APPENDIX D

BORING LOGS

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-1

COORDINATES
N 620241.78 E 728685.22

SURFACE EL: 1586.9

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
	0					Gravel and SAND orangeish gray. Road base.		Not sampled
1583.9						3'	GP-GM	6" sampler
		S-1		100%		COBBLES with SAND, Rock fragments are Porphyritic rhyolite, angular to subangular, dark brown, The fragment shapes and colors are similar in all intervals except where stated		Not cored boulders
1576.9	10					10'	GP-GM	
		S-2		84%		COBBLES and GRAVEL with sand/fines, Rock fragments are Dark Reddish Brown and sand/fines are moderate yellowish brown.		
1566.9	20					20'	GW	Drilled with 4" core barrel . Poor recovery
						COBBLES and GRAVEL some sand, dark reddish brown		
	30	S-3		30%				
1546.9	40					40'	GP	6" sampler. Rapid drilling rate, poor recovery, no water 800 lbs pressure, 800 PSI pressure.
		S-4		30%				
1536.9	50					50'	GP	Rapid drilling rate
		S-5		10%				
1526.9	60					60'	GP	Rapid drilling rate
		S-6		40%				
	70							

DATE STARTED: 1/16/2006	GWL: DEPTH: N/A DATE/TIME:	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DATE COMPLETED: 1/16/2006	GWL: DEPTH: DATE/TIME:	
FIELD GEOLOGIST: HWG	DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	
CHECKED BY: EGZ		
DRILLING CO.: Miller Co	DRILLER: Tracy HELPER: Chris, Christian and Jeremy	RIG: VERSASONIC Rig

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-1

COORDINATES
N 620241.78 E 728685.22

SURFACE EL: 1586.9

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
1516.9						70' COBBLES and GRAVEL with trace fines	GP	Rapid drilling rate
		S-7		60%				
1506.9	80					80' COBBLES and GRAVEL, trace fines	GP	Rapid drilling rate
		S-8		60%				
1496.9	90					90' COBBLES and GRAVEL some sand/fines	GP	
		S-10		82%				
1486.9	100					100' COBBLES and GRAVEL trace fines; also present is soil with roots. Soil is Silty, bluish gray and moderate yellowish brown.	GP	
		S-11		100%				
1483.9						103' Rhyolite porphyry, Reddish brown, fractured	GP-GM	
		S-12		50%				
1481.2						BOTTOM OF BORING 105.7'		See TS-1R for rock coring log
	110							
	120							
	130							
	140							

DATE STARTED: 1/16/2006	GWL: DEPTH: N/A DATE/TIME:	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DATE COMPLETED: 1/16/2006	GWL: DEPTH: DATE/TIME:	
FIELD GEOLOGIST: HWG	DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	
CHECKED BY: EGZ		
DRILLING CO.: Miller Co	DRILLER: Tracy HELPER: Chris, Christian and Jeremy	RIG: VERSASONIC Rig

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-2

COORDINATES
N 620883.19 E 728417.47

SURFACE EL: 1587.45

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
	0					Poorly graded GRAVEL; parking lot - road aggregate	GP	Not sampled
1584.5						3'	GP-GC	6" sampler. Not cored boulders
		S-1		70%		COBBLES with GRAVEL, some sand, some clay, Rock fragments are angular to subangular, brownish gray. Sand is moderate yellowish brown. The fragment shapes and colors are similar in all intervals except where stated		
1577.5	10					10'	GP	Rapid drilling rate
						COBBLES and GRAVEL some sand. Brownish gray		
		S-2		45%				
1569.5						18'	GP	
1568.0						COBBLES and GRAVEL some sand; trace fines. Rock fragments are reddish gray	GP	Moist from drilling
1567.5	20					18.5'	GW	Rapid drilling rate
						20'		
		S-3		45%				
1557.5	30					30'	GP	Rapid drilling rate
						COBBLES and GRAVEL some sand, trace fines. Rock fragments are reddish gray		
1553.5						34'	GP	Slow drilling rate
		S-4		50%		Boulder @ 34'-37.5'		
1547.5	40					40'	GP	Fast drilling rate.
		S-5		50%				
1537.5	50					50'	GP-GM	Rapid drilling rate except for 54-56' where moderate
						GRAVEL with sand, some silt		
		S-6		50%				
1527.5	60					60'	GP-GM	Slow drilling rate; drilled 10'/0.5 hr
		S-7		50%				
	70							

DATE STARTED: 1-19-06	GWL: DEPTH: dry DATE/TIME: 3-13-06/ 08:00	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DATE COMPLETED: 1-20-06	GWL: DEPTH: DATE/TIME:	
FIELD GEOLOGIST: HWG	DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	
CHECKED BY: EGZ		
DRILLING CO.: Miller Co	DRILLER: Tracy HELPER: Chris, Christian and Jeremy	RIG: VERSASONIC Rig

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-2

COORDINATES
N 620883.19 E 728417.47

SURFACE EL: 1587.45

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
1517.5						70' COBBLES and GRAVEL; trace fines - mostly derived from coring	GP	Rapid drilling rate 10'/1 min Moisture from drilling
		S-8		28%				
1507.5	80					80'	GC	Very rapid drilling rate; Moderate from 95' to 100'. Boulder 98'-100'. Changed to 4" sampler
	90	S-9		5%				
1487.5	100	S-10				100' Silty SAND, light yellowish gray Rhyolite (boulder and cobble)	GC	Changed back to 6" sampler
1482.0						BOTTOM OF BORING 104.5'		See TS2-R for rock coring log
	110							
	120							
	130							
	140							

DATE STARTED: 1-19-06	GWL: DEPTH: dry DATE/TIME: 3-13-06/ 08:00	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DATE COMPLETED: 1-20-06	GWL: DEPTH: DATE/TIME:	
FIELD GEOLOGIST: HWG	DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	
CHECKED BY: EGZ		
DRILLING CO.: Miller Co	DRILLER: Tracy HELPER: Chris, Christian and Jeremy	RIG: VERSASONIC Rig

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP

PROJECT NO. 06-3551

LOG OF BORING NO. TS-3

COORDINATES
N 620744.30 E 728478.45

SURFACE EL: 1587.4

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
	0					SILT, SAND and GRAVEL, Grayish orange; road access cover		Not sampled
1585.4						2'	GW-GM	
						Sandy GRAVEL with silt and cobble; grayish brown. Moist		
		S-1		70%				
1577.4	10					10'	GP-GC	Rapid drilling rate
						Rhyolitic GRAVEL fragments with sandy silt		
		S-2		50%				
						COBBLES, GRAVEL, with sand; little fines. Rock fragments are reddish gray		Moist from drilling
1567.4	20					20'	GP-GC	Rapid drilling rate
		S-3		45%				
1557.4	30					30'	GW	Rapid drilling rate
						COBBLES, GRAVEL, with sand; little fines. Rock fragments are reddish gray		
		S-4		37%				
1547.4	40					40'	GP	Fast drilling rate.
		S-5		25%				
1537.4	50					50'	GP-GM	Slow drilling rate
						Rhyolitic COBBLES, GRAVEL some sand and silt.		
		S-6		50%				
1527.4	60					60'	GP-GM	Slow drilling rate Boulders
						Boulders of Porphyritic Rhyolite		
		S-7		50%				
	70							

DATE STARTED: 1-19-06
DATE COMPLETED: 1-20-06
FIELD GEOLOGIST: HWG
CHECKED BY: EGZ

GWL: DEPTH: 97.15 DATE/TIME: 3/13/06 08:00
GWL: DEPTH: DATE/TIME:
DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'

NOTES: All samples sent to Geotechnics laboratory for additional analysis

DRILLING CO.: Miller Co

DRILLER: Tracy HELPER: Chris, Christian and Jeremy

RIG: VERSASONIC Rig

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-3

COORDINATES
N 620744.30 E 728478.45

SURFACE EL: 1587.4

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
1517.4						70' Several boulders of Porphyritic Rhyolite	GP	Slow drilling rate Boulders
		S-8		28%				
1507.4	80					80'	GP	Moderate drilling rate 80'-87'; rapid from 87' to 90'
		S-9		25%				
1497.4	90					90'	GC	
		S-10		50		Silty SAND, olive gray (soil). Wet		PP = 1.5 TSF
1491.5						BOTTOM OF BORING 95.9'		See TS-3R for rock coring log
	100							
	110							
	120							
	130							
	140							

DATE STARTED: 1-19-06 DATE COMPLETED: 1-20-06 FIELD GEOLOGIST: HWG CHECKED BY: EGZ	GWL: DEPTH: 97.15 DATE/TIME: 3/13/06 08:00 GWL: DEPTH: DATE/TIME: DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DRILLING CO.: Miller Co	DRILLER: Tracy HELPER: Chris, Christian and Jeremy	RIG: VERSASONIC Rig

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-4

COORDINATES
N 620602.03 E 728540.85

SURFACE EL: 1587.03'

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
	0	S-1		40%		GRAVEL and Sand, with fines (silt) from drilling and upper road access. Rock fragments are angular to subangular, dark reddish brown. Sand/fines are moderate yellowish brown. The fragment shapes and colors are similar in all intervals except where stated	GP-GM	Boulders at 2-3' and 7-9'.
1577.0	10					10' GRAVEL some sand, some fines (silt) - fines are existing and due to drilling.	GP-GM	Boulder at 15-16' Rapid drilling rate 19-20' Moderate drilling rate 10-18'
		S-2		80%				
1567.0	20					20' GRAVEL some sand and fines (silt). Rock fragments are Dark Reddish Brown and sand and fines are moderate yellowish brown.	GP-GM	Rapid drilling rate Moist from drilling and rain
		S-3		50%				
1557.0	30					30' GRAVEL, some sand	GP	Boulder at 34-36' Rapid drilling rate 30-34', 39-40'. Moderate drilling rate 36-39'
		S-4		35%				
1551.0						36' GRAVEL, Washed sample with no sand/fines preserved. Rapid drilling rate 30-34'	GP	Boulder at 15-16'
		S-4		50%				
1547.0	40					40' COBBLES and GRAVEL trace sand/fines	GP	Rapid drilling rate 45-50'
		S-5		20%				
1537.0	50					50' GRAVEL, some sand and fines (silt)	GP-GM	Rapid drilling rate except for 55-57' where it was moderate
		S-6		20%				
1527.0	60					60' GRAVEL trace sand/fines	GP	Rapid drilling rate 60-65', and moderate 65 70'
		S-7		20%				
	70							

DATE STARTED: 1-20-2006	GWL: DEPTH: 96.8 DATE/TIME: 3-13-06/ 08:30	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DATE COMPLETED: 1-21-2006	GWL: DEPTH: DATE/TIME:	
FIELD GEOLOGIST: RJB	DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	
CHECKED BY: EGZ		
DRILLING CO.: Miller Co	DRILLER: Tracy HELPER: Chris, Christian and Jeremy	RIG: VERSASONIC Rig

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-4

COORDINATES
N 620602.03 E 728540.85

SURFACE EL: 1587.03'

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
1517.0						70' GRAVEL some cobbles, trace sand/fines	GP	Rapid drilling rate except for boulder 72-74'
		S-8		20%				
1507.0	80					80' GRAVEL some cobbles trace sand/fines	GP	Rapid drilling rate except for 84-88' where moderate. Boulder at 88-90'
		S-9		20%				
1497.0	90					90' COBBLES some and fines (silt) from soil layer and rock dust from drilling. The soil layer (about 4" thick) is light greenish gray with the presence of roots. Top of bedrock at 97.25'.	GP-GM	Moderate to slow drilling rate Boulder at 92-93'
		S-10		40%				
1488.8						BOTTOM OF BORING 98.25'		See TS-4R for rock coring log
	100							
	110							
	120							
	130							
	140							

DATE STARTED: 1-20-2006	GWL: DEPTH: 96.8 DATE/TIME: 3-13-06/ 08:30	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DATE COMPLETED: 1-21-2006	GWL: DEPTH: DATE/TIME:	
FIELD GEOLOGIST: RJB	DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	
CHECKED BY: EGZ		
DRILLING CO.: Miller Co	DRILLER: Tracy HELPER: Chris, Christian and Jeremy	RIG: VERSASONIC Rig

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-5

COORDINATES
N 620433.73 E 728614.27
SURFACE EL: 1587.13

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
	0					Not Sampled 0 to 2 feet		
1585.1						2' GRAVEL and COBBLES with Sand and Silt, dark to moderate reddish brown.	GW	
		S-1		60%				
1577.1	10					10'	GP-GM	
		S-2		40%				
1572.1						15' COBBLES, GRAVEL and trace Sand	GP	Slow drilling
		S-3		80%				
1567.1	20					20' COBBLES, CORED BOULDERS (>12") and trace Sand	GP-GC	Fast drilling 24 to 30'
		S-4		40%				
1557.1	30					30' GRAVEL, COBBLES AND Trace Sand And Silt, moist	GP-GC	Fast drilling 30 to 50'
		S-5		40%				
1547.1	40					40'	GP-GC	
		S-6		20%				
1537.1	50					50' COBBLES and GRAVEL some Sand, moist Boulder 50'-56'	GP	50 to 60" Slow drilling 56 to 60' fast drilling
		S-7		20%				
1527.1	60					60' COBBLES and GRAVEL some Sand, trace Silt	GW	Easy drilng 60 to 65'
		S-8		20%				Exttremly Slow 65-67 (boulder)
	70					Boulder		Not Sampled - switched to solid bit.

DATE STARTED: 1-21-06	GWL: DEPTH: DATE/TIME:	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DATE COMPLETED: 1-22-06	GWL: DEPTH: DATE/TIME:	
FIELD GEOLOGIST: RJB	DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	
CHECKED BY: EGZ		
DRILLING CO.: Miller Drilng	DRILLER: Tracy HELPER: Chris, Chris, and Jeremy	RIG: Versa Sonic

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-5

COORDINATES
N 620433.73 E 728614.27
SURFACE EL: 1587.13

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
						Solid bit broke in hole (borehole abandoned.		71.5 to 80" very fast drilling
1507.1	80					BOTTOM OF BORING 80' Borehole backfilled with bentonite.		See TS-5R for rock coring log
	90							
	100							
	110							
	120							
	130							
	140							

DATE STARTED: 1-21-06 DATE COMPLETED: 1-22-06 FIELD GEOLOGIST: RJB CHECKED BY: EGZ	GWL: DEPTH: DATE/TIME: GWL: DEPTH: DATE/TIME: DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DRILLING CO.: Miller Drillng	DRILLER: Tracy HELPER: Chris, Chris, and Jeremy	RIG: Versa Sonic

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-6

COORDINATES
N 620778.58 E 728552.28

SURFACE EL: 1537.29

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
	0					Asphalt and gravel - no sample		
1535.3		S-1		50%		2' COBBLES, GRAVEL, and rock dust, dry, dark reddish brown, fines and sand are moderate yellowish brown	gp	easy drilling 4' to 5.5' boulders 5.5' to 7.5'
1532.3		S-2		75%		5'	GP	9' easy drilling
1527.3	10	S-3		50%		10' COBBLES, GRAVEL, with sand, moist, some dry clay	GM	
1517.3	20	S-4		40%		20' Similar to 10' to 20' but gravel is more abundant, more moist	GP-GC	17' easy drilling
1507.3	30	S-5		25%		30' GRAVEL, SAND, and some fines, moist, moderate yellowish brown	GM-GC	easy drilling
1497.3	40	S-6		25%		40' COBBLES, GRAVEL, trace fines	gp	easy drilling 49.5'
1487.3	50	S-7		5%		50' Similar to 40'-50', dry	GP-GM	most of sample lost in fishing broken 4" drilling pipe
1483.3						BOTTOM OF BORING 54'		See TS-6R for coring log
	60							
	70							

DATE STARTED: 1-24-06
DATE COMPLETED: 1-24-06
FIELD GEOLOGIST: RJB
CHECKED BY: EGZ

GWL: DEPTH: dry DATE/TIME: 3-11-06
GWL: DEPTH: DATE/TIME:
DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'

NOTES: All samples sent to Geotechnics laboratory for additional analysis

DRILLING CO.: Miller Drilng

DRILLER: Tracy HELPER: Chris, Chris, and Jeremy

RIG: Versa Sonic

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-7

COORDINATES
N 621176.86 E 727799.66

SURFACE EL: 1551.04

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
	0	S-1		20%		GRAVEL and COBBLES with very little fines/sand. Rock fragments are angular to subangular, dark redish brown. Sand/fines are moderate yellowish brown. The fragment shapes and colors are similar in all intervals except where stated	gm	Not representative for gradation. Drilled first with 4" displacement bit to overcome boulder. Rapid drilling 6'-11'
1541.0	10					10' COBBLES, fine GRAVEL, and sand/fines. Rock fragments are Dark Reddish Brown and sand/fines are moderate yellowish brown.	gw-gm	Boulder at 15-16' Rapid drilling rate 15-20' Moderate drilling rate 10-18'
		S-2		40%				
1531.0	20					20' COBBLES, GRAVEL, and sand/fines	gw-gm	Rapid drilling rate except 20-23' and 28-29' where moderate
		S-3		40%				
1521.0	30					30' COBBLES, GRAVEL with trace sand/fines.	GP	Rapid drilling rate
		S-4		20%				
1511.0	40					40' GRAVEL, some SAND	GW	Rapid drilling rate except for 43-45' where moderate
		S-5		30%				
1501.0	50					50' GRAVEL, some sand	GW	Rapid drilling rate except for 54-56' where moderate
		S-6		30%				
1491.0	60					60' COBBLES and GRAVEL with trace fines	GW	Rapid drilling rate
		S-7		20%				
	70							

DATE STARTED: 1-24-2006
DATE COMPLETED: 1-24-2006
FIELD GEOLOGIST: RJB
CHECKED BY: EGZ

GWL: DEPTH: 106.5 DATE/TIME: 3-13-06/07:00
GWL: DEPTH: DATE/TIME:
DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'

NOTES: All samples sent to Geotechnics laboratory for additional analysis

DRILLING CO.: Miller Co

DRILLER: Tracy HELPER: Chris, Christian and Jeremy

RIG: VERSASONIC Rig

Paul C. Rizzo Associates, Inc.
CONSULTANTS

Taum Sauk Plant, Upper Reservoir Dike. Foley & Lardner LLP **PROJECT NO. 06-3551**

LOG OF BORING NO. TS-7

COORDINATES
N 621176.86 E 727799.66

SURFACE EL: 1551.04

ELEVATION (FEET MSL)	DEPTH (FEET)	SAMPLE NO. OR RUN NO.	BLOW/6" & (N) OR % REC. & (RQD)	RECOVERY (ft.)	PROFILE	DESCRIPTION	USCS SYMBOL	REMARKS
1481.0						70' COBBLES and GRAVEL some sand	GP	Rapid drilling rate except for 75-77' where moderate
		S-8		22%				
1471.0	80					80' Mostly GRAVEL and COBBLES and trace sand/fines Top of bedrock at 86'.	GP	Rapid drilling rate except for 84-87' where slow. Boulder at 88-90'
		S-9		30%				
1464.0						BOTTOM OF BORING 87'		See TS-7R for rock coring log
	90							
	100							
	110							
	120							
	130							
	140							

DATE STARTED: 1-24-2006	GWL: DEPTH: 106.5 DATE/TIME: 3-13-06/07:00	NOTES: All samples sent to Geotechnics laboratory for additional analysis
DATE COMPLETED: 1-24-2006	GWL: DEPTH: DATE/TIME:	
FIELD GEOLOGIST: RJB	DRILLING METHOD: Sonic drilling with 6" diameter core. Sample typically taken every 10'	
CHECKED BY: EGZ		
DRILLING CO.: Miller Co	DRILLER: Tracy HELPER: Chris, Christian and Jeremy	RIG: VERSASONIC Rig