U.S. Department of Agriculture Forest Service **JOB HAZARD ANALYSIS *(JHA)*** References-FSH 6709.11 and -12 *(Instructions on Reverse)*	1. WORK PROJECT/ACTIVITY **ROCK DRILL OPERATION**	2. LOCATION **Pacific Crest NST**	3. UNIT
	4. NAME OF ANALYST	5. JOB TITLE	6. DATE PREPARED

7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE
PERSONAL SAFETY	**EAR, EYE AND LUNG INJURY**	**Proper ear and eye protection will be worn by operators at all times. Dust masks are also required. Other equipment should include hard hats and leather boots.**
LIFTING AND DRILLING		**Whenever possible, two people should operate and transport drill. One stabilizes the drill while the other operates and guides the drill. Always lift with legs.**
SOLID FOOTING		**Establish your drilling position with solid footing prior to drilling. If you fall, throw drill away from your body.**
PROLONGED USE	**INJURY (carpel tunnel)**	**Use heavy-duty gloves. If numbness develops, discontinue drill use.**
FUELING	**EXPLOSION AND FIRE**	**Use safety can. Stop drill and let cool down before fueling. Wipe any spilled gas from drill before starting.**
STARTING	**ROCK CHIPS, BOUNCING TOOLS, HOT EXHAUST, AND HEAVY WEIGHT.**	**When starting machine cold, position rock drill on firm ground with no chisels or drill bits attached. Gloves will be worn when starting. Starter cable will be pulled straight up and away from face.**
OPERATING	**ROCK CHIPS, BOUNCING TOOLS, HOT EXHAUST HEAVY WEIGHT.**	**Choose firm footing before starting operation. Use leg muscles to shift rock drill around. In all operations, start at slow speed to avoid chipping tool edges and causing rock chips to fly. For drilling other than vertical have an assistant help steady rock drill. During operation keep hands and feet away from bits (Impact is 26.9 foot// pounds).**

10. LINE OFFICER SIGNATURE	11. TITLE	12. DATE

JHA Instructions *(References-FSH 6709.11 and .12)*

The JHA shall identify the location of the work project or activity, the name of employee(s) writing the JHA, the date(s) of development, and the name of the appropriate line officer approving it. The supervisor acknowledges that employees have read and understand the contents, have received the required training, and are qualified to perform the work project or activity.

Blocks 1, 2, 3, 4, 5, and 6: Self-explanatory.

Block 7: 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).

Block 8: Identify all known or suspect hazards associated with each respective task/procedure listed in Block 7. For example:

a. Research past accidents/incidents
b. Research the Health and Safety Code, FSH 6709.11 or other appropriate literature.
c. Discuss the work project/activity with participants
d. Observe the work project/activity
e. A combination of the above

Block 9: 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:

a. Engineering Controls (the most desirable method of abatement). For example, ergonomically designed tools, equipment, and furniture.
b. Substitution. For example, switching to high flash point, non-toxic solvents.
c. Administrative Controls. For example, limiting exposure by reducing the work schedule; establishing appropriate procedures and practices.
d. PPE (least desirable method of abatement). For example, using hearing protection when working with or close to portable machines (chain saws, rock drills portable water pumps)
e. A combination of the above.

Block 10: 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.

Blocks 11 and 12: Self-explanatory.

Emergency Evacuation Instructions *(Reference FSH 6709.11)*

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.

Be prepared to provide the following information:

a. Nature of the accident or injury *(avoid using victim's name)*.
b. Type of assistance needed, if any *(ground, air, or water evacuation)*
c. Location of accident or injury, best access route into the worksite *(road name/number),* identifiable ground/air landmarks.
d. Radio frequency(s).
e. Contact person.
f. Local hazards to ground vehicles or aviation.
g. Weather conditions *(wind speed & direction, visibility, temp)*.
h. Topography.
i. Number of person(s) to be transported
j. Estimated weight of passengers for air/water evacuation.

The items listed above serve only as guidelines for the development of emergency evacuation procedures.

JHA and Emergency Evacuation Procedures Acknowledgment

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:

SIGNATURE	DATE	SIGNATURE	DATE
Work Leader			