

APPENDIX D

Field Forms

Form 1: Visual Classification of Soils Form

Form 2: Well Abandonment Form

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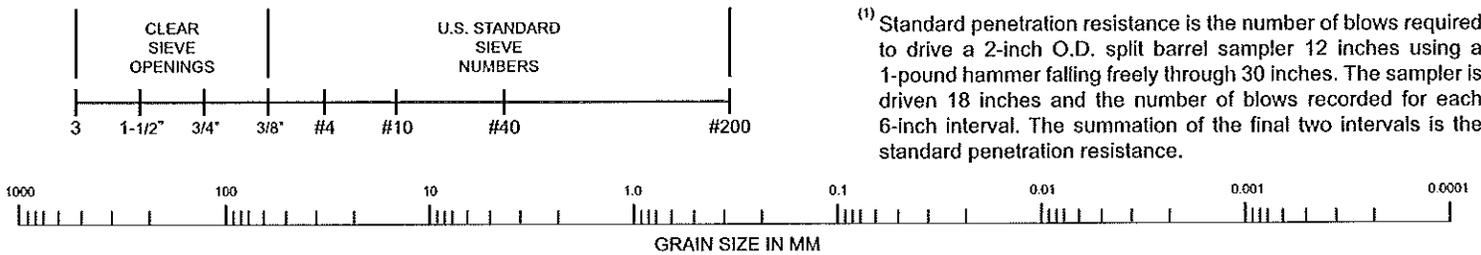
Consistency of Cohesive Soils

Consistency	Unconfined Compressive Strength (Tons per Square Foot)
Very Soft	Less than 0.25
Soft	0.25 to 0.50
Firm	0.50 to 2.0
Hard	2.0 to 4.0
Very Hard	More than 4.0

Density of Granular Soils

Density	Standard Penetration Resistance ⁽¹⁾
Very Loose	0-4
Loose	5-10
Medium Dense	11-30
Dense	31-50
Very Dense	Over 50

⁽¹⁾ Standard penetration resistance is the number of blows required to drive a 2-inch O.D. split barrel sampler 12 inches using a 1-pound hammer falling freely through 30 inches. The sampler is driven 18 inches and the number of blows recorded for each 6-inch interval. The summation of the final two intervals is the standard penetration resistance.



Cobbles	Gravel		Sand			Silt and Clay
	Coarse	Fine	Coarse	Medium	Fine	

USCS CLASSIFICATION FOR SOILS

Coarse-Grained Soils

Clean Gravels (little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines
	GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
Gravel with Fines (appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixtures
	GC	Clayey gravels, gravel-sand-clay mixtures
Clean Sands (little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines
	SP	Poorly-graded sands, gravelly sands, little or no fines
Sands with Fines (appreciable amount of fines)	SM	Silty sands, sand-silt mixtures
	SC	Clayey sands, sand-silt mixtures

Fine-Grained/Highly Organic Soils

Silts and Clays Liquid Limit (less than 50)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	OL	Organic silts and organic silty clays of low plasticity
Silts and Clays Liquid Limit (greater than 50)	MH	Inorganic silts, micaceous or diatomaceous; fine, sandy or silty soils
	CH	Inorganic clays or high plasticity, fat clays
	OH	Organic clays of medium to high plasticity, organic silts
Highly Organic Soils	PT	Peat, humus, swamp soils with high organic contents

Form 3. Well Abandonment Form

Well Abandonment Form		Project Name _____		Borehole Number _____	
		Location _____		Well Number _____	
		Project Number _____		Page _____ of _____	
Logged By _____		Checked By _____		Reason For Abandonment _____	
Driller _____					
Drilling Method _____			Measured Depth of Well _____		Depth to Water _____
Sampling Method _____			Was Old Well Removed? Yes _____ No _____ Partial _____		
Start Date _____		End Date _____		Drilled Diameter _____	Quality of Backfill (Gal) _____
DEPTH (feet)	SAMPLE NUMBER	MATERIAL DESCRIPTION	BACKFILL DESCRIPTION	WELL CONSTRUCTION DETAILS	WELL SCHEMATIC
				TOP OF SEAL _____ TOP OF SAND _____ TOP OF SCREEN _____ WATER LEVEL _____ DEPTH OF WELL _____ DEPTH OF HOLE _____	

Form 3. Well Abandonment Form (concluded)

Denver Federal Center Boring Log				Project Name _____		Boring Number Page _____ of _____	
				Contractor _____			
				Project Number _____			
Depth (ft-bgs)	Blows/6" (recovery)	PID (ppm)	Graphic Log	MATERIAL DESCRIPTION		REMARKS	

APPENDIX E

**BFF Spill Quality Assurance Project Plan (QAPjP)
(submitted under separate cover)**

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