Trenching and Excavation Program
Appendix A

Trenching and Excavation – PERMIT

(Required for all excavations greater than 2' at Concentrates facilities and 4' at Mining facilities)

PREPLANNING WORKSHEET:

(Each section must be addressed and responded to before work starts)

Project Name:	Worksheet Completed By:
Project Location:	Project Number:
Name of Competent Person:	
Reason for Trench/Excavation:	

Underground Installations
Estimated locations of all underground utility installations determined prior to excavation work beginning.
YES ____
Utility companies contacted and advised of proposed work.
YES ____ N/A ____
Exposed underground installations protected, supported, or removed while excavation is open.
YES ____ N/A ____

Encumbrances
Surface encumbrances that are located so as to potentially create a hazard to employees have been removed or supported as necessary to safeguard employees.
YES ____ N/A ____

Exposure to Vehicular Traffic
Personnel exposed to hazardous vehicular traffic are wearing reflectorized or high-visibility vests.
YES ____ N/A ____

Protective Systems
Protective system used when trench or excavation depth is greater than 4 feet.
YES____
Type of protective system used.
_____Sloping 1-1/2H:1V (34 degrees)
_____Shoring system
_____Trench box
All protective systems designed by a registered professional engineer or accompanied by tabulated data from the manufacturer.
YES ____ N/A ____
Protective systems checked and measured each day to detect movement and possible failure.
YES ____ N/A ____

Access and Egress
Stairways, ladders, or ramps provided every 25 ft.
YES ____ N/A ____
Structural ramps used for access and egress of equipment and/or personnel approved by the competent person.
YES ____ N/A ____

Electrical Safety
All electrical devices grounded and/or GFCI protected.
YES____ N/A ____

Exposure to Failing Loads
Workers prohibited from standing underneath loads handled by lifting or digging equipment.
YES ____ N/A ____

Warning Systems for Mobile Equipment
Warning systems utilized when mobile equipment is operated adjacent to or at the edge of an excavation.
YES ____ N/A ____
If yes, state type being used.
Hand Signals________ Stop Logs ________ Earthen Berm ________ Other (list) ______________________

Emergency Rescue Equipment
Emergency rescue equipment (safety harness and line, basket stretcher, etc) readily available and attended when hazardous conditions exist or could develop.
YES ____ N/A ____

Protection From Hazards Associated With Water Accumulation
Water being controlled or prevented from accumulating in an excavation by the use of water-removal equipment.
YES ____ N/A ____

Stability of Adjacent Structures
Support systems, such as shoring, bracing, or underpinning, provided to ensure stability of adjoining structures (i.e., buildings, walls) are protected from endangerment by excavation activities.
YES____ N/A ____
Support system designed by a registered professional engineer.
YES ____ N/A ____

Protection of Employees From Loose Rock or Soil
Workers protected from equipment and excavated or other material by placing material a minimum of 2 ft. from the edge of excavations or by the use of retaining devices.
YES ____

Fall Protection
Standard guardrails provided on walkways and bridges that cross over 4-ft.-plus excavations.
YES ____ N/A ____
Excavations accessible to the public adequately barricaded or covered when unattended.
YES ____ N/A ____

Testing for Hazardous Atmospheres
Atmospheric testing performed in excavations greater than 4 ft. deep.
YES ____
Testing conducted at a frequency to ensure safety of personnel.
Initial____Periodic____Continuous____
Ventilation used or required to ensure safe limits for entry into trench/excavation.
YES____N/A____

Safe Limits: **Oxygen 19.5%-23.5%**
LEL <10%
Hydrogen Sulfide <10 PPM
Ammonia < 50 PPM

Times and Readings	Date: ______ Time: ______ LEL: _______ % Oxygen: ____% Toxic: ____ ppm of _______ Performed by: _____________ _____________	Date: ______ Time: ______ LEL: _______ % Oxygen: ____% Toxic: ____ ppm of _______ Performed by: _____________ _____________	Date: ______ Time: ______ LEL: _______ % Oxygen: ____% Toxic: ____ ppm of _______ Performed by: _____________ _____________	Date: ______ Time: ______ LEL: _______ % Oxygen: ____% Toxic: ____ ppm of _______ Performed by: _____________ _____________	Date: ______ Time: ______ LEL: _______ % Oxygen: ____% Toxic: ____ ppm of _______ Performed by: _____________ _____________
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Special Precautions:					

Inspections (Use this section for safety inspections)
Daily inspections of excavations being done by the Competent Person.
YES ____
Inspections being performed by the Competent Person after every rainstorm or other hazard-increasing occurrence.
YES ____

I have inspected the excavation described on this permit:

_________________________________ ____________
(Signature of Competent Person) (Date)

Inspection Log

Date	Time	Findings	Corrections	Signature
