

Potential Hazard Review

Physical Hazards

- Fire/explosion: Burns, death
- Slips/fall: Bruise, contusion, sprain, strain, fracture from fall and impact
- Striking against: Laceration, puncture, abrasion
- Caught in/on/between; pinch points: Crush, amputation

Related Safe Work Practice

- Backhoe Loader
- Confined Space
- Fuel Safety
- Machine Operation
- Traffic Safety

Authority

- CCR Title 8 Section 341, 1540, 1541

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No excavation shall be conducted below five (5) feet or in areas where oxygen deficiency or hazardous atmospheres could reasonably be expected to exist. For excavations greater than 5 feet, or where oxygen deficiency or hazardous atmospheres could reasonably be expected to exist, additional safety measures will be required that are not addressed here. Consult EHS for permit requirements¹ and further assistance.

This SWP is dedicated to helping you avoid an injury or illness from known hazards. You are advised to follow these recommendations, read and follow this SWP and any related SWPs, complete any required or recommended training, and to obtain advice from a Qualified Person if you have any questions.

A Qualified Person is a person **designated** by the employer; and by reason of **training**, experience, or instruction who has demonstrated the ability to perform safely all assigned duties; and, when required is properly licensed in accordance with federal, state, or local laws and regulations.

¹ Ghilloti Bros. Construction Inc., 33 COR 40-5761 [¶ 20,868], Cal OSHA Appeals Board Decision dated 9/27/06.

All tasks require that you:

- Use the equipment in accordance with the guidelines set forth by the manufacturer. This includes following all signs and labels, and reviewing any manufacturer's operating manuals.
 - If the instructions provided in the operating manual conflict with this SWP, then follow the instructions in the manual. The manufacturer's instructions prevail over this SWP.
- Review the safety data sheets (SDSs) for each chemical.
- Be trained on this SWP and those listed above as related. Training on SWPs must be completed before initial assignment. It is also recommended that you complete refresher training every two years.

BEFORE

1. An excavation is defined as any cut made by a person that creates a cavity, trench or depression in the earth's surface formed by earth removal. This includes trenching, which is simply a narrow excavation.
2. Determine the location of underground utilities by calling Underground Service Alert (USA) at 1-800-227-2600.
 - a. Notify the owners of those utilities at least 2 working days prior to the start of excavation. Excavation may not proceed until you have received a "positive response" from all owners. EHS recommends this be done in writing and documentation is retained for your records.
 - b. When the excavation is proposed within 10 feet of a high priority subsurface installation, you must meet onsite with the utility owners to determine location. High priority subsurface installations are high pressure natural gas pipelines with normal operating pressures greater than 415 kPA gauge (60 p.s.i.g.), petroleum pipelines, pressurized sewage pipelines, conductors or cables that have a potential to ground of 60,000 volts or more, or hazardous materials pipelines that are potentially hazardous to employees, or the public, if damaged.
 - c. If the excavation is an emergency, and you do not have time to wait for USA, then you will need approval from the Director of Operations to proceed².
3. A reasonable examination of the work area by a "competent" person shall be made to determine that no recognizable conditions exist which would expose employees to injury from possible moving ground before work is permitted in or adjacent to excavation. A "competent" person is one with the knowledge to spot hazards and the

² See SOHR project #3759

authority to ensure their correction, conduct adequate safety inspections of the excavation prior to commencing work and as needed throughout the job.

4. Inspect the area to be excavated for hazards. Remove trees, poles, boulders, or other objects which may be hazardous.
5. Erect barriers around excavations in remote work locations to improve site security, and control and prevent injury to others.
6. Follow all traffic control procedures (see *Traffic Safety*) as applicable.
7. Every trench is a possible trap for hazardous atmospheres. When in doubt, test and ventilate (see *Confined Space SWP*).
8. Shore, brace or underpin structures (including sidewalks) when their stability is threatened so as to prevent collapse. Use additional bracing when vibration or external loads are a hazard. A “competent” person must inspect the structures daily to ensure their integrity.

DURING

9. Daily inspections must be made and documented of the excavation and adjacent areas by the competent person.
10. While the excavation is open, protect or support any underground installations.
11. Locate the spoils at least 2 feet from the edge of the trench.
12. Do not:
 - excavate beneath the level of adjacent foundations, retaining walls or other structures unless a professional engineer has determined that the work will not be hazardous.
 - park heavy equipment next to a trench.
 - permit any employee to stand underneath loads handled by digging or lifting equipment.
 - work in excavations in which there is accumulated/accumulating water unless the competent person has established precautions to protect the employees against the hazard posed by water accumulation.
13. Protect employees from excavated from loose rock or soil that could pose a hazard by falling or rolling from an excavation face.

14. Inspect the excavation after every rainstorm, earthquake or other hazard-increasing occurrence.
15. Be aware of moving machinery (see *Machine Operation SWP*):
 - a. Do not leave any machines unattended.
 - b. Keep away from the moving arm of the backhoe loader (see *Backhoe Loader SWP*).
 - c. Ensure the operator can see you at all times.
16. If you discover or cause damage to a line, you must notify the owner or USAlert. If it is an emergency you must also call 911.

AFTER

17. Backfill the trench when work is completed.
18. Cover and secure the trench when unattended or after work hours.

References:

1. Tailgate/Toolbox Topics, Trenching Safety. Cal-OSHA, TT-8: Feb. 2006.
2. Safety Requirements for Excavation – American National Standard for Construction and Demolition Operations. American National Standards Institute, ANSI/ASSE A10.12-1998 (R2005).
3. Workshop on Cal-OSHA Regulation Changes for Marking Underground Utilities. SFPUC Health and Safety Program. April 5, 2007.
4. Ditch Witch 1030 Operator's Manual (1030/1230 Safety).
http://www.ditchwitch.com/pdf/manuals/Ditch_Witch_1030-1230_Manual.pdf