

## Contractor Projects in Student Housing

Contractors who perform work within or adjacent to student residences must sign a document titled “Special Contract Conditions for Construction Projects in Occupied Student Housing, Enclosure 1”. This document identifies contractor expectations when working in these areas to ensure students’ privacy and enjoyment of their residence, maintains security of the residence, limits contact with the students and provides advanced notice of any work that may affect the residents.

Highlights from the contract conditions indicate contractors must:

- Conduct themselves in a manner that does not constitute sexual harassment.
- Not smoke or chew tobacco within 20 feet of any campus building entrance.
- Only work Monday through Friday from 8:00 a.m. to 5:00 p.m., unless specifically authorized by the Project Manager.
- Minimize noise that may be heard by residents outside of the work days/hours noted above.
- Not eat, drink, or play music or radios outside of designated construction area
- Not use any of the building furnishes at any time for any reason.
- Not access any housing department space outside of the construction area.
- Coordinate access to the student housing through the Mines Project Manager. **Seventy-two hour notice** is required to enter any occupied residence.
- Not prop open doors.
- Secure their work area at the end of each shift.
- Wear Mines issued identification badges

# Contractor Environmental Health and Safety Handbook



## Emergency Information

If a fire alarm is activated, contractors must leave the facility and not reenter until an all clear is announced. Any alarm triggered by the contractor must be reported immediately and a representative must be available to address the incident. In the event of an emergency, the contractor should report the incident to the Mines Public Safety Office at 911 or 303-273-3333.

## Emergency, Urgent Help and Other Important Phone Numbers

Emergency services .....	911
Fire .....	911
Department of Public Safety .....	303-273-3333 (campus police)
Environment Health and Safety (EHS) .....	303-273-3316 (phone monitored 24/7/365)
Facilities Management (Normal Business Hours)...	303-273-3330
Facilities Management (After Hours) .....	303-384-2211
Office of Design and Construction (ODC) .....	303-273-3568
Colorado Poison Center .....	1-800-222-1222
Mines Parking Services .....	303-273-3100

## Fire Alarm System Modifications

Modifications to fire alarm systems (removing, replacing, adding, relocating, rewiring devices or programming a fire panel) requires a NICET Level II certified technician to be present overseeing the modifications. Any impairments to the Fire Protection System shall be coordinated with Mines Project Manager, refer to the Fire Protection System Impairment section of this handbook.

When planning and performing work, minimize impacts to the Building's fire protection system, only take points offline that will be affected by your work. Mines electric shop can assist with identifying the proper points to taken offline

## Confined Space Entry

Contractors shall have a confined space entry program. Contractors without a confined space entry program will not be allowed to perform work in a Mines confined space.

Contractors must follow their own Confined Space Entry Procedure when entering confined spaces. Contractors must work through their Mines Project Manager and Mines EHS to obtain hazard information regarding the confined space. Mines Project Managers will debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in permit spaces during entry operations.

## Steam Tunnel Entry

Mines Steam Tunnel is considered a non-permit required confined space. Due to the extensiveness of the steam tunnel, entry into the tunnel requires the following:

- Notify Mines EHS of entry into and exit from the tunnel by calling 303-273-3316
- A four gas air monitor for each group entering the space
- A minimum of 2 individuals entering the space
- Verification of ventilation prior to entry

## Fire Detection System

Contractors shall prevent the inadvertent activation of the fire detection system when performing work activities that generate smoke, dust or mists.

When performing work activities that generate smoke, dust or mists, work with Mines Project Management to determine the best method of preventing inadvertent activation of the fire detections system; taking specific smoke detectors off-line, covering smoke detectors or disconnecting the smoke detector.

Taking specific smoke detectors off-line requires **72 hour notice** to Facilities Management.

The fire detection system shall be restored to normal operation at the end of the task or end of the work day, which ever comes first.

## Fire Protection System Impairments

Contractors performing work on a fire protection system shall coordinate work activities on that system with the Mines Project Manager. Impairments to the system requires a **72 hour notice** to the impairment coordinator in Facilities Management.

Mines Fire Protection System Impairment process can be found at <https://www.mines.edu/ehs/fire-safety/>. To initiate the impairment process complete Section 1 of the Impairment Notification Form and send it to [firesystemimpairments@mines.edu](mailto:firesystemimpairments@mines.edu) and to your Mines PM.

## Introduction

Colorado School of Mines (Mines) values the health and safety of all campus personnel, including contractors who perform work for the school. This handbook informs contractors of Mines' expectations for the safe execution of work in order to protect the campus community and property

## Expectations for Environmental Health and Safety Performance

Contractors performing work on Mines property are expected to control the hazards associated with their work activities sufficiently to protect their workers, the public, students, faculty, and staff from harm and injury. Contractors are expected to:

- Perform work in accordance with their company's safety program and applicable federal, state, and local regulatory requirements (OSHA, EPA, CDPHE, City of Golden, etc.).
- Promptly notify the Mines Project Manager of all accidents involving injury to personnel and/or damage to property.
- Promptly contact the EHS department in the case of chemical spills that occur outdoors or are large chemical spills.
- Complete job hazard evaluations and control hazards as necessary prior to performing work.
- Secure and sign job site as necessary to keep unauthorized personnel from entering. Sufficiently barricade trenches, holes and pits to mitigate fall hazards.
- Maintain building security by refraining from propping open doors.
- Provide training to their workers and verify their competency to safely perform their duties.
- Provide competent persons as required by OSHA for hazard identification and specific activities such as fall protection, confined space entry, scaffolding and excavations.

- Maintain a clean and organized job site.
- Keep main corridors and stairwells clear and easily accessible.
- Smoke only in contractor vehicles or other designated areas.
- Store chemicals only in covered storage containers, no chemicals may be stored outdoors.
- Investigate accidents/incidents to ensure causes have been addressed prior to continuing similar work activities.
- Obtain and maintain required permits and licenses for the job
- Provide employees with the necessary PPE to safely perform the job.
- Provide their own safety and construction equipment. Contractors are not allowed to utilize Mines equipment and vehicles.
- Provide work zone traffic control. Drivers, pedestrians, and cyclists must be able to see and understand the construction traffic routes. The contractor will use all necessary means including flaggers, signs, barricades to safely manage the movement of construction traffic.

## Hot Work

Hot work is any activity that generate sparks or flames. Examples of hot work include, but are not limited to:

- Gas or arc welding
- Grinding
- Thawing pipes
- Brazing, cutting
- Soldering
- Torch-applied roofing

Mines has developed a hot work procedure and permit which applies to both Mines employees and to Contractors. The procedure is applicable to all hot work activities except those taking place in a designated welding area or in new facilities in which Mines has not accepted beneficial occupancy. If contractors do not use the Mines hot work process, they must have a program that is acceptable to Mines.

The Mines Hot Work Permit can be obtained and completed by visiting the Mines EHS Hot Work website available at <https://www.mines.edu/ehs/hot-work-permit/>

Contractors are required to complete the Hot Work Permit Form and submit the form electronically to the Mines EHS Department for review.

Taking specific smoke detectors off-line requires **72 hour notice** to Facilities Management.

Contractors are required to print a copy of the Hot Work Permit and have the permit present at the job site in an accessible and visible location for the duration of the hot work activities.

Contractors must place screens around welding areas to prevent inadvertent viewing by a passerby. The welding screen will be posted with appropriate signage.

## Excavations and Underground Utilities

Contractors are required to perform a utility locate for both public and private utilities prior to digging, driving stakes and other activities that may damage underground utilities.

Call 811 for the utility locates and indicate that the locates are for Mines. Mines has contracted with a 3<sup>rd</sup> party to automatically perform a private utility locate when a request is made through 811, Utility Notification Center of Colorado (UNCC).

The Mines Project Manager will seek approvals from Mines EHS prior to any excavation work in and around Engineering Hall, former CSMRI site near clear creek and former Golden Ford site. EHS will evaluate the risks associated with underground legacy issues.

Contractors must take the necessary precautions to protect underground utilities from damage and protect workers from inadvertent contact. When working within 3 feet of an identified utility, techniques such as hand digging, potholing, or hydrovacating shall be employed.

Isolation of utilities requires a request to be submitted with the Mines Project Manager at least **72 hour** prior to the utility outages.

## Cranes and Material Hoist Operations

Contractors shall provide appropriate barriers around cranes and material hoists to prevent pedestrian and vehicular traffic from accessing the hazard zone. Closure of roadways or main pedestrian corridors shall be coordinated with Mines Project Manager.

## Heavy Equipment Operations and Traffic Control

Contractors shall manage heavy equipment operations (haul trucks, fork lifts, backhoes, etc.) to minimize conflicts with pedestrian and vehicular traffic. When moving heavy equipment across walkways and onto public roadways the contractor shall engage the use of spotters/flagmen to ensure the safety of foot, bicycle and vehicle traffic. Closure of roadways or main pedestrian corridors shall be coordinated with Mines Project Manager.

## Hazard Communication

Contractors shall have and follow their own hazard communication plan.

When contractors are working in laboratories or industrial spaces, Mines Project Manager will:

- Communicate the hazards and precautions for working within that space.
- Inform the contractor of any alarms and the associated alarm response for that work area.

Laboratories that house radiological or biological hazards require a hazard specific orientation prior to working within that space. This orientation is provided by Mines EHS.

## Hazardous Materials

- Contractors bringing hazardous materials on site must be prepared to share Safety Data Sheets (SDS) for materials being brought onsite if requested by Mines.
- Hazardous materials must be appropriately stored to prevent damage and spills.
- All unused materials must be removed from campus at the end of the project unless specifically addressed in the contract.
- Under no circumstances may hazardous chemicals be poured down a drain or spilled into any storm sewer.

## Waste/Hazardous Waste

Contractors are responsible to properly dispose of waste materials in accordance with local, state and federal requirements.

## Spill Prevention and Response

Contractors are responsible for any petroleum-based or chemical spill within their construction boundary as well as spills that migrate outside the construction boundary. Spills of diesel fuel, glycol, hydraulic oil or other spills that are caused by a contractor's equipment, container, personnel or subcontractor are the responsibility of the contractor. Spills involving research chemicals in a laboratory that are caused by the contractor's equipment, container, personnel or subcontractor are the responsibility of the contractor but will be cleaned up by Mines EHS.

Contractors may request research chemicals be relocated when working within a laboratory

Contractor responsibilities include:

- Spill clean up
- Reporting the spill to Mines Project Manager
- Reporting the spill to Mines EHS, by calling 303-273-3316
- Post remediation sampling
- Covering the full cost of spill clean up-activities

For construction projects that require bulk fuel storage on Mines property, the contractor must ensure:

- Fuel is stored in a double walled tank
- The tank must be surrounded with a berm with a height to contain 125% of the storage tank volume.
- Personnel conducting refueling operations must remain within visual range to ensure spills do not occur.
- Storage containers must be properly labeled.

Fuel day tanks or fuel cans may be used if they are FM approved containers that are properly labeled.

When performing dust generating activities that may impact smoke detectors, HVAC or sensitive equipment, protection must be provided.

## Hazardous Energy Control (Lockout/Tagout)

Contractors are expected to follow their own Hazardous Energy Control/Lockout Tagout (LOTO) Program. LOTO of campus utilities and systems to accomplish hazardous energy control shall be coordinated with Mines Project Manager to ensure appropriate notifications have been made and system impacts to campus have been managed. MINES and the contractor will inform each other of their respective LOTO programs. A copy of Mine's LOTO program can be accessed through the following link, <https://inside.mines.edu/EHS-Occupational-Safety>.

## Hidden Utilities in Buildings

When performing work that will penetrate building surfaces such as walls, floors, ceilings and roofs, contractors are required to locate utilities that may be hidden in those surfaces prior to performing the work.

The contractor should determine the appropriate combination of utility locate methodologies to reliably assure hidden utilities will not be disturbed or damaged. Utility locate methodologies may include review of drawings, walk down of the work area, use of a borescope, use of ground penetrating radar and evaluate against standard installation methodologies.

Contractors must take the necessary precautions to protect the hidden utilities from damage and protect workers from inadvertent contact.

Isolation of utilities requires a request to be submitted with the Mines Project Manager at least **72 hour** prior to the utility outages.

## Rooftop/Elevated (over 6 feet) Work

When accessing or working on rooftops contractors are required to ensure potential fall hazards have been mitigated by providing adequate fall protection through passive (e.g. guard rails) or active (e.g. personal fall arrest) systems.

Many Mines facilities have some form of fall protection system installed on their roofs, however most facilities do not have complete systems that cover the entire roof area. The types of installed fall protection systems at Mines include 42” parapets, guardrails, mechanical screening, horizontal life lines, and anchors for personal fall arrest systems (PFAS).

Contractors may use Mines installed fall protection system **after:**

- The contractor’s competent person has assessed the system and determined it is acceptable for their use; and
- The contractor has submitted a Fall Protection Plan to Mines that indicates how Mines installed fall protection system will be used and their competent person’s review of the system.

Mines specifically makes no warranties concerning the condition or suitability of any PFAS, and assumes no liability for any damages arising from the use of any previous installed PFAS.

Rooftop areas are not equipped with Fire Alarm annunciation. Contractors are encouraged to have a plan in place to ensure their workers are notified in the event of a building fire alarm.

## Dust Control

Contractors performing dust generating activities must implement dust control measure to mitigate exposure to campus population, and migration of dust into adjacent work spaces. When wet methods are used for dust control, water runoff must be managed so that it does not enter storm drains or water ways.

## Storm Water

Any construction activity, including grading, clearing, excavation, or other earth moving processes may require a National Pollutant Discharge Elimination System (NPDES) Storm Water Quality Permit. The NPDES storm water permit requirement is a component of the Clean Water Act.

Storm Water Quality Permit is required whenever construction activities will disturb one half acre or more. A permit is also required whenever a project disturbs less than one half acre but is part of a phased project that will impact one half acre or more over the course of the project.

Contractors are required to obtain Storm Water Quality Permits for jobs meeting the criteria defined above.

The City of Golden is a designated Qualifying Local Program by the Colorado Department of Public Health and Environment (CDPHE). Storm Water Quality Permits may be obtained through the City of Golden for construction sites that disturb up to 5 acres. The permit application is available at: <https://www.cityofgolden.net/government/departments-divisions/water/stormwater/>

Construction sites that disturb greater than five acres require a State Storm Water Construction Permit in addition to the City permit. Contact CDPHE at <https://www.colorado.gov/pacific/cdphe/wq-construction-permits> or 303-692-3500 for more information.

No hazardous, toxic, or solid materials shall be discharged to the storm water conveyance system. Contractors performing work that will create potential water runoff must contact the City of Golden Storm Water office and Mines EHS for guidance.

Do not locate dumpsters over a storm drain. Close dumpster covers at the end of each workday.

## Asbestos

Asbestos was incorporated in a number of widely used products, many of which were used in building construction from the late 1800's until the mid 1980's. The most common use of asbestos in Mines buildings was in floor tiles, mastic, thermal systems insulation (TSI), plaster, ceiling tiles, structural steel fireproofing, and acoustical and decorative plaster. Per CDPHE Regulation 8, building materials shall be presumed to contain asbestos unless historical information or testing indicates otherwise.

Contractors who perform building or facilities-related maintenance, repair or renovation shall be provided the location of suspect and known asbestos-containing materials (ACM) in the work area(s) to which they are assigned. Contractors shall, under no circumstances, damage or disturb known or suspect ACM (unless they are a licensed Asbestos Abatement Contractor and have been specifically contracted to perform asbestos abatement activities). If in the course of the work, suspected asbestos materials are discovered, the contractor shall immediately stop work that might disturb the material and notify the Mines Project Manager.

It is the responsibility of the Contractor to provide their employees with an asbestos awareness program, which shall include, but not be limited to the information contained in this section and appropriate training as required by CDPHE Regulation 8 and OSHA.

Contractors performing work that is expected to disturb materials with trace quantities of asbestos (less than 1% asbestos content) must adhere to OSHA standards regarding asbestos materials which includes the use of wet methods (when feasible) and/or HEPA filtered equipment to reduce and control dust generation. If inadequate housekeeping practices associated with materials containing trace asbestos is observed, Mines reserves the right to request the contractor demonstrate that airborne asbestos levels, upon completion of the job or prior to a Mines

employee's need to enter the work area, are below the Maximum Allowable Asbestos Level (MAAL) established by CDPHE.

## Lead

Contractors who perform building or facilities-related maintenance, repair or renovation work shall be informed by the Mines Project Manager of the location of lead-containing building materials in the work area. Project Managers may request that Mines EHS complete a lead-based paint survey prior to the start of site work activities.

Contractors who will disturb lead-containing building materials during the course of site activities shall take all necessary precautions to prevent any exposure to lead dust or contamination. These measures shall conform, at a minimum, to the OSHA Lead requirements contained in 29 CFR 1926.62 and Colorado Revised Statute 25-2-1101, Lead-Based Paint Abatement.

## Housekeeping

Good housekeeping plays a key role in preventing accidents and fires. Contractors are required to maintain good housekeeping on their jobsite.

Contractors should:

- Keep everything in its proper place - store materials and equipment in a safe and orderly manner.
- Put trash, scrap materials and other waste in the proper containers.
- Keep the floor of the work area clear of tools, cords, and scrap materials.

Maintain clear access to all work areas. Do not block fire extinguishers, emergency equipment, electrical boxes or panels, or other safety and fire equipment.