Subsurface Exploration and Geotechnical Engineering Report

Prepared for:

Lost Creek ISR, LLC
5880 Enterprise Drive, Suite 500
Casper, WY 82601

Uranium Processing Plant Sweetwater County

September 8, 2008

13854-CX

Prepared by:

INBERG-MILLER ENGINEERS
1120 East "C" Street
Casper, WY 82601

INBERG-MILLER ENGINEERS

QUALITY SOLUTIONS THROUGH TEAMWORK

September 8, 2008 13854-CX

Mr. Steve Hatten
Lost Creek ISR, LLC
5880 Enterprise Drive, Suite 500
Casper, WY 82601

RE: SUBSURFACE EXPLORATION AND
GEOTECHNICAL ENGINEERING REPORT
URANIUM PROCESSING PLANT
SWEETWATER COUNTY, WYOMING

Dear Steve:

We are enclosing the original and two copies of our subsurface Exploration and Geotechnical Engineering report for the above-referenced project. The work described in this report has been completed per our Service Agreement and proposal (Appendix A) dated August 5, 2008.

It has been a pleasure participating in this project. We are available to provide additional services at your request. Services we could provide include:

- additional field exploration
- environmental assessment
- civil engineering
- plan and specification review
- surveying
- construction materials testing
- observation of excavations and earthwork

If you have any questions or comments, please contact us at 307-577-0806.

Sincerely,

INBERG-MILLER ENGINEERS

Ben Hauser E.I.T.
Geotechnical Engineer

BH:llm\13854-cx\13854-cx rpt

Enclosures as stated

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Summary

Based on information obtained from our subsurface exploration and laboratory testing of recovered samples, it is our opinion that the site is suitable for construction of the proposed uranium processing plant, subject to considerations for site preparation and foundations as described in this report. Our field exploration included 12 test borings to depths ranging from 20 to 45 feet. Soils encountered included varying layers of sand and clay. Soils at anticipated shallow foundation depths were generally in a very dense or hard condition. Groundwater was not encountered within any of the test borings.

The proposed building can be supported on conventional, shallow spread, and continuous footings bearing on properly prepared and compacted native subgrades. Footings can be placed on firm, native soil subgrades that have been scarified, moisture conditioned, and compacted as described in the recommendations.

Scope of Services

The purpose of this study was to explore subsurface conditions at the site of the proposed uranium processing plant, and to provide geotechnical recommendations for design and construction. Specific recommendations and information are provided about foundation types, bearing capacity, groundwater conditions, earthwork, and other pertinent foundation and construction requirements.

Project Information

Project information was provided by Steve Hatten and Catherine Bull with Lost Creek ISR, LLC. It is our understanding the project will consist of constructing a new uranium processing plant and two containment ponds.

Detailed information on the structural loads was not available at the time this report was prepared. However, based on information provided, we assume that the proposed buildings will have low to moderate loads. These assumptions include maximum wall loads on the order of 3 kips per linear foot and maximum isolated columns loads on the order of 60 kips. In addition we understand there will be processing tanks with approximate loads of 100 kips. Some recommendations provided in this report will not be appropriate for buildings with loads in excess of those described above. Based on preliminary drawings provided to us we understand the project will include the construction of a main plant with approximate dimensions of 425 feet by 200 feet. In addition, the project will have two out buildings, one located at the north edge, and the other located at the southeast corner of the plant. We assume structural loads for these buildings will be similar to the main processing plant. Test borings were placed within the proposed footprint of each out building.

Grading plans were not provided to us at the time this report was prepared. We assume that some minor grading will be required for the proposed plant, and cut and fill depths will be less than 3 feet. If cuts and fills significantly in excess of these assumptions are planned for the proposed plant, we should be provided plans and the recommendations of this report should be reviewed for conformance with the planned site configuration. Cut and fill recommendations have not been provided for the proposed containment ponds.

Field Exploration

The fieldwork was performed using a Mobile B-57 truck-mounted drilling rig at the site from August 11 through August 15, 2008. Twelve test borings were advanced to depths of 20 to 45 feet. Drilling was performed using 4.25-inch inside diameter, hollow-stem augers. The augers act as a continuously advancing, steel casing. The method prevents test holes from caving in above the levels to be tested. Sampling tools are lowered inside the hollow-stem for testing into undisturbed soils.

Drilling and field sampling were performed according to the following standard specifications:

1. "Standard Practice for Using Hollow-Stem Augers for Geotechnical Exploration and Soil Sampling," ASTM D6151.

2. Sampling with a 2-inch O.D., split-barrel (split-spoon) sampler per ASTM D1586, "Penetration Test, and Split-Barrel Sampling of Soils." Ninety-eight such tests were performed. Standard penetration test blow counts were obtained by driving a 2.0-inch diameter split-spoon sampler into the soil using an automatic hammer that drops a 140-pound hammer a distance of 30 inches. The SPT N-value is the blow count for 12 inches of sampler penetration. N-values are correlated to soil relative density, hardness, strength and a variety of other parameters.

The soil samples were field classified by the geotechnical engineer, sealed in containers to prevent loss of moisture, and returned to our laboratory. A field log was prepared for each boring during drilling. The borings were located in the field by pacing from property corners.

Laboratory Testing Program

Upon return to the office, samples were classified visually in accordance with ASTM D2488. In order to better classify the recovered samples and determine their engineering properties, the following laboratory soil tests were performed:

		TESTS
1.	Moisture Content (ASTM D2216)	98
2.	Atterberg Limits (ASTM D4318)	7
3.	Sieve Analysis (#4 to #200) (ASTM C136 and C117)	13
4.	Water Soluble Sulfate	4

A Final Log for each boring was prepared containing the work method, samples recovered, and a description of soils encountered. The sieve analyses are presented graphically in Appendix C. All other test results are arrayed on the final logs bound into Appendix B.

Site Conditions

The site is located approximately 23 miles southwest of Bairoil, Wyoming. The site is vegetated with sparse native grass. The topography at the site slopes gently to the south. A Site Location Map, Site Observation Sheet, and Test Boring Location Plan in Appendix A describe the site in more detail.

Subsoil Conditions

The subsoil classified in the 12 test borings performed at the site consisted of varying layers of sand and clay over sedimentary bedrock. The following paragraphs represent only general subsoil conditions for the site due to the degree of variability within the subsoil. The final logs presented in Appendix B should be viewed for specific details about the subsoil conditions.

The topsoil consists of 0.5 to 2 feet of sandy clay. The organic content of the soils appears to be relatively low. Standard Penetration Test Blow counts (N-Values) indicate that the soils are in a stiff to hard condition.

Over the approximate interval of 2 to 4 feet, clayey sand and sandy clay was encountered. Laboratory testing indicates minus number 200 sieve fractions of 16.6 percent to 72.8 percent and plasticity indices of "non-plastic" to 18 percent indicating low to medium plasticity. Standard Penetration Test blow counts (N-values) indicate that the soil is in a medium dense to very dense condition in the case of the sand soils. The clay soil condition is hard.

Over the approximate interval of 4 feet to the extent of each boring, sedimentary bedrock was encountered. Laboratory testing indicates minus number 200 sieve fractions of 15.3 percent to 80 percent and plasticity indices of "non-plastic" to 14 percent indicating low to medium plasticity.

Based on the soil classification, the clayey sand has a low susceptibility for problematic settlement or heave under anticipated building loads. However, layers with high percentages of moderate plasticity clay may be subject to swell and heave if moisture becomes elevated.

Groundwater Conditions

Groundwater was not encountered in any of the test borings. Observations were made in each test boring at the completion of drilling and again prior to completion of the fieldwork. This

information, along with cave-in depths of the drill holes, is recorded on the final logs in Appendix B. Test borings were backfilled at the completion of the fieldwork for practical and safety reasons, therefore no subsequent readings were performed.

Three permanent monitor wells were placed in the corners of the containment ponds. The fourth monitor well was not installed after exploration of the subsoil conditions at B-2 indicated that a suitable low permeability layer was not present. Installation records for the three monitor wells are presented graphically in Appendix B.

Recommendations

Earthwork

1. Prior to construction on the site, all vegetation and organic surface matter should be stripped from the surface. Based on the test borings, it appears that stripping depths of approximately 4 to 8 inches may be required.

2. Demolition of existing structures and utilities (if any) must include complete removal of below grade concrete and old fill.

3. After excavation to desired site grades (including any overexcavation required), and prior to placing fill or erection of forms for foundations and slabs, we recommend the site surface be compacted. This compaction densifies the native subgrade and soils loosened by excavation. This compaction effort should be performed in the presence of the geotechnical engineer so that soft or loose zones can be properly identified and improved. Alternatively, the geotechnical engineer can observe proof rolling with a heavily loaded wheeled vehicle. If loose or soft zones are encountered that do not improve with repeated compaction, they should be removed and replaced with properly compacted, approved fill, as described in Items 4 and 5 below.

4. Fill material requirements are provided in the following table:

Use	Fill Material
Beneath structures	Native clayey sand or Structural fill meeting Envelope A
Beneath Slabs/Pavement Bottom of slap/paved surface to 6 inches Deeper than 6 inches below slab	 Grading W aggregate base Native clayey sand or Structural fill meeting Envelope A
Road and pavement subgrades	Scarified and compacted native soil
Trench backfill	Native clayey sand
General site fill in landscaped areas	Native clayey sand

Imported fill specifications are provided below:

Structural Fill Envelope A	
Sieve	Percent Finer
1.5″	100
#4	50-100
#8	30-90
#30	15-75
#50	10-60
#200	0-20
Liquid Limit < 40, PI < 15	

WYDOT Grading W Crushed Aggregate Base	
Sieve	Percent Finer
1.5″	100
1″	90-100
½″	60-85
#4	45-65
#8	33-53
#200	3-12
Liquid Limit < 25, PI < 3	

5. Engineered fill should be placed in horizontal lifts not exceeding 8 inches in loose thickness and compacted at moisture contents ranging from 2 percent below to 2 percent above the optimum moisture content. The contractor's equipment and procedures should produce a uniformly mixed and compacted lift. In-place density and water content of each lift of fill materials should be tested and approved.

   The following table is our recommended soil compaction requirement for earthwork. All compaction requirements are based on Standard Proctor maximum dry density (ASTM D698).

Native Subgrade	Minimum % Compaction
Scarified and compacted subgrade soils beneath footings, slabs-on-grade, pavement, and structural fill	95
Fill Soils	
Beneath foundations	95
Beneath slabs-on-grade	95
Beneath pavements	95
Embankments and backfill in non-structural areas	90

6. If construction takes place during cold weather, care should be taken to prevent construction on frozen soils. In addition, fill materials should not contain snow and/or ice and should not be placed in a frozen condition.

Foundations

The proposed structures can be supported on conventional continuous and spread footings bearing on well-prepared native soil. Site soils are generally in a hard or very dense condition and are considered adequate for support of shallow foundations.

1. Continuous strip or individual pad (spread) footings should bear on moisture conditioned, compacted, and tested, native site soil. Compaction should be performed as described in the *Earthwork* section above.

2. Spread footings for building columns and continuous footings for bearing walls should be designed for an allowable net bearing pressure of 1500 psf. The allowable net bearing pressure could potentially be increased if excavations reveal that footings will bear directly on the sandstone bedrock. This determination should be made by a qualified geotechnical engineer.
   - Shallow footing widths should be a minimum of 24 inches for individual pads and 18 inches for continuous footings.
   - The allowable net bearing pressure can be increased by one-third for short-term loads such as wind or seismic.
   - The above allowable bearing pressure is to be used with foundation reactions from dead and long-term live loads derived by working stress analyses.
   - "Net" bearing pressure is the difference in vertical pressure on an element of soil, at the bottom of the footing, between its pre-excavation condition and its completed project condition (including all live and dead structural loads). Generally, the weight of below-grade foundation concrete and below-grade fill are not considered a net structural load because the densities of these materials are similar to the density of the original soil they displace. Where site grades change between the time of foundation excavation and project completion, the weight of fill soil and/or excavated soil may need to be accounted for as part of the "net bearing capacity".

3. For frost protection and to provide containment for the bearing soils, exterior footings should extend to a minimum depth of 48 inches below finished exterior grade. Interior footings within heated areas of the building should extend to a minimum depth of 18 inches below the floor subgrade.

4. Settlement is often induced by saturation of the foundation subgrade. Therefore, provisions for adequate surface drainage should be made. Where differential settlement may be problematic, consideration should be given to design footing

dimensions and loads to produce equal settlement. This effort may include considerations of compressibility of native soil, thickness and compressibility of fill, and distribution of dead load. Total anticipated settlement and differential settlement based on the allowable bearing pressure and estimated footing sizes are presented below:

Footing Size	Estimated Total Settlement	Estimated Differential Settlement
Continuous or rectangular (*B<3 feet)	0.25 to 0.5 inch	< 0.5 inch
Rectangular or Circular (*3 feet < B < 10 feet)	0.5 to 1.0 inches	< 0.5 inch
Rectangular or Circular (*10 feet < B < 15 feet)	0.5 to 1.5 inches	< 0.5 inch

* B = least footing dimension or diameter

5. Footing subgrades should be observed by the geotechnical engineer prior to concrete placement, to identify suitable bearing materials, and to observe whether the foundation soils have been properly prepared prior to foundation construction. All loose or soft soils in the footing excavation should be removed from the foundation excavation prior to concrete placement. Footings should not be placed on either uncompacted native soil or uncompacted fill.

Lateral Earth Pressures

1. Lateral load parameters are provided in the following table. All of the parameters assume the structure and soils are above the water table. The following parameters do not include a factor of safety. A minimum factor of safety of 2.0 is recommended for horizontal loading.

	Native Clayey Sand	Grading A Fill
Active Lateral Soil Pressure – for structures that can deflect without restraint by other structures. (equivalent fluid unit weight, pcf)	35	40
At-Rest Lateral Soil Pressure - for structures that have significant restraint against deflection. (equivalent fluid unit weight, pcf)	55	60
Passive Lateral Soil Pressure – resistance of soil abutting a structure. (equivalent fluid unit weight, pcf)	480	400
Coefficient of Friction between foundation and underlying soil	0.6	0.5
Soil Density, wet soil (pcf)	130	135

2. Where possible, foundations should be backfilled and compacted evenly on all sides to prevent horizontal movement due to unbalanced pressure. Foundations walls should be adequately braced prior to backfilling. Fill placed against retaining walls or basement walls should be carefully compacted with appropriate equipment to prevent excessive lateral pressures that may displace or damage the structure.

3. Surcharge loads, on the uphill side of the wall, due to ground slope, soil stockpiles, equipment, and structures may significantly increase lateral forces on the wall and need to be fully evaluated, if applicable to this project, by the geotechnical engineer.

4. Drains should be installed behind retaining walls or other confined areas where surface seepage and percolation water can collect. Drains should be designed to prevent the build-up of hydrostatic pressures behind the retaining structures due to trapped water.

Slab-on-Grade

1. We recommend a minimum of 6 inches of properly compacted aggregate base (WYDOT Grading W) beneath the slab. This layer is intended as a leveling course and to reduce potential point loading due to inconsistencies in the natural subgrade or shrink-swell related movements. The aggregate base course will not provide an effective capillary break for moisture rise to the slab. Soil beneath the aggregate base can be properly prepared, native soil or structural fill prepared as described in the Site Preparation and Fill Section above.

2. The floor slabs should have an adequate number of joints to reduce cracking resulting from differential movement, shrinkage, and curing stresses. The floor slab should be considered "floating" and may move differentially with respect to the building and foundation supported equipment. Consequently, isolation joints should be placed between the floor, building walls, and foundation supported equipment.

3. Regardless of the pre-construction soil-moisture content, there is a potential for problematic infiltration of moisture upwards through the slab-on-grade floor. In this semi-arid climate, the moisture content of soil beneath buildings generally increases following construction. This is due to the reduction of evapotranspiration from the ground surface and the concentration of water around the building from irrigation and runoff from hard surfaces. Post-construction moisture infiltration through the slab may result in damage to

flooring materials or may support growth of mold or other biologic materials in areas of poor ventilation. Installation of a moisture barrier beneath the slab should be considered by the building design professionals in light of the long-term service requirements for the building.

General

1. The measured water-soluble sulfate content of 0-50 ppm for samples from test borings B-6, B-8, B-9, and B-11 at a depth of 2.5 feet indicates that the soils do not contain sufficient sulfates to be very reactive with cement. According to American Concrete Institute (ACI) and Portland Cement Association (PCA) guidelines, no special provisions for cement type or water/cementitious material ratio are required for sulfate resistance of portland cement concrete.

2. Rainwater discharge from the building roofs, parking, and drive areas should be directed toward collection points and disposed of away from the building and pavement in an adequate and efficient manner.

3. In order to promote drainage away from the building, we recommend that final exterior grades slope away from the building at a slope of 5 percent for a minimum distance of 10 feet.

4. In order to reduce the presence of moisture near the structure, landscaping adjacent to the building should utilize plants and vegetation that do not require much irrigation. Furthermore, sprinkler heads should not be placed closer than 10 feet from the structure.

5. In accordance with the International Building Code (IBC), 2003 Edition, Table 1615.1.1, we recommend site Class C for determination of design spectral response acceleration parameters per IBC. This class is based on Standard Penetration Resistance blow count numbers (N-values) per ASTM D1586 and the assumption that the subsurface soil conditions encountered in the test borings can be projected deeper into the earth to describe the average soil conditions for the top 100 feet. Class C describes the average soil properties for the top 100 feet as very dense soil and soft rock (Standard Penetration Test blow count, N > 50 or unconfined shear strength > 2,000 psf).

6. Inberg-Miller Engineers should review final plans and specifications in order to determine whether the intent of our recommendations has been properly implemented. In addition, we should be retained as the geotechnical engineer and construction materials testing agency to provide the following services:

a. Observe excavations to determine if subsurface conditions revealed are consistent with those discovered in the exploration.
b. Identify if the proper bearing stratum is exposed at proposed foundation excavation depths.
c. Observe that foundation excavations are properly prepared, cleaned, and dewatered prior to concrete placement.
d. Test compaction of subgrades and fills.
e. Perform field and laboratory testing of concrete and other materials as required by project specification and/or building code.
f. Observe drilled pier construction to identify suitable bearing strata and to observe pier construction including cleaning of pier bottoms and concrete placement.

Construction Considerations

No major difficulties are anticipated for conventional equipment during earthwork construction at the proposed site. We do not anticipate that groundwater will be encountered at the proposed foundation depths during construction. However, excavations should be protected from surface water run-off, whenever possible. Water accumulation within excavations should be promptly removed. If excavation bottoms become wet, excavation of soils beyond the minimum required depth may be necessary to provide a firm base for fill placement.

Excavations should be sloped, benched, shored, or made safe for entry by use of trench boxes as required by the standards of 29 CFR Part 1926. As a safety measure, it is recommended that all vehicles and soil piles be kept a minimum lateral distance equal to the slope height, from the crest of the slope. The contractor is solely responsible for designing and constructing stable excavations. Furthermore, the contractor's "responsible person" should continuously evaluate the soil exposed in the excavations, the geometry of the excavation slopes, and the protective equipment and procedures employed by his forces. For the sole purpose of project planning, we recommend that sandy clays and clayey sands be considered an OSHA Type B soil. Excavations, including utility trenches, extending to depths of greater than 20 feet are required to have side slopes, trench boxes, or shoring designed by a professional engineer.

Closure

This report has been prepared for the exclusive use of our client, Lost Creek ISR, LLC, for evaluation of the site, design, and construction planning purposes of the described project. All information referenced in the Table of Contents, as well as any future written documents that address comments or questions regarding this report, constitute the "entire report". Inberg-Miller Engineers' conclusions, opinions, and recommendations are based on the entire report. This report may contain insufficient information for applications other than those herein

described. Our scope of services was specifically designed for and limited to the specific purpose of providing geotechnical recommendations for the design of the proposed Uranium Processing Plant. Consequently, this report may contain insufficient information for applications other than those herein described.

The scope of services for this project does not include any environmental or biological assessment of the site. If requested, we would be pleased to assist you with developing a scope of services for environmental assessment for the subject site. Wherever structures are in contact with soil, there is potential that soil moisture may penetrate the building and provide an opportunity for mold growth. While this report identifies soil moisture/groundwater conditions and may provide geotechnical recommendations for drainage and construction, the design of drains, water proof/resistant building elements, equipment to remove moisture from the building, or additional measures to prevent the growth of mold are beyond the scope of our geotechnical services. Implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent the growth of mold in or on the proposed building.

We appreciate participating in your project. We can offer services under a separate contract to provide civil or environment engineering services, review final plans and specifications, perform construction surveying, field and laboratory construction materials testing, and observe excavations, as may be required. Please call us at 307-577-0806 if you have any questions regarding this report.

Sincerely,

INBERG-MILLER ENGINEERS

Ben Hauser, E.I.T.
Geotechnical Engineer

BH:llm\13854-cx\13854-cx rpt

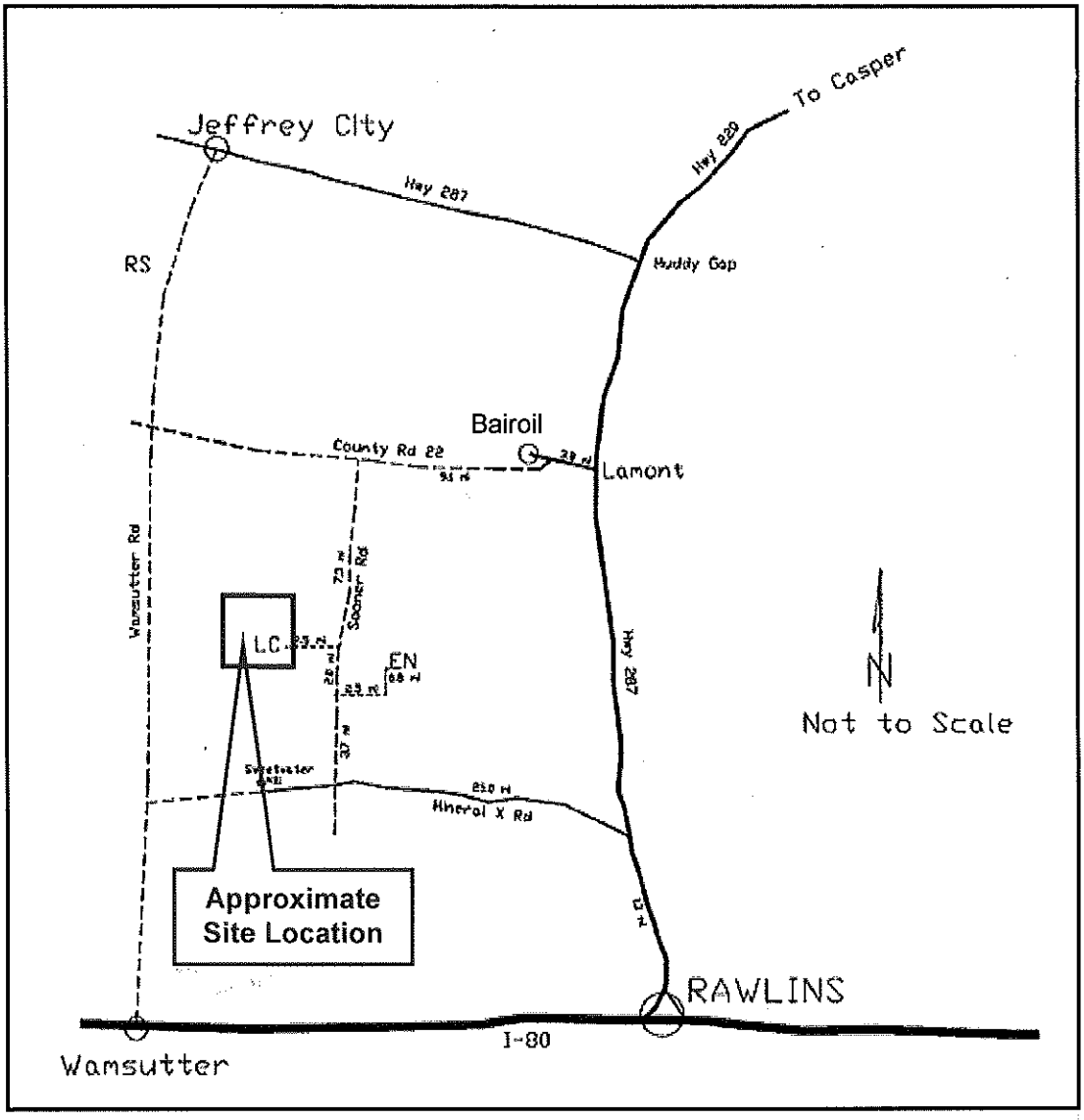
REVIEWED BY:

Glen M. Bobnick, P.E.
Geotechnical Engineer

Professional Engineer
GLEN M. BOBNICK
7075
Date 9/8/08
WYOMING

Appendix A

Site Location Map

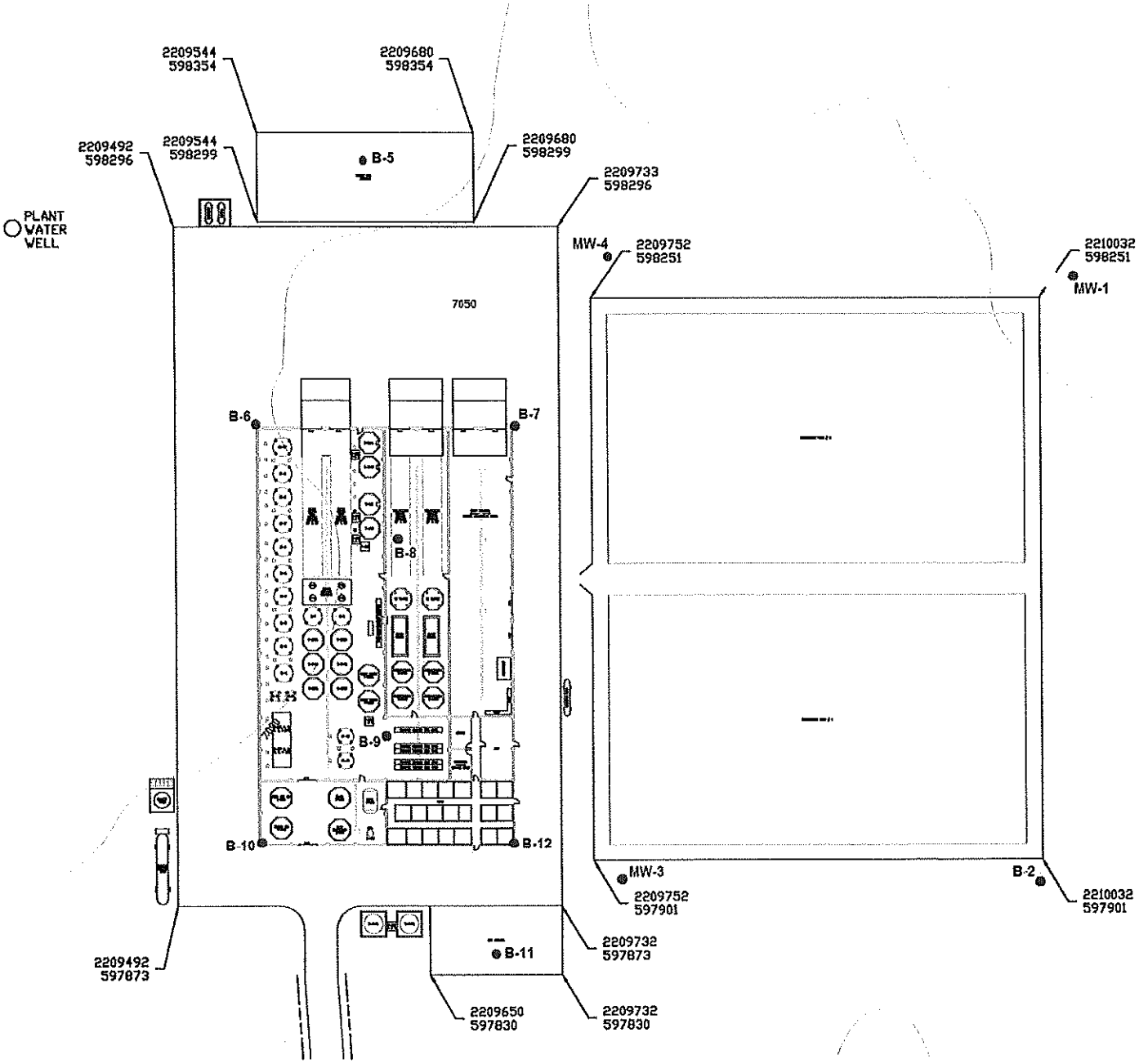


Source: Lost Creek ISR, LLC

Site Observations

1.	Location of Site:	*Approximately 23 miles SW of Bairoil WY*
2.	City/Town:	*n/a*
3.	Slope of Ground Surface:	*2%*
4.	Downhill Direction:	*south*
5.	Est. Change of Surface Elevation:	*5 to 6 feet*
6.	Bodies of Water Nearby:	*none*
7.	Topsoil Type:	*Sandy clay*
8.	Vegetation:	*Native grasses and shrubs*
9.	Rock Outcrops:	*None*
10.	Est. Depth to Bedrock:	*Unknown*
11.	Artificial Fills:	*None*
12.	Type and Depth:	n/a
13.	Nearby Land Features:	*None noted*
14.	Present Site Improvements:	*There are a few uranium exploration holes near the site*
15.	Buried Utilities On Site:	*None*
16.	Nearby Buildings:	*None*
17.	Cond. of Nearby Foundations:	n/a
18.	Cond. of Nearby Streets/Walks:	*N/A*
19.	Buried Obstructions Encountered:	*None*
20.	History of Land Use:	*BLM range land*
21.	Existing Drainage Features:	*None*
22.	Overhead Utilities Crossing Site:	*None*
23.	Geologic Description of Site:	*Basin lithology*
24.	Remarks:	*none*

Test Boring Location Plan



Test Boring by Inberg-Miller Engineers on August 11-15, 2008
Map Source: Lost Creek ISR, LLC

Appendix B

LOG OF TEST BORING NO. MW-1

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): _____ Benchmark/Datum (Ft): _____

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 10	Stiff. dry, brown, sandy CLAY		14		2.9			
	SS-2 2.5-4.0 18	2.5 Dense to very dense, dry, reddish brown, clayey, fine SAND (sandstone)		40		9.0			
5	SS-3 5.0-6.5 8			50/5.5"		9.2			
	SS-4 7.5-9.0 5			50/5.5"		7.0			
10	SS-5 10.0-11.5 3	Grades to medium sand		50/4"		5.2			
15	SS-6 15.0-16.5 4			50/4"		7.0			- #200 = 24.0%
20	SS-7 20.0-21.5 2.5			50/3"		5.1			
		24.0							
25	SS-8 25.0-26.5 3	Hard, slightly moist, reddish tan, sandy CLAY (claystone)		50/4"		7.9			
30	SS-9 30.0-31.5 6	Grades olive	CL	50/4"		8.6		33 20 13	- #200 = 64.4%
		33.0							
35	SS-10 35.0-36.5 6	35.3 Very dense, moist, tan, clayey SAND (sandstone)		50/4"		10.5			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)	none		
Depth to Cave-In (ft)			

DRILLING AND SAMPLING NOTES

Date Begun 8/12/08 Comp. 8/13/08
Crew BH, BWH Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 35.3

LOG OF TEST BORING/PIT 13854-CX GINT.GPJ INB_MLLR.GDT 9/4/08

INBERG-MILLER ENGINEERS

LOG OF TEST BORING NO. B-2

Project: Lost Creek Project | Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY | Client: Lost Creek ISR, LLC
Surface El. (Ft): | Benchmark/Datum (Ft):

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 5	Hard, dry, brown, sandy CLAY		32		3.5			
	SS-2 2.5-4.0 16	Grades tan		52		8.9			
		4.5							
5	SS-3 5.0-6.5 12	Very dense, dry, olive tan clayey SAND (sandstne)		50/4"		8.8			
	SS-4 7.5-9.0 4			50/5.5"		6.9			
10	SS-5 10.0-11.5 4			50/5"		7.1			
15	SS-6 15.0-16.5 3.5			50/4"		4.7			- #200 = 28.3%
20	SS-7 20.0-21.5 5.5	Grades less clayey		50/4"		6.4			
25	SS-8 25.0-26.5 5.5			50/4"		8.7			- #200 = 21.0%
30	SS-9 30.0-31.5 3.5			50/4"		7.9			
35	SS-10 35.0-36.5 4	35.3		50/4"		5.7			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)	none		
Depth to Cave-In (ft)	21.5		

DRILLING AND SAMPLING NOTES

Date Begun 8/14/08 Comp. 8/14/08
Crew BH, BWH, MEF Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 35.3

INBERG-MILLER ENGINEERS

LOG OF TEST BORING NO. MW-3

Project: Lost Creek Project | Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY | Client: Lost Creek ISR, LLC

Surface El. (Ft): | Benchmark/Datum (Ft):

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 11	Medium dense, dry, tan, clayey, medium SAND		23		3.7			
	SS-2 2.5-4.0 10	Grades very dense		66		11.2			
5	SS-3 5.0-6.5 9			50/3"		3.5			- #200 = 16.6%
	SS-4 7.5-9.0 12	9.0		50/5.5"		4.7			
10	SS-5 10.0-11.5 14	Very dense, moist, light olive, clayey SAND (sandstone)	SM	50/5.5"		3.5		NP	- #200 = 15.3%
15	SS-6 15.0-16.5 5	Grades gray		50/5.5"		9.5			
20	SS-7 20.0-21.5 4	23.0		50/4"		8.9			
25	SS-8 25.0-26.5 3	Very dense, moist, light tan, clayey, medium SAND (sandstone)		50/4.5"		3.1			
30	SS-9 30.0-31.5 4			50/5"		5.1			- #200 = 17.3%
35	SS-10 35.0-36.5 5			50/5"		7.9			
40	SS-11 40.0-41.5 4			50/4.5"		8.2			
45	SS-12 45.0-46.5 2	45.2		50/2.5"		8.4			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)	none		
Depth to Cave-In (ft)			

DRILLING AND SAMPLING NOTES

Date Begun 8/11/08 Comp. 8/12/08
Crew BH, BWH Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 45.2

LOG OF TEST BORING NO. MW-4

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): Benchmark/Datum (Ft):

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 6	Very stiff, dry, light brown, sandy CLAY (		25		3.4			
	SS-2 2.5-4.0 14	2.5 Medium to very dense, dry, tan, clayey, medium SAND (sandstone)		21		6.6			
5	SS-3 5.0-6.5 10			50/5.5		3.9			
	SS-4 7.5-9.0 8			50/3"		5.9			
10	SS-5 10.0-11.5 6			50/6"		9.6			
15	SS-6 15.0-16.5 8			50/3"		10.9			- #200 = 20.5%
20	SS-7 20.0-21.5 3			50/4"		7.4			
		24.0							
25	SS-8 25.0-26.5 4	Hard, dry, light tan, sandy CLAY (claystone)	CL	50/4.5"		26.1		34 21 13	- #200 = 72.7%
30	SS-9 30.0-31.5 3			50/4"		9.8			
		33.0							
35	SS-10 35.0-36.5 3	35.3 Very dense, dry, tan, clayey SAND (sandstone)		50/4"					

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)	none		
Depth to Cave-In (ft)			

DRILLING AND SAMPLING NOTES

Date Begun 8/12/08 Comp. 8/12/08
Crew BH, BWH Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 35.3

INBERG-MILLER ENGINEERS

LOG OF TEST BORING NO. B-5

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): Benchmark/Datum (Ft):

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 3	Very stiff, dry, tan, sandy CLAY topsoil to 6 inches	SC	23		3.6		31 17 14	- #200 = 41.8%
		2.0							
	SS-2 2.5-4.0 14	Medium to very dense, dry, tan, clayey SAND		20		1.8			
5	SS-3 5.0-6.5 18			51		5.6			
		7.5							
	SS-4 7.5-9.0 6	Very dense, dry, tan, clayey SAND (sandstone)		50/6.5"		5.9			
10	SS-5 10.0-11.5 5			50/4"		6.9			
15	SS-6 15.0-16.5 4			50/4.5"		6.7			
20	SS-7 20.0-21.5 4	20.3		50/3"		8.0			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)			
Depth to Cave-In (ft)	11.0		

DRILLING AND SAMPLING NOTES

Date Begun 8/13/08 Comp. 8/13/08
Crew BH, BWH Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 20.3

LOG OF TEST BORING NO. B-6

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): _____ Benchmark/Datum (Ft): _____

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 5	Very stiff, dry, tan, sandy CLAY		24		1.8			
		2.0							
	SS-2 2.5-4.0 18	Dense to very dense, dry, light tan, clayey SAND (sandstone)		36		10.5			wss = 0-50 ppm
5	SS-3 5.0-6.5 10			50/5.6"		5.6			
	SS-4 7.5-9.0 3			50/4.5"		5.7			
10	SS-5 10.0-11.5 3			50/3"		4.8			
15	SS-6 15.0-16.5 2			50/2.5"		3.9			
20	SS-7 20.0-21.5 2	20.3		50/2.5"		8.7			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)			
Depth to Cave-In (ft)	12.0		

DRILLING AND SAMPLING NOTES

Date Begun 8/12/08 Comp. 8/13/08
Crew BH, BWH Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 20.3

LOG OF TEST BORING NO. B-7

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): _____ Benchmark/Datum (Ft): _____

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 4	Very stiff, dry, brown, sandy CLAY		25		2.4			
		2.0							
	SS-2 2.5-4.0 18	Dense to very dense, dry, tan, clayey SAND (sandstone)		43		5.3			
5	SS-3 5.0-6.5 5			50/5.5"		5.0			
	SS-4 7.5-9.0 5			50/5.5"		4.6			
10	SS-5 10.0-11.5 6			50/6"		7.3			
15	SS-6 15.0-16.5 5			50/5"		8.8			
20	SS-7 20.0-21.5 3	20.3		50/3"		7.9			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)			
Depth to Cave-In (ft)	12.0		

DRILLING AND SAMPLING NOTES

Date Begun 8/13/08 Comp. 8/13/08
Crew BH, BWH Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 20.3

INBERG-MILLER ENGINEERS

LOG OF TEST BORING NO. B-8

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): _____ Benchmark/Datum (Ft): _____

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 6	Very stiff to hard, dry, brown, sandy CLAY		24		3.4			
	SS-2 2.5-4.0 4	Grades less sandy	CL	52		9.1		39 21 18	wss = 0-50 ppm - #200 = 72.8%
5	SS-3 5.0-6.5 6	Grades reddish		50/6"		6.8			
		7.0							
	SS-4 7.5-9.0 6	Very dense, dry, tan, clayey SAND (sandstone)		50/5"		7.5			
10	SS-5 10.0-11.5 6			50/5.5"		4.8			
15	SS-6 15.0-16.5 5			50/5"		7.9			
20	SS-7 20.0-21.5 4	20.3		50/4"		7.3			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)			
Depth to Cave-In (ft)	13.0		

DRILLING AND SAMPLING NOTES

Date Begun 8/13/08 Comp. 8/13/08
Crew BH, BWH Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 20.3

INBERG-MILLER ENGINEERS

LOG OF TEST BORING NO. B-9

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): Benchmark/Datum (Ft):

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 7	Very stiff, dry, brown, sandy CLAY		21		2.0			
		2.0							
	SS-2 2.5-4.0 4	Very dense, dry, tan, clayey SAND		51		1.9			wss = 0-50 ppm
		4.5							
5	SS-3 5.0-6.5 5	Hard, dry, light tan, sandy CLAY (claystone)		50/6"		9.5			
		6.0							
	SS-4 7.5-9.0 8	Very dense, dry, tan, clayey SAND (sandstone)	SM	50/6"		3.5		NP	- #200 = 26.9%
10	SS-5 10.0-11.5 5.5			50/6"		6.1			
15	SS-6 15.0-16.5 3			50/4"		5.1			
20	SS-7 20.0-21.5 3	20.3		50/4"		9.1			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)			
Depth to Cave-In (ft)	12.1		

DRILLING AND SAMPLING NOTES

Date Begun 8/14/08 Comp. 8/14/08
Crew BH, BWH, MEF Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 20.3

LOG OF TEST BORING NO. B-10

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): Benchmark/Datum (Ft):

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 6	Very stiff to hard, dry, brown, sandy CLAY		29		2.0			
	SS-2 2.5-4.0 14			88		6.5			
5	SS-3 5.0-6.5 6			50/5"		7.3			
	SS-4 7.5-9.0 12	8.0 Very dense, dry, tan, clayey SAND (sandstone)		50/5.5"		5.7			
10	SS-5 10.0-11.5 6			50/6"		4.4			
15	SS-6 15.0-16.5 6			50/5"		8.3			
20	SS-7 20.0-21.5 2	20.3		50/3"		2.6			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)	none		
Depth to Cave-In (ft)	12.2		

DRILLING AND SAMPLING NOTES

Date Begun 8/14/08 Comp. 8/14/08
Crew BH, BWH, MEF Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 20.3

LOG OF TEST BORING NO. B-11

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): Benchmark/Datum (Ft):

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 14	Stiff, dry, brown, sandy CLAY 1.0		18		4.5			
	SS-2 2.5-4.0 10	Very dense, dry, tan, clayey SAND (sandstone)		50/5.5"		2.8			wss = 0-50 ppm
5	SS-3 5.0-6.5 4			50/5.5"		8.6			
	SS-4 7.5-9.0 4	9.0		50/5.5"		2.7			
10	SS-5 10.0-11.5 14	Hard, slightly moist, olive gray, sandy CLAY (claystone) 14.5	CL	91		10.7		36 22 14	- #200 = 80.2%
15	SS-6 15.0-16.5 3	Very dense, dry, light gray, clayey SAND (sandstone) 18.5		50/3"		7.0			
20	SS-7 20.0-21.5 3	Hard, slightly moist, olive gray, sandy CLAY (claystone) 20.3		50/4"		10.5			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft)	none		
Time After Drilling	0.1		
Depth to Water (ft)	none		
Depth to Cave-In (ft)	11.5		

DRILLING AND SAMPLING NOTES

Date Begun 8/15/08 Comp. 8/15/08
Crew BH, BWH Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 20.3

LOG OF TEST BORING/PIT 13854-CX GINT.GPJ INB_MLLR.GDT 9/4/08

LOG OF TEST BORING NO. B-12

Project: Lost Creek Project Job No.: 13854-CX
Location: 23 Miles SW of Bairoil, WY Client: Lost Creek ISR, LLC

Surface El. (Ft): Benchmark/Datum (Ft):

Depth (ft)	SAMPLING TYPE - NO. DEPTH (ft) RECOVERY(in)	SOIL DESCRIPTION	USCS	N BLOWS PER Ft	q_p (TSF)	W (%)	γ_m γ_d (PCF)	LL PL PI (%)	OTHER TESTS
0	SS-1 0.0-1.5 5	Very stiff, dry, brown, sandy CLAY topsoil 1.0		26		3.4			
	SS-2 2.5-4.0 15	Very dense, dry, light tan, clayey SAND (sandstone)		62		2.4			
5	SS-3 5.0-6.5 11			50/6"		2.5			
	SS-4 7.5-9.0 10			50/4"		4.6			
10	SS-5 10.0-11.5 5			50/5.5"		4.5			
15	SS-6 15.0-16.5 6	Grades very fine		50/5.5"		8.9			
20	SS-7 20.0-21.5 3	Grades reddish gray 20.3		50/3"		8.9			

WATER LEVEL OBSERVATIONS

Initial Occurrence While Drilling (ft) none
Time After Drilling 0.1
Depth to Water (ft) none
Depth to Cave-In (ft) 12.0

DRILLING AND SAMPLING NOTES

Date Begun 8/15/08 Comp. 8/15/08
Crew BH, BWH Rig Mobile B-57
Method: Hollow-Stem Auger
Termination Depth (ft) 20.3

MONITOR WELL INSTALLATION RECORD

PROJECT: Lost Creek Project JOB NO.: 13854-CX
LOCATION: 23 Miles SW of Bairoil, WY CLIENT: Lost Creek ISR, LLC
BORING NO.: MW-1 MONITOR WELL NO.: MW-1

CAP: locking steel

CASING
DIAMETER: 2.0 in.
MATERIAL: PVC
GAUGE: 40 SCH
FROM (A): ~+3.3 ft.
TO (J): 26.7 ft.

BLANK CASING
FROM (A): +3.3 ft.
TO (G): 16.7 ft.

FACTORY SLOTTED CASING (SCREEN)
SLOT SIZE: in.
FROM (G): 16.7 ft.
TO (H): 26.7 ft.

BLANK CASING
FROM (H): ____ ft.
TO (J): ____ ft.

PACKING
CONCRETE
FROM (B): +0.3 ft.
TO (C): 0.0 ft.

BENTONITE PLUG
FROM (C): ____ ft.
TO (D): ____ ft.

BACKFILL: Natural soil
FROM (D): 0.0 ft.
TO (E): 12.0 ft.

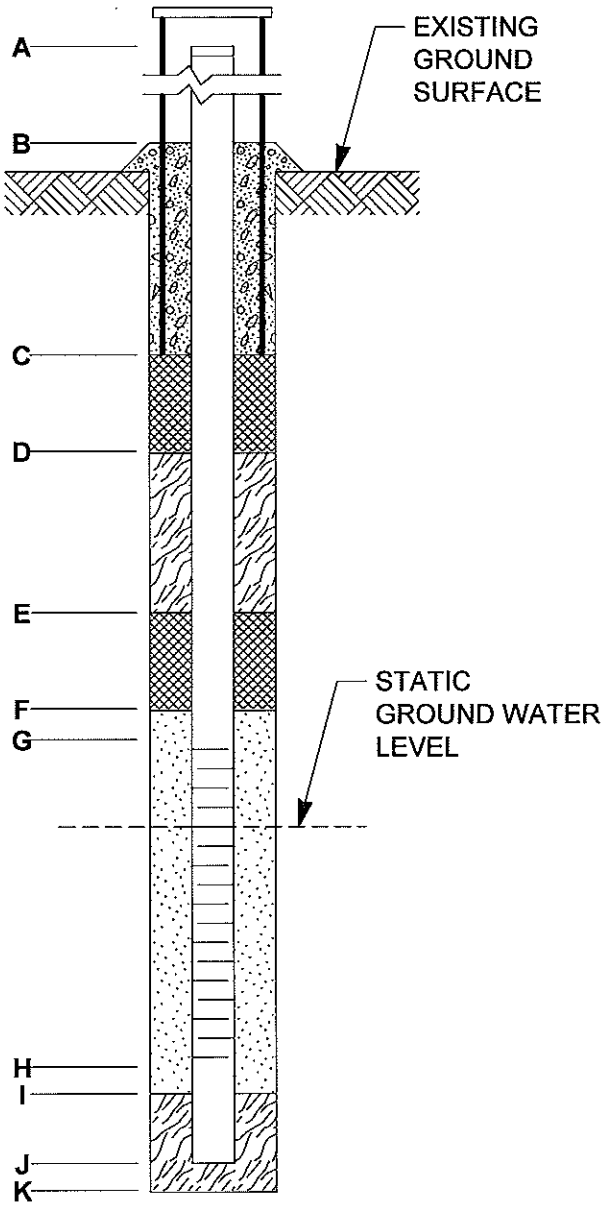
BENTONITE PLUG
FROM (E): 12.0 ft.
TO (F): 14.5 ft.

SAND: Sand
FROM (F): 14.5 ft.
TO (I): 26.7 ft.

NATURAL CAVE-IN
FROM (I): 26.7 ft.
TO (K): 35.3 ft.

ELEVATIONS
COMPLETION DATE: 8/15/08
SURFACE ELEV.: ____ ft.
CASING ELEV.: ____ ft.

POTENTIOMETRIC SURFACE
DATE: ____ ____ ft.
DATE: ____ ____ ft.
DATE: ____ ____ ft.



TOTAL COMPLETED CASING DEPTH (J): 26.7 ft.
TOTAL COMPLETED TEST BORING DEPTH (K): 35.3 ft.

NOTE: Bentonite plug from 26.7 to 27.7 feet. All depths measured from existing ground surface.

MONITORING WELL RECORD 13854-CX GINT.GPJ INB_MLLR.GDT 9/3/08

INBERG-MILLER ENGINEERS

MONITOR WELL INSTALLATION RECORD

PROJECT: Lost Creek Project JOB NO.: 13854-CX
LOCATION: 23 Miles SW of Bairoil, WY CLIENT: Lost Creek ISR, LLC
BORING NO.: MW-3 MONITOR WELL NO.: MW-3

CAP: locking steel

CASING
DIAMETER: 2.0 in.
MATERIAL: PVC
GAUGE: 40 SCH
FROM (A): ~+2.5 ft.
TO (J): 19.95 ft.

BLANK CASING
FROM (A): +5.05 ft.
TO (G): 4.95 ft.

FACTORY SLOTTED CASING (SCREEN)
SLOT SIZE: in.
FROM (G): 4.95 ft.
TO (H): 19.95 ft.

BLANK CASING
FROM (H): ft.
TO (J): ft.

PACKING
CONCRETE
FROM (B): +0.3 ft.
TO (C): 0.0 ft.

BENTONITE PLUG
FROM (C): ft.
TO (D): ft.

BACKFILL: Natural soil
FROM (D): 0.0 ft.
TO (E): 1.75 ft.

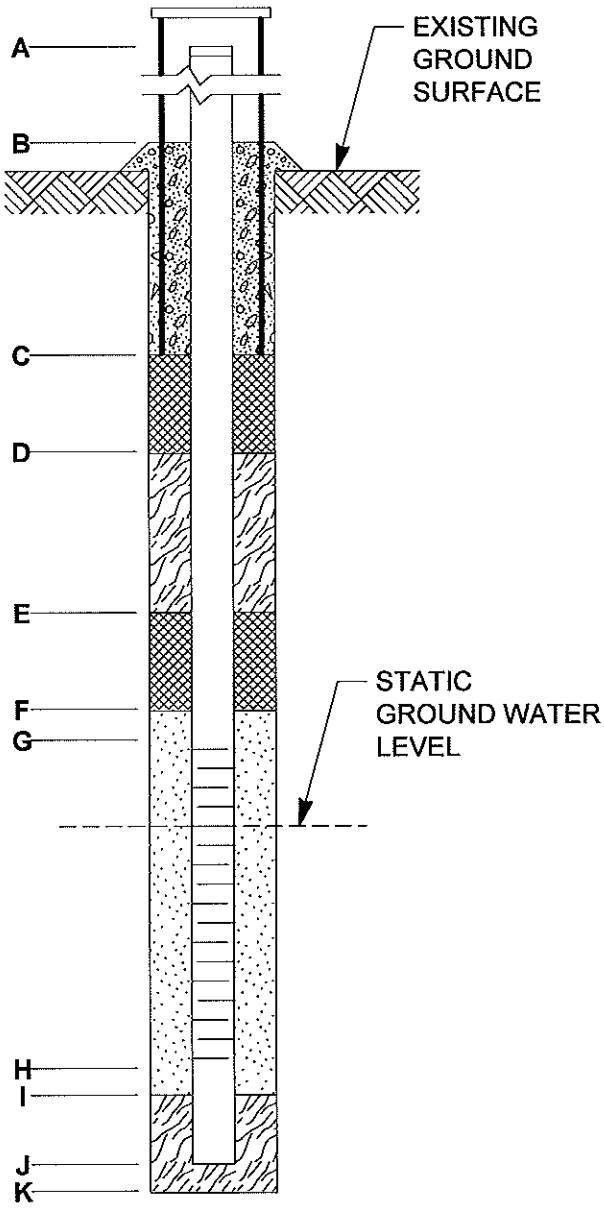
BENTONITE PLUG
FROM (E): 11.75 ft.
TO (F): 3.75 ft.

SAND: Sand
FROM (F): 3.75 ft.
TO (I): 19.95 ft.

NATURAL CAVE-IN
FROM (I): 19.95 ft.
TO (K): 45.2 ft.

ELEVATIONS
COMPLETION DATE: 8/14/08
SURFACE ELEV.: ft.
CASING ELEV.: ft.

POTENTIOMETRIC SURFACE
DATE: ft.
DATE: ft.
DATE: ft.



TOTAL COMPLETED CASING DEPTH (J): 19.95 ft.
TOTAL COMPLETED TEST BORING DEPTH (K): 45.2 ft.

NOTE: Bentonite plug from 19.95 to 21.6 feet. All depths measured from existing ground surface.

MONITORING WELL RECORD 13854-CX.GINT.GPJ INB_MLLR.GDT 9/3/08

INBERG-MILLER ENGINEERS

MONITOR WELL INSTALLATION RECORD

PROJECT: Lost Creek Project JOB NO.: 13854-CX
LOCATION: 23 Miles SW of Bairoil, WY CLIENT: Lost Creek ISR, LLC
BORING NO.: MW-4 MONITOR WELL NO.: MW-4

CAP: locking steel

CASING
DIAMETER: 2.0 in.
MATERIAL: PVC
GAUGE: 40 SCH
FROM (A): ~+2.5 ft.
TO (J): 23.8 ft.

BLANK CASING
FROM (A): +6.2 ft.
TO (G): 13.8 ft.

FACTORY SLOTTED CASING (SCREEN)
SLOT SIZE: in.
FROM (G): 13.8 ft.
TO (H): 23.8 ft.

BLANK CASING
FROM (H): ____ ft.
TO (J): ____ ft.

PACKING
CONCRETE
FROM (B): +0.3 ft.
TO (C): 0.0 ft.

BENTONITE PLUG
FROM (C): ____ ft.
TO (D): ____ ft.

BACKFILL: Natural soil
FROM (D): 0.0 ft.
TO (E): 10.0 ft.

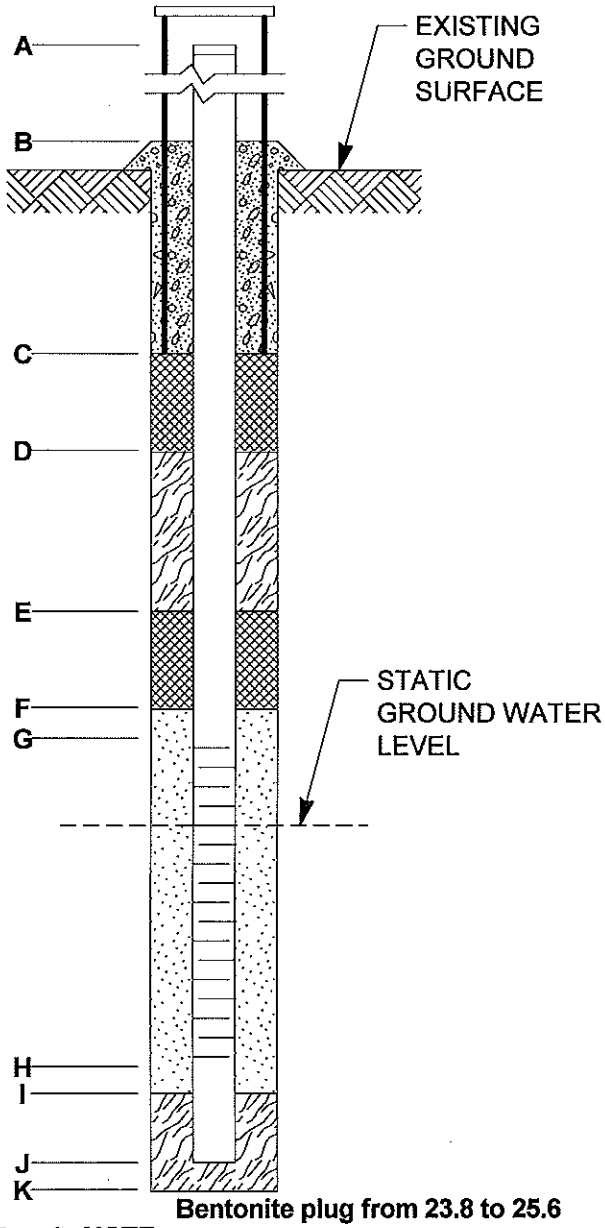
BENTONITE PLUG
FROM (E): 10.0 ft.
TO (F): 11.5 ft.

SAND: Sand
FROM (F): 11.5 ft.
TO (I): 23.8 ft.

NATURAL CAVE-IN
FROM (I): 23.8 ft.
TO (K): 35.3 ft.

ELEVATIONS
COMPLETION DATE: 8/15/08
SURFACE ELEV.: ____ ft.
CASING ELEV.: ____ ft.

POTENTIOMETRIC SURFACE
DATE: ____ ____ ft.
DATE: ____ ____ ft.
DATE: ____ ____ ft.



TOTAL COMPLETED CASING DEPTH (J): 23.8 ft.
TOTAL COMPLETED TEST BORING DEPTH (K): 35.3 ft.

NOTE: Bentonite plug from 23.8 to 25.6 feet. All depths measured from existing ground surface.

MONITORING WELL RECORD 13854-CX GINT.GPJ INB_MLLR.GDT 9/3/08

INBERG-MILLER ENGINEERS

General Notes - Log of Test Boring/Test Pit

DESCRIPTIVE SOIL CLASSIFICATION

Grain Size Terminology

Soil Fraction		Particle Size	U.S. Standard Sieve Size
Boulders		Larger than 12"	Larger than 12"
Cobbles		3" to 12"	3" to 12"
Gravel:	Coarse	3/4" to 3"	3/4" to 3"
	Fine	4.76mm to ¾"	#4 to ¾"
Sand:	Coarse	2.00mm to 4.76mm	#10 to #4
	Medium	0.42mm to 2.00mm	#40 to #10
	Fine	0.074mm to 0.42mm	#200 to #40
Silt		0.005mm to 0.074mm	Smaller than #200
Clay		Smaller than 0.005mm	Smaller than #200

Plasticity characteristics differentiate between silt and clay

Relative Density

Term	"N" Value*
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	Over 50

Consistency

Term	q_u-tons/sq. ft.
Very Soft	0.0 to 0.25
Soft	0.25 to 0.5
Firm	0.5 to 1.0
Stiff	1.0 to 2.0
Very Stiff	2.0 to 4.0
Hard	Over 4.0

*Note: The penetration number, N, is the summation of blows required to effect two successive 6" penetrations of the 2" split-barrel sampler. The sampler is driven with a 140-pound weight falling 30", and is seated to a depth of 6" before commencing the standard penetration test.

DESCRIPTIVE ROCK CLASSIFICATION

Engineering Hardness Description of Rock
(not to be confused with MOH's scale for minerals)

Very Soft	Can be carved with a knife. Can be excavated readily with point of pick. Pieces one inch or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.
Soft	Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.
Medium Soft	Can be grooved or gouged 1/16-inch deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1-inch-maximum size by hard blows of the point of a geologist's pick.
Medium Hard	Can be scratched with knife or pick. Gouges or grooves to ¼-inch deep. Can be excavated by hard blow of a geologist's pick. Hand specimens can be detached by moderate blow.
Hard	Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.
Very Hard	Cannot be scratched with knife or sharp pick. Breaking of hand specimens requires several hard blows of geologist's pick.

NOMENCLATURE

Drilling and Sampling

SS	-	Split Barrel (spoon) Sampler
N	-	Standard Penetration Test Number, blows/foot*
ST	-	Thin-walled Tube (Shelby Tube) Sampler
DC	-	Thick-wall, ring lined, drive sampler
C	-	Coring
DP	-	Direct Push Sampler
CS	-	Continuous Sampler (used in conjunction with hollow stem auger drilling)
D		Disturbed Sample (auger cuttings, air/wash rotary cuttings, backhoe, shovel, etc.)

Laboratory Tests

USCS	-	Unified Soil Classification System (soil type)
W	-	Water Content (%)
LL	-	Liquid Limit (%)
PL	-	Plastic Limit (%)
PI	-	Plasticity Index (LL-PL) (%)
q_u	-	Unconfined Strength, TSF
q_p	-	Penetrometer Reading (estimate of unconfined strength), TSF
γm	-	Moist Unit Weight, PCF
γd	-	Dry Unit Weight, PCF
WSS	-	Water Soluble Sulfate (%)
Φ	-	Angle of Internal Friction (degrees)
c	-	Soil Cohesion, TSF
SG	-	Specific gravity of soil solids
S	-	Degree of Saturation (%)
e	-	Void Ratio
n	-	Porosity
k	-	Permeability (cm/sec)

Water Level Measurement

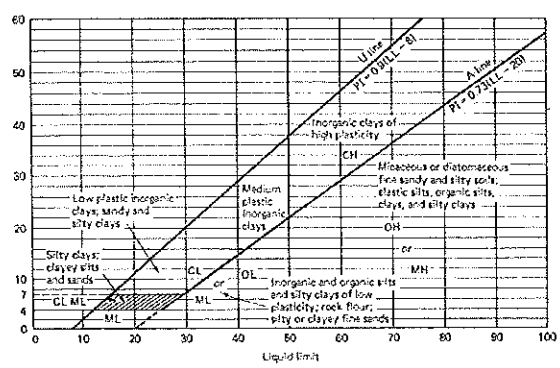
▼ - Water Level at Time Shown

Note: Water level measurements shown on the boring logs represent conditions at the time indicated, and may not reflect static levels, especially in cohesive soils. The available water level information is given at the bottom of each log.

Classification of Soils for Engineering Purposes

ASTM Designation: D2487-69 and D2488-69
(Unified Soil Classification System)

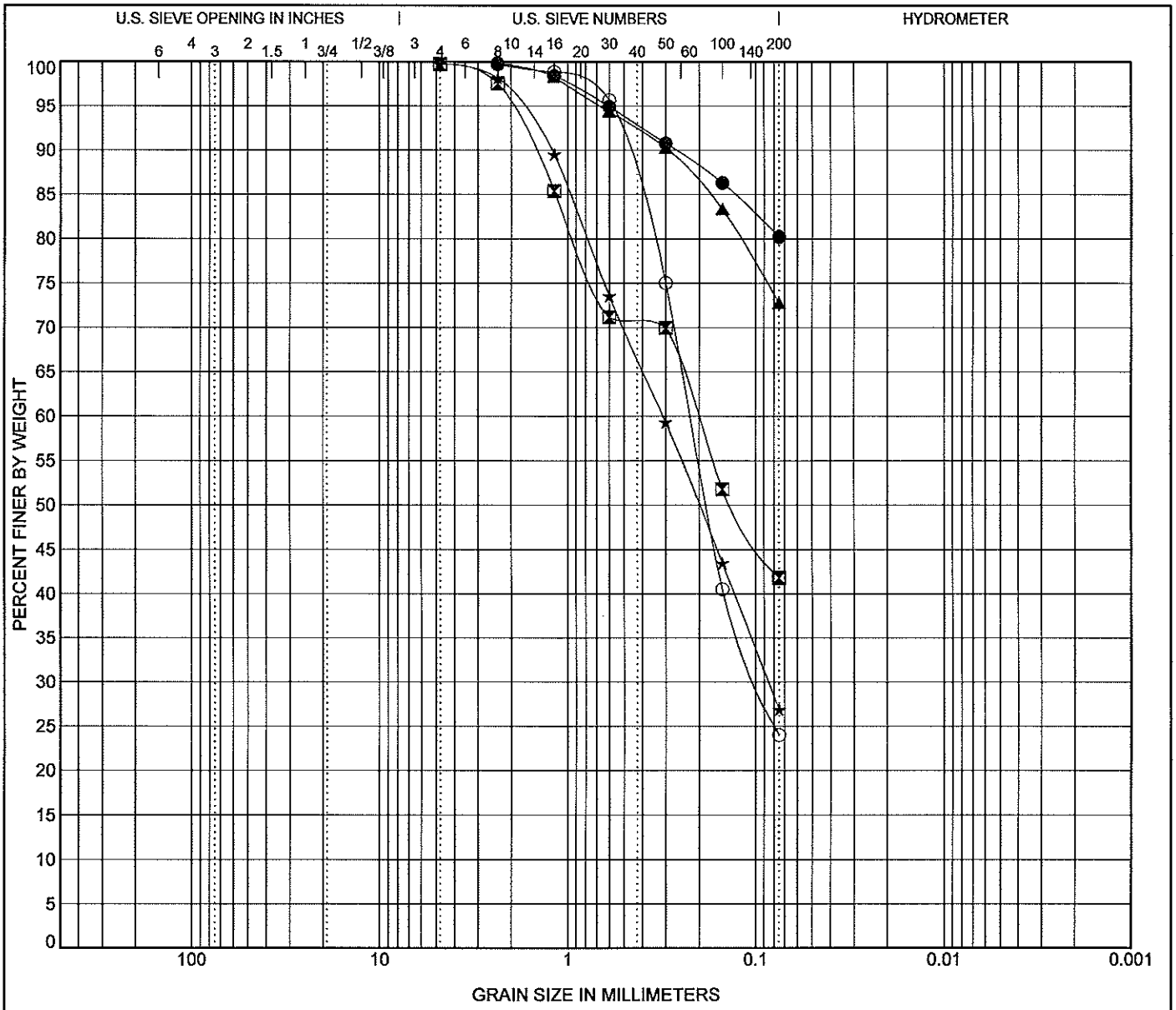
Major Divisions			Group Symbols	Typical Names	Laboratory Classification Criteria		
Coarse-Grained Soils (More than half of material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean Gravels (Little or no fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines	Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 % GW, GP, SW, SP; More than 12% GM, GC, SM, SC; 5 to 12 % Borderline cases requiring dual symbols[b]	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{(D_{30})^2}{D_{10} x D_{60}}$ between 1 & 3	
			GP	Poorly Graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW	
		Gravels w/ Fines (Appreciable amount of fines)	GM[a] d / u	Silty gravels, gravel-sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures		Atterberg limits below "A" line or P.I. greater than 7	
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean Sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines		$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_c = \frac{(D_{30})^2}{D_{10} x D_{60}}$ between 1 & 3	
			SP	Poorly graded sands, gravelly sands, little or no fines		Not meeting all gradation requirements for SW	
		Sands w/ Fines (Appreciable amount of fines)	SM[a] d / u	Silty sands, sand-silt mixtures		Atterberg limits above "A" line or P.I. less than 4	Limits plotting in hatched zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures		Atterberg limits above "A" line or P.I. greater than 7	
Fine-Grained Soils (More than half material is smaller than No. 200 sieve size)	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	Plasticity Chart		
			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, elastic silts			
			CH	Inorganic clays of high plasticity, fat clays			
			OH	Organic clays of medium to high plasticity, organic silts			
	Highly Organic Soils		P_t	Peat and other highly organic soils			



[a] Division of GM and SM groups into subdivision of d and u are for roads and airfields only. Subdivision is based on Atterberg limits; suffix d used when L.L. is 28 or less and the P.I. is 6 or less; the suffix u used when L.L. is greater than 28.

[b] Borderline classifications, used for soils possessing characteristics of two groups, are designated by combinations of group symbols. For example: GW-GC, well-graded gravel-sand mixture with clay binder.

Appendix C



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	B-11	10.0	LEAN CLAY with SAND(CL)	36	22	14		
⊠	B-5	0.0	CLAYEY SAND(SC)	31	17	14		
▲	B-8	2.5	LEAN CLAY with SAND(CL)	39	21	18		
★	B-9	7.5	SILTY SAND(SM)	NP	NP	NP		
⊙	MW-1	15.0						

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B-11	10.0	2.36				0.0	19.6	80.2	
⊠	B-5	0.0	4.75	0.205			0.0	57.9	41.8	
▲	B-8	2.5	1.18				0.0	25.5	72.8	
★	B-9	7.5	4.75	0.31	0.085		0.0	72.9	26.9	
⊙	MW-1	15.0	2.36	0.222	0.096		0.0	75.7	24.0	

PROJECT: Lost Creek Project
JOB NO.: 13854-CX
CLIENT: Lost Creek ISR, LLC
TEST METHOD: ASTM D422

PARTICLE SIZE ANALYSES

US_GRAIN_SIZE 13854-CX GINT.GPJ US_LAB.GDT 9/5/08

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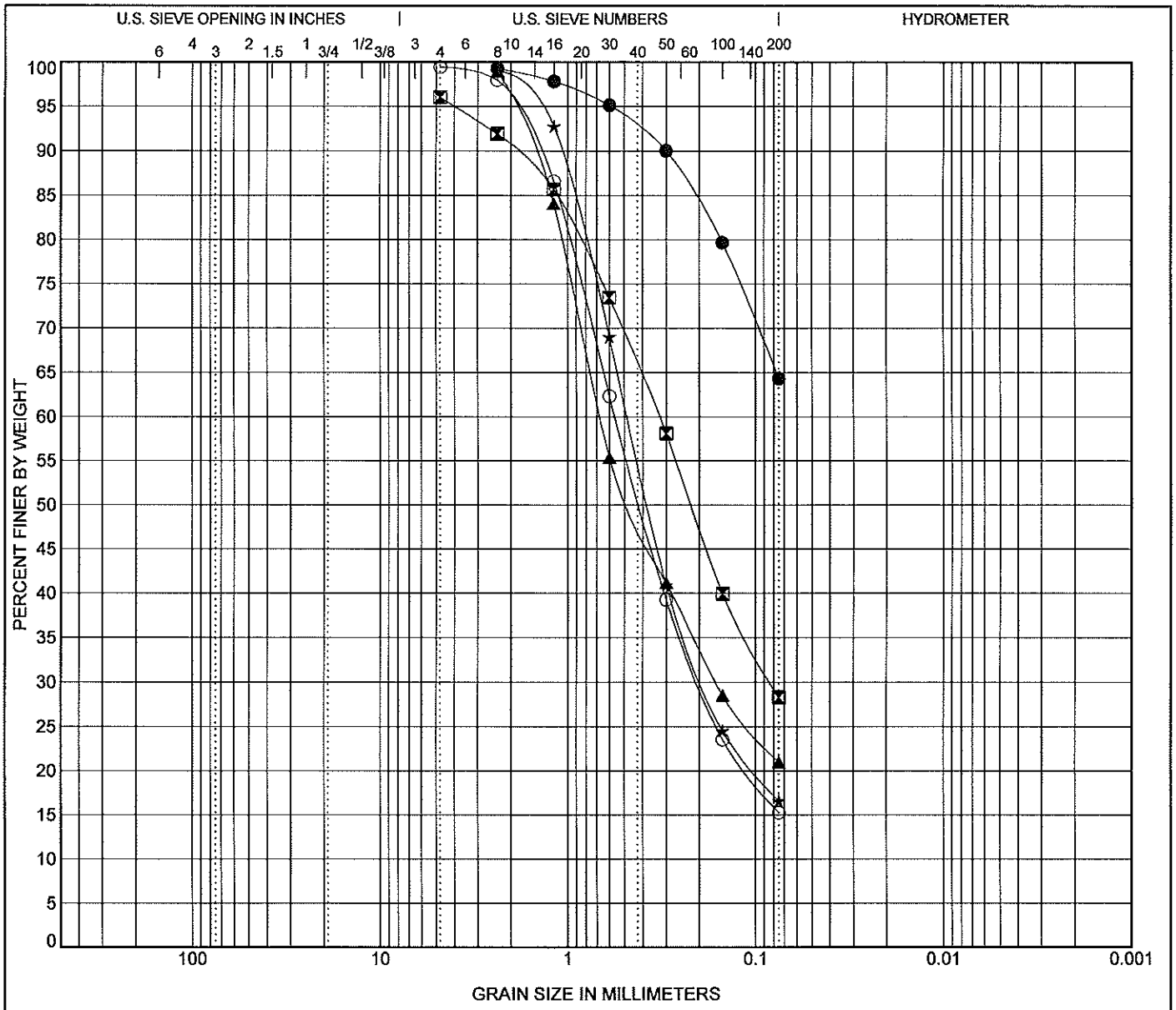


COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	MW-1	30.0	SANDY LEAN CLAY(CL)	33	20	13		
⊠	MW-2	15.0						
▲	MW-2	25.0						
★	MW-3	5.0						
⊙	MW-3	10.0	SILTY SAND(SM)	NP	NP	NP		

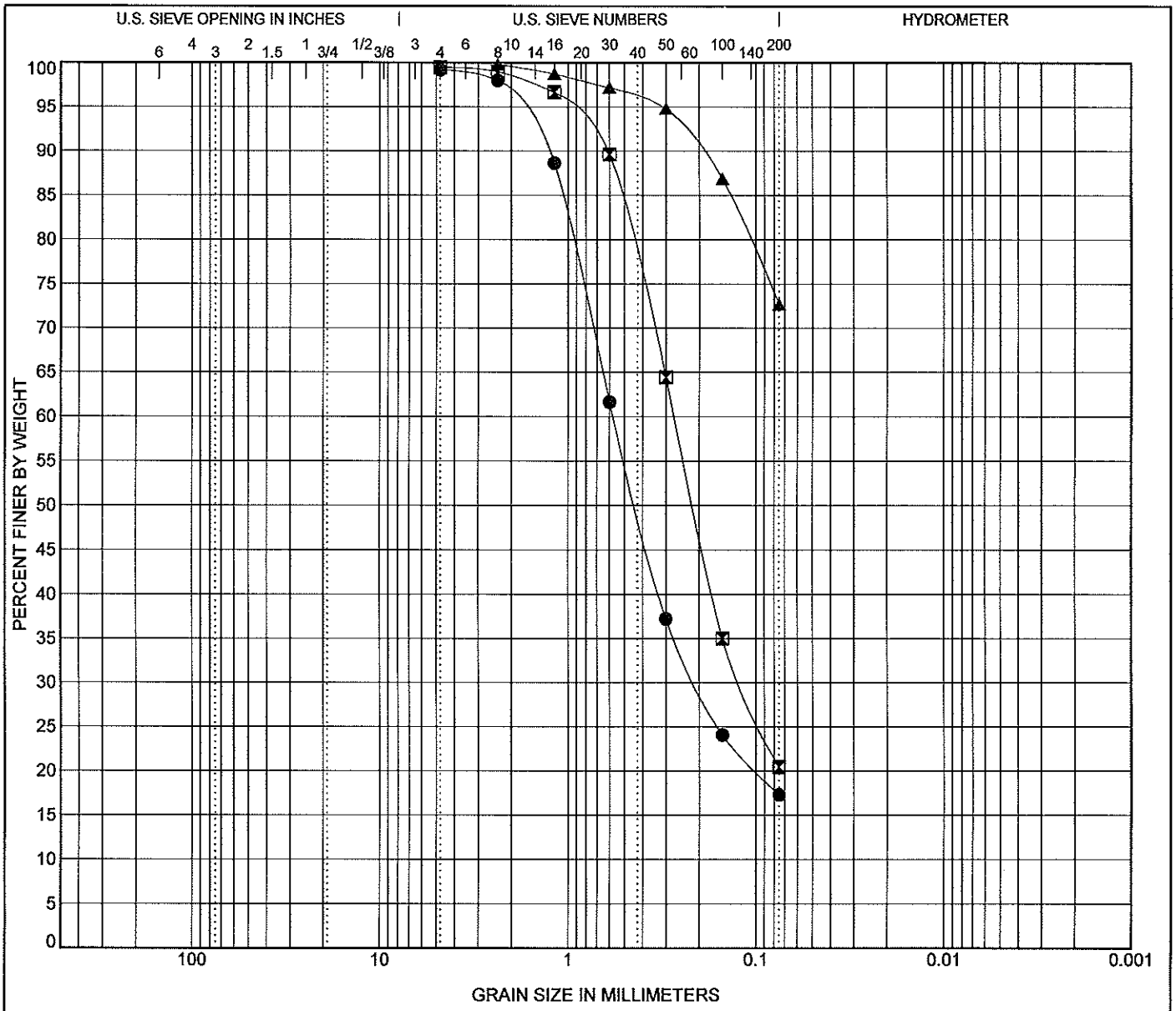
	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	MW-1	30.0	2.36				0.0	34.9	64.4	
⊠	MW-2	15.0	4.75	0.327	0.083		0.0	67.7	28.3	
▲	MW-2	25.0	2.36	0.67	0.163		0.0	77.9	21.0	
★	MW-3	5.0	2.36	0.48	0.189		0.0	82.5	16.6	
⊙	MW-3	10.0	4.75	0.559	0.199		0.0	84.2	15.3	

PROJECT: Lost Creek Project
JOB NO.: 13854-CX
CLIENT: Lost Creek ISR, LLC
TEST METHOD: ASTM D422

PARTICLE SIZE ANALYSES

INBERG-MILLER ENGINEERS

US_GRAIN_SIZE 13854-CX.GINT.GPJ US_LAB.GDT 9/5/08



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	MW-3	30.0						
⊠	MW-4	15.0						
▲	MW-4	25.0	LEAN CLAY with SAND(CL)	34	21	13		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	MW-3	30.0	4.75	0.572	0.205		0.0	81.9	17.3	
⊠	MW-4	15.0	4.75	0.27	0.118		0.0	79.0	20.5	
▲	MW-4	25.0	2.36				0.0	27.1	72.7	

PROJECT: Lost Creek Project
JOB NO.: 13854-CX
CLIENT: Lost Creek ISR, LLC
TEST METHOD: ASTM D422

PARTICLE SIZE ANALYSES

US_GRAIN_SIZE 13854-CX GINT.GPJ US_LAB.GDT 9/5/08

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Appendix D

Limitations and Use of This Report

This report has been prepared by Inberg-Miller Engineers, hereinafter referred to as "IME", to evaluate this property for the intended use described herein. If any changes of the facility are planned with respect to the design vertical position or horizontal location as outlined herein, we recommend that the changes be reviewed, and the conclusions and recommendations of this report be modified in writing by IME.

The analyses and recommendations submitted in this report are our opinions based on the data obtained, and subsurface conditions noted from the field exploration. The locations of the exploration are illustrated on the accompanying map and diagram. Any variations that may occur between, beyond, or below the depths of test borings or test pits, are not presented in this report because these areas were not specifically explored. Excavations during the construction phases may reveal variations from subsurface conditions identified in our exploration. The nature and extent of such variations may not become evident until excavation and construction begins. If variations appear evident during construction, we advise a re-evaluation of the recommendations in this report. After performing additional on-site observations, we can provide an addendum to our recommendations noting the characteristics of any variations.

IME is responsible for the conclusions and opinions contained in this report based on the supplied data relative only to the specific project and location outlined in this report. If conclusions or recommendations are made by others, IME should be given an opportunity to review and comment on such conclusions or recommendations in writing, prior to the completion of the project design phase.

It is recommended that IME be provided the opportunity to review final designs, plans, and specifications using the conclusions of this report, in order to determine whether any change in concept may have any effect on the validity of the recommendations contained in this document. If IME is accorded the privilege of this review, IME can assist in avoiding misinterpretation or misapplication of these recommendations if changes have been made as compared with IME's understanding of either the project or design content. Review of the final design, plans, and specifications will be noted in writing by IME upon client's request, and will become a part of this report.

Standards are referenced by designated letters/numbers in several locations within this report. These standards were identified for the sole purpose of informing the reader what test methods were followed by IME during the execution of IME's scope of services. Anyone who reads, references, or relies on this report for any purpose whatsoever is hereby advised that IME has applied professional judgment in determining the extent to which IME complied with any given standard identified in this report or any other instrument of IME's professional service. Unless otherwise indicated, such compliance referred to as "general compliance," *specifically excluded consideration of any standard listed as a reference* in the text of those standards IME has cited. Questions about general compliance – i.e., which elements of a cited standard were followed and to what extent, should be directed to IME.

Limitations and Use of This Report, Continued

IME has performed exploration, laboratory, and engineering services sufficient to provide geotechnical information that is adequate for either the preliminary planning or the design phase of the project, as stated herein. IME's scope of services was developed and agreed to specifically for this purpose. Consequently, this report may be insufficient for other purposes. For example, this report may be insufficient for the contractor or his subcontractors to prepare an accurate bid for the construction phase of the project. The client, owner, potential contractors, and subcontractors are advised that it is specifically the contractor and subcontractor's obligation and responsibility during the bidding process to collect whatever additional information they deem necessary to prepare an accurate bid. The contractor's and subcontractor's bid should include selection of personnel, equipment, bits, etc. that are necessary to complete the project according to the project specifications, on schedule, within budget, and without change orders resulting from unforeseen geologic conditions.

Variations in soil conditions may be encountered during construction. To permit correlation between soil data in this report and the actual soil conditions encountered during construction, we recommend that IME be retained to perform construction observations of the earthwork and foundation phases of the work. It is recommended that IME be retained to observe all areas where fills are to be placed, and test and approve each class of fill material to be used according to the recommendations for compacted fill presented in this report. IME can provide specific assistance in evaluating construction compliance with the design concepts, specifications, or recommendations if IME has been retained to perform continuous on-site observations and materials testing during construction.

The presence of IME's field representative, if such services are requested by the client, will be for the sole purpose of providing record observations and field materials testing. We recommend the contractor be solely responsible for supervision, management, or direction of the actual work of the contractor, his employees, or agents. The contractor for this project should be so advised. The contractor should also be informed that neither the presence of our field representative or the observation and testing by our firm shall excuse him in any way for defects discovered in his work. It is understood that IME will not be responsible for job or site safety on this project.

This report has been prepared in accordance with generally accepted geotechnical engineering practices, and makes no warranties, either expressed or implied. The services performed by IME in preparing this report have been conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, express or implied, and no warranty or guarantee is included or intended in this report. The report has not been prepared for other uses or parties other than those specifically named, or for uses or applications other than those enumerated herein. The report may contain insufficient or inaccurate information for other purposes, applications, building sites, or other uses.

Sample and Data Collection Information

Field-sampling techniques were employed in this exploration to obtain the data presented in the Final Logs and Report generally in accordance with ASTM D420, D1452, D1586 (where applicable), and D1587 (where applicable).

The drilling method utilized in most test borings is a dry-process, machine rotary auger type that advances hollow steel pipe surrounded by attached steel auger flights in 5-foot lengths. This method creates a continuously cased test hole that prevents the boring from caving in above each level of substrata to be tested. Sampling tools were lowered inside the hollow shaft for testing in the undisturbed soils below the lead auger. In some test borings, as appropriate to advance to the desired depth, air or wash rotary drilling methods were utilized. Air or wash rotary drilling methods allow for the extraction of rock core samples.

Samples were brought to the surface, examined by an IME field representative, and sealed in containers (or sealed in the tubes) to prevent a significant loss of moisture. They were returned to our laboratory for final classification per ASTM D2487 methods. Some samples were subjected to field or laboratory tests as described in the text of this report.

Groundwater observations were made with cloth-tape measurements in the open drill holes by IME field personnel at the times and dates stated on the Final Logs. Recorded groundwater levels may not reflect equilibrium groundwater conditions due to relatively low permeability of some soils. It must also be noted that fluctuations may occur in the groundwater level due to variations in precipitation, temperature, nearby site improvements, nearby drainage features, underdrainage, wells, severity of winter frosts, overburden weights, and the permeability of the subsoil. Because variations may be expected, final designs and construction planning should allow for the need to temporarily or permanently dewater excavations or subsoil.

A Final Log of each test pit or boring was prepared by IME. Each Final Log contains IME's interpretation of field conditions or changes in substrata between recovered samples based on the field data received, along with the laboratory test data obtained following the field work or on subsequent site observations. The final logs were prepared by assembling and analyzing field and laboratory data. Therefore, the Final Logs contain both factual and interpretive information. IME's opinions are based on the Final Logs.

The Final Logs list boring methods, sampling methods, approximate depths sampled, amounts of recovery in sampling tools (where applicable), indications of the presence of subsoil types, and groundwater observations and measurements. Results of some laboratory tests are arrayed on the Final Logs at the appropriate depths below grade. The horizontal lines on the Final Logs designate the interface between successive layers (strata) and represent approximate boundaries. The transition between strata may be gradual.

Sample and Data Collection Information, Continued

We caution that the Final Logs alone do not constitute the report, and as such they should not be excerpted from the other appendix exhibits or from any of the written text. Without the written report, it is possible to misinterpret the meaning of the information reported on the Final Logs. If the report is reproduced for reference purposes, the entire numbered report and appendix exhibits should be bound together as a separate document, or as a section of a specification booklet, including all drawings, maps, etc.

Pocket penetration tests taken in the field, or on samples examined in the laboratory are listed on the Final Logs in a column marked "q_p". These tests were performed only to approximate unconfined strength and consistency when making comparisons between successive layers of cohesive soil. It is not recommended that the listed values be used to determine allowable bearing capacities. Bearing capacities of soil is determined by IME using test methods as described in the text of the report.

Important Information About Your

Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

Rely, on Your ASFE-Member Geotechncial Engineer for Additional Assistance

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you ASFE-member geotechnical engineer for more information.

ASFE
The Best People on Earth

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