01 45 Quality Control 01 45 23 - Testing and Inspecting Services

Patching core holes, to 12" diameter Drying shrinkage at 28 days	Crew 1 Cefi		Hours	Unit	Material 36	Labor Equipment	Total	Incl 0&P
Drying shrinkage at 28 days		44	.364	Ea.	00	19.35	55.35	68.50
				1.			236	260
Flexural test beams, ASTM C 78							136	150
Mix design, one batch mix							259	285
Added trial batches							120	132
Modulus of elasticity, ASTM C 469				Ea.			195	215
							52	58
								155
								205
								80
								55
								105
								112
								96
								95
								75
								35
								75
								75
								125
								200
The state of the s								100
								170
								150
								500
								20
								550
								290
								275
								253
		-						120
								450
								600
								350
								450
								612
								612
-								612
								612
				Day				612
								612
				Duy				612
								612
				Fn				100
				11				400
							001	100
				Fa	475		475	525
				Lu.				655
								740
					0/3			1,500
				Duy "				2,500
				Total				5,000
				norul "				7,000
	Tensile test, cylinders, ASTM C 496 Water-Cement ratio curve, 3 batches 4 batches Masonry testing, absorption, per 5 brick, ASTM C 67 Chemical resistance, per 2 brick Compressive strength, per 5 brick ASTM C 67 Efflorescence, per 5 brick Modulus of rupture, per 5 brick Modulus of rupture, per 5 brick Moisture, block only Mortar, compressive strength, set of 3 Reinforcing steel, bend test Tensile test, up to #8 bar #9 to #11 bar #14 bar and larger Soil testing, Atterberg limits, liquid and plastic limits Hydrometer analysis Sieve analysis, washed, ASTM D 422 Consolidation test (ASTM D 2435), minimum Moisture content, ASTM D 2216 Permeability test, double ring infiltrometer Permeability, var. or constant head, undist., ASTM D 2434 Recompacted Proctor compaction, 4" standard mold, ASTM D 698 6" modified mold Shear tests, triaxial, minimum Maximum Direct shear, minimum, ASTM D 3080 Maximum Technician for inspection, per day, earthwork Bolting Roofing Welding Non-destructive metal testing, dye penetrant Magnetic particle Radiography Ultrasonic Welding certification, minimum Maximum Underground storage tank Volumetric trightness, °= 12,000 gal. 12,000 = 29,999 gal. = 30,000 gal. Vadose zone (sail gas) sampling, 10-40 samples, min. Maximum Ground water monitoring incl. drilling 3 wells, min. Maximum	Water-Cement ratio curve, 3 batches 4 batches Masonry testing, absorption, per 5 brick, ASTM C 67 Chemical resistance, per 2 brick Compressive strength, per 5 brick, ASTM C 67 Efflorescence, per 5 brick, ASTM C 67 Imperviousness, per 5 brick Modulus of rupture, per 5 brick Moisture, block only Mortar, compressive strength, set of 3 Reinforcing steel, bend test Tensile test, up to #8 bar #9 to #11 bar #14 bar and larger Soil testing, Atterberg limits, liquid and plastic limits Hydrometer analysis Sieve analysis, washed, ASTM D 422 Consolidation test (ASTM D 2435), minimum Moisture content, ASTM D 2216 Permeability, vac. or constant head, undist., ASTM D 2434 Recompacted Protro compaction, 4" standard mold, ASTM D 698 6" modified mold Shear tests, frioxial, minimum Maximum Direct shear, minimum, ASTM D 3080 Maximum Technician for inspection, per day, earthwork Bolling Roofing Welding Non-destructive metal testing, dye penetrant Magnetic particle Radiography Ultrasonic Welding certification, minimum Maximum Underground storage tank Volumetric tightness, "= 12,000 gal. 12,000 - 29,999 gal. = 30,000 gal. Vadose zone (sail gas) sampling, 10-40 samples, min. Maximum Ground water monitoring incl. drilling 3 wells, min.	Water-Cement ratio curve, 3 batches 4 batches Masonry testing, obsorption, per 5 brick, ASTM C 67 Chemical resistance, per 2 brick Compressive strength, per 5 brick, ASTM C 67 Imperviousness, per 5 brick, ASTM C 67 Imperviousness, per 5 brick Modulus of rupture, per 5 brick Modulus of	Mosonry testing, absorption, per 5 brick, ASTM C 67 Chemical resistance, per 2 brick Compressive strength, per 5 brick, ASTM C 67 Efflorescence, per 5 brick, ASTM C 67 Imperviousness, per 5 brick Modulus of rupture, per 5 brick Mostrue rupture, per 5 brick Wideling India of the following india of the following of the follow	Water-Cement ratio curve, 3 batches 4 bartches Masonry testing, obsorption, per 5 brick, ASTM C 67 Chemical resistance, per 5 brick, ASTM C 67 Efflorescence, per 5 brick, ASTM C 67 Imperviousness, per 5 brick Modulus of rupture, per 5 brick Modulus of rupture, per 5 brick Mosture, block only Mortar, compressive strength, set of 3 Reinforcing steel, bend test Tensile test, up to #8 bor #9 to #11 bor #14 bor and larger Soil testing, Attreberg limits, liquid and plastic limits Hydrometer analysis Sieve analysis, washed, ASTM D 422 Consolidation test (ASTM D 2435), minimum Moisture content, ASTM D 2216 Permeability, vex., or constant head, undist., ASTM D 2434 Recompacted Proctor compaction, 4" standard mold, ASTM D 698 6" modified mold Shear tests, triaxial, minimum Maximum Direct shear, minimum, ASTM D 3080 Maximum Technician for inspection, per day, earthwork Bolting Roofing Welding Non-destructive metal testing, dye penetrant Magnetic particle Rodiography Ultrasonic Welding certification, minimum Maximum Lord storage tank Volumentic hightness, "= 12,000 gol. 12,000 – 29,999 gol. = 30,000 gol. Vadose zone (soil gas) sampling, 10-40 samples, min. Day Maximum Ground water monitoring incl. drilling 3 wells, min. Total	Water-Cement ratio curve, 3 batches 4 batches 4 batches 4 batches 6 compressive strength, per 5 brick, ASTM C 67 Chemical insistance, per 1 brick, ASTM C 67 Efflorescence, per 5 brick, ASTM C 67 Imperviousness, per 5 brick Modulus of rupture, per 5 brick Mosture, black only Mortar, compressive strength, sel of 3 Reinforcing steel, bend test Tensile test, up to #8 bor #9 to #11 bor #14 bor and larger Soil testing, Armeherg limits, liquid and plastic limits Hydrometer analysis Sieve analysis, washed, ASTM D 422 Consolidation test (ASTM D 2435), minimum Moisture content, ASTM D 2216 Permeability test, double ring infiltrometer Permeability, vor. or constant head, undist, ASTM D 2434 Recompacted Proctor compaction, 4" standard mold, ASTM D 698 6" modified mold Sheer tests, triacioid, minimum Moximum Direct shear, minimum, ASTM D 3080 Moximum Technicion for inspection, per day, earthwork Bolting Roofing Welding emitikation, minimum Maximum "" Underground storage traik Volumetric lightness, S= 12,000 gal. # 475 12,000 – 29,999 gal. # 30,000 gal. # 675 Moximum Ground water monitoring incl. drilling 3 wells, min. # 50tal	Woter-Gement ratio curve, 3 batches 4 bacthes Assoray testing, obsorption, per 5 bick, ASTM C 67 Chemical esistence, per 2 back Compessive strength, per 5 bick, ASTM C 67 Improviousness, per 5 bick, ASTM C 67 Improviousness, per 5 bick Modutus, bick con by Montan, compressive strength, set of 3 Reinforcing steel, bend test Testile test, up to 48 bor #1 to br #1 to br #1 to br #1 to br #1 to brand-larges Soil testing, Affecting limits Hydromate analysis Sieve analysis, worked, ASTM D 422 Consolidation test ASTM D 2435), minimum Moisture content, ASTM D 2216 Permeability test, double ring inflatometer Permeability, vor, or constant head, undist, ASTM D 2434 Recompacted Proda compacted Proda compacted, "standard mold, ASTM D 698 6" modified mold Shear tests, trioxiol, minimum Nacionum Direct shear, minimum, ASTM D 3080 Moximum Technician for inspection, per day, earthwork Boiling Roding Welding Non-dissiluctive metal testing, dve penetrant Moximum Undergrend serification, minimum Moximum Great short gerification, minimum Moximum Great short gerification, minimum Moximum Great short gerification, diffiling 3 wells, min. Total	Water Cement roto cave, 3 backles