

**CONTRACTOR SAFETY PROCEDURES FOR
EXCAVATIONS OF POSSIBLE CONTAMINATED SOIL**

1.0 GENERAL

REQUIREMENTS INCLUDED

- who determines this is "possibly" contaminated?*
- RCRA FACILITY INVESTIGATION (OVERALL)
- TEST BORINGS - NEARBY EXCAVATIONS
- A. Environmental and Safety Training *- SEE SLAB CLOSURE*
 - B. Medical Monitoring *"PLAN FOR JONES & NUSS'S ROADMAP" FOR THIS ONE.*
 - C. Respiratory Protection *RNO*
 - D. Personnel Protection
 - E. Field Evaluation
 - F. Site Monitoring
 - G. Decontamination

PLAINTIFF'S
EXHIBIT
CEL-673

1.2 REFERENCES

- A. OSHA requirements established in 29 CFR 1910 and 1926
- B. OSHA "Manual for Hazardous Waste Site Activities"

1.3 SUBMITTALS

- A. The Contractor will be required to provide 3 copies of a site specific health and safety plan to the Owner at a preconstruction conference. The plan will address all necessary items to safeguard contractor employees from any and all health and safety hazards associated with the construction on-site. The contractor shall make all necessary amendments required by the owner until written acceptance is obtained. As a minimum, the plan shall address the items of this section as they pertain to the project and include:
 - 1. A list of known and/or suspected materials to be encountered during the work, the waste type, (liquid gas, solid) quantity, and characteristics.
 - 2. Determine the level of protection required, according to the EPA level of protection: Levels A, B, C, and D and a description of the safety and protection equipment to be supplied by the Contractor.
 - 3. If required, provide a field monitoring program during construction to monitor the impacts to surface water, soil, and air.
 - 4. If required, provide the measures taken for equipment and personnel decontamination including the collection and disposal methods.

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1.4 QUALIFICATIONS

- A. Contractor will have successfully completed projects of a similar scope, provide a qualified field safety officer, and employees that have a level of safety training appropriate for the project.

1.5 REGULATORY REQUIREMENTS

- A. Contractor will be responsible for appropriate disposal of contaminated soil, debris, and water that is generated as a result of construction, decontamination, and related site activities. Contractor will work with Owner's representative to follow Texas Water Commission (TWC) approved procedures and supply all necessary information to keep waste manifest records if waste disposal is required off-site. Contractor will use only TWC and/or EPA approved disposal techniques and facilities. Respiratory protection shall be provided for dusty working conditions. Appropriate measures shall be taken to minimize the creation and dispersion of dust.

INSPECTION &
DOCUMENTATION *what function?*
(INDEPENDENT REGISTERED ENGINEER)

1.6 ENVIRONMENTAL AND SAFETY TRAINING

- A. In undertaking this work, the Contractor acknowledges and affirms that the employees have been trained in their respective use of equipment and have had appropriate safety training according to OSHA regulations as established in 29 CFR 1910.120.
- B. Contractor will provide a field safety officer responsible for safeguarding the Contractor's employees and implementing the health and safety program. The health and safety program will be site specific and submitted to the Owner or Owner's representative for review at the preconstruction conference.

again what function? INSPECTION &
DOCUMENTATION
(JONES & NEUSE USED PREVIOUSLY)

1.7 MEDICAL MONITORING

- A. Prior to working on-site, the Contractor's employees will have undergone a full physical examination within the previous 12 months. The examination will include:
1. Physical examination including medical and occupational history.
 2. Chest X-ray
 3. Screening audiometry
 4. Visual test
 5. Lab work-up SMA 24, urinalysis and CBC as a minimum
 6. Electrocardiogram
 7. Pulmonary function test

The results should indicate the ability of on-site personnel to use respirators if required.

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1.8 RESPIRATORY PROTECTION

- A. If the air quality during construction indicates the presence of any specific OSHA chemical for which the threshold limit value (TLV) has been exceeded, the field safety officer provided by the Contractor will direct the use of appropriate respirators for contractor employees.
- B. It is the Contractor's sole responsibility to monitor the air quality at the site and make appropriate safety recommendations. If necessary, the Contractor will provide an Organic Vapor Analyzer (OVA) or photoionizer to monitor the on-site air quality.
- C. Only safety equipment approved by the National Institute of Occupational Safety and Health (NIOSH) will be used.

1.9 PERSONNEL PROTECTION

- A. Contractor shall provide personnel protective equipment and safety requirements that are appropriate to protect employees from potential or known hazards.
- B. Protective equipment provided by the Contractor will be selected based on the type, concentration, and routes of exposure from substances at the site.
- C. If the type of materials and possibilities of contact are unknown, the Contractor will provide a more subjective determination of required personal protective equipment for initial safety.
- D. The Contractor will determine the appropriate level of protection as defined by EPA level of protection. (Levels A, B, C, and D). Contractor shall reevaluate, and modify as necessary, the overall level of protection periodically as the amount of information about the site increases during construction. The appropriate level of protection shall be determined prior to initial on-site entry, based on best available information.
- E. The Contractor will provide on-site the following emergency equipment as a minimum. All parts of 29 CFR 1010.151 will be followed.
 - 1. First Aid Kits
 - 2. Fire Blankets
 - 3. ABC Dry Chemical Fire Extinguishers
 - 4. Eye Wash
 - 5. Emergency Transportation Vehicle
 - 6. List of emergency agencies with phone numbers (Ambulance, Hospital, Fire, and Police)
 - 7. Directions to nearby hospitals
 - 8. Emergency radios or telephone where not provided
 - 9. Stretcher
 - 10. Emergency proximity suits with respirators

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- F. Contractor's field safety officer will coordinate the field construction safety efforts with the policies of the Owner's safety department.

1.10 FIELD EVALUATION

- A. Contractor will provide a monitoring program during all phases of the project to monitor the health and safety of his employees, limit off-site releases, and minimize the risk of fire or explosion.
- B. Contractor will provide a routine air monitoring program using portable instruments such as OVA, HNU, photoionizer, combustible gas indicator, as required to monitor the breathing zone of workers.
- C. When organic vapors are present and a difference between readings at the downwind and upwind construction perimeter is greater than 10 parts per million, actions will be taken to reduce off-site releases.
- D. Appropriate protective measures shall be provided by the Contractor so that no contaminants are permitted to pass into surface waters. In excavations involving contaminated soil, actions shall be taken to prevent both run-on and run-off of water. Inspections of any berms or other devices will be performed daily.
- E. Contractor will provide a daily inspection for soil contamination caused by the construction. Contractor will note the spread of any contamination, cleanup any spills, and properly dispose of contaminated material.

1.11 DECONTAMINATION

- A. Equipment - Decontamination of safety and protective equipment may be necessary to avoid contamination of off-site areas. The site specific health and safety plan provided by the contractor will determine what decontamination measures are required. If a high pressure detergent solution is required to decontaminate equipment, a collection system and appropriate disposal is also required. Contractor should indicate when verification of decontamination is needed with sufficient lead-time for Owners' representative to respond. Owner's representative will sample, analyse, and document decontamination as required to meet TWC/EPA guidelines.
- B. Personnel - If personnel exposure to hazardous materials is anticipated or possible, the site specific health and safety plan will include a hygiene management plan. The plan will address appropriate measures to avoid employee exposure by direct contact, inhalation, and ingestion during decontamination. This plan, if required, will address procedures to avoid exposure to contaminants when dressing down before leaving the site. The program will address the need for personnel wash-down or shower facility or other facilities if deemed necessary.

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