contractor shall require all workers to wear long pants and a suitable shirt, with no less than 4-inch-long sleeves.
- 14. The Contractor's workers exposed to high noise levels shall wear appropriate hearing protection PPE.

10.08 Hand and Power Tools

- 1. The Contractor shall ensure that tools provided for use are used in accordance with the manufacturers' recommendations, have required guards in place, and are maintained in good working order. Appropriate PPE must be worn when using any tool.
- The Contractor shall ensure that equipment and tools, including hand tools, are inspected, operated, and maintained by qualified workers. Damaged or defective tools shall be tagged as Out of Service or removed from UNM property.
- 3. The Contractor shall ensure that power tools and equipment are inspected prior to use. They must also be inspected, at minimum, quarterly or more frequently if recommended by the manufacturer.
- 4. The Contractor shall follow 29 CFR 1926.302(e) if powder-actuated tools will be used. Only properly trained and certified workers shall be permitted to use powder-actuated tools. Documentation of the training shall be made available for UNM review. The powder-actuated charges for powder-actuated tools shall be controlled. The cartridges shall be properly stored. No live or spent cartridges shall be left on the ground or disposed of in trashcans or in any other unauthorized container.
- 5. The Contractor shall ensure that work is performed only in areas and at times where adequate illumination exists. The Contractor shall provide all lighting required to safely perform work. Lighting must meet the minimum intensities listed in 29 CFR 1926.56, Table D-3. Artificial lighting equipment shall be manufactured to a recognized standard acceptable to UNM.
- 6. The Contractor must ensure that tools are never hoisted, lowered, or carried by the power cord. All electric tools shall be grounded, except approved and labeled double-insulated tools. The Contractor shall ensure that all tools are checked for electrical continuity after repairs are made. Extension cords shall be in good condition.
- 7. The Contractor shall use Ground Fault Circuit Interrupters (GFCI) on all temporary electrical



applications, including task lighting.

- 8. Temporary construction light stringers that provide general-purpose area lighting shall not be installed on the load side of a GFCI and shall have no receptacles installed in its dedicated branch circuit. Temporary light stringers shall contain a grounding conductor.
- 9. The Contractor shall use grinding wheels, wire brushes, and flapper wheels that are rated for the grinder on which they are used.
- 10. The Contractor will ensure that excess flow valves are installed on air manifolds and compressors supplying air to greater than 1/2-inch ID hoses.
- 11. The Contractor shall ensure that fuel-powered tools are not used inside a building or excavation without adequate ventilation and air monitoring. All fuel-powered tools must be shut down prior to being refueled.
- 12. The Contractor shall ensure that all Contractor-owned ventilated enclosures, confinement systems, and/or local exhaust ventilation systems are tested prior to use and on a routine basis, not less than one time per year. This applies to ventilation systems that are intended to minimize worker exposures and to prevent occupational diseases caused by the inhalation of hazardous or toxic contaminants. High-Efficiency Particulate Air (HEPA) filtration systems must be tested to verify filtration efficiency prior to initial use and annually thereafter and after any maintenance that disturbs the HEPA filter.
- 13. The Contractor shall ensure that portable or vehicle-mounted electric generators have the neutral conductor properly bonded to the generator case and that all general-purpose single-phase 15, 20, and 30-amp receptacles are GFCI protected. Generators shall be grounded per the manufacturer's instructions.
- 14. The Contractor shall use electric power tools utilizing 60Hz AC power (whether 120 V, 240 V, 480 V, etc.) that are listed by a Nationally Recognized Testing Laboratory (NRTL). Such NRTL listing also applies to any extension cords, locatable power taps, temporary lighting, or other electrical equipment utilizing or delivering 60Hz AC power.
- 15. A daisy chain of electrical extension cords is prohibited unless evaluated by a qualified person prior to installation.

10.09 Fire Protection

- 1. Smoking or use of tobacco products is prohibited at UNM. The Contractor shall inform its workers of UNM's tobacco policy and ensure that it is upheld.
- 2. The Contractor shall control the storage and loading of combustible materials within work and office areas to ensure both safety and compliance with applicable fire codes. The material must be well-arranged and aisles shall be maintained open and clear of obstructions. Stored material



shall be kept away from heaters, lamps, hot pipes, equipment, and machinery and the use of extension cords shall be minimized.

- 3. Prior to starting any work, the Contractor shall develop and submit to UNM for review and acceptance, a Fire Protection and Prevention Plan specific to the work under this subcontract. The plan shall be submitted as part of the Contractor's CSP.
- 4. The Contractor shall provide all fire protection and prevention equipment necessary for its operations, including, but not limited to, portable fire extinguishers.
- 5. The Contractor shall provide an adequate number of portable fire extinguishers of the correct size and type for the work activities. Extinguishers shall be maintained per the manufacturer's recommendations, inspected monthly, and tested annually.
- 6. The Contractor shall train workers on the proper use of portable fire extinguishers.
- 7. See <u>Section 11.35</u>, *Welding*, *Cutting*, *Brazing*, *and Grinding* for fire watch and portable fire extinguisher requirements.
- 8. The Contractor shall ensure that fire protection equipment is placed and maintained in proper locations as work progresses.
- 9. The Contractor shall ensure that if temporary heating equipment is installed, it will be used, refueled, and maintained to minimize the fire hazard posed by these devices. The Contractor shall use the listed/approved, temporary heating devices in accordance with the manufacturer's requirements. The Contraction shall also perform refueling operations in an approved manner, place this equipment with sufficient separation from adjacent combustible materials, and monitor the safe operation of this equipment during use.
- 10. The Contractor shall monitor its work and office areas to ensure that all doors, stairwells, aisles, and means of egress are OSHA compliant and are always kept clear and unobstructed.
- 11. If the Contractor furnishes portable field offices, the Contractor shall ensure they have appropriate separations, are secured, that all exits are clearly marked and adequately lighted. If the portable field offices are equipped, all emergency lights must remain functional.
- 12. The Contractor shall address the requirements for the handling, storage, use, and disposal of flammable and combustible liquids and gases. The Contractor shall ensure they are stored properly and dispensed in safety cans manufactured to a recognized standard, and that areas designated for these activities are maintained in an orderly fashion. All hazardous areas shall be posted with appropriate signs and access shall be controlled. The Contractor shall prohibit open flames and smoking in designated storage areas.
- 13. The Contractor shall ensure that portable fire extinguishers, staged fire-fighting equipment, fire suppression system control valves, sprinkler system, standpipe fire department connections, fire



hydrants, and fire lanes are kept clear and unobstructed.

- 14. The Contractor shall maintain a minimum of 18 inches of free space below sprinkler heads when working in facilities that have sprinkler systems. Fire sprinkler heads and fire detection and alarm devices shall be appropriately masked and protected during both painting and sprayapplication of fireproof materials.
- 15. The Contractor shall ensure that combustible waste containers are emptied regularly; equipment, tables, and floors are free from oil or oily rags; and oily rag containers are kept covered and emptied regularly. Janitor/storage closets shall be maintained in an orderly condition and shall not be used to store large quantities of hazardous or toxic chemicals or non-janitorial related chemicals. Electrical, mechanical, and communications rooms shall be kept in order and free of combustible storage materials. Cable trays and raceways shall be free of combustible material, debris, and trash.
- 16. The Contractor shall not permit open fires on the job site.

10.10 Barricades

- The Contractor is responsible for properly erecting and maintaining barricades in such a manner that they provide adequate warning/protection and do not impede the work of others. Any exception must be approved in writing by the UNM PM.
- 2. The Contractor shall provide and use one of the following barricade devices (appropriate for the nature of the job) for all physical hazard areas, including all construction areas.
 - a. Warning Barricades call attention to hazards but offer no physical protection. Yellow and black rope or tape shall be used for Warning Barricades.
 - b. Protective Barricades warn, as well as provide physical protection from falls (see <u>Section 11.12</u>, *Fall Prevention Program*). A protective barricade shall be erected when a warning barricade will not offer adequate protection.
- 3. No barricade shall be placed closer than three feet from the edge of the danger point.
- 4. Barricades must have a designated entrance gate. Entry or exit from an area shall only occur through the designated gate. Stepping over or ducking under the barricade is prohibited.
- 5. When an elevation difference of four (4) feet or more is within three (3) feet of the barricade, a protective barricade or a warning barricade at least six feet from the hazard edge must be used to act as a buffer area around the hazard.
- 6. Authorization to enter a barricade may only be obtained from the PIC working inside the barricade. In an alternative, workers that are authorized to permit entry may be listed on a tag attached to the barricade.



- 7. When a work area is completely isolated from all other activities and operations, the area may be designated as such and posted with the appropriate warning and access authorization signs in lieu of extensive barricades and tags. Barricades must still be utilized within the posted area, as appropriate, to provide hazard control of individual tasks within the work area.
- 8. Barricades must be removed when no longer required.

10.11 Floor and Wall Openings

- Holes or openings through which workers could fall in floors, decking, or roofs, including skylights must be guarded with guardrails or with covers capable of supporting, without failure, at least twice the maximum load expected to cross over the cover. When installed, covers must be secured to prevent displacement. When covers are removed, the exposed holes or openings must be constantly attended or protected by a temporary standard railing.
- 2. Covers must possess distinctive color-coding to reveal their presence.
- 3. Material or equipment may not be stored on a hole/opening cover.
- 4. Wall openings from which there is a drop of more than four (4) feet and where the bottom of the opening is less than three (3) feet above the working surface must be barricaded or provided with standard guardrails. Guardrails shall be constructed with the top rail 42 (±3) inches from the floor or platform level and shall have a mid-rail and toe board and must withstand a side load of 200 lb. Toe boards shall extend four (4) inches above the floor or platform level. The Contractor shall install vertical support posts for guardrails at intervals of not more than eight (8) feet.
- 5. Any floor opening/wall opening adjacent to hazardous operations/locations or machinery must be guarded against falls or unwanted access.



Section 11. CSP POTENTIAL INCLUSIONS

The following sections shall be included in the CSP if part of the construction SOW.

11.01 Aerial Lifts

- Machines manufactured and used for elevated worker platform work (JLG, Hi-lift, etc.) shall be
 operated and maintained in accordance with manufacturer's recommendations by trained and
 qualified individuals. Training records shall be made available to UNM, upon request.
- 2. All persons inside work platforms shall wear a full-body harness attached to a designated anchor point and shall stand on the floor of the platform or basket only. Climbing or sitting on the guardrail or enclosure is prohibited.
- 3. The Contractor shall ensure that lifts are not used as a substitute for a material hoist and that nothing is rigged from the boom or platform.

11.02 Air Quality

Any air quality permits that are required by EPA, NMED, Bernalillo County, and the City of Albuquerque will be in place prior to performing the work. This includes Fugitive Dust Permits which are required if an area of greater than three-fourths of an acre will be disturbed by construction activities. The Contractor must follow all dust reduction activities required by the above permit

11.03 Asbestos Abatement

- 1. If asbestos may be present as a facility hazard, then the hazard must be evaluated in accordance with the Industrial Hygiene requirements in this document. The following sections are applicable if workers may be in contact with asbestos, but do not disturb asbestos except as allowed by OSHA for maintenance and custodial work.
- 2. UNM shall inform the Contractor of the presence and location of asbestos in areas that may be contacted. The Contractor's workers shall receive asbestos awareness training.
- The Contractor shall ensure that workers who may come in contact with asbestos, do not disturb asbestos or perform asbestos abatement, as well as perform any maintenance and custodial work in accordance with 29 CFR 1910.1001 and 29 CFR 1926.1101.
- 4. The Contractor performing asbestos abatement shall submit an Asbestos Abatement Plan (AAP) for UNM's approval prior to the start of work. The AAP shall address the requirements in the contract and the procedures (including materials, chemicals, tools, and equipment) that will be used to perform asbestos work and disposal of asbestos containing waste. The AAP shall be included in the Contractor's CSP.
- The Contractor shall perform all asbestos work in accordance with the EPA Standard 40 CFR, National Emission Standard for Hazardous Air Pollutants (NESHAP), Subpart M; 29 CFR 1926.110;



29 CFR 1910.1001; and the subcontract. The Contractor shall submit the following information, as applicable, prior to the commencement of abatement work:

- a. Company abatement license
- b. qualifications/training/certificates for workers, supervisors, air-monitors
- c. medical records (latest) for workers, supervisors, air-monitors
- d. respirator fit-test (latest) for workers, supervisors, air-monitors
- e. Inspector accreditation certificate and inspection report
- f. Designer accreditation certificate and designer report
- 6. The Contractor shall be cognizant of and responsible for all wastes generated in accordance with Section 11.34 Waste Management/Disposal, of this manual.
- The Contractor shall prepare and submit all required NMED notification forms/letters to City of Albuquerque Environmental Health Department for work performed on ABQ Main Campus, or to NMED for Branch Campuses (with a copy submitted to UNM EHS and the UNM PM) at least ten (10) working days before any work begins in accordance with New Mexico Administrative Code 20.2.78 and 40 CFR 6I .145.
- 7. The Contractor shall comply with the waste handling, packaging, and disposal requirements contained in 29 CFR I926.1101, 40 CFR 61.145, 40 CFR 61.150, 20.9.7.A(9) NMAC, 20.9.8.10-I2 NMAC (as applicable), and the U.S. Department of Transportation shipping regulations contained in 49 CFR 171 and 172.
- 8. The Contractor shall be responsible for transporting asbestos waste to a UNM designated area and container(s) using an approved Special Waste Manifest.
- 9. The Contractor shall provide UNM EHS and PM with copies of the signed waste shipment records as required by 40 CFR 6I.150.

11.04 Biological Safety and Worker Protection

The Contractor shall develop and implement a contract-specific, written Exposure Control Plan (ECP) for direct exposure to wastewater, sewage, contact with blood or other potentially infectious materials, direct contact with wildlife, or potential contact with rodent nests or infestations.

The Contractor shall have a written Blood Borne Pathogens Program that meets the requirements of 29 CFR 1910.1030.

11.05 Chemical Management for Chemicals Used on Site

1. If hazardous chemicals will be used for the work, the Contractor shall develop and implement a written Hazard Communication (HAZCOM) Plan that must include procedures describing the method the Contractor will use to communicate the hazards associated with chemical handling, use, storage, and disposal. The plan shall be submitted as part of the CSP.



- a. Note: For guidance in determining whether a chemical is hazardous, refer to Appendices A and B of the Hazard Communication Standard (29 CFR 1910.1200).
- The Contractor must keep copies of SDS for each hazardous material purchased and/or carried onto a worksite. The Contractor shall submit them to UNM upon request. Hazardous materials brought onto the site without an SDS shall be removed, held off-site, and not released until the SDS is received.
- 3. The Contractor shall ensure that workers are trained in the recognition, proper handling, and use of hazardous substances. Specific hazardous material training shall be provided by the Contractor for the workers involved with the use of hazardous material.
- 4. The Contractor shall label all hazardous substances and/or chemicals that have been transferred from the manufacturer's container into another container.
- 5. Chemicals must be stored in appropriate containers and segregated to ensure compatibility.

11.06 Confined Space Program

- The Contractor shall have a written confined space program that meets the requirements of 29 CFR 1926.353 and 1910.146 as applicable. The Confined Space Program shall include requirements for entering permit-required and non-permit, required confined spaces. Before confined-space work is performed, the Contractor's written program shall be submitted as part of the CSP and approved by EHS.
- 2. Any work within the UNM Utility Tunnels must be performed in accordance with the UNM Ford Utilities Confined Space Program, regardless of if the work meets the definition of confined space or not.
 - UNM Utility Tunnel emergency procedures can be obtained through the UNM FM Utilities Department.
- 3. The Contractor is responsible for air quality evaluation and monitoring in confined spaces. Monitoring for oxygen, explosive gases, and other identified hazard(s) shall be conducted prior to entry into any confined space and the results shall be documented. Monitoring equipment shall be provided by the Contractor and calibrated to manufacturers' recommendations. All workers conducting air monitoring shall have documented training. All instrument calibration and training records shall be made available to UNM upon request.
- 4. The Contractor shall ensure that all workers have completed appropriate confined space training to the current standards
- 5. Prior to each entry into a permit-required confined space, the Contractor shall ensure:
 - a. natural or powered ventilation equipment is used to purge or supply air to the confined space,



- b. a confined space entry permit is completed,
- c. all required training is current,
- d. all electrical service is either low voltage or GFCI protected,
- e. adequate access/egress from the confined space is provided,
- f. a task-specific rescue plan has been developed and reviewed with all involved workers,
- g. if required, a trained and equipped, non-entry or entry rescue team (as dictated by the entry hazards) is assembled and onsite, and
- h. all external sources of atmospheric contamination are isolated.
- 6. The Contractor shall ensure that all workers responsible for safety watches (confined space attendants) are easily identified, properly trained, and aware of the duties associated with each emergency situation that may occur within the confined space.
- 7. When required, the Contractor shall make all arrangements for and bear the cost of an onsite emergency rescue team.
- 8. The Contractor shall not permit entry into any permit-required confined space until the permit system has been properly executed. The permit shall be conspicuously posted at the confined space and all entrants must sign a log upon entering and exiting the confined space.
- 9. The Contractor shall notify UNM PDC and EHS if a new confined space or permit-required confined space is created and/or discovered during the course of the project.

11.07 Cranes and Material Handling

- All crane and material handling operations shall be performed in accordance with the applicable sections of 29 CFR 1910 and 29 CFR 1926, the ANSI B30 series documents, and the manufacturer's instructions.
- A lift plan shall be submitted to EHS for all crane and material handling operations on UNM property.

Note: On August 09, 2010, the OSHA promulgated 29 CFR 1926.1400, *Cranes and Derricks in Construction*. Contractors shall be familiar with and shall comply with these and all of OSHA 1926 Subpart CC regulations. Documentation specified in Subpart CC, including training certification, will be included in the lift plan.

11.08 Demolition

- 1. Demolition work requires advance notification by UNM to the NMED, even if no asbestos is present. The Contractor shall prepare and submit all required NMED notification forms/letters to NMED and forward a copy to UNM at least ten (10) working days before any work begins.
- 2. All Exhaust Ductwork and Chemical Waste Lines must be reviewed and approved by EHS prior to any demolition work.



11.09 Electrical Safety

- 1. The Contractor shall implement a comprehensive electrical safety program appropriate for the activities at the worksite which must meet the applicable electrical safety codes and standards listed in Section 9: *General Requirements*.
- 2. The Contractor will use only electrical equipment that is listed by a NRTL such as Underwriters Laboratory (UL) and will use it as intended per its listing.
- 3. The Contractor shall ensure that all workers who may be exposed to facility electrical hazards meet the training requirements for electrical workers per OSHA and NFPA 70E for Qualified Person(s).
- 4. For work on or near exposed electrical hazards, which includes activities such as zero-energy checks, adjustments, troubleshooting, and maintaining and/or repairing electrical equipment, the Contractor shall develop and follow a job safety analysis, or similar document, that meets the requirements of NFPA 70E.
- 5. The Contractor shall ensure that electrical workers follow all PPE requirements of this manual, as well as the requirements contained in NFPA 70E.
- 6. The Contractor shall ensure that any worker subjected to electrical shock (other than static electricity) is evaluated by competent medical personnel and that UNM is notified. Additionally, an arc flash or burn to the skin or eyes from proximity to an electrical discharge requires UNM notification and evaluation by competent medical personnel.

11.10 Environmental Reporting

- The Contractor shall maintain reports and documentation required by Federal, State, and Local laws and regulations regarding environmental reporting. These reports and documentation shall be submitted to UNM upon request.
- 2. The Contractor shall prepare and submit information and data to UNM for input to any required regulatory reports, including but not limited to:
 - a. the Quarterly Hazardous Waste Report;
 - b. the EPA Annual Tier II Chemical Inventory Report; and
 - c. the EPA Annual Toxic Release Inventory Report.
 - d. UNM will notify the Contractor of any additional required reports needed by UNM.
- 3. This does not relieve the Contractor from reporting as required by Federal, State, or Local laws or of notifying UNM of the UNM's requirement to report if the Contractor identifies any Contractor activity that results in a reporting requirement.
- 4. Environmental Requirements: Many wastes are regulated as hazardous waste, special waste, universal waste, infectious waste, solid waste, and each has specific reporting requirements.



- a. The Contractor is responsible for contacting the UNM PM and EHS for sampling or otherwise determining whether waste (including construction debris) is regulated and if it will ultimately require reporting to regulatory authorities.
- b. The contractor will be responsible for containerizing the construction debris appropriately (as approved by EHS), including that which may be contaminated with toxic metals. The Contractor will notify UNM PM and EHS of scheduled waste production and assist in gathering appropriate information (quantities, state [liquid, solid, gas], etc.) for the required reports.
- c. See Section 11.33: Waste Management/Disposal for more details.

11.11 Excavation and Trenching

- The Contractor shall designate a PIC of the excavation who is qualified, experienced, and knowledgeable in the hazards associated with excavations. The PIC must be onsite whenever excavation work is taking place, including work in the excavation. The Competent Person may serve as the PIC.
- 2. All Contractor workers, whether craft or supervision, involved in any excavation, fill, soil disturbance/transfer, or trenching work activity, including working in any excavation are required to complete Excavation Training. The Contractor shall ensure that fill material (soil, concrete, or asphalt) used on UNM's site is free of contamination.
- 3. The Contractor is responsible for ensuring that all trenching and shoring operations occur in accordance with UNM Standards and OSHA regulations.
- 4. The Contractor shall not transport fill material (soil, concrete, or asphalt) from its point of origin to another site at UNM without obtaining written approval from UNM PM prior to movement of the material.
- 5. The Contractor shall obtain written approval from UNM PM prior to the release of fill material (soil, concrete, or asphalt) from UNM for use outside the UNM facility boundary.
- 6. The Contractor shall not abandon excavated material, debris, or equipment onsite at UNM.
- 7. The Contractor shall utilize NM811 (previously NM One Call) for locating utilities and shall follow all regulations pertaining to performing excavation and trenching in the State of New Mexico.
 - a. NM811 can be reached by dialing 811 or visiting their website, nm811.org.
- 8. The Contractor shall hand-locate (pothole) and expose a five (5)-foot radius around all identified locations prior to any machine excavation. The Hazardous Energy Safe condition must be met prior to excavation. Appropriate precautionary PPE and tools shall be utilized when exposing live or unknown findings.



- 9. The Contractor shall ensure that, while excavations are open, all underground installations are protected, supported, or removed as necessary to protect workers and the utility.
- 10. The Contractor shall erect barricades around the excavation area prior to beginning work activities or ahead of work progress. Barricades shall be installed at least six (6) feet from the edge in a manner that prevents accidental entry into the trenched or excavated area.
- 11. The Contractor shall evaluate and monitor air quality prior to entry into any excavation that may contain possible hazardous atmospheres. Documented results shall be available at the job site.
- 12. Walkways, bridges, or ramps with standard guardrails shall be provided where workers or equipment are permitted, or required, to cross over excavations or trenches.
- 13. The Contractor shall provide (at the job site) a Competent Person (whose qualifications shall be made available to UNM upon request) who will classify all soils and perform inspections daily and after each rain, snow, freeze, thaw, etc. of all excavations/trenches. These inspections shall be documented, kept on file, and made available to UNM upon request.
- 14. UNM Facility Management (FM) Grounds should be contacted regarding the preservation of trees and large shrubs on UNM campuses during excavation. Permission shall be obtained from the UNM PM prior to removing trees or shrubs during the contract.
- 15. The Contractor shall stop work and notify UNM immediately should anything unanticipated be exposed or discovered, including any cultural resource remains.

11.12 Fall Protection Program

- 1. The Contractors CSP shall include a written Fall Prevention/Protection Program that includes maximum use of primary fall protection systems, including, but not limited to, scaffolds, aerial lifts, and hoists.
- 2. The Contractor shall require the inspection of fall protection equipment as required by the manufacturer and prior to each use.
- 3. The Contractor shall adopt a fall protection policy that is OSHA compliant and makes provision for secondary fall protection (full-body harness) for workers who are working or traveling more than six (6) feet (for construction) above a lower level. The Contractor shall provide fall protection devices that shall be manufactured and used in accordance with a recognized standard.
- 4. When workers are required to work on unprotected roofs or other structures, a Roof Access/Fall Protection Plan must be developed by the Contractor and submitted to UNM EHS for acceptance prior to the start of such work. As part of this plan, the Contractor shall review the scope of work to identify and implement the methods to achieve 100% fall protection or prevention.



5. Where lifeline systems are used, anchor points must be capable of supporting at least 5,000 pounds. Lifelines shall be installed and maintained by qualified persons who possess the rigging knowledge necessary to ensure the integrity and safety factors required for lifeline system installation. Lanyards must be secured to vertical lifelines by rope grabs only. Knots, paintershitches, or loops shall not be utilized. Horizontal lifelines shall have tie-off points at least waisthigh.

11.13 Firearm Safety

In accordance with the OSHA General Duty Clause, UNM and the Contractors engaged in UNM activities involving the use of firearms must operate under the New Mexico State Police or Albuquerque Police Department's established firearms safety policies and procedures for security operations and training to ensure proper accident prevention controls are in place.

11.14 Hearing Conservation/Protection Program

- 1. When noise associated with contracted work is equal to or exceeds the OSHA exposure limits, the Contractor shall have a written Hearing Conservation Program that meets the requirements of 29 CFR 1910.95 and 1926.52. The written program shall be submitted as part of the CSP. The program shall include:
 - a. noise monitoring to identify noise levels that require workers to be included in a Hearing Conservation Program,
 - b. administrative and engineering controls,
 - c. the procurement and use of low-noise equipment when possible,
 - d. posting of signs and warnings for areas found to require hearing protection,
 - e. how the contractor will perform audiometric testing to establish a baseline audiogram, and
 - f. training on noise health effects and the hearing protection devices used.
- As part of noise monitoring to identify activities that require workers to be included in a hearing conservation program, the Contractor shall ensure that workers who are part of a Hearing Conservation Program complete annual training as defined in 29 CFR 1910.95 and 1926.52, Occupational Noise Exposure.
- 3. The Contractor shall provide equipment for sampling and monitoring noise levels.
- 4. The Contractor shall calibrate such equipment before and after use, document all measurements, and provide calibration documentation to UNM upon request.

11.15 Heavy Metals

1. The Contractor's CSP shall address requirements specific to any work involving heavy metals, including training, qualification, monitoring, medical surveillance, and worker protection requirements. The most common, but not limited to, encounter in



contraction/demolition/remodeling is the disturbance of lead-based paint, chromium-based paint, and welding fumes.

- 2. The Contractor shall follow the following requirements that define specific worker protections that OSHA requires. These requirements take president over any different general standard which might otherwise apply to the same condition, practice, means, method, operation, or process when working with any of the following materials:
 - a. **Inorganic Arsenic**: The Contractor shall perform work in accordance with 29 CFR 1910.1018 and 29 CFR 1926.1118 (identical standards).
 - Cadmium: The Contractor shall perform work in accordance with 29 CFR 1910.1027 and/or 29 CFR 1926.1127.
 - c. **Lead**: The Contractor shall perform work in accordance with 29 CFR 1910.1025 and/or 29 CFR 1926.62.
 - d. **Chromium (VI)**: The Contractor shall perform work in accordance with 29 CFR 1910.1026 and/or 29 CFR 1926.1126.
 - e. **Welding and Cutting**: The Contractor shall perform work in accordance with 29 CFR 1926.350 thought 354. Metals such as zinc, lead, cadmium, chromium, and mercury are addressed in 1926.353(c).
 - f. **Miscellaneous Metals**: Other metals that may be impacted and other compliance requirements are contained in 29 CFR 1926.55, *Gases, Vapors, Fumes, Dusts and Mists* and Appendix A, *American Conference of Governmental Industrial Hygienists' Threshold Limit Values of Airborne Contaminants for Construction*".

11.16 Inclement Weather

- 1. The Contractor shall establish adequate controls for worker exposure to potential inclement weather conditions, including, but not limited to, heat, cold, wind, lightning, etc.
- 2. The Contractor shall ensure that all workers are trained on the warning signs/symptoms of early heat- or cold-related disorders, and are instructed on the clothing and work methods best suited to avoid heat and/or cold stress. Stay times shall be defined to reduce the possibility of heat- or cold-related disorders if necessary,
- 3. The Contractor shall ensure that workers have access to an adequate, sanitary, potable water supply during all periods of the day and that they have plenty of fluids available when heat stress conditions exist.
- 4. The Contractor shall define protective actions for lightning threats and high wind conditions. Actions should include stopping work and sheltering when required.



11.17 Industrial Hygiene (IH)

- The Contractor shall implement an Industrial Hygiene (IH) Program that will ensure worker exposures are not exceeding the applicable OSHA Permissible Exposure Levels (PELs) to substances listed in 29 CFR 1910, Toxic and Hazardous Substances, Subpart Z; 29 CFR 1926, Occupational Health and Environmental Controls; and 29 CFR 1926, Toxic and Hazardous Substances, Subpart Z.
- 2. The Contractors IH Program shall include, at a minimum, the following elements:
 - a. Initial or baseline surveys and periodic resurveys and/or exposure monitoring, as appropriate, for work areas to identify and evaluate potential worker IH-related health risks.
 - b. The commitment to providing an assessment of potential IH hazards and document methods to mitigate the potential exposures in a JHA prior to commencing work with potential exposure at or above the OSHA PELs.
 - c. Coordination with planning and design workers to anticipate and control health hazards that proposed facilities and operations would introduce.
 - d. Coordination with cognizant occupational, medical, environmental, and work-planning professionals.
 - e. Policies and procedures to mitigate the risk from identified and potential occupational carcinogens.
 - f. Use of respiratory protection equipment and other, necessary PPE.
- 3. The Contractor shall establish procedures to identify significant existing or potential workplace hazards and to assess the risk of associated work injury and illness. Procedures must include methods to:
 - a. Assess worker exposure to chemical, physical, and/or biological workplace hazards through appropriate workplace monitoring.
 - b. Document assessments for chemical, physical, and/or biological workplace hazards using recognized exposure assessment and, when necessary, testing methodologies and using accredited and certified laboratories.
 - c. Record observations, including testing and monitoring results.
 - d. Analyze designs of new facilities and modifications to existing facilities and equipment for potential workplace hazards.
 - e. Perform routine job activity level hazard analysis



- f. Commitment to employ or engage the services of a CIH when there is a potential for overexposure (as determined by the Contractor or EHS).
- g. Evaluate operations, procedures, and facilities to identify workplace hazards.
- h. Review site safety and health experience information.
- 4. The Contractor shall perform the activities identified initially to obtain baseline information and as often, thereafter, as necessary to ensure compliance with this manual and OSHA Subpart Z regulations.
- 5. The Contractor shall ensure that workers have the right, without reprisal, to be notified when monitoring results indicate the worker was overexposed to hazardous materials. Workers also have the right to observe the measuring of hazardous agents and to have the monitoring results of their own exposure.
- 6. The Contractor shall address hazard prevention and abatement, including a process to identify control the hazards based on risk and the hierarchy of controls (i.e., elimination or substitution, engineering controls, work practices and administrative controls, personal protective equipment, see Section 10.07: Personal Protection Equipment) in its CSP.
- 7. UNM will provide the Contractor with site characterization to the extent it is available. These facilities, however, have been used in educational and research operations, and the historical use may not be totally understood. The spectrum of hazards to employees, workers, the public, and the environment for any likely activity must be taken into consideration by the Contractor and their health and safety staff.

11.18 Laser Safety

The CSP shall include a Laser Safety Program that ensures compliance with ANSI Z136.1-2007, *Standard for Safe Use of Lasers*, which is the standard for compliance with the OSHA General Duty Clause. The program shall include laser hazard evaluation, hazard controls, laser safety training, and other requirements specific to the work.

11.19 Lock Out/Tag Out (LO/TO) Program

- 1. Where the Contractor will perform work as defined by 29 CFR 1910.147 and by this section, they must identify (1) all of the hazardous energy sources associated with the equipment that must be controlled to prevent injury, (2) the energy isolating device(s) for those energy sources, and (3) notify the UNM Project Manager of impending de-energization.
- Where the Contractor will perform work as defined by OSHA 29 CFR 1910.147, the Contractor will follow a compliant LO/TO procedure which is to be included in the CSP and approved by UNM.
- 3. When it is necessary to work on UNM equipment, the Contractor will work with the UNM-



designated lead authorized worker to (1) identify all of the hazardous energy sources associated with the equipment that must be controlled to prevent injury and (2) to identify the energy-isolating device(s) for those energy sources.

- 4. When working on non-UNM equipment, the Contractor must (1) identify all of the hazardous energy sources associated with the equipment that must be controlled to prevent injury and (2) to identify the energy-isolating device(s) for those energy sources.
- 5. The Contractor shall acquire and provide the equipment required, including locks and tags, to implement the required LO/TO procedure
- 6. The Contractor shall notify the equipment owners/operators prior to implementing LO/TOs on the site.

11.20 Motor Vehicles and Powered Industrial Trucks (PIT)

- 1. The Contractor shall implement a motor vehicle safety program to protect the safety and health of all drivers and passengers in motor vehicles and powered industrial equipment (i.e., fork trucks, tractors, platform lift trucks, and other similar specialized equipment powered by an electric motor or an internal combustion engine). General requirements for Contractor-provided equipment and vehicles shall be defined in the CSP to ensure compliance with appropriate regulatory requirements (29 CFR 1910.178 and 29 CFR 1926.600 and NFPA 505: Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations).
- 2. The Contractor's workers operating motor vehicles and powered industrial equipment must have a valid driver's licenses.
- 3. The Contractor shall be responsible for training the Contractor's workers to operate equipment and machinery. All workers operating any Contractor-provided vehicles or mobile equipment at sites controlled/managed by UNM must be healthy and unimpaired, possess appropriate and required operator's license(s)/training, and abide by established road regulations and/or job site regulations.
- 4. Operators of All-Terrain Vehicles (ATVs) shall obtain a Motorcycle Safety Foundation (MSF), MSF endorsed, or similar state-approved ATV training. ATV operators must use the appropriate PPE for ATV use. The Contractor shall prohibit passengers riding with operators on ATVs unless the ATV is designed for passengers with seatbelts in place and in use.
- 5. The Contractor shall ensure that all Contractor-provided vehicles and items of mobile equipment are registered/licensed, maintained in a road-worthy condition, and operated and maintained in a safe manner in accordance with the manufacturer's recommendations.
- 6. The Contractor shall ensure that major equipment used in the performance of work under this subcontract is inspected, operated, and maintained by competent workers. The Contractor shall



inspect and maintain equipment in conformance with the manufacturer's recommendations.

- 7. The Contractor's forklift operators must perform a preoperational inspection once during each shift the vehicle is used. In addition, forklift-qualified workers shall inspect forklifts at intervals not greater than 12 months or whenever permanent deformation is suspected. Severe use of this equipment shall warrant more frequent inspection and shall be performed by trained workers.
- 8. The Contractor shall ensure that equipment or machinery that is not in compliance with regulatory requirements is de-energized, rendered inoperable, and tagged out of service, or removed from the project location.
- 9. The Contractor shall enforce the following motor vehicle safety requirements:
 - a. Workers shall not use a cellular phone while the motor vehicle or PIT is in operation.
 - b. All accidents/incidents leading to the damage of a motor vehicle on UNM property must be reported to UNM Project Management and investigated.
 - c. Drivers of motor vehicles shall follow on-site speed limits and other traffic rules.
- 10. Contractor-provided vehicle and mobile equipment operators are responsible for the safety of all passengers and the stability of materials being transported.
- 11. The Contractor shall ensure that vehicles and mobile equipment are shut off during refueling.
- 12. The Contractor shall ensure that parking brakes are set in vehicles when unattended.
- 13. The Contractor shall ensure that dozer blades, end loader buckets, forklift forks, or like equipment parts are lowered to the ground before the operator exits such equipment.
- 14. The Contractor shall ensure that truck drivers exit the cab and remain clear while the truck is being loaded by powered equipment unless the vehicle is equipped with an approved cab shield.
- 15. The Contractor shall manage, clean up, containerize, and characterize all oil, fuel, or petroleum product leakage from Contractor-provided vehicles and equipment and shall follow applicable waste management requirements for disposal.

11.21 Pollution Prevention Waste Minimization

For smaller projects, waste recycling should be coordinated with the UNM Recycling Office. Large demolition operations should divert as much of the waste stream as possible to recycling. This has the added benefit of improving a project Leadership in Energy and Environmental Design (LEED) score.

11.22 Portable Ladders

1. The Contractor shall ensure that ladders are visually inspected before each use by the trained



ladder-user and at least once a year for damage and/or defects. The Contractor shall remove defective equipment from service immediately.

- Manufactured ladders must be rated for industrial or heavy-duty work and may only be used as allowed by the manufacturer. Job-made ladders shall be constructed to conform to OSHA standards.
- 3. Metal ladders shall not be used during electrical work activities, including electrical welding, or if there is any risk of contracting an energized electrical circuit. Portable ladders shall not be used if the ladder or worker will come within 10 feet of an energized power line.
- 4. The Contractor shall provide training on the care, use, and inspection of portable ladders to workers. Training records will be made available to UNM upon request.

11.23 Pressure Safety

- 1. In accordance with applicable requirements, the Contractor must establish safety policies and procedures to ensure that pressure systems are designed, fabricated, tested, inspected, maintained, repaired, and operated by trained and qualified workers in accordance with applicable and sound engineering principles.
- 2. The Contractor shall ensure that all pressure vessels, boilers, air receivers, and supporting piping systems conform to the applicable ASME Boiler and Pressure Vessel Code or to the applicable state or local codes, whichever is more stringent.
 - a. The list of Nationally Recognized Testing Laboratories can be found on the OSHA website at https://www.osha.gov/dts/otpca/nrtl/nrtllist.html.
- 3. The Contractor shall ensure that when national consensus codes are not applicable (because of pressure range, vessel geometry, use of special materials, etc.), the Contractor will implement measures to provide equivalent protection and ensure a level of safety greater than or equal to the level of protection afforded by the ASME or applicable state or local codes. Measures must include the following:
 - a. If compressed gases will be used to perform work, the Contractor must have a Gas
 Cylinder Use and Storage Procedure that meets the requirements of the Compressed
 Gas Association (CGA) Pamphlet P-1 (latest version). The procedure shall include
 segregation by:
 - i. type,
 - ii. proper signage,
 - iii. protective isolation of flammable gases from oxygen,
 - iv. provisions to keep cylinder caps in place when cylinders are not in use,
 - v. positive securing of bottles, and
 - vi. maintenance of safe distances from ignition sources, doors, and windows.



- vii. The procedure shall be submitted as part of the CSP.
- b. The Contractor shall provide cradles and/or cages for lifting compressed gas cylinders and shall ensure that cylinders being transported are secured.
- c. The Contractor shall ensure that their workers are properly trained and qualified for the tasks they will be performing.

11.24 Radioactive Sealed Source and/or Radiation Generating Device

- The Contractor shall notify UNM Health Sciences Safety Radiation Safety (UNMHS RS) and
 receive approval prior to bringing, using, or storing a radioactive sealed source or radiation
 generating device onsite. UNM EHS Radiation Safety group shall facilitate the coordination of
 obtaining the required approvals.
- The Contractor's EH&S Representative will be immediately available during soil compaction testing, Nuclear Density Gauge, Seal Source Radiography Camera operation, or when a Well Logging Tool is present. The Contractor's workers shall have appropriate training and certifications. The Contractor's workers will comply with the UNM Radiation Work Permits. UNM will assist in obtaining such work permits.
- Nuclear Density Gauges, Sealed Source Cameras, and Well Logging Tools will be operated in accordance with the Nuclear Regulatory Commission (NRC) License and the NMED License. The Contractor will follow the NRC and NMED operating procedures.
- 4. The Contractor's workers involved shall wear appropriate whole-body dosimeters and will possess a working, calibrated health physics hand-held instrument to perform radiation surveys as required in the operating procedure.
- 5. The Contractor shall provide the following information to UNMHS RS for review and approval prior to transporting the Nuclear Density Gauge or Sealed Source Cameras onsite:
 - a. A current copy of the Contractor's NRC and NMED Licenses.
 - b. Department of Transportation (DOT) shipping papers (e.g., bill of lading) for the specific Nuclear Density Gauge or Seal Source Camera being transported.
 - c. A current copy of the manufacture's Special Form Certificate, Competent Authority for Package.
 - d. A current lead test document, which includes the Radionuclide, for the Nuclear Density Gauge or Sealed Source Camera.
 - e. Current training documentation for all workers transporting and using the equipment in question.



- f. A current copy of the Contractor's operating procedure.
- g. Emergency contact list.
- 6. The Contractor shall be responsible for notifying and providing the required documentation as described above to UNMHS RS prior to bringing the source/generator on site.

11.25 Radiological Requirements

Radiological issues, other than the use of radiation containing or generating devices brought to the sight and removed in-tact, if applicable, must address the UNMHS RS requirements. The Contractor must provide information to and coordinate with the UNMHS RS group and proceed only with their approval when radiological hazards other than the sources/generating devices being brought onto site (see Section 11.24: *Radioactive Sealed Source and/or Radiation Generating Devices*).

11.26 Refrigerants

- 1. The Contractor shall be responsible and accountable for compliance with the EPA CAA Section 608, regulated under 40 CFR Part 82 for all refrigerant related work.
- 2. The Contractor shall ensure that their workers are made aware of the content of these practices prior to beginning work on refrigerant containing equipment.
- 3. The Contractor shall use only proper-level, EPA certified technicians for the type of equipment being serviced.
- 4. The Contractor shall use only EPA certified recovery/recycle units.
- The Contractor shall provide UNM a signed certification statement affirming that the Contractor has submitted an EPA Recovery Unit Acquisition Certification form to the EPA (a copy of the form is acceptable).

11.27 Respiratory Protection

- 1. The Contractor will have a written Respiratory Protection Program addressing the required elements in both OSHA 1910.134 and ANSI Z88.2. Elements include but are not limited to:
 - a. designated qualified respirator program administrator,
 - b. respirator selection,
 - c. medical evaluation,
 - d. fit testing,
 - e. use, maintenance, and care,
 - f. breathing air quality and use (if supplied-air respirators are required),
 - g. training,
 - h. program evaluation, and
 - i. record-keeping.



- j. The written program will be submitted as part of the CSP or as an addendum.
- The Contractor's designated respirator program administrator must oversee the Contractor's respirator program.

Medical Evaluation

- a. The Contractor must identify a Physician or Other Licensed Health Care Professional (PLHCP) to perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as a medical questionnaire. The information required is contained in Appendix G of OSHA standard 1910.134. The Contractor must obtain a written recommendation regarding the worker's ability to use the respirator from the PLHCP.
- b. The medical evaluation must be completed prior to fit-testing and use of the respirator.

4. Fit Testing

- a. The Contractor must ensure that workers pass an appropriate Qualitative Fit Test (QLFT) or Quantitative Fit Test (QNFT), per OSHA regulations.
- b. Fit testing is required prior to initial use, whenever a different respirator facepiece is used, and at least annually thereafter. An additional fit-testing is required whenever the worker, the employer, or the PLHCP makes visual observations of changes in the worker's physical condition that could affect respirator fit (e.g., facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight).

5. Use of Respirators

a. Contractors must clean and disinfect respirators, using either the procedures in Appendix B-2 of OSHA 1910.134 or equally effective manufacturer's procedures at the intervals specified in OSHA 1910.134.

Provisions will be made for workers who wear corrective lenses and are required to wear full-face respiratory protection. These provisions will include rotation from such respiratory protection work and eyeglass inserts or special lenses, as/if required.

11.28 Scaffolds

- 1. If scaffolds will be used to perform work, the Contractor shall include a written Scaffolding Procedure in the CSP that meets the requirements of 29 CFR 1926.450.
- 2. Scaffold platforms shall be fully planked or decked out, capable of supporting four (4) times the maximum intended load to be imposed upon them, and all sides must be protected by a standard guardrail system. The top rail shall be approximately 42 inches above the platform. A mid-rail and a 4-inch toe board shall be installed.



- 3. The Contractor erected scaffolding, where workers are working/passing below, shall have planking/siding or netting installed from the platform to the top rail.
- 4. The Contractor shall develop a scaffolding tagging system that utilizes a red tag to indicate scaffolding under construction or demolition; a yellow tag to indicate scaffolding that is complete, but that has hazards associated with it; and a green tag to indicate scaffolding that has been erected to a complete, safe standard.
- 5. The Contractor shall erect or modify scaffolding under the direction of a trained, competent scaffolding builder, whose qualifications shall be made available to UNM upon request. The competent person shall perform and document scaffold inspections before initial use, including initial use following alteration and daily thereafter.
- 6. The Contractor shall provide safe access/egress to all levels of scaffolds. Scaffold platform accesses shall be protected to prevent the possibility of accidental fall through.
- 7. Special scaffolds (e.g., hanging scaffolds, 2-point suspension scaffolds, etc.) shall be designed by a competent engineer and erected with all necessary personal safety equipment installed, such as rope grabs and lifelines.
- 8. All scaffolding erected by the Contractor shall have casters, jackscrews, or base plates installed. Mudsills shall be used where required. Scaffolding shall be level and plumb, capable of supporting at least four (4) times the anticipated load and secured to a solid structure when required.
- 9. The Contractor shall provide scaffold user training to workers. Training records will be made available to UNM, upon request.

11.29 Spill Prevention, Reporting, and Response

- The Contractor shall prepare and implement a Spill Prevention Control and Countermeasure (SPCC) plan in accordance with 40 CFR 112 (SPCC Plan) if they will have an (including temporary or mobile tanks) aggregate aboveground storage capacity of 1,320 gallons or greater of oil or other petroleum products. The SPCC plan shall be submitted by the Contractor as part of the CSP or as an addendum as necessary.
- 2. The Contractor shall develop and maintain spill prevention control and countermeasures for chemicals, petroleum, and waste products used and stored on the worksite. The following BMP shall be used for such spill prevention and countermeasures:
 - Establish secondary containment, diversionary structures, and/or equipment to prevent the products from contaminating the environment in the case a spill or leak would occur.
 - b. Locate storage facilities away from low-lying areas, such as ditches, water-courses, and



storm sewers.

- c. Maintain nearby spill control equipment (i.e., spill kit).
- d. Effectively containerize and label all products.
- 3. The Contractor shall maintain an inventory of all hazardous materials they have or maintain on-site as required by OSHA 1910.1200. The Contractor will supply UNM with an inventory of chemicals, petroleum, and other products to be stored at the worksite in quantities greater than 100 gallons or 500 pounds (whichever is smaller). Prior to bringing those stated materials on site, the Contractor will also provide UNM with the steps that will be taken to prevent releases of the products.
- 4. The Contractor shall provide immediate notification to UNM PM of any spill, leak, pump, pour, discharge (including wastewater), emission, or dump of materials to the environment, regardless of quantity. The Contractor shall also report any other incident relative to material/waste handling, storage, transportation, or disposal and shall take immediate and appropriate steps to protect human health and the environment. The Contractor agrees to sample and analyze liquid releases and/or spill residues as may be required for characterization and disposal that results from their actions.
- 5. The Contractor shall not store or use the chemicals listed in the Clean Air Act Section 112R, *Toxic or Flammable Chemicals* in excess of the threshold quantities that would require UNM to have a Risk Management Plan. The Contractor shall provide a list of all chemicals planned to be stored or used over the duration of the project in quantities in excess of 500 pounds. This list is required to be provided prior to the start of work.



11.30 Storm Water Management

- 1. The Contractor shall comply with all Federal, State, and Local laws and regulations regarding storm water runoff and control of contaminants from construction sites. The Contractor shall utilize Best Management Practices (BMP) including installation of erosion controls to prevent the movement of storm water and contaminants from the site. Furthermore, the Contractor will comply with all actions set forth in the Storm Water Pollution Prevention Plan (SWPPP) submitted to the EPA and kept at the job site.
- 2. The Contractor shall submit an NOI to Discharge Storm Water and assist UNM with the development of a SWPPP in accordance with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) for Storm Water Discharges from construction activities. An NOI must be submitted for all projects greater than or equal to one acre.

11.31 Suspended Worker Platforms

- Suspended worker platforms shall only be used when they are the least hazardous way to
 perform the work and the Contractor shall develop and submit a Lift Plan to UNM for review
 and approval prior to use. The plan shall include but limited to, worker training, pre-lift
 meetings, trial lifts, and platform and rigging inspections.
- Worker platforms (baskets) provided by the Contractor shall be designed, by a qualified
 professional or registered engineer. Additionally, any repairs or alterations to worker platforms
 must be approved by a qualified professional or registered engineer. The platforms must have
 permanent markings indicating maximum weight and must be load-tested in accordance with 29
 CFR 1910.179.
- 3. If UNM approves the use of crane suspended worker platforms, the Contractor shall thoroughly inspect the crane/derrick and ensure it has an operational anti-two-block device and locking devices on the hook. Freefall capacity, if present, shall be positively locked out or disabled. The area under the lift shall be isolated by barricades and signs.
- 4. The Contractor shall provide a positive means of communication between the crane operator and workers in the crane suspended worker platform. Workers in the platform shall wear a full-body harness attached to a designated anchor point.
- 5. The Contractor shall describe how they and their subcontractor intend to comply with this section in the Contractor's Contract-Specific Safety Plan.

11.32 Traffic and Pedestrian Controls (OSHA 1926 Subpart G)

The Contractor shall develop and implement a Traffic Control Plan (TCP) for the worksite, including the placement and use of traffic control devices and flagmen. The plan shall address changes required in traffic flow, pedestrian flow, and associated controls as the work progresses. The plan will be submitted



to the UNM PM and the UNM Parking and Transportation Services (PATS) for approval. The Contractor's TCP shall be submitted for each phase of a multi-phase project.

- 1. The Contractor's TCP must include a set of control measures designed to minimize the impact on transportation and to facilitate the passage of vehicles and pedestrians around the work zone. Strategies for traffic operations must include:
 - a. demand management,
 - b. corridor/network management,
 - c. safety management and enforcement, and
 - d. work-zone traffic management.
- 2. The Contractor's TCP shall include a set of control measures designed to inform road users, the general public, area residences and businesses, and appropriate public entities about the project and its impacts.
- 3. The Contractor's TCP controls must conform to accepted design standards, such as the most recent version of the Manual on Uniformed Traffic Control Devices (MUTCD), for traffic control devices used in construction and maintenance work zones. The amount of detail included in the TCP depends on the complexity of the project, volume of traffic flow, roadway geometry, and the activities being performed. At a minimum, the TCP shall include a description outlining how vehicles (including oversize vehicles) and pedestrians will be directed to use traffic paths prescribed in the TCP during every phase of the project. Instructions addressing the sequence of actions necessary to set up, maintain, operate, and take down the traffic control devices shall also be included.
- 4. The Contractor shall analyze and design temporary diversions of traffic from its normal course while creating and maintaining a safe work zone.
- 5. The Contractor shall equip flashing amber lights on any barricade left after dark on or in close proximity to roadways.

11.33 Waste Management/Disposal

- The Contractor shall comply with all Federal, State, and Local laws and regulations for generation, storage, packaging, transportation, and disposal of wastes generated at sites controlled by UNM.
- 2. The Contractor shall coordinate with UNM EHS when planning and before conducting project activities at UNM to verify additional guidance on permits and requirements relative to waste and materials management.
- 3. The Contractor shall not abandon or leave any waste, materials, product, chemicals, debris, equipment, excess concrete, asphalt, or soil on-site at UNM without the approval of UNM.



- 4. Waste regulated by EPA or NMED will be packaged by the Contractor and disposed of by the Contractor through an appropriate third party. UNM EHS will not be responsible for arranging the disposal of hazardous waste generated by a contractor.
- 5. Waste stored, handled, packaged, transported, and/or disposed of by the Contractor will be in accordance with EPA, NMED, and DOT regulations and requirements.
- 6. The Contractor will provide a list of waste to be generated, including:
 - a. Waste streams that will be generated;
 - b. Estimated volumes by stream;
 - c. Packaging required for shipment; and
 - d. Disposal destination. (The Contractor will segregate accordingly.)
- 7. The Contractor shall notify the UNM PM immediately if a waste stream is generated that was not included in the approved plans. Work involving the new waste stream shall not continue until authorized by UNM EHS.
- 8. For Contractor controlled universal waste, special waste, or hazardous waste satellite accumulation areas, the Contractor shall:
 - a. Set up appropriate areas for accumulating and storing wastes in pre-approved locations (e.g., <90-day accumulation area, satellite accumulation area, universal waste area, used oil area, New Mexico special waste area) approved by the UNM EHS Hazardous Waste Specialist.
 - b. Perform all necessary inspections, record keeping, and reporting requirements for accumulation, staging, or storage areas the Contractor establishes, and submit inspection records to UNM at the end of the project for records management.
 - c. Make recordkeeping and inspection records available to UNM upon request.
- 9. The Contractor shall participate in periodic UNM and/or regulatory agency waste management compliance inspections. The Contractor shall:
 - a. Ensure that all containers are packaged, labeled, screened, and marked in accordance with the 49 CFR Department of Transportation requirements.
 - b. Coordinate waste transportation directly with the disposal facility or through the UNM EHS Hazardous Waste Management.
 - c. Notify UNM's waste generator and UNM EHS of scheduled waste shipping dates.
 - d. Verify that all shipping containers are secured by the carrier prior to transportation.
 - e. Transport wastes in accordance with the off-site receiving facilities' waste acceptance criteria and 40 CFR Department of Transportation requirements.



- f. Ensure transportation is by an approved carrier is appropriately placarded and licensed to transport the waste.
- g. Maintain a copy throughout the lifetime of the project of the final Due Diligence Report(s) provided to UNM.
- h. Provide UNM a copy of the final Due Diligence Report(s) with the Waste Profile form and/or Land Application Package(s), if applicable.

11.34 Wastewater Discharges

- 1. The Contractor shall comply with all Federal, State, and Local laws and regulations regarding wastewater management and discharges. Wastewater includes sanitary wastewater, industrial wastewater, potable water, or any other liquid which may pollute waters of the state. Wastewater shall not be discharged to any watercourse without coverage under an approved surface Water Discharge Permit or an approved Notices of Intent (NOI) to Discharge. Wastewater shall not be discharged to the subsurface without coverage under an approved Groundwater Discharge Plan. The Contractor shall contact the UNM PM prior to any wastewater discharges from the project. The Contractor shall provide the permit or Discharge Plan when required.
- The Contractor shall capture all concrete and mortar washout material in on-site containment
 areas for dewatering, evaporation, and hardening at locations designated by the UNM PM. The
 Contractor shall ensure residue from this process is accounted for and managed as approved by
 UNM.
- 3. For wastewater discharges into UNM sanitary sewer, the Contractor shall demonstrate compliance with the applicable Waste Acceptance Criteria (WAC) defined by the country water authority and receive approval from the UNM PM prior to any such wastewater discharges. Compliance with the WAC may be required by UNM and may be demonstrated through existing water quality data or sampling and analysis by the Contractor.

11.35 Welding/Cutting/Brazing/Grinding

- 1. The Contractor shall ensure that its workers are trained in, and comply with, the requirements for proper fire prevention and equipment use when welding, cutting, brazing, or grinding.
- 2. The Contractor shall ensure that its workers are certified to the type of material, welding process, and necessary standard for the work they are performing.
- 3. Welding, cutting, grinding, and brazing equipment apparatuses and tools shall be inspected before each use. Cutting torch assemblies shall be equipped with pressure relief valves, backflow prevention devices, and flash arrestors.
- 4. The Contractor shall ensure that workers performing welding, cutting, grinding, or other spark-



producing activities wear fire-retardant clothing, as well as other applicable body protection (leather gloves, sleeves, aprons, etc.).

- 5. Prior to beginning any spark- or flame-producing operation, the Contractor shall inspect the work area for the presence of combustible, flammable, or toxic materials, and shall ensure that those materials either (1) are not within a 35-foot radius of the operation area or (2) are protected.
- 6. The Contractor shall evaluate the housekeeping conditions, fire extinguisher availability, emergency exit locations, and pull alarms for emergency response services prior to starting work involving spark- or flame-producing operations.
- 7. Prior to beginning any spark- or flame-producing operation, the Contractor shall assess the work area for proper ventilation to prevent the accumulation of fumes, gases, particulates, or conditions that would create an oxygen-deficient or oxygen- enriched atmosphere.
- 8. The Contractor shall designate a fire watch who has the responsibility of (I) monitoring the spark- or flame-producing operation, (2) remaining for 30 minutes after the conclusion of the operation to assess potential ignition hazards, and (3) walking the area to ensure that no smoldering ambers are present that could ignite a fire in the work area.
- 9. The Contractor's workers conducting a spark- or flame-producing operation shall ensure that a fully-charged fire extinguisher is in the immediate area and that spent welding rods are properly disposed. The work area should be properly shielded with a curtain or managed in such a way that it protects against incidental exposure by observers. All gases should be shut off at the cylinder valve when the operation is complete.

11.36 Work within the Boundary of a Solid Waste Management Unit

Any work within a Solid Waste Management Unit, which is regulated as an RCRA site (Hazardous Waste Site are regulated by the RCRA and regulations), a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site, or State regulatory agency dealing with CERCLA, RCRA, or proposed sites under waste regulations, will comply with OSHA 1910.120 and/or 1926.65 requirements for worker protection.