

COLORADO DEPARTMENT OF TRANSPORTATION					
JOB SAFETY ANALYSIS					
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2		Activity Name: Continuous Sampler/Penetration Test			
3		Activity Number: 3201			
4 Activity Description & Purpose: Continuous Sampler/Penetration Test - The continuous penetration test (CPT) is an in situ testing method used to determine the geotechnical engineering properties of soils and delineating soil stratigraphy.					
5 Date Prepared: 04/01/2009					
6		Typical Equipment		PPE Required	
7	Description	Class Code	Typical Crew Size:	Safety Boots, Hardhat, ReflectORIZED Vest, Safety Glasses, Dust Mask, Hearing Protection, Appropriate Gloves	
8	PU 4X4	10	3 to 11 Depending on traffic control		
9	Drill Rig	942	(Crew sizes may vary due to different site conditions such as in travel lane, off road drilling - within 12' of edge of road or many feet off road, winter conditions, summer conditions, day time or night time drilling)		
10	Drill/Truck Mounted	945			
11	Trailer - Lowboy	606			
12	(If Night Drilling)				
13	Light Plant	913			
14	(If Traffic Control is needed)				
15	Arrow Board/VMB	902-903			
16	Sequence of Job Tasks	Potential Hazards			Safe Job Procedures
17	1) Preplan	N/A			Orientation - Safety Meetings - Tailgate Talks. Develop Traffic Control Plan and discuss it with everyone involved. Notify the Traffic Management Center and Public Relations. Utilize Uniformed Law Enforcement when available.
18	2) Underground and Overhead Utilities	Buried power, gas & water lines, fibre optics, overhead lines			Insure UNCC clearance and non-member utilities are contacted and cleared
19	2) Pretrip	Tripping, Falling, Pinching, Crushing, Burns, Lifting, Bending, Pulling, Twisting	Always perform equipment inspections before and after operations (pre and post)		
20	3) Loading Equipment	Backing truck or equipment into objects/ people or off the side of a trailer, Unsecured loads, Tripping, Falling, Pinching, Crushing, Moving Parts, Burns, Lifting, Bending, Pulling, Twisting	If using ATV Drill Rig...Use a spotter, Do a walk around, Proper loading/ unloading of equipment, Secure loads. Display appropriate warning signs. Wear appropriate PPE - if using Truck mounted drill rig - be sure all transported equipment and tools are properly secured.		
21	4) Traffic Control Setup	Tripping, Falling, Pinching, Crushing, Moving Parts, Burns, Lifting, Bending, Pulling, Twisting, Backing equipment into objects/ people, Traffic	Follow your traffic control plan (MHT) and insure the plan is on location. Mark all overhead obstructions with cones, signs, or flags. Always use attenuator trucks when available and TEST your plan and insure it is working properly.		
22		Worn faded/dirty traffic control devices	Use clean and legible traffic control devices		
23		Getting struck by traffic or equipment	Use identified escape routes in your traffic control plan - always have a set of eyes watching traffic		
24		Signs blowing over	Use sandbags		
25	5) Perform Task	Tripping, Falling, Pinching, Crushing, Moving parts, Flying debris, Noise, Dust, Backing truck/ equipment into objects/ people, Overhead power lines/ bridges/ signs/ obstructions, Weather - lightning/ heat / Hazardous Materials	Use trained personnel to operate equipment, Follow all procedures outlined in the Driller Safety Handbook.		
26	6) Traffic control removal	Tripping, Falling, Pinching, Crushing, Moving Parts, Burns, Lifting, Bending, Pulling, Twisting, Backing equipment into objects/ people, Traffic	Remove signs and other safety devices in accordance with Methods of Handling Traffic. Always use attenuator trucks when available, notify the traffic management center and public relations when work is completed, utilize law enforcement when available, wear appropriate PPE.		
27	7) Unloading equipment	Backing truck or equipment into objects/ people, Unsecured loads, Tripping, Falling, Pinching, Crushing, Moving Parts, Burns, Lifting, Bending, Pulling, Twisting	Use a spotter, Do a walk around, Proper unloading of equipment, Wear appropriate PPE		
28	8) Post Trip	Tripping, Falling, Pinching, Crushing, Burns, Lifting, Bending, Pulling, Twisting	Always perform equipment inspections before and after operations (pre and post)		
29 Notes and Specifications Instructions			Other Related Resources		
			Regional MHT		
			Driller Safety Handbook		
			MMS Manual		
			MUTCD		
			PD 80.1, Personal Protective Equipment		
			M & S Standards		
			Lane Closure Strategy Book		
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