

	1. WORK PROJECT/ACTIVITY <b>AML / INACTIVE MINE INSPECTION</b>	2. LOCATION	3. UNIT
<b>JOB HAZARD ANALYSIS (JHA)</b>  References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST	5. JOB TITLE	6. DATE PREPARED
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	
<p>Participation in field exercises at active and abandoned mine and mill sites</p> <p>Field exercises at surface mines and mills</p>	Travel To Field Sites	<p>Follow all procedures for driving a government owned or leased vehicle or vehicle rented under a government contract. Drive defensively.</p> <p>All passengers must wear safety belts whenever the vehicle is in motion. For urban traffic, select drivers comfortable in freeway situations and congested traffic areas. Use co-pilot for navigation to field sites, to assist driver in locating the proper area. Recognize added sight distance and turning radii requirements if using 15 passenger vans. Use spotter when backing vehicle. Back into parking spaces.</p>	
	Steep Unstable Slopes	<p><b>AVOID.</b> If unavoidable, wear sturdy leather work boots with lug soles that provide ankle support.</p> <p>Traverse along contours of slope and use proper angulation of body away from hill. There will not be anyone directly above or below because of loose rolling rock and other falling material hazards. Determine if any participant has a physical restriction due to a health condition or physical disability.</p>	
	Shaft Collars, Glory Holes, Subsidence Areas, Portals	<p><b>AVOID.</b> If necessary to enter, see JHA requirements for underground mine entry, below.</p>	
	Active Mill	<p>Be aware of mill operations in order to avoid dangerous areas, such as falling rock from grizzly/crusher, conveyor belts, and chemical storage/use areas. Always wear approved hardhat, protective eyewear, leather gloves, and hearing protection.</p>	
	Abandoned Mine and Mill Structures and Equipment	<p><b>AVOID.</b> If necessary to enter, be aware of and avoid all areas having rotten/unstable structure supports that may fail on entry or disturbance.</p> <p>Avoid handling mine/mill equipment. Look for and avoid loose boards with nails and protruding mill remnants (e.g., concrete rebar). Wear approved hardhat, protective eyewear, and leather gloves. Also refer to hantavirus JHA.</p>	
	Abandoned Chemicals and Chemical Containers	<p><b>AVOID.</b> Report discoveries to the Regional HazMat Coordinator. Note nomenclature on containers from a safe distance. Never touch containers.</p>	
	Waste Rock, Tailings, Acid Mine Drainage, and Hazardous Metals	<p><b>AVOID</b> these areas on dry, windy days. Have water and soap or equivalent hand cleaner available. Wash all material from boots and other clothing as necessary.</p>	
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS	

		Engineering Controls * Substitution * Administrative Controls * PPE
Field exercises at surface mines and mills (cont'd.)	Heavy Equipment	Understand mine operation (left hand v. right hand traffic). Avoid areas of equipment use. Yield right of way to equipment and establish eye contact with operator. Wear hearing protection.
Field exercises at underground mines/portals	Personal Protective Equipment (PPE)	Hardhat, MSHA approved lighting, proper footgear (muckers or leather work boots with steel toes and ankle support), long pants, long sleeved shirts, safety glasses with side shields or goggles, dust masks (if conditions warrant), leather gloves, if needed.
	Portal Entry	Workings deemed safe to enter by a qualified certified mineral examiner (QCME). Two person team minimum comprised of at least one QCME with each group  Station one person at mine entrance clear of portal.  Complete the underground mine entry notification form and file with local district office dispatcher.  Notify host district office dispatch before entering and upon leaving mine. Check out with local district office - notify regional MSHA office, if appropriate. Make list of employees entering workings, and check-off when they exit.
	Bad Air Quality O2 Deficiency High O2 Conc. CO CH4 H2S Radon Dust	Qualified CME (lead instructor) will be equipped with a multi-gas continuous monitor with visual displays of gas concentration, warning lights, and audible alarms.  All employees will immediately evacuate upon alarm or first sign of symptoms for bad air inhalation (i.e. , headache, dizziness, slurred speech, and nausea).
	Falling Hazards	QCME will discuss probable and known hazards at training site.  Keep eyes moving, observe competency of ribs and back, and be aware of footing, especially in mines containing ground water (also see Pools of Water below). Avoid identified falling hazards.  Do not pry loose rocks from ribs or back unless deemed necessary by QCME.
	Explosives	Qualified blaster (instructor) will sweep underground workings prior to trainees entering. Suspected explosives will not be handled. If potentially live explosives are found on site, lead instructor will assess risk and make determination whether to continue the exercises.
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE
Field exercises at underground mines/portals (cont'd.)	Pools of Water	Conduct water quality assessments at designated field site prior to trainee entry.  Qualified CME (lead instructor) will probe standing water to verify depth and associated hazards. If necessary, water will be pumped from workings to

	<p><b>Walking Surfaces</b></p> <p><b>Disorientation</b></p> <p><b>Wildlife, Bug Bites, and Insect Stings</b></p>	<p>provide information and reduce unknown potential hazards.</p> <p>Constantly observe condition of floors. Avoid traversing winzes and other vertical shaft openings, unless sufficient walking surfaces having structural integrity exist.</p> <p>Qualified CME (lead instructor) and co-lead will constantly monitor each other and trainees for signs of disorientation. If noticed, exit workings. Stay in radio contact with safety officer at portal.</p> <p>Identify any trainee subject to anaphylactic shock or other hypersensitivity from animal and bug bites or insect stings prior to field exercises (individuals with known adverse reactions to insect stings should secure appropriate medication from personal family physician prior to attending the course, if such field environments presents a potential life threatening condition).</p> <p>First aid kit of the appropriate size available at portal.</p>
10. LINE OFFICER SIGNATURE	11. TITLE	12. DATE
<p>Previous edition is obsolete (over)</p>		

<p align="center"><b>JHA Instructions (References-FSH 6709.11 and .12)</b></p> <p>The JHA shall identify the location of the work project or activity, the name of employee(s) involved in the process, the date(s) of acknowledgment, and the name of the appropriate line officer approving the JHA. The line officer acknowledges that employees have read and understand the contents, have received the required training, and are qualified to perform the work project or activity.</p> <p><b>Blocks 1, 2, 3, 4, 5, and 6:</b> Self-explanatory.</p> <p><b>Block 7:</b> Identify all tasks and procedures associated with the work project or activity that have potential to cause injury or illness to personnel and damage to property or material. Include emergency evacuation procedures (EEP).</p> <p><b>Block 8:</b> Identify all known or suspect hazards associated with each respective task/procedure listed in block 7. For example:</p> <ul style="list-style-type: none"> <li>a. Research past accidents/incidents.</li> <li>b. Research the Health and Safety Code, FSH 6709.11 or other appropriate literature.</li> <li>c. Discuss the work project/activity with participants.</li> <li>d. Observe the work project/activity.</li> <li>e. A combination of the above.</li> </ul>	<p align="center"><b>Emergency Evacuation Instructions (Reference FSH 6709.11)</b></p> <p>Work supervisors and crew members are responsible for developing and discussing field emergency evacuation procedures (EEP) and alternatives in the event a person(s) becomes seriously ill or injured at the worksite.</p> <p>Be prepared to provide the following information:</p> <ul style="list-style-type: none"> <li>a. Nature of the accident or injury (avoid using victim's name).</li> <li>b. Type of assistance needed, if any (ground, air, or water evacuation).</li> <li>c. Location of accident or injury, best access route into the worksite (road name/number), identifiable ground/air landmarks.</li> <li>d. Radio frequencies.</li> <li>e. Contact person.</li> <li>f. Local hazards to ground vehicles or aviation.</li> <li>g. Weather conditions (wind speed &amp; direction, visibility, temperature).</li> <li>h. Topography.</li> <li>i. Number of individuals to be transported.</li> <li>j. Estimated weight of individuals for air/water evacuation.</li> </ul> <p>The items listed above serve only as guidelines for the development of emergency evacuation procedures.</p> <p align="center"><b>JHA and Emergency Evacuation Procedures Acknowledgment</b></p>																
<p><b>Block 9:</b> Identify appropriate actions to reduce or eliminate the hazards identified in block 8. Abatement measures listed below are in the order of the preferred abatement method:</p>	<p>We, the undersigned work leader and crew members, acknowledge participation in the development of this JHA (as applicable) and accompanying emergency evacuation procedures. We have thoroughly discussed and understand the provisions of each of these documents:</p>																
<ul style="list-style-type: none"> <li>a. Engineering Controls (the most desirable method of abatement). For example, ergonomically designed tools, equipment, and furniture.</li> </ul>	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td align="center"><b>SIGNATURE</b></td> <td align="center"><b>SIGNATURE</b></td> <td></td> </tr> <tr> <td></td> <td align="center"><b>DATE</b></td> <td align="center"><b>DATE</b></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>						<b>SIGNATURE</b>	<b>SIGNATURE</b>			<b>DATE</b>	<b>DATE</b>					
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<ul style="list-style-type: none"> <li>b. Substitution. For example, switching to high flash point, non-toxic solvents.</li> </ul>	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>																
<ul style="list-style-type: none"> <li>c. Administrative Controls. For example, limiting exposure by reducing the work schedule; establishing appropriate procedures and practices.</li> </ul>	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>																
<ul style="list-style-type: none"> <li>d. PPE (least desirable method of abatement). For example, using hearing protection when working with or close to portable machines (chain saws, rock drills, and portable water pumps).</li> </ul>	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>																
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<p><b>Block 10:</b> The JHA must be reviewed and approved by a line officer. Attach a copy of the JHA as justification for purchase orders when procuring PPE.</p>	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>																
<p><b>Blocks 11 and 12:</b> Self-explanatory.</p>	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>																