APPENDIX B-4

TEST PIT LOGS

TEST PIT NO. GA-TP-01	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 1, 2007	
TIME: 1505	
LOCATION:	1596508.7 N 2060410.5 E
ELEVATION:	5425.1
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A

Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 10 feet long, by 3 feet wide, by 10 feet deep. Two samples were collected.

ROOT DEPTH N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0 -5	1	**Sample 1** - Brown sandy, silty CLAY (CL-ML), slightly moist to moist (BULK SAMPLE)
5-10	2	**Sample 2** - Reddish brown, weakly to moderately cemented sandy SILT (ML) and silty SAND (SM), dry (BULK SAMPLE)

EXCAVATION NOTES:

1. Operator notes consistant excavation conditions throughout pit profile.

TEST PIT NO. GA-TP-02	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 2, 2007	
TIME: 0740	
LOCATION:	1596555.9 N 2062587.4 E
ELEVATION:	5444.3
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A
Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 12 feet long, by 3 feet wide, by 11 feet deep. Two samples were collected.	
ROOT DEPTH	N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-2		Reddish brown silty SAND (SM), slightly moist to moist (TOPSOIL)
2-6	1	**Sample 1** - Light reddish brown silty SAND (SM), trace very fine sand, weakly to moderately cemented, dry (BULK SAMPLE)
6-10.5	2	**Sample 2** - Reddish brown sandy, silty CLAY (CL-ML), trace white sandy clay, trace gravel, dry (BULK SAMPLE)

EXCAVATION NOTES:

TEST PIT NO. GA-TP-03	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 1, 2007	
TIME: 1540	
LOCATION:	1595901.2 N 2060958.5 E
ELEVATION:	5439.9
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A

Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 10 feet long, by 3 feet wide, by 11 feet deep. Three samples were collected.

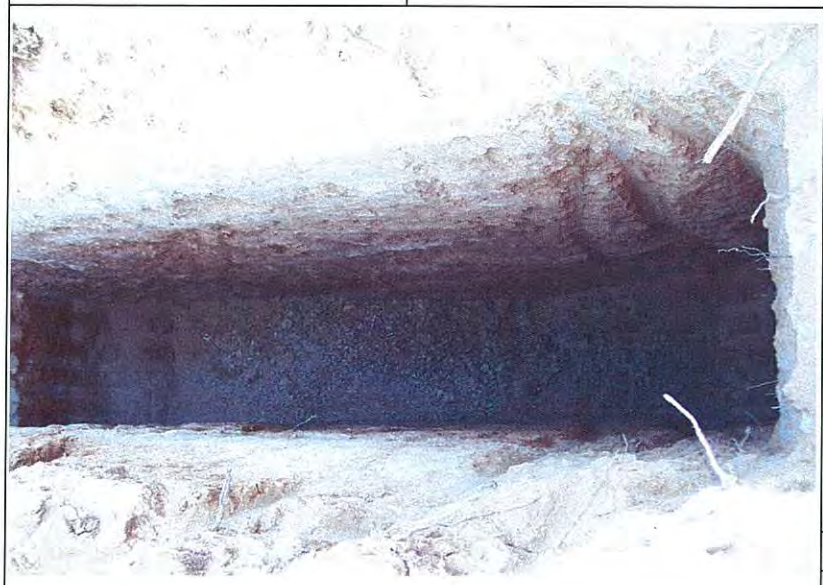
ROOT DEPTH N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-4	1	**Sample 1** -Reddish brown, very fine grained silty SAND (SM), dry to slightly moist (BULK SAMPLE)
4-9	2	**Sample 2** - Light reddish brown, very fine grained silty SAND (SM), trace to little gravel, dry (BULK SAMPLE)
6-10.5	3	**Sample 3** - Light reddish brown, very fine to fine grained silty SAND (SM), little gravel, little cobbles, trace medium to coarse sand, dry (BULK SAMPLE)

EXCAVATION NOTES:

1. Operator notes cobbley material in bottom 2 feet

TEST PIT NO. GA-TP-04	FIELD TEST PIT LOG	Golder Associates



PROJECT NO.:	073-81694
DATE: November 2, 2007	
TIME: 0910	
LOCATION:	1595889.0 N 2062566.9 E
ELEVATION:	5445.8
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A
Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 10 feet long, by 3 feet wide, by 10 feet deep. Two samples were collected.	
ROOT DEPTH	N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-2		Light reddish brown, very fine grained silty SAND (SM), slightly moist
2-5	1	**Sample 1** - Light tan to white silty, clayey SAND (SC-SM), chalky, dry (BULK SAMPLE)
5-10	2	**Sample 2** - Reddish brown silty SAND (SM), trace gravel, trace cobbles (BULK SAMPLE)

EXCAVATION NOTES:

TEST PIT NO. GA-TP-05	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 1, 2007	
TIME: 1630	
LOCATION:	1594959.4 N 2061470.7 E
ELEVATION:	5467.1
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A

Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 12 feet long, by 3 feet wide, by 10 feet deep. Two samples were collected.

ROOT DEPTH N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-2	1	**Sample 1** - Brown, very fine grained sandy SILT (ML), slightly moist to moist (TOPSOIL) (BULK SAMPLE)
2-4	1	**Sample 1** - Light reddish brown silty SAND (SM), weakly to moderately cemented, dry (BULK SAMPLE)
4-9.5	2	**Sample 2** - Reddish brown, very fine grained silty SAND (SM), trace fine to coarse sand, trace gravel, weakly cemented, dry (BULK SAMPLE)

EXCAVATION NOTES:

TEST PIT NO. GA-TP-06	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 2, 2007	
TIME: 0840	
LOCATION:	1594887.2 N 2062632.2 E
ELEVATION:	5456.6
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A
Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 12 feet long, by 3 feet wide, by 10 feet deep. Two samples were collected.	
ROOT DEPTH	N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-3		Reddish brown silty SAND (SM), moist
3-6	1	**Sample 1** - Light reddish brown silty SAND (SM), some gravel some cobbles, trace boulders, dry (BULK SAMPLE)
6-10	2	**Sample 2** - Reddish brown, very fine grained silty, clayey SAND (SC-SM), dry (BULK SAMPLE)

EXCAVATION NOTES:

1. Cobbles ≤12" dia. and boulders ≤24" dia. Excavated from test pit

TEST PIT NO. GA-TP-07	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 2, 2007	
TIME: 0950	
LOCATION:	1593460.0 N 2061496.2 E
ELEVATION:	5498.2
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A

Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 10 feet long, by 3 feet wide, by 10 feet deep. Two samples were collected.

ROOT DEPTH N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-1.5		Brown, very fine grained silty SAND (SM), slightly moist
1.5-5	1	**Sample 1** - Light reddish brown, very fine grained silty SAND (SM), trace clay, trace gravel, dry (BULK SAMPLE)
5-9	2	**Sample 2** - same as above (1.5 to 5 feet) (BULK SAMPLE)
9-10		COBBLES and GRAVEL

EXCAVATION NOTES:

TEST PIT NO. GA-TP-08	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 2, 2007	
TIME: 1040	
LOCATION:	1592971.3 N 2062039.9 E
ELEVATION:	5508.4
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A

Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 9 feet long, by 3 feet wide, by 10 feet deep. Two samples were collected.

ROOT DEPTH N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-1		Brown sandy SILT (ML), slightly moist to moist
1-2.5	1	**Sample 1** - Reddish brown, very fine grained clayey SAND (SC), trace fine to coarse sand, trace gravel, dry to slightly moist (BULK SAMPLE)
2.5-10	2	**Sample 2** - Light reddish brown, well-graded, silty GRAVEL (GW-GM), some fine to coarse sand, little (BULK SAMPLE)

EXCAVATION NOTES:

1. Difficult excavation / harder soil - similar to GA-TP-11. More cobbles and boulders.

TEST PIT NO. GA-TP-09	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 2, 2007	
TIME: 1140	
LOCATION:	1591630.0 N 2061943.2 E
ELEVATION:	5542.5
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A

Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 9 feet long, by 3 feet wide, by 11 feet deep. Two samples were collected.

ROOT DEPTH N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-1		Brown, sandy-clayey SILT (ML), slightly moist
1-5	1	**Sample 1** - Light reddish brown, very fine grained silty SAND (SM), trace fine to coarse sand, weakly cemented, dry (BULK SAMPLE)
5-11	2	**Sample 2** - Light brown very fine grained clayey, silty SAND (SM), weakly cemented, dry (BULK SAMPLE)

EXCAVATION NOTES:

1. Excavation effort was soft and easy.

TEST PIT NO. GA-TP-10	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 2, 2007	
TIME: 1110	
LOCATION:	1591765.7 N 2062391.3 E
ELEVATION:	5536.1
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A

Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 8 feet long, by 3 feet wide, by 10 feet deep. Two samples were collected.

ROOT DEPTH N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-1		Brown, very fine grained silty SAND (SM), slightly moist
1-4	1	**Sample 1** - Light reddish brown, sandy, silty CLAY (CL-ML), trace gravel, trace cobbles, dry (BULK SAMPLE)
4-5.5		Light reddish brown, very fine grained silty SAND (SM), some gravel, some cobbles, dry
5.5-10	2	**Sample 2** - Light brown, very fine to fine grained silty SAND (SM), dry (BULK SAMPLE)

EXCAVATION NOTES:

1. Excavation effort was soft and easy.

TEST PIT NO. GA-TP-11	FIELD TEST PIT LOG	Golder Associates

PROJECT NO.:	073-81694
DATE: November 2, 2007	
TIME: 1010	
LOCATION:	1593903.6 N 2062412.6 E
ELEVATION:	5483.8
ENGINEER:	J. Elliott
EQUIPMENT:	Backhoe - CAT 430D
OPERATOR:	Donny - High Desert Construction
WATER LEVEL	N/A

Surface condition: Test pit was excavated on the flat valley floor. Test pit was approximately 9 feet long, by 3 feet wide, by 10 feet deep. Two samples were collected.

ROOT DEPTH N/A

Depth (Ft.)	SAMPLE NO.	DESCRIPTION OF MATERIAL [(GROUP NAME (GROUP SYMBOL), moisture, angularity, HCL reaction, structure, max. particle size, gravel/cobble hardness, dry strength, dilatancy, toughness, local name, geologic interpretation]
0-3	1	**Sample 1** - Reddish brown, very fine grained clayey SAND (SC), trace Gravel, slightly moist
3-10.5	2	**Sample 2** - White to reddish white, very fine to medium grained silty SAND (SM), dry

EXCAVATION NOTES:

1. Operator notes much greater excavtion effort required for this test pit compared to others.