Appendix F

GQAL Field Observations and Borelogs

Client: QR
Project: Jilalan Rail Yard Upgrade Project
Project Number: 30420-005
File Name: Soil Investigation
Driller: Connell Hatch

Commenced: 29/08/07
Completed: 29/08/07
Location: Jilalan
Easting: 0
Northing: 0
Elevation: 25
Method: Hand Auger

Borehole Number: GQAL1

Sheet: 1 of 1

Investigation Information			Soil Description			Observations and Strata Information			
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Observations	Graphic Log	Elevation (m)	Depth (m)
	Lab			**Silty Clay Loam** Very dark gray (10YR 3/1)		Coarse organic matter and roots present Field Emerson Class 6 Fine grade gravel present			
	Lab								
	Lab			**Light Clay** Reddish yellow (7.5YR 6/8) with dark gray (10YR4/1) mottling		Silt content increasing with depth down profile Field Emerson Class 6			
	Lab					Field Emerson Class 6			
		1.0						24.0	1.0
	Lab					Firm plastic bolus observed Field Emerson Class 6			
		2.0						23.0	2.0
		3.0						22.0	3.0
		4.0						21.0	4.0
		5.0						20.0	5.0

Moisture Key
D Dry
M Moist
W Wet

Particle Size Distribution
Gravel Coarse 20mm to 63mm
Medium 6mm to 20mm
Fine 2.36mm to 6mm
Sand Coarse 0.6mm to 2.36mm
Medium 0.2mm to 0.6mm
Fine 0.075mm to 0.2mm

Logged By: Chris Bignill **Date:** 27/11/07

Checked By: Monique Harrison **Date:** 27/11/07

Client: QR
Project: Jilalan Rail Yard Upgrade Project
Project Number: 30420-005
File Name: Soil Investigation
Driller: Connell Hatch

Commenced: 29/08/07
Completed: 29/08/07
Location: Jilalan
Easting: 0
Northing: 0
Elevation: 16
Method: Hand Auger

Borehole Number: GQAL2

Sheet: 1 of 1

Investigation Information			Soil Description			Observations and Strata Information			
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Observations	Graphic Log	Elevation (m)	Depth (m)
	Lab			**Clay Loam** Brown (7.5YR 4/2) to very dark grayish brown (10YR 3/2) with brown (7.5YR 5/6) to yellowish brown (7.5YR 5/8) mottling		Silty fines present			
	Lab					Field Emerson Class 5			
	Lab			**Silty Clay** Grayish brown (10YR 5/2) with very dark gray (10YR 3/1) and yellowish brown (10YR 5/8) to brownish yellow (10YR 6/8) mottling		Field Emerson Class 5			
	Lab					Field Emerson Class 2			
		1.0				Flecks of white calcerous material present		15.0	1.0
	Lab					Field Emerson Class 2			
		2.0						14.0	2.0
		3.0						13.0	3.0
		4.0						12.0	4.0
		5.0						11.0	5.0

Moisture Key
D Dry
M Moist
W Wet

Particle Size Distribution
Gravel Coarse 20mm to 63mm
Medium 6mm to 20mm
Fine 2.36mm to 6mm
Sand Coarse 0.6mm to 2.36mm
Medium 0.2mm to 0.6mm
Fine 0.075mm to 0.2mm

Logged By: Janet Krick **Date:** 27/11/07
Checked By: Monique Harrison **Date:** 27/11/07

Client: QR
Project: Jilalan Rail Yard Upgrade Project
Project Number: 30420-005
File Name: Soil Investigation
Driller: GeoDrill

Commenced: 29/08/07
Completed: 29/08/07
Location: Jilalan
Easting: 0
Northing: 0
Elevation: 19
Method: SPT

Borehole Number: GQAL3

Sheet: 1 of 1

Investigation Information			Soil Description			Observations and Strata Information			
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Observations	Graphic Log	Elevation (m)	Depth (m)
	Lab			**Loamy Sand** Dark brown (7.5YR 3/2)	M	Coarse gravel fragments and organic mater present			
	Lab				M	Field Emerson Class 5			
	Lab			**Silty Clay** Reddish yellow (7.5YR 6/6) to reddish brown (5YR 5/4) with red (2.5YR 4/6) mottling and light coloured streaks through profile	M	Plastic with some sandy fnes present			
	Lab					Field Emerson Class 2			
	Lab	1.0				No plasticity with coarse sand and gravel fragments present		18.0	1.0
		2.0						17.0	2.0
		3.0						16.0	3.0
		4.0						15.0	4.0
		5.0						14.0	5.0

Moisture Key
D Dry
M Moist
W Wet

Particle Size Distribution
Gravel Coarse 20mm to 63mm
Medium 6mm to 20mm
Fine 2.36mm to 6mm
Sand Coarse 0.6mm to 2.36mm
Medium 0.2mm to 0.6mm
Fine 0.075mm to 0.2mm

Logged By: Monique Harris **Date:** 27/11/07

Checked By: Chris Bignill **Date:** 27/11/07

Client: QR
Project: Jilalan Rail Yard Upgrade Project
Project Number: 30420-005
File Name: Soil Investigation
Driller: GeoDrill

Commenced: 29/08/07
Completed: 29/08/07
Location: Jilalan
Easting: 0
Northing: 0
Elevation: 20
Method: SPT

Borehole Number: GQAL4

Sheet: 1 of 1

Investigation Information			Soil Description			Observations and Strata Information			
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Observations	Graphic Log	Elevation (m)	Depth (m)
	Lab			**Sandy Loam** Dark brown (7.5YR 3/2) to brown (7.5YR 5/2 to 7.5YR 4/2)		No plasticity with small amount of silty fines present Fine subrounded gravel fragments and silty fines present Field Emerson Class 2			
	Lab								
	Lab			**Sandy Clay Loam** Strong brown (7.5YR 5/6)		Field Emerson Class 2			
	Lab					Low plasticity Field Emerson Class 8			
	Lab	1.0				Silty fine present Field Emerson Class 8		19.0	1.0
		2.0						18.0	2.0
		3.0						17.0	3.0
		4.0						16.0	4.0
		5.0						15.0	5.0

Moisture Key
D Dry
M Moist
W Wet

Particle Size Distribution
Gravel Coarse 20mm to 63mm
Medium 6mm to 20mm
Fine 2.36mm to 6mm
Sand Coarse 0.6mm to 2.36mm
Medium 0.2mm to 0.6mm
Fine 0.075mm to 0.2mm

Logged By: Monique Harris **Date:** 27/11/07

Checked By: Chris Bignill **Date:** 27/11/07

Client: QR
Project: Jilalan Rail Yard Upgrade Project
Project Number: 30420-005
File Name: Soil Investigation
Driller: Connell Hatch

Commenced: 29/08/07
Completed: 29/08/07
Location: Jilalan
Easting: 0
Northing: 0
Elevation: 12
Method: Hand Auger

Borehole Number: GQAL5

Sheet: 1 of 1

Investigation Information			Soil Description			Observations and Strata Information			
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Observations	Graphic Log	Elevation (m)	Depth (m)
	Lab			**Loam** Light gray (10YR 7/2)	D	Field Emerson Class 2			
	Lab				D	Field Emerson Class 2			
				Silty Loam Brown (7.5YR 4/3) to light gray (10YR 7/2)					
	Lab				D	Field Emerson Class 2 Fine nodules present			
				Clay Loam Yellowish brown (10YR 5/6) to brownish yellow (10YR 6/6) with pale brown (10YR 6/3) to gray (10YR 6/1) mottling					
	Lab				D	Field Emerson Class 3 Cemented structure with flecks of white calcerous material present			
		1.0						11.0	1.0
	Lab				D	Field Emerson Class 2			
		2.0						10.0	2.0
		3.0						9.0	3.0
		4.0						8.0	4.0
		5.0						7.0	5.0

Moisture Key
D Dry
M Moist
W Wet

Particle Size Distribution
Gravel Coarse 20mm to 63mm
Medium 6mm to 20mm
Fine 2.36mm to 6mm
Sand Coarse 0.6mm to 2.36mm
Medium 0.2mm to 0.6mm
Fine 0.075mm to 0.2mm

Logged By: Janet Krick **Date:** 27/11/07

Checked By: Monique Harrison **Date:** 27/11/07

The results in Appendix F – GQAL Field Observations and Borelogs include GQAL Borelogs 1 to 5. Additional results for borelogs GQAL 6 to GQAL 36 will be included in the final version of the Soil and Acid Sulfate Soil Investigation.