



Sequoyah Facility Disposal Cell Phase IV (Cover) As-Built Report



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1.0 INTRODUCTION

This report summarizes the construction work and quality assurance testing associated with the construction of the cover for the on-site disposal cell at the Sequoyah Fuels Corporation (SFC) facility near Gore (Sequoyah County), Oklahoma. This report has been prepared for SFC by Stantec Consulting Services, Inc. (Stantec) to document construction activities, design modifications, and quality assurance test results.

The design of the Disposal Cell and plans for phased construction are presented in the Cell Construction Plan (SFC, 2008), which was organized as Attachment E of the Reclamation Plan, and Technical Specifications and Design Drawings (Attachment A of the Reclamation Plan). U.S. Nuclear Regulatory Commission (NRC) review of these documents is reflected in the Technical Specifications and Design Drawings.

The cover on the Disposal Cell (Phase IV of the construction sequence) is a multi-layered, 10-ft thick system. Phases I, II, and III of the construction sequence were for the three areas of the multi-layered base of the disposal cell. Issued-for-construction drawings for Phase IV were prepared by MWH for SFC in August 2016 (MWH, 2016) and updated in March 2019 (Stantec, 2019). The Phase IV as-built drawings are presented in Appendix A.

2.0 SUMMARY OF COVER CONSTRUCTION ACTIVITIES

Construction materials for the cover system consisted of (1) clay from on-site borrow areas, (2) synthetic liner (HDPE geomembrane), (3) sand (for synthetic liner cover) from an off-site source, (4) subsoil from an on-site borrow area, (5) rock mulch comprised of soil from an on-site borrow area and rock obtained from an off-site source, and (6) topsoil sourced from an on-site borrow area. Riprap (for erosion protection) obtained from an off-site source was also used to construct a rock apron along the base of the cover along the disposal cell perimeter.

Photos showing the key activities during cover construction are included in Appendix E. SFC prepared daily quality assurance reports and took photos during Phase IV construction (and throughout disposal cell construction) which are available upon request.

Phase IV construction was conducted from January 2015 to December 2025. Cover construction (as outlined in the Specifications) was conducted concurrently with placement of waste material in the disposal cell and consisted of the following tasks:

- 1) Preparation, placement, and construction of the cover system. The construction activities for the cover system included the following components:
 - a. Placement, grading, and compaction of disposed material (where necessary);
 - b. Placement and compaction of the cover clay layer;
 - c. Deployment and seaming of synthetic liner;
 - d. Placement of liner cover sand;
 - e. Placement of the subsoil zone;
 - f. Placement of the rock portion of the rock mulch;
 - g. Placement and compaction of the topsoil portion of the rock mulch;
 - h. Placement of topsoil on the top surface of the disposal cell;
 - i. Seeding topsoil;



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- 2) Placement of perimeter apron rock.
- 3) Placement of Gully 005 Erosion Protection rock.

Other tasks conducted concurrently with the cover system are listed below:

- 1) Construction of East Drainage Channel:
 - a. Channel grading,
 - b. Installation of rock sediment control breaks,
 - c. Placement of topsoil, and
 - d. Seeding and mulching topsoil.
- 2) Site perimeter earthwork and grading:
 - a. Grading, topsoil placement, and seeding of clay borrow source.
 - b. Grading, topsoil placement, and seeding of old treatment pond areas.
 - c. Decommissioning of stormwater collection reservoir.

3.0 DESIGN MODIFICATIONS

Modifications to the disposal cell design were made during cover construction to match on-site conditions and available construction materials. For modification to the technical specifications (Appendix B) were made pursuant to License SUB-1010, Amendment 35, Condition 54, the reference for the modification (as change-of-license or CL) is included in parentheses (CL00X). For deviations from the technical specifications, the deviation reference is included in parentheses (D00X). The modifications and deviations during Phase IV are described below.

3.1 RAFFINATE MATERIAL OFFSITE DISPOSAL

The disposal cell interior included a synthetically lined cell for disposal of raffinate sludge and other named sediments (materials) that had been temporarily stored on site. Following licensing approvals, these materials were shipped to Energy Fuels in Blanding, Utah for processing and disposal in 2018 (CL019) (SFC, 2018). No longer needing the interior cell, the synthetic liner was cut, folded, and left in place at the bottom of the interior cell. The interior cell was filled with regular waste materials.

3.2 DISPOSAL CELL MATERIALS AND PLACEMENT METHODS

Subsoil:

- The specification for subsoil was broadened to allow more on-site material to be used for the subsoil layer. The minimum required fines content for the subsoil was reduced from 30 to 10% to allow additional site areas with a lower fines content to be used for subsoil (CL012) (MWH, 2015).
- The specification for subsoil was also modified to require that the materials have radionuclide activity concentrations lower than the selected subsurface soil cleanup level (CL020) (SFC, 2019).



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Design Modifications

Riprap:

- Riprap specifications were broadened to not be specific to a single rock quarry for the project. The gradation requirements were modified to improve constructability and align with the method of riprap production at the quarry, while maintaining the minimum rock D_{50} for erosion protection analyzed in the original design. A gradation with a minimum D_{50} of 5.3 inches (based on analysis of the longest slope length) was used for all of the cover slopes. Similarly, the Apron Rock was modified for the longest slope length to require a minimum D_{50} of 9.2 inches (CL017) (Stantec, 2018c).
- The erosion protection design for the disposal cell slopes originally included riprap and underlying filter zone layers. In 2020, the slope erosion protection was revised to a topsoil-riprap mixture (rock mulch) and updated material placement methods were documented in CL021 (Stantec, 2020).
- Rock quality (durability) test results from the selected rock quarry showed oversizing of the rock mulch and apron rock was required to meet NRC requirements (Johnson, 2002). Rock oversizing adjustments (based on rock durability) were included in CL021 (Stantec, 2020a).
- Rock mulch D_{10} (tenth percentile) particle size was originally specified to be between 1.5 and 3 inches. However, gradation test results ranged between 3.5 and 4 inches for D_{10} , which was reviewed and determined to be acceptable (D003) (Stantec, 2018a).
- Apron Rock particle sizes were originally specified to be between 2.5 and 5.7 inches for the D_{10} and a maximum size (D_{100}) of 20 inches. Gradation test results showed the D_{10} to be approximately 6 inches and D_{100} between 18.5 and 24 inches, which was reviewed and determined to be acceptable (D004) (Stantec, 2018b).

Liner Cover:

- Gradation ranges for the liner cover material were broadened based on the availability of local off-site materials and the strength and stability of the liner cover material to provide a working surface for placement over the synthetic liner (CL015) (Stantec, 2019b).
- The original cover synthetic liner anchor trench backfill material specifications included frequency requirements for field density testing and Standard Proctor tests. During synthetic liner installation, anchor trench backfilling was observed and testing was not conducted. Anchor trench backfilling and compaction were determined to be acceptable without testing (D006) (Stantec, 2020b).

Clay Layer:

- Protection of the top surface of the clay layer from drying originally had a 24-hour limit between clay layer completion and synthetic liner placement. Due to synthetic liner contractor scheduling, the 24-hour limit was extended as long as the clay layer was placed to the specified thickness, tested for density and moisture, visually inspected for changes (such as desiccation cracking), and properly documented (CL015) (Stantec, 2019b).



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3.3 SYNTHETIC LINER

Along some lengths of the disposal cell toe, the textured synthetic liner did not extend past the perimeter berm as shown in the design drawings (Appendix A). The use of smooth liner available on-site for extending the synthetic liner coverage beyond the perimeter berm was analyzed, determined to be acceptable, documented in Stantec (2020c), and filed by SFC as D005.

3.4 PARTICLE-SIZE DISTRIBUTION TESTING

The required frequencies of particle-size distribution testing for the liner cover material and the subsoil zone material were reduced due to the consistency of the liner cover material (from an off-site source) and the wide range of acceptable gradations of subsoil zone material. The reduced frequency of testing still allowed adequate characterization of these materials for the RADON model calculations and provided acceptable gradation checks for the materials during placement (CL015) (Stantec, 2019b).

3.5 REVEGETATION

The original seed mix for the disposal cell cover system was included in the design documented in the original version of the Technical Specifications (2007). Seed species included in the original seed mix were no longer available when seed was ordered in 2022, requiring changes to the seed mix (CL022) (Stantec, 2022). CL022 also includes updated recommendations for seed application methods, soil amendments, and erosion protection for newly spread seed (Stantec, 2022).

3.6 STORMWATER BERM REMOVAL

Perimeter berms were included in the disposal cell design for surface water management during construction. As cover construction progressed upward in elevation to the transition to the top surface, space for the berms was not available. Changes in surface water management plans (to manage water quality without the berm storage capacity) were documented in SFC (2023) and filed by SFC as D007.

4.0 SUMMARY OF QUALITY ASSURANCE TESTING

4.1 MATERIAL TESTING CRITERIA AND PLACEMENT

The testing requirements for cover construction are outlined in the Technical Specifications (Appendix B) and are summarized in **Table 1**, along with the completed test frequencies. During construction, SFC reviewed test results to verify that the construction quality assurance (QA) testing requirements had been met. This work consisted of: (1) checking that test results were consistent with material specifications, and (2) checking that testing frequencies were consistent with testing frequency requirements in the specifications.

The following sections summarize the performance testing requirements and actual QA testing frequencies for specific materials. Appendix C contains the QA testing data.



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Table 1. Summary of Phase IV Construction Materials and Quality Assurance Testing Requirements

Material	Max. Size (in) [Test/cy]	Passing No. 200 Sieve (%) [Test/cy]	Min. Plasticity Index (%) [Test/cy]	Max. Saturated Hydraulic Conductivity (cm/s) [Test/phase]	Max. Lift Thickness (in)	Standard Proctor [Test/cy]	Compaction Effort ^a (%) [Test/cy]	Moisture Conditioning ^b (%) [Test/cy]
Subsoil Fill (fine-grained) [tests required]	6.0 [1/10,000]	10 [1/10,000]	---	---	12	---	---	---
Test Frequency Completed (test/cy)	<6.0 [1/4,330]	43 [1/4,330]	---	---	---	---	---	---
Clay Layer (24-in thickness) [tests required]	1.0 [1/2,000]	50 [1/2,000]	10 [1/2,000]	1×10^{-7} [1/phase]	6	---	95 [1/1,000]	+/- 2 [1/1,000]
Test Frequency Completed (test/cy or tests)	<1.0 1/1,213	58-98 1/1,213	8 1/1,213	7.39×10^{-8} 1	---	---	PASS 1/553	PASS 1/553

Notes:

^a Percent of Standard Proctor test maximum dry density

^b Moisture content relative to optimum, based on Standard Proctor test



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Summary of Quality Assurance Testing

Table 1. (continued) Summary of Phase IV Construction Materials and Quality Assurance Testing Requirements

Material	Max. Size (in) [Test/cy]	Passing No. 4 Sieve (%) [Test/cy]	Passing No. 16 Sieve (%) [Test/cy]	Passing No. 40 Sieve (%) [Test/cy]	Passing No. 200 Sieve (%) [Test/cy]	Air Channel Pressure Testing (psi) [Test/seam]	Shear Strength (lb/in- width) [Test/ sample]	Peel Strength (lb/in- width) [Test/ sample]	Vacuum Testing (psi) [Test/ weld]
60-mil HDPE Synthetic Liner [tests required]						30, with max drop of 3 psi in 5 min. [All seams]	120 [1/1000 ft of seam]	70 [1/1000 ft of seam]	>5 [All extrusion welds]
Test Results and Frequency Completed						30 to 35 psi, max. drop of 2 psi [All seams]	133 - 232lb/inch 1/756 ft of seam	85 -164 lb/inch 1/756 ft of seam	NA
Synthetic Liner Cover Material (18-in depth) [tests required]	1.0 [1/2,000]	65-100 [1/2,000]	25-100 [1/2,000]	20-90 [1/2,000]	5-35 [1/2,000]				
Test Frequency Completed (test/cy)	<1.0 1/1,638	59-98 1/1,638	39-70 1/1,638	25-56 1/1,638	13-26 1/1,638				

Notes:

n.a. – not applicable



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4.1.1 Waste Materials

To confirm foundation conditions for placement of the clay liner, the top surface of the waste material was tested for field density. Materials tested met the compaction requirements of 90% of the Standard Proctor maximum dry density for the material, with water contents within 1% above to 4% below the optimum moisture content for the material. Standard Proctor test results are grouped by dates of use with field density tests and are shown on **Figures 1 through 3**.

Twenty field density tests were conducted in the top 6 inches of waste material, representing a volume of 21,839 cubic yards. The resulting frequency was one test per 1,092 cubic yards. Density testing frequency was two tests less than the specified frequency (1 test per 1,000 cy) for the volume of material placed.

Nine Standard Proctor tests were conducted on this material, for a frequency of one test per 2,427 cubic yards. The testing frequency is less than the specified frequency of one Standard Proctor test per 2,000 cubic yards, but there was generally minimal variation in the maximum dry densities for the material (Figure 1).

4.1.2 Clay Layer

The total volume of compacted clay used for the clay layer in cover construction was approximately 43,678 cubic yards. Over the duration of clay layer construction, 36 samples of clay were collected for laboratory testing, including particle-size distribution, Atterberg limits, and Standard Proctor compaction. This resulted in a testing frequency of one test per approximately 1,213 cubic yards of clay layer material placed. This testing frequency meets the testing frequency specification (one test per 2,000 cubic yards).

The laboratory test results show that the clay layer material met the specifications of (1) greater than 50% passing the No. 200 sieve, (2) a maximum particle size of one inch, and (3) a plasticity index (PI) of 10% or more. As shown on **Figure 4**, the fraction passing the No. 200 sieve ranged between approximately 58 and 98%. Particle sizes were less than 1 inch. As shown on **Figure 5**, 35 of the plasticity index values were above 10, with one test result at 8. Each of the 36 samples were classified (as per ASTM) as low-plasticity clay (CL).

A total of 79 field density tests were performed on the compacted clay. Standard Proctor test results are grouped by dates of use with field density tests and are shown on **Figures 6 through 12**. The field density testing frequency was one test per 553 cubic yards of clay layer placed, meeting the specified minimum frequency of one test per 1,000 cubic yards. Field density tests met the compaction requirements for the material of 95% of the maximum dry density at moisture contents within 2% above to 2% below the optimum moisture content.

For confirmation of clay layer remolded permeability, one laboratory permeability test was performed by Terracon (Fort Collins, CO) on a representative sample of clay layer material. A specimen was remolded to approximately 95% of the Standard Proctor maximum density at 2% below optimum water content. The test resulted in a saturated hydraulic conductivity of 7.39×10^{-8} cm/sec.



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4.1.3 Clay Layer Thickness

Throughout cover construction, the bottom and top surface of the clay layer was surveyed using a grid system. The top of the surface was compared to the bottom at grid system points to verify the minimum specified thickness of 24 inches. Survey results for clay layer thickness ranged from 2.17 to 3.29 feet (26 to 39.5 inches).

4.1.4 Cover Synthetic Liner

EnviroCon Systems installed synthetic liner on top of the clay layer, with the installation schedule in stages, following the cover construction progress on the disposal cell slopes. Synthetic liner installation was conducted in eight stages between September 2015 and March 2025. EnviroCon System's installation reports and drawings depicting installation locations are included in Appendix D. Synthetic liner installation quantities are summarized in **Table 2**. QA testing (by EnviroCon Systems) is summarized in the following subsections.

Table 2. Synthetic Liner Installation Quantities

Year	Installed Quantity (60-mil HDPE) (SF)	Length of Seams (FT)	General Installation Areas
2025	34,500	1,033	Cell top
2024	0	0	
2023	193,202	6,322	Repairs after excavating the liner anchor trench, cell top
2022	0	0	
2021	31,195	1,880	
2020	29,791	1,230	Toe of the Cell (described in Section 3.1.1.3) and on the east and west haul ramps
2015	400,784	20,816	East, north and west slopes (Sections E, F, G)

4.1.4.1 Non-destructive Air Channel Tests

A total of 444 pressure tests were performed on the air channel between panel seam welds. Starting pressures were between 30 and 35 psi. Pressure drops over a 5-minute period varied between 0 and 2 psi, which meets the specification of less than 3 psi over a 5-minute period, with a minimum starting pressure of 30 psi.

4.1.4.2 Destructive Tests

Destructive testing (shear and peel) was performed on seam samples extracted from panel seams. A total of 46 samples were taken from the 34,758 feet of seaming assembled during cover construction. The 46 samples were tested for shear and peel for a frequency of one sample per 756 lineal feet of seams, which exceeds the specified testing frequency of one sample per 1,000 lineal feet of seams. Destructive test sample locations are shown on the figures included in the liner installation completion reports (Appendix D). Patches were placed over the destructive test sample locations and seamed with extrusion welds. The destructive testing quantities do not include trial welds.



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Peel testing was conducted with five peel tests conducted on each seam sample, meeting the specification of five tests per sample. The specified minimum peel strength is 70 lb/in-width of seam. Measured peel strength test values ranged from 85 to 1,643 lb/in. The minimum shear strength is specified at 120 lb/in-width of seam. Shear strength test results ranged from 133 to 232 lb/in, meeting the minimum specified requirements for shear strength. The specified shear testing frequency was 5 tests per sample. Of the 46 samples, only five samples were tested with less than five tests per sample.

4.1.5 Synthetic Liner Cover Material

The total volume of sand used for the synthetic liner cover material was approximately 32,759 cubic yards. Over the duration of cover construction, 21 samples of liner cover material were collected for particle-size distribution testing. **Figure 13** shows the gradation curves for the samples.

- Maximum particle sizes were less than one inch, meeting the specified maximum 1-inch particle size.
- The fraction passing the No. 4 sieve ranged between approximately 59 and 98%, generally meeting the specification range of 60 and 100%. Two samples were below 60% passing, at 59.4 and 59.7%.
- The fraction passing the No. 16 sieve ranged between approximately 39 and 75%, meeting the specification range of 25 and 100%.
- The fraction passing the No. 40 sieve ranged between approximately 25 and 56%, meeting the specified range of 20 and 90%.
- The fraction passing the No. 200 sieve ranged between approximately 13 and 26%, meeting the specified range of 5 and 35%.

The resulting testing frequency was 1 test per 1,638 cubic yards for synthetic liner cover material placed, exceeding the specified testing frequency of one test per 4,000 cubic yards.

4.1.6 Subsoil Zone

The total volume of subsoil zone material placed for cover construction was approximately 116,912 cubic yards. Over the duration of cover construction, 27 samples of subsoil zone material were collected for particle-size distribution testing. This resulted in a testing frequency of approximately 1 test per 4,330 cubic yards of subsoil zone material placed, which exceeds the specified testing frequency of one test per 10,000 cubic yards.

Figure 14 shows the gradation curves for each sample. Maximum particle sizes were less than six inches, meeting the specified maximum of 6 inches. The percent passing the No. 200 sieve (for samples analyzed to the No. 200 sieve size) was at least 43%, which was above the specification minimum of 10%.

4.1.7 Rock Mulch

The total volume of rock delivered to the Site for the rock mulch layer of the cover was approximately 28,500 cubic yards. Specifications included particle-size distribution analyses and rock-durability scoring. Particle-size analyses were conducted on 19 samples, and 4 samples



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were analyzed for durability. This frequency meets the testing quantity specifications of at least 8 particle-size distribution tests and 4 durability tests.

Actual particle-size distribution analyses consisted of one test at initial quarry production, six tests through 33% production, six tests through 67% production, and six tests by the end of quarry production. This exceeds the specified testing frequency of one at initial production, four through the first 1/3 of production, one each in the next two thirds of production, and one at completion of production. Particle sizes of the rock were calculated using the Wolman count method (FHWA, 2013) and photo-gradations using publicly available tools to analyze riprap photos for particle size distributions (FHWA, 2014). Alternative methods to the standard test method listed in the specifications (ASTM D5519), were selected due to equipment limitations and the sample sizes necessary to follow the standard method.

Figures 15 through 33 show the gradation curves for the 19 samples. The range of gradations are summarized in **Table 3**. Stantec determined the measured gradation ranges to be acceptable, since the average value and range of values for the median rock size (D_{50}) exceeded specified minimum D_{50} value calculated for erosional stability (D003) (Stantec, 2018a).

Table 3. Rock Mulch Granular Material Gradation Ranges

Rock Particle Size	Measured	Specified
D ₁₀ range	3.0 to 4.5 inches	1.5 to 3.0 inches
D ₅₀ range	5.5 to 6.0 inches	5.6 to 9.3 inches
D ₅₀ average	5.8 inches (average)	5.6 inches (minimum)
D ₉₀ range	8.0 to 9.0 inches	7.8 to 11.8 inches
D ₁₀₀ maximum	11 inches	12 inches

Rock durability testing scores from the four samples were 72, 65, 74, and 75. Three samples met the specification requirement of 65 or higher. However, the overall score range being below 80 required an increase in the median particle size (D_{50}) specification to 5.6 inches. This adjustment and the data are summarized in Stantec (2019a). The specified gradation ranges listed above reflect the adjusted particle size specification.

4.1.8 Perimeter Apron Rock

The total volume of rock delivered to Site for the perimeter apron rock in the cover construction was approximately 8,000 cubic yards. Seven samples of perimeter apron rock were analyzed using the Wolman count method (FHWA, 2013) and photo-gradations using publicly available tools to analyze riprap photos for particle size distributions (FHWA, 2014). **Figures 34 through 40** show the particle-size distributions for each sample. The range of gradations is summarized in **Table 4**.

Table 4. Perimeter Apron Rock Gradation Ranges

Rock Particle Size	Measured	Specified
D ₁₀ range	5.0 to 6.0 inches	2.5 to 5.7 inches
D ₅₀ range	8.5 to 10.0 inches	9.2 to 14.9 inches
D ₉₀ range	13.9 to 17.1 inches	12.2 to 19.3 inches

Stantec determined that the particle-size distributions measured for the perimeter apron rock were acceptable, including the median (D_{50}) size, which is the specified value calculated for erosional



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stability (D004) (Stantec, 2018b). One test result resulted in a D_{50} particle size that was less than the specified minimum.

Particle-size analyses were conducted on three samples at initial production, then one test each at 24%, 47%, 71% and 100% production. This met the specified frequency for testing at the start of production, at 1/3 and 2/3 of production, and at completion of production. Although the number of particle-size distribution measurements conducted on the perimeter apron rock (seven) were one test less than specified amount (eight or more samples), the measurements effectively represented the particle-size distribution of the perimeter apron rock through the stages of quarry production. Alternative methods to ASTM D5519, as stated in the specifications, were selected due to equipment limitations and the sample sizes necessary to follow ASTM D5519.

For confirmation of rock durability, one sample was collected prior to first delivery and one at 33, 67, and 100% of quarry production, per specification (four samples tested). Rock durability scores for the four samples were 74, 75, 71, and 69. Because of the durability scores less than 80, an increase in the median particle size specification was applied. The specified gradation ranges listed in Table 4 above reflect the adjusted particle-size specification.

4.1.9 Topsoil and Revegetation

The agronomic properties of nine samples, three samples from each of the three topsoil borrow areas, were tested to evaluate the need for growth medium amendment. This testing schedule exceeds the specification of at least one sample per borrow area. **Table 5** shows the results of the agronomic testing.

Table 5 Topsoil Agronomic Properties

Parameter	Method	Optimal Suitability Ranges	Results Average (all samples)	Units
pH (Paste)	1:1 Saturated Paste	6 – 8.3	6.1	N/A
Electrical Conductivity	1:1 Saturated Paste	< 6	0.4	mmhos/cm
Total Organic Carbon	Combustion	< 10	0.6	% of Total Soil
Organic Matter	Based on TOC	0.5 – 5.0	0.6	%
Texture	By Hydrometer	No Textural Extremes	Silty Loam	% Size Fraction
NO ₃ -N	KCL Extraction	> 0.1 ⁺	5.3	ppm
Phosphorus (p)	AB-DTPA	> 1 ⁺	9.1	ppm
CaCO ₃	ASTM D4373 - 96	Addressed as pH	0.4	%
Calcium (Ca)	EPA Method 3050B	Addressed as SAR	2.4	ppm
Sodium (Na)	EPA Method 3050B	Addressed as SAR	1.2	ppm
Sodium Absorption Ratio	EPA Method 3050B	< 15	1.3	N/A

The Technical Specifications include a revegetation seed mixture that was reviewed and revised by Cedar Creek in 2021. **Table 6** summarizes the seed mixture prescribed by Cedar Creek Associates in 2021.



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Table 6 Revegetation Seed Mix

Scientific Name	Common Name	Seeding Rate (pls/acre)
Andropogon gerardii	Big bluestem var. Kaw	6
Schizachyrium scoparium	Little bluestem var. Cimarron	3
Panicum virgatum	Switchgrass var. Blackwell	2
Pascopyrum smithii	Western Wheatgrass var. Barton	3
Sorghastrum nutans	Indiangrass var. Osage	2
Coreopsis /anceolata	Lanceleaf Coreopsis	2
Echinacea angustifolia	Narrowleaf Purple Coneflower	1
Gaillardia aristata	Blanket Flower	1
Helianthus maximiliani	Maximilian Sunflower	1

Topsoil from borrow areas on Site was used for placement on the top surface and perimeter areas of the disposal cell and for the soil component of the rock mulch.

4.2 QUALITY ASSURANCE TEST SUMMARY

The quality assurance tests described above for the various materials in the disposal cell cover meet the technical specifications with approved changes (Appendix B) for (1) compliance with the design intent and required material characteristics, and (2) required frequency of tests.

5.0 REFERENCES

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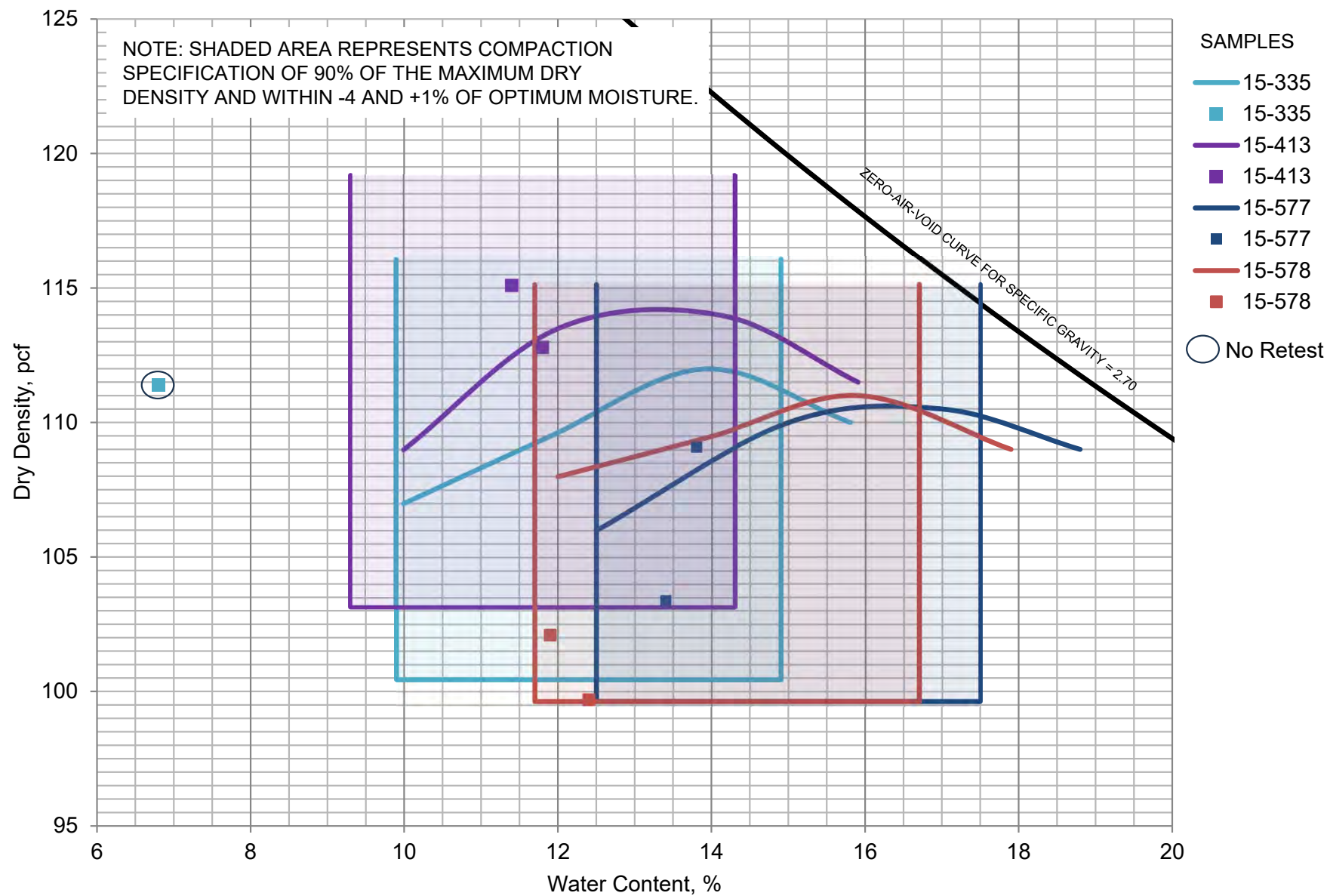


PHASE IV (COVER) AS-BUILT REPORT

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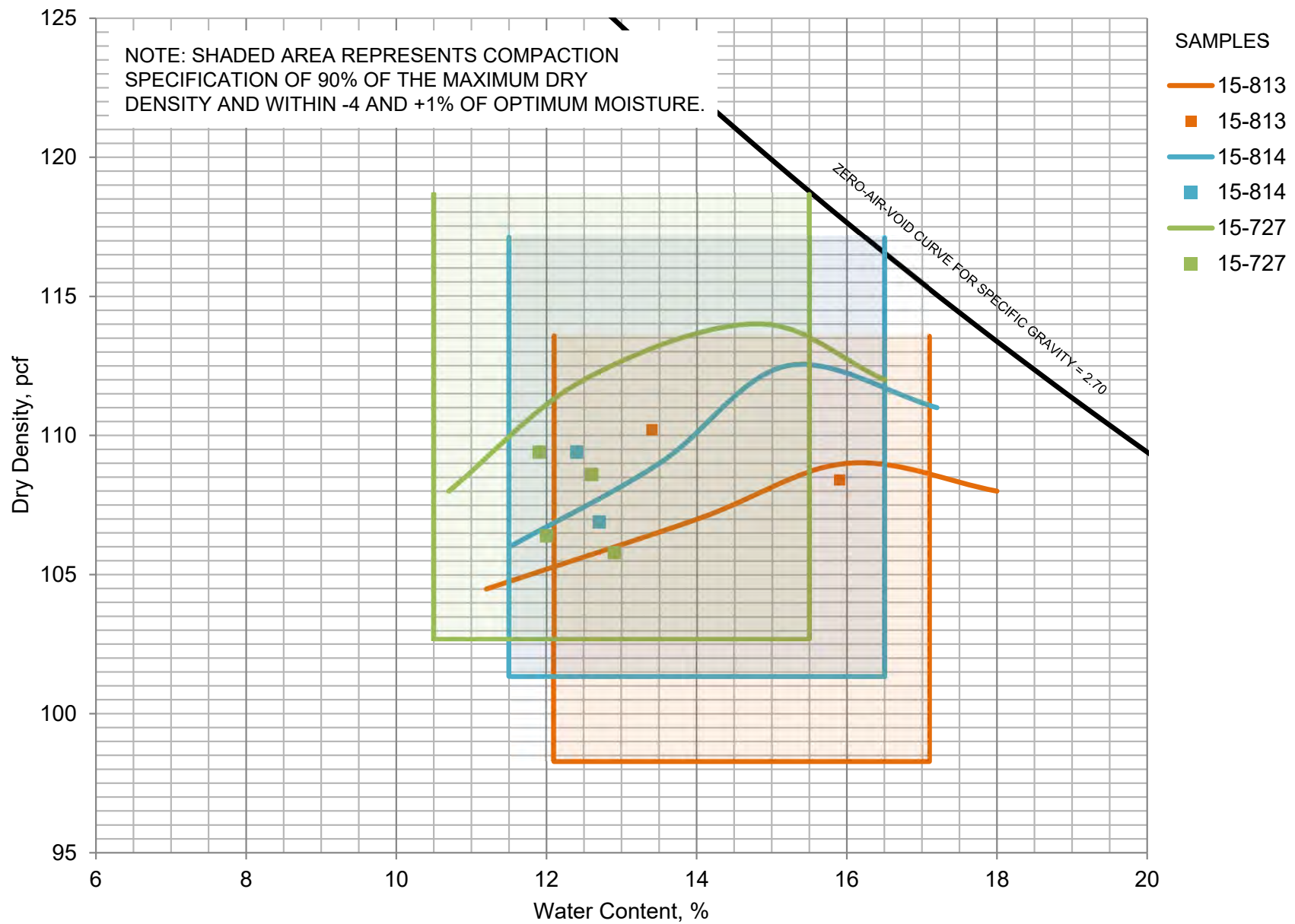
SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

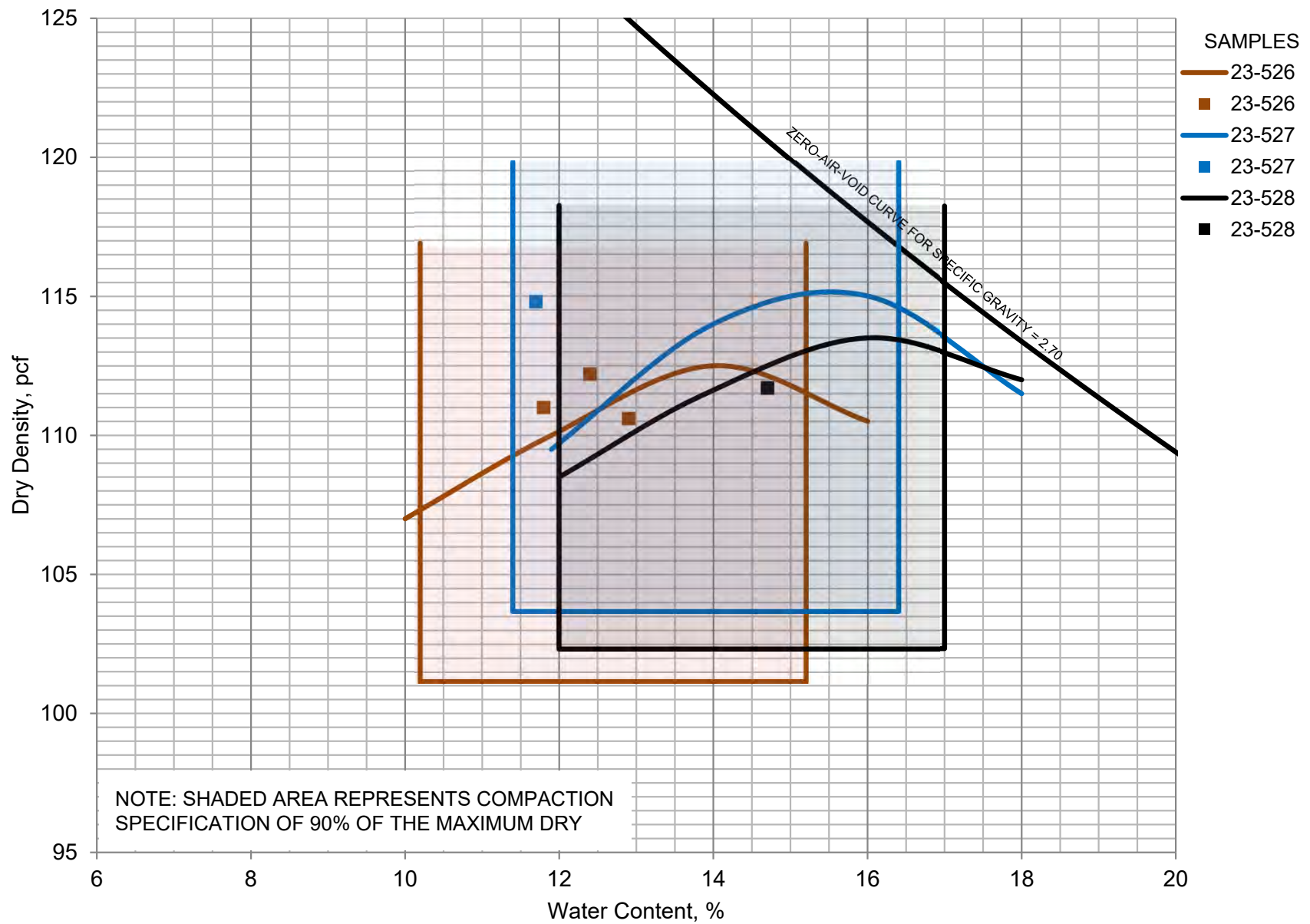
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

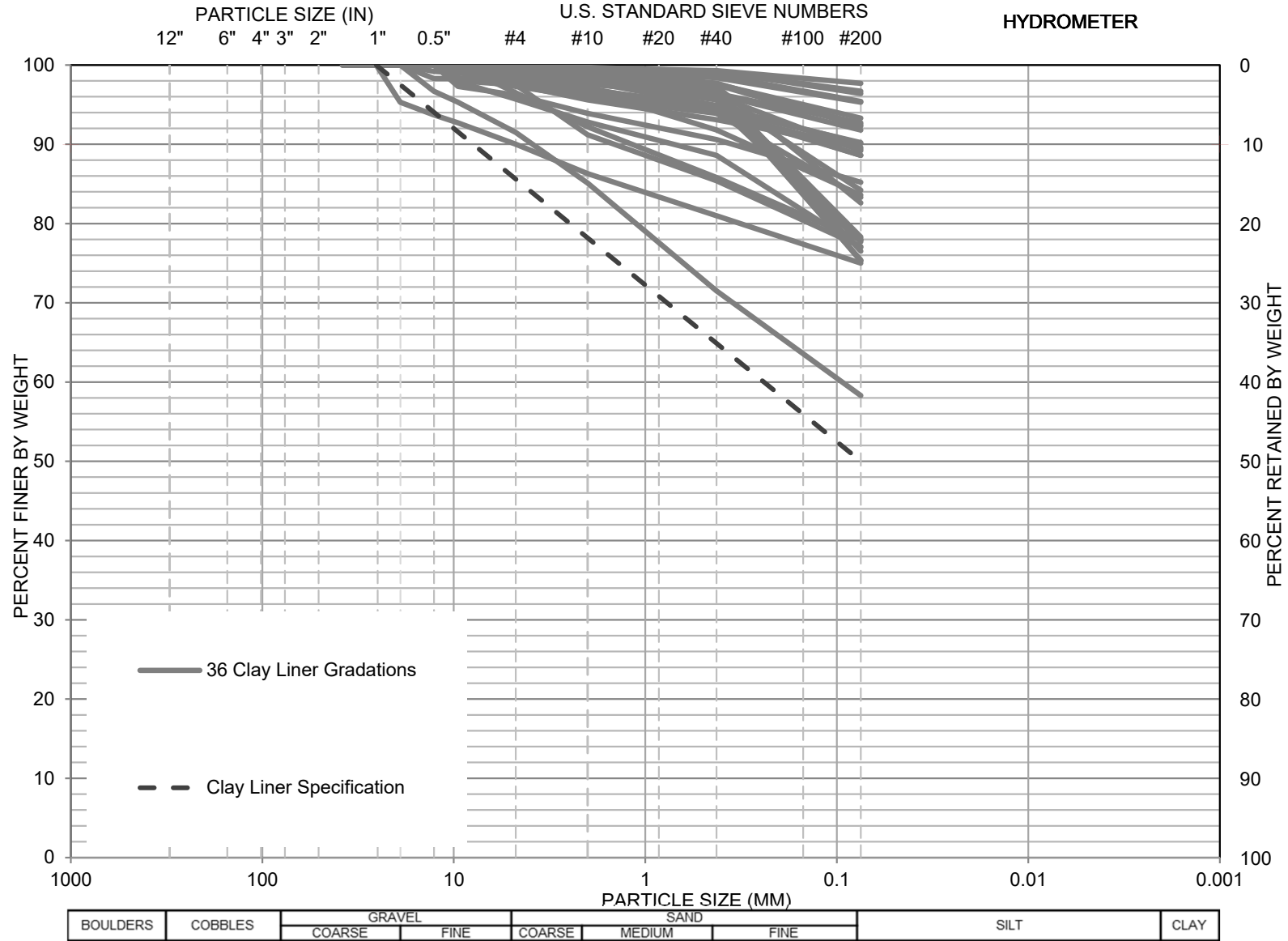
TITLE
TOP OF WASTE COMPACTION DATA
JULY-AUGUST 2015



DATE! FIGURE 1





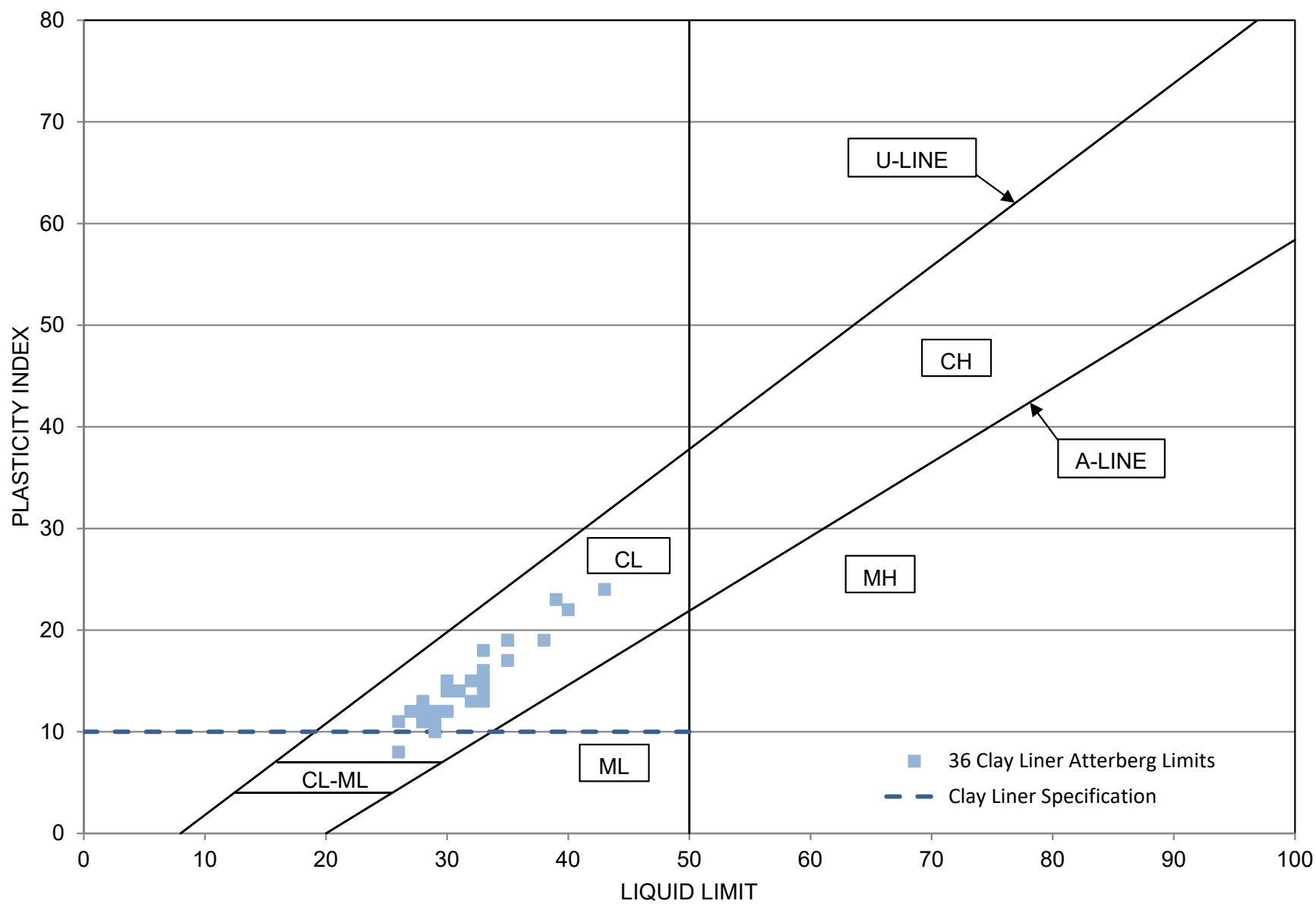


PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
CLAY LINER (COVER)
PARTICLE-SIZE DISTRIBUTIONS



DATE! FIGURE 4



SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

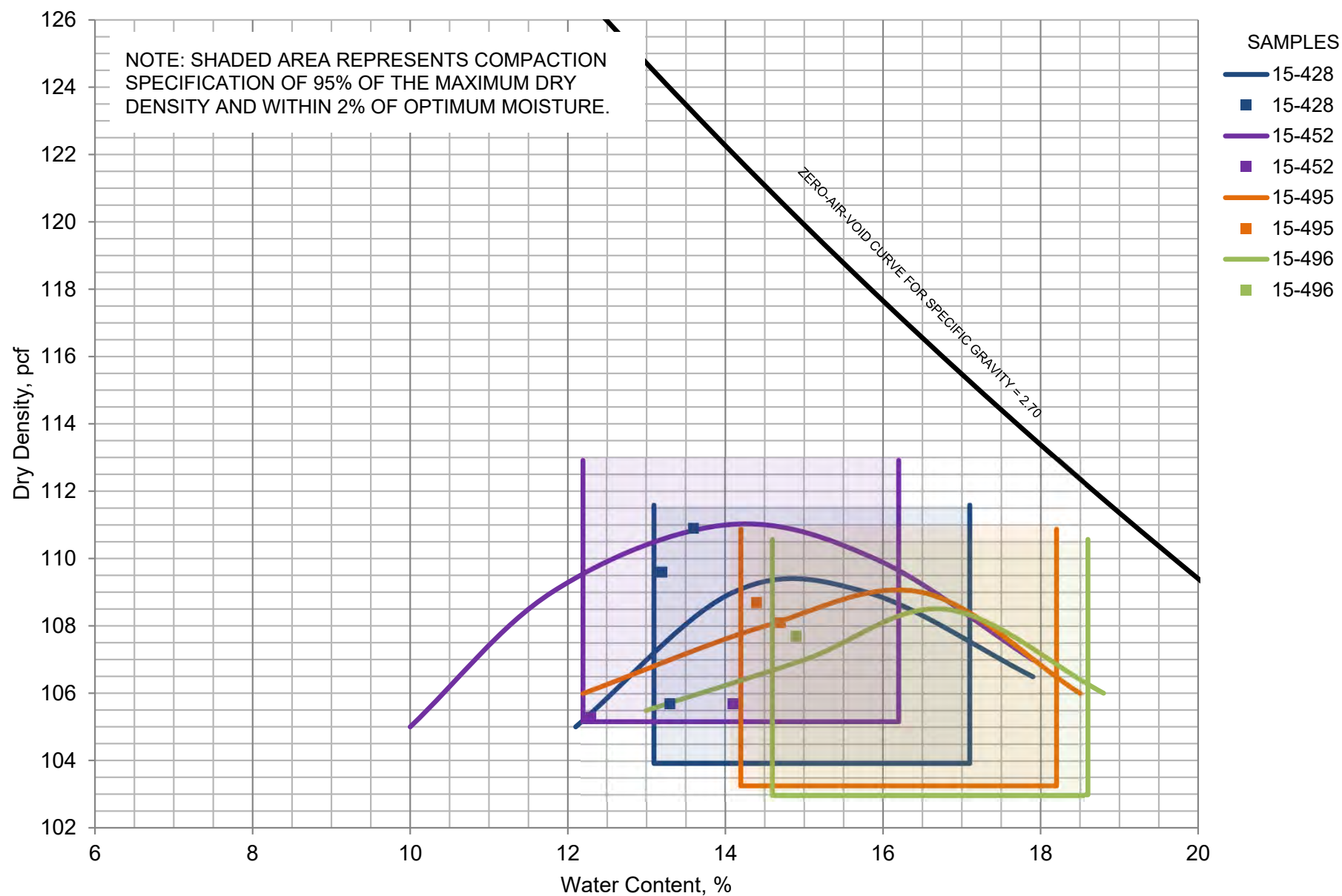
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

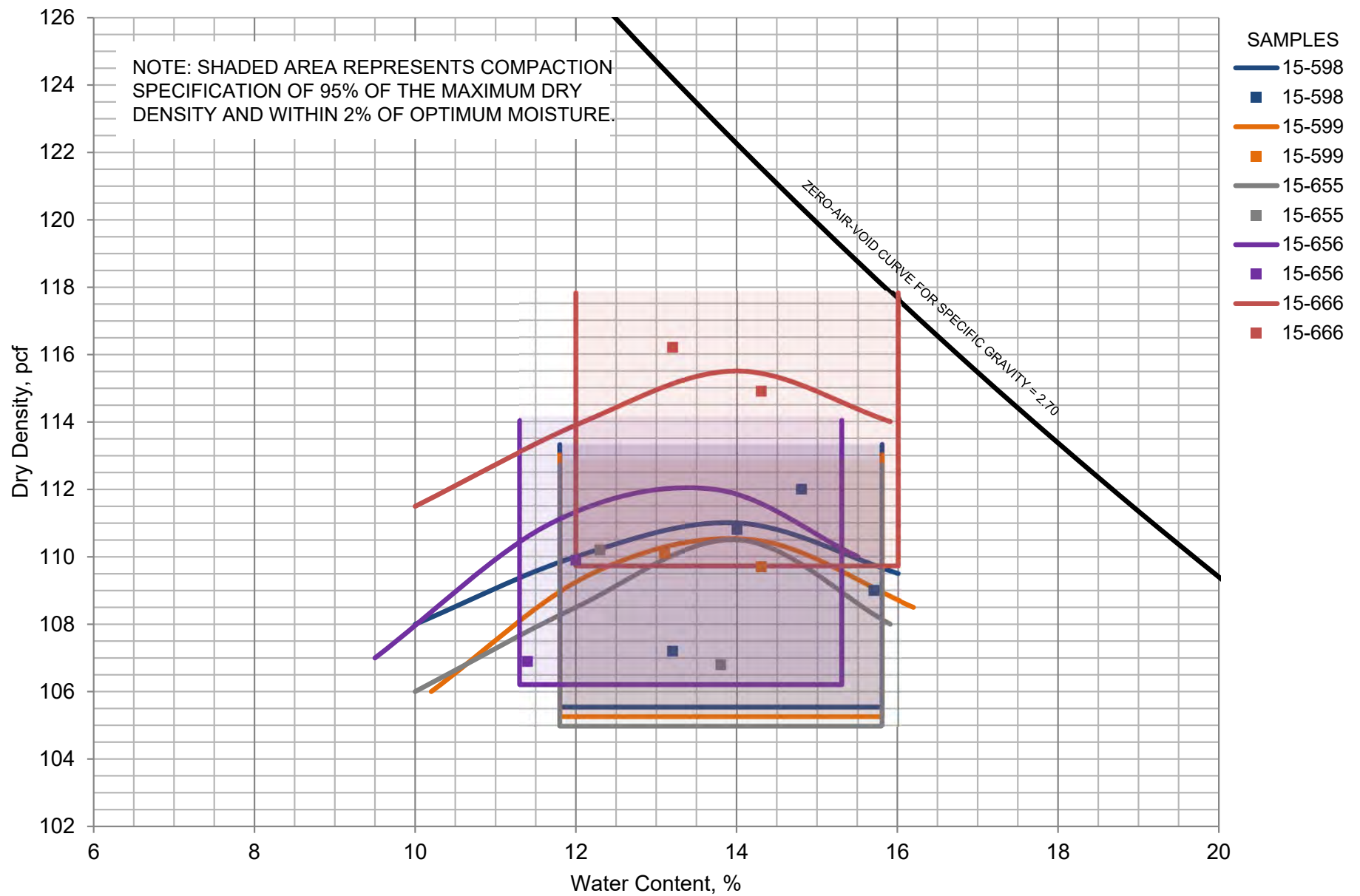
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CLAY LINER (COVER)
ATTERBERG LIMITS

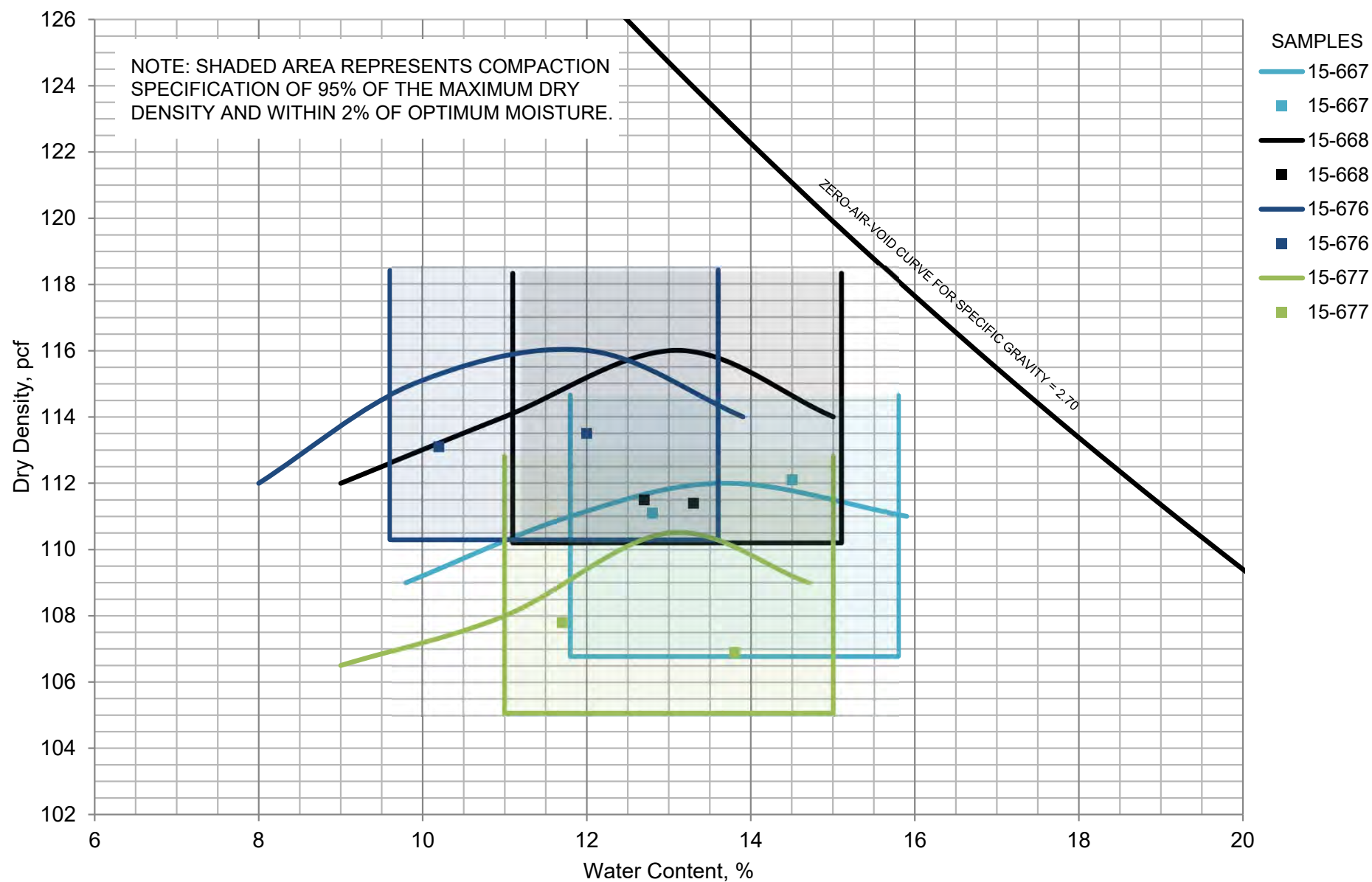


DATE:

FIGURE 5







SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

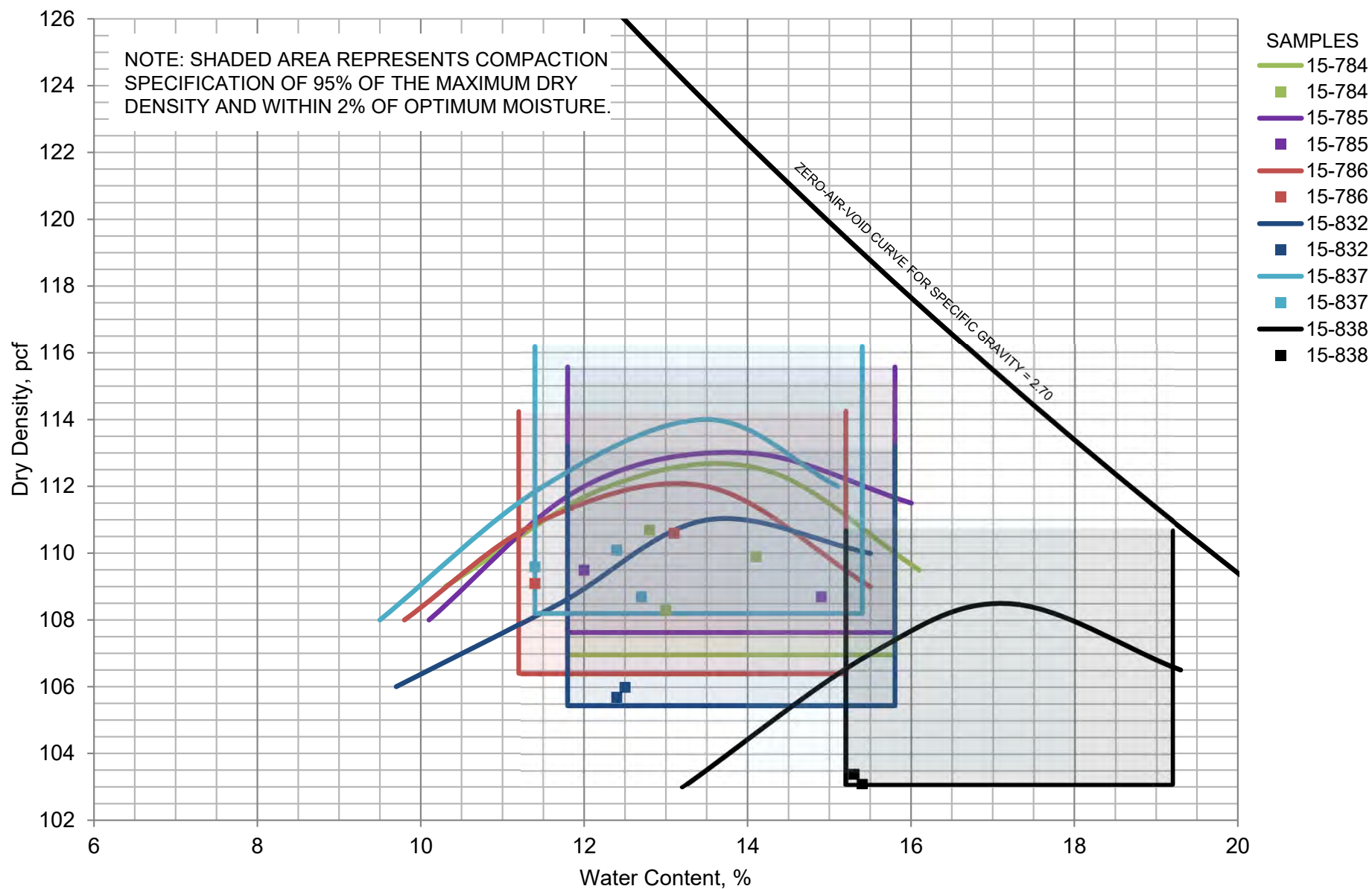
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
CLAY LINER COMPACTION DATA
SEPTEMBER 2015



DATE!

FIGURE 8



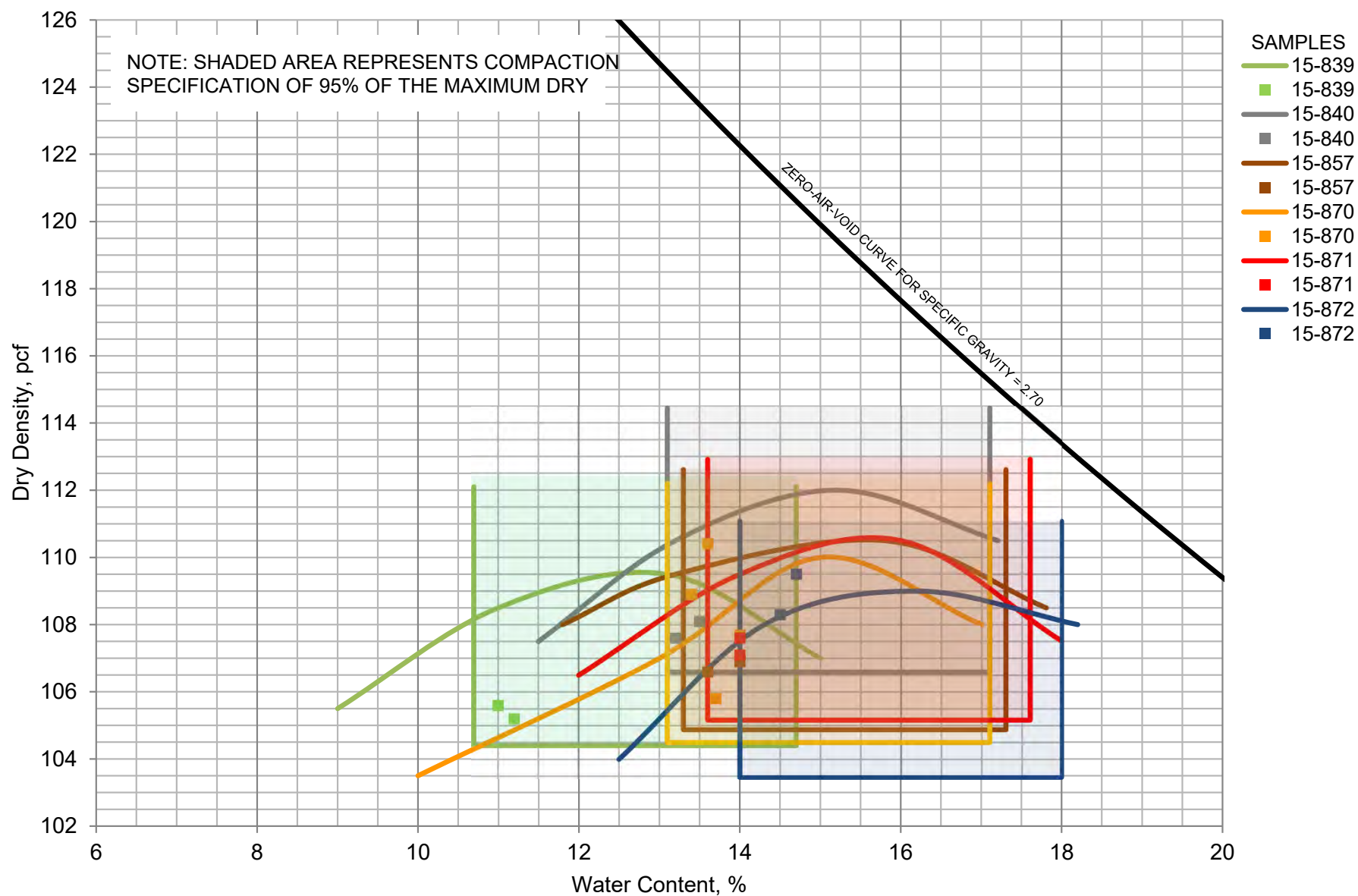
SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

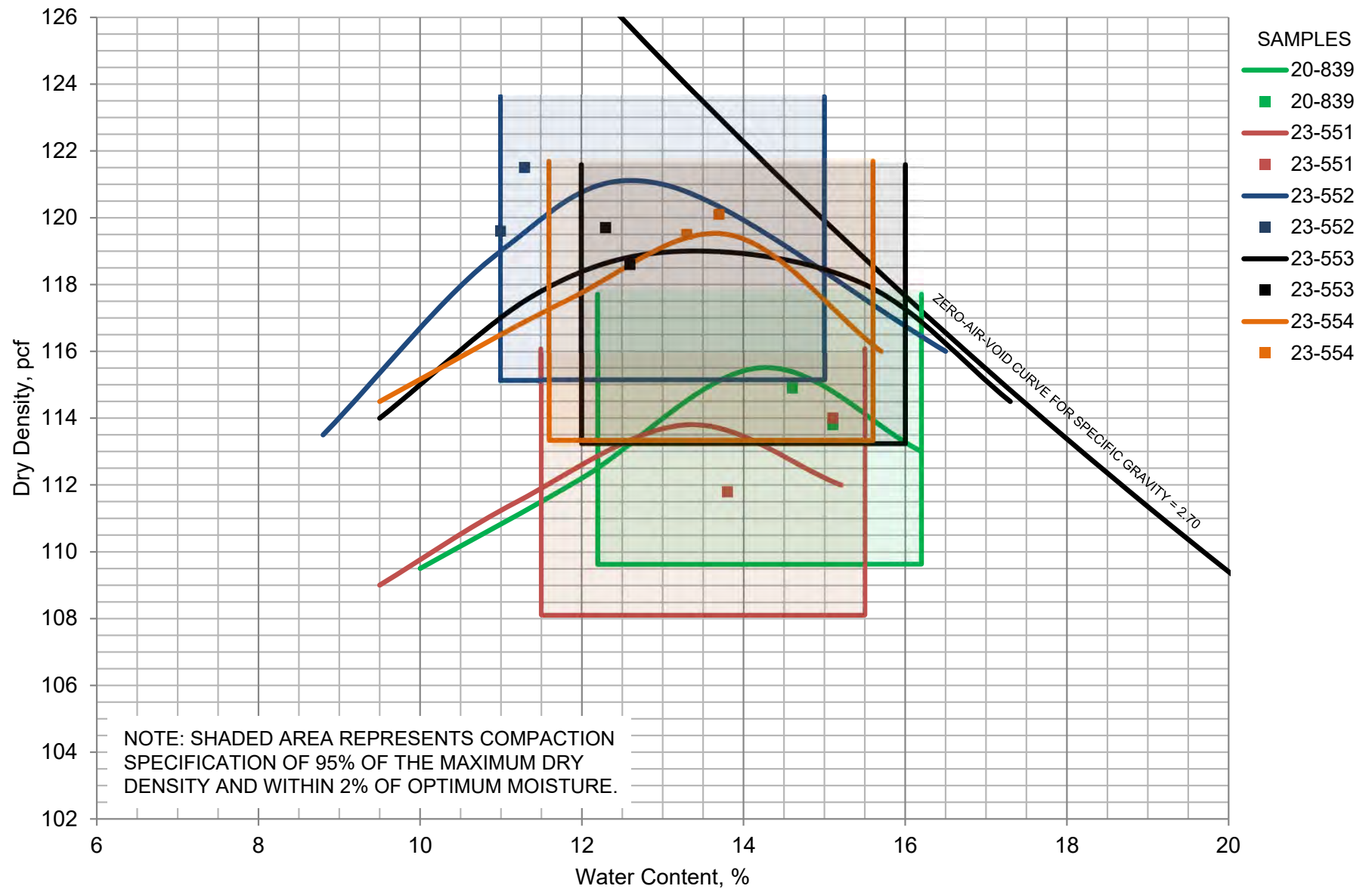
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

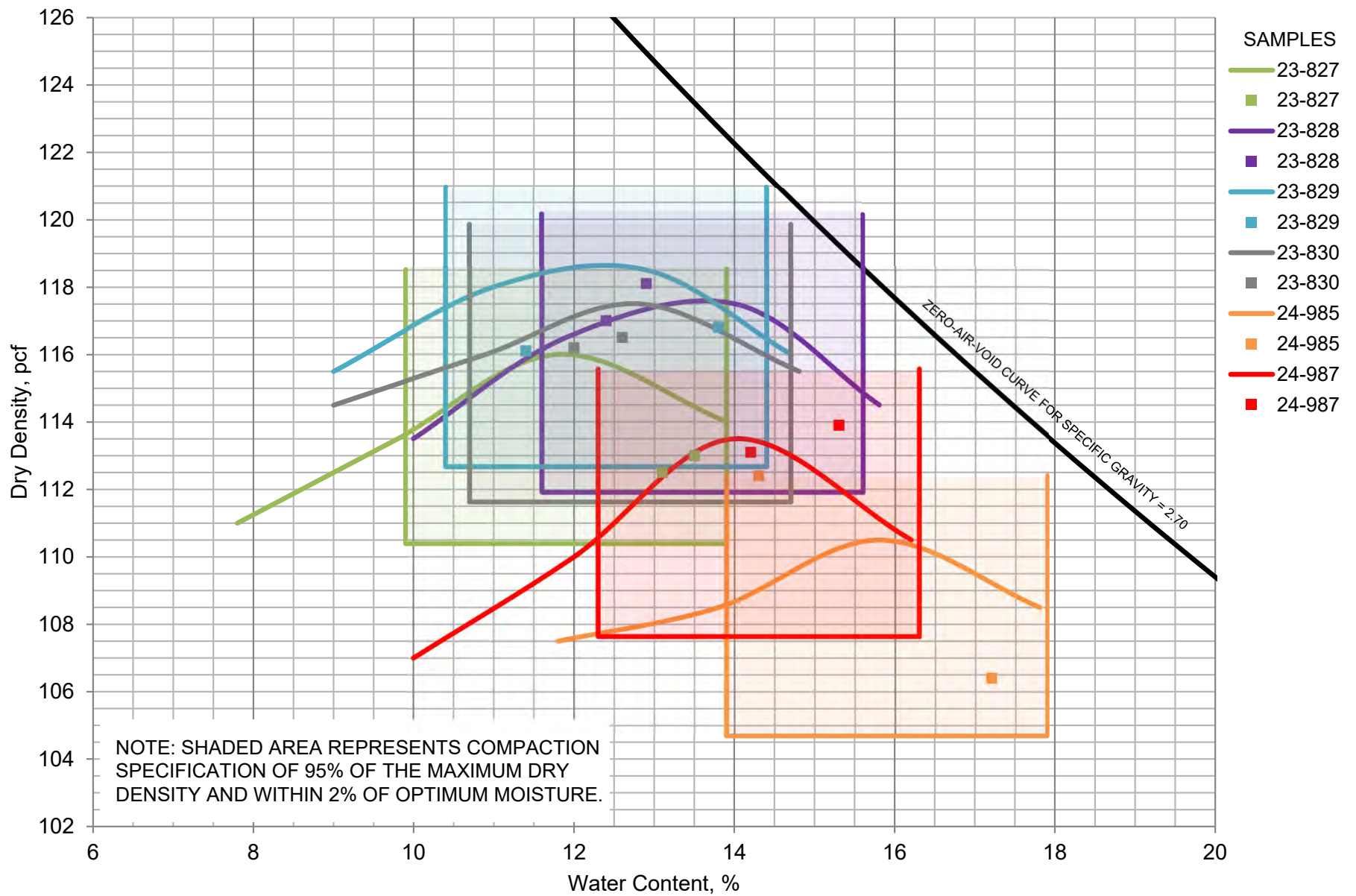
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CLAY LINER COMPACTION DATA
OCTOBER-NOVEMBER 2015

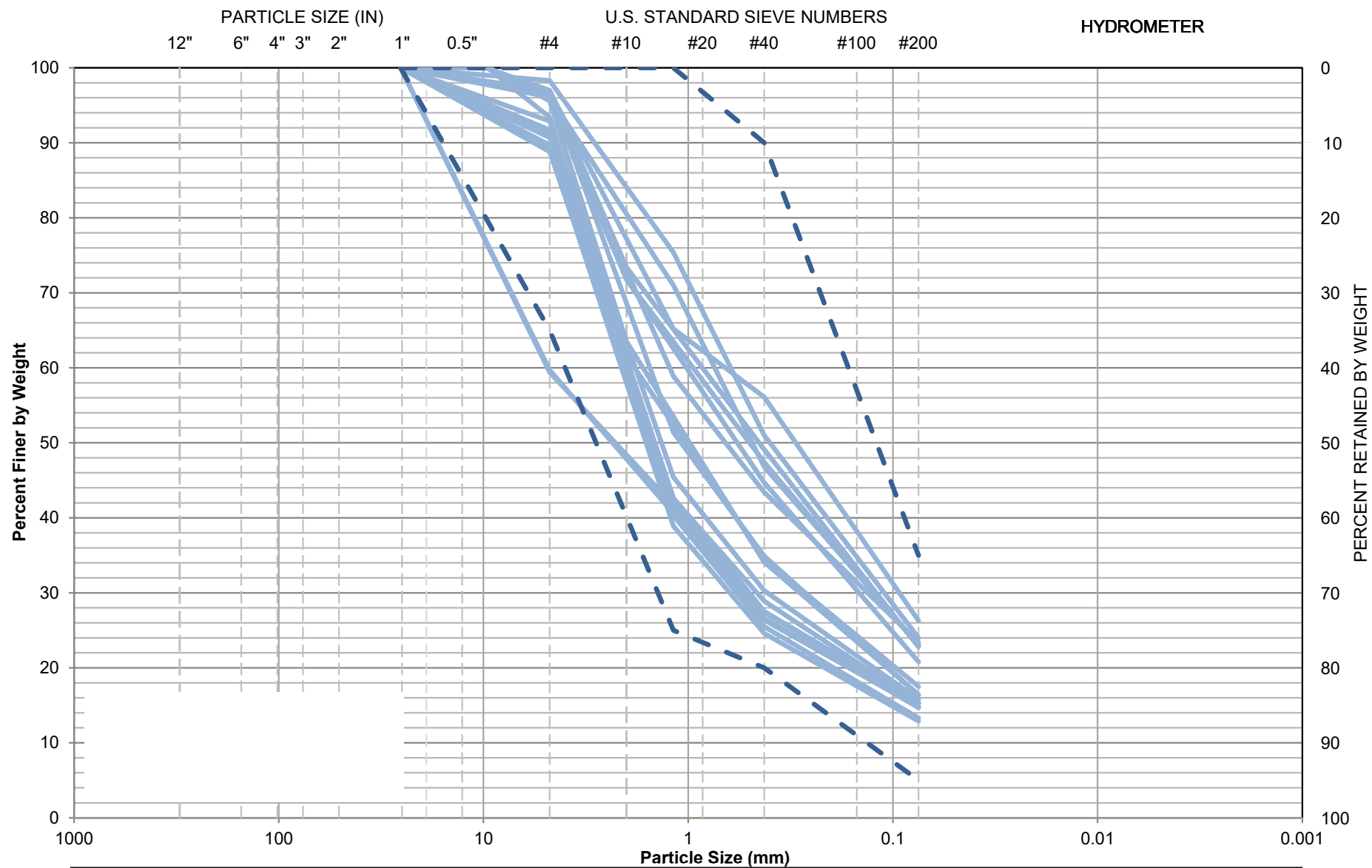


DATE! FIGURE 9









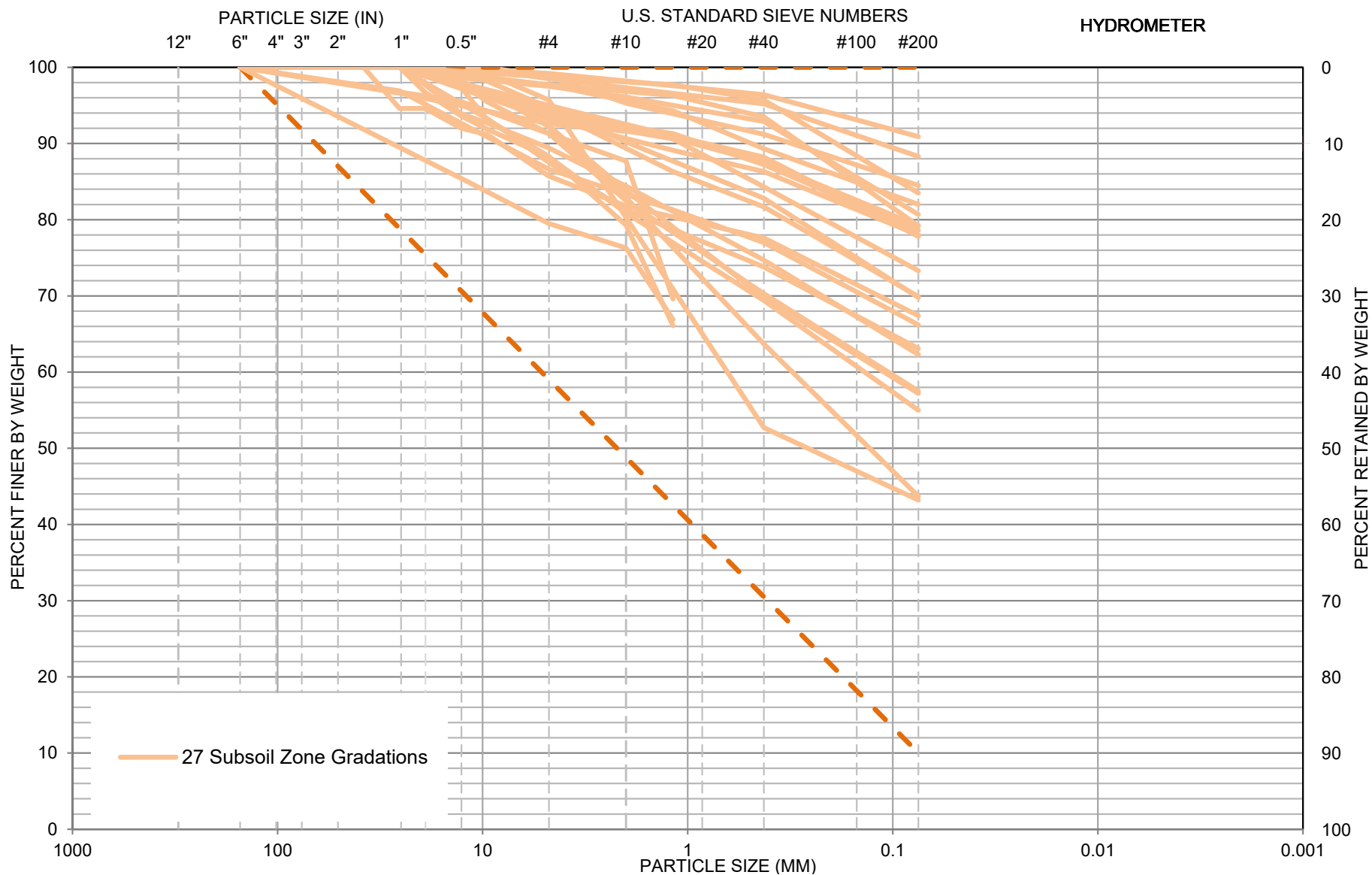
SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
LINER COVER MATERIAL (COVER)
PARTICLE-SIZE DISTRIBUTIONS



DATE! FIGURE 13



BOULDERS	COBBLES	GRAVEL		SAND			SILT	CLAY
		COARSE	FINE	COARSE	MEDIUM	FINE		



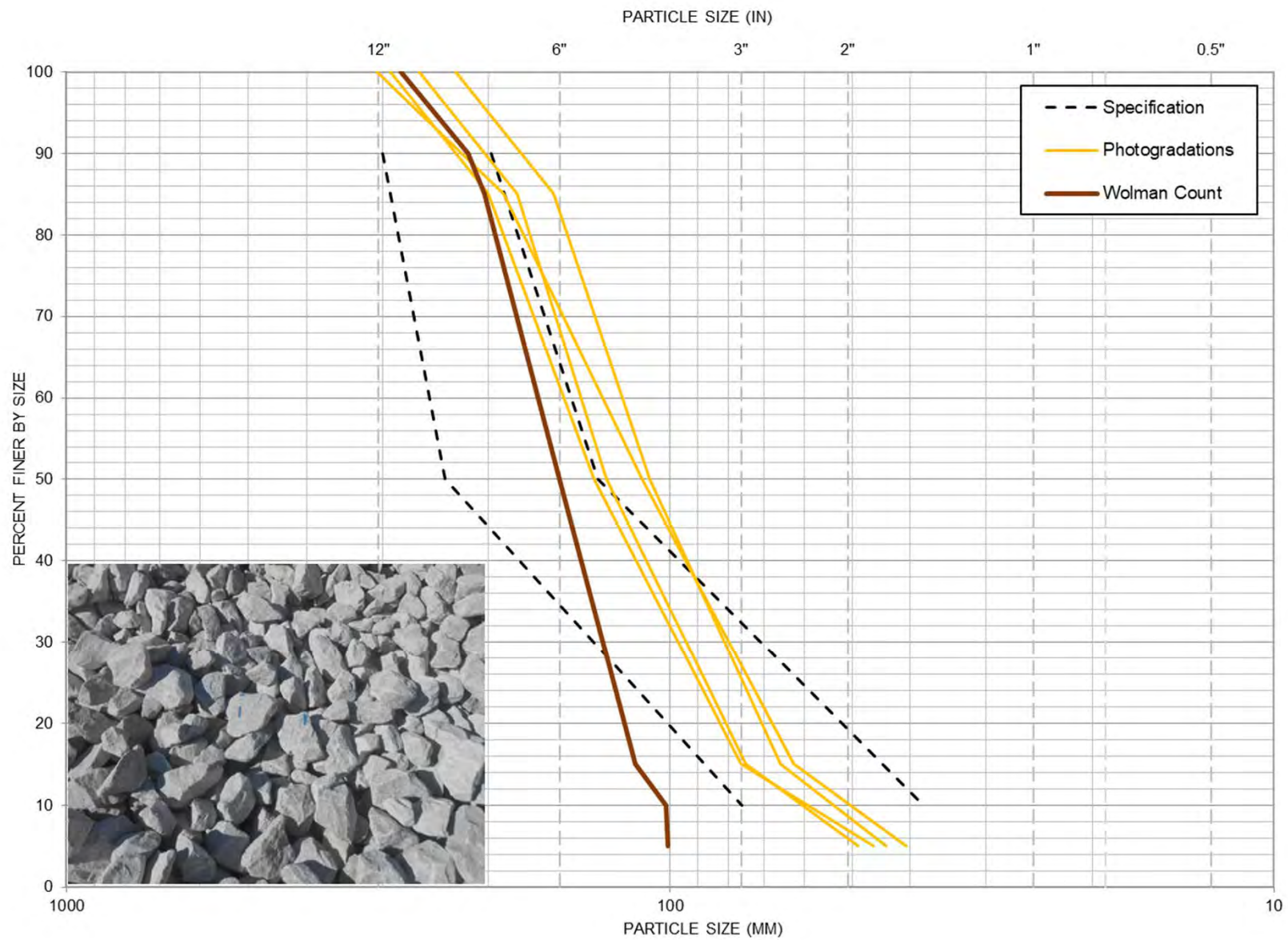
SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

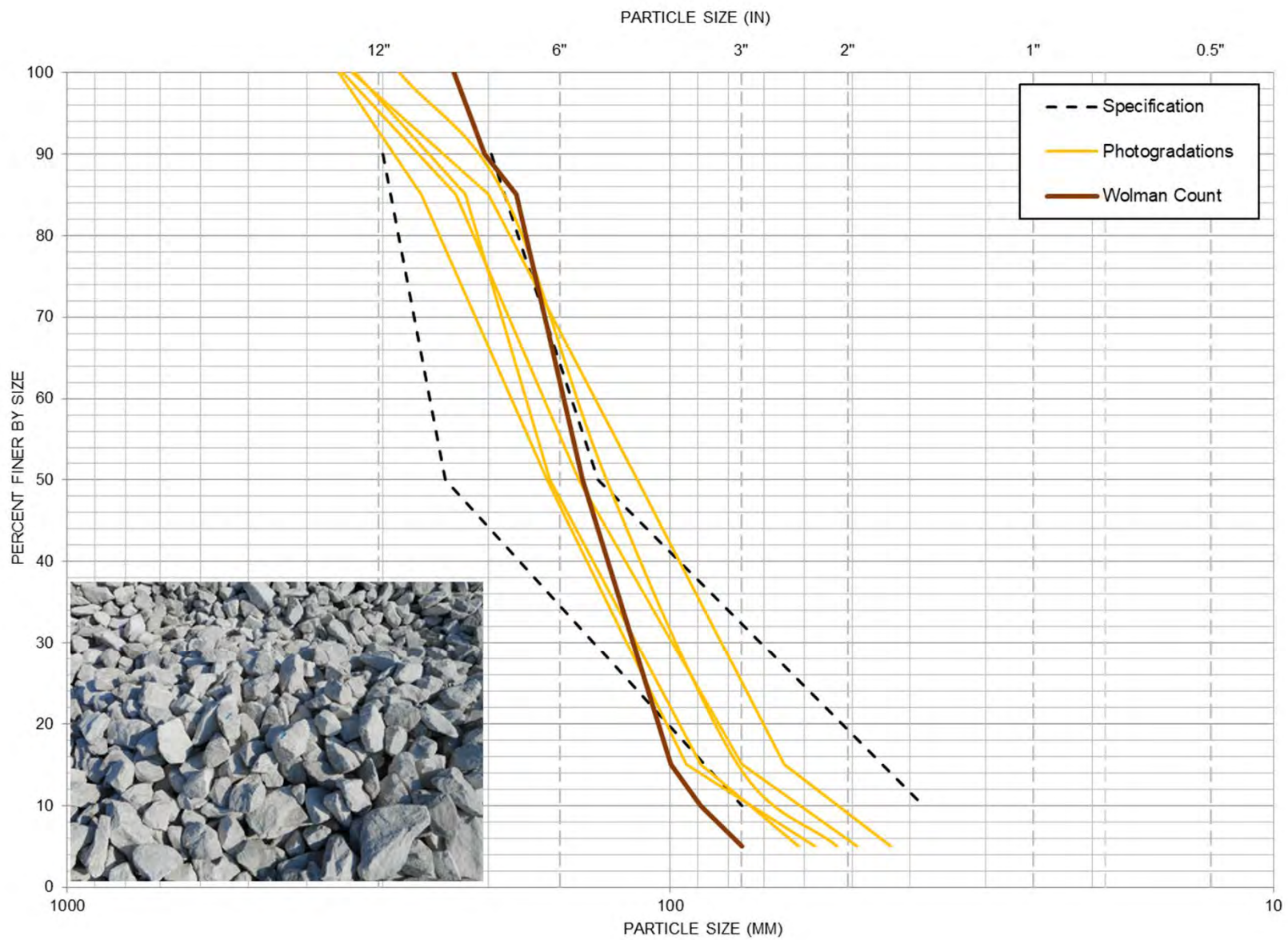
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

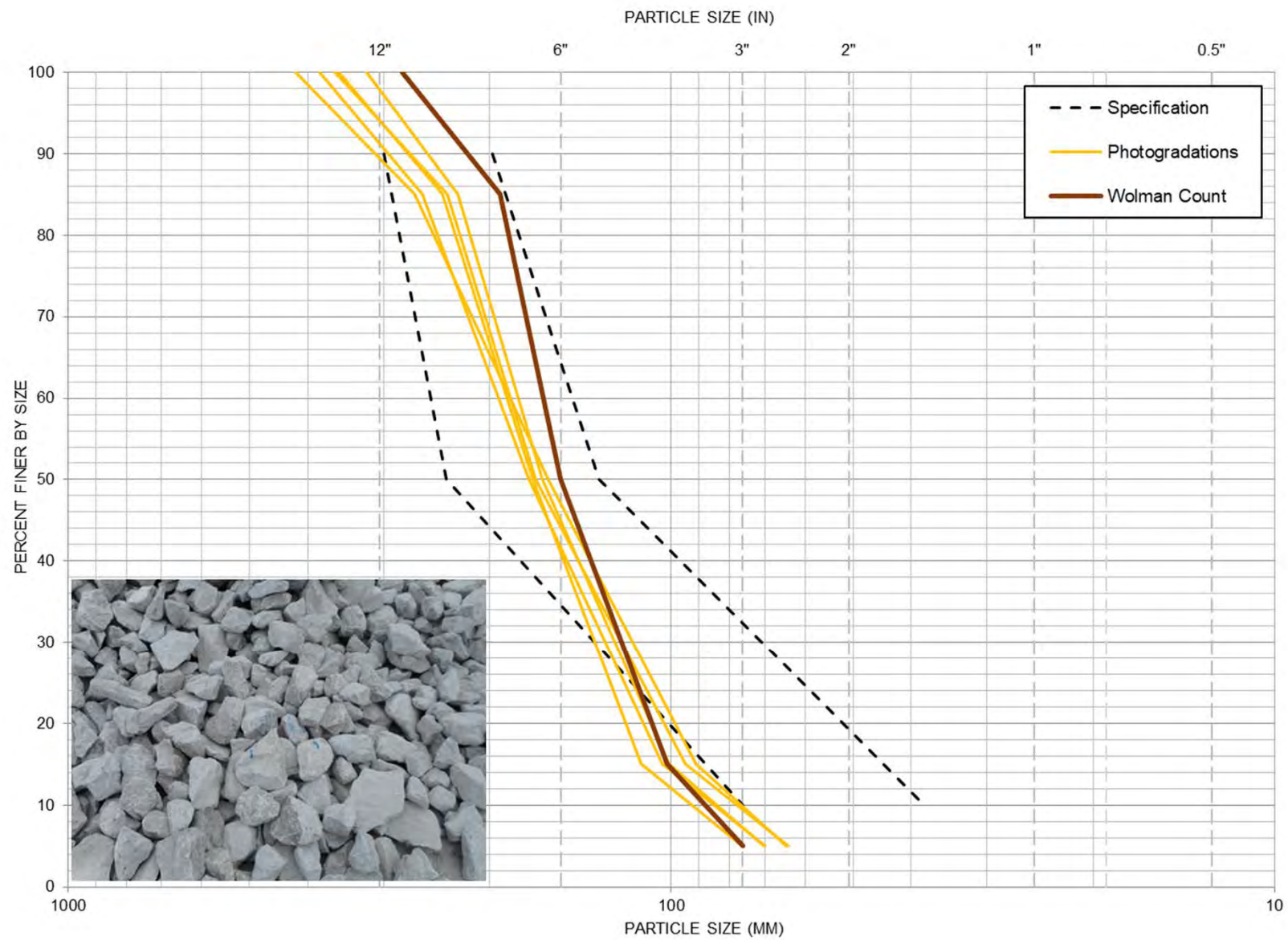
TITLE
SUBSOIL ZONE (COVER)
PARTICLE-SIZE DISTRIBUTIONS



DATE! FIGURE 14







SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

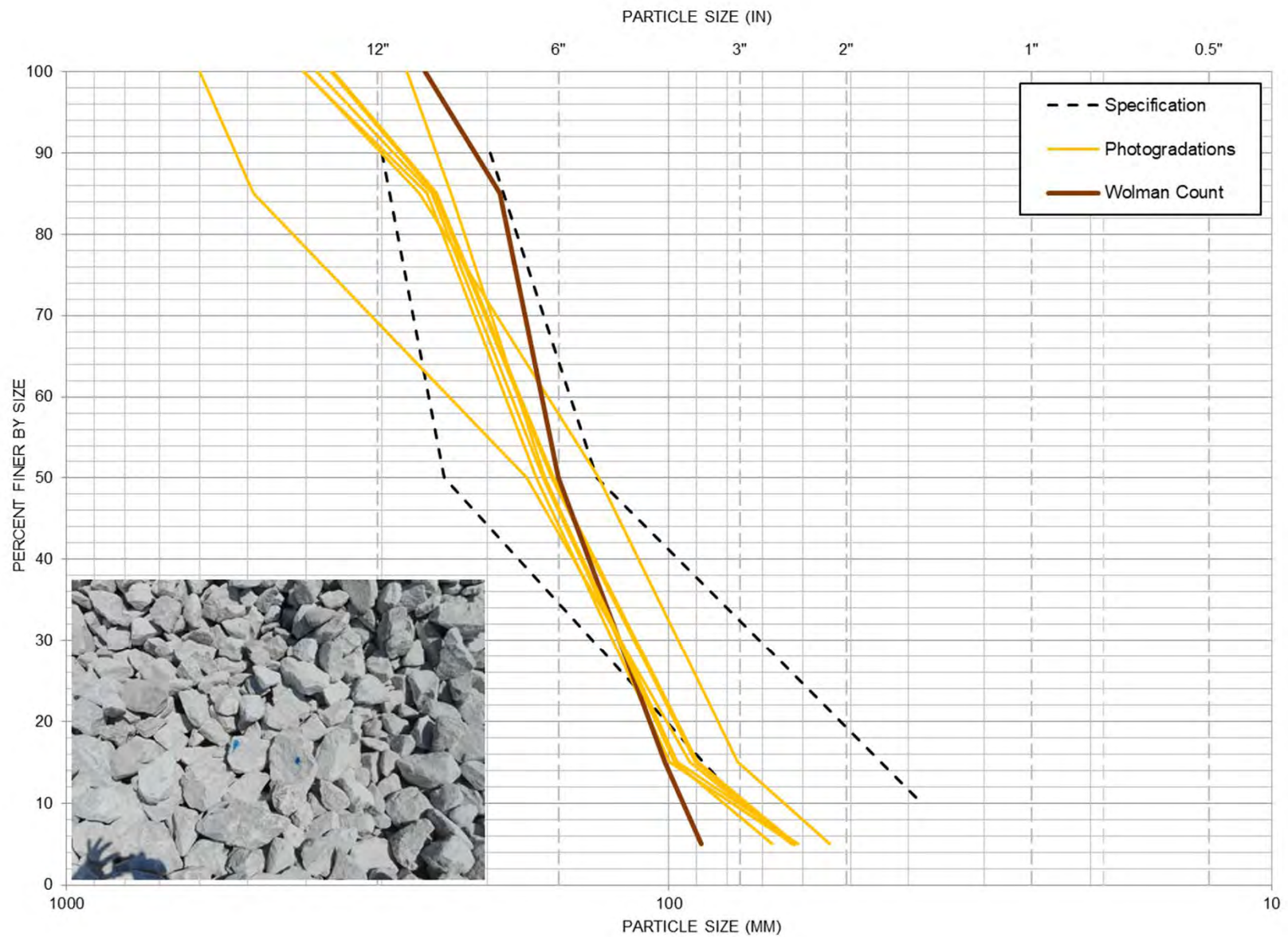
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

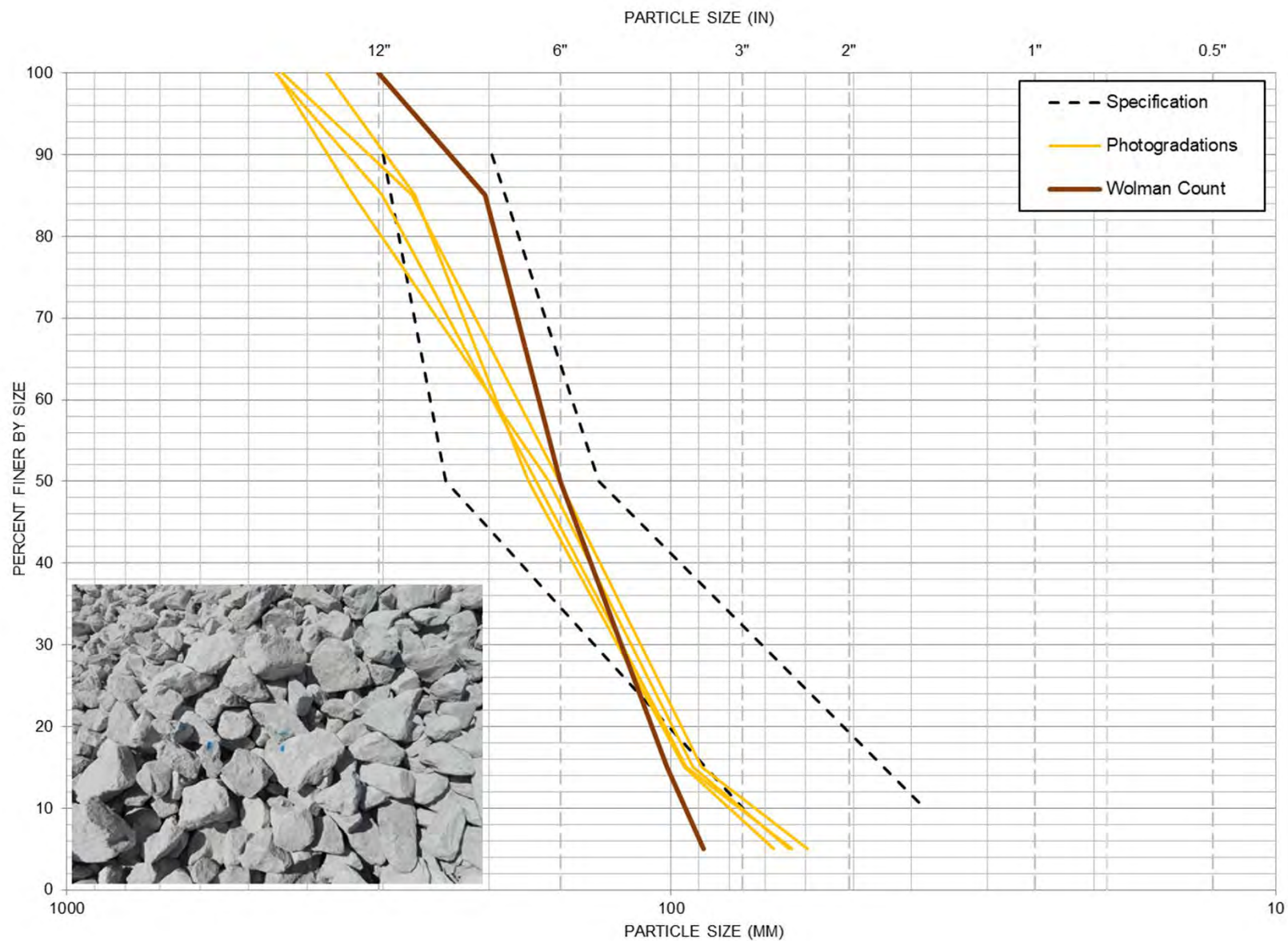
TITLE
ROCK MULCH SAMPLE 0212-03
PARTICLE-SIZE DISTRIBUTIONS



DATE!

FIGURE 17





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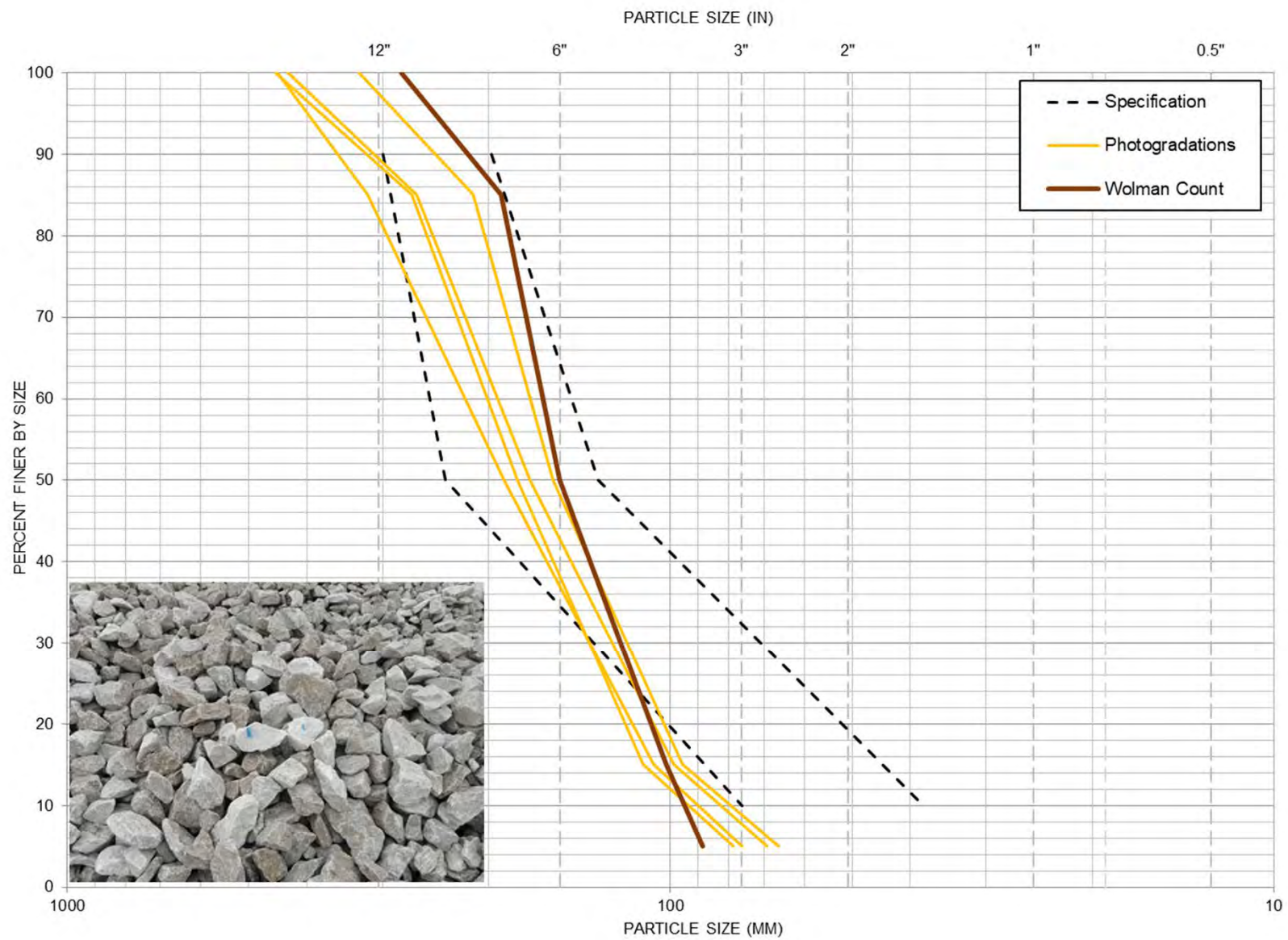
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
ROCK MULCH SAMPLE 0413-05
PARTICLE-SIZE DISTRIBUTIONS



DATE:

FIGURE 19



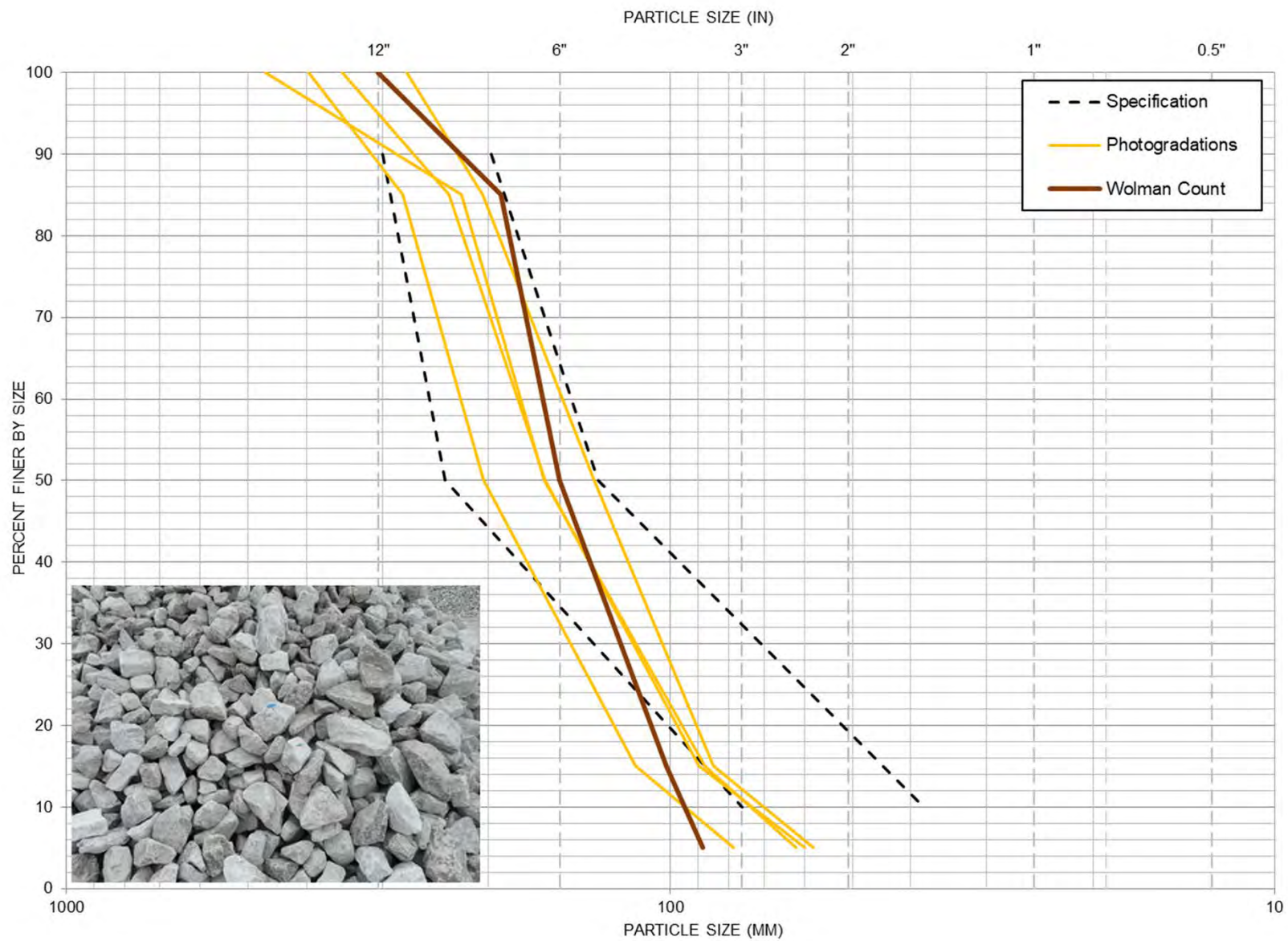
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A GENERAL ATOMICS COMPANY

PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
ROCK MULCH SAMPLE 0420-06
PARTICLE-SIZE DISTRIBUTIONS



DATE! FIGURE 20



SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

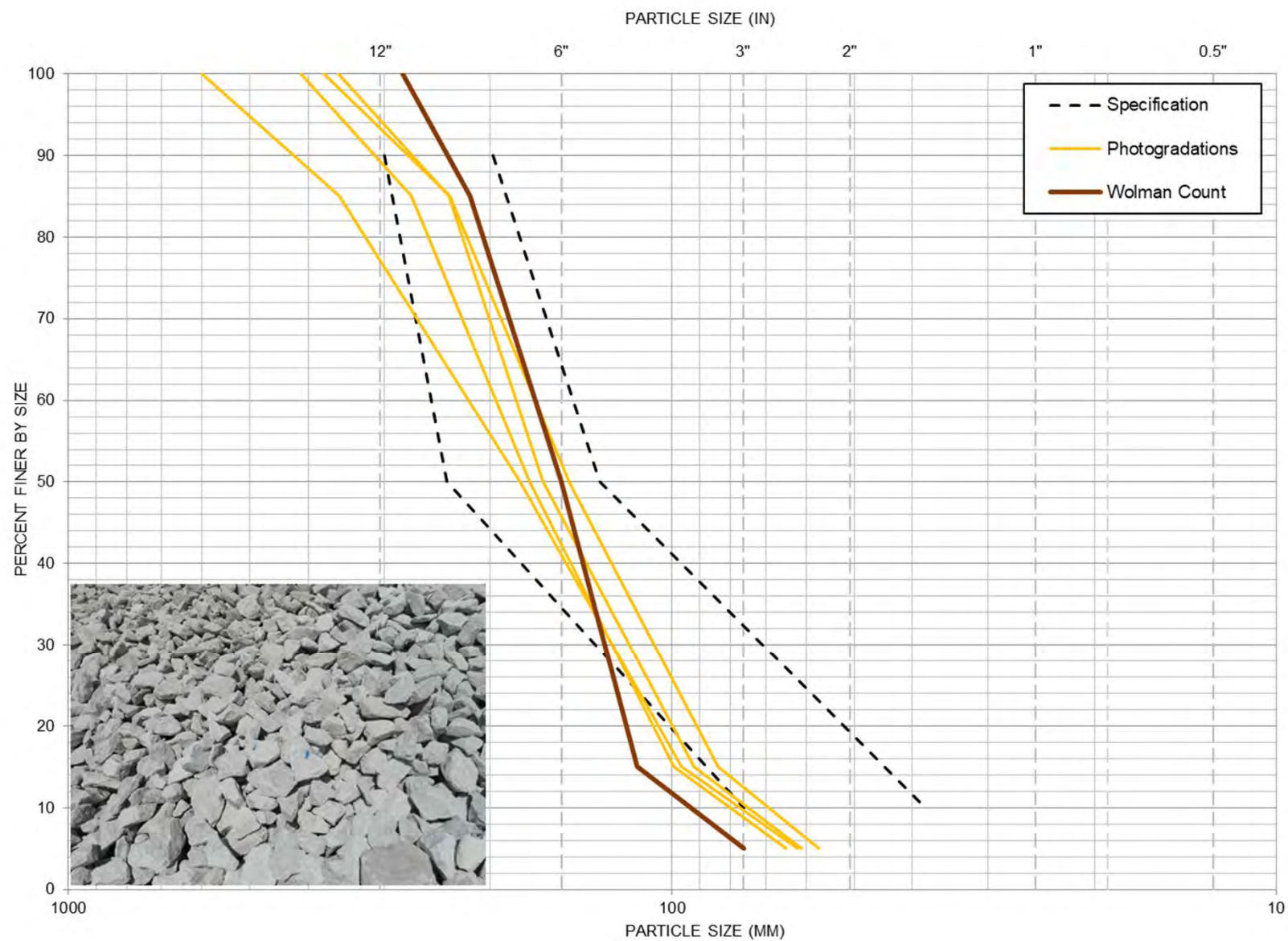
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
ROCK MULCH SAMPLE 0426-07
PARTICLE-SIZE DISTRIBUTIONS



DATE!

FIGURE 21



SEQUOYAH FUELS
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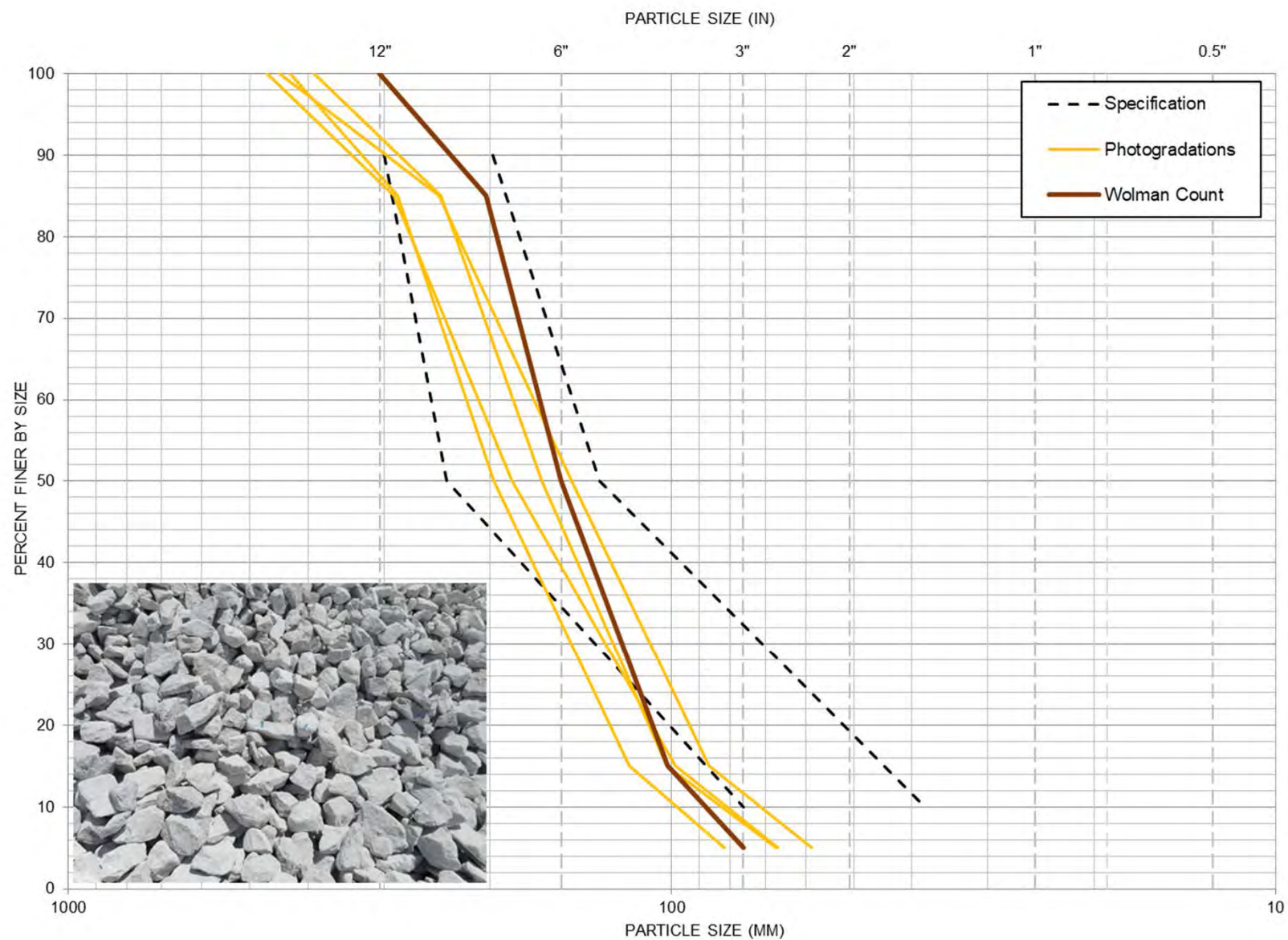
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
ROCK MULCH SAMPLE 0507-09
PARTICLE-SIZE DISTRIBUTIONS



DATE:

FIGURE 23



SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

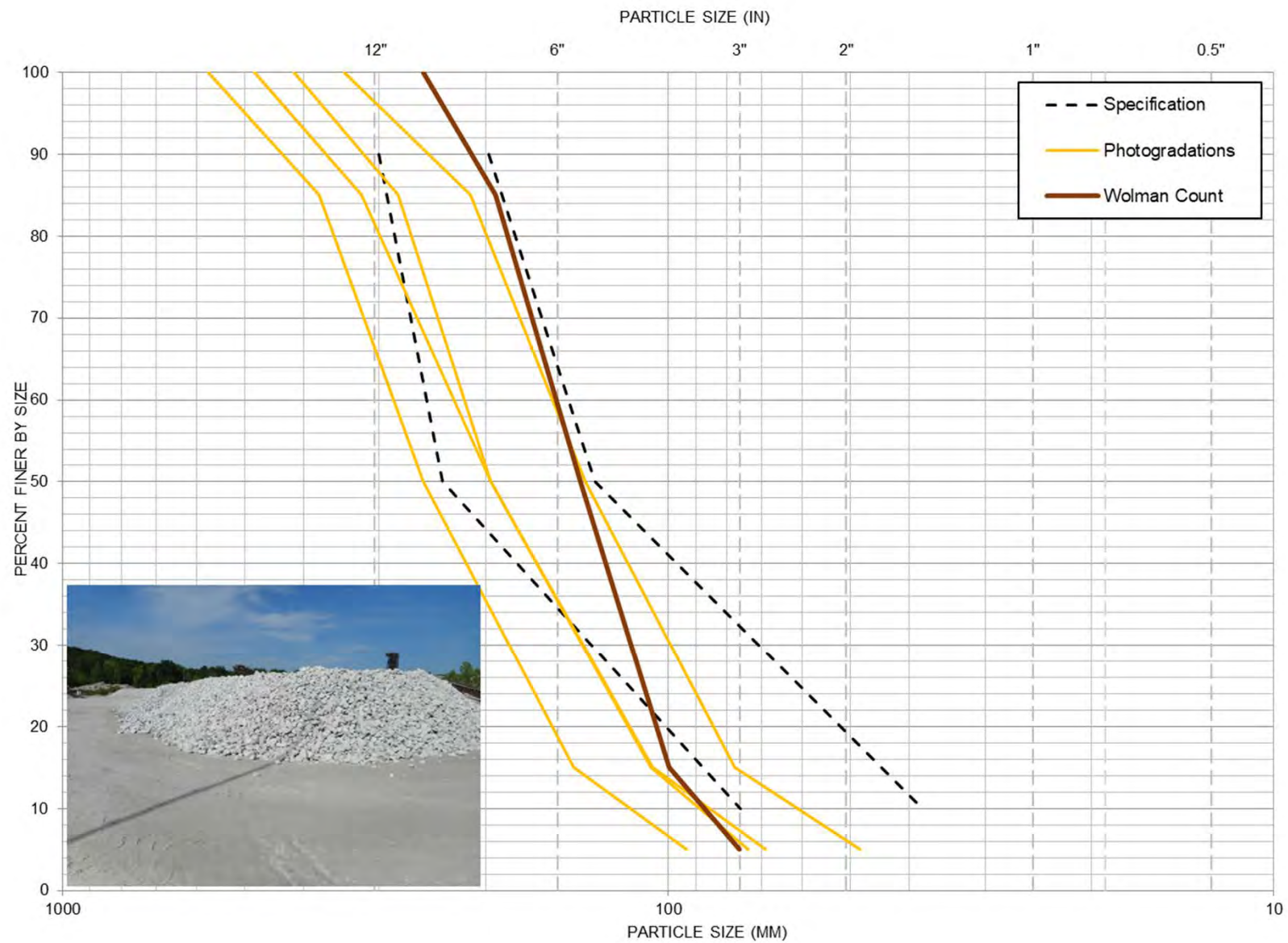
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

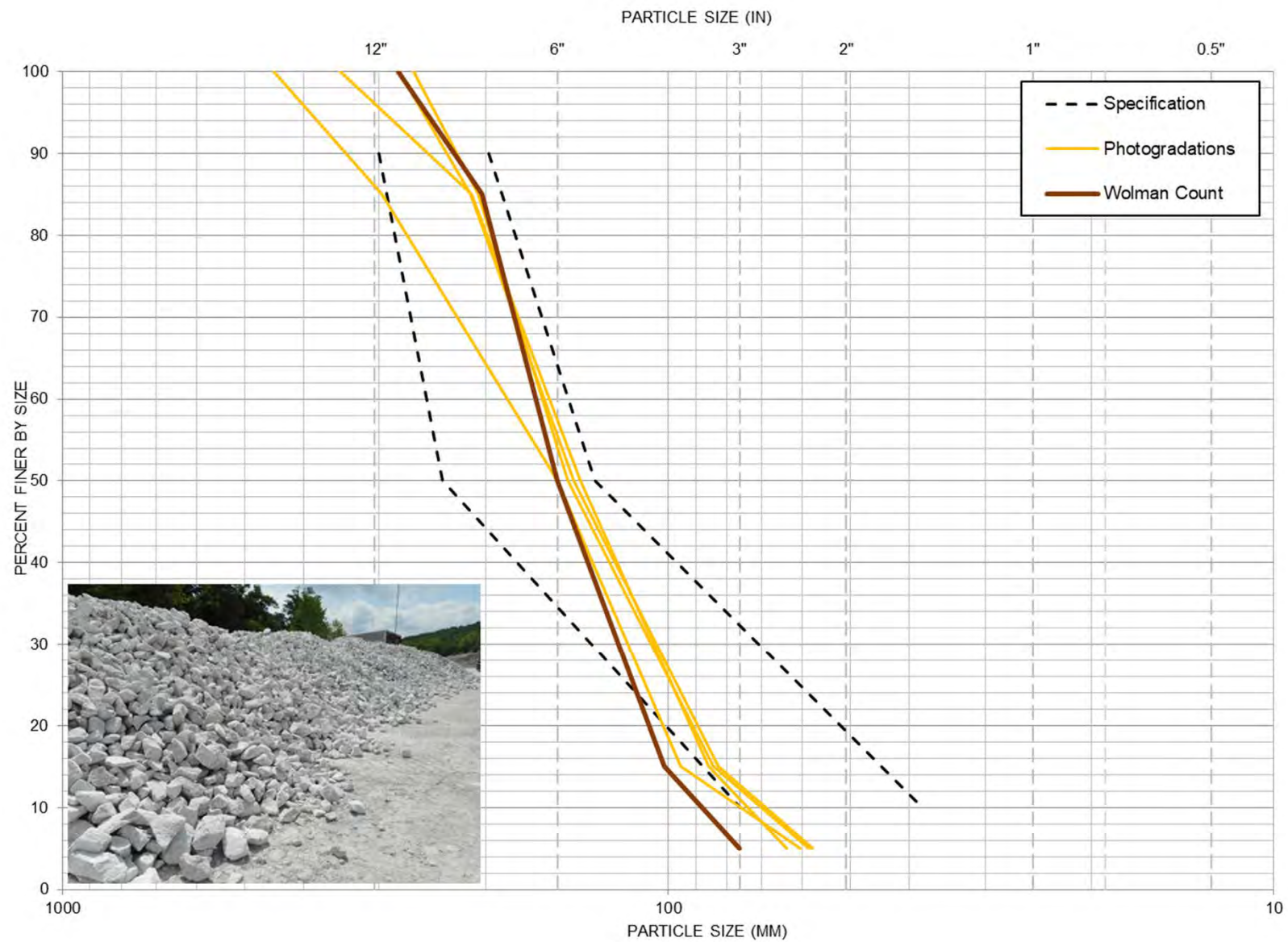
TITLE
ROCK MULCH SAMPLE 0509-10
PARTICLE-SIZE DISTRIBUTIONS



DATE:

FIGURE 24





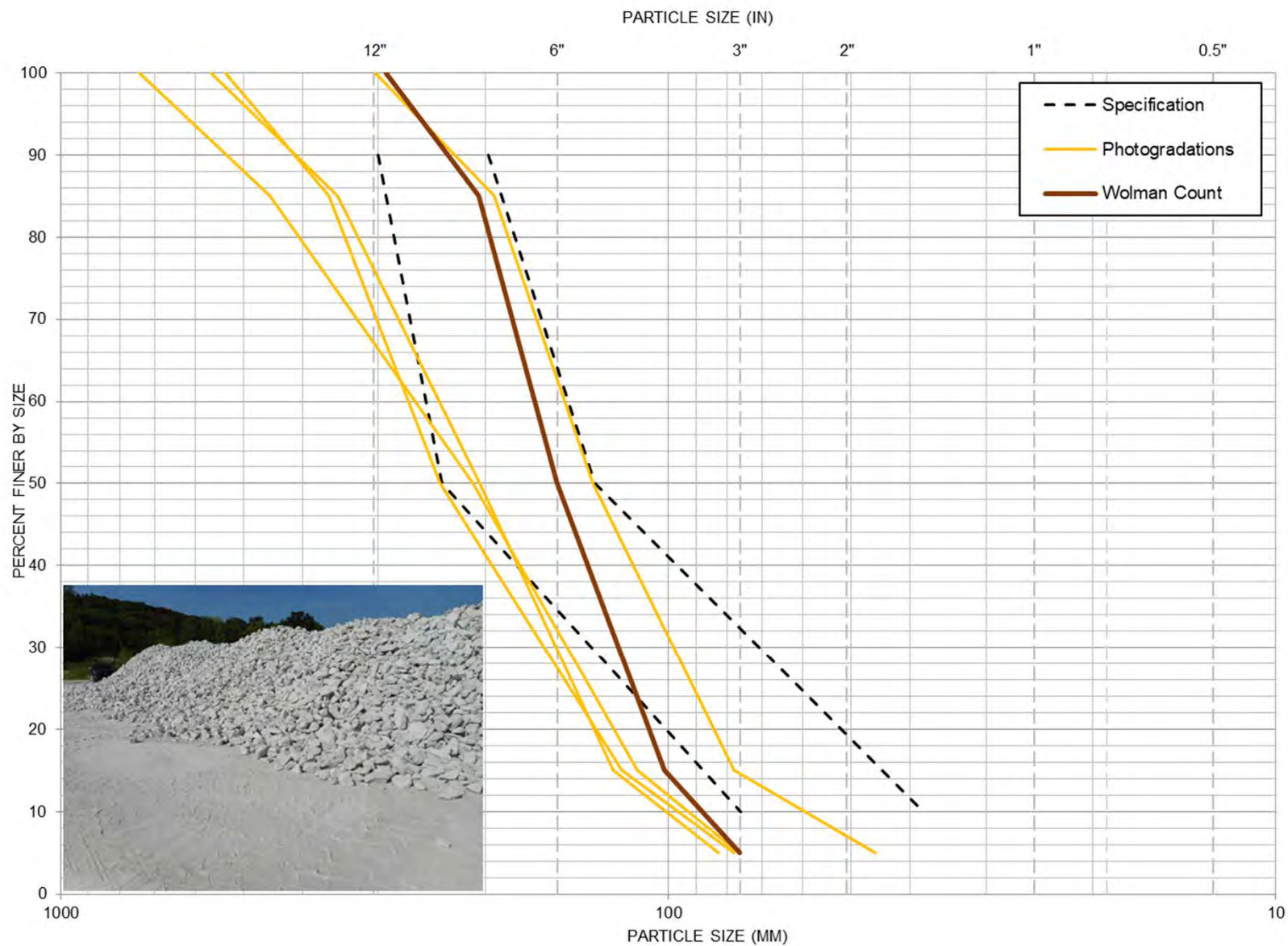
SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

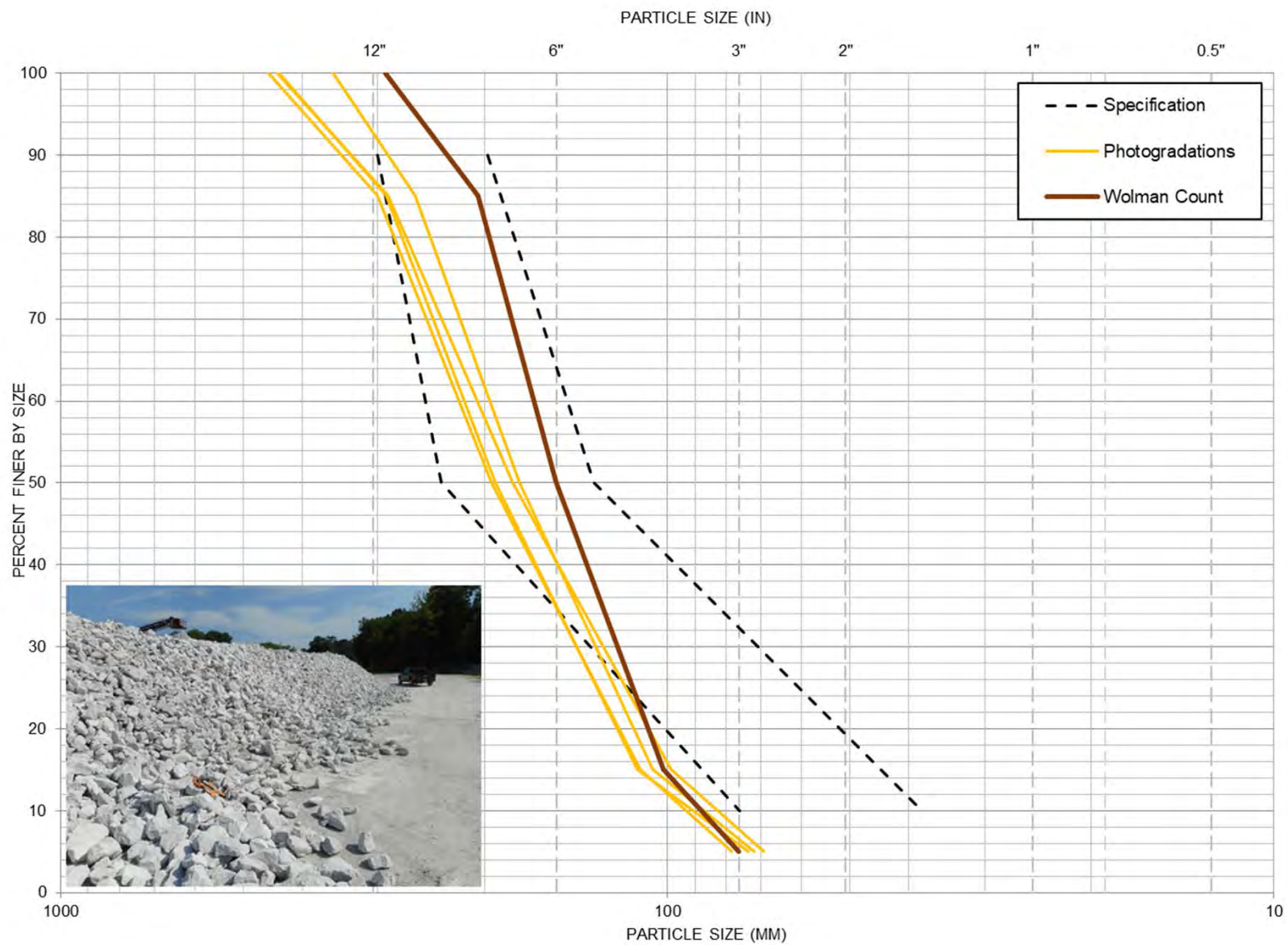
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
ROCK MULCH SAMPLE 0519-12
PARTICLE-SIZE DISTRIBUTIONS



DATE! FIGURE 26





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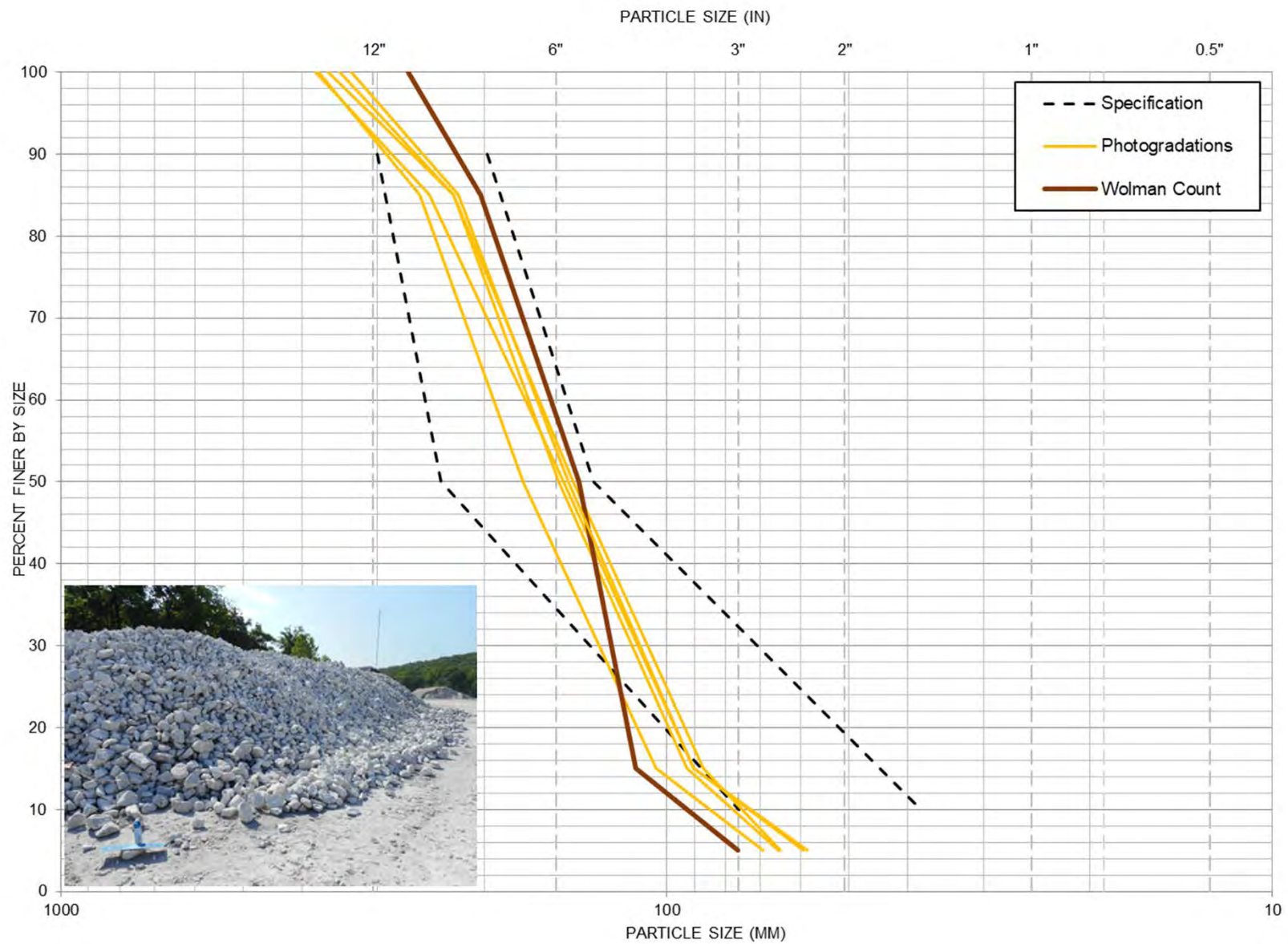
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

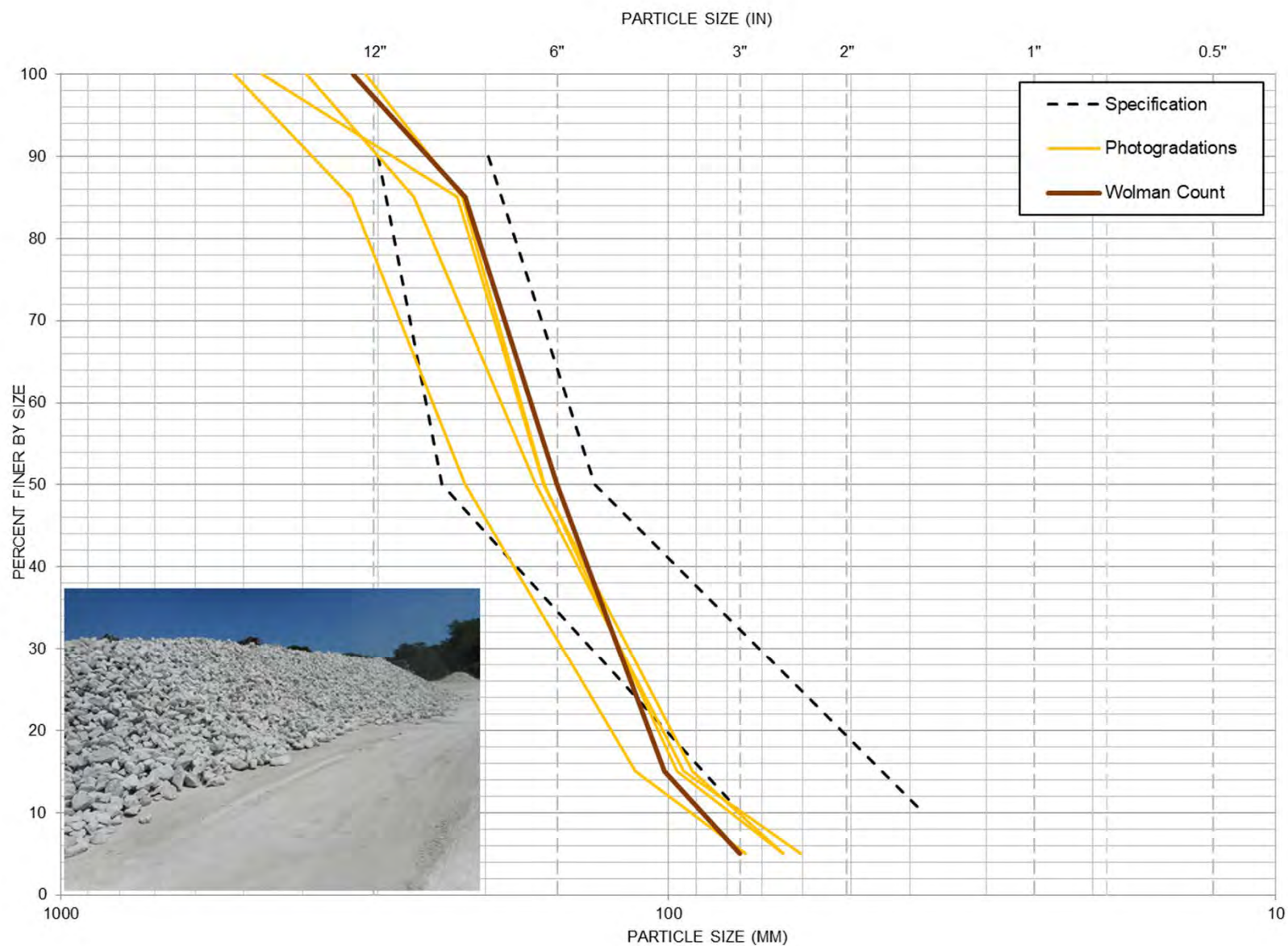
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ROCK MULCH SAMPLE 0529-14
PARTICLE-SIZE DISTRIBUTIONS

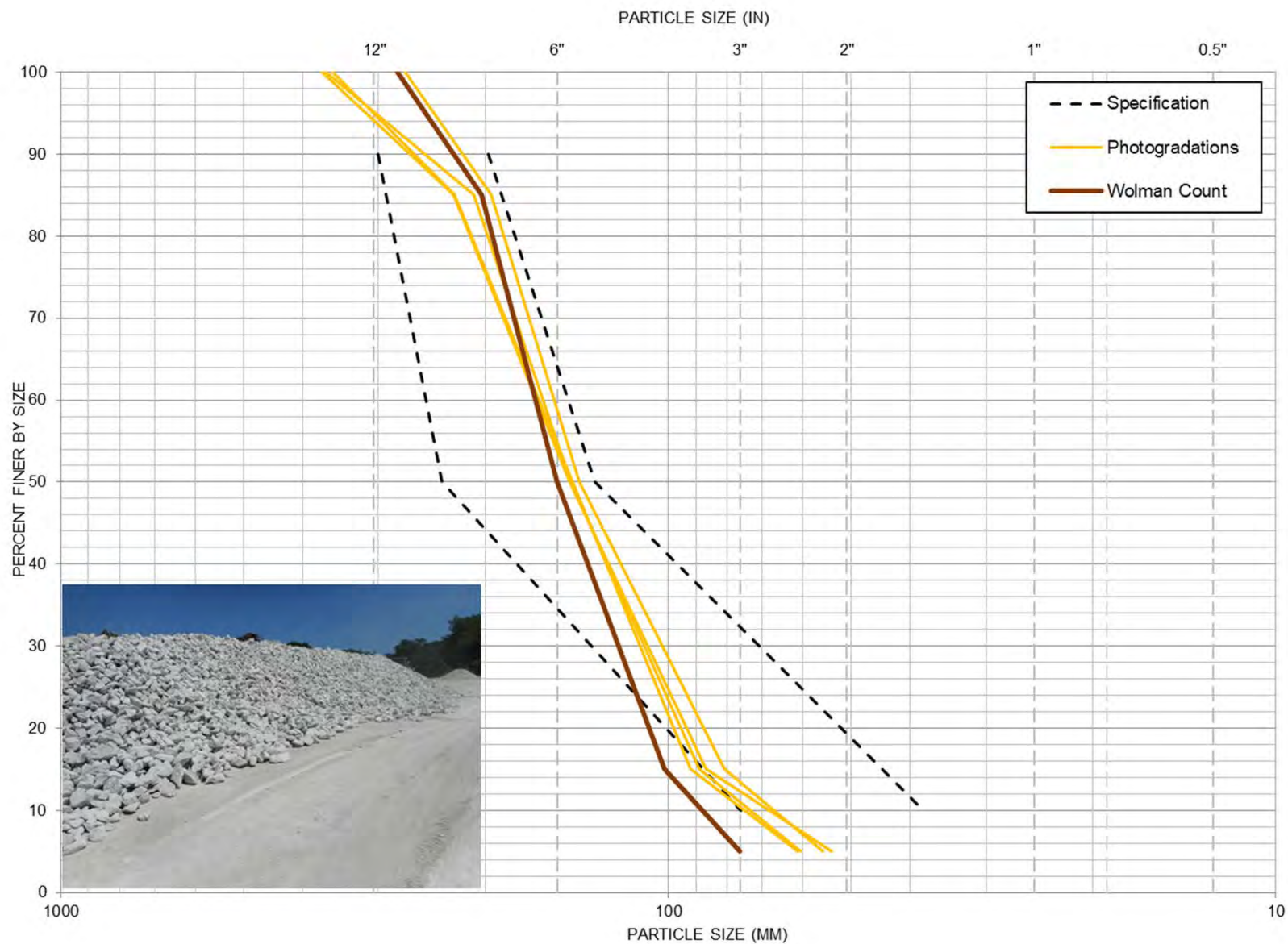


DATE:

FIGURE 28







SEQUOYAH FUELS
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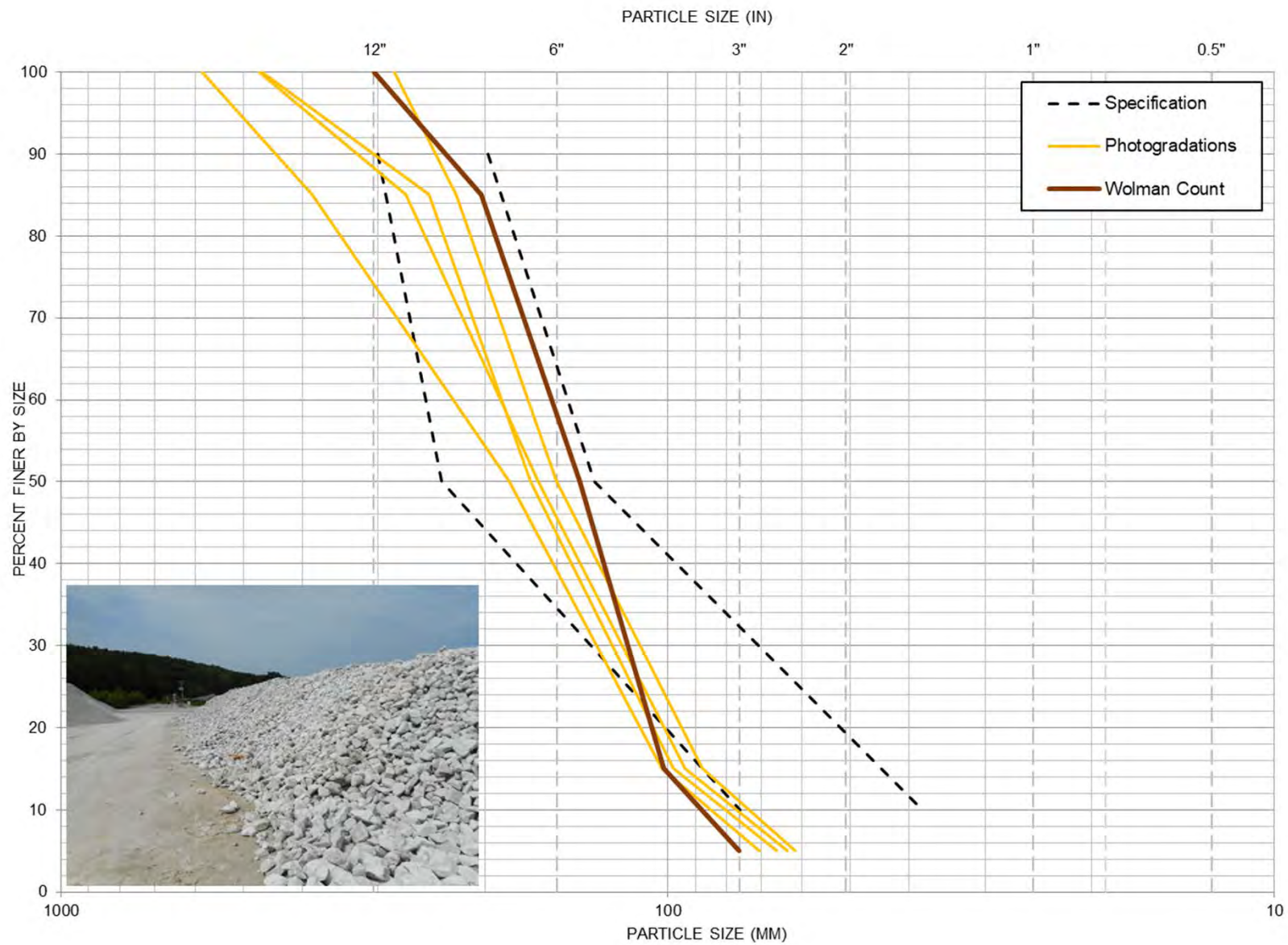
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

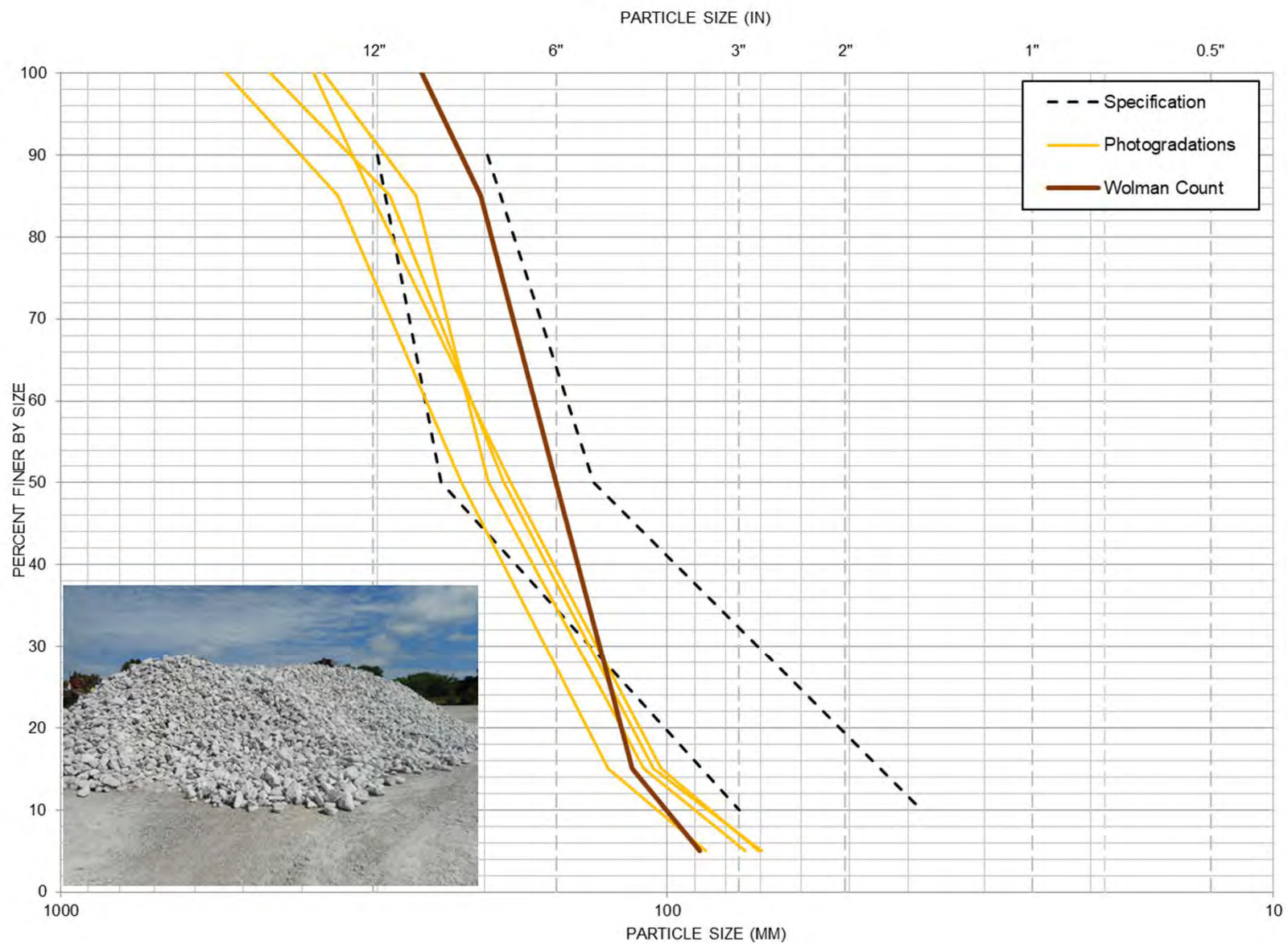
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MULCH ROCK SAMPLE 0608-17
PARTICLE-SIZE DISTRIBUTIONS

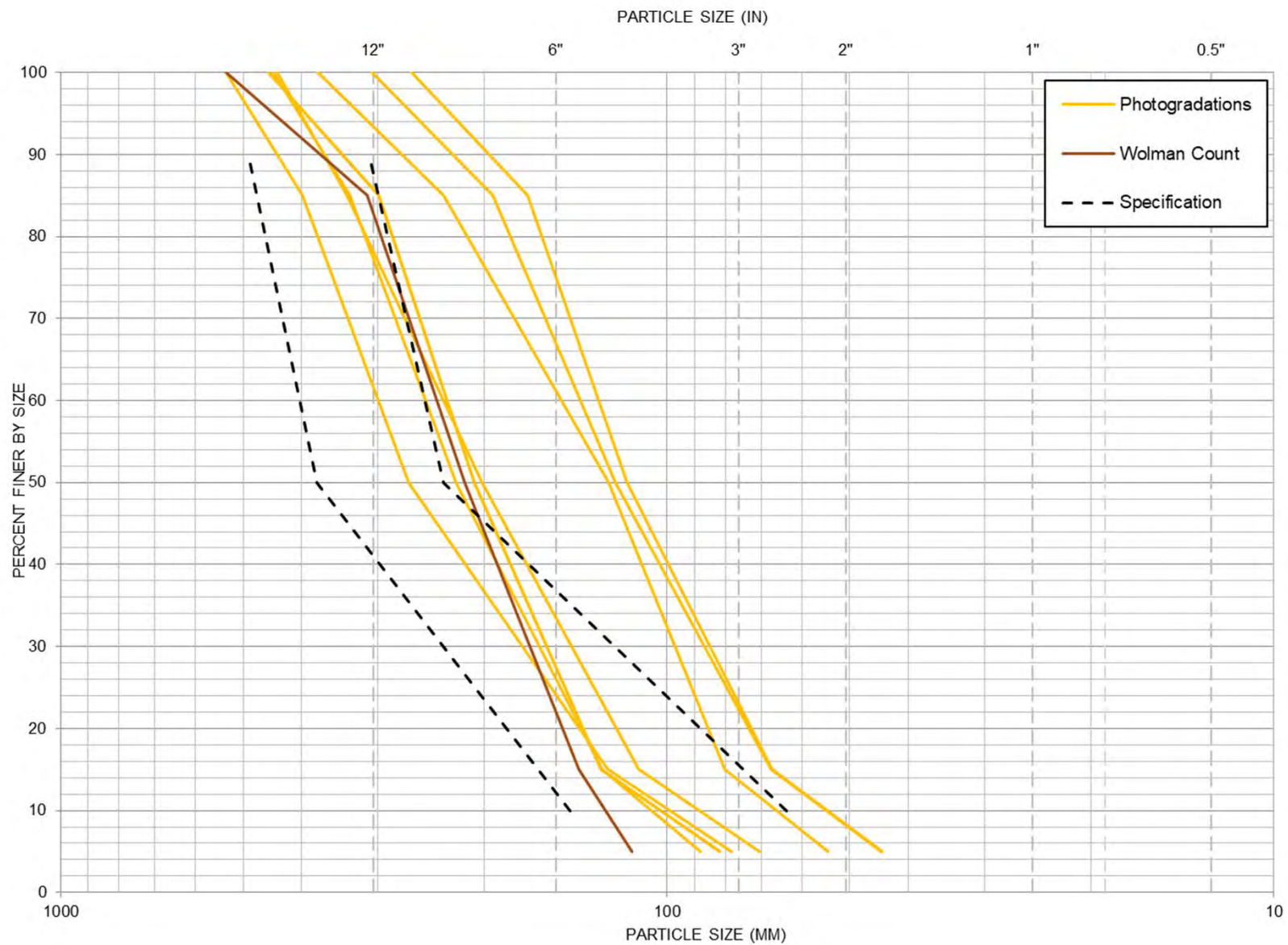


DATE:

FIGURE 31







SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

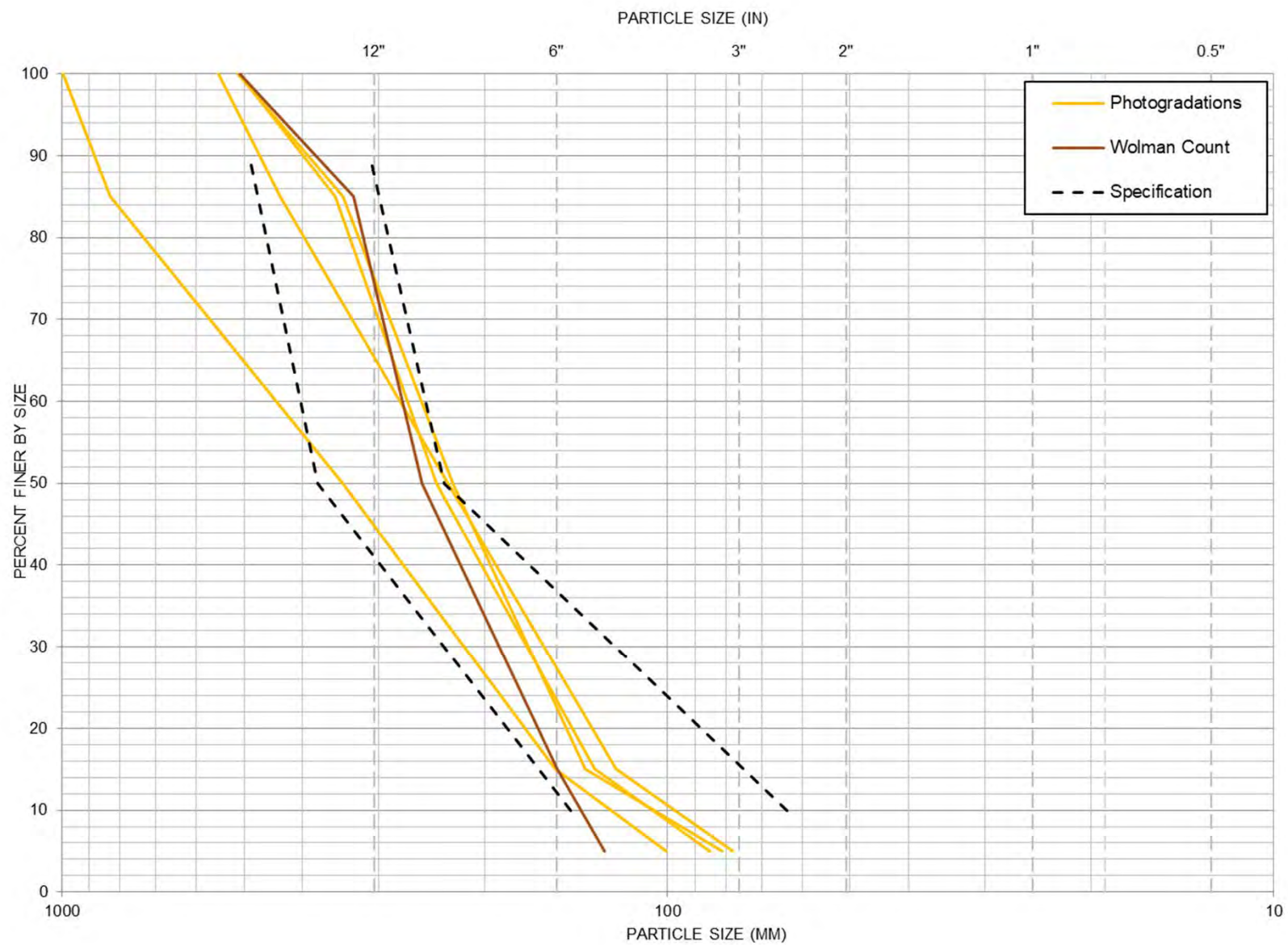
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
APRON ROCK 8-15-18 SAMPLE
PARTICLE-SIZE DISTRIBUTIONS



DATE!

FIGURE 34



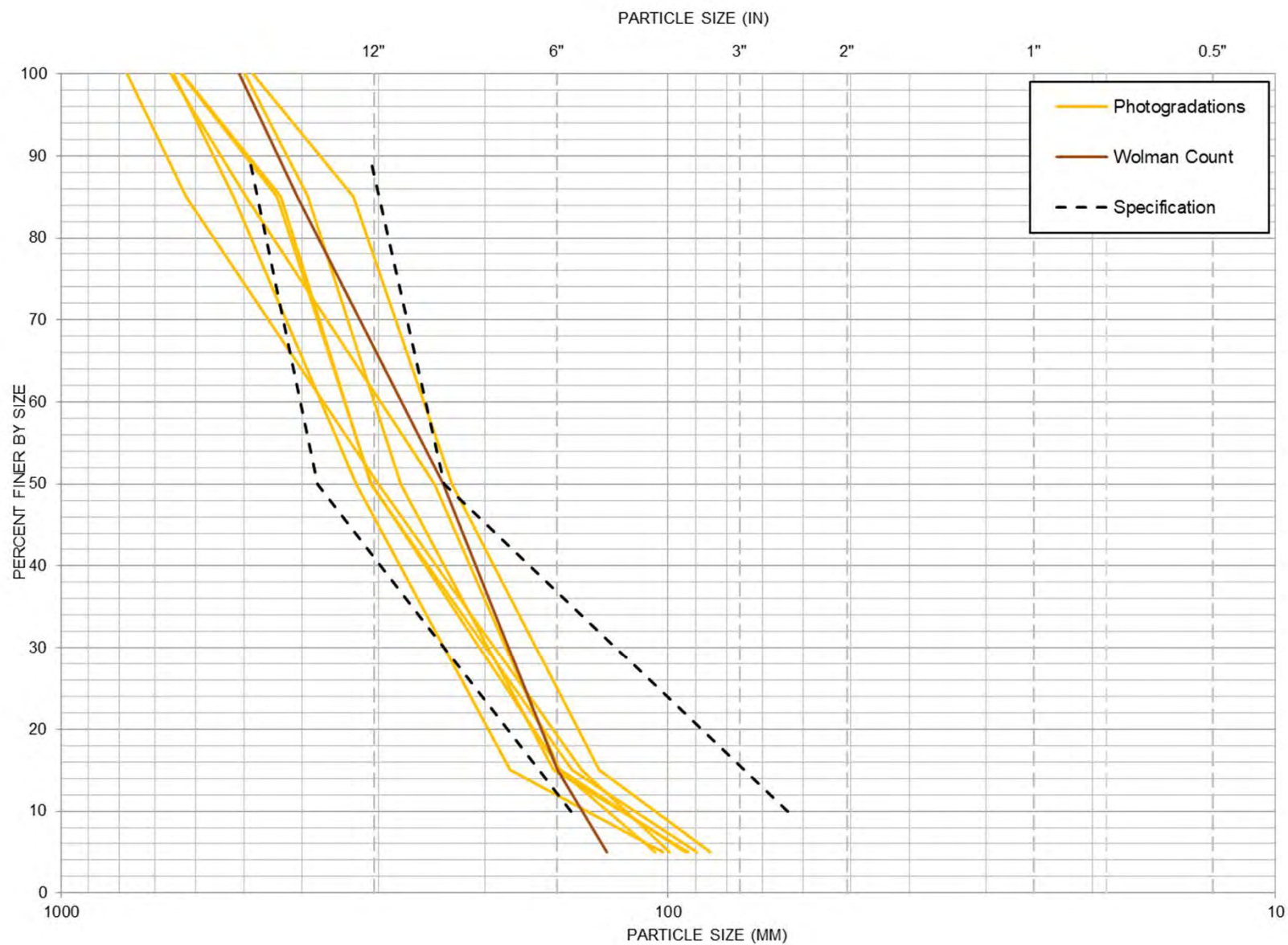
SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
APRON ROCK 8-29-18 SAMPLE
PARTICLE-SIZE DISTRIBUTIONS



DATE! FIGURE 35



SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

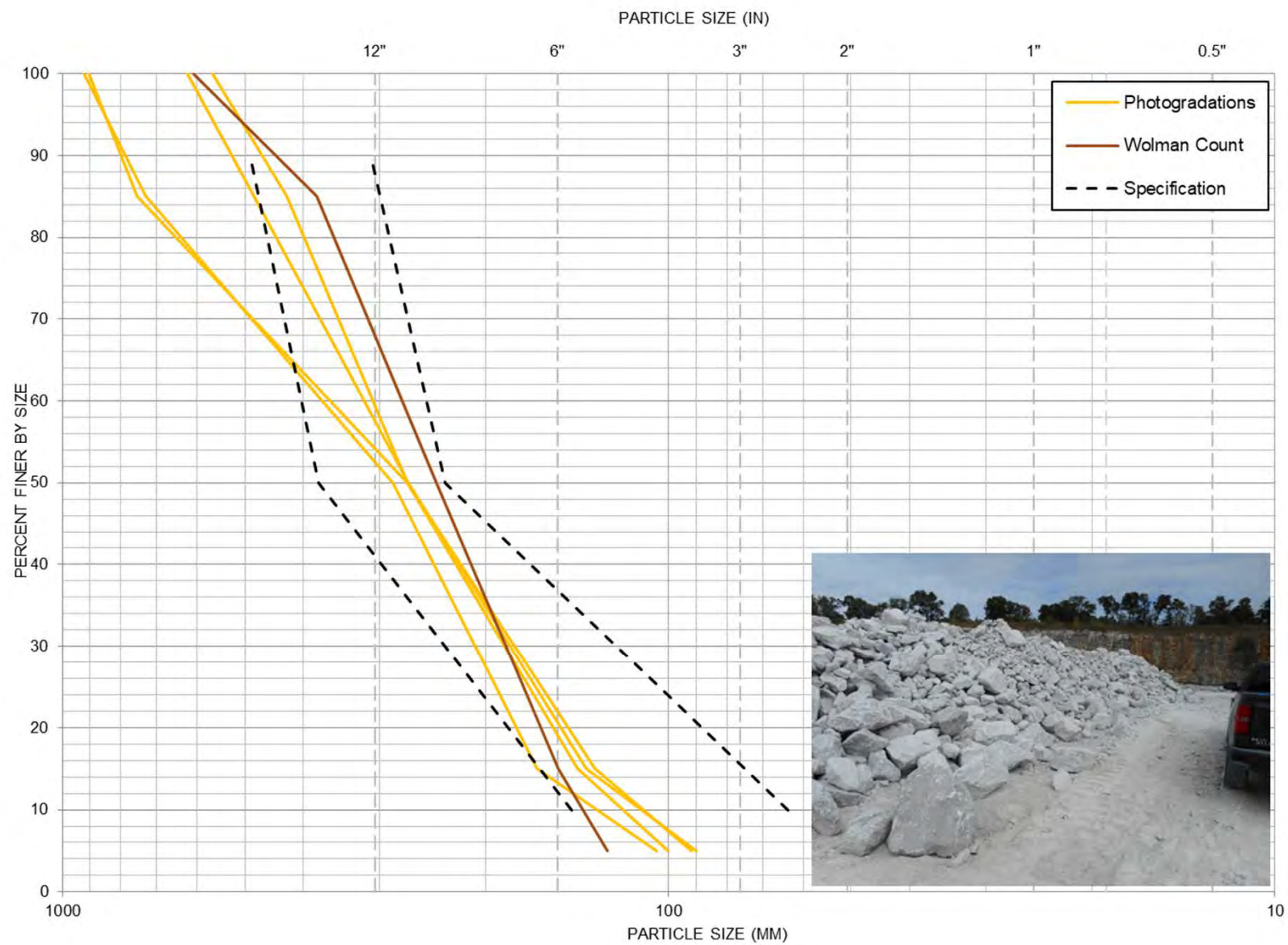
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
APRON ROCK 9-14-18 SAMPLE
PARTICLE-SIZE DISTRIBUTIONS



DATE!

FIGURE 36



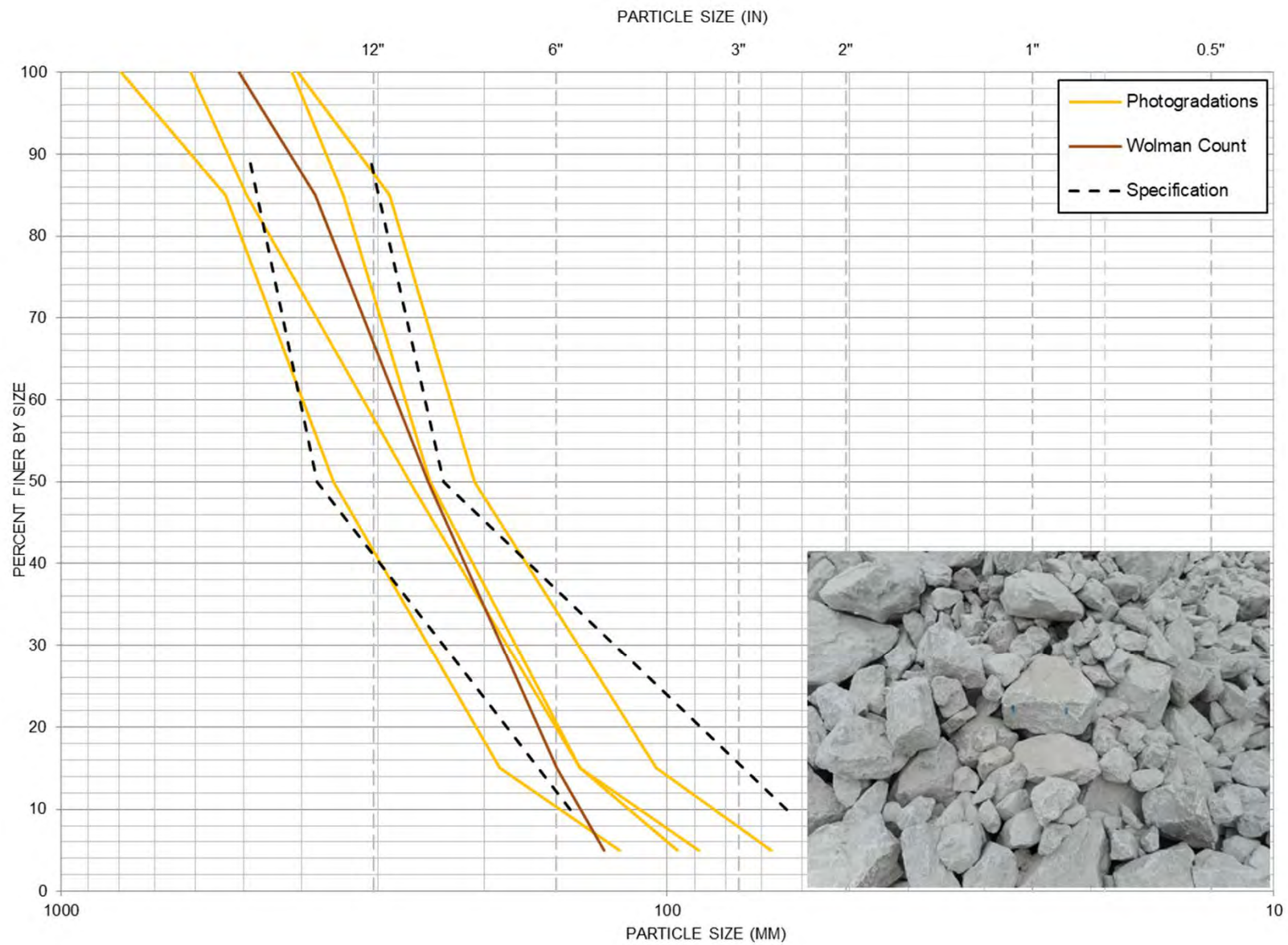
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A GENERAL ATOMICS COMPANY

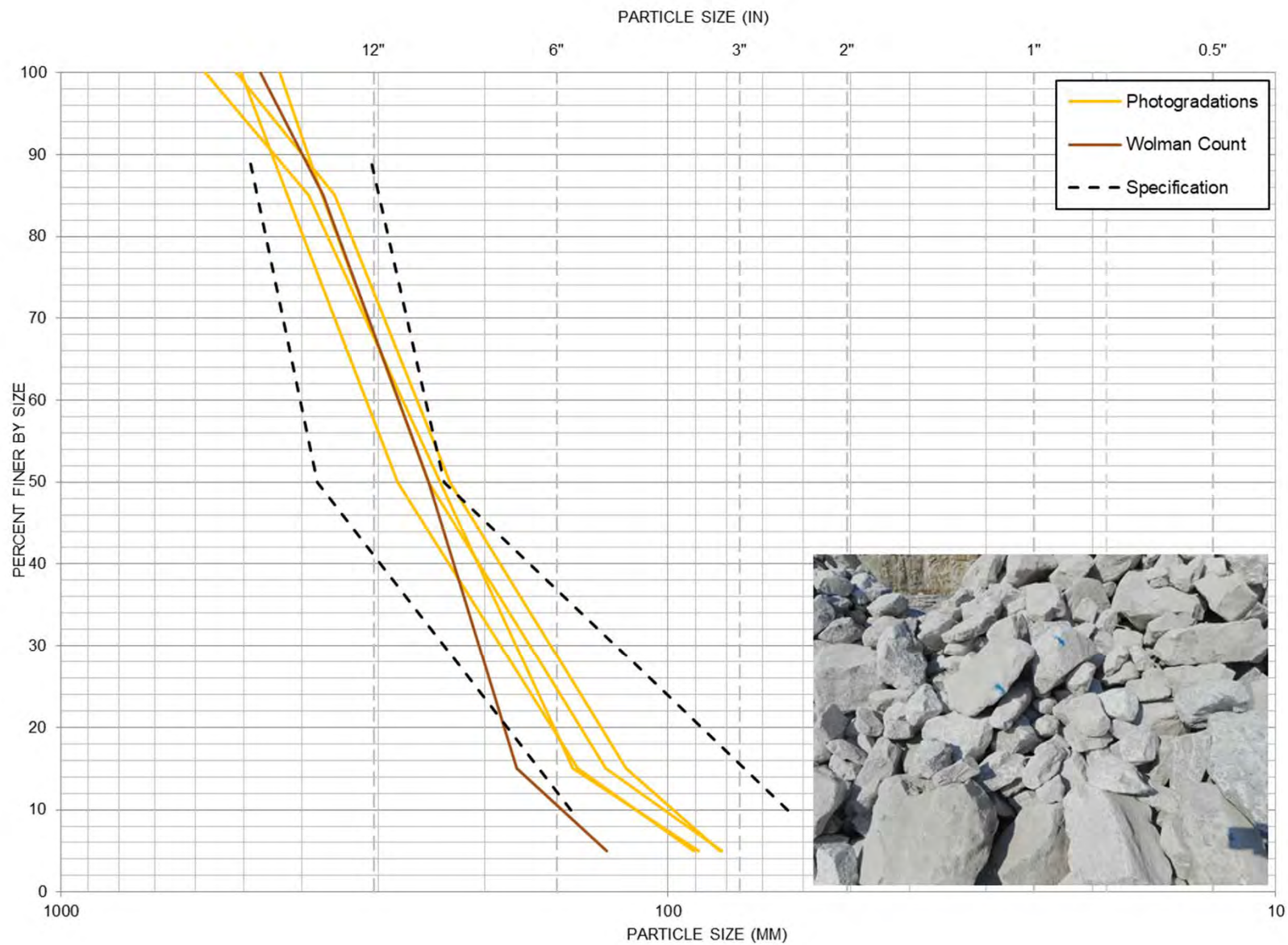
PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

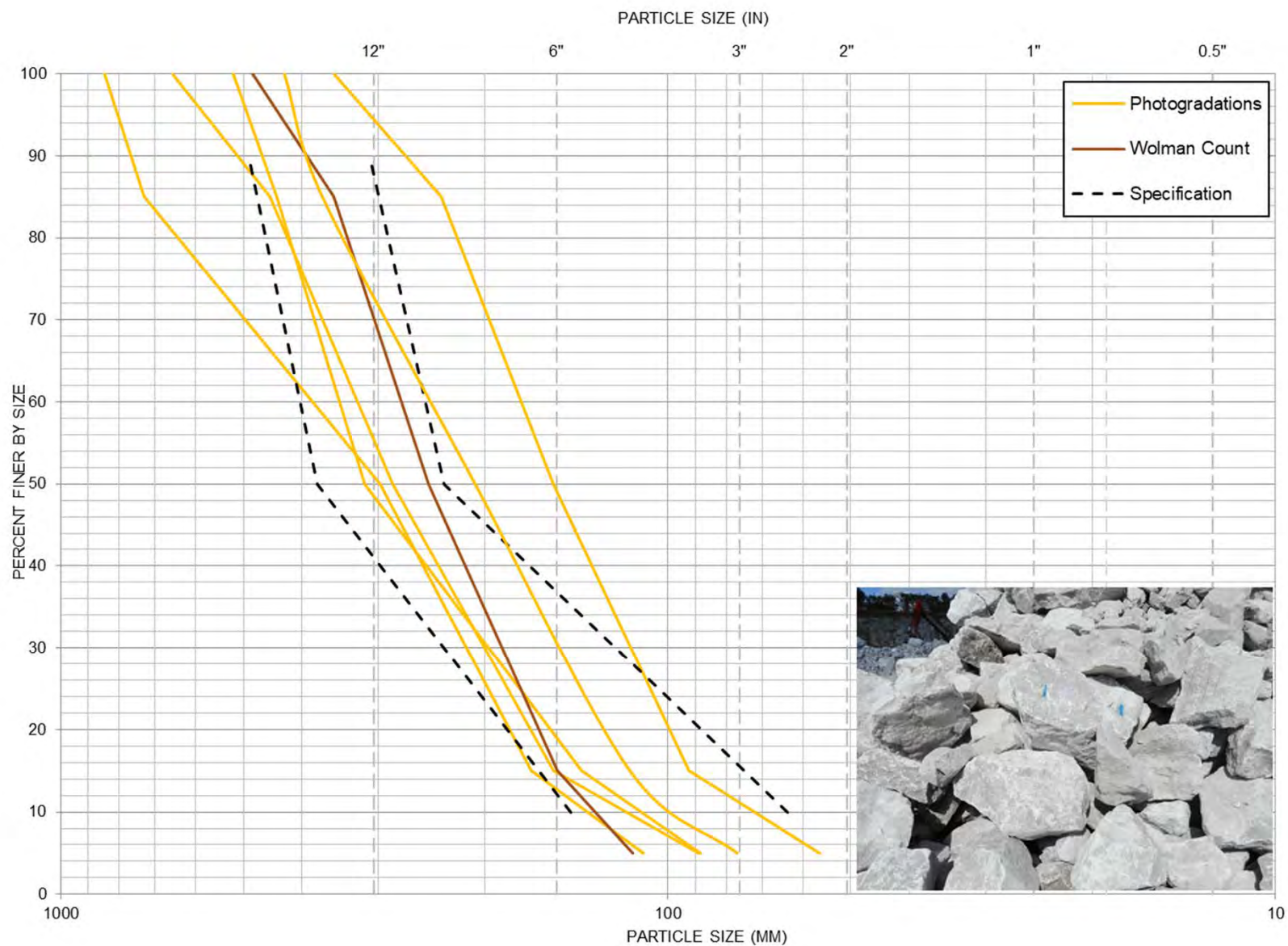
TITLE
APRON ROCK SAMPLE 0910-01
PARTICLE-SIZE DISTRIBUTIONS



DATE! FIGURE 37







SEQUOYAH FUELS
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PROJECT
SEQUOYAH SITE DISPOSAL CELL, COVER

TITLE
APRON ROCK SAMPLE 0924-04
PARTICLE-SIZE DISTRIBUTIONS



DATE:

FIGURE 40

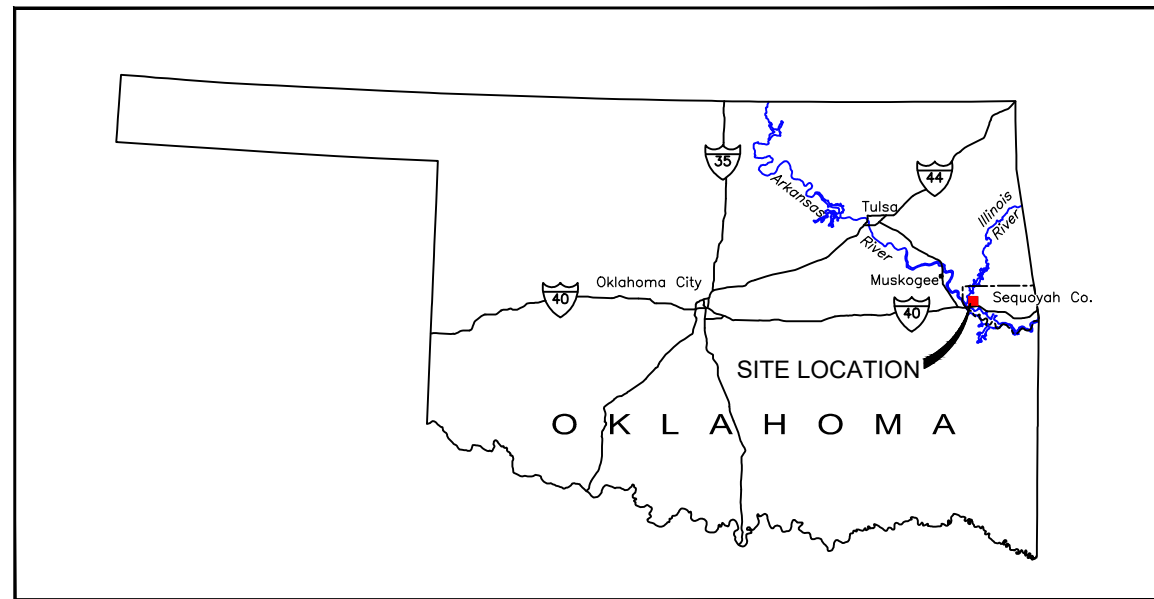
PHASE IV (COVER) AS-BUILT REPORT

Appendix A Phase IV (Cover As-Built Drawings)

Appendix A PHASE IV (COVER AS-BUILT DRAWINGS)



SEQUOYAH SITE DISPOSAL CELL, COVER SYSTEM (PHASE IV)
SEQUOYAH COUNTY, OKLAHOMA
MAY 2026



LOCATION MAP
N.T.S.

DRAWING INDEX		
DRAWING NO.	DRAWING TITLE	REVISION
CS-GL1	SITE LOCATION AND LAYOUT	F
CS-GL2	DISPOSAL CELL AREA TOPOGRAPHY	F
CS-GL3	DISPOSAL CELL LAYOUT AND MONITORING FEATURES	F
CS-CS1	COVER SECTIONS AND DETAILS (1 OF 3)	F
CS-CS2	COVER SECTIONS AND DETAILS (2 OF 3)	F
CS-CS3	COVER SECTIONS AND DETAILS (3 OF 3)	F
CS-CS4	COLLECTION SUMP AND MONITORING ELEMENT DETAILS	F



SITE MAP
N.T.S.

		F	AS-BUILT CONDITIONS	2026.05	CF	JC	CS	
		E	ISSUED FOR 2019 CONSTRUCTION	2019.03	KR	JC	CS	
		D	ISSUED FOR 2016 CONSTRUCTION	2016.08	KR	JC	CS	
		C	ISSUED FOR CLIENT REVIEW	2015.09	KR	JC	CS	
		B	ISSUED FOR CLIENT REVIEW	2015.02	DM	JC	CS	
		A	ISSUED FOR CLIENT REVIEW	2014.11	KY	JC	CS	
Ref. Dwg. No.	Ref. Dwg. Title	Rev.	Description	Date	By	Chk	Eng.	Appd.

Permit-Seal



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A GENERAL ATOMICS COMPANY

SEQUOYAH SITE DISPOSAL CELL, COVER SYSTEM

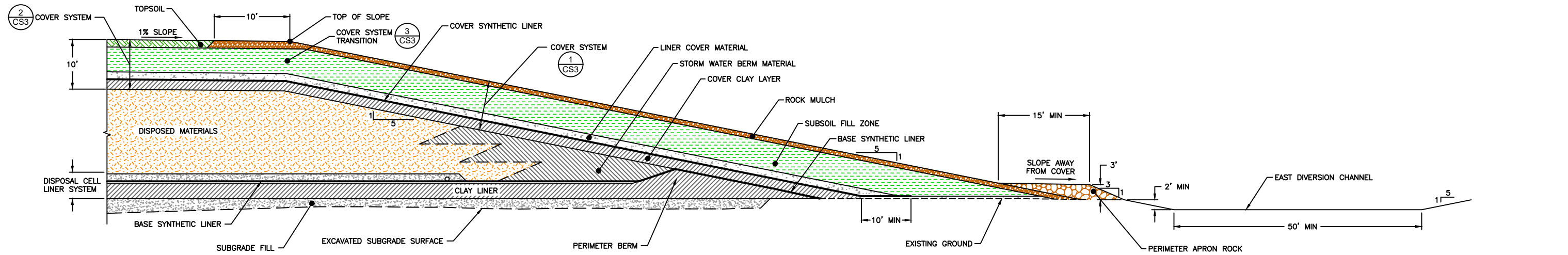
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	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Title

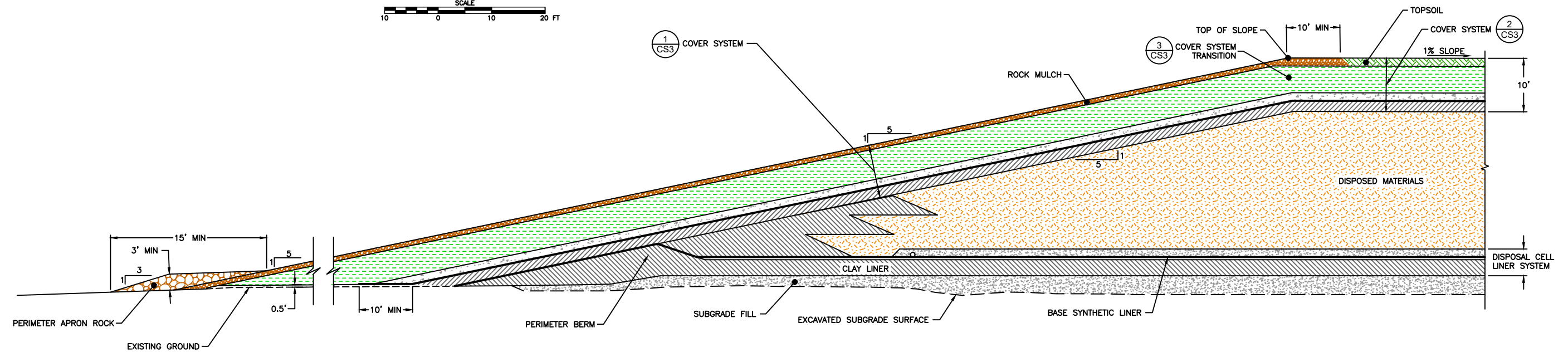
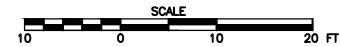
SITE LOCATION AND LAYOUT

Project No.	Scale
233001003	N.T.S.

Drawing No.	Revision
CS-GL1	F



E
GL2
TYPICAL CROSS SECTION ON EAST SIDE OF DISPOSAL CELL
(LOOKING NORTH)



N
GL2
TYPICAL CROSS SECTION ON NORTH SIDE OF DISPOSAL CELL
(LOOKING EAST)



Ref. Dwg. No.	Ref. Dwg. Title	Rev.	Description	Date	By	Chk	Eng.	Appd.
		F	AS-BUILT CONDITIONS	2026.05	CF	JC	CS	
		E	ISSUED FOR 2019 CONSTRUCTION	2019.03	KR	JC	CS	
		D	ISSUED FOR 2016 CONSTRUCTION	2016.08	KR	JC	CS	
		C	ISSUED FOR CLIENT REVIEW	2015.09	KR	JC	CS	
		B	ISSUED FOR CLIENT REVIEW	2015.02	DM	JC	CS	
		A	ISSUED FOR CLIENT REVIEW	2014.11	KT	JC	CS	

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SEQUOYAH SITE DISPOSAL CELL, COVER SYSTEM

Title

COVER SECTIONS AND DETAILS (1 OF 3)

Project No.
233001003

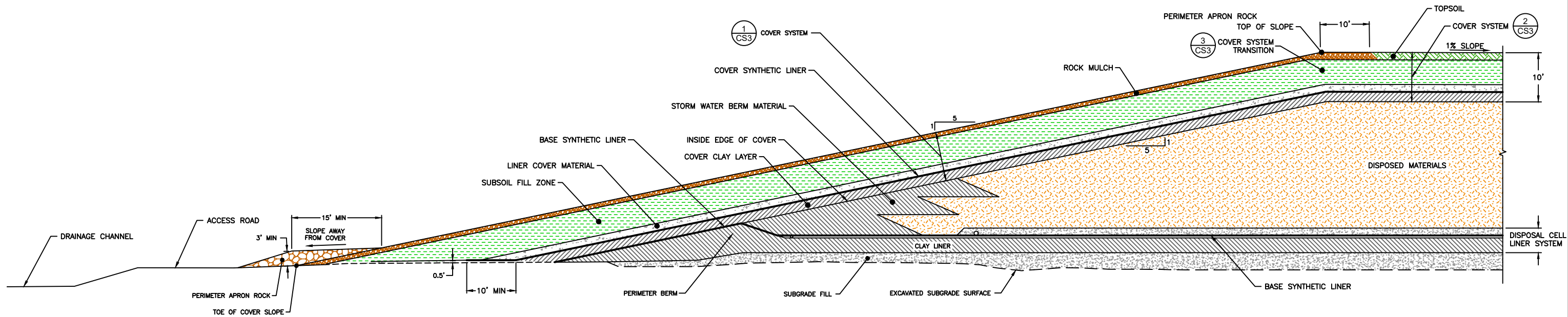
Scale

Drawing No.

CS-CS1

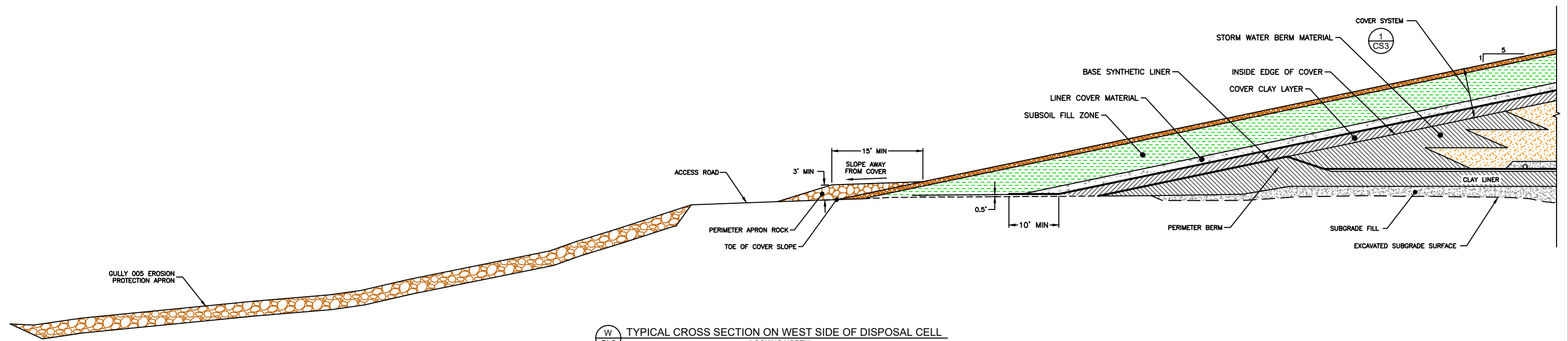
Revision

F



GL2 TYPICAL CROSS SECTION ON SOUTHWEST SIDE OF DISPOSAL CELL
(LOOKING NORTHWEST)

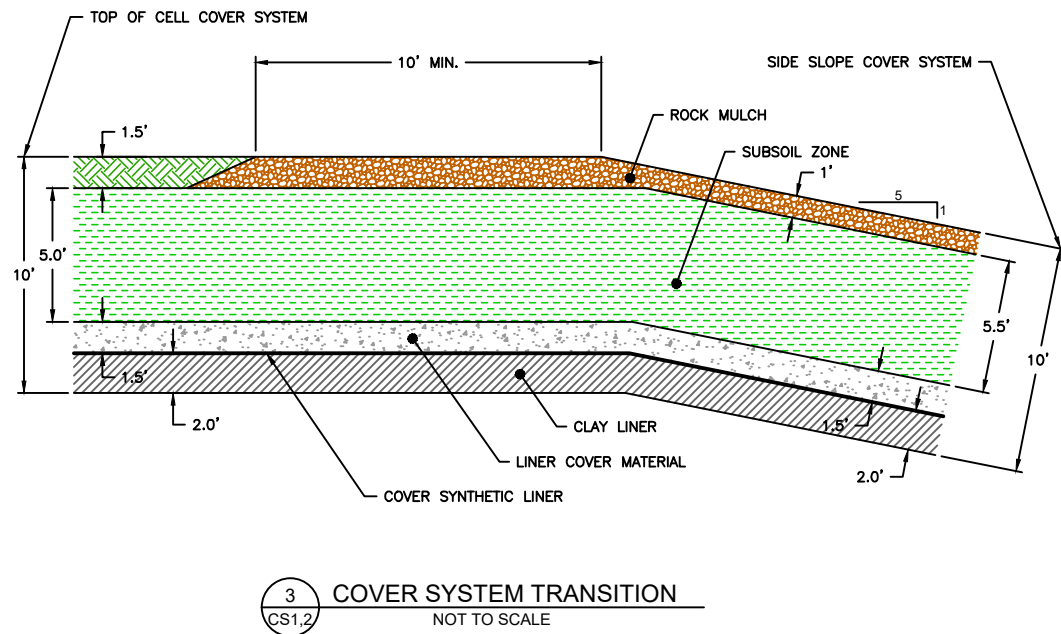
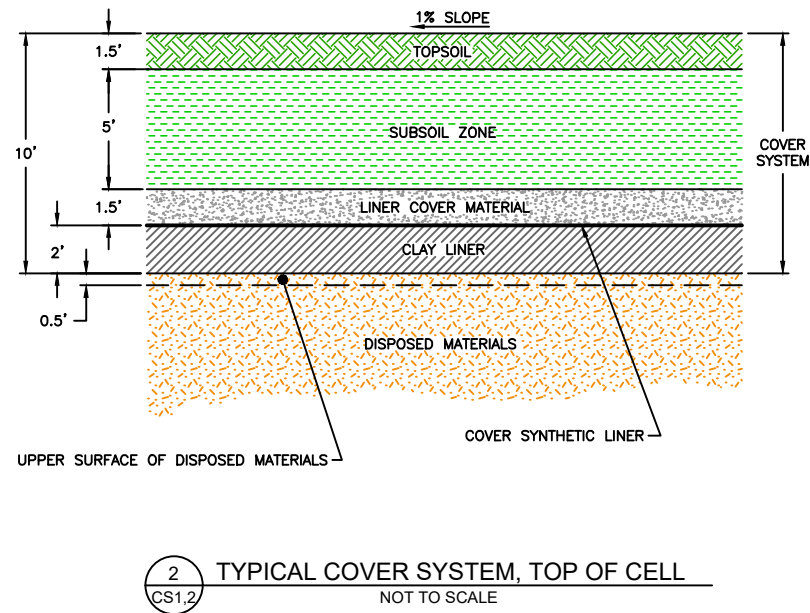
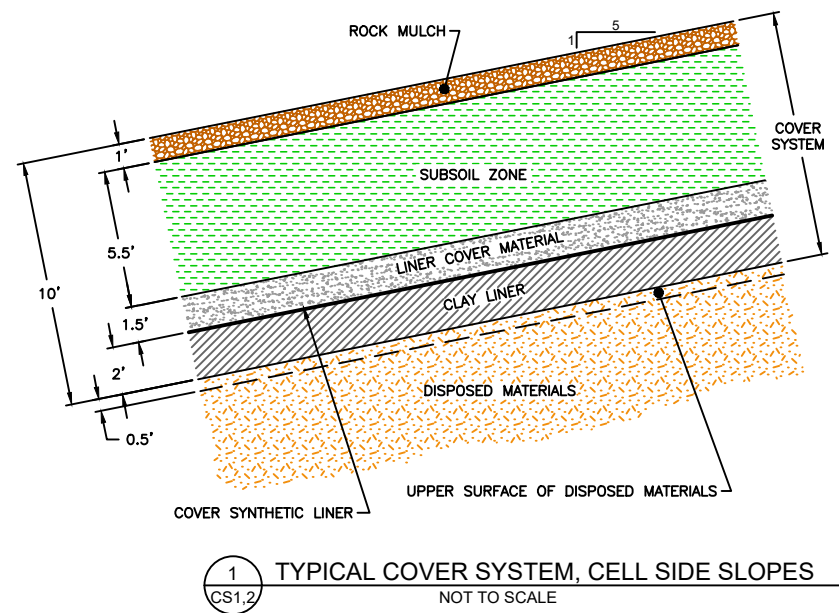
SCALE
10 0 10 20 FT



GL2 TYPICAL CROSS SECTION ON WEST SIDE OF DISPOSAL CELL
(LOOKING NORTH)

SCALE
10 0 10 20 FT

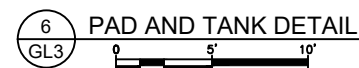
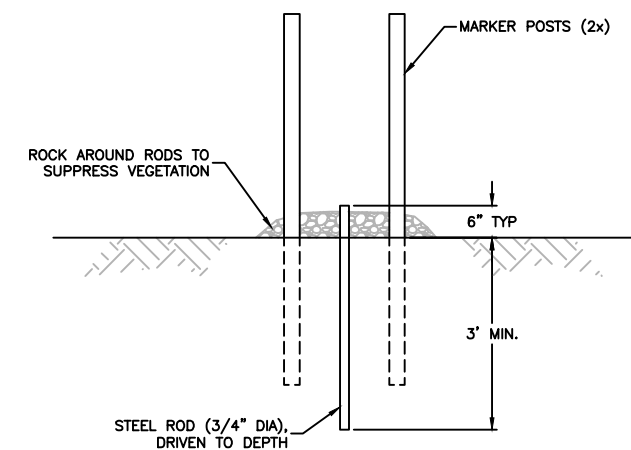
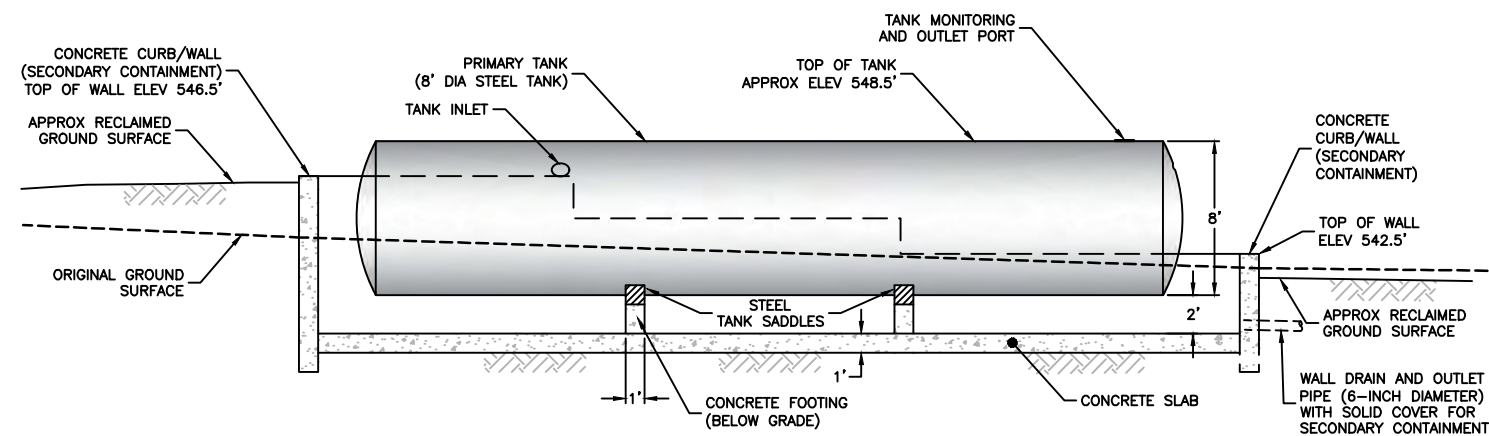
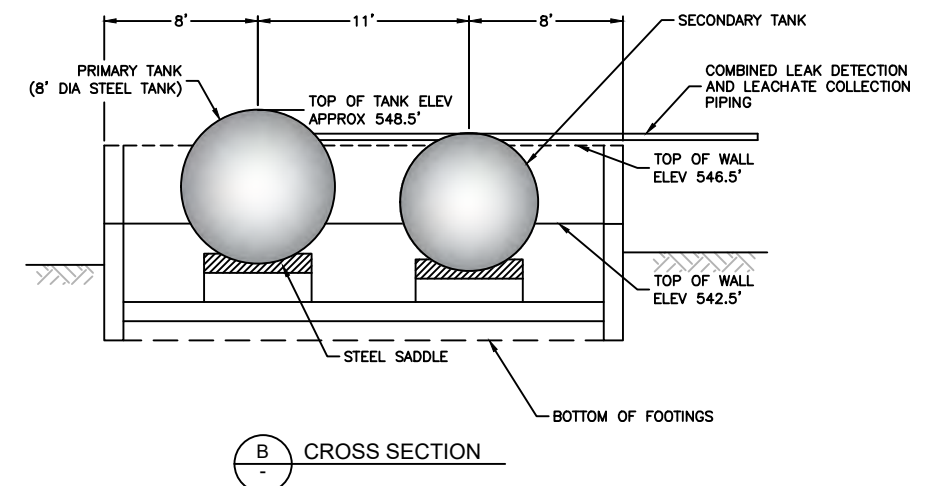
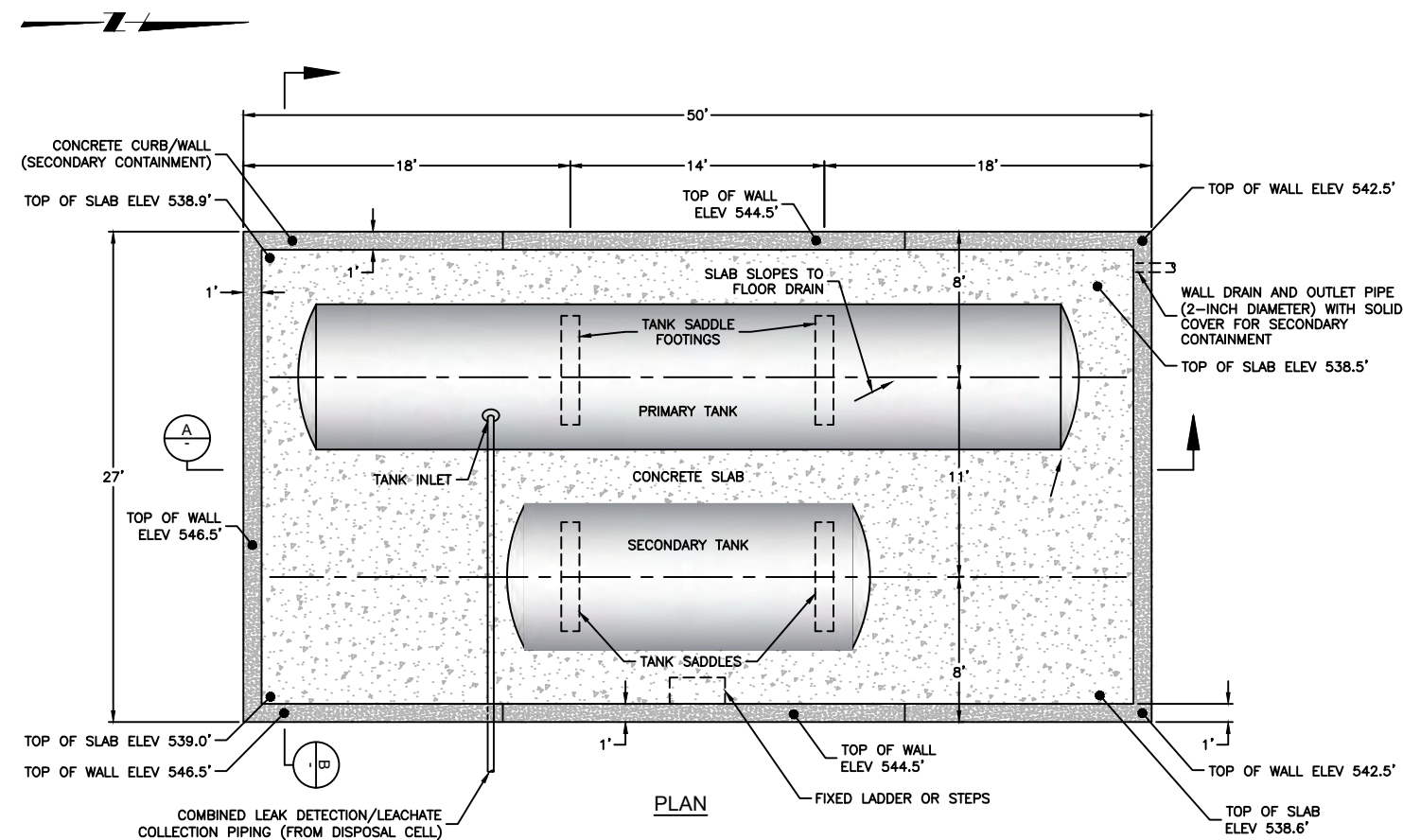
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COVER NOTES:

- COVER CONSTRUCTION MATERIALS AND PLACEMENT SHALL COMPLY WITH THE CURRENT VERSION OF THE TECHNICAL SPECIFICATIONS.
- SITE SUBGRADE FILL SHALL CONSIST OF GRANULAR MATERIAL WITH A MAXIMUM PARTICLE-SIZE (D100) OF 6 INCHES.
- DISPOSED MATERIALS ARE MATERIALS FROM SITE CLEANUP OPERATIONS, PLACED IN 2-FOOT MAXIMUM LIFTS AND COMPACTED WITH A VIBRATORY ROLLER.
- THE COVER CLAY LINER SHALL CONSIST OF CLAY COMPACTED TO A MINIMUM OF 95 PERCENT OF STANDARD PROCTOR DENSITY AND WITHIN 2 PERCENT OF STANDARD PROCTOR OPTIMUM MOISTURE CONTENT.
- THE COVER SYNTHETIC LINER SHALL CONSIST OF 60-MIL NOMINAL THICKNESS HDPE WITH TEXTURED SURFACE ON BOTH SIDES. THE COVER SYNTHETIC LINER SHALL BE SEAMED TO FORM A CONTINUOUS LINER. THE COVER SYNTHETIC LINER SHALL EXTEND OVER THE OUTSIDE SLOPE OF THE PERIMETER BERM. AT LEAST 10 FEET BEYOND THE PERIMETER BERM TOE.
- THE LINER COVER MATERIAL SHALL CONSIST OF GRANULAR MATERIAL WITH A MAXIMUM PARTICLE SIZE (D100) OF 1 INCH AND SHALL BE PLACED IN ONE LIFT TO FORM A LAYER OF 1.5 FEET THICK.
- THE SUBSOIL ZONE SHALL BE PLACED IN LIFTS ABOVE THE LINER COVER MATERIAL SUBSOIL MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 6 INCHES AND MORE THAN 10 PERCENT FINES.
- THE ROCK MULCH SHALL CONSIST OF SELECTED DURABLE ROCK WITH A MEDIAN SIZE OF 5.6 INCHES AND PLACED IN A 12-INCH THICK LIFT AND COVERED WITH TOPSOIL FROM ON-SITE BORROW AREAS AND PLACED IN A 6 TO 8-INCH LIFT AND WORKED INTO THE ROCK.
- PERIMETER APRON ROCK SHALL CONSIST OF SELECTED DURABLE ROCK WITH A MEDIAN SIZE OF 9.2 INCHES.

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- NOTES:

1. CONCRETE REINFORCING STEEL SIZES AND SPACING, JOINT LAYOUT AND WATERSTOPS BY CONTRACTOR.
2. BOTTOM OF FOOTINGS EXCAVATED TO FIRM MATERIAL.
3. SECONDARY TANK INSTALLED FOR BACKUP CAPACITY, BUT NOT USED.

		F	AS-BUILT CONDITIONS	2026.05	CF	JC	CS		
		E	ISSUED FOR 2019 CONSTRUCTION	2019.03	KR	JC	CS		
		D	ISSUED FOR 2016 CONSTRUCTION	2016.08	KR	JC	CS		
		C	ISSUED FOR CLIENT REVIEW	2015.09	KR	JC	CS		
		B	ISSUED FOR CLIENT REVIEW	2015.02	DM	JC	CS		
		A	ISSUED FOR CLIENT REVIEW	2014.11	KT	JC	CS		
Ref. Dwg. No.	Ref. Dwg. Title	Rev.	Description	Date	By	Chk	Eng.	Appd.	

Permit-Seal



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Fort Collins, CO 80525-3681
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Client/Project



SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

SEQUOYAH SITE DISPOSAL CELL, COVER SYSTEM

Title

COLLECTION SUMP AND MONITORING ELEMENT DETAILS

Project No.
233001003

Scale

Drawing No.

CS-CS4

Revision

F

Appendix B TECHNICAL SPECIFICATIONS



TECHNICAL SPECIFICATIONS FOR THE SEQUOYAH FUELS CORPORATION DISPOSAL CELL

Prepared For:
Sequoyah Fuels Corporation
I-40 & Highway 10
Gore, Oklahoma 74435

Prepared By:
MFG Inc.
3801 Automation Way, Suite 100
Fort Collins, Colorado 80525

Final Revisions Prepared By:
Sequoyah Fuels Corporation
I-40 & Highway 10
Gore, Oklahoma 74435

03 February 2020



G
consulting
scientists and
engineers

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1.0 SPECIAL PROVISIONS

1.1 SCOPE OF DOCUMENT

The following technical specifications have been prepared for the construction, operation, and closure of the on-site disposal cell at the proposed Sequoyah Fuels Corporation (SFC) site near Gore, Oklahoma. These technical specifications have been prepared for review and approval by the U.S. Nuclear Regulatory Commission (NRC), and will form part of contracts for reclamation of the site, for work tasks conducted by contractors selected by and under contract with SFC.

1.2 DEFINITIONS

These technical specifications are referred to in this document as the Specifications. Sections referred to in this document are specific sections of the technical specifications. The Drawings referred to in this document are the construction drawings, issued for each phase of the project, that form a necessary component of these Specifications. These Specifications and Drawings comprise Attachment A of the SFC Reclamation Plan.

For these Specifications, SFC is referred to as the Owner, with overall responsibility for disposal cell construction, operation, closure; as well as overall site reclamation.

The Contractor is defined as the group (or groups) selected by SFC and responsible for conducting the work tasks outlined in Section 1.3 under the direction of and under contract with SFC.

The QA Manager is defined as the person appointed by SFC responsible for inspection and Quality Assurance (QA) testing of construction work to ensure that the engineering aspects of site reclamation work are conducted as outlined in these Specifications.

The Reclamation Project Manager is defined as the person appointed by SFC responsible for ensuring that reclamation activities, including construction work and inspection and QA testing of construction, are conducted according to these Specifications and the intent of the design.

The Manager, Health and Safety is defined as the person appointed by SFC responsible for worker safety and personnel monitoring. The Manager, Health and Safety will be responsible for personnel safety training, personnel health monitoring, and documentation. These tasks will be conducted in accordance with the Health and Safety Plan for site reclamation work as well as pertinent sections of these Specifications.

1.3 SCOPE OF WORK

The work outlined in these Specifications consists of execution of the following tasks associated with construction and operation of the disposal cell and associated site reclamation.

1. Preparation of borrow areas for material excavation by removal of vegetation; and stripping, salvaging, and stockpiling of topsoil.
2. Preparation of material staging and stockpile areas by removal of vegetation; stripping, salvaging, and stockpiling of topsoil; and providing for stormwater diversion and internal water collection.

3. Staged preparation of the disposal cell base and liner system for placement of on-site materials and construction of stormwater diversion and internal water collection facilities.
4. Removal of residual process and waste materials from ponds and storage areas on site, with treatment or dewatering, and placement in the disposal cell.
5. Removal of liner materials and contaminated subsoils from beneath waste material pond and storage areas, and placement in the disposal cell.
6. Excavation of process area structure foundations, paved areas, concrete pads and roadways, and placement of these materials in the disposal cell.
7. Excavation of contaminated subsoils from the process area, and placement in the disposal cell.
8. Construction of the cover system over the disposal cell, with placement of rock mulch and topsoil over the disposal cell cover surface.
9. Regrading and placement of topsoil over excavated areas, stockpile and staging areas, and other disturbed areas of the site.
10. Establishment of vegetation on the disposal cell surface and surrounding reclaimed areas on site.

Work not included in these Specifications consists of pressure filtration and bagging of raffinate sludge, off-site removal of raffinate sludge and associated materials, salvage of facility equipment, demolition of facility structures, groundwater monitoring and remediation, and post-reclamation performance monitoring.

1.4 APPLICABLE REGULATIONS AND STANDARDS

The work shall conform to applicable Federal, State, and County environmental and safety regulations. The work shall conform to applicable conditions in the Radioactive Materials License with NRC. Geotechnical testing procedures shall conform to applicable ASTM standards, as documented in the edition of standards in force at the start of work (ASTM, 2003 or future annual edition). Personnel safety procedures and monitoring shall be conducted in accordance with the Health and Safety Plan for site reclamation.

1.5 INSPECTION AND QUALITY ASSURANCE

Full-time, on-site training, personnel monitoring, and inspection of construction activities shall be conducted by the Manager, Health and Safety (and approved assistants as needed) while the site reclamation work is in progress. The Manager, Health and Safety (and assistants) will be independent representatives of SFC, appointed by SFC. The responsibilities and duties of the Manager, Health and Safety shall be as outlined in the Health and Safety Plan for site reclamation.

Full-time, on-site inspection of all construction activities and quality assurance (QA) testing outlined in these Specifications shall be conducted by the QA Manager (and approved assistants as needed) while the construction work is in progress. The QA Manager (and assistants) will be independent representatives of SFC, appointed by SFC. The inspection and QA testing conducted by the QA Manager shall be under the supervision of the Reclamation Project Manager. Inspection and QA testing shall include the tasks listed below.

1. Observation of construction practices and procedures for conformance with the Specifications.
2. Testing material characteristics to ensure that earthen materials used in the construction conform to the requirements in the Specifications.
3. Testing liner material characteristics and installation to ensure placement, compaction, deployment, seaming, and other work practices conform to the requirements in the Specifications.
4. Documentation of construction activities, test locations, samples, and test results.
5. Notification of results from quality assurance testing to SFC and the Contractor.
6. Documentation of field design modifications or approved construction work that deviates from the Specifications.

Documentation outlined above shall be recorded by the QA Manager on a daily basis. Deviations from the Specifications shall be approved by the Reclamation Project Manager and the SFC President, with notification to NRC or other appropriate Oklahoma state regulatory agency personnel.

1.6 CONSTRUCTION DOCUMENTATION

During construction, documentation of construction inspection work will be recorded by the QA Manager on a daily basis. Documentation will include the following items.

1. Work performed by the Contractor.
2. QA testing and surveying work conducted.
3. Discussions with SFC and the Contractor.
4. Key decisions, important communications, or design modifications.
5. General comments, including weather conditions, soil or liner surface conditions, visitors to the site.

All earthwork and synthetic liner QA test results will be documented on a daily basis (on separate reporting forms), with a copy of the results given to the QA Manager by the end of the following working day after the testing. Photographs of key construction activities and critical items for documentation will be taken by the QA Manager or his representative.

A final construction report documenting the as-built conditions of the disposal cell will be submitted to NRC after the completion of disposal cell construction. This report will include the following items.

1. All design modifications or changes to the specifications that were made during construction.
2. An as-built layout of the disposal cell prior to material disposal, and at the completion of cover construction.
3. An as-built layout of other reclaimed areas of the site.

4. Documentation of soil cleanup verification work (soil radiation survey and soil sampling and analyses) in areas of contaminated soil excavation.

1.7 DESIGN MODIFICATIONS

Design modifications (due to unanticipated site conditions or field improvements to the design) will be made following the protocol outlined below.

1. Communication of modification with the Reclamation Project Manager, and approval of modification by the SFC President.
2. Documentation of modification in the as-built construction report.

1.8 ENVIRONMENTAL REQUIREMENTS

The Contractor shall store materials, confine equipment, and maintain construction operations according to applicable laws, ordinances, or permits for the project site. Fuel, lubricating oils, and chemicals shall be stored and dispensed in such a manner as to prevent or contain spills and prevent said liquids from reaching local streams or ground water. If quantities of fuel, lubricating oils or chemicals exceed the threshold quantities specified in Oklahoma regulations, the Contractor shall prepare and follow a Spill Prevention Control and Countermeasures Plan (SPCCP), as prescribed in applicable Oklahoma regulations. SFC shall approve said plan. Used lubricating oils shall be disposed of or recycled at an appropriate facility.

1.9 WATER MANAGEMENT

The Contractor shall construct and maintain all temporary diversion and protective works required to divert stormwater from around work areas. The Contractor shall furnish, install, maintain, and operate all equipment required to keep excavations and other work areas free from water in order to construct the facilities as specified.

Water required by the Contractor for dust suppression or soil moisture conditioning shall be obtained from wells or surface water storage areas identified by the Owner. Contaminated water will not be used for disposal cell construction.

1.10 HISTORICAL AND ARCHEOLOGICAL CONSIDERATIONS

Due to construction and operational activity at the site, it is unlikely that materials of historical or archeological significance are present in the disposal cell area. However, if materials are discovered or uncovered that are of potential historical or archeological significance, the Contractor shall immediately notify the Owner. The Owner may stop work in a specific area until the materials can be evaluated for historical, cultural, or archeological significance. All materials determined to be of significance shall be protected as determined by appropriate regulatory agencies, including removal or adjustment of work areas.

1.11 HEALTH AND SAFETY REQUIREMENTS

Work outlined in these specifications shall be conducted under the Health and Safety Plan for site reclamation, as directed by the Manager, Health and Safety.

The Contractor shall suspend construction or demolition operations or implement necessary precautions whenever (in the opinion of the Reclamation Project Manager or Manager, Health and Safety), unsatisfactory conditions exist due to rain, snow, wind, cold temperatures, excessive water, or unacceptable traction or bearing capacity conditions. The QA Manager, Reclamation Project Manager, and Manager, Health and Safety each have the authority to stop Contractor work if unsafe conditions or deviations from specifications are observed.

2.0 SITE CONDITIONS

2.1 SITE LOCATION AND LAYOUT

The SFC site is located in north-central Oklahoma, northeast of the confluence of the Illinois River with the Arkansas River (tributaries of the Robert S. Kerr Reservoir). The site encompasses approximately 600 acres on the east bank of the Illinois River, north of Interstate Highway 40 and west of Oklahoma State Highway 10. The SFC facilities are primarily located within the 85-acre process area (shown on the Drawings).

2.2 CLIMATE AND SOIL CONDITIONS

The site is in an area of warm, temperate, continental climate. Annual precipitation averages 39 to 45 inches, and is fairly evenly distributed throughout the year. Annual evaporation averages approximately 70 inches (for Class A pan data) and 50 inches (for shallow lake data).

The site is located on a ridge or upland area above the Illinois River, and is underlain by a horizontally bedded sequence of Pennsylvanian Atoka Formation sandstone, siltstone and shale. The Atoka Formation surface has been weathered and eroded, and mantled to varying depths with Pleistocene terrace deposits. Soils investigated from over 500 drill holes on site consist of the terrace deposits and weathered zones of the Atoka Formation. These soils range from sandy, clayey gravels to silty clays of moderate plasticity.

2.3 PAST SFC OPERATIONS

Uranium processing operations at the SFC site started in 1969 under a license with Kerr McGee Corporation. In 1993, SFC notified the NRC of its intent to terminate licensed activities at the site. The NRC license remains in effect until site decommissioning is completed.

2.4 FACILITIES DEMOLITION

Demolition of equipment, structures, and associated facilities at the SFC site will be conducted according to applicable conditions of the NRC license, the demolition plan for the facility, and the SFC Health and Safety Plan for site reclamation. Facilities demolition is not included in this document.

2.5 DISPOSED MATERIALS

The materials to be placed in the disposal cell consist of process waste materials, structural debris, and underlying liner materials and subsoils from planned site cleanup activities. The various materials to be placed in the disposal cell will be disposed in a planned sequence, depending on the timing of excavation. Materials with higher activity concentrations of radionuclides will generally be placed lower in the disposal cell. The four major types of materials are outlined below.

2.5.1 Type A Material

Type A materials consist of five components: (1) raffinate sludge, (2) Emergency Basin sediment, (3) North Ditch sediment, (4) Sanitary Lagoon sediment, and (5) Pond 2 residual materials. The first four components were shipped off site in 2018. The Pond 2 residual materials shall comprise the lowest layer in the disposal cell profile, and will be placed over a prepared liner within the disposal cell.

2.5.2 Type B

Type B materials consist of soil liner and subsoil materials beneath the clarifier, calcium fluoride basin, Pond 3E, the Emergency Basin, the North Ditch and the Sanitary Lagoon, as well as Pond 1 spoils pile material. The Type B materials (primarily contaminated soils) are listed second in the order, since they will be excavated after removal of Type A materials and placed at the base of the disposal cell or directly on top of Type A materials in the disposal cell.

2.5.3 Type C

Type C materials consist of structural materials, concrete and asphalt, calcium fluoride basin materials, calcium fluoride sediments, and on-site buried materials. These materials will be placed with or above the Type B materials, and covered with contaminated soils (Type D materials).

2.5.4 Type D

Type D materials consist of contaminated soils and sedimentary rock on site that require excavation and placement in the disposal cell. Type D materials will be placed with and on top of Type C materials.

2.6 CELL CONSTRUCTION MATERIALS

Construction materials for disposal cell base and cover systems include soils and weathered sedimentary rock from on-site sources, and granular materials from off-site sources. These materials are outlined below, with selected source locations shown on the Drawings.

2.6.1 Cover Material

The subsoil zone of the cover will be obtained from on-site terrace deposit soils and weathered Atoka Formation shale and sandstone. Available sources of these materials are existing berms and embankments, underlying subsoils, and previously used borrow areas.

2.6.2 Liner Material

The clay liner in the disposal cell base and in the cover system will consist of fine-grained soils obtained from the soil borrow area at the south end of the site. These soils may be amended with off-site clays to meet liner permeability requirements.

2.6.3 Topsoil

Topsoil for the surface of the disposal cell and surrounding areas to be vegetated will be obtained from within the facility boundary.

2.6.4 Rock Mulch

A layer of rock mulch will form the erosion protection zone on the side slopes and perimeter apron of the disposal cell. The sources of rock are nearby commercial sources of limestone or alluvial gravel and cobbles. Rock mulch shall meet the particle-size distribution and durability requirements outlined in Section 7.

2.6.5 Perimeter Apron Material

A layer of rock will form the erosion protection on the perimeter apron and as protection of Gully 005 from headward erosion. The sources of rock are nearby commercial sources of limestone or alluvial gravel and cobbles. Perimeter apron material shall meet the particle-size distribution and durability requirements outlined in Section 7.

2.6.6 Granular Materials

Granular materials will be used for (1) filter material, and (2) the synthetic liner cover and bedding layer for the cell liner and cover systems. Granular materials may also be used for subsurface fill for the cell base. The sources of these materials are nearby commercial sources of alluvial sand and gravel.

2.7 STAGING AND STOCKPILE AREAS

Areas on site identified as staging areas or stockpile locations will be approved by SFC. These areas will be constructed and used in a manner consistent with SFC plans for stormwater management.

2.8 ACCESS AND SECURITY

Access to the SFC site will be controlled at gated entrances through the existing Protected Area fence. The gated entrances will be operated by SFC.

2.9 UTILITIES

Utilities on site will be maintained by SFC outside of work areas (areas to be demolished or reclaimed). Utilities inside of work areas may be connected to SFC systems as approved by SFC or provided by the contractor. Utilities inside of work areas will be maintained by the Contractor.

2.10 SANITATION FACILITIES

Sanitation facilities will be maintained by the Contractor, in accordance with the Health and Safety Plan for site reclamation.

3.0 WORK AREA PREPARATION

3.1 GENERAL

This Section describes the preparation of site areas for reclamation. This work will be conducted according to applicable sections of the Health and Safety Plan for site reclamation.

3.2 WATER MANAGEMENT

Preparation for work in the site area will include the water management tasks outlined below.

1. Removal and treatment of fluids and removal and filtration of raffinate sludge from the clarifier ponds. The clarifier ponds liners will be cleaned and repaired if necessary for affected stormwater storage and treatment.
2. Removal, treatment and permitted discharge of water in the remaining existing ponds.
3. Diversion of clean area stormwater runoff from work areas (where facilities demolition and material excavation will take place) and from the disposal cell footprint area.
4. Collection of stormwater runoff from within the work areas and the disposal cell footprint for treatment and permitted discharge, or for disposed material compaction or dust control. The planned storage location for this affected stormwater is the clarifier pond system (after the ponds have been cleaned).
5. Isolation of water used for processing operations associated with reclamation (such as liquids from pressure filtration) from stormwater runoff.

Water from processing operations or other contaminated water will not be used for disposal cell construction.

3.3 PHASED CELL CONSTRUCTION

The disposal cell base will be constructed in phases. The layout of the three phases of cell base construction, as well as areas and facilities to be removed by phase are shown on the Drawings, and outlined below.

3.3.1 Phase I Area

The phase I (northeast) area of the disposal cell footprint is relatively clean, requiring minimal structure demolition and minor contaminated material or subsoil removal. The phase I area will be prepared by removal and stockpiling of structures and contaminated materials, followed by construction of the disposal cell base (Section 4).

3.3.2 Phase II Area

The phase II (northwest) area of the disposal cell footprint will be prepared by removal of sediments, liner, and contaminated soils from the phase II area of the disposal cell footprint. These materials will be disposed on the prepared liner system in the phase I area of the disposal cell. The residual excavated

surface will be regraded or backfilled with subgrade fill to the desired subgrade surface. The phase II liner system will be constructed on the prepared subgrade surface (Section 4).

3.3.3 Phase III Area

The phase III (south) area of the disposal cell footprint will be prepared by removal of sediments, liner, and contaminated soils from the phase III area of the disposal cell footprint. These materials will be disposed on the prepared liner system in the phase II area of the disposal cell. The residual excavated surface will be regraded or backfilled with subgrade fill to the desired subgrade surface. The phase III liner system will be constructed on the prepared subgrade surface (Section 4).

3.3.4 Areas Outside of Cell

Materials from cleanup outside of the disposal cell will be disposed in the phase I, II, or III areas of the disposal cell.

3.4 COVER AND LINER SOIL BORROW AREAS

Disposal cell cover and liner system soils will be excavated from among the identified borrow areas on site.

The use of specific soil borrow areas will be selected based on haul distance to the disposal cell, ease of excavation of cover material, geotechnical characteristics and uniformity of the borrow material, and acceptable radiological and geochemical characteristics.

Borrow area preparation will consist of setup for stormwater management (Section 3.2), clearing and stripping (Section 3.6).

3.5 TOPSOIL BORROW AREA

The topsoil borrow areas will be located within the facility boundary. Borrow area preparation will include mowing or shredding of existing vegetation prior to topsoil excavation.

3.6 CLEARING AND STRIPPING

Many of the work areas have been used for processing or construction activities and are free from vegetation. For work areas that are vegetated, preparation work will include the tasks outlined below.

3.6.1 Clearing

Clearing of vegetation and grubbing of roots will be in identified work areas. Clearing and grubbing shall not extend beyond 20 feet from the edge of the work area, unless as shown on the Drawings or as approved by the Reclamation Project Manager.

Vegetation from clearing and grubbing shall be shredded, ground, chipped, or otherwise removed and disposed as approved by the Reclamation Project Manager. Alternative methods of on-site or off-site disposal or burning of stripped vegetation shall be conducted only as approved by the Reclamation Project Manager.

3.6.2 Stripping

Stripping of salvageable topsoil (if present) shall be done within the entire work area. Stripping of topsoil shall not extend beyond 10 feet from the edge of the work area, unless approved by the Reclamation Project Manager. The depth of stripping of reclamation soil shall be based on the presence of suitable topsoil and approved by the Reclamation Project Manager. Water shall be added to the area of excavation if the soils are dry and stripping work is generating dust.

Topsoil shall be stockpiled in approved stockpile areas. The final stockpile surface shall be graded and smoothed to minimize erosion and facilitate interim revegetation of the stockpile surfaces.

4.0 DISPOSAL CELL BASE CONSTRUCTION

4.1 GENERAL

This section outlines the work associated with construction of the disposal cell base for receipt of materials (as described in Section 6.0). The base of the disposal cell will be lined with a compacted clay liner and synthetic liner system, with intermediate layers of granular materials that contain networks of perforated pipes. The cell base will be constructed in phases as shown on the Drawings and outlined in Section 3.3.

4.2 MATERIALS DESCRIPTION

4.2.1 Subgrade Fill

The disposal cell footprint is likely to have an irregular surface from areas that have been excavated for waste materials and sediments, contaminated liner soils and subsoils, and underground utilities. This excavated surface will be filled in low areas to form a smooth, competent foundation for liner system construction. Subgrade fill will be used for fill in excavated areas of the disposal cell footprint to meet desired grades and elevations for the disposal cell foundation (shown on the Drawings).

Subgrade fill will consist of off-site granular materials, soils and weathered sedimentary rock from approved on-site excavation areas, or crushed concrete. Subgrade fill shall be minus 6-inch size, and shall be free from roots, branches, rubbish, process area debris, and reinforcing steel. Subgrade fill shall have radionuclide activity concentrations lower than the selected subsurface soil cleanup level.

4.2.2 Clay Liner

Clay liner material will consist of soils from approved on-site borrow areas. Clay liner material shall be minus 1-inch size, and shall be free from roots, branches, rubbish, and process area debris. Clay liner material shall have a minimum of 50 percent passing the No. 200 sieve and a minimum plasticity index of 10. Compacted clay material shall have a maximum saturated hydraulic conductivity of 1×10^{-7} cm/s (0.1 ft/yr). Clay liner material shall have radionuclide activity concentrations lower than the selected subsurface soil cleanup level.

4.2.3 Synthetic Liner Bedding Material

Synthetic liner bedding material shall consist of gravelly sand from off-site sources. Synthetic liner bedding material shall be free from roots, branches, rubbish, process area debris, and other angular or pointed materials that could damage the synthetic liner. Synthetic liner bedding material shall have radionuclide activity concentrations lower than the selected subsurface soil cleanup level. Synthetic liner bedding material shall meet the following particle-size specifications:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
No. 4	65-100
No. 16	25-85
No. 40	5-45
No. 200	0-10

In areas not immediately adjacent to leak detection pipe (more than 6 inches from the pipe), synthetic liner bedding material may consist of silty sand from nearby, alternative, sources. The material shall meet the same requirements as given above, with the following particle-size specifications:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
No. 4	95-100
No. 40	70-100
No. 100	20-90
No. 200	0-35

4.2.4 Synthetic Liner

Synthetic liner material (geomembrane) shall be 60-mil nominal thickness HDPE, with smooth surfaces on both sides and material characteristics outlined in Section 5.2.1.

4.2.5 Synthetic Liner Cover

Synthetic liner cover material shall be placed over the synthetic liner to provide a cover material for protection of the synthetic liner during material placement.

Synthetic liner cover material shall consist of gravelly sand from off-site sources. Synthetic liner cover material shall be free from roots, branches, rubbish, process area debris, and other angular or pointed materials that could damage the synthetic liner. Synthetic liner cover material shall have radionuclide activity concentrations lower than the selected subsurface soil cleanup level. Synthetic liner cover material shall meet the following particle-size specifications:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
No. 4	65-100
No. 16	25-85
No. 40	5-45
No. 200	0-10

4.2.6 Synthetic Liner Anchor Backfill

Synthetic liner anchor backfill shall be placed over the synthetic liner to hold the edge of the synthetic liner in-place. The synthetic liner anchor backfill may be placed in anchor trenches or on flat extensions of synthetic liner along the perimeter of the lined area of the disposal cell. The method of synthetic liner anchoring shall be approved by the Reclamation Project Manager.

Synthetic liner anchor backfill shall consist of soils and weathered sedimentary rock from approved on-site excavation areas. Synthetic liner anchor backfill shall be minus 1-inch size, and shall be free from roots, branches, rubbish, process area debris, and other angular or pointed materials that could damage the synthetic liner.

4.2.7 Leak Detection System Pipe

Leak detection system pipe (to be installed in the synthetic liner bedding material) shall consist of 4-inch diameter HDPE pipe (or approved equivalent). Pipe connections shall be welded according to manufacturer's recommendations. Leak detection system pipe shall be perforated within the perimeter of

the disposal cell, with perforated sections starting a minimum of 20 feet inside of the perimeter berm (as shown on the Drawings). Perforations in leak detection system pipe shall be 1/8 inch (3 mm) in maximum diameter, with a minimum inlet area of 0.3 square inches per linear foot (6 square centimeters per linear meter) of pipe.

4.2.8 Leachate Collection System Pipe

Leachate collection system pipe (to be installed in the liner cover layer) shall consist of 6-inch diameter, SDR-11 HDPE pipe (or approved equivalent). Pipe connections shall be welded according to manufacturer's recommendations. Leak detection system pipe shall be perforated within the perimeter of the disposal cell, with slotted sections starting within the inside toe of the perimeter berm (as shown on the Drawings). Perforations in leachate detection system pipe shall be 1/8 inch (3 mm) in maximum diameter, with a minimum inlet area of 0.5 square inches per linear foot (10 square centimeters per linear meter) of pipe.

4.3 WORK DESCRIPTION

4.3.1 Foundation Preparation

The footprint of the disposal cell will consist of excavated areas, existing concrete pads, and areas with placed subgrade fill. The footprint of the disposal cell shall form a competent foundation for clay liner and cover construction. The surface of the disposal cell footprint shall be filled (where required) in low areas to form a smooth, competent foundation for clay liner and cover construction, as well as provide separation between the clay liner and underlying groundwater (where required). Subgrade fill (Section 4.2.1) shall be placed in lifts and compacted in excavated areas of the disposal cell footprint to meet desired grades and elevations for the disposal cell foundation (shown on the Drawings). The final filled surface shall be compacted with approved construction equipment to provide a foundation surface with uniform density for clay liner placement.

4.3.2 Subgrade Fill Placement

Subgrade fill (Section 4.2.1) shall be placed in lifts and compacted in excavated areas of the disposal cell footprint to meet desired grades and elevations for the disposal cell foundation. Subgrade fill may be (1) granular material from off-site commercial sources, or (2) soils and weathered sedimentary rock from approved on-site excavation areas.

For fine-grained subgrade fill (materials with more than 10 percent passing the No. 200 sieve), these materials will be placed in lifts not exceeding 8 inches in loose thickness. Each lift shall be compacted to a minimum of 90 percent of Standard Proctor density and within three percent of optimum moisture content for the material.

For coarse-grained or granular subgrade fill (materials with less than 10 percent passing the No. 200 sieve), these materials will be placed in lifts not exceeding 8 inches in loose thickness. Each lift shall be compacted by method specification to achieve a minimum relative density of 75 percent for the material. A test section will be established at the site to correlate the number of passes with vibratory equipment to the relative density of the granular material.

4.3.3 Disposal Cell Foundation Area

The disposal cell has been designed to accommodate a variation in total contaminated soil (Type D material) volume. The footprint of the disposal cell is established along the north, east, and west sides of

the cell (shown on the Drawings). The location of the south side of the disposal cell (shown on the Drawings) will be based on a total disposed volume of approximately 9 million cubic feet. The final location of the south side of the disposal cell, the transition to the other sides of the cell, and the corresponding foundation area within the disposal cell will be established as the final volume of Type D material is determined during contaminated soil excavation.

4.3.4 Clay Liner Material Placement

Clay liner material (Section 4.2.2) shall be placed in lifts with maximum compacted thickness of 6 inches to form a continuous layer with a total minimum compacted layer thickness of 36 inches. Clay liner material shall be placed over the prepared subgrade surface of the disposal cell (Section 4.3.1). Along the perimeter of the disposal cell, the clay liner material shall be used to construct the perimeter berm (shown on the Drawings).

Each lift of clay liner material shall be compacted to at least 95 percent of the maximum dry density for the material, as determined by the Standard Proctor test. During compaction, the material shall be within 2 percent above to 2 percent below optimum moisture content for the material, as determined by the Standard Proctor test. If water addition is required to achieve this range of moisture contents, the added water shall be thoroughly mixed into the material prior to compaction.

Compaction of the clay liner material shall be done with a sheepsfoot or tamping-foot roller of sufficient weight to achieve the required compaction specifications. Rubber-tired equipment shall not be used solely to compact the clay liner material.

The top surface of compacted clay liner shall be covered with the liner bedding layer material (Section 4.3.5) within 24 hours of liner testing and approval.

4.3.5 Leak Detection System Pipe Installation

Leak detection system pipe (Section 4.2.7) shall be placed on the completed clay layer surface in the general layout (oriented for gravity drainage) shown on the Drawings. The nominal pipe spacing within the perimeter of the disposal cell shall be 40 feet. The pipe layout may be modified during construction to improve the rate of drainage, based on completed top-of-clay surface elevations. The pipe layout for a particular phase of the disposal cell is not connected to the pipe layout for the other phases of the disposal cell.

4.3.6 Synthetic Liner Bedding Layer Material Placement

Synthetic liner bedding material shall be placed over the footprint of the prepared disposal cell liner area to provide a protective bedding material for placement and installation of the synthetic liner. Synthetic liner bedding material (Section 4.2.3) shall be placed in one or more lifts to form a zone a minimum of 6 inches thick. The final synthetic liner bedding material surface shall be rolled with approved compaction equipment to form a smooth base for synthetic liner installation.

4.3.7 Synthetic Liner Material Installation

Synthetic liner material (Section 4.2.4) shall be installed on the final surface of the clay liner as outlined in Section 5.3.

4.3.8 Leachate Collection System Pipe Installation

Leachate collection system pipe (Section 4.2.8) shall be placed on the completed synthetic liner surface in the general layout (oriented for gravity drainage) shown on the Drawings. The nominal pipe spacing within the perimeter of the disposal cell shall be 60 feet or less. The pipe layout may be modified during construction to improve the rate of drainage, based on completed top-of-clay surface elevations. The pipe layout for a particular phase of the disposal cell is not connected to the pipe layout for the other phases of the disposal cell. .

4.3.9 Synthetic Liner Cover Placement

Synthetic liner cover material shall be placed over the completed synthetic liner to provide a protective cover for placement of disposal material. Synthetic liner cover material (Section 4.2.5) shall be placed in one lift to form a zone a minimum of 18 inches thick. The lift of synthetic liner cover shall be placed with a small dozer or other approved equipment in a manner that does not tear, puncture, or otherwise damage the synthetic liner.

4.3.10 Synthetic Liner Anchor Backfill Placement

Liner anchor backfill placement and compaction shall be approved by the Reclamation Project Manager, and shall be conducted in a manner that does not tear, puncture, or damage the synthetic liner. The final liner anchor material surface shall be rolled with approved compaction equipment to match the adjacent synthetic liner cover surface.

4.4 PERFORMANCE STANDARDS AND TESTING

4.4.1 Subgrade Testing

Where required, checking of compaction of compacted subgrade fill and the final subgrade surface shall consist of a minimum of one field density test per 1,000 cubic yards of material compacted. Field density tests shall be compared with Standard Proctor tests (ASTM D-698 Method A or C) or Maximum Index Density tests (ASTM D-4253) on the same material. Where required, Standard Proctor or Maximum Index Density tests shall be conducted at a frequency of at least one test per 2,000 cubic yards of material compacted, or when material characteristics show significant variation.

Field density testing may be conducted with the sand cone test (ASTM D-1556) or a nuclear density gauge (ASTM D-6938, or as modified by the QA Manager). Correlation of nuclear density gauge results shall be by comparison with results from sand cone test(s) and laboratory testing for water content(s) using the oven drying method on similar material.

Subgrade fill shall be placed in low areas such that the completed top surface of subgrade fill shall be two feet above the highest level of groundwater in the terrace or Shale 1 unit.

4.4.2 Clay Liner Testing

Material specifications for the clay liner material shall be confirmed by gradation testing conducted by approved personnel. Testing shall consist of No. 200 sieve wash and maximum particle size testing (ASTM D-422), and Atterberg limit testing (ASTM D-4318) on samples of clay liner materials, at a frequency of at least one test per 2,000 cubic yards of fill placed, or when material characteristics show a significant variation.

Checking of compaction of the clay liner material shall consist of a minimum of one field density test per 1,000 cubic yards of material compacted. Field density tests shall be compared with Standard Proctor tests (ASTM D-698 Method A or C) on the same material. Standard Proctor tests shall be conducted at a frequency of at least one test per 2,000 cubic yards of material compacted, or when material characteristics show significant variation.

Field density testing may be conducted with the sand cone test (ASTM D-1556) or a nuclear density gauge (ASTM D-6938, or as modified by the QA Manager). Correlation of nuclear density gauge results shall be by comparison with results from sand cone test(s) and laboratory testing for water content(s) using the oven drying method on similar material.

Permeability of the compacted clay liner material shall be confirmed by performing back pressure permeability testing by constant head or flow pump (EPA 9100 or ASTM D-5084) on samples of clay liner material recompacted to density and moisture of field placed compacted clay liner. Testing shall be completed at a frequency of one test per phase of cell base liner construction, or when material characteristics show significant variation.

The completed clay liner shall have a minimum thickness of 3.0 feet. The final surface of the clay liner shall slope toward the leak detection sump location, and shall be smoothed to avoid abrupt changes in surface grade.

4.4.3 Synthetic Liner Bedding Layer Testing

If used in the disposal cell base, the completed synthetic liner bedding layer surface shall be constructed with a minimum thickness of 6 inches as shown on the Drawings. The final surface of the synthetic liner bedding material shall be smoothed or rolled to avoid abrupt changes in surface grade. The surface shall provide a smooth and unyielding foundation for the synthetic liner with no sharp or protruding objects. The final surface shall be inspected and approved by the QA Manager prior to initiation of liner installation.

4.4.4 Synthetic Liner Testing

The synthetic liner panels and seams shall be tested as outlined in Section 5.4. The final synthetic liner surface shall be inspected and approved by the QA Manager prior to initiation of synthetic liner cover placement.

4.4.5 Synthetic Liner Cover Testing

Material specifications for synthetic liner cover material (Section 4.2.5) shall be confirmed by gradation testing conducted by approved personnel. Testing shall consist of No. 200 sieve wash and maximum particle size testing (ASTM D-422) at a frequency of at least one test per 2,000 cubic yards of fill placed, or when material characteristics show a significant variation.

4.4.6 Synthetic Liner Anchor Backfill Testing

Checking of compaction of the liner anchor backfill shall consist of a minimum of one field density test per 1,000 cubic yards of material compacted. Field density tests shall be compared with Standard Proctor tests (ASTM D-698 Method A or C) on the same material. Standard Proctor tests shall be conducted at a frequency of at least one test per 2,000 cubic yards of material compacted, or when material characteristics show significant variation.

Field density testing may be conducted with the sand cone test (ASTM D-1556) or a nuclear density gauge (ASTM D-6938, or as modified by the QA Manager). Correlation of nuclear density gauge results shall be by comparison with results from sand cone test(s) and laboratory testing for water content(s) using the oven drying method on similar material.

5.0 SYNTHETIC MATERIAL INSTALLATION

5.1 GENERAL

This Specification Section describes the placement, seaming, testing, and protection of synthetic liner (geomembrane). Synthetic liner is to be installed: (1) at the base of the disposal cell, (2) surrounding the filtered raffinate sludge (if disposed on site), (3) in the cover system, and (4) on the inside slopes of the stormwater retention berms.

The filtered raffinate sludge was shipped off site in 2018, thus item (2) is not applicable.

5.2 MATERIALS DESCRIPTION

5.2.1 Synthetic Liner

The synthetic liner shall be used on the base of the disposal cell and in the bottom zone of the cover system (as shown on the Drawings). The synthetic liner shall consist of high-density polyethylene (HDPE) geomembrane. The nominal geomembrane thickness shall be 60 mil (0.060 inches). The synthetic liner at the base of the disposal cell shall have a smooth surface on both sides. The synthetic liner in the cover system shall have a textured surface on both sides.

The geomembrane shall be manufactured with products designed and manufactured for the purpose of liquid containment. The geomembrane shall conform to the following minimum physical requirements listed below:

Tensile strength at break	210 lbs/inch width
Elongation at break	700 percent

Labels on the geomembrane roll or panel shall identify the thickness, length, width, and manufacturer's mark number. Transport and storage of the geomembrane material shall be according to manufacturer's recommendations. Geomembrane rolls stored on site shall be kept off of the ground surface and covered. Prior to liner deployment, the outer liner surface of each roll shall be inspected for punctures, scratches or other damage. If the outer liner surface of the roll is damaged, the outer two wraps of the roll shall be removed and discarded prior to liner deployment.

The geomembrane shall be manufactured to be free of holes, blisters, undispersed raw materials, gels, or visible evidence of contamination by foreign matter. Any such defect shall render that roll or panel of material unacceptable for use and shall be replaced with material that is free of any such defects. Defects may be repaired in lieu of material replacement only upon approval of the QA Manager.

5.2.2 Stormwater Liner

If suitable materials of low permeability are not available for construction of the stormwater berms, the berms shall be constructed with a liner, on the inside slopes, to maintain stormwater containment within the berms.

If used, the stormwater liner shall be placed on the inside slopes of the stormwater retention berms in the disposal cell (as shown on the Drawings). The stormwater liner shall consist of high-density polyethylene

(HDPE) geomembrane with a smooth surface on both sides, or approved equivalent new material or on-site used material. The nominal geomembrane thickness shall be 40 mil (0.040 inches).

The geomembrane shall be manufactured with products designed and manufactured for the purpose of liquid containment. The geomembrane shall conform to the following minimum physical requirements listed below:

Tensile strength at break	150 lbs/inch width
Elongation at break	700 percent

Labels on the geomembrane roll or panel shall identify the thickness, length, width, and manufacturer's mark number. Transport and storage of the geomembrane material shall be according to manufacturer's recommendations. Geomembrane rolls stored on site shall be kept off of the ground surface and covered. Prior to liner deployment, the outer liner surface of each roll shall be inspected for punctures, scratches or other damage. If the outer liner surface of the roll is damaged, the outer two wraps of the roll shall be removed and discarded prior to liner deployment.

The geomembrane shall be manufactured to be free of holes, blisters, undispersed raw materials, gels, or visible evidence of contamination by foreign matter. Any such defect shall render that roll or panel of material unacceptable for use and shall be replaced with material that is free of any such defects. Defects may be repaired in lieu of material replacement only upon approval of the QA Manager.

5.2.3 Geogrid

Geogrid (if used to improve bearing capacity of soft disposed materials) shall be HDPE or polypropylene material specifically manufactured for the purpose of bearing capacity support. The geogrid shall have minimum unit weight of 6 ounces per square yard and a maximum aperture size of 1.5 inches.

Transport and storage of the geogrid shall be according to manufacturer's recommendations. Geogrid rolls stored on site shall be kept off of the ground surface and covered. Prior to geogrid deployment, the outer liner surface of each roll shall be inspected for punctures, scratches or other damage. If the outer liner surface of the roll is damaged, the outer wrap of the roll shall be removed and discarded prior to geogrid deployment.

5.3 WORK DESCRIPTION

Installation of geomembrane, filter fabric, or geogrid shall be only on areas approved by the Reclamation Project Manager, as outlined in the Drawings.

5.3.1 Geomembrane Deployment

Individual panels of geomembrane shall be laid out and overlapped a minimum of 4 inches prior to welding, or as recommended otherwise by the manufacturer. Where possible, the overlapping panels shall be shingled, such that the up-slope panel is on top on the down-slope panel. On the side slopes, panels shall be placed with the long dimension perpendicular to the slope contours. The liner panel and roll number shall be marked on the panel and recorded as the material is being deployed.

The geomembrane shall not be placed during precipitation, high winds, or in the presence of excessive liner bedding material moisture. Geomembrane that has been damaged due to wind uplift shall be discarded.

5.3.2 Geomembrane Seaming

All geomembrane panel seams shall be welded to form a continuous, watertight barrier. The seams to be welded shall be cleaned and prepared according to manufacturer's guidelines to be free from dust, debris, oil, moisture, or other material that would interfere with liner seaming.

Panel seams shall be hot wedge welded whenever possible. This shall consist of two parallel welds along the overlap between liner panels that allow pressure testing of the channel between welds. Where wedge welding is not possible, field welds for the remaining seams shall be by a heat extrusion process.

Field welding shall form a continuous bond between the extrudate and liner material, according to the guidelines of the manufacturer. The field welding equipment shall be capable of continuously monitoring and controlling the temperatures and pressures in zone of contact where the machine is actually fusing the lining material to prevent changes in environmental conditions from affecting the integrity of the weld. Field welding shall be conducted when the air temperature (measured 12 inches above the synthetic liner surface) is between 30°F and 110°F. When the measured air temperature is outside of this range, field welding may be conducted, but only if the Contractor can demonstrate that seaming performance is acceptable (in terms of shear and peel testing outlined in Specification Section 5.4.3).

5.3.3 Geomembrane Anchoring

Around the perimeter of the lined area of the disposal cell, the edge of the geomembrane shall be continuously anchored as shown in the Drawings. The geomembrane shall extend a minimum of five feet beyond the outside toe of the perimeter berm. Backfill material (Section 4.2.6) shall be placed (as outlined in Section 4.3.10) to retain, in-place, the edge of the geomembrane.

Along the liner anchor, welded panel seams shall extend a minimum of six inches beyond the outside toe of the perimeter berm

Geomembrane anchoring shall be done when the air temperature above the liner is relatively cool, in order to minimize liner shrinkage due to decreasing temperature after the liner is anchored.

5.3.4 Geomembrane Repairs

Geomembrane installation shall be done without puncturing, tearing, or otherwise damaging the geomembrane panels or seams. No vehicles shall be driven or parked on top of the uncovered geomembrane. Punctures, overlaps (fishmouths), or other unacceptable liner conditions shall be repaired with an overlapping patch bonded to the geomembrane by field welding. Geomembrane patching shall be done with the patch material extending a minimum of six inches beyond the puncture, tear, or joint in the liner. Small punctures may be patched with extrusion welds, only if approved by the QA Manager. Repair of damage to the deployed geomembrane and testing of geomembrane patches will be the responsibility of Contractor, with repairs approved by the QA Manager.

5.3.5 Geomembrane Protection

Upon completion of geomembrane seaming, the liner shall be protected from uplift due to wind by placing sand bags or similar approved material on the liner surface. These protective materials shall be of a spacing and weight sufficient to prevent uplift or movement of the liner without puncturing, tearing, or otherwise damaging the geomembrane.

5.3.6 Geogrid Installation

Rolls of geogrid shall be handled and unrolled according to manufacturer's guidelines. The edges and ends of the geogrid rolls shall have a minimum overlap of six inches. Where necessary, the overlapped edges of the geogrid shall be tied together according to manufacturer's guidelines.

5.3.7 Liner Boot Installation

Where the leak detection pipe system (Section 4.3.9) or leachate collection pipe system (Section 4.3.10) penetrate the synthetic liner at the perimeter of the disposal cell, the penetrating pipes shall be sealed to the synthetic liner with an HDPE liner boot (as shown on the Drawings). The liner boot shall be installed and seamed to the synthetic liner and the HDPE pipe according to manufacturer's recommendations.

5.4 PERFORMANCE STANDARDS AND TESTING

5.4.1 General Requirements

Testing of the installed geomembrane shall consist of the following items.

1. Visual examination of the panels upon delivery to the site, with documentation of the panel thickness, length, width, and manufacturer's mark number and receipt of mill certification and material property data.
2. Physical examination of the panels upon unfolding and spreading, with checking of nominal widths and examination for material flaws or defects.
3. Pressure testing of the air channel between panel seam welds, as outlined in Specification Section 5.4.2.
4. Destructive (shear and peel) tests on seam samples extracted from all panel seams at a frequency equivalent to one sample collected from up to 1000 linear feet of seam. If the integrity of the seam, weather conditions, or welder operation are of concern to the QA Manager, the maximum spacing shall be reduced to one sample for 500 linear feet of seam. Tests are outlined in Specification Section 5.4.3.
5. Vacuum testing of all extrusion welded seams and patch seams, as outlined in Specification Section 5.4.4.
6. Physical examination of the completed liner surface, checking for liner damage, punctures and defects in seaming.

5.4.2 Air Channel Testing

Each geomembrane panel seam shall be tested by air pressure testing of the air channel between parallel seams. The minimum air channel test pressure shall be 30 psi, with a maximum pressure drop of 3 psi over a 5-minute test period.

5.4.3 Shear and Peel Tests

Each sample cut from the seamed geomembrane shall be tested for both shear and peel tests. The shear (or bonded seam strength) test shall be conducted according to ASTM D-3083 and ASTM D-638, and

have a shear strength of 120 lb/inch width of seam. The peel (or peel adhesion) test shall be conducted according to ASTM D-413 and ASTM D-638, and have a minimum peel strength of 70 lb/inch width of seam. Failure for both tests shall be in a ductile manner and observed at the film bond to be acceptable.

Each type of test shall be performed on five replicate specimens from each material sample (equivalent to five shear tests and five peel tests per material sample). The test results shall be reported individually, with four out of five tests meeting strength requirements being acceptable.

In the event of a failed test (less than four of five tests meeting strength requirements), additional samples shall be collected at 50-foot intervals along the seam on either side of the failed sample location, with additional sampling and testing conducted until tested seam conditions are acceptable. The seam in the failed test area between the acceptable test locations shall be extrusion welded and tested.

5.4.4 Vacuum Testing

All extrusion welded geomembrane seams shall be tested with a vacuum box. The minimum vacuum shall be equivalent to 5 psi (10 inches of mercury). Seam failure shall be assessed by complete loss of vacuum or presence of bubbles.

5.4.5 Testing Documentation

The QA Manager shall review all geomembrane liner test results made by the Contractor and conduct independent tests as necessary. All flaws in the seams or liner panels resulting from the installation shall be repaired and approved by the QA Manager prior to approval for covering with liner cover material.

Geomembrane panel and seam locations, seam test results, repair locations, and seam test results shall be marked on the liner surface and documented by the QA Manager. Final approval of the liner testing will be determined by the QA Manager, based on having acceptable QA test results.

6.0 MATERIAL DISPOSAL

6.1 GENERAL

This section outlines the work associated with placement of materials in the disposal cell. Material placement will be according to the phases of cell construction shown on the Drawings and outlined in Section 3.3.

6.2 MATERIALS DESCRIPTION

Process area materials with similar characteristics have been organized into groups for disposal in specific layers within the disposal cell. Their location in the process area dictates the phase of the disposal cell area where the material will be placed. The types of materials to be disposed in the cell are outlined below.

6.2.1 Stabilized Calcium Fluoride Sludge

A portion of calcium fluoride sludge (Type C materials) will be placed as an initial layer on the completed disposal cell base (Section 4). The calcium fluoride sludge will be used as a tracer for subsequent leak detection purposes. Calcium fluoride sludge shall be mixed with fly ash prior to placement in the disposal cell at a ratio of one part fly ash to no more than two parts calcium fluoride sludge. The mixture shall be placed over the disposal cell base in all three phases of the disposal cell.

6.2.2 Type A Materials

Type A materials consist of five components: (1) raffinate sludge, (2) Emergency Basin sediment, (3) North Ditch sediment, (4) Sanitary Lagoon sediment, and (5) Pond 2 residual materials. The first four components were shipped off site in 2018.

The Pond 2 residual materials will comprise the lowest layer in the disposal cell profile, and be placed early in the disposal sequence for each phase of the cell (on top of the stabilized calcium fluoride sludge).

6.2.3 Type B Materials

Type B materials include soil liner and subsoil materials beneath the clarifier, Pond 4, the Emergency Basin, the North Ditch and the Sanitary Lagoon, as well as Pond 1 spoils pile material. Type B materials also include interim soil storage cell materials and soils from the equipment storage area. The locations of these materials are shown on the Drawings.

The Type B materials (primarily contaminated soils) are second in the disposal order, since these materials will be excavated after removal of Type A materials and will have the second highest activity concentrations of radionuclides. Where feasible, Type B materials will be placed over, or adjacent to, Type A materials in the disposal cell profile or over other prepared areas of the disposal cell liner system.

6.2.4 Type C Materials

Type C materials consist of structural materials, concrete and asphalt, calcium fluoride basin materials, calcium fluoride sediments, residual calcium fluoride sludge (not used for stabilized sludge, Section 6.2.1), calcium fluoride basin liners and subsoils, and on-site buried materials. The locations of these

materials are shown on the Drawings. Type C materials will be placed directly over, or adjacent to, Type A materials, with Type B materials, or over other prepared areas of the disposal cell liner system.

6.2.5 Type D Materials

Type D materials consist of contaminated soils and sedimentary rock that require cleanup. The approximate area of Type D material cleanup is shown on the Drawings.

Type D materials will be placed over, or adjacent to, Type A, B, or C materials, or over other prepared areas of the disposal cell liner system. Type D materials will be used to cover plant equipment and structural debris (Type C materials) to minimize void spaces, and may be used for additional bedding material for plant equipment and structural debris. Type D materials may comprise the primary component of the stormwater retention berms for the disposal cell, depending on schedule and availability.

6.3 WORK DESCRIPTION

6.3.1 Stabilized Calcium Fluoride Sludge Placement

Calcium fluoride sludge shall be stabilized or solidified by mixing with fly ash at a maximum sludge to fly ash ratio of two to one by volume, using mixing techniques approved by SFC. The mixture shall be placed in lifts at least six inches thick but not to exceed one foot in loose thickness and compacted as outlined in Section 6.3.4.5. The mixture shall be placed on completed disposal cell base (Section 4) in all three phases of cell construction. Stabilized calcium fluoride sludge may be used to construct stormwater retention berms. Stabilized calcium fluoride sludge may also be placed and compacted around demolition debris to minimize void spaces.

6.3.2 Type A Material Placement

Type A materials (Section 6.2.2) that are not filtered (if disposed on site), will be dewatered or solidified/stabilized to eliminate free water prior to placement in the cell. Type A materials will be placed within the disposal cell in lifts prior to covering with additional Type A materials or with Type B materials. Type A materials may also be placed and compacted around demolition debris to minimize void spaces.

6.3.3 Type B Material Placement

Type B materials will be placed within the disposal cell in lifts and spread (if necessary) to allow consolidation and drying of wet materials. Type B materials (Section 6.2.3) will be placed directly over, or adjacent to, Type A materials, within the lined area of the disposal cell, or over other prepared areas of the disposal cell liner system.

6.3.4 Type C Material Placement

Type C materials will be placed within the disposal cell in lifts. Type C materials (Section 6.2.4) will be placed directly over or adjacent to, Type B or C materials, or over other prepared areas of the disposal cell liner system. The preparation and placement of various Type C materials is outlined below.

6.3.4.1 Material Sizing and Preparation

Demolition debris to be placed in the disposal cell will consist of equipment and structural material from facilities demolition. The demolition procedures are outlined in the Facility Demolition Plan (Reclamation Plan attachment F). Because of the wide variety in shape and size of demolition debris, material of odd shapes will be cut or dismantled, to the extent practical, prior to disposal to facilitate handling and placement as well as minimize void spaces in the disposal cell. The maximum size of dismantled or cut materials shall not exceed 20 feet in the longest dimension. Smaller dimensions may be necessary for loading, handling, hauling, and placement of material in the disposal cell.

6.3.4.2 Incompressible Debris

Material that is not compressible (steel columns and beams, concrete, and other solid material) shall be reduced in size for loading, hauling, and placement in the disposal cell. Incompressible debris shall be placed, oriented, or spread in a manner that minimizes void spaces below, between, and above these materials. Incompressible debris shall be placed on and covered with soils or similar materials (Specification Section 6.2.5). Incompressible debris such as steel members shall be placed in the disposal cell with the longest dimension oriented horizontally.

Thick-walled pipe, conduit, tanks, vats, pressure vessels, and other hollow materials that will not be crushed or dismantled shall be transported to the planned location within the disposal cell and oriented for filling and burial. Voids larger than 6 inches in all dimensions, or across (the diameter of) a conduit, on the inside of items, shall be filled with random fill, sand, or grout, prior to burial. Contaminated soil (Section 6.2.5) or sand will be placed outside of the item and compacted with standard compaction equipment (where possible) or hand-operated equipment to the compaction requirements in Specification Section 6.3.4.6. Several lifts of compacted contaminated soil may be necessary to fill around and cover these items.

6.3.4.3 Compressible Debris

Materials that are compressible (such as thin-walled piping and thin-walled tanks) shall be flattened or crushed in the disposal cell, prior to final placement in the disposal cell. Flattening or crushing shall be done with hydraulic excavator attachments, or with a dozer or other steel-tracked equipment.

These materials shall be placed in the disposal cell and spread to form a lift with a maximum thickness of two feet. Spreading shall be done in a manner resulting in materials laying flat and minimizing void spaces.

6.3.4.4 Soils and Similar Materials

Soils and soil-like materials to be placed in the disposal cell will be from on-site areas identified by SFC for excavation (Sections 6.2.4 and 6.2.5). Soil or soil-like material (Type A, B, C, or D material) shall be placed and compacted over each lift of debris (Section 6.3.4.2 or 6.3.4.3) or other Type C materials in lifts not to exceed two feet in loose thickness and compacted prior to placement of additional lifts. Soils will also be used for interim soil cover to minimize exposure of demolition materials and other Type C materials to air and meteoric water. Soils may be placed in the disposal cell to provide access for, and to prevent the contamination of, equipment working to place materials in the cell.

6.3.4.5 Material Compaction

Soil or similar Type C material shall be compacted with a minimum of six passes with self-propelled, towed, or hand-held vibratory compaction equipment. The number of passes shall be confirmed with actual compaction equipment on site with a field test section of soil to establish a correlation between the field compaction method and 95 percent of maximum dry density for the soil, as determined by the Standard Proctor test.

6.3.5 Type D Material Placement

Type D materials (Section 6.2.5) will be placed directly over Type A, B, or C materials, or over other prepared areas of the disposal cell liner system. Type D soil shall be placed in lifts not exceeding two feet in loose thickness, and shall be compacted with a minimum of six passes with vibratory compaction equipment to work the soil downward into underlying void spaces (if present). The number of passes shall be confirmed with actual compaction equipment on site with a field test section of soil to establish a correlation between the field compaction method and 95 percent of maximum dry density for the soil, as determined by the Standard Proctor test.

6.3.6 Raffinate Sludge Liner and Cover

The raffinate sludge filtercake bags (supersacks) were shipped off site in 2018, thus this section is not applicable.

6.3.7 Stormwater Retention Berms

Type D and C soils shall be used to construct stormwater retention berms. The stormwater retention berms shall be initially constructed on top of the liner material inside the perimeter berms, as shown on the Drawings. Initial stormwater retention berm construction shall be on the lower sides of the phases of the disposal cell. As material is placed in the disposal cell, the stormwater retention berms are constructed on outside slopes of each phase to maintain capacity for storage of stormwater on the top of each phase of the cell.

The stormwater retention berm material shall be placed in lifts not exceeding 24 inches in compacted thickness, with slopes and crest widths as shown on the Drawings. The stormwater retention berms shall be constructed in phases or raises to maintain adequate freeboard (five feet minimum) for stormwater above the level of disposed materials inside the stormwater retention berms.

If used, the stormwater liner shall be anchored on the berm crest and continued past the inside toe of the berm onto disposed materials or liner cover material, as shown on the Drawings.

6.4 PERFORMANCE STANDARDS AND TESTING

6.4.1 Stormwater Retention Berm

Each phase or raise of stormwater retention berm material shall be placed in lifts not exceeding 24 inches in compacted thickness. Phases or raises shall be constructed in an upstream manner, or inside of the previous raise. The outside slopes of the stormwater retention berms shall be 3:1 (horizontal:vertical) or flatter, unless approved otherwise by the Reclamation Project Manager for temporary material storage capacity. The berm crest widths, for areas where vehicles will traffic the berms, shall be a minimum of 15 feet. Where traffic along the berm crest is not planned, the berm crest configuration shall be approved

by the Reclamation Project Manager. The crest elevation of the stormwater retention berm shall be a minimum of five feet above the level of disposed materials inside the stormwater berms.

6.4.2 Final Slope and Grades

The final disposed material surface shall have maximum side slopes of 5:1 and a top surface sloping in the direction shown on the drawings at a nominal slope of 1 percent. The side slopes and top surface shall be free from abrupt changes in grade or areas of runoff concentration. The final disposed material surface shall be compacted with approved construction equipment to form a smooth surface with uniform density for subsequent cover placement.

The upper six inches of the final disposed material surface shall be compacted to 90 percent of the maximum dry density for the material, as determined by the Standard Proctor test. During compaction, the material shall be within 1 percent above to 4 percent below optimum moisture content for the material, as determined by the Standard Proctor test. If water addition is required to achieve this range of moisture contents, the added water shall be thoroughly mixed into the material prior to compaction.

Checking of compaction of the final disposed material surface shall consist of a minimum of one field density test per 1,000 cubic yards of material compacted. Field density tests shall be compared with Standard Proctor tests (ASTM D-698 Method A or C) on the same material. Standard Proctor tests shall be conducted at a frequency of at least one test per 2,000 cubic yards of material compacted, or when material characteristics show significant variation.

Field density testing may be conducted with the sand cone test (ASTM D-1556) or a nuclear density gauge (ASTM D-6938, or as modified by the QA Manager). Correlation of nuclear density gauge results shall be by comparison with results from sand cone test(s) and laboratory testing for water content(s) using the oven drying method on similar material.

7.0 DISPOSAL CELL COVER CONSTRUCTION

7.1 GENERAL

This section outlines the work associated with construction of the disposal cell cover.

7.2 MATERIALS DESCRIPTION

7.2.1 Clay Liner

Clay liner material will consist of soils from approved on-site borrow areas (Section 3.4). Clay liner material shall be minus 1-inch size, and shall be free from roots, branches, rubbish, and process area debris. Clay liner material shall have a minimum of 50 percent passing the No. 200 sieve and a minimum plasticity index of 10. Compacted clay liner material shall have a maximum saturated hydraulic conductivity of 1×10^{-7} cm/s. Clay liner material shall have radionuclide activity concentrations lower than the selected subsurface soil cleanup level.

7.2.2 Synthetic Liner

Synthetic liner material shall be 60-mil nominal thickness HDPE, with textured surfaces on both sides and material characteristics outlined in Section 5.2.1.

7.2.3 Liner Cover Material

Synthetic liner cover material shall be placed over the synthetic liner to provide a cover material for protection of the synthetic liner during material placement.

Synthetic liner cover material shall consist of gravelly sand. Synthetic liner cover material shall be free from roots, branches, rubbish, process area debris, and other angular or pointed materials that could damage the synthetic liner, and meet the following particle-size specifications:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
No. 4	60-100
No. 16	25-100
No. 40	35-90
No. 200	5-35

7.2.4 Subsoil Zone

The subsoil zone of the cover will consist of soils from approved on-site borrow areas (Section 3.4). Subsoil zone material shall be minus 6-inch size, and shall be free from roots, branches, rubbish, and process area debris. Subsoil zone material shall have a minimum of 10 percent passing the No. 200 sieve. Subsoil zone material shall have radionuclide activity concentrations lower than the selected subsurface soil cleanup level.

7.2.5 Rock Mulch

The rock mulch will be placed on the disposal cell side slopes and edge of top surface (as shown on the Drawings) for erosion protection. The rock portion of the rock mulch shall be free from roots, branches, rubbish, and debris. After the rock portion has been placed, topsoil will be placed and tracked into the rock surface to form the rock mulch.

The rock portion of the rock mulch will consist of granular materials from approved off-site areas meeting NRC long-term durability requirements (a rock quality designation of 65 or more, as outlined in Appendix D of NUREG-1623, Design of Erosion Protection for Long-Term Stabilization). The specifications as given below are for rock quality designations of 72 or higher. If actual rock quality designation is between 65 and 71, additional oversizing will be required. Rock quality designations below 65 will not be acceptable.

If limestone from the Souter Quarry is used for the rock portion of the rock mulch, the median particle size shall be no less than 5.3 inches. The rock portion of the rock mulch shall be angular and meet the following particle-size specifications:

Percentile	Particle Size	
	Inches	mm
D ₉₀	7.8 – 11.8	198 – 300
D ₅₀	5.2 – 9.3	132 – 236
D ₁₀	1.5 – 3.0	38 – 76

Sieve Size	Percent Passing
12 inch (305 mm)	100
2 inch (51 mm)	0 – 18

The soil portion of the rock mulch will consist of select material from the on-site topsoil borrow area (Section 3.5).

7.2.6 Perimeter Apron Rock

Material for the perimeter apron and Gully 005 erosion protection will consist of granular materials from approved off-site areas. The perimeter apron rock will be placed along the toe of the disposal cell and in the Gully 005 erosion protection area (as shown on the Drawings). Perimeter apron rock shall meet NRC long-term durability requirements (a rock quality designation of 65 or more, as outlined in Appendix D of NUREG-1623, Design of Erosion Protection for Long-Term Stabilization).

Perimeter apron rock shall be free from roots, branches, rubbish, and debris. The specifications as given below are for rock quality designations of 72 or higher. If actual rock quality designation is between 65 and 71, additional oversizing will be required. Rock quality designations below 65 will not be acceptable.

If limestone from the Souter Quarry is used for perimeter apron rock, the median particle size shall be no less than 9.3 inches, and shall meet the following particle-size specifications:

Percentile	Particle Size	
	Inches	mm
D ₉₀	12.2 – 19.3	310 – 490

D ₅₀	9.2 – 14.9	234 – 379
D ₁₀	2.5 – 5.7	64 – 145

Sieve Size	Percent Passing
20 inch (508 mm)	100
6 inch (152 mm)	10 – 36
3 inch (76 mm)	0 – 15

7.2.7 [RESERVED]

7.2.8 Topsoil

Topsoil will consist of select material from on-site topsoil borrow areas (Section 3.5).

7.3 WORK DESCRIPTION

7.3.1 Base Preparation

The final disposed material surface shall be prepared as outlined in Section 6.4.2, and shall be free from sharp objects that would interfere with clay liner placement.

7.3.2 Clay Liner Placement

Clay liner material (Section 7.2.1) shall be placed in lifts with maximum compacted thickness of 6 inches to form a continuous layer with a total minimum compacted layer thickness of 24 inches. Clay liner material shall be placed over the prepared surface of the disposal cell (Section 6.4.2).

Each lift of clay liner material shall be compacted to at least 95 percent of the maximum dry density for the material, as determined by the Standard Proctor test. During compaction, the material shall be within 2 percent above to 2 percent below optimum moisture content for the material, as determined by the Standard Proctor test. If water addition is required to achieve this range of moisture contents, the added water shall be thoroughly mixed into the material prior to compaction.

Compaction of the clay liner material shall be done with a sheep'sfoot or tamping-foot roller of sufficient weight to achieve the required compaction specifications. Rubber-tired equipment shall not be used solely to compact the clay liner material.

Compacted clay liner shall be covered with the synthetic liner upon completion of testing and approval. The clay liner must meet all specifications at the time of synthetic liner installation.

7.3.3 Synthetic Liner Installation

Synthetic liner material (Section 7.2.2) shall be installed on the final surface of the clay liner as outlined in Section 5.3.

7.3.4 Liner Cover Material Placement

Synthetic liner cover material shall be placed over the completed synthetic liner to provide a protective cover for the synthetic liner. Liner cover material (Section 7.2.3) shall be placed in one lift to form a zone a minimum of 18 inches thick. The lift of synthetic liner cover shall be placed by dumping material and

pushing liner cover material over synthetic liner with a small dozer or other approved equipment. Synthetic liner cover placement shall be done in a manner that does not tear, puncture, or otherwise damage the synthetic liner.

7.3.5 Subsoil Zone Placement

Subsoil zone material (Section 7.2.4) shall be placed in lifts of 12-inch maximum loose thickness to form a uniform subsoil layer for the cover system. The minimum thickness on the top surface of the disposal cell and the minimum thickness on the side slopes of the disposal cell are shown on the drawings.

7.3.6 Rock Material Placement

Rock mulch (Section 7.2.5) and perimeter apron rock (Section 7.2.6) shall be placed to the thicknesses outlined on the Drawings and using the methods outlined below. Unless approved otherwise by the QA manager, each type of material shall be placed in one lift to avoid segregation or degradation of particles.

The rock portion of the rock mulch shall be handled, loaded transported, stockpiles, and placed in a manner that minimizes segregation. Rock mulch material shall be placed in or near its final location by dumping, then spread with a small dozer or other suitable equipment. Rock mulch material shall be placed and spread in a manner that minimizes displacement of underlying cover soils or natural soils. The layer of placed rock mulch material shall be tamped with the bucket of a trackhoe or densified by other approved methods to form an interlocking rock surface. The placed thickness of the rock portion of the rock mulch shall meet the minimum thickness shown on the drawings prior to the addition of the soil portion of the rock mulch.

Following placement of the rock portion of the rock mulch, topsoil (Section 7.2.8) shall be placed and spread in one or more lifts to form a uniform layer. The topsoil shall be worked into the voids of the underlying rock surface using a method that does not reduce the median diameter of the rock.

The completed layer of rock mulch shall be well-graded in particle-size distribution and free from pockets of smaller material and free from large voids or loose areas.

Perimeter apron rock shall be handled, loaded, transported, stockpiled, and placed in a manner that minimizes segregation. Rock shall be placed in or near its final location by dumping, then spread with the bucket of a trackhoe, or other suitable equipment. Rock shall be placed and spread in a manner that minimizes displacement of underlying cover soils, or natural soils. The layer of placed rock shall be tamped with the bucket of a trackhoe or densified by other approved methods to form an interlocking rock surface. The placed thickness of the perimeter apron rock shall meet the minimum thickness requirement shown on the drawings. No equipment shall travel over the completed surface of the perimeter apron rock unless approved by the QA manager.

7.3.7 Topsoil Placement

Topsoil (Section 7.2.8) shall be placed and spread over the rock surface to develop the rock mulch on the side slopes. Top soil shall be placed in one or more lifts to form the uniform topsoil layer on the top surface. The placed thickness of the topsoil would vary between the top surface and side slopes in order to have the final side slope surface match the final top slope surface as shown on the drawings.

7.4 PERFORMANCE STANDARD AND TESTING

7.4.1 Clay Liner Testing

Material specifications for the clay liner material shall be confirmed by gradation testing conducted by approved personnel. Testing shall consist of No. 200 sieve wash and maximum particle size testing (ASTM D-422), and Atterberg limit testing (ASTM D-4318) on samples of clay liner materials, at a frequency of at least one test per 2,000 cubic yards of fill placed, or when material characteristics show a significant variation.

Checking of compaction of the clay liner material shall consist of a minimum of one field density test per 1,000 cubic yards of material compacted. Field density tests shall be compared with Standard Proctor tests (ASTM D-698 Method A or C) on the same material. Standard Proctor tests shall be conducted at a frequency of at least one test per 2,000 cubic yards of material compacted, or when material characteristics show significant variation.

Field density testing may be conducted with the sand cone test (ASTM D-1556) or a nuclear density gauge (ASTM D-6938, or as modified by the QA Manager). Correlation of nuclear density gauge results shall be by comparison with results from sand cone test(s) and laboratory testing for water content(s) using the oven drying method on similar material.

Permeability of the compacted clay liner material shall be confirmed by performing back pressure permeability testing by constant head or flow pump (EPA 9100 or ASTM D-5084) on samples of clay liner material recompacted to density and moisture of field placed compacted clay liner. One test shall be completed during cover construction, or when material characteristics show significant variation.

The completed clay liner shall have a minimum thickness of 2.0 feet. The final surface of the clay liner shall be smoothed to avoid abrupt changes in surface grade.

7.4.2 Synthetic Liner Testing

The synthetic liner panels and seams shall be tested as outlined in Section 5.4. The final synthetic liner surface shall be inspected and approved by the QA Manager prior to initiation of synthetic liner cover placement.

7.4.3 Synthetic Liner Cover Testing

Material specifications for synthetic liner cover material (Section 7.2.3) shall be confirmed by gradation testing conducted by approved personnel. Testing shall consist of No. 200 sieve wash and maximum particle size testing (ASTM D-422) at a frequency of at least one test per 4,000 cubic yards of fill placed (a minimum of 10 tests on the liner cover sand), or when material characteristics show a significant variation.

7.4.4 Subsoil Zone Material Testing

Material specifications for the cover material shall be confirmed by gradation testing conducted by approved personnel. Testing shall consist of No. 200 sieve wash and maximum particle size testing (ASTM D-422) on samples of cover materials, at a frequency of at least one test per 10,000 cubic yards of fill placed (a minimum of 15 tests on the subsoil material), or when material characteristics show a significant variation. Cover material compaction will be controlled by the maximum lift thickness shown on the drawings.

7.4.5 Rock Mulch Testing

The gradation specifications for the rock used for rock mulch material (Specification Section 7.2.5) shall be confirmed by gradation testing conducted by approved personnel. Testing shall consist of particle-size distribution testing (ASTM D-5519 or equivalent) on eight (or more) samples from the selected rock source representing initial production, 1/3 of production, 2/3 of production, and completion of production of the rock mulch. Four samples must be tested for the first one-third of the material produced, at least one additional test for each remaining third of the material volume produced, and one final test representative of the end of the produced material. Samples must be representative of the produced volume. Particle-size testing shall be completed at the intervals prescribed, and additionally if rock characteristics show a significant variation.

The durability of the rock used for rock mulch material shall be verified by durability tests outlined in Appendix D of the 1990 NRC Staff Technical Position, Design of Erosion Protective Covers. The rock used for the rock mulch material shall have a minimum rock quality designation of 80. Rock with a rock quality designation between 65 and 79 will require additional oversizing to the particle-size distribution given in Specification Section 7.2.5.

The rock portion of the rock mulch and the perimeter apron rock shall be sampled for durability tests to be conducted on four (or more) samples from the selected rock source representing initial production, 1/3 of production, 2/3 of production, and completion of production of the rock mulch and perimeter apron materials.

Gradations on the rock mulch material, including the minimum median particle size (D_{50}) and durability properties shall be sampled from the quarry, tested, confirmed, and documented prior to delivery to the site. A licensed professional geologist or engineer shall visually inspect the rock, at the source, during production on a regular basis for consistency, irregularities, joints, and planes of weakness that may affect the durability.

Rock mulch thickness will be established during construction with GPS-guided grading equipment, grade stakes, or other approved methods. The minimum thickness of the rock mulch layer will be verified by spot checking of layer thickness by excavation in selected locations.

7.4.6 Perimeter Apron Rock Testing

Material specifications for the perimeter apron rock shall be confirmed by gradation testing conducted by approved personnel. Testing shall consist of particle-size distribution testing (ASTM D-5519 or equivalent) on eight (or more) samples from the selected rock source representing initial production, 1/3 of production, 2/3 of production, and completion of production of the rock mulch. Four samples must be tested for the first one-third of the material produced, at least one additional test for each remaining third of the material volume produced, and one final test representative of the end of the produced material. Samples must be representative of the produced volume. Particle-size testing shall be completed at the intervals prescribed, and additionally if rock characteristics show a significant variation.

The durability of the rock shall be verified by durability tests outlined in Specification Section 7.4.5.

Gradations on the apron rock material, including the minimum median particle size (D_{50}) and durability properties shall be sampled from the quarry, tested, confirmed, and documented prior to delivery to the site. A licensed professional geologist or engineer shall visually inspect the rock, at the source, during production on a regular basis for consistency, irregularities, joints, and planes of weakness that may affect the durability.

Rock layer thickness will be established during construction with GPS-guided grading equipment, grade stakes, or other approved methods. The minimum thickness of the perimeter apron rock layer will be verified by spot checking of layer thickness by excavation in selected locations.

7.4.7 Topsoil Testing

Topsoil will be sampled for agronomic properties to evaluate the need for growth medium amendments. If topsoil will be collected from different borrow areas on-site, at least one sample from each borrow area should be tested for agronomic properties.

7.4.8 Surface Slopes and Grades

The final cover surface shall have maximum side slopes of 5:1 and a top surface sloping in the direction shown on the drawings at a nominal slope of 1 percent. The side slopes and top surface shall be free from abrupt changes in grade or areas of runoff concentration. The perimeter apron at the toe of the side slopes shall have a minimum width of 20 feet from the toe of the side slopes and slope away from the toe of the side slopes (as shown on the Drawings). As-built surveys of the final surface of the subsoil and the rock layers will be used to verify layer thicknesses prior to placement of topsoil.

8.0 REVEGETATION

8.1 GENERAL

Following topsoil placement on the disposal cell, the cover surface will be revegetated. This section describes the requirements for vegetation establishment and where additional vegetation establishment efforts are required. This section may be revised as necessary based on field requirements and soil analysis.

8.2 MATERIALS DESCRIPTION

The following section describes the types of soil amendments, seed mixture, transplant species, and erosion control materials that will be used to achieve vegetation establishment. Submittals for each of the following products shall be provided to SFC for approval prior to use of such products.

8.2.1 Soil Amendments

In order for the cover to function properly as a plant growth media, soil amendments may be needed. Topsoil material will be tested to determine fertilizer requirements, for nutrient availability, pH, texture, and organic matter content. The results from these analyses will be used as a guide for determining site-specific topsoil amendment requirements.

8.2.2 Seed Mix

Species selection for the seed mixture was based on native vegetation found at the site area as well as soil and climatic conditions of the area. Tree species shall not be included in the seed mixture. Changes to the seed mixture will be approved by SFC. The following seed mixture shall be used on all seeded areas.

Scientific Name	Common Name	Seeding Rate (lbs pure live seed/acre)
<i>Andropogon gerardii</i>	Big bluestem	6.0
<i>Schizachyrium scoparium</i>	Little bluestem	3.0
<i>Panicum virgatum</i>	Switchgrass	2.0
<i>Sorghastrum nutans</i>	Indiangrass	2.0
<i>Elymus villosus</i>	Hairy wildrye	2.0
<i>Solidago altiplanities</i>	High plains goldenrod	1.5
<i>Helianthus petiolaris</i>	Prairie sunflower	1.5
<i>Silphium laciniatum</i>	Compassplant	0.5
<i>Liatris Gaertn. Ex Schreb.</i>	Blazing star	0.5
<i>Rhus microphylla</i>	Littleleaf sumac	2.0
	TOTAL	21.0

8.2.3 Erosion Control Materials

Certified weed-free straw shall be applied to all seeded areas at the rate of 2 tons per acre. Straw mulch shall be applied with a blower designed for such purposes.

8.3 WORK DESCRIPTION

Revegetation efforts shall be directed at all areas included in the disposal cell cover. The goal of the revegetation plan is to ensure that a self-sustaining vegetative community is established.

8.3.1 Soil Amendment Application

Following the final placement and grading of the cover, lime will be applied to those areas identified by soil analysis that require an increase in soil pH. The application of lime will be performed by broadcast spreader. Rates of application will be determined from the soil analysis report.

Organic amendments consisting of manure, sewage sludge, wood chips, or similar organic material will be applied to all seeded areas that are shown to contain less than 2 percent organic matter. Rates of application will be determined from the soil analysis report.

Inorganic sources of nitrogen, phosphorus, and potassium will be applied to the soil by broadcast spreader. Rates of application will be determined from previous soil analyses.

8.3.2 Growth Zone Preparation

A favorable seedbed shall be prepared prior to seeding operations. The soil should be loose and friable so as to maximize contact with the seed. Tillage operations not only prepare the seedbed, but also incorporate soil amendments. The soil will be tilled, following site contours with a disc (or similar approved equipment) to a depth of 6 inches. The depth of valleys and the height of ridges caused by the final tillage operations are not to exceed 2 inches. Thus, the total maximum difference from the top of ridges to the bottom of valleys will be 4 inches. Harrowing may be required to further prepare the soil for seeding.

8.3.3 Seed Application

Seeding will follow the application of soil amendments and seedbed preparation, either by drill seeding or broadcast spreading. Seed shall be drilled to a depth of 0.25 to 0.75 inches by a conventional drill; drilling orientation shall follow the contour of the land. Seed shall be drilled at the specified application rate. Seed shall be applied by broadcast spreader at two times the specified application rate. Broadcast seed shall be harrowed into the soil to a depth of 0.25 to 0.75 inches.

8.3.4 Erosion Control Material Application

Immediately following seeding operations, straw shall be blown over the seeded area. The rate of application shall be 2 tons per acre. Straw should be applied in a uniform manner with no obvious clumping of straw at the soil surface. Following the application of straw, plantago based tackifier (or approved equivalent) shall be applied by a hydromulcher at the rate of 150 pounds per acre. Sufficient water shall be used to apply the tackifier in a uniform manner.

8.4 PERFORMANCE STANDARD AND TESTING

The following section describes performance-based criteria for successful revegetation.

8.4.1 Vegetation Establishment Performance

Total vegetative cover sampling shall be performed at a future date to ascertain vegetation establishment success. The revegetation effort shall be deemed successful if the total vegetation cover on the disposal cell cover is at least 70 percent of the total cover of a nearby background reference area for two consecutive years. Areas that do not meet this performance criterion will be reseeded.

8.4.2 Erosion Control

The disposal cell cover shall be inspected two times per year for eroded areas. Any area that has experienced erosion shall be backfilled and reseeded. Straw shall also be applied over the reseeded area.

8.4.3 Weed Control

The cover shall be inspected for the presence of weedy species at least two times per year: once in late spring, and once in mid-summer. Weed species should be identified and the approximate coverage should be noted. Spot-spraying of weeds may be necessary to control unwanted species. Growth of trees on the cover shall be prevented as long as SFC retains control of the site.

PHASE IV (COVER) AS-BUILT REPORT

Appendix C Laboratory and Field QA Test Results

Appendix C LABORATORY AND FIELD QA TEST RESULTS

Appendix Contents:

- C.1 Gradation Test Results
- C.2 Proctor and Classification Test Results
- C.3 Density Test Results
- C.4 Rock Durability Test Results
- C.5 Clay Permeability Test Results
- C.6 Liner Bedding Permeability Test Results
- C.7 Sand Cone Test Results



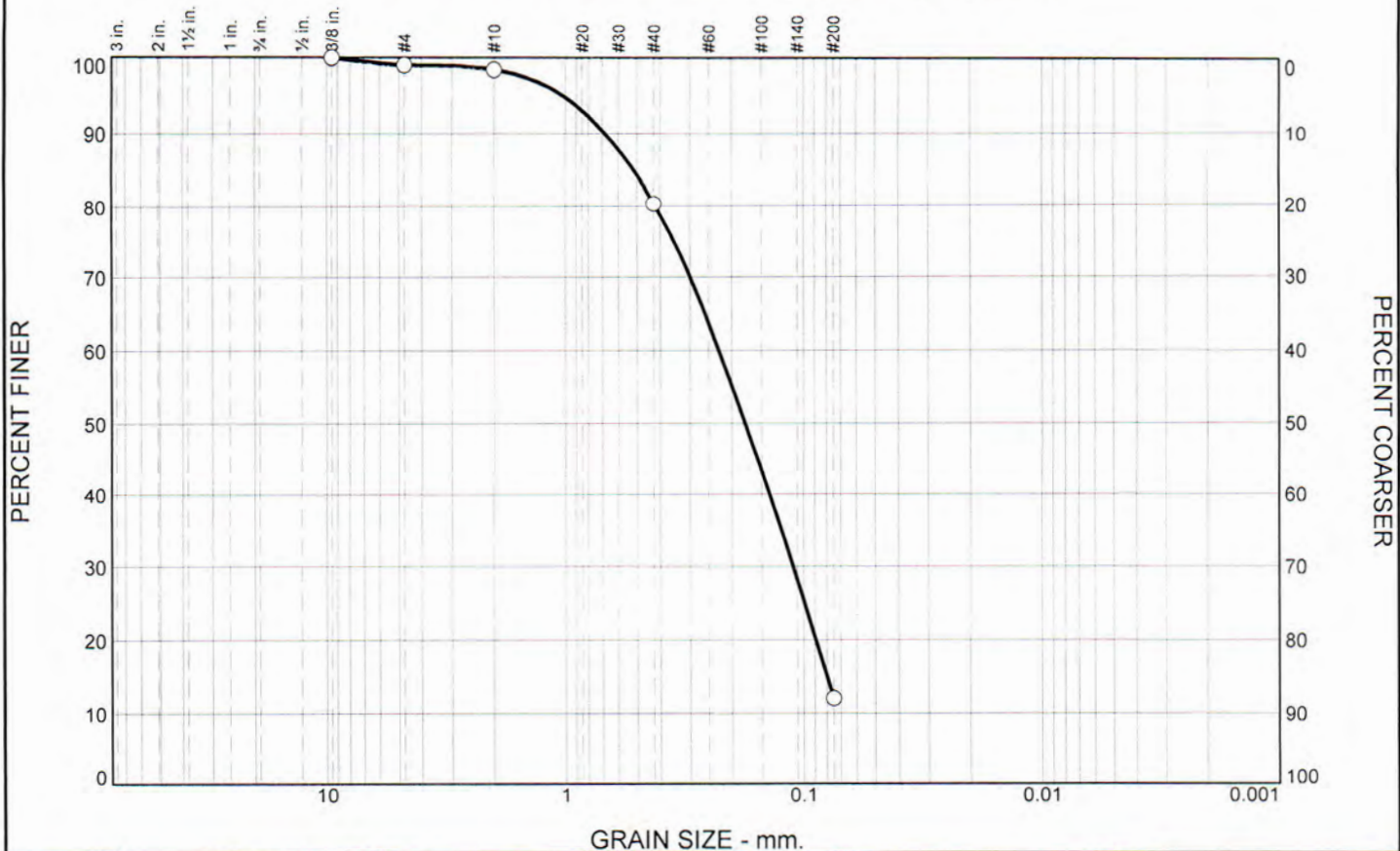
PHASE IV (COVER) AS-BUILT REPORT

Appendix C Laboratory and Field QA Test Results

C.1 GRADATION TEST RESULTS



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.0	0.5	18.2	68.2	12.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	99.0		
#10	98.5		
#40	80.3		
#200	12.1		

* (no specification provided)

Material Description
Silty Sand - Dark Red

Atterberg Limits
 PL= NP LL= NV PI= NP
Coefficients
 D₉₀= 0.6816 D₈₅= 0.5190 D₆₀= 0.2261
 D₅₀= 0.1757 D₃₀= 0.1108 D₁₅= 0.0799
 D₁₀= C_u= C_c=

Classification
 USCS= SM AASHTO= A-2-4(0)

Remarks
 NT - No Test
 F.M.=1.05

Location: Borrow Pit West of Pond #5
 Sample Number: 15-304 Depth: Stockpile

Date: 6/8/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
 Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

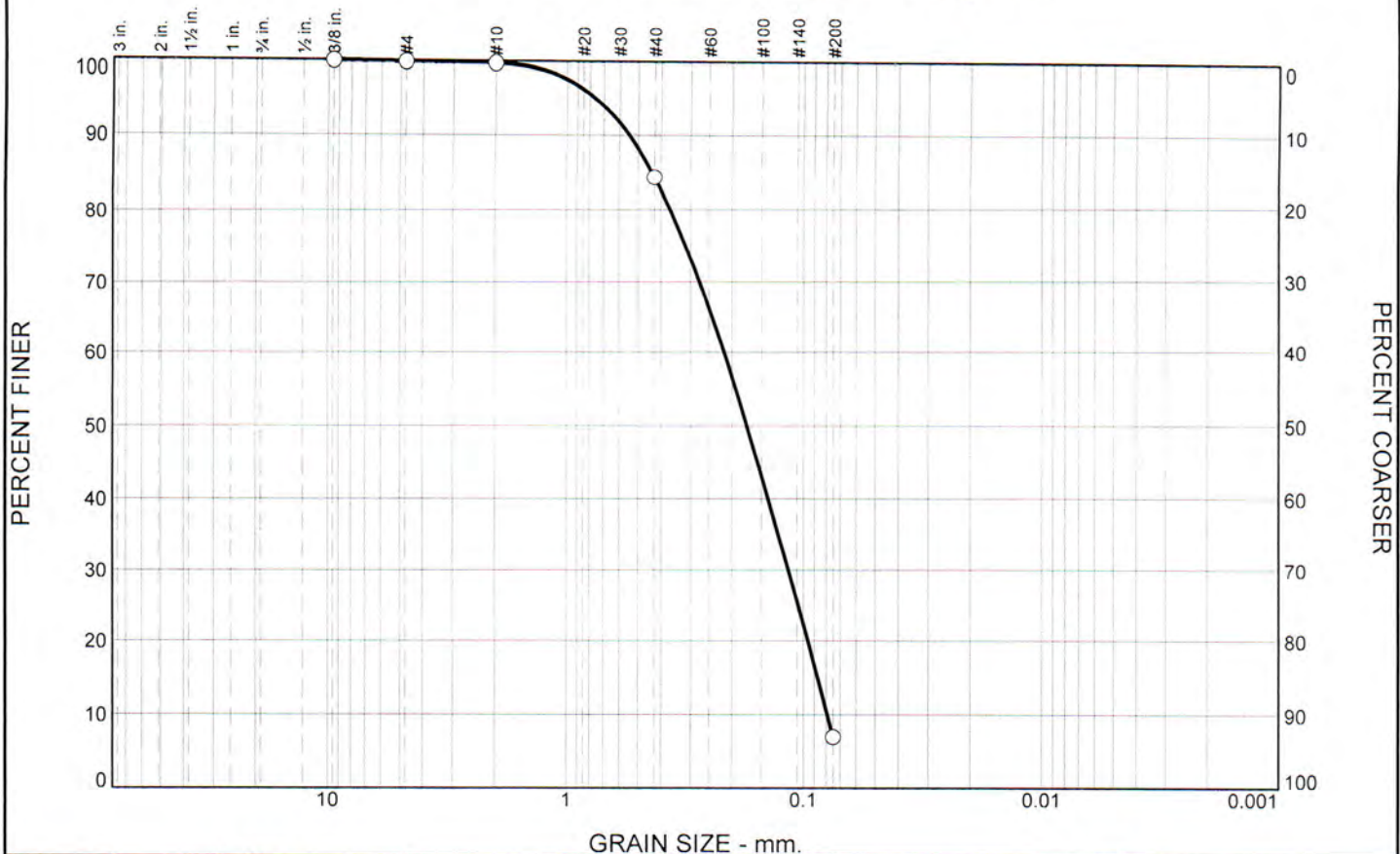
Project No: 09-1341

Figure 1 of 1

Checked By: _____

SSS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.1	0.1	15.4	77.4	7.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	99.9		
#10	99.8		
#40	84.4		
#200	7.0		

* (no specification provided)

Material Description		
Silty Sand - Dark Red		
Atterberg Limits LL= NV PI= NP Coefficients D₉₀= 0.5426 D₅₀= 0.1728 D₁₀= 0.0794 C_u= 2.71 D₈₅= 0.4350 D₃₀= 0.1158 D₆₀= 0.2152 D₁₅= 0.0872 C_c= 0.78		
Classification USCS= SP-SM AASHTO= A-3		
Remarks NT - No Test F.M.=0.93		

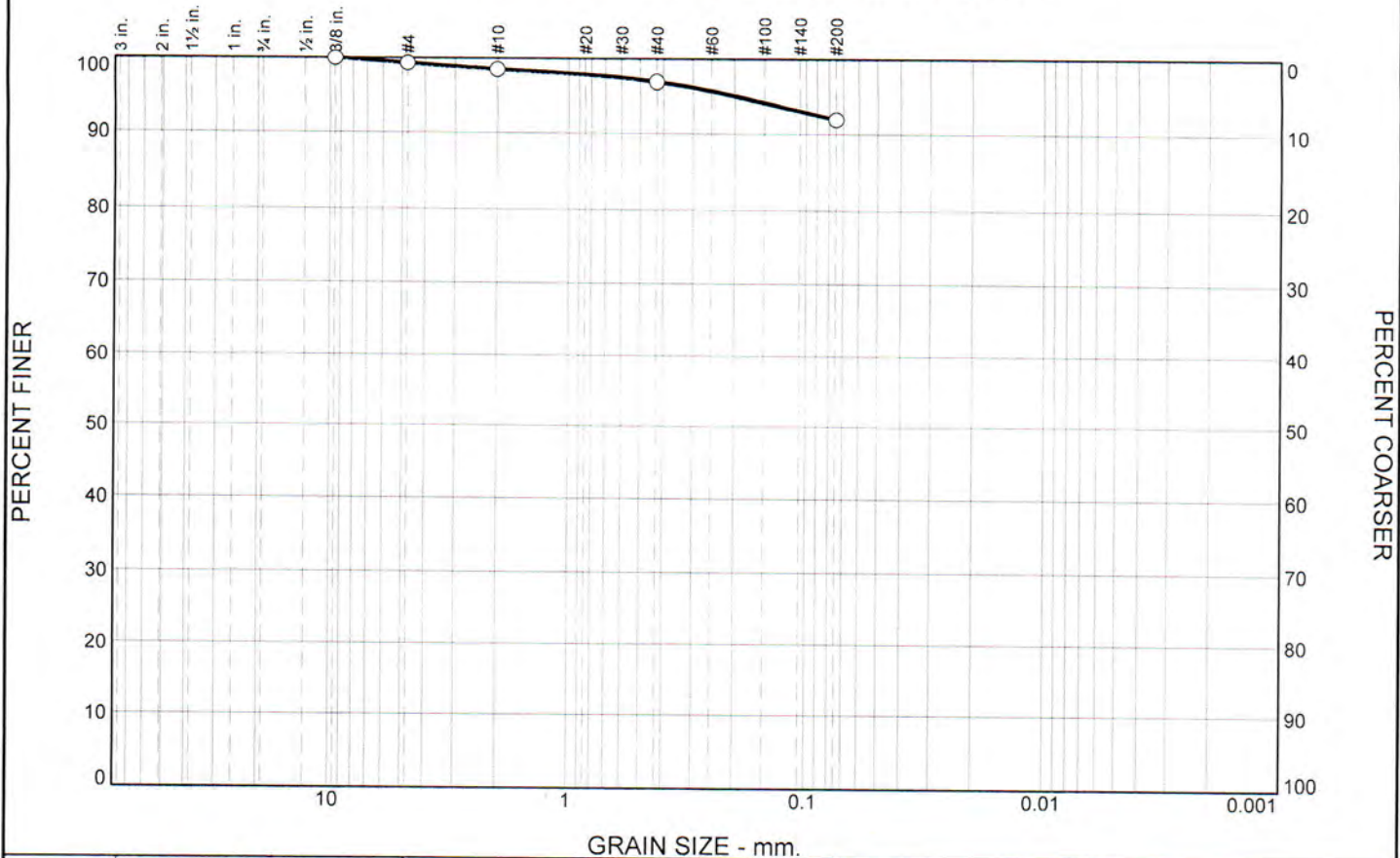
Location: Borrow Pit West of Pond #5
 Sample Number: 15-305 Depth: Stockpile

Date: 6/8/2015

Quality Testing Ft. Gibson, OK	Client: SEQUOYAH FUELS Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL Project No: 09-1341
	Figure 1 of 1

Checked By: SSS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.7	0.8	1.6	4.8	92.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	99.3		
#10	98.5		
#40	96.9		
#200	92.1		

* (no specification provided)

Material Description
Lean Clay - Reddish Brown & Gray

Atterberg Limits
PL= 18 LL= 40 PI= 22

Coefficients
D₉₀= D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CL AASHTO= A-6(21)

Remarks
NT - No Test
F.M.=0.16

Location: Composite Sample
Sample Number: 15-306

Date: 6/8/2015

Quality Testing

Ft. Gibson, OK

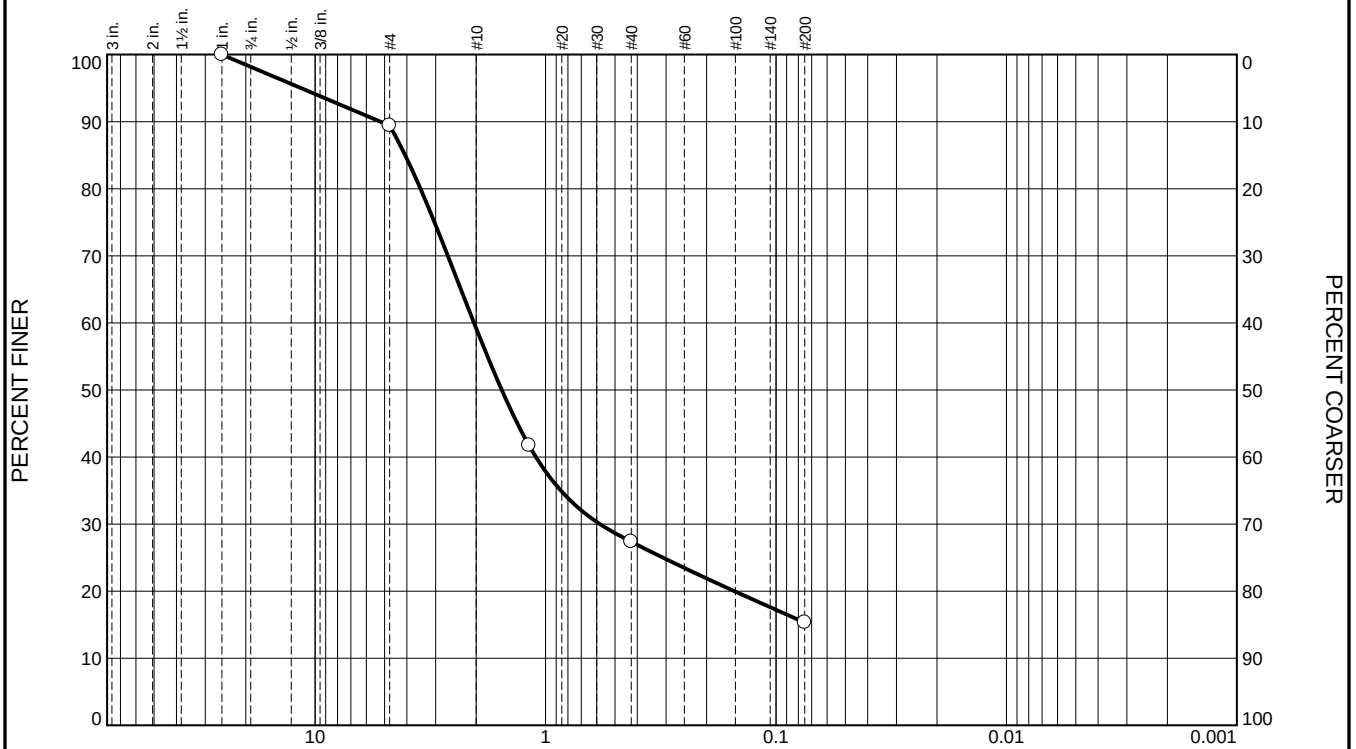
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: 

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.8	8.8	30.2	31.8	12.1	15.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	89.4		
#16	41.7		
#40	27.4		
#200	15.3	5.0 - 35.0	

Material Description
Liner Cover, Section A Part 1
10/3/2019

Atterberg Limits
PL= NP LL= NV PI= NP

Coefficients
D₉₀= 5.2060 D₈₅= 4.0683 D₆₀= 2.0442
D₅₀= 1.5502 D₃₀= 0.5810 D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= SM AASHTO= A-1-b

Remarks
Moisture 10.2%
F.M.=3.36

* Sequoyah Fuels - Line Cover Material

Source of Sample: Okay Screenings
Sample Number: 20-126-1

Depth: Bag Sample

Date: 1/20/2020

Quality Testing

Ft. Gibson, OK

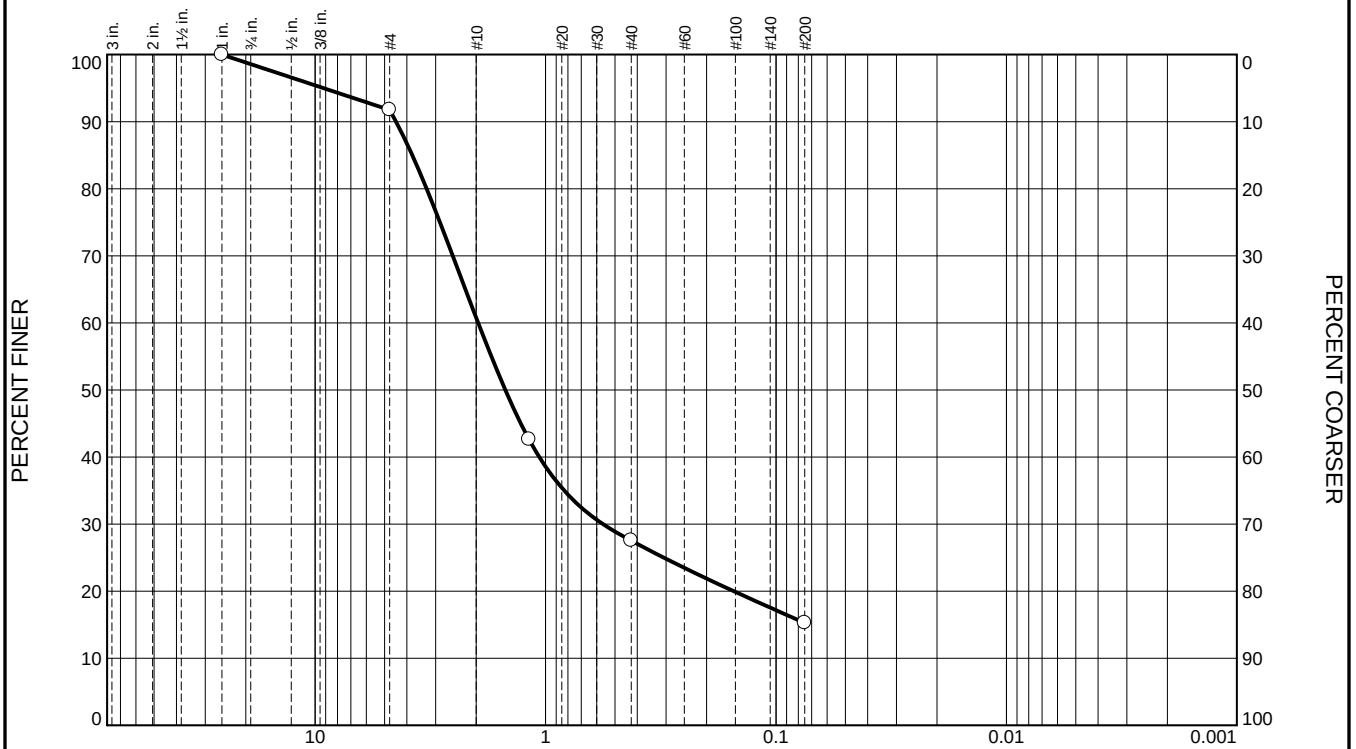
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.4	6.9	30.9	33.3	12.2	15.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	91.7		
#16	42.6		
#40	27.5		
#200	15.3	5.0 - 35.0	

* Sequoyah Fuels - Line Cover Material

Material Description		
Liner Cover, Section A Part 3		
11/19/2019		
Atterberg Limits		
PL= NP	LL= NV	PI= NP
Coefficients		
D ₉₀ = 4.4550	D ₈₅ = 3.7902	D ₆₀ = 1.9612
D ₅₀ = 1.4957	D ₃₀ = 0.5631	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Classification		
USCS= SM	AASHTO=	A-1-b
Remarks		
Moisture 6.1%		
F.M.=3.29		

Source of Sample: Okay Screenings
Sample Number: 20-127-2

Depth: Bag Sample

Date: 1/20/2019

Quality Testing

Ft. Gibson, OK

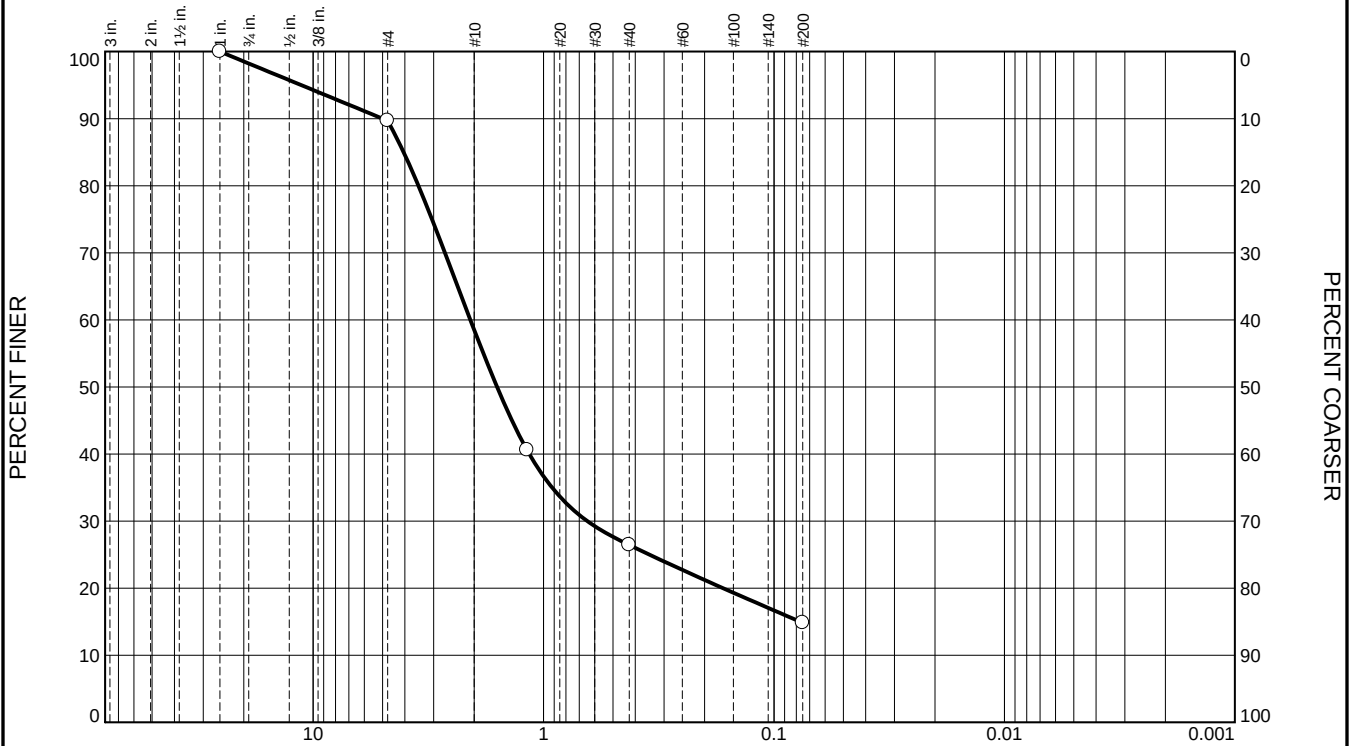
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.8	8.5	31.2	32.1	11.6	14.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	89.7		
#16	40.6		
#40	26.4		
#200	14.8	5.0 - 35.0	

* Sequoyah Fuels - Line Cover Material

Material Description

Liner Cover, Section B Part 2
12/17/2019

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D₉₀= 4.9917 D₈₅= 4.0501 D₆₀= 2.0787
D₅₀= 1.5924 D₃₀= 0.6465 D₁₅= 0.0769
D₁₀= C_u= C_c=

Classification

USCS= SM AASHTO= A-1-b

Remarks

Moisture 8.0%
F.M.=3.40

Source of Sample: Okay Screenings
Sample Number: 20-128-3

Depth: Bag Sample

Date: 1/20/2020

Quality Testing

Ft. Gibson, OK

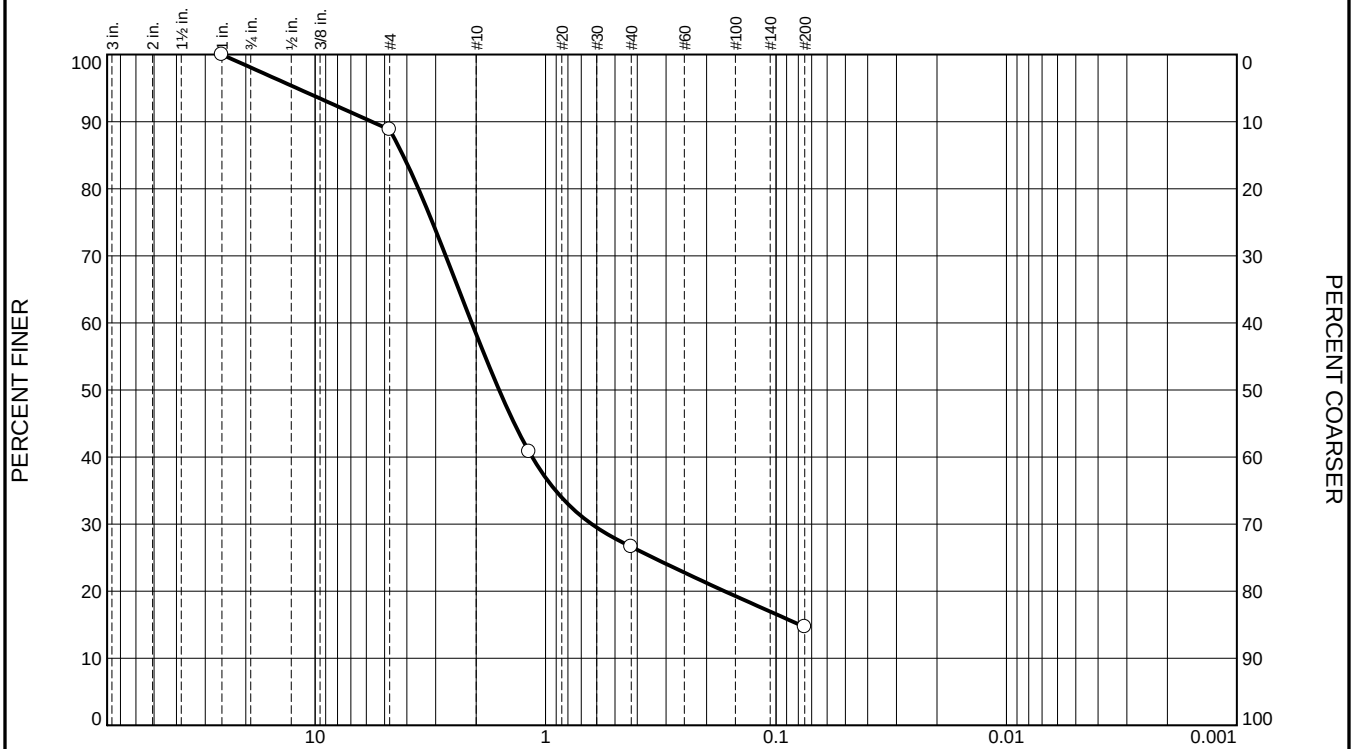
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.9	9.3	30.5	31.7	11.9	14.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	88.8		
#16	40.8		
#40	26.6		
#200	14.7	5.0 - 35.0	

Material Description
Liner Cover, Section B Part 3
1/13/2020

Atterberg Limits
PL= NP LL= NV PI= NP

Coefficients
D₉₀= 5.6784 D₈₅= 4.1570 D₆₀= 2.0910
D₅₀= 1.5917 D₃₀= 0.6306 D₁₅= 0.0788
D₁₀= C_u= C_c=

Classification
USCS= SM AASHTO= A-1-b

Remarks
Moisture 8.6%
F.M.=3.41

* Sequoyah Fuels - Line Cover Material

Source of Sample: Okay Screenings
Sample Number: 20-129-4

Depth: Bag Sample

Date: 1/20/2020

Quality Testing

Ft. Gibson, OK

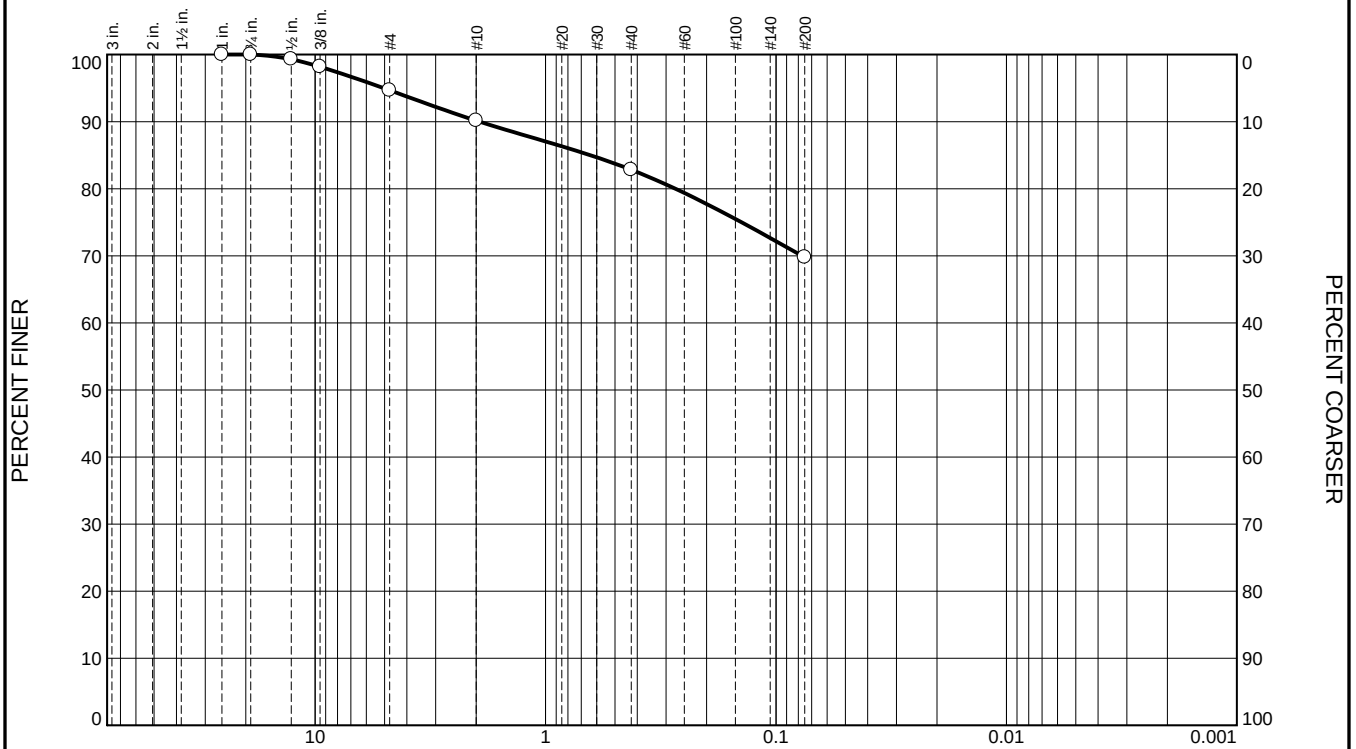
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	5.3	4.5	7.4	13.0	69.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
3/4"	100.0		
1/2"	99.3		
3/8"	98.2		
#4	94.7		
#10	90.2		
#40	82.8		
#200	69.8	10.0 - 100.0	

Material Description
Subsoil Section A - Dark Brown

Atterberg Limits
 PL= NT LL= NT PI= NT

Coefficients
 D₉₀= 1.9378 D₈₅= 0.6395 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 18.1%
 F.M.=0.88

* SFC Subsoil

Source of Sample: Pond 3E Berm
Sample Number: 20-330-1

Depth: Bag Sample 11/6/19

Date: 4/15/2020

Quality Testing

Ft. Gibson, OK

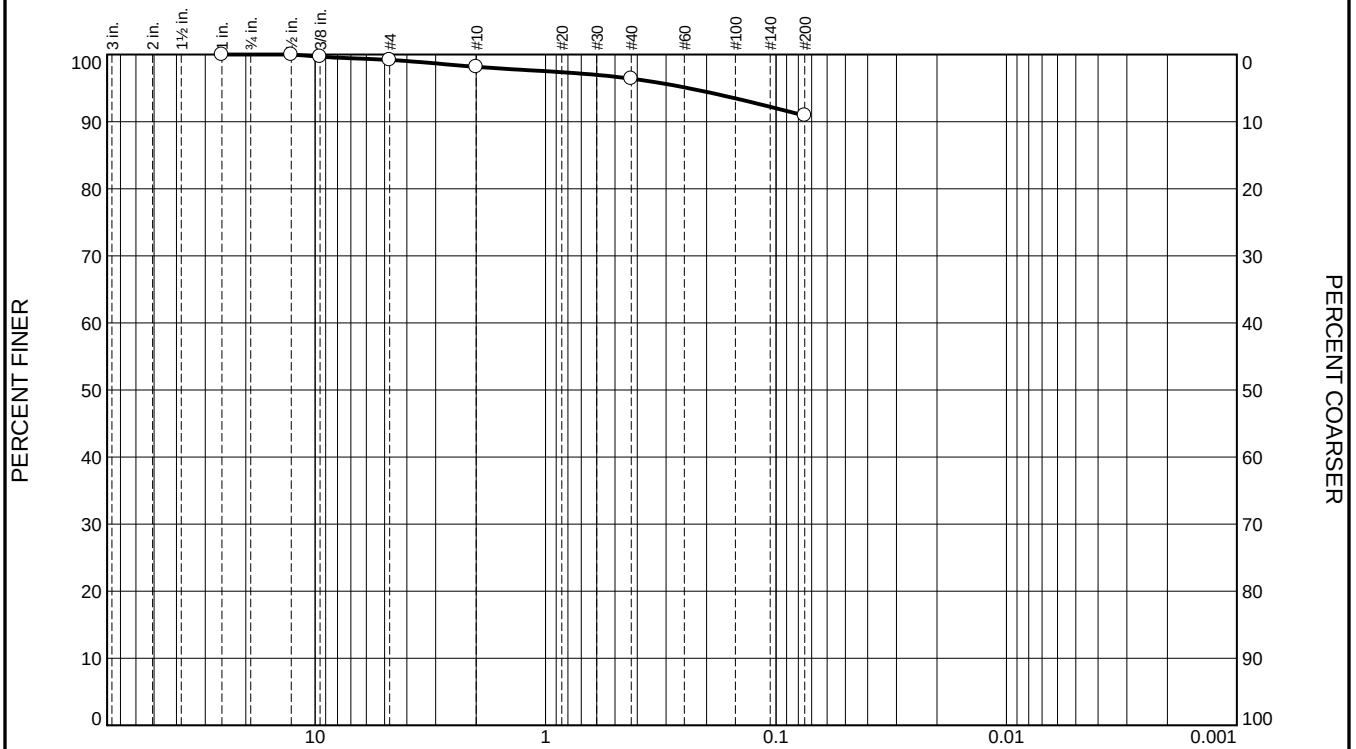
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS,
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.8	1.0	1.8	5.5	90.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
1/2"	100.0		
3/8"	99.7		
#4	99.2		
#10	98.2		
#40	96.4		
#200	90.9	10.0 - 100.0	

Material Description
Subsoil Section A - Yellowish Brown

Atterberg Limits
 PL= NT LL= NT PI= NT

Coefficients
 D₉₀= D₈₅= D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 21.5%
 F.M.=0.19

* SFC Subsoil

Source of Sample: Pond 3E Berm
Sample Number: 20-330-2

Depth: Bag Sample 11/26/19

Date: 4/15/2020

Quality Testing

Ft. Gibson, OK

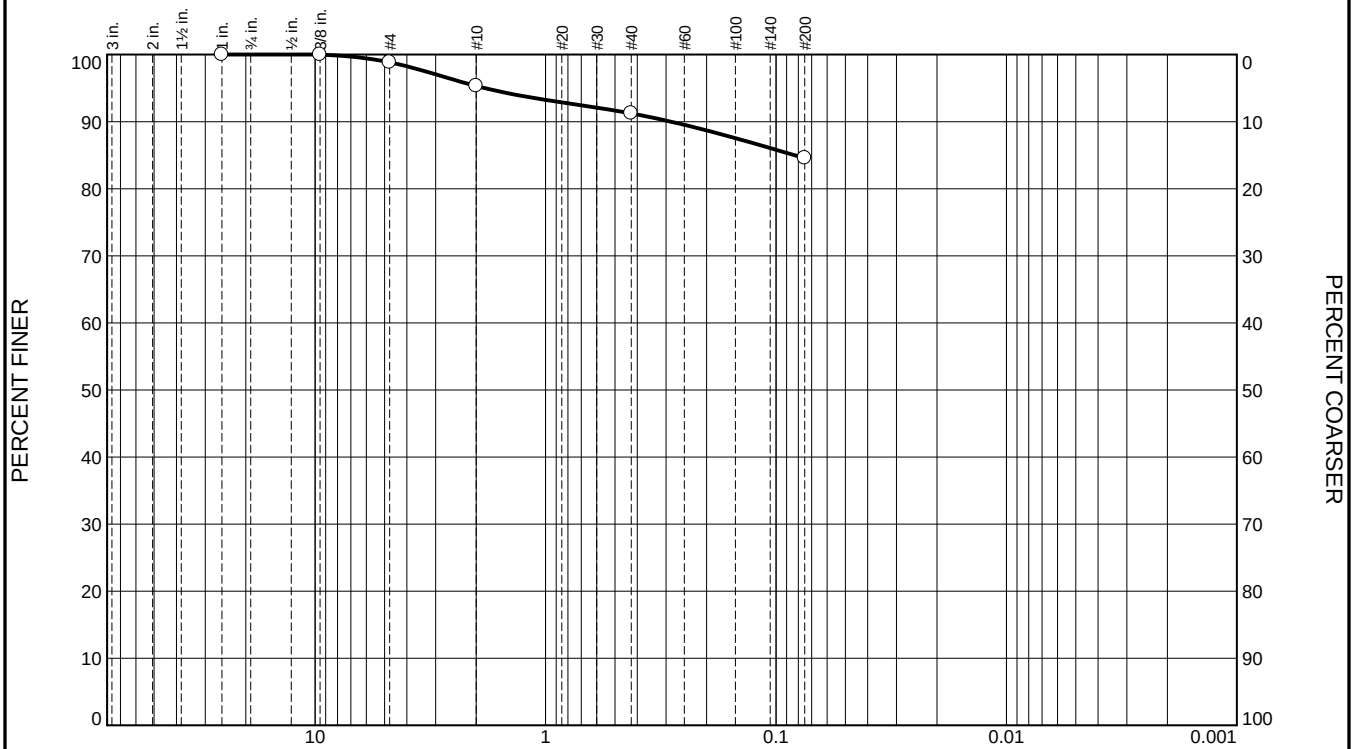
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS,
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.2	3.5	4.1	6.7	84.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
3/8"	100.0		
#4	98.8		
#10	95.3		
#40	91.2		
#200	84.5	10.0 - 100.0	

Material Description
Subsoil Section B - Yellowish Brown

Atterberg Limits
 PL= NT LL= NT PI= NT

Coefficients
 D₉₀= 0.2861 D₈₅= 0.0831 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 18.5%
 F.M.=0.42

* SFC Subsoil

Source of Sample: Pond 3E Berm
Sample Number: 20-330-3

Depth: Bag Sample 1/3/20

Date: 4/15/2020

Quality Testing

Ft. Gibson, OK

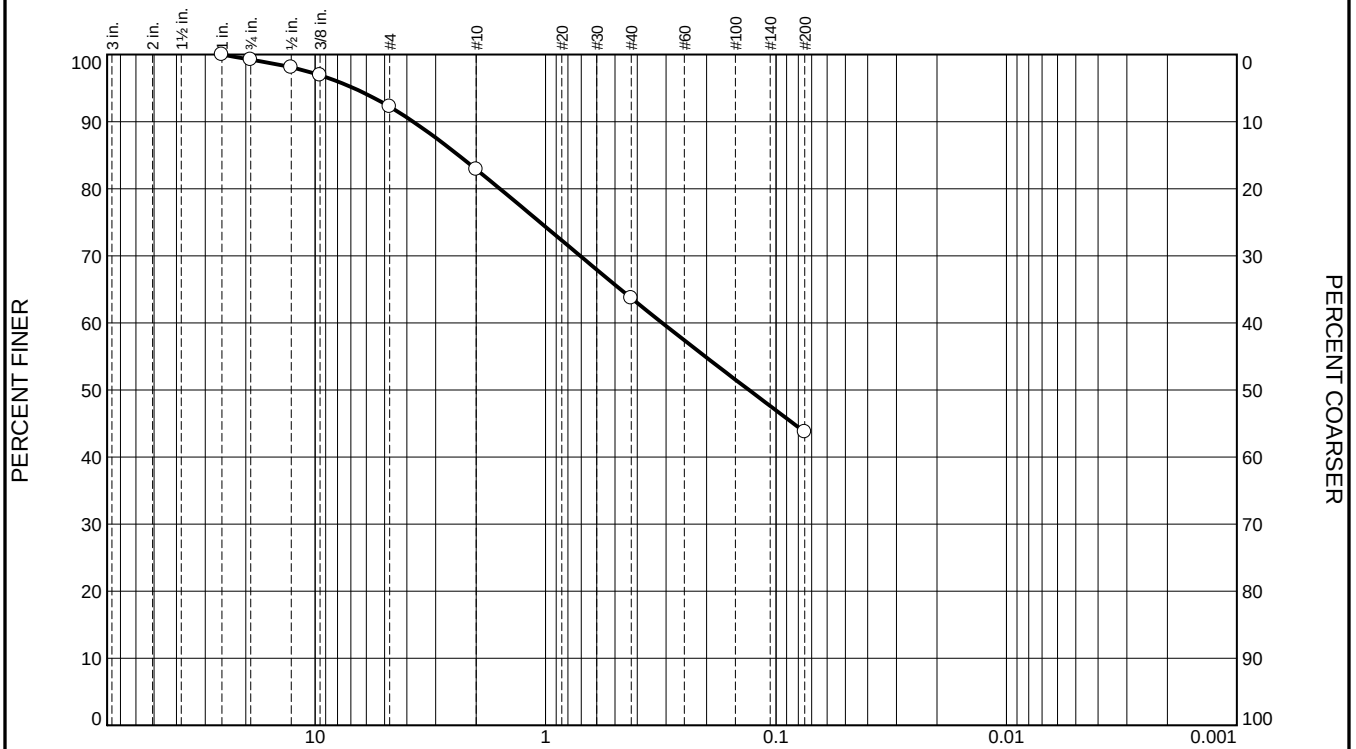
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS,
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.8	7.0	9.3	19.2	20.0	43.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
3/4"	99.2		
1/2"	98.1		
3/8"	96.9		
#4	92.2		
#10	82.9		
#40	63.7		
#200	43.7	10.0 - 100.0	

* SFC Subsoil

Material Description

Sibsoil Section B - Dark Yellowish Brown

Atterberg Limits

PL= NT LL= NT PI= NT

Coefficients

D₉₀= 3.7562 D₈₅= 2.3901 D₆₀= 0.3119
D₅₀= 0.1310 D₃₀= C_u=
D₁₀= C_c=

Classification

USCS= AASHTO=

Remarks

Moisture: 13.4%
F.M.=1.71

Source of Sample: Pond 3E Berm
Sample Number: 20-330-4

Depth: Bag Sample 1/16/20

Date: 4/15/2020

Quality Testing

Ft. Gibson, OK

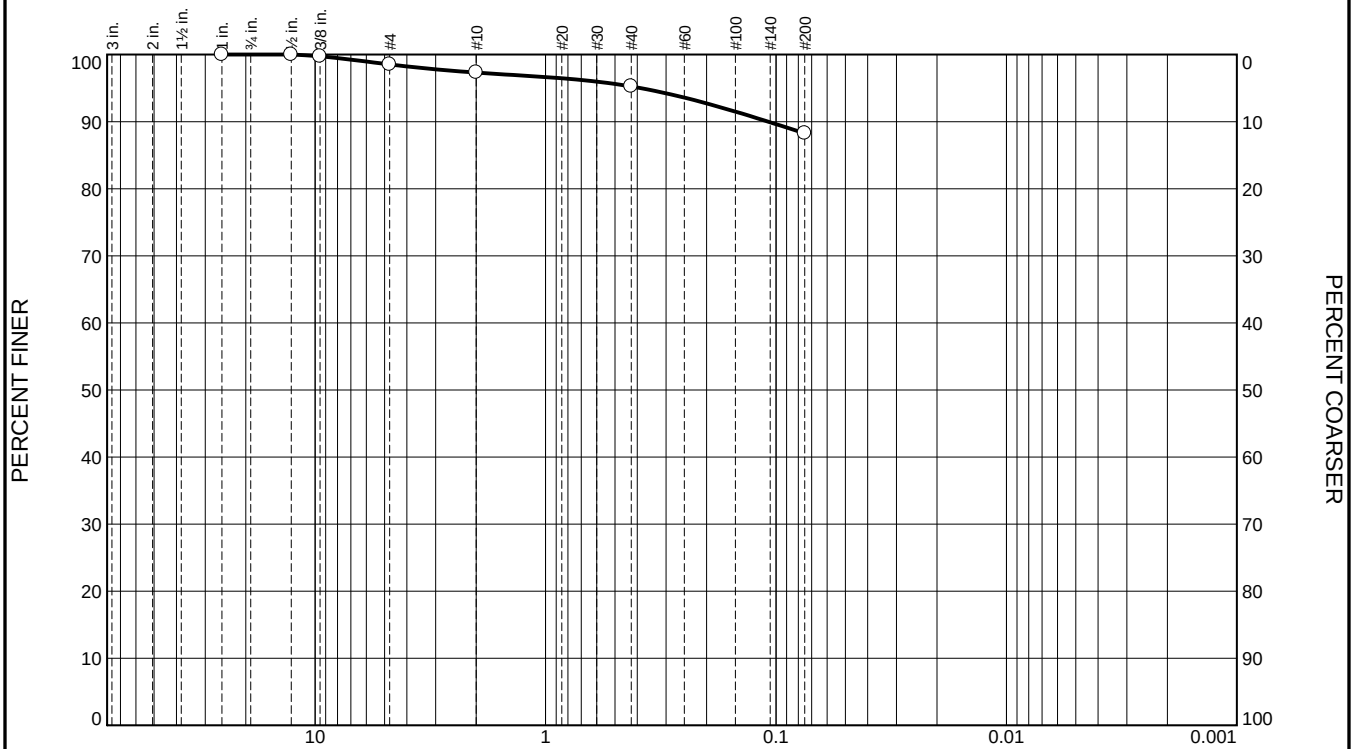
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS,
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.5	1.2	2.1	6.9	88.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
1/2"	100.0		
3/8"	99.7		
#4	98.5		
#10	97.3		
#40	95.2		
#200	88.3	10.0 - 100.0	

* SFC Subsoil

Material Description

Subsoil Section B - Reddish Brown

Atterberg Limits

PL= NT LL= NT PI= NT

Coefficients

D₉₀= 0.1082 D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Moisture: 18.3%
F.M.=0.26

Source of Sample: Pond 3E Berm
Sample Number: 20-330-5

Depth: Bag Sample 2/19/20

Date: 4/15/2020

Quality Testing

Ft. Gibson, OK

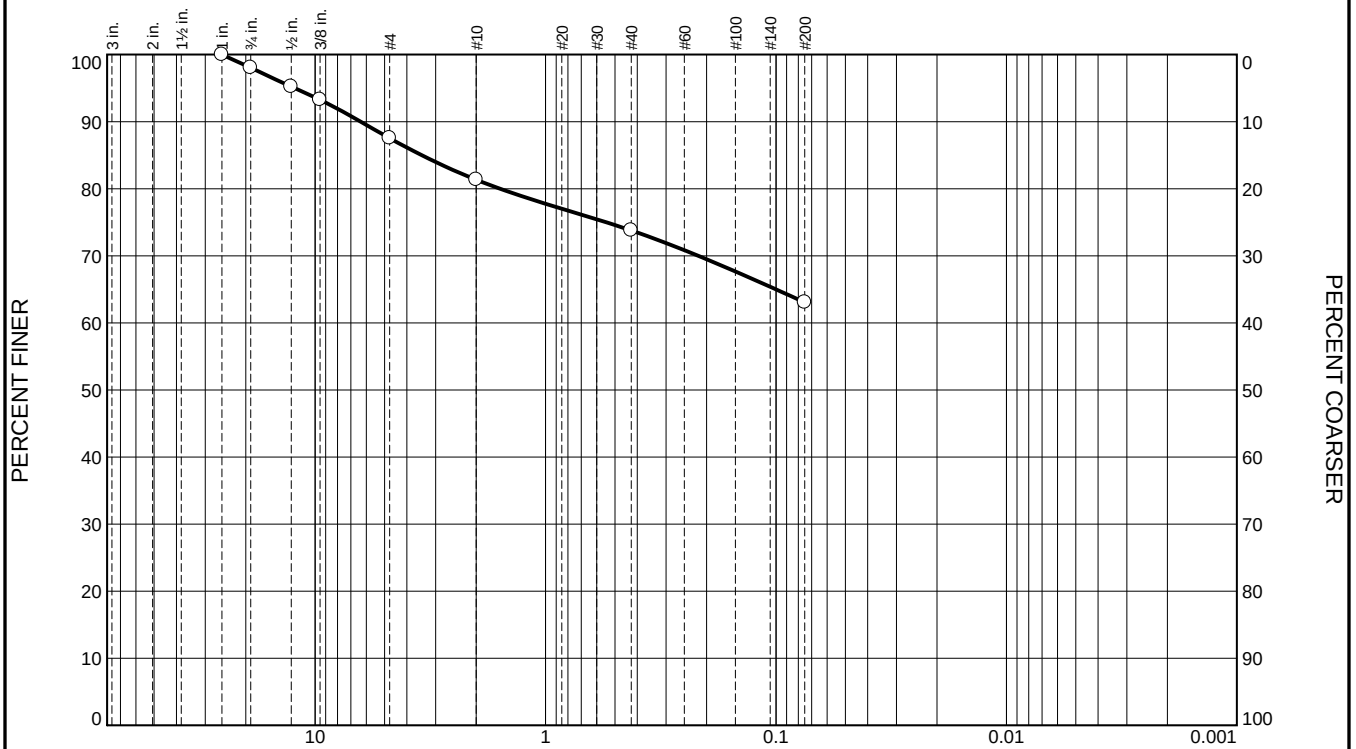
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS,
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.0	10.5	6.2	7.5	10.7	63.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
3/4"	98.0		
1/2"	95.2		
3/8"	93.3		
#4	87.5		
#10	81.3		
#40	73.8		
#200	63.1	10.0 - 100.0	

Material Description
Subsoil Section C - Yellowish Brown

Atterberg Limits
 PL= NT LL= NT PI= NT

Coefficients
 D₉₀= 6.3480 D₈₅= 3.4470 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 20.6%
 F.M.=1.45

* SFC Subsoil

Source of Sample: Pond 3E Berm
Sample Number: 20-330-6

Depth: Bag Sample 3/10/20

Date: 4/15/2020

Quality Testing

Ft. Gibson, OK

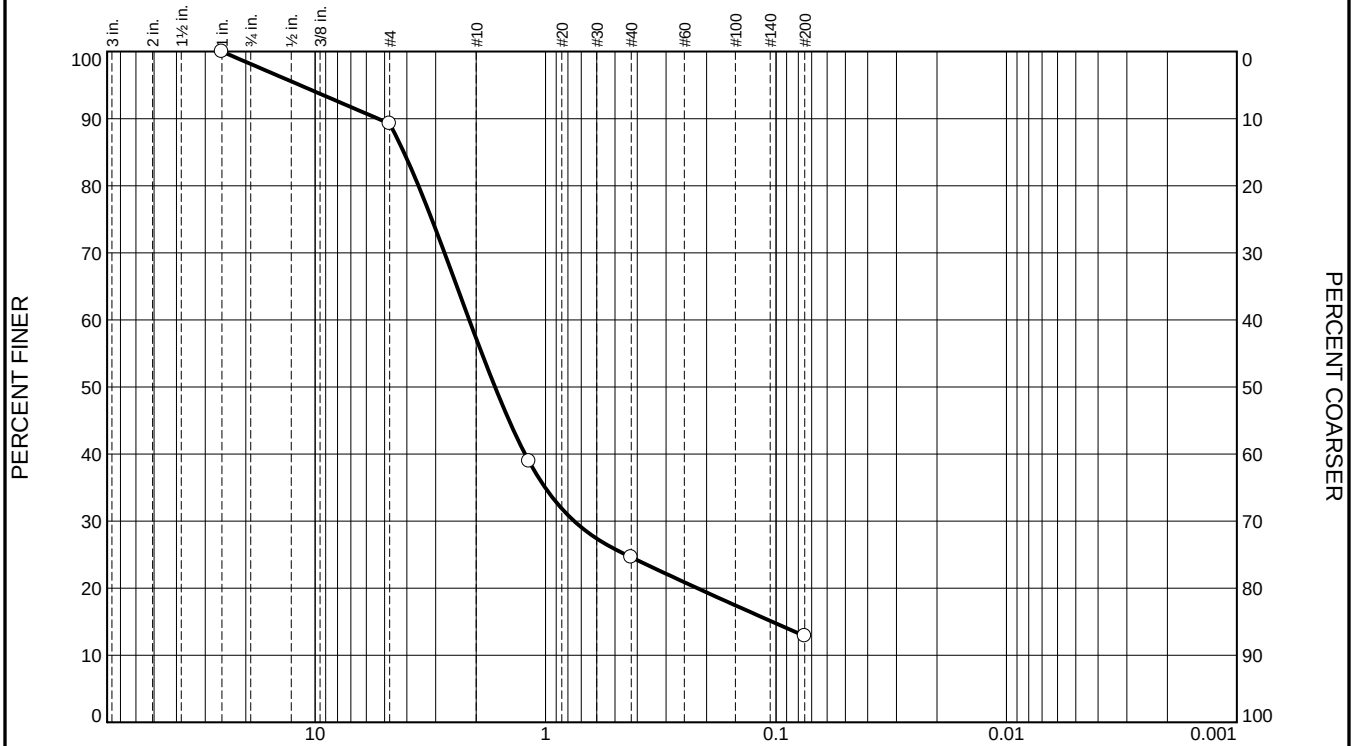
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS,
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.8	9.0	32.0	32.6	11.7	12.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	89.2		
#16	38.9		
#40	24.6		
#200	12.9	5.0 - 35.0	

Material Description

Liner Cover Section C

Atterberg Limits

PL= NT LL= NT PI= NT

Coefficients

D₉₀= 5.3399 D₈₅= 4.1227 D₆₀= 2.1439
D₅₀= 1.6584 D₃₀= 0.7521 D₁₅= 0.1039
D₁₀= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Moisture: 8.1%
F.M.=3.49

* Sequoyah Fuels - Line Cover Material

Source of Sample: Okay Screenings
Sample Number: 20-330-7

Depth: Bag Sample 3/4/20

Date: 4/15/2020

Quality Testing

Ft. Gibson, OK

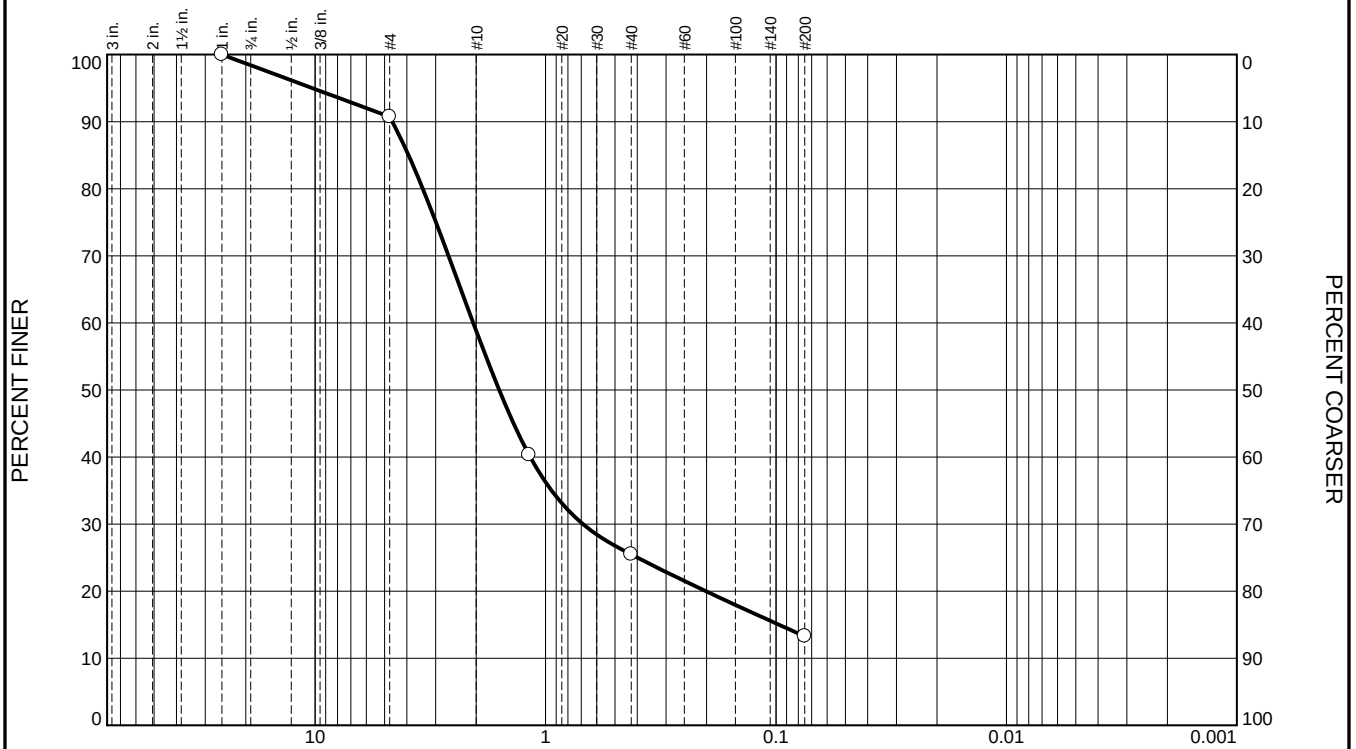
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS,
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.6	7.7	31.9	33.3	12.2	13.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	90.7		
#16	40.3		
#40	25.5		
#200	13.3	5.0 - 35.0	

* Sequoyah Fuels - Line Cover Material

Material Description

Liner Cover Section C

Atterberg Limits

PL= NT LL= NT PI= NT

Coefficients

D₉₀= 4.6258 D₈₅= 3.9334 D₆₀= 2.0604
D₅₀= 1.5901 D₃₀= 0.6882 D₁₅= 0.0971
D₁₀= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Moisture: 8.0%
F.M.=3.41

Source of Sample: Okay Screenings
Sample Number: 20-330-8

Depth: Bag Sample 4/2/20

Date: 4/15/2020

Quality Testing

Ft. Gibson, OK

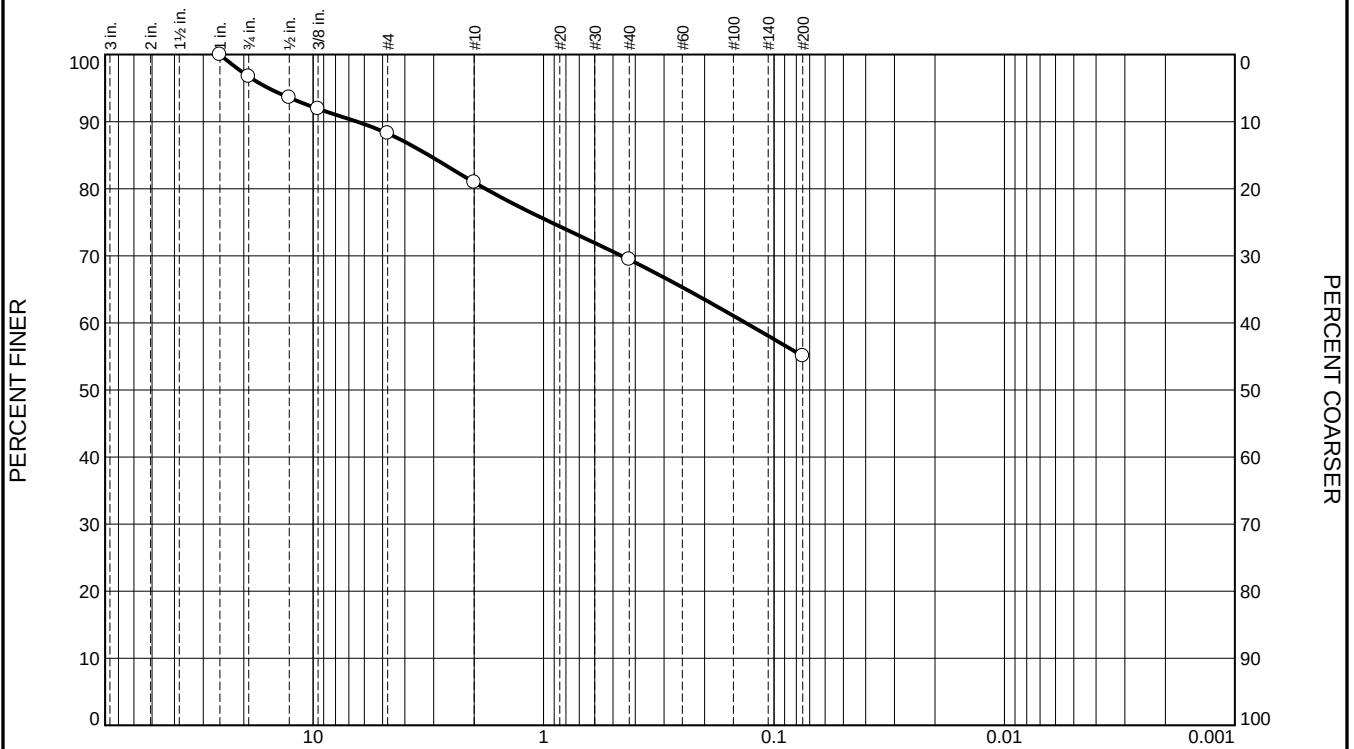
Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS,
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	3.3	8.5	7.3	11.5	14.4	55.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
3/4"	96.7		
1/2"	93.6		
3/8"	91.9		
#4	88.2		
#10	80.9		
#40	69.4		
#200	55.0	10.0 - 100.0	

Material Description
Dark Yellowish Brown

Atterberg Limits
PL= LL= PI=

Coefficients
D₉₀= 6.4567 D₈₅= 3.1488 D₆₀= 0.1326
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= AASHTO=

Remarks
Moisture: 17.3%
F.M.=1.64

* Seq Fuels

Source of Sample: Section C Part 4, Pond 3W
Sample Number: 21-293-1

Depth: Bag Sample

Date: 12/7/2020

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

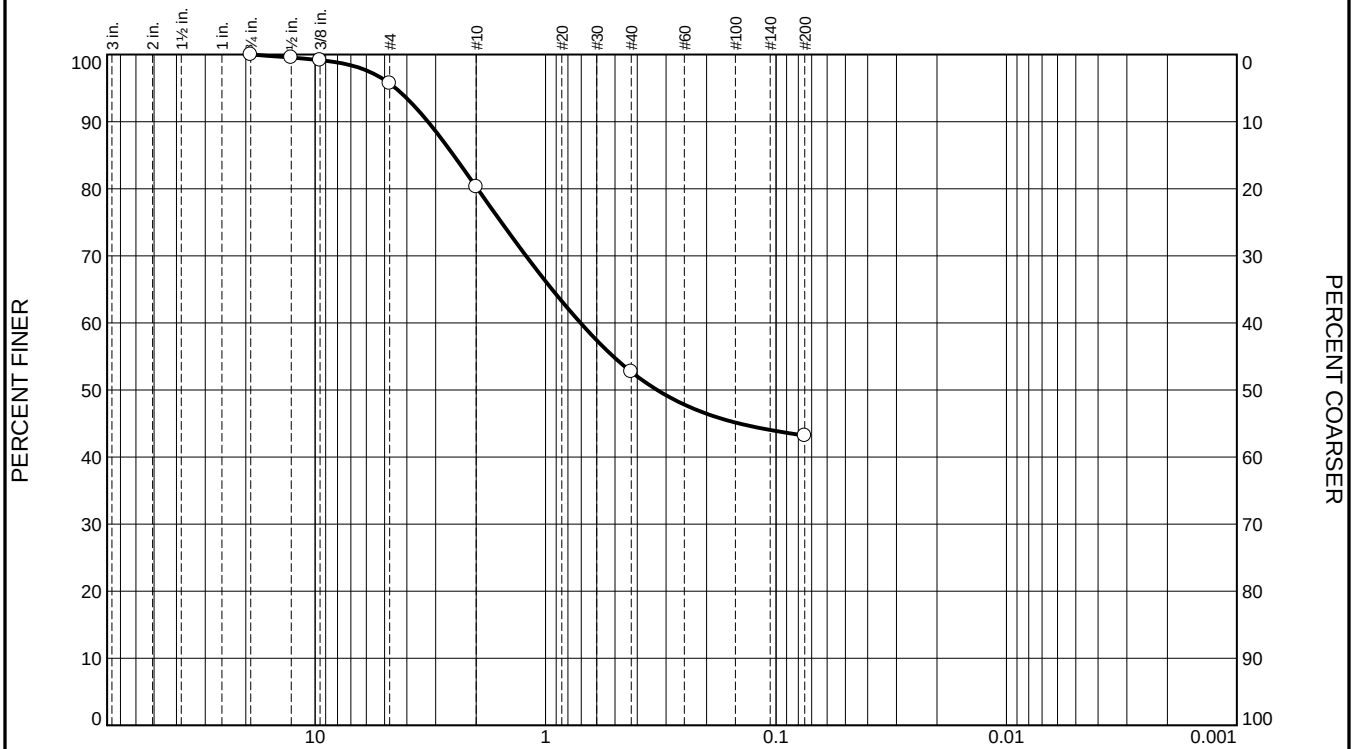
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	4.3	15.4	27.6	9.5	43.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0	100.0	
1/2"	99.6		
3/8"	99.2		
#4	95.7		
#10	80.3		
#40	52.7		
#200	43.2	10.0 - 100.0	

* Seq Fuels

Material Description

Yellowish Brown

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 3.2407

D₈₅= 2.5082

D₆₀= 0.7057

D₅₀= 0.3283

D₃₀=

D₁₅=

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Moisture: 15.6%

F.M.=2.00

Source of Sample: Section G Part 2, East Road
Sample Number: 21-293-2

Depth: Bag Sample

Date: 12/23/2020

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

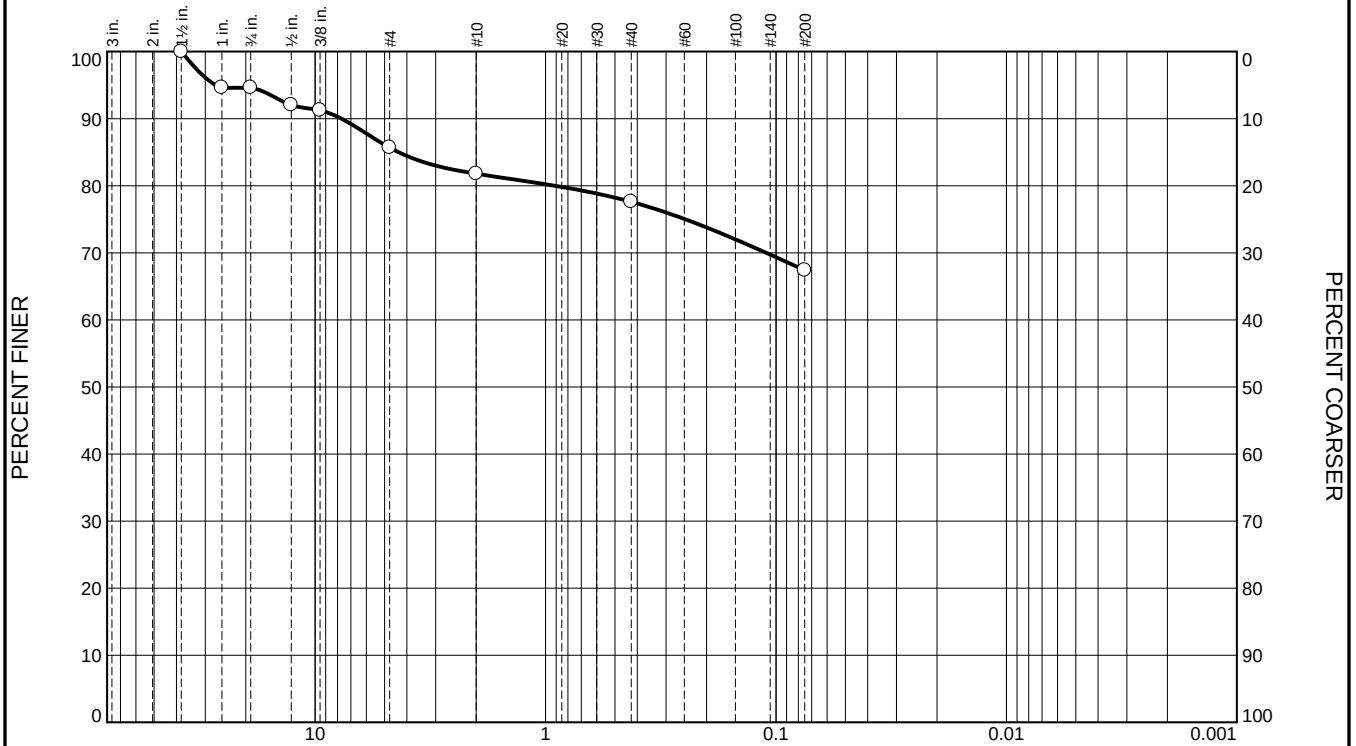
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	5.4	8.9	3.9	4.2	10.2	67.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 1/2"	100.0	100.0	X
1"	94.6		
3/4"	94.6		
1/2"	92.0		
3/8"	91.2		
#4	85.7	10.0 - 100.0	
#10	81.8		
#40	77.6		
#200	67.4		

Material Description
Dark Brown

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 7.6860 D₈₅= 4.3522 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 11.1%
 F.M.=1.39

* Seq Fuels

Source of Sample: Section G Part 1, East DUF4
 Sample Number: 21-293-3

Depth: Bag Sample

Date: 12/23/2020

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.3	8.3	5.0	9.7	12.4	62.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	X
3/4"	97.7		
1/2"	93.9		
3/8"	92.7		
#4	89.4		
#10	84.4	10.0 - 100.0	
#40	74.7		
#200	62.3		

Material Description
Yellowish Brown

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 5.2904 D₈₅= 2.2001 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 11.5
 F.M.=1.37

* Seq Fuels

Source of Sample: Section D Part 3, Pond 3W
 Sample Number: 21-293-4

Depth: Bag Sample

Date: 1/13/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

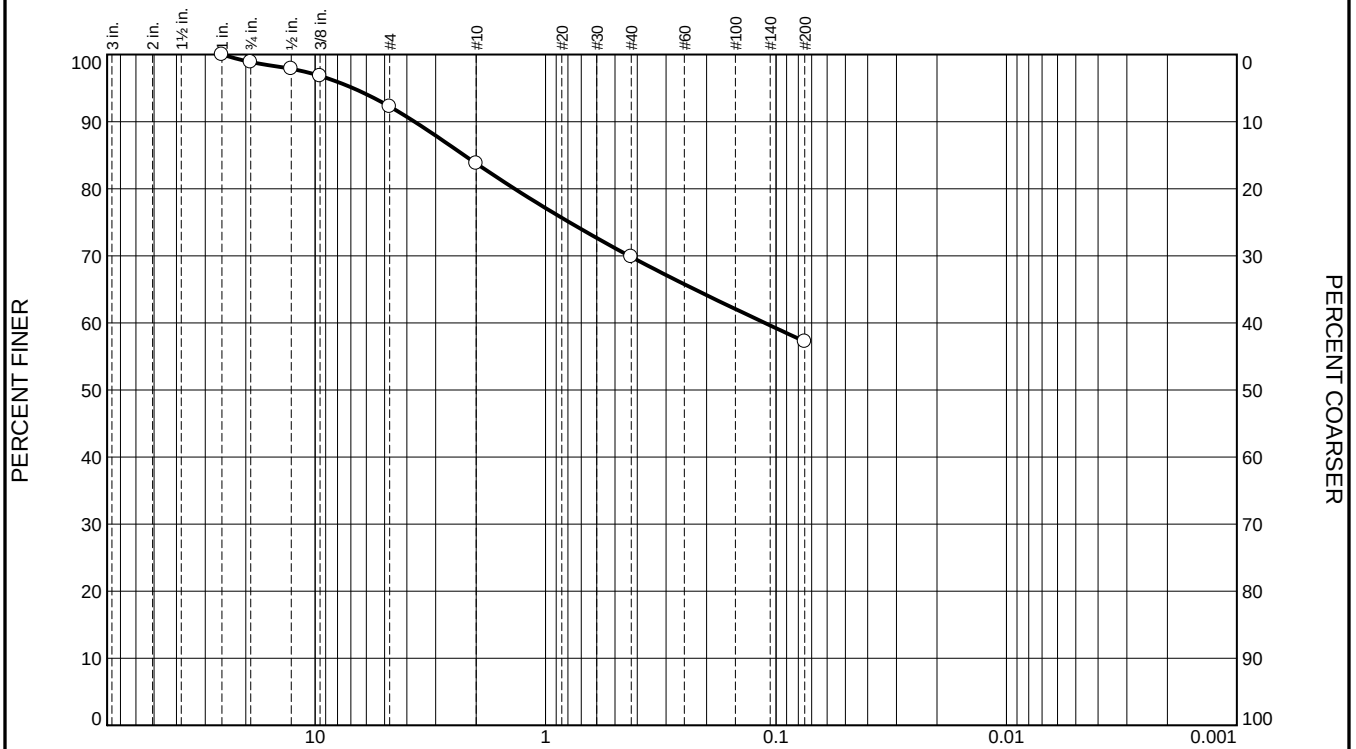
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.1	6.6	8.5	14.0	12.6	57.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	X
3/4"	98.9		
1/2"	97.9		
3/8"	96.8		
#4	92.3		
#10	83.8	10.0 - 100.0	
#40	69.8		
#200	57.2		

* Seq Fuels

Material Description

Light Brown

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 3.7065

D₈₅= 2.2574

D₆₀= 0.1119

D₅₀=

D₃₀=

D₁₅=

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Moisture: 8.4%

F.M.=1.46

Source of Sample: Section D Part 4, YC Pad Shale
Sample Number: 21-293-5

Depth: Bag Sample

Date: 3/2/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

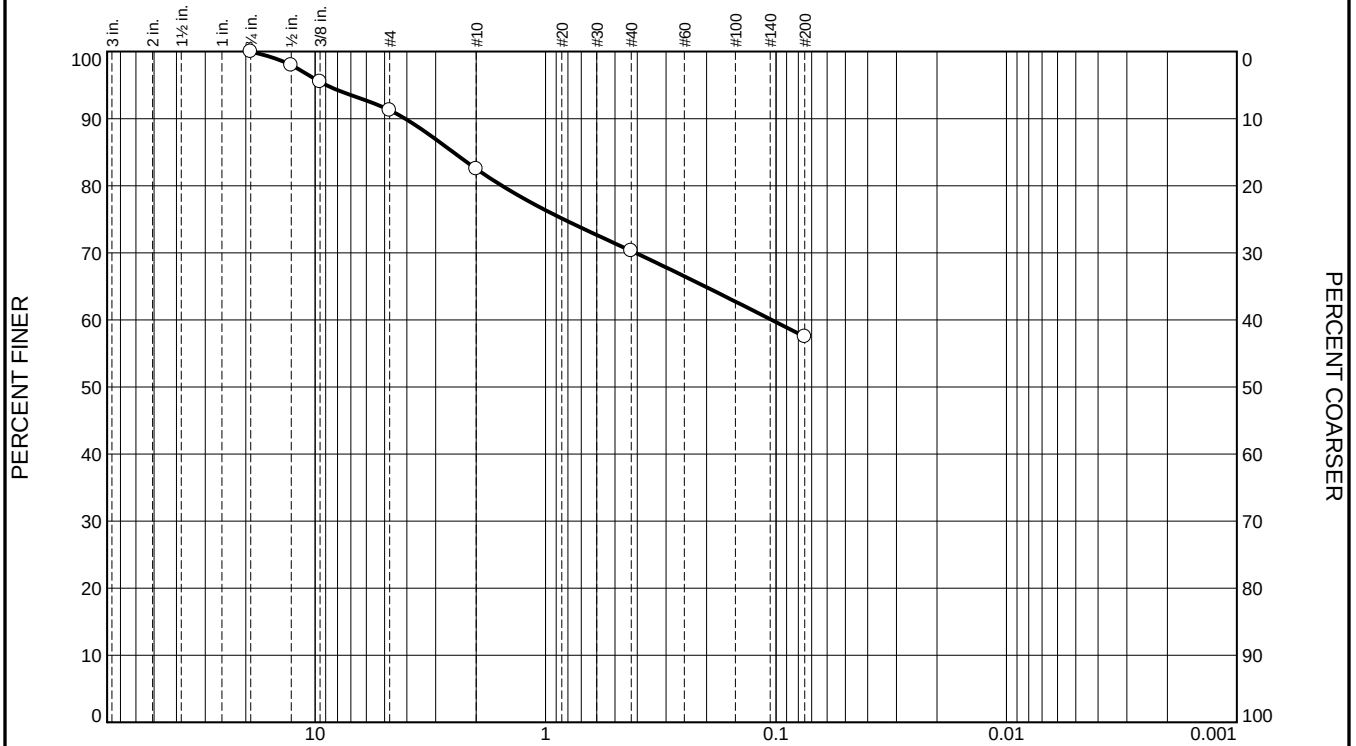
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	8.7	8.8	12.2	12.8	57.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0	100.0	
1/2"	98.0		
3/8"	95.5		
#4	91.3		
#10	82.5		
#40	70.3		
#200	57.5	10.0 - 100.0	

Material Description
Dark Reddish Brown

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 4.0701 D₈₅= 2.5166 D₆₀= 0.1045
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 18.0%
 F.M.=1.48

* Seq Fuels

Source of Sample: Section D Part 3, YC Pad Clay
 Sample Number: 21-293-6

Depth: Bag Sample

Date: 3/5/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

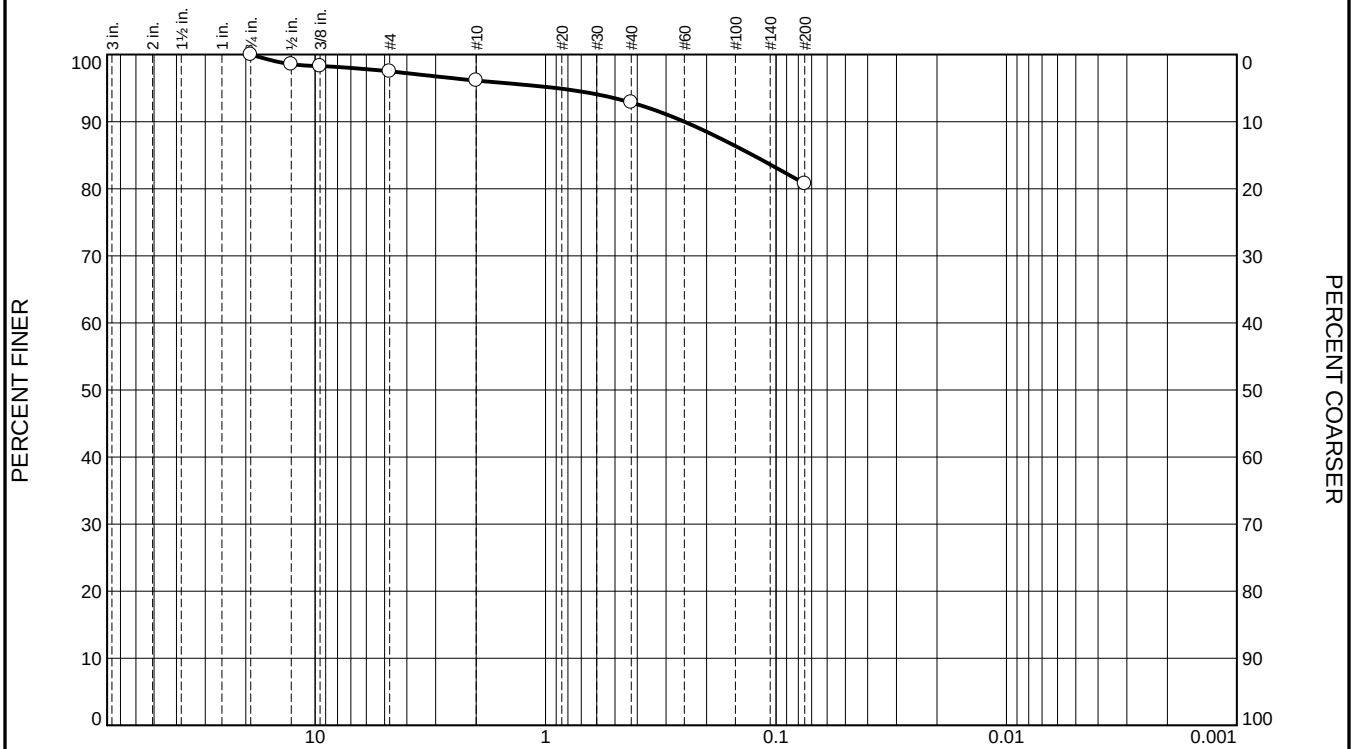
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.5	1.4	3.2	12.2	80.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0	100.0	
1/2"	98.6		
3/8"	98.3		
#4	97.5		
#10	96.1		
#40	92.9		
#200	80.7	10.0 - 100.0	

Material Description
 Reddish Brown

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 0.2501 D₈₅= 0.1259 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 7.3%
 F.M.=0.41

* Seq Fuels

Source of Sample: Section G Part 4, Pond 3W
 Sample Number: 21-293-7

Depth: Bag Sample

Date: 3/10/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

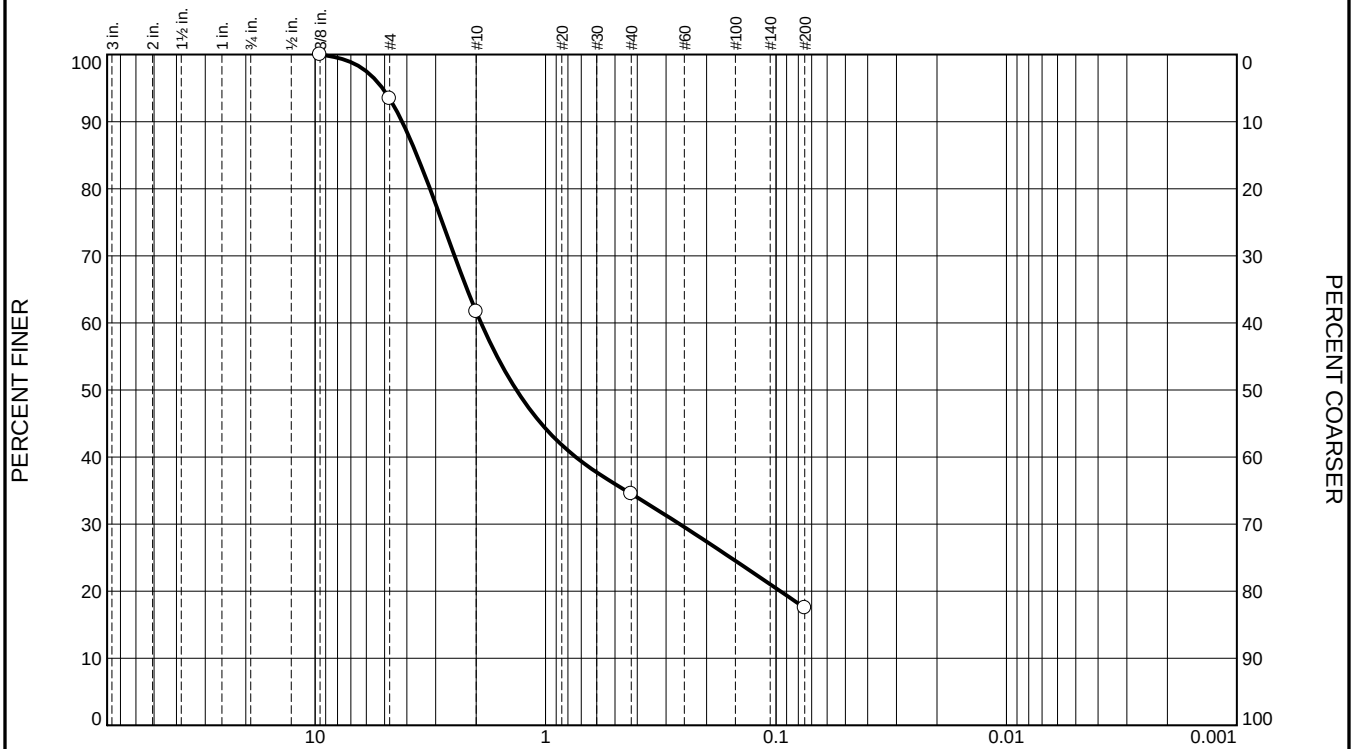
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	6.6	31.8	27.1	17.0	17.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0	100.0	
#4	93.4		
#10	61.6		
#40	34.5		
#200	17.5	5.0 - 35.0	

* Seq Fuels

Material Description

Screenings

PL= **Atterberg Limits** PI=

LL= **Coefficients** D₈₅= 3.6177

D₉₀= 4.1919 D₃₀= 0.2619 D₆₀= 1.9071

D₅₀= 1.3386 C_u= D₁₅=

D₁₀= **Classification** C_c=

USCS= AASHTO=

Remarks

Moisture: 8.2%

F.M.=2.98

Source of Sample: Section D Part 1, Okay Quarry
Sample Number: 21-293-8

Depth: Bag Sample

Date: 11/18/2020

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.0	23.6	24.3	26.3	22.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2"	100.0	100.0	
3/8"	99.9		
#4	97.0		
#10	73.4		
#40	49.1		
#200	22.8	5.0 - 35.0	

* Seq Fuels

Material Description

Screenings

PL= **Atterberg Limits** PI=

LL= **Coefficients** D₈₅= 2.9304

D₉₀= 3.4718 D₃₀= 0.1156 D₆₀= 1.0407

D₅₀= 0.4576 C_u= D₁₅=

D₁₀= **Classification** C_c=

USCS= AASHTO=

Remarks

Moisture: 7.6%

F.M.=2.31

Source of Sample: Section D Part 2, Spiro Quarry
Sample Number: 21-293-9

Depth: Bag Sample

Date: 12/21/2020

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

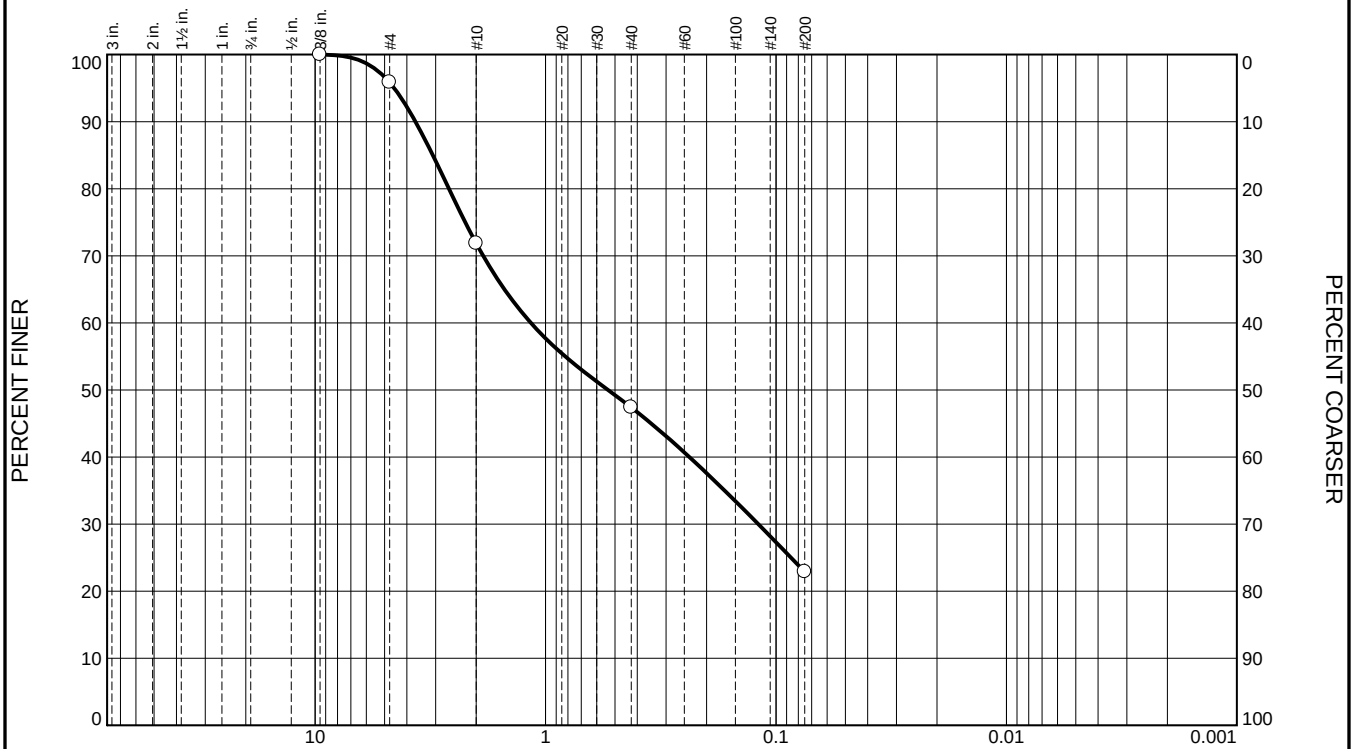
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	4.2	24.0	24.4	24.5	22.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0	100.0	
#4	95.8		
#10	71.8		
#40	47.4		
#200	22.9	5.0 - 35.0	

* Seq Fuels

Material Description

Screenings

PL= **Atterberg Limits** PI=

LL= **Coefficients**

D₉₀= 3.6695 D₈₅= 3.0869 D₆₀= 1.1581

D₅₀= 0.5357 D₃₀= 0.1194 D₁₅=

D₁₀= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Moisture: 8.1%

F.M.=2.39

Source of Sample: Section D Part 4, Spiro Quarry
Sample Number: 21-293-10

Depth: Bag Sample

Date: 1/13/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

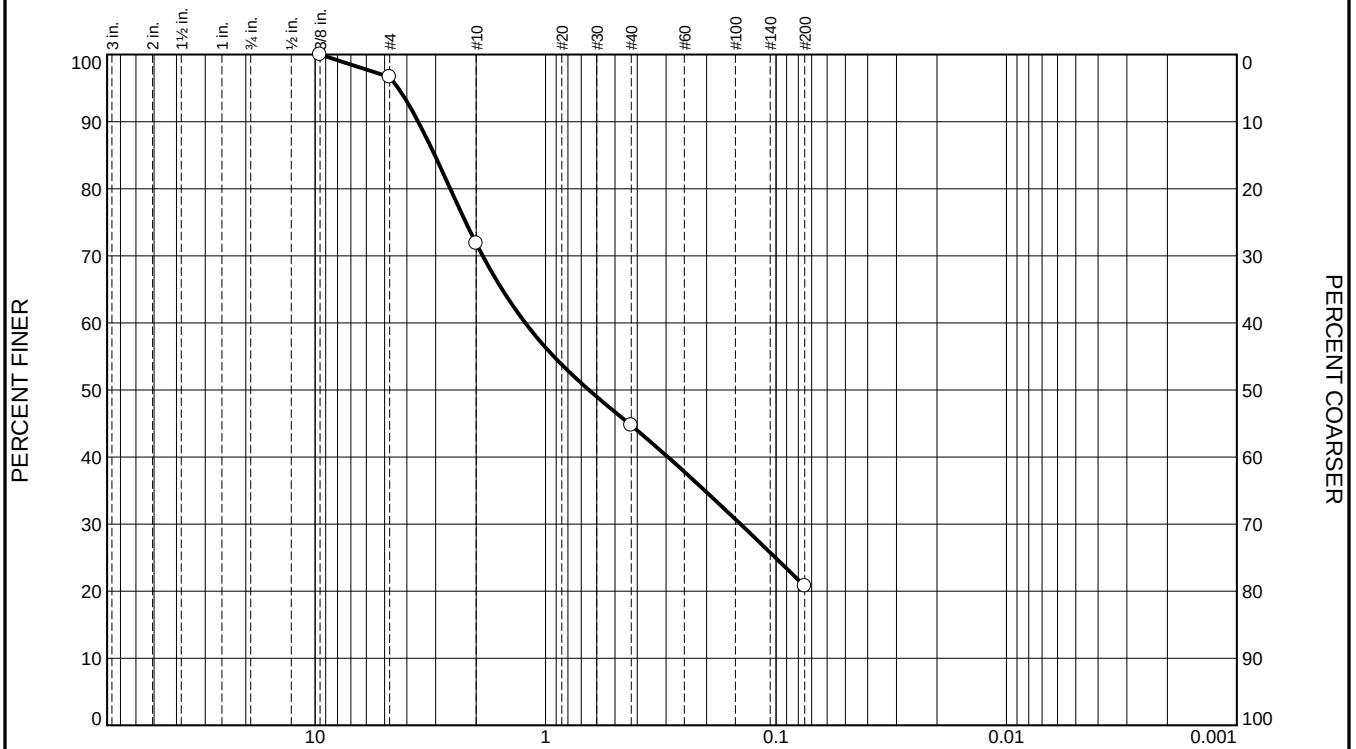
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.3	24.9	27.1	23.9	20.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0	100.0	
#4	96.7		
#10	71.8		
#40	44.7		
#200	20.8	5.0 - 35.0	

* Seq Fuels

Material Description

Screenings

PL= **Atterberg Limits** PI=

LL= **Coefficients**

D₉₀= 3.5708 D₈₅= 3.0270 D₆₀= 1.2250

D₅₀= 0.6487 D₃₀= 0.1426 D₁₅=

D₁₀= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Moisture: 9.0

F.M.=2.47

Source of Sample: Section G Part 1, Spiro Quarry
Sample Number: 21-293-11

Depth: Bag Sample

Date: 1/13/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

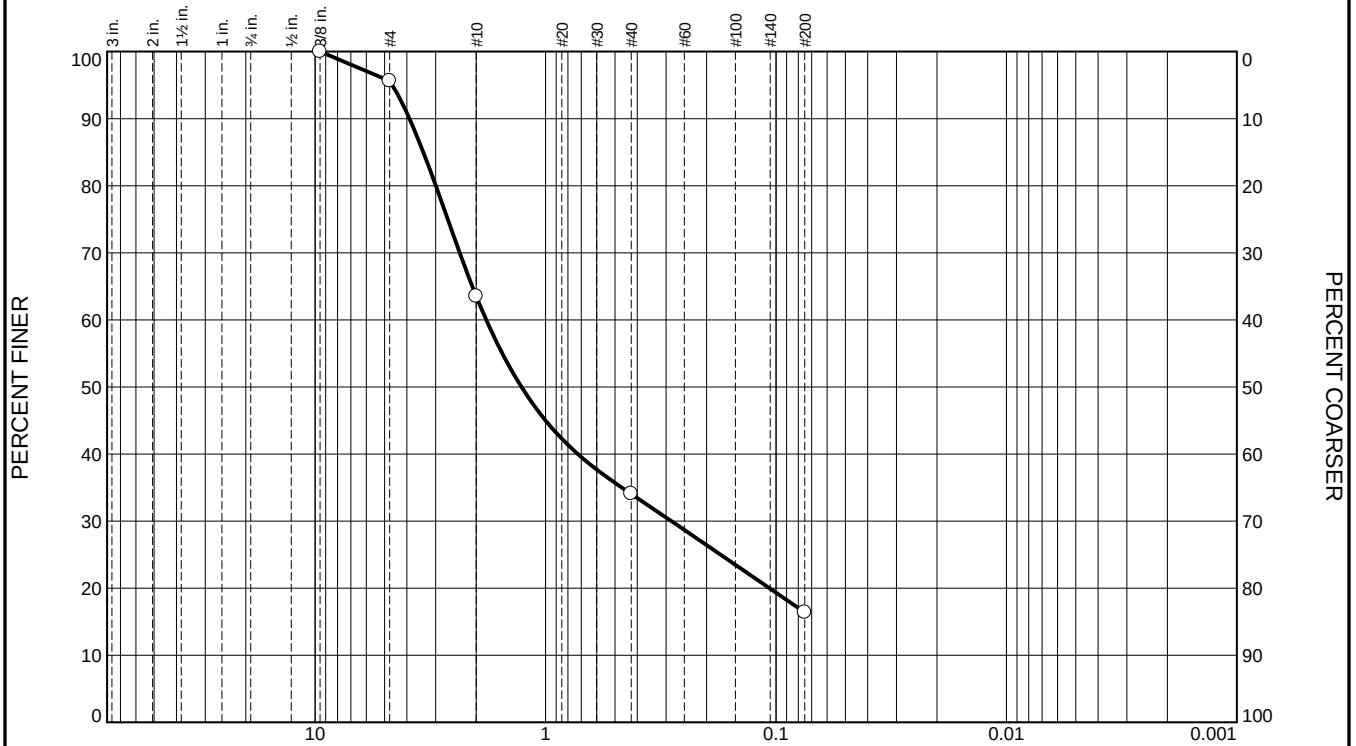
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	4.4	32.1	29.4	17.7	16.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0	100.0	
#4	95.6		
#10	63.5		
#40	34.1		
#200	16.4	5.0 - 35.0	

* Seq Fuels

Material Description

Screenings

PL= **Atterberg Limits** PI=

LL= **Coefficients** D₈₅= 3.3937

D₉₀= 3.8944 D₃₀= 0.2846 D₆₀= 1.8106

D₅₀= 1.2724 C_u= D₁₅=

D₁₀= **Classification** C_c=

USCS= AASHTO=

Remarks

Moisture: 5.0%

F.M.=2.94

Source of Sample: Section G Part 3, Spiro/Okay Quarry
Sample Number: 21-293-12

Depth: Bag Sample

Date: 3/9/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

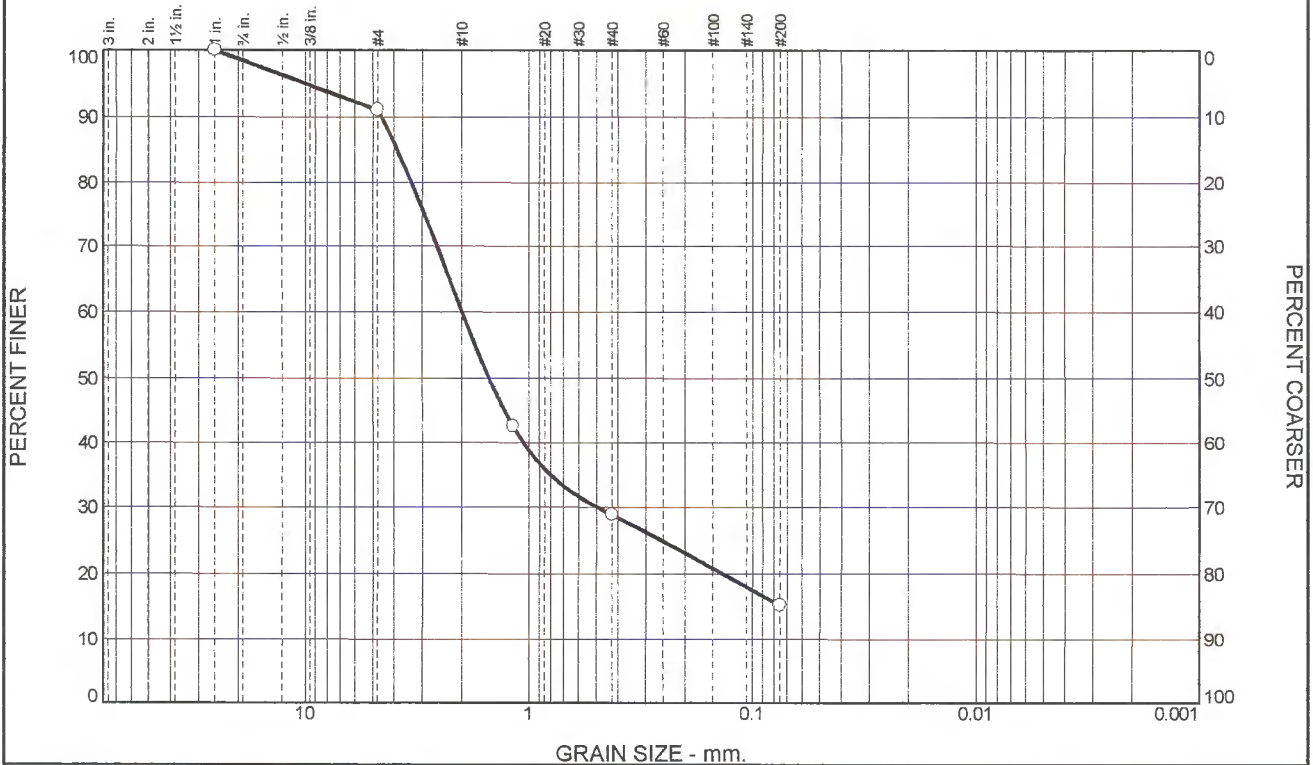
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.5	7.5	30.8	31.3	13.6	15.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	91.0		
#16	42.6		
#40	28.9		
#200	15.3	5.0 - 35.0	

* Sequoyah Fuels - Line Cover Material

Material Description		
Screenings 6/24/2021		
PL= NP	LL= NV	PI= NP
Coefficients		
D ₉₀ = 4.5712	D ₈₅ = 3.8747	D ₆₀ = 1.9884
D ₅₀ = 1.5097	D ₃₀ = 0.4941	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Classification		
USCS= SM	AASHTO=	A-1-b
Remarks		
Moisture: 5.8%		
F.M.=3.28		

Source of Sample: Section F Part 1, Okay Quarry
Sample Number: 21-606

Depth: Bag Sample

Date: 8/10/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

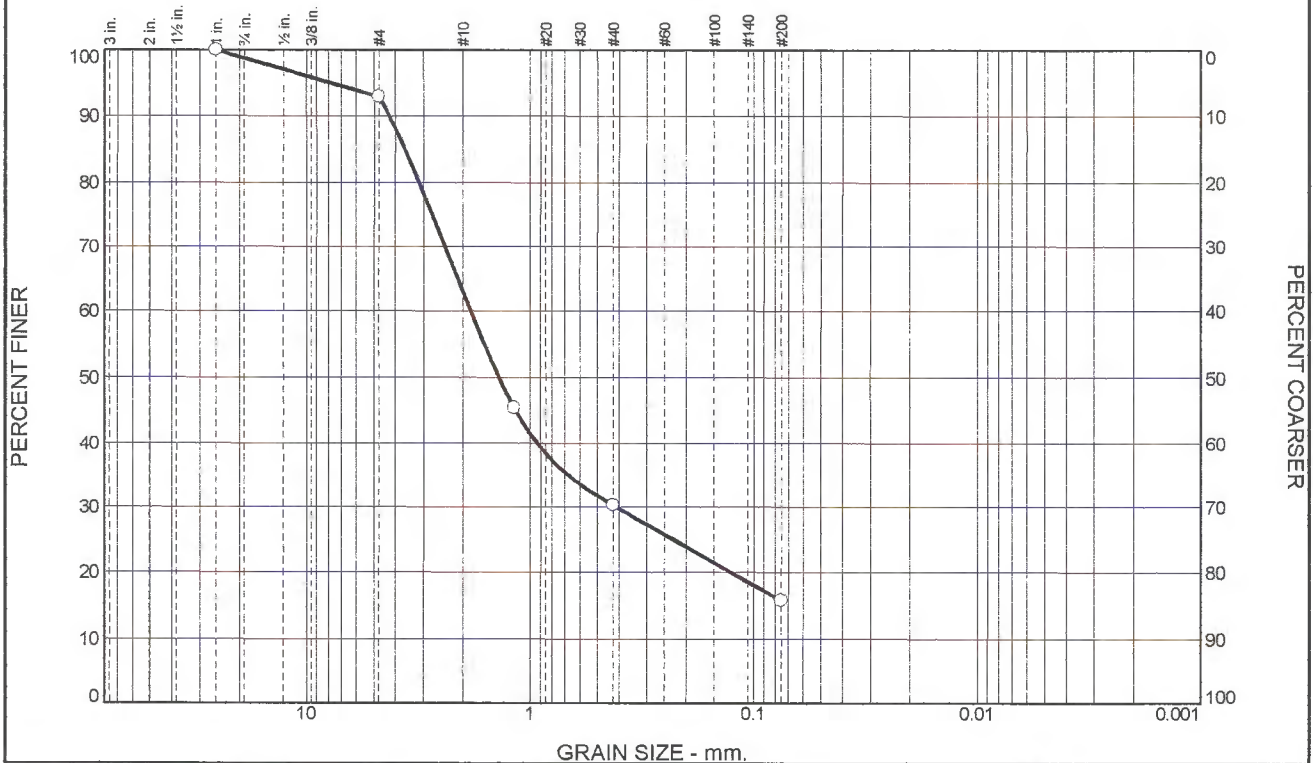
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.2	5.9	29.9	32.7	14.5	15.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	92.9		
#16	45.4		
#40	30.3		
#200	15.8	5.0 - 35.0	

* Sequoyah Fuels - Line Cover Material

Material Description		
Screenings, 7/7/2021		
Atterberg Limits		
PL= NP	LL= NV	PI= NP
Coefficients		
D ₉₀ = 4.2686	D ₈₅ = 3.6303	D ₆₀ = 1.8436
D ₅₀ = 1.3799	D ₃₀ = 0.4107	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Classification		
USCS= SM	AASHTO=	A-1-b
Remarks		
Moisture: 6.2%		
F.M.=3.15		

Source of Sample: Section F Part 3, Okay Quarry
Sample Number: 21-607

Depth: Bag Sample

Date: 8/10/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

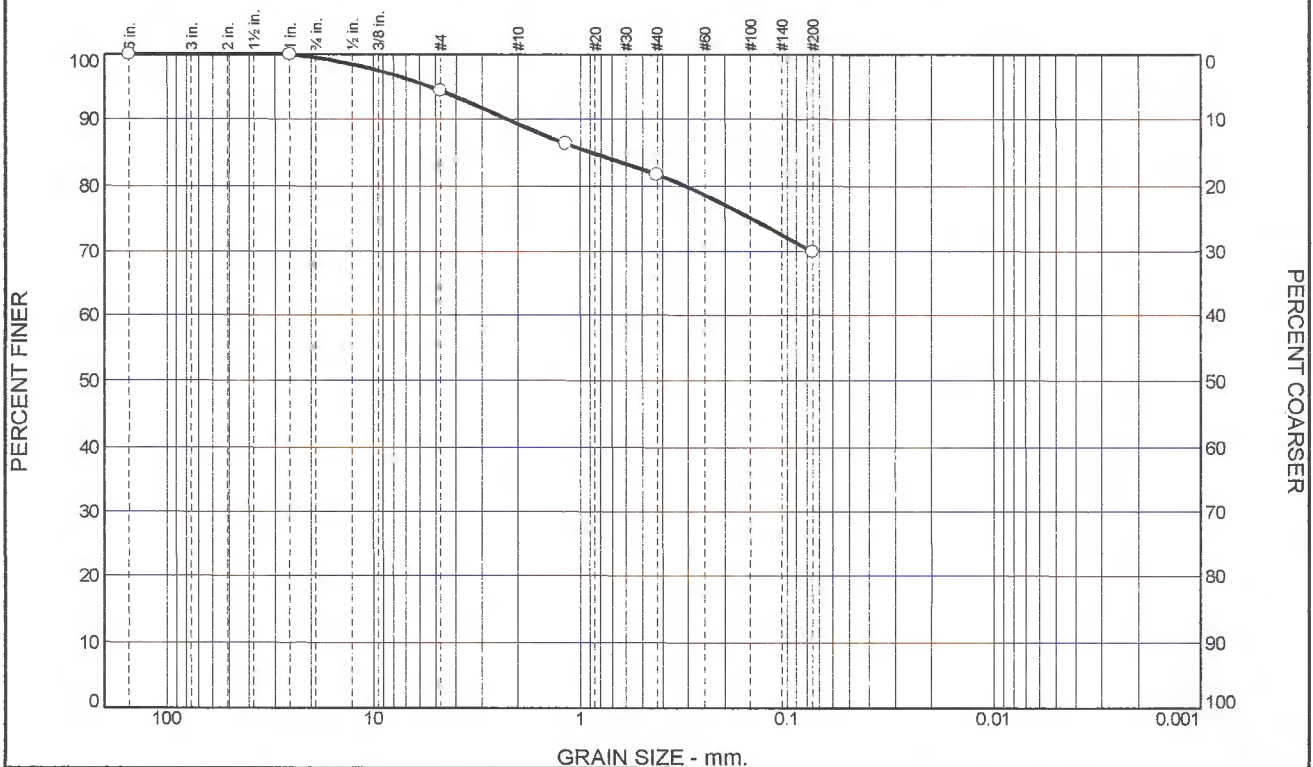
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.5	5.1	5.1	7.6	11.8	69.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	94.4		
#16	86.3		
#40	81.7		
#200	69.9	10.0 - 100.0	

* SFC Subsoil

Material Description
 Light Reddish Brown
 6/29/2021

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 2.2606 D₈₅= 0.8878 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 14.5%
 F.M.=0.94

Source of Sample: Section F Part 2, Subsoil
 Sample Number: 21-608

Depth: Bag Sample

Date: 8/10/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

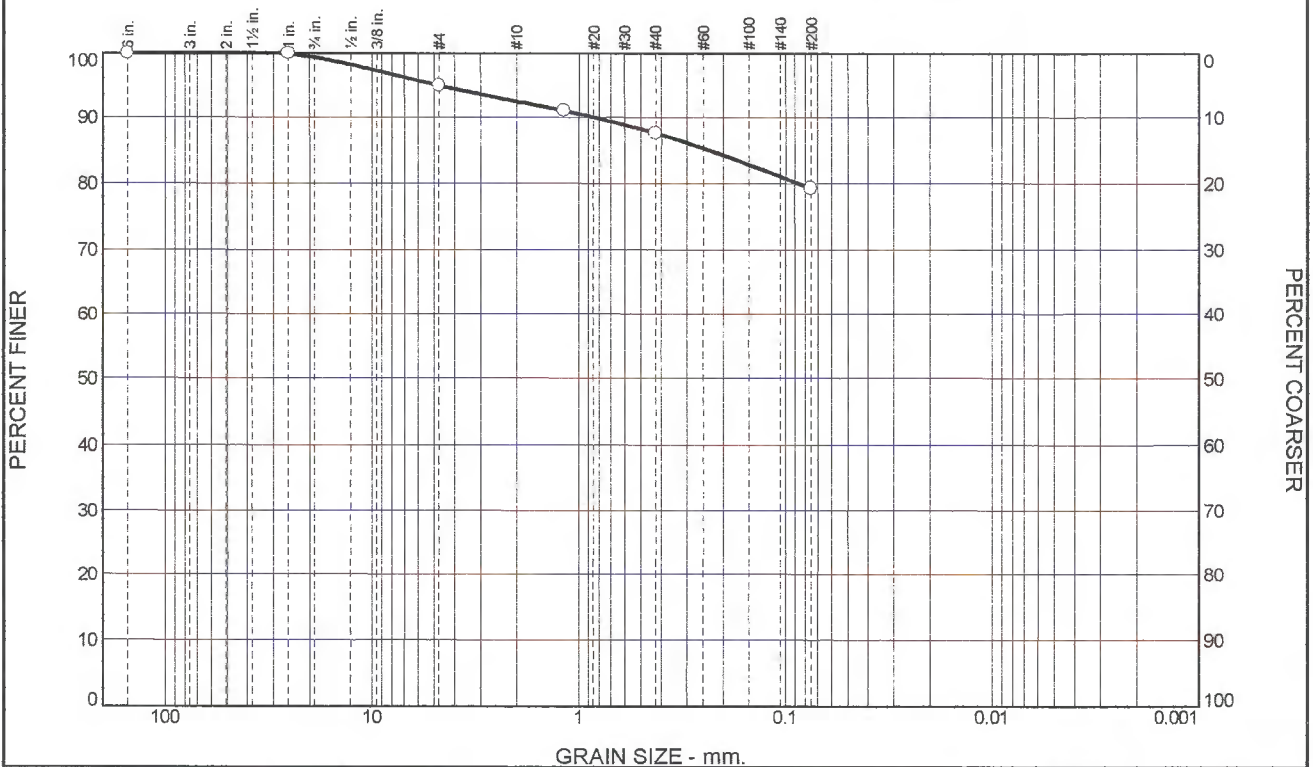
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.6	4.4	2.5	4.9	8.4	79.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	95.0		
#16	91.0		
#40	87.6		
#200	79.2	10.0 - 100.0	

* SFC Subsoil

Material Description

Reddish Brown
7/20/2021

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.8401 D₈₅= 0.2367 D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Moisture: 8.8%
F.M.=0.67

Source of Sample: Section F Part 3, Subsoil
Sample Number: 21-609

Depth: Bag Sample

Date: 8/10/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

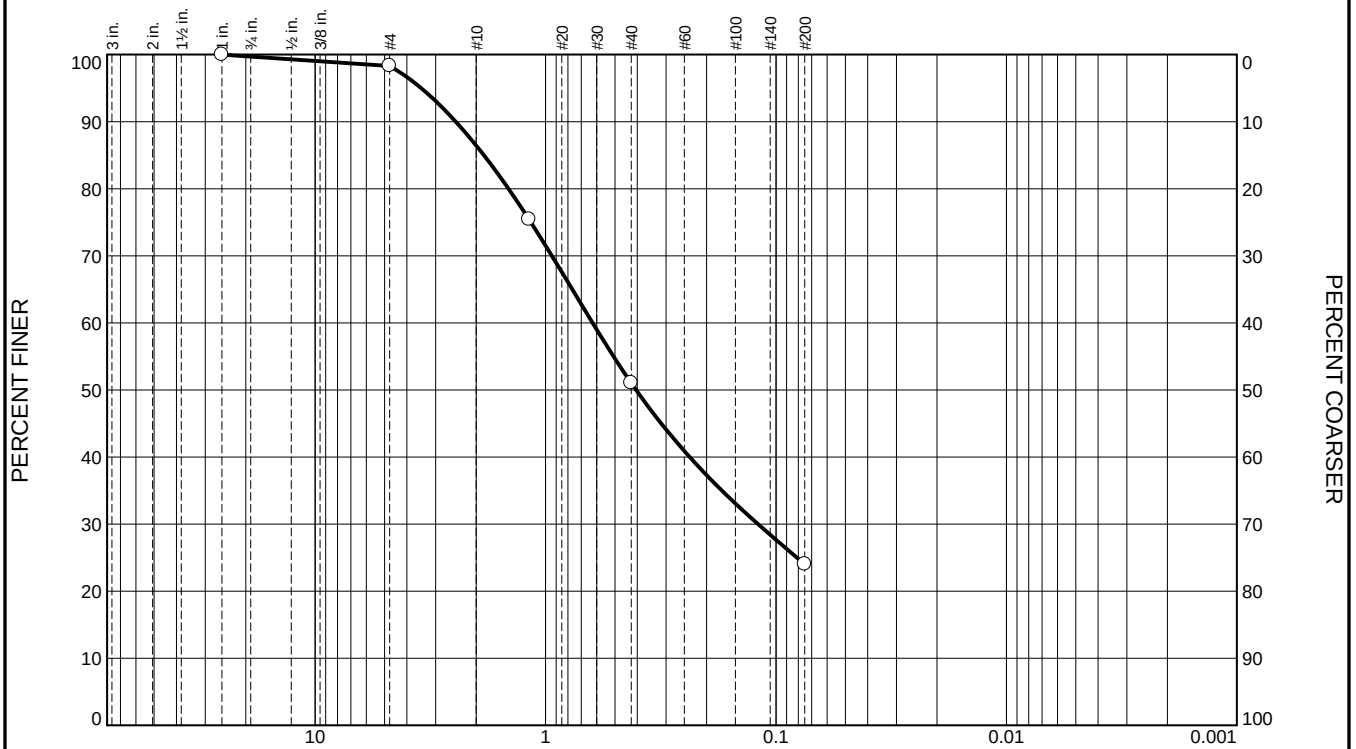
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.3	1.4	11.9	35.4	27.0	24.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	98.3		
#16	75.4		
#40	51.0		
#200	24.0	5.0 - 35.0	

Material Description		
Screenings		
PL= NP		
LL= NV		
PI= NP		
Atterberg Limits		
Coefficients		
D ₉₀ = 2.4536	D ₈₅ = 1.8532	D ₆₀ = 0.6251
D ₅₀ = 0.4046	D ₃₀ = 0.1197	D ₁₅ =
D ₁₀ =	C _u =	C _c =
USCS= SM		
AASHTO= A-2-4(0)		
Classification		
Remarks		
Moisture: 4.7%		
F.M.=2.02		

* Sequoyah Fuels - Line Cover Material

Source of Sample: Section E Part 1, Spiro Quarry
Sample Number: 22-100

Depth: Bag Sample

Date: 10/20/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

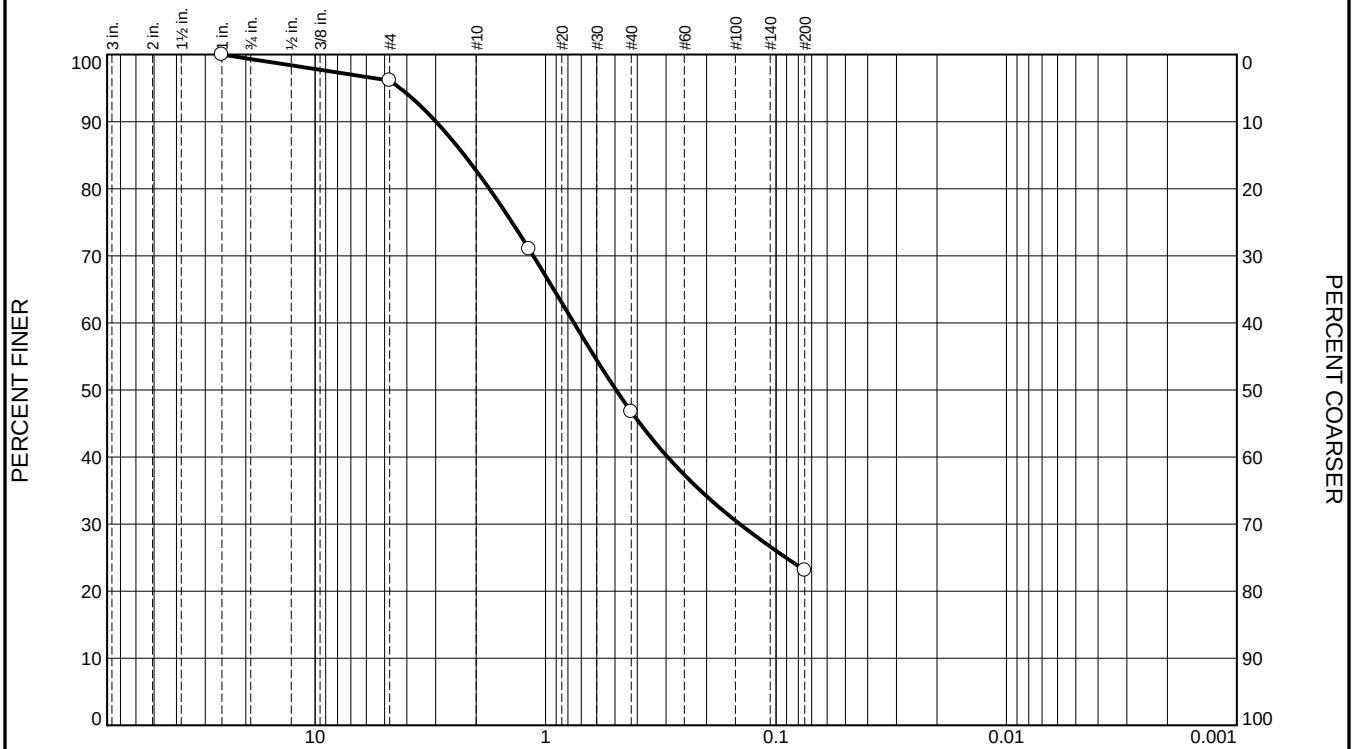
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.7	3.2	13.4	35.9	23.7	23.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	96.1		
#16	71.0		
#40	46.8		
#200	23.1	5.0 - 35.0	

Material Description		
Screenings		
PL= NP	Atterberg Limits LL= NV	PI= NP
D ₉₀ = 2.9891	Coefficients D ₈₅ = 2.2492	D ₆₀ = 0.7536
D ₅₀ = 0.4943	D ₃₀ = 0.1435	D ₁₅ =
D ₁₀ =	C _u =	C _c =
USCS= SM	Classification AASHTO= A-1-b	
Remarks		
Moisture: 3.7%		
F.M.=2.25		

* Sequoyah Fuels - Line Cover Material

Source of Sample: Section E Part 3, Spiro Quarry
Sample Number: 22-101

Depth: Bag Sample

Date: 11/16/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

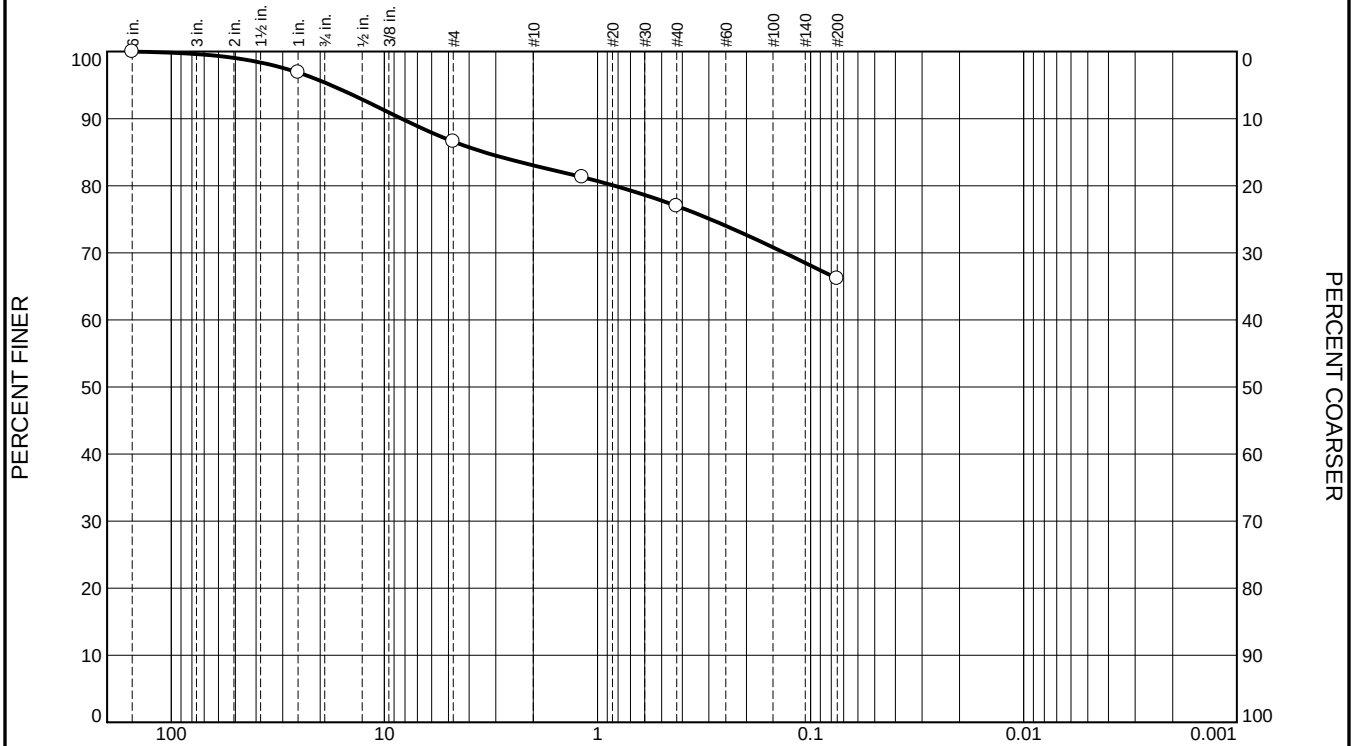
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

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Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.4	4.2	8.8	3.6	6.0	10.8	66.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	96.9		
#4	86.6		
#16	81.3		
#40	77.0		
#200	66.2	10.0 - 100.0	

Material Description
 Reddish Brown

Atterberg Limits
 LL= NT PI= NT

Coefficients
 D₉₀= 8.3016 D₈₅= 3.3997 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 15.6%
 F.M.=1.40

* SFC Subsoil

Source of Sample: Section E Part 1, Subsoil
 Sample Number: 22-102

Depth: Bag Sample

Date: 12/7/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

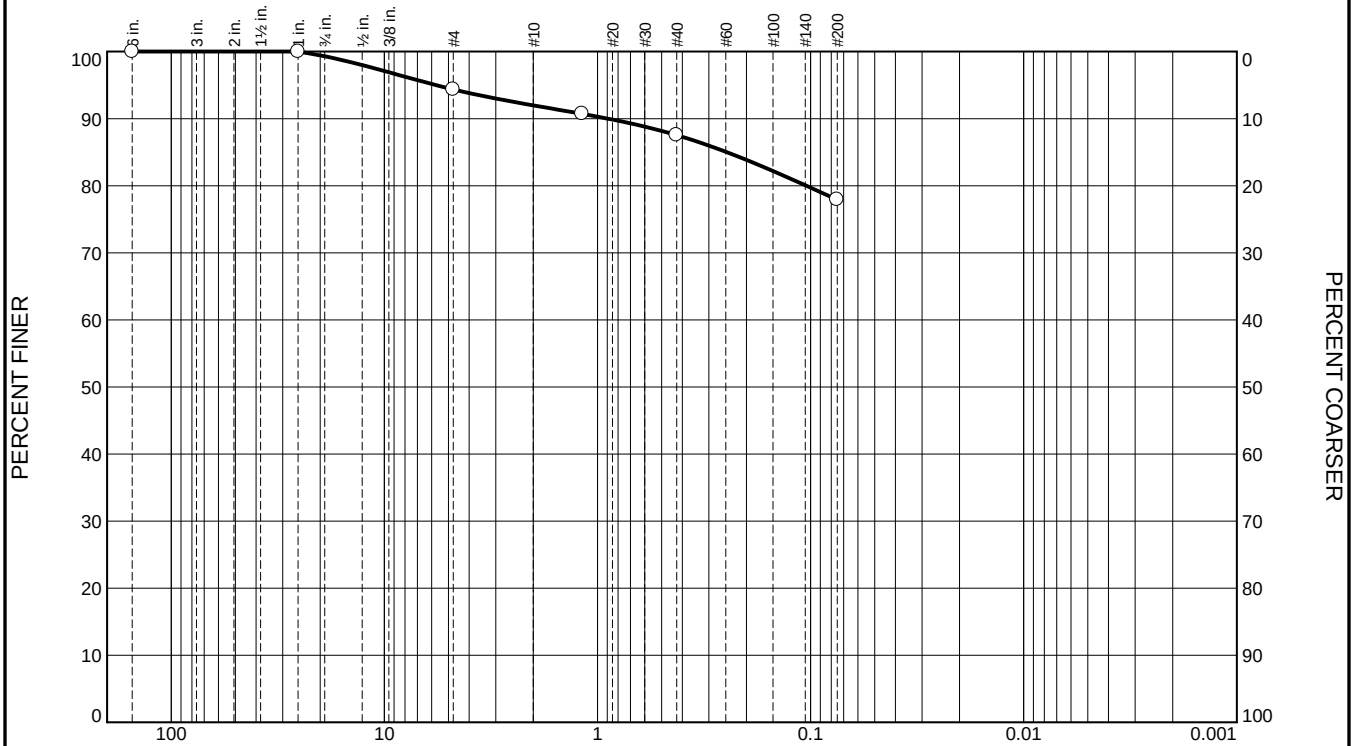
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.7	4.9	2.4	4.5	9.6	77.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	94.4		
#16	90.7		
#40	87.5		
#200	77.9	10.0 - 100.0	

* SFC Subsoil

Material Description
Light Reddish Brown

Atterberg Limits
 PL= NT LL= NT PI= NT

Coefficients
 D₉₀= 0.8946 D₈₅= 0.2472 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 8.5%
 F.M.=0.69

Source of Sample: Section E Part 3, Subsoil
 Sample Number: 22-103

Depth: Bag Sample

Date: 12/21/2021

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

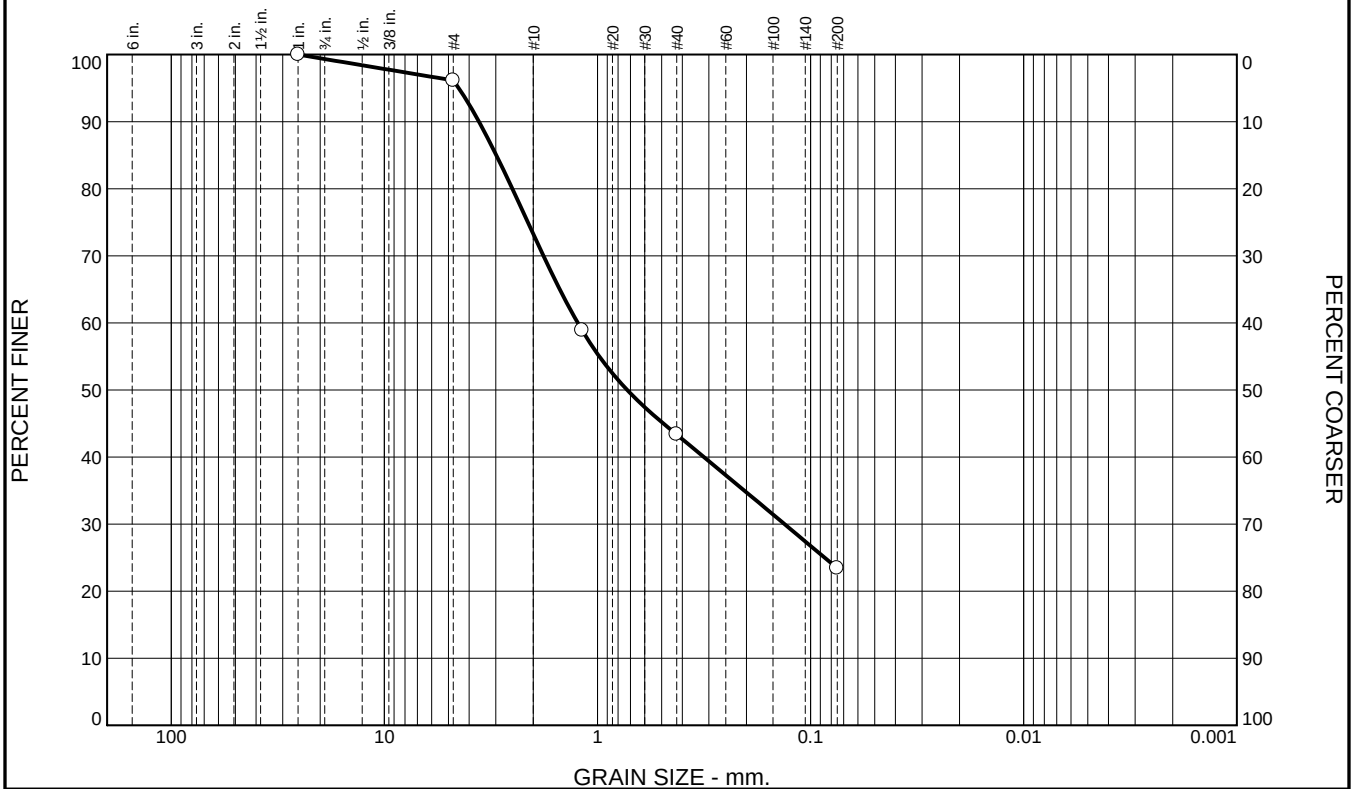
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.7	3.1	23.0	29.8	20.0	23.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	96.2		
#16	58.9		
#40	43.4		
#200	23.4	5.0 - 35.0	

Material Description		
Souter Quarry Screenings		
PL= NP		
LL= NV		
PI= NP		
Coefficients		
D ₉₀ = 3.5966	D ₈₅ = 2.9830	D ₆₀ = 1.2375
D ₅₀ = 0.7257	D ₃₀ = 0.1326	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Classification		
USCS= SM		
AASHTO= A-1-b		
Remarks		
Moisture: 4.1%		
F.M.=2.51		

* Seq Fuels Liner Cover

Source of Sample: Liner Cover Material
Sample Number: 23-832

Depth: Grab / Souter

Date: 9/27/2023

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

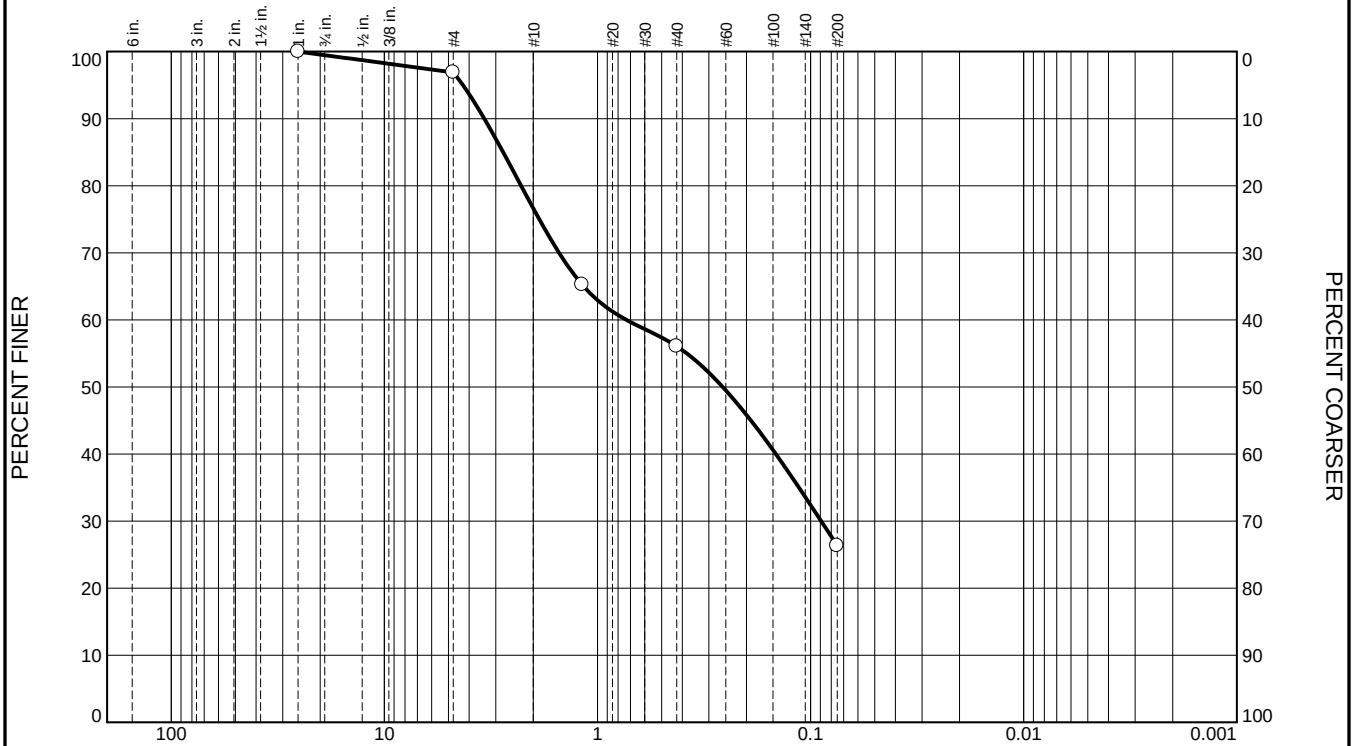
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.5	2.6	20.3	20.5	29.8	26.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	96.9		
#16	65.2		
#40	56.1		
#200	26.3	5.0 - 35.0	

<u>Material Description</u>		
Spiro Screenings		
<u>Atterberg Limits</u>		
PL= NP	LL= NV	PI= NP
<u>Coefficients</u>		
D ₉₀ = 3.3940	D ₈₅ = 2.7709	D ₆₀ = 0.7319
D ₅₀ = 0.2584	D ₃₀ = 0.0892	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= SM	AASHTO= A-2-4(0)	
<u>Remarks</u>		
Moisture: 6.1%		
F.M.=2.08		

* Seq Fuels Liner Cover

Source of Sample: Liner Cover Material
Sample Number: 23-833

Depth: Grab / Spir

Date: 9/27/2023

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

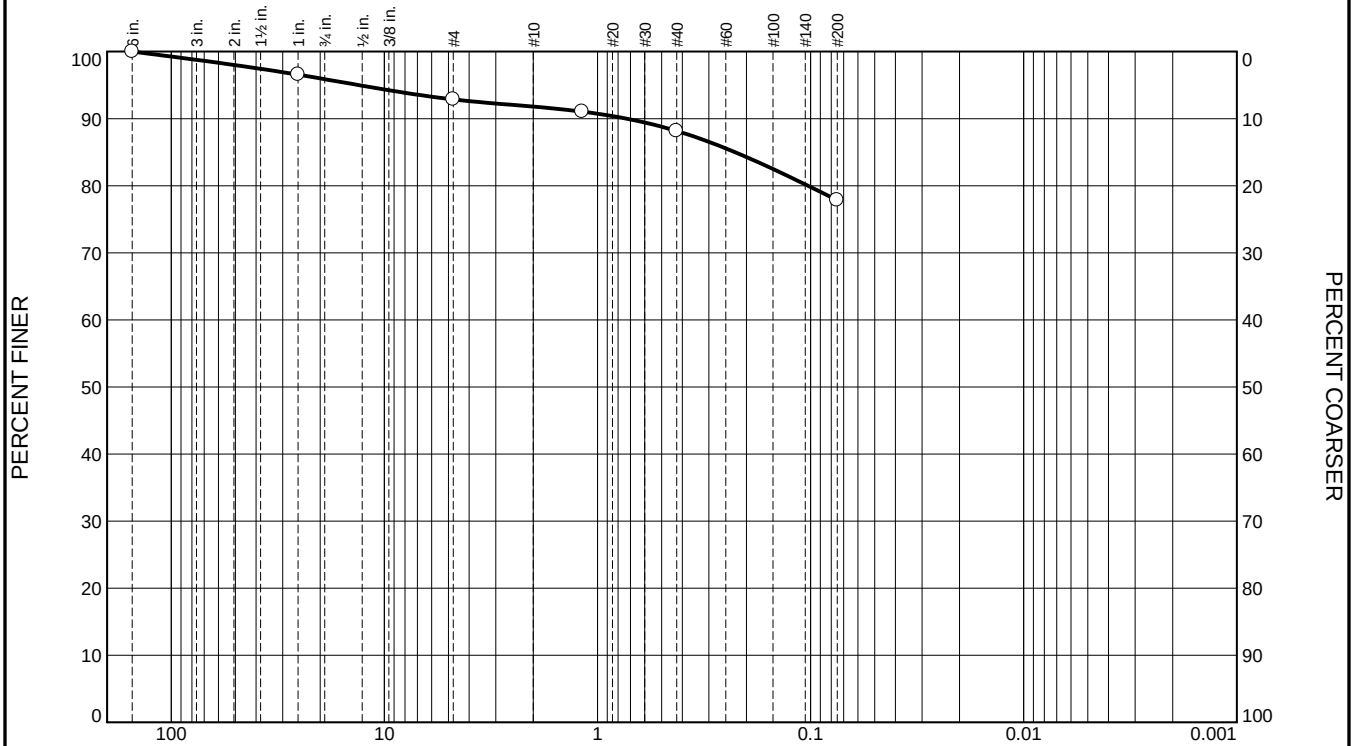
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
1.2	2.9	3.0	1.1	3.6	10.4	77.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	96.6		
#4	92.9		
#16	91.0		
#40	88.2		
#200	77.8	10.0 - 100.0	

Material Description
 9/21/2023 Cell Top North Slope
 East YC Pad Stockpile

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 0.7307 D₈₅= 0.2262 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 5.2%
 F.M.=0.79

* Seq Fuels Subsoil

Source of Sample: Subsoil Material
 Sample Number: 24-152 (1)

Depth: Bag Sample

Date: 3/4/2024

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

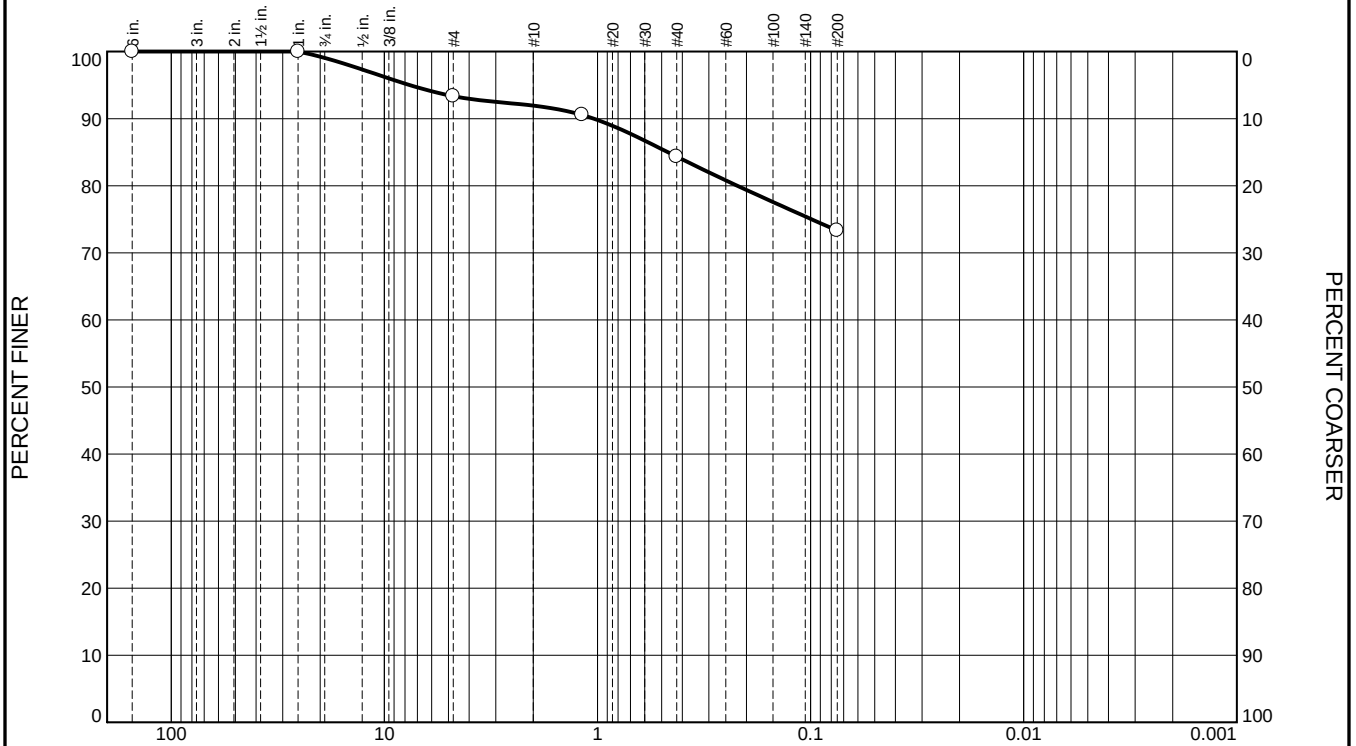
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.9	5.7	1.5	7.6	11.0	73.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	93.4		
#16	90.6		
#40	84.3		
#200	73.3	10.0 - 100.0	

Material Description
 10/23/2023 Cell Top West Slope North 1/2
 Caf Drainage Stockpile

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 1.0402 D₈₅= 0.4674 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 14.8%
 F.M.=0.83

* Seq Fuels Subsoil

Source of Sample: Subsoil Material
 Sample Number: 24-152 (2)

Depth: Bag Sample

Date: 3/4/2024

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

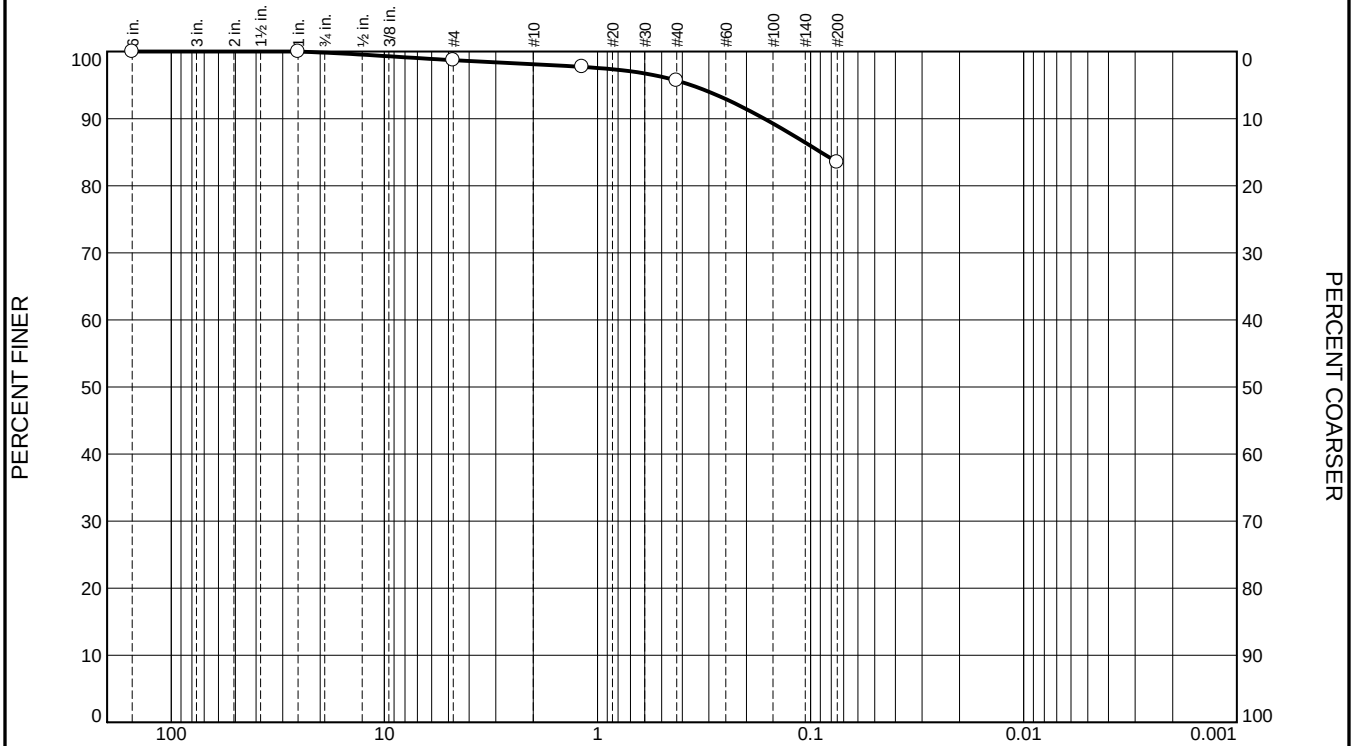
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.2	1.1	0.6	2.4	12.2	83.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	98.7		
#16	97.7		
#40	95.7		
#200	83.5	10.0 - 100.0	

Material Description
 11/6/2023 Cell Top North 1/2
 West YC Pad Stockpile

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 0.1650 D₈₅= 0.0895 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 14.8%
 F.M.=0.26

* Seq Fuels Subsoil

Source of Sample: Subsoil Material
 Sample Number: 24-152 (3)

Depth: Bag Sample

Date: 3/4/2024

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.9	5.9	2.8	4.1	8.3	78.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	93.2		
#16	89.1		
#40	86.3		
#200	78.0	10.0 - 100.0	

* Seq Fuels Subsoil

Material Description

11/16/2023 Cell Top West Slope / Top North 1/2 Pond 5 East Berm

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 1.7036 D₈₅= 0.3062 D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Moisture: 14.7%
F.M.=0.78

Source of Sample: Subsoil Material
Sample Number: 24-152 (4)

Depth: Bag Sample

Date: 3/4/2024

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

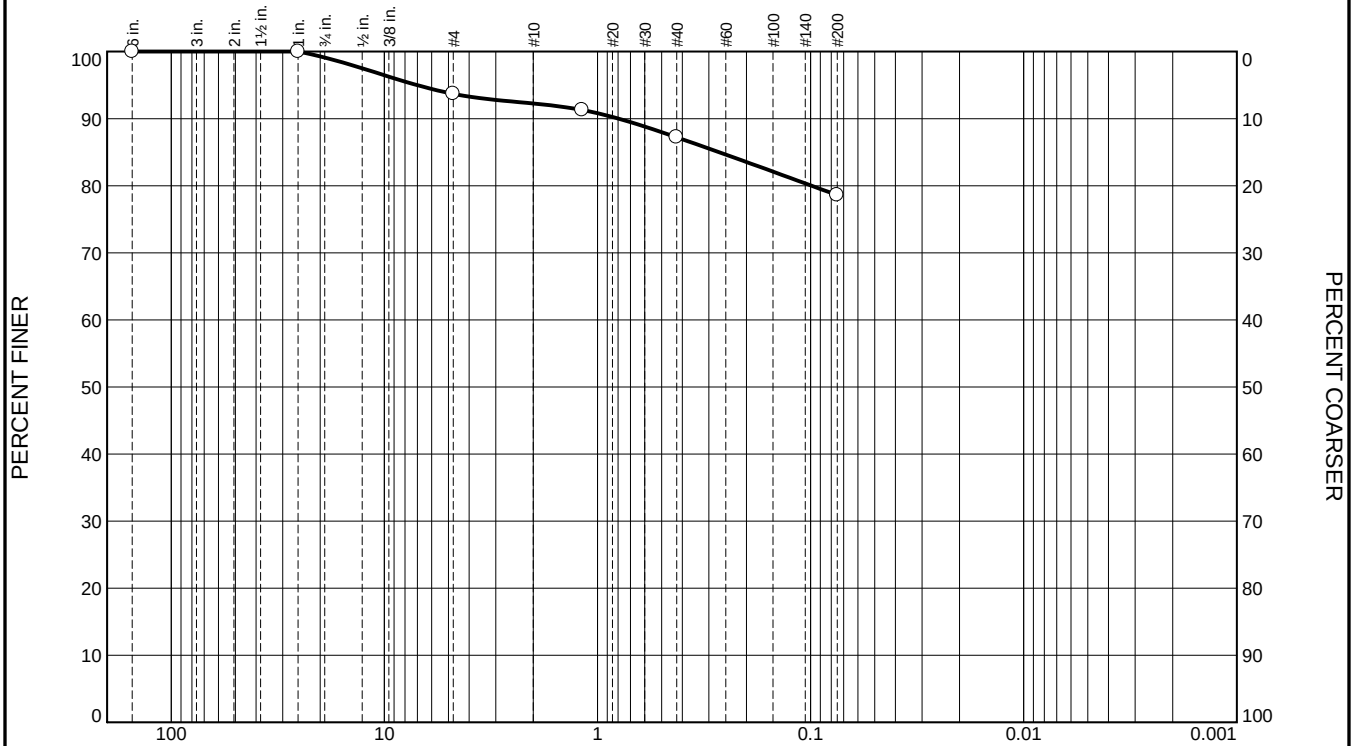
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.9	5.4	1.4	5.1	8.6	78.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	93.7		
#16	91.3		
#40	87.2		
#200	78.6	10.0 - 100.0	

Material Description
 12/6/2023 Cell Top East South 1/2
 Pond 5 East Berm

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 0.7957 D₈₅= 0.2689 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 15.8%
 F.M.=0.71

* Seq Fuels Subsoil

Source of Sample: Subsoil Material
 Sample Number: 24-152 (5)

Depth: Bag Sample

Date: 3/4/2024

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

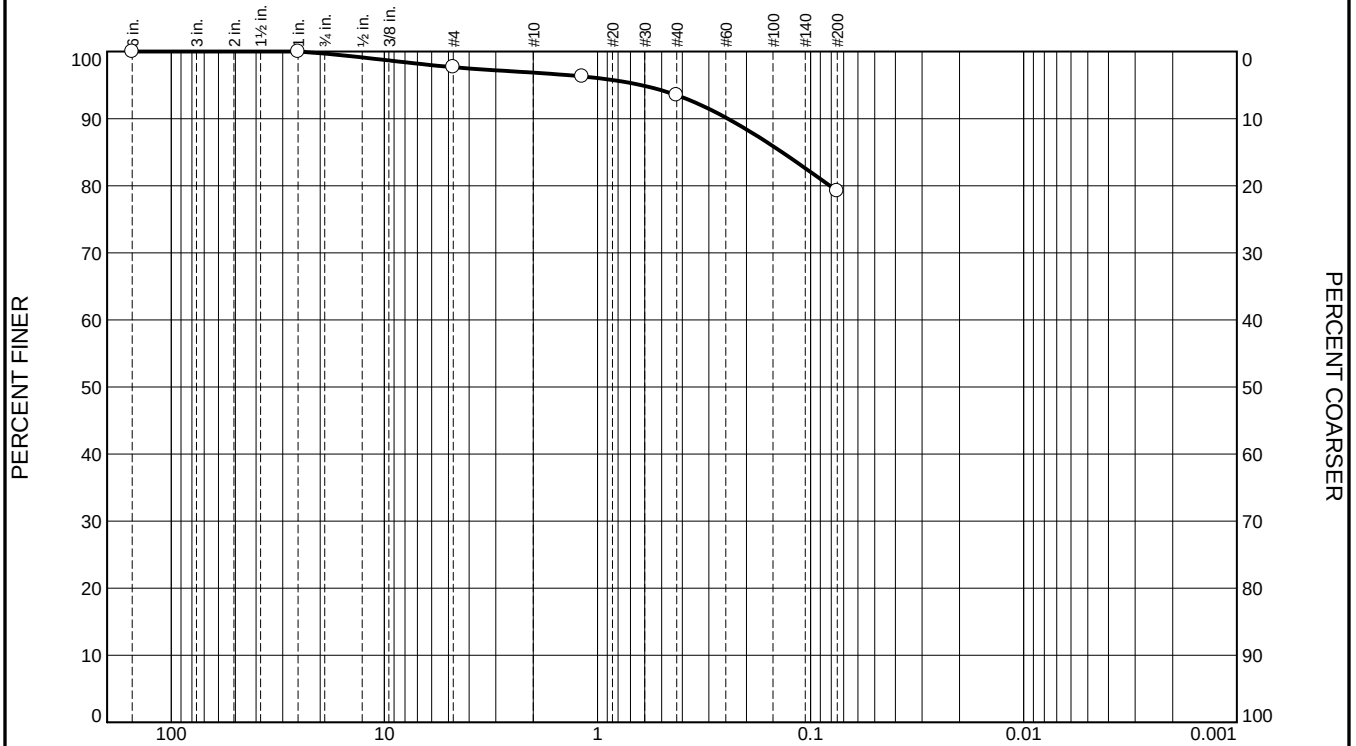
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.3	2.0	0.8	3.4	14.3	79.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	97.7		
#16	96.3		
#40	93.5		
#200	79.2	10.0 - 100.0	

Material Description
 12/21/2023 Cell Top South & East Top South 1/2
 Pond 5 South Berm

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 0.2446 D₈₅= 0.1362 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= AASHTO=

Remarks
 Moisture: 9.9%
 F.M.=0.38

* Seq Fuels Subsoil

Source of Sample: Subsoil Material
 Sample Number: 24-152 (6)

Depth: Bag Sample

Date: 3/4/2024

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

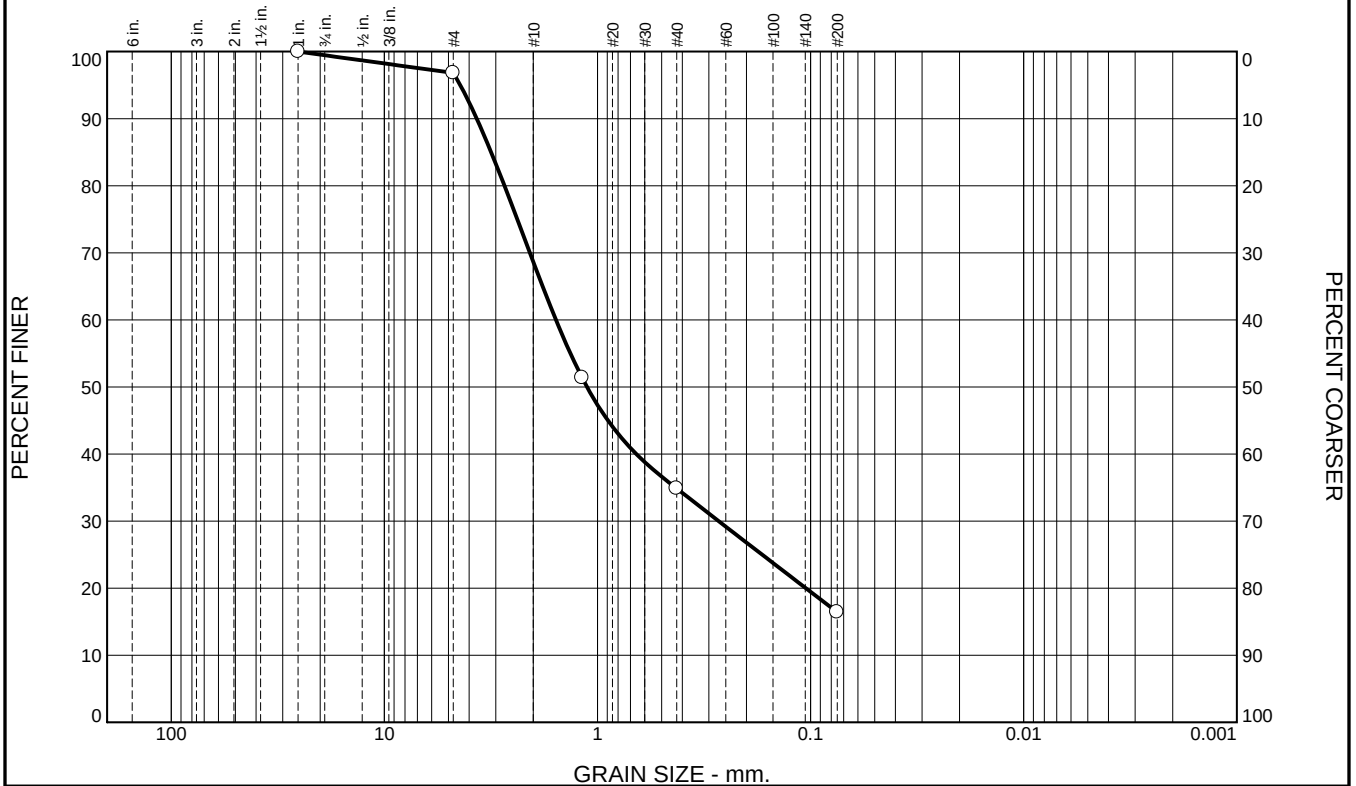
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.5	2.7	28.2	33.7	18.5	16.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0	100.0	
#4	96.8		
#16	51.4		
#40	34.9		
#200	16.4	5.0 - 35.0	

Material Description		
3/14/2025 Souter Quarry Screenings		
PL= NP LL= NV PI= NP		
Coefficients		
D ₉₀ = 3.6836	D ₈₅ = 3.1540	D ₆₀ = 1.5656
D ₅₀ = 1.1198	D ₃₀ = 0.2701	D ₁₅ =
D ₁₀ =	C _u =	C _c =
USCS= SM AASHTO= A-1-b		
Moisture: 2.8%		
F.M.=2.86		
Remarks		

* Seq Fuels Liner Cover

Source of Sample: Liner Cover Material
Sample Number: 25-337-1

Depth: Bag Sample

Date: 4/2/2025

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

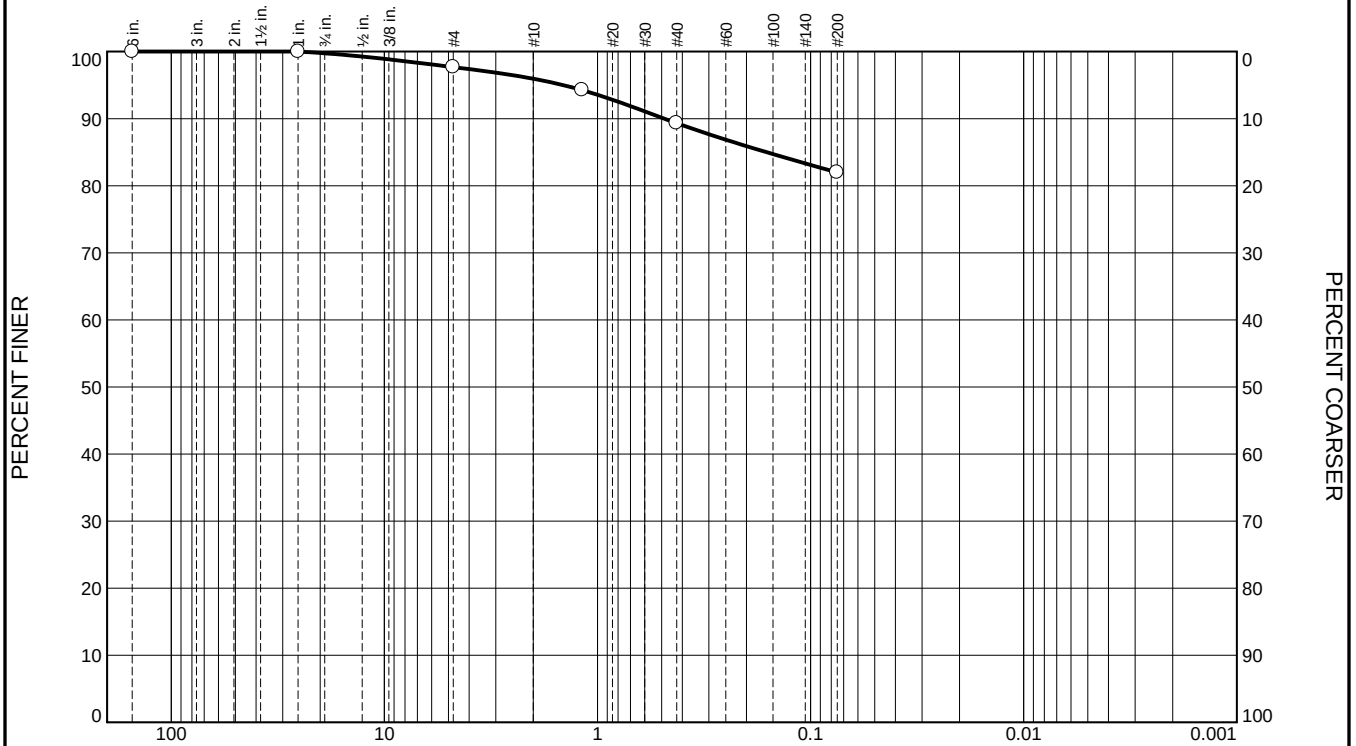
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.3	2.0	1.8	6.6	7.3	82.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	97.7		
#16	94.3		
#40	89.3		
#200	82.0	10.0 - 100.0	

Material Description
 3/17/2025 Section F Ramp Subsoil
 South Hall Ramp Stockpile

Atterberg Limits
 PL= NP LL= NV PI= NP

Coefficients
 D₉₀= 0.4852 D₈₅= 0.1610 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= ML AASHTO= A-4(0)

Remarks
 Moisture: 20.2%
 F.M.=0.50

* Seq Fuels Subsoil

Source of Sample: Subsoil Material
 Sample Number: 25-337-2

Depth: Bag Sample

Date: 4/2/2025

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

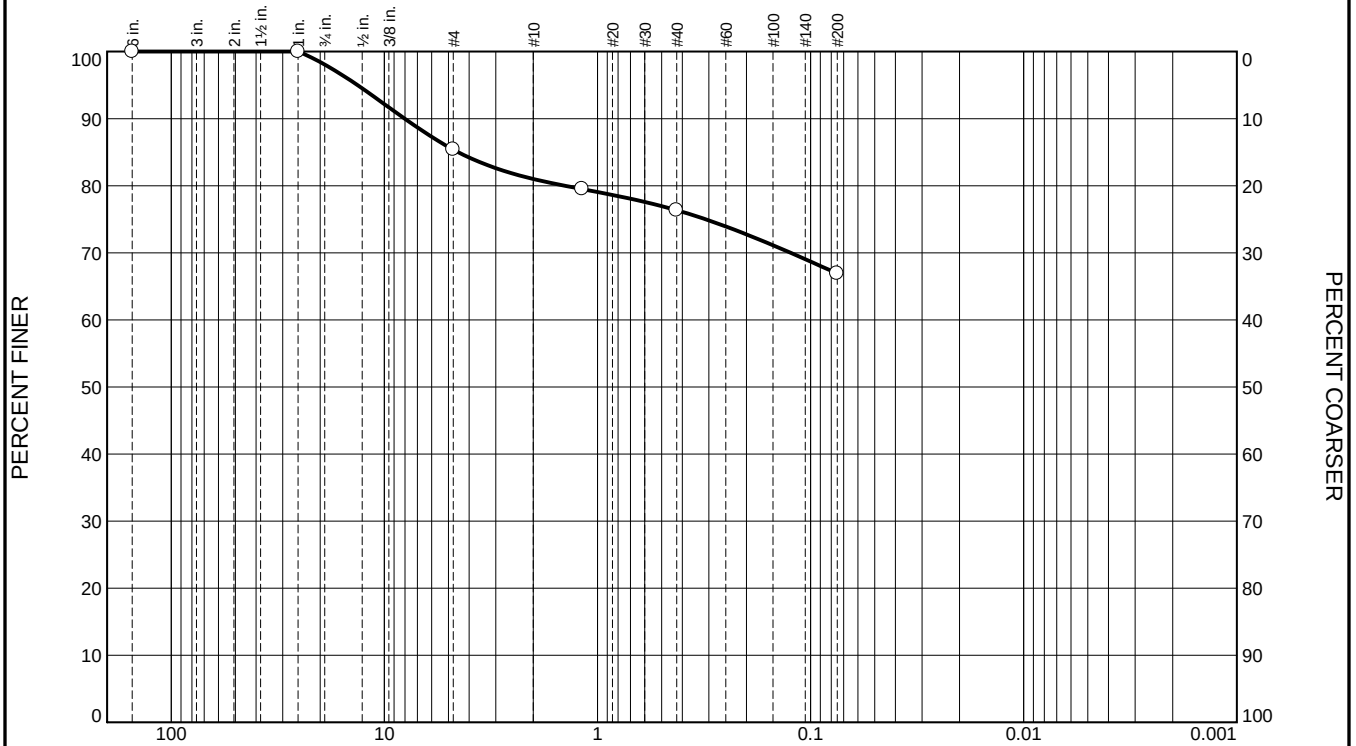
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.9	12.7	4.4	4.7	9.4	66.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	85.4		
#16	79.5		
#40	76.3		
#200	66.9	10.0 - 100.0	

Material Description
 3/19/2025 Section F Ramp Subsoil
 Port Road Stockpile

Atterberg Limits
 PL= NP LL= NV PI= NP

Coefficients
 D₉₀= 8.0260 D₈₅= 4.5046 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= ML AASHTO= A-4(0)

Remarks
 Moisture: 9.0%
 F.M.=1.40

* Seq Fuels Subsoil

Source of Sample: Subsoil Material
 Sample Number: 25-337-3

Depth: Bag Sample

Date: 4/2/2025

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

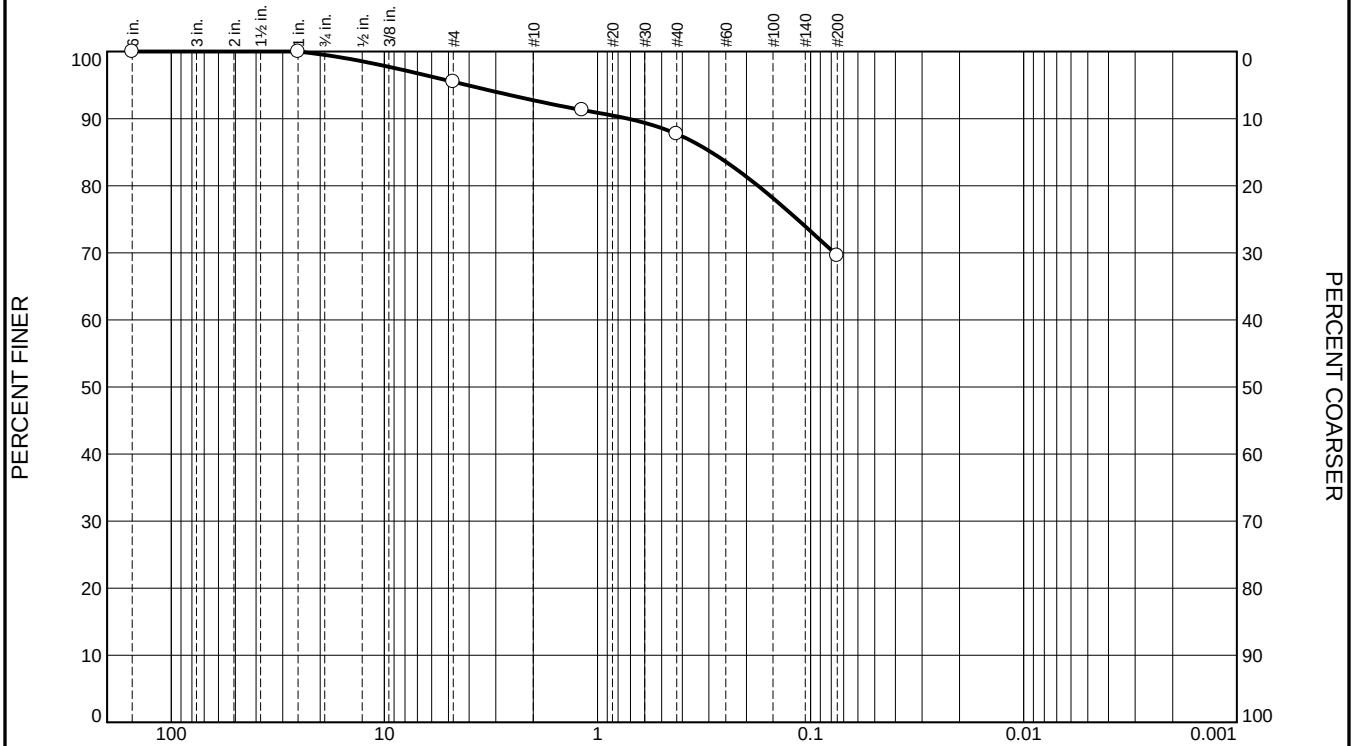
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.5	4.0	2.8	5.0	18.1	69.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
6"	100.0	100.0	
1"	100.0		
#4	95.5		
#16	91.3		
#40	87.7		
#200	69.6	10.0 - 100.0	

Material Description
 3/26/2025 Section F Ramp Subsoil
 Pond 5 West Berm

Atterberg Limits
 PL= NP LL= NV PI= NP

Coefficients
 D₉₀= 0.7205 D₈₅= 0.2927 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= ML AASHTO= A-4(0)

Remarks
 Moisture: 13.6%
 F.M.=0.70

* Seq Fuels Subsoil

Source of Sample: Subsoil Material
 Sample Number: 25-337-4

Depth: Bag Sample

Date: 4/2/2025

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 1

Checked By: Shelby Jackson

PHASE IV (COVER) AS-BUILT REPORT

Appendix C Laboratory and Field QA Test Results

C.2 PROCTOR AND CLASSIFICATION TEST RESULTS



Laboratory Compaction Characteristics of Soil

Curve No.: 15-428

Project No.: 09-1341

Date: 7/20/2015

SG

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material, Section A

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-4(8)

Nat. Moist. = 13.7 %

Sp.G. = NT

Liquid Limit = 29

Plasticity Index = 10

% > No.4 = 0.6 %

% < No.200 = 93.3 %

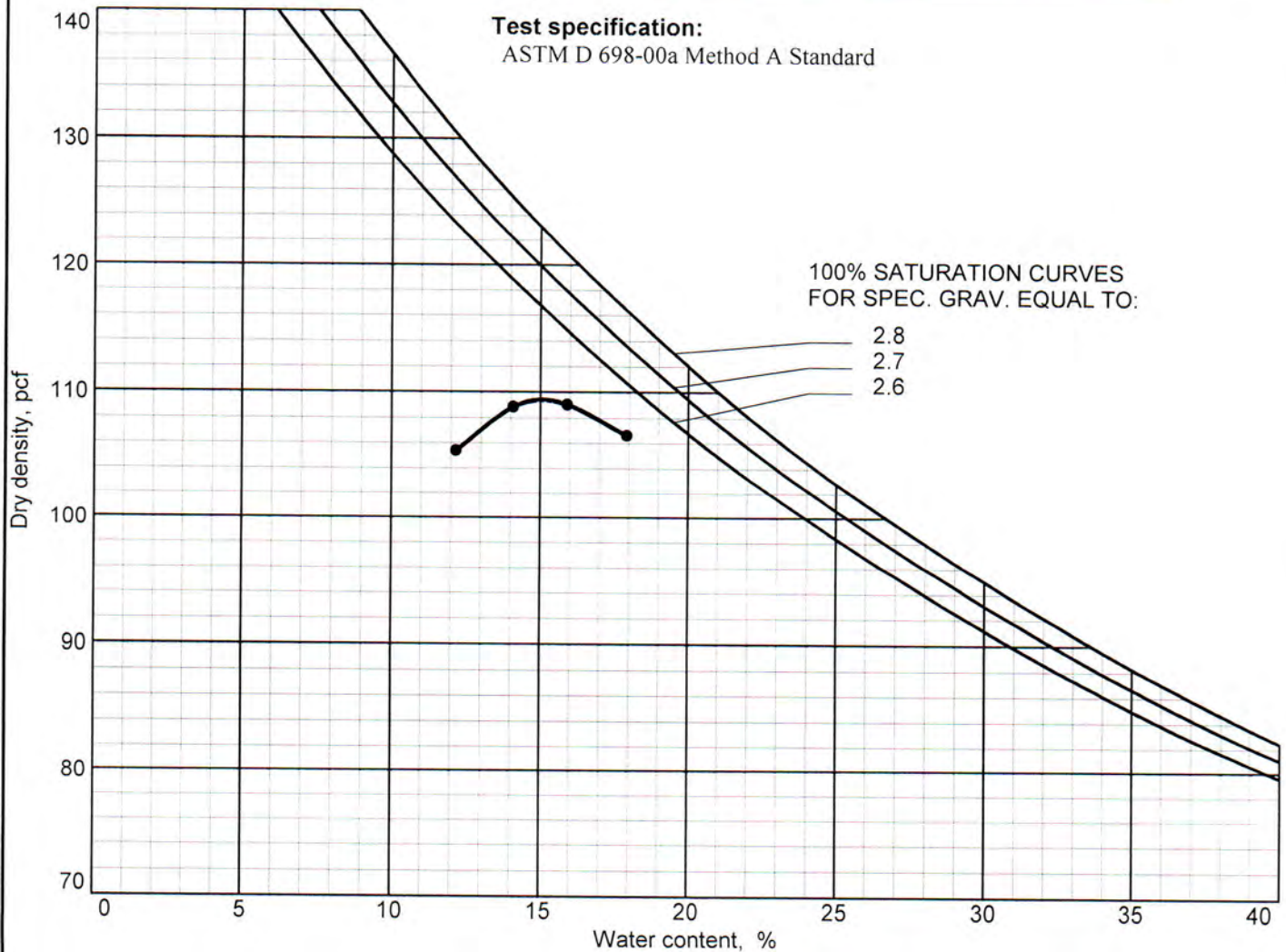
TEST RESULTS

Maximum dry density = 109.4 pcf

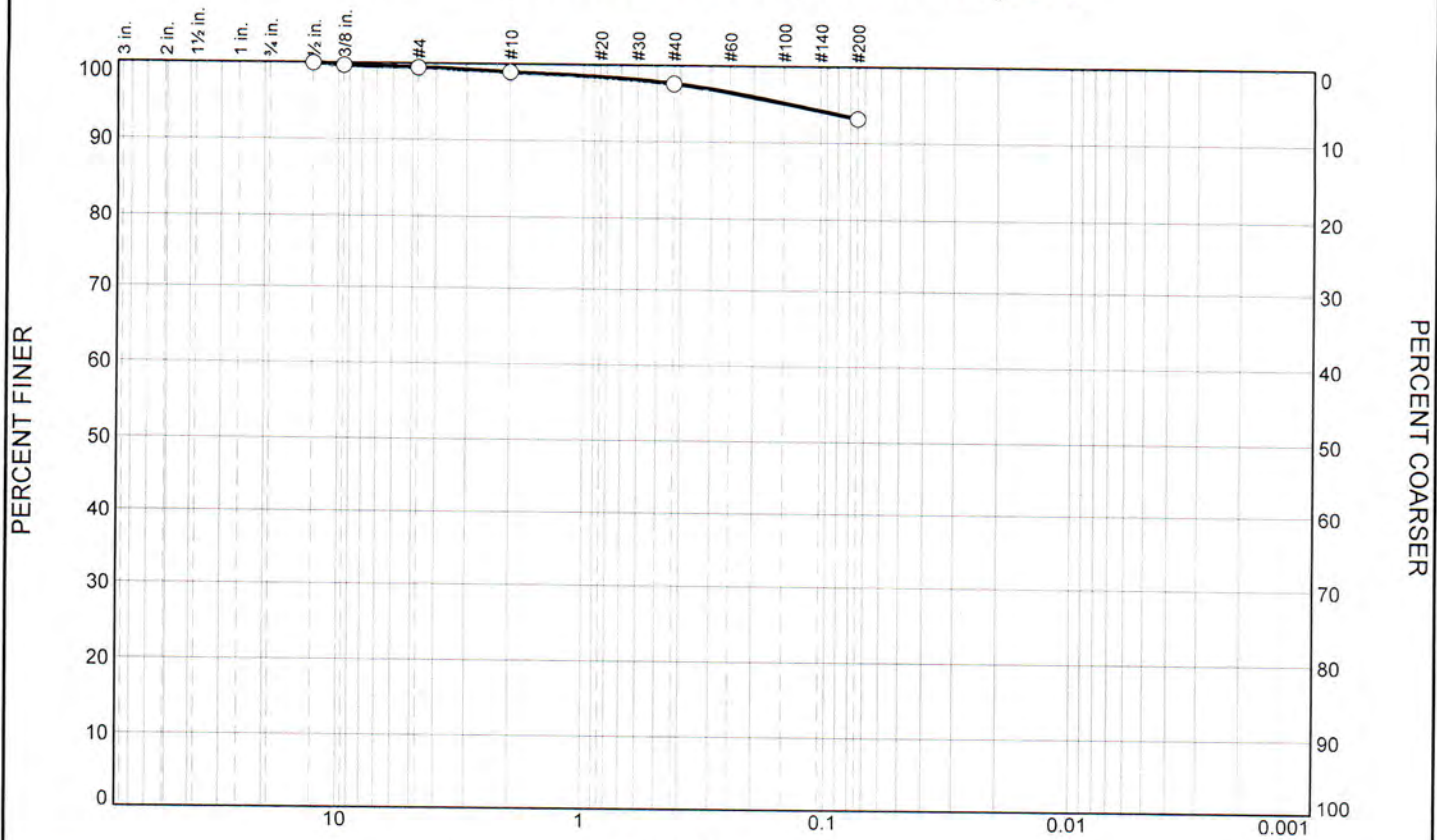
Optimum moisture = 15.1 %

Test specification:

ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.6	0.5	1.3	4.3	93.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	99.7		
#4	99.4		
#10	98.9		
#40	97.6		
#200	93.3		

* (no specification provided)

Material Description
Lean Clay - Reddish Brown

Atterberg Limits
PL= 19 LL= 29 PI= 10

Coefficients
D₉₀= D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CL AASHTO= A-4(8)

Remarks
NT - No Test
F.M.=0.13

Location: Existing Material, Section A
Sample Number: 15-428 Depth: Subgrade

Date: 7/20/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-452

Project No.: 09-1341

Date: 7/28/2015

SS

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Borrow Material, Clay Cover

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(10)

Nat. Moist. = 17.6 %

Sp.G. = NT

Liquid Limit = 30

Plasticity Index = 12

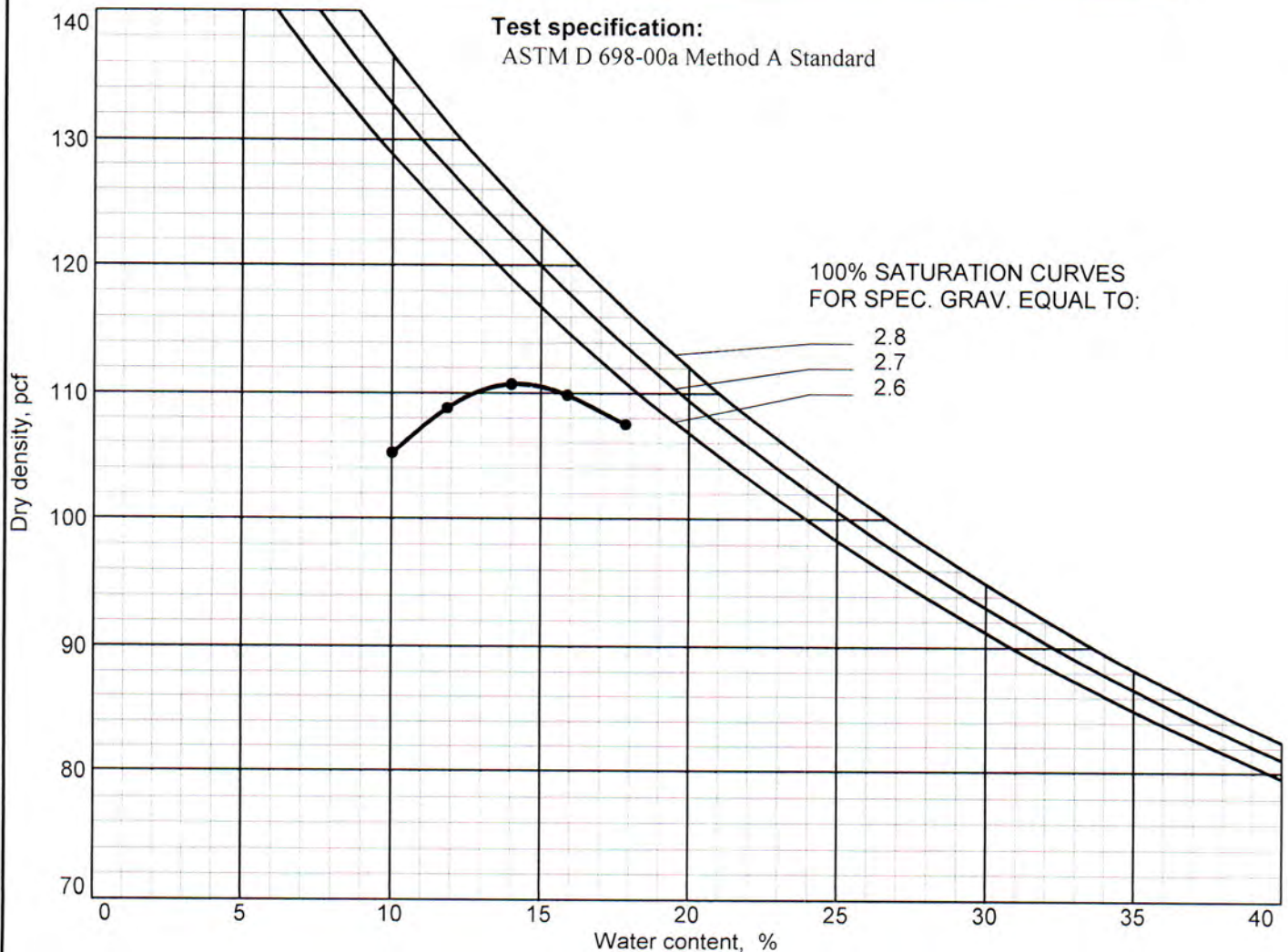
% > No.4 = 2.5 %

% < No.200 = 90.2 %

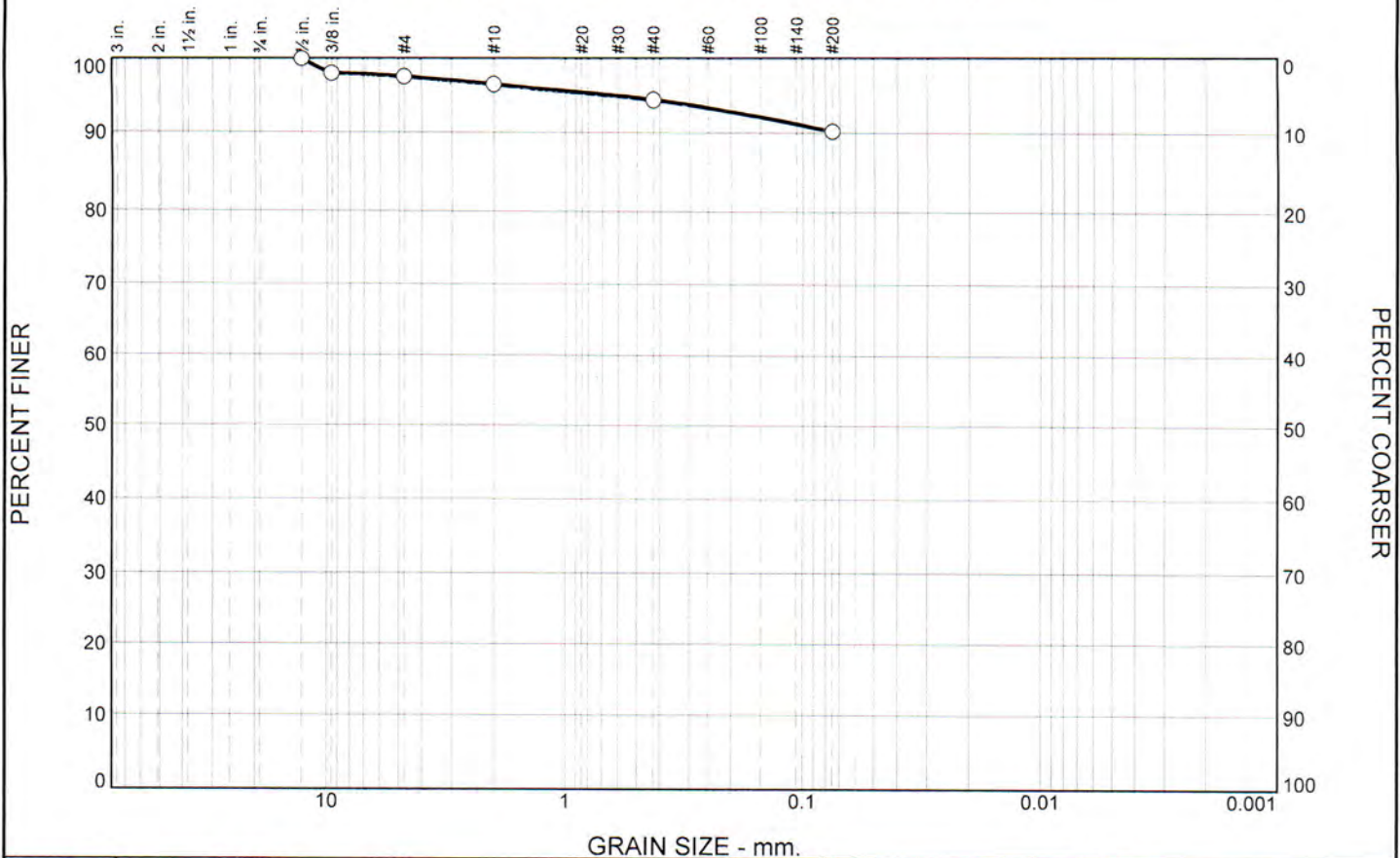
TEST RESULTS

Maximum dry density = 110.7 pcf

Optimum moisture = 14.2 %



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.5	1.0	2.0	4.3	90.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	98.0		
#4	97.5		
#10	96.5		
#40	94.5		
#200	90.2		

* (no specification provided)

Material Description		
Lean Clay - Reddish Brown		
Atterberg Limits PL= 18 LL= 30 PI= 12		
Coefficients D₉₀= D₅₀= D₁₀= D₈₅= D₃₀= C_u= D₆₀= D₁₅= C_c=		
Classification USCS= CL AASHTO= A-6(10)		
Remarks NT - No Test F.M.=0.31		

Location: Borrow Material, Clay Cover
Sample Number: 15-452 Depth: Borrow Material

Date: 7/28/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-495

Project No.: 09-1341

Date: 8/5/2015

SD

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material, Clay Cover

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(11)

Nat. Moist. = 11.6 %

Sp.G. = NT

Liquid Limit = 30

Plasticity Index = 12

% > No.4 = 0.0 %

% < No.200 = 95.4 %

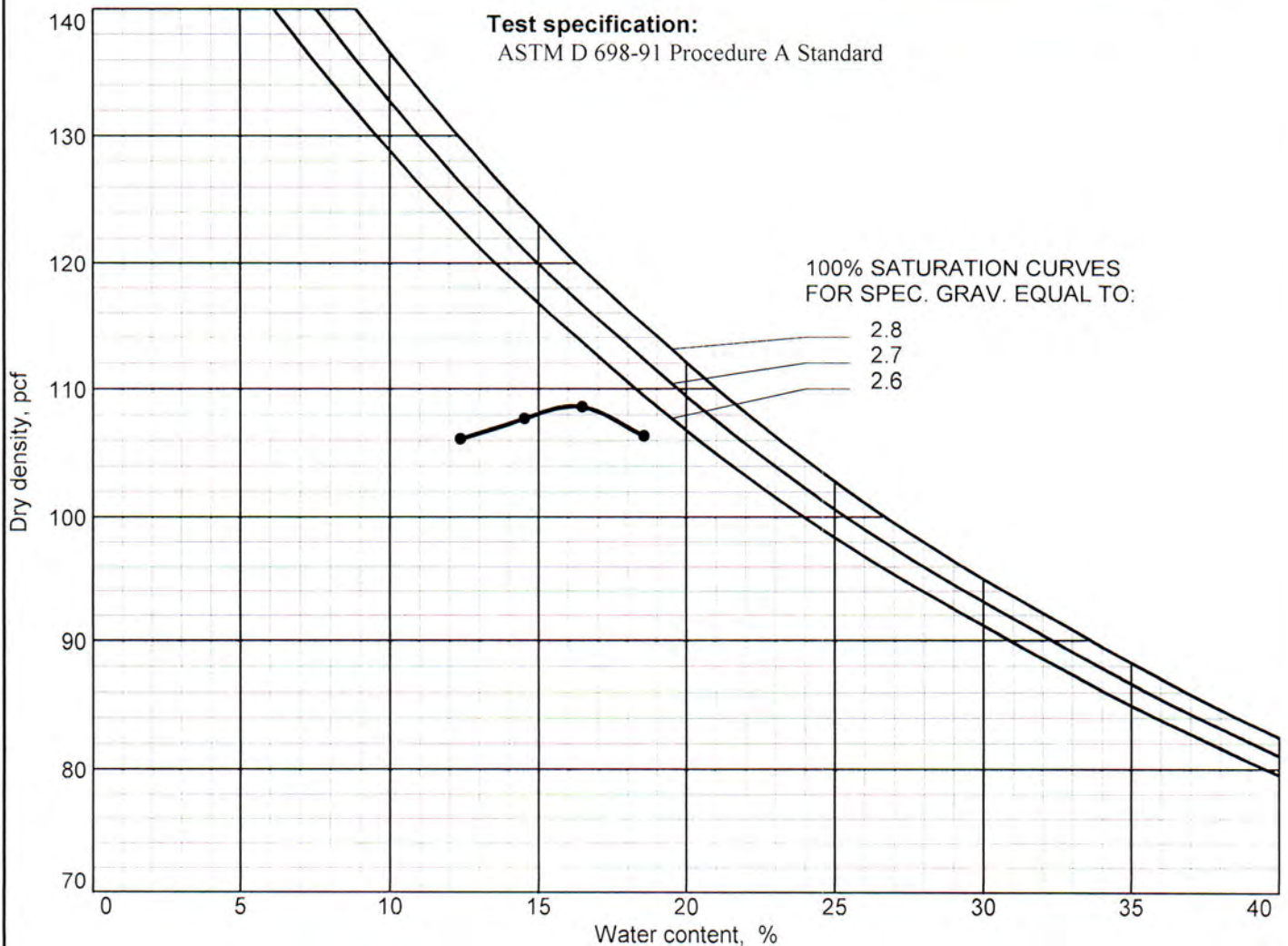
TEST RESULTS

Maximum dry density = 108.7 pcf

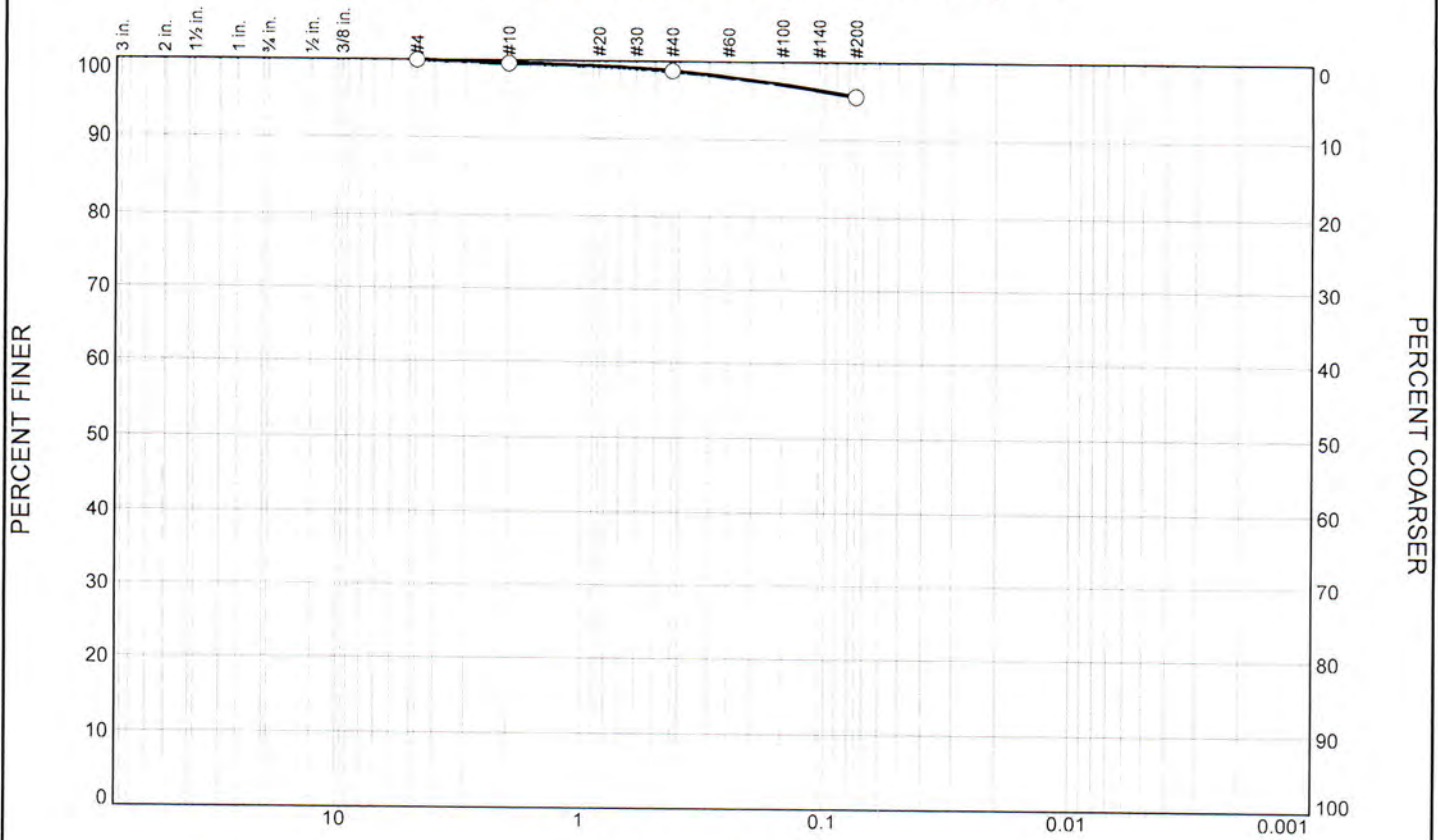
Optimum moisture = 16.2 %

Test specification:

ASTM D 698-91 Procedure A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.4	0.9	3.3	95.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.6		
#40	98.7		
#200	95.4		

* (no specification provided)

Material Description
Lean Clay - Reddish Brown

Atterberg Limits
PL= 18 LL= 30 PI= 12

Coefficients
D₉₀= D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CL AASHTO= A-6(11)

Remarks
NT - No Test
F.M.=0.07

Location: Existing Material, Clay Cover

Sample Number: 15-495 Depth: Borrow Material

Date: 8/5/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS

CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-496

Project No.: 09-1341

Date: 8/5/2015

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material, Clay Cover

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(12)

Nat. Moist. = 11.9 %

Sp.G. = NT

Liquid Limit = 32

Plasticity Index = 13

% > No.4 = 0.0 %

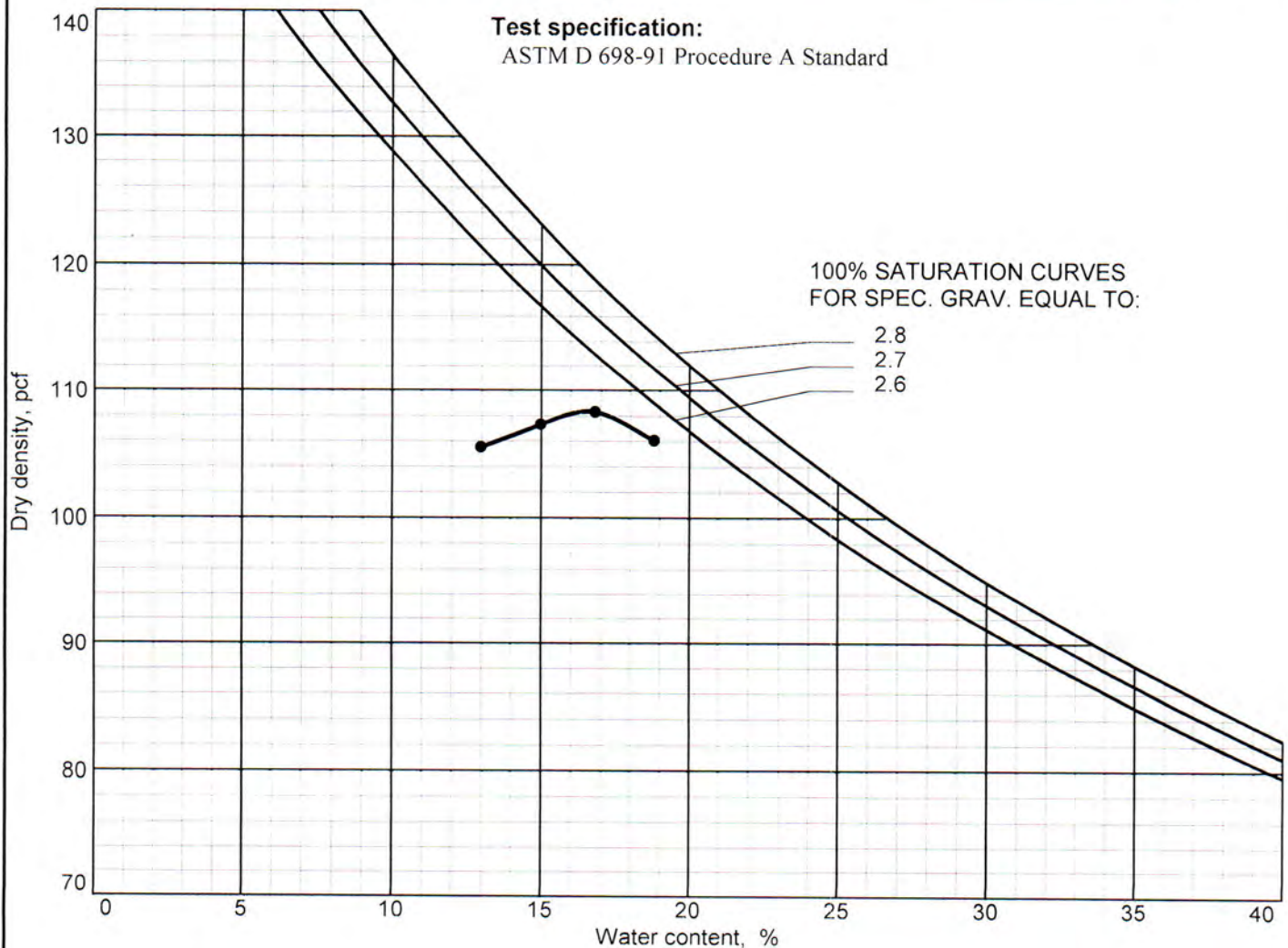
% < No.200 = 96.4 %

TEST RESULTS

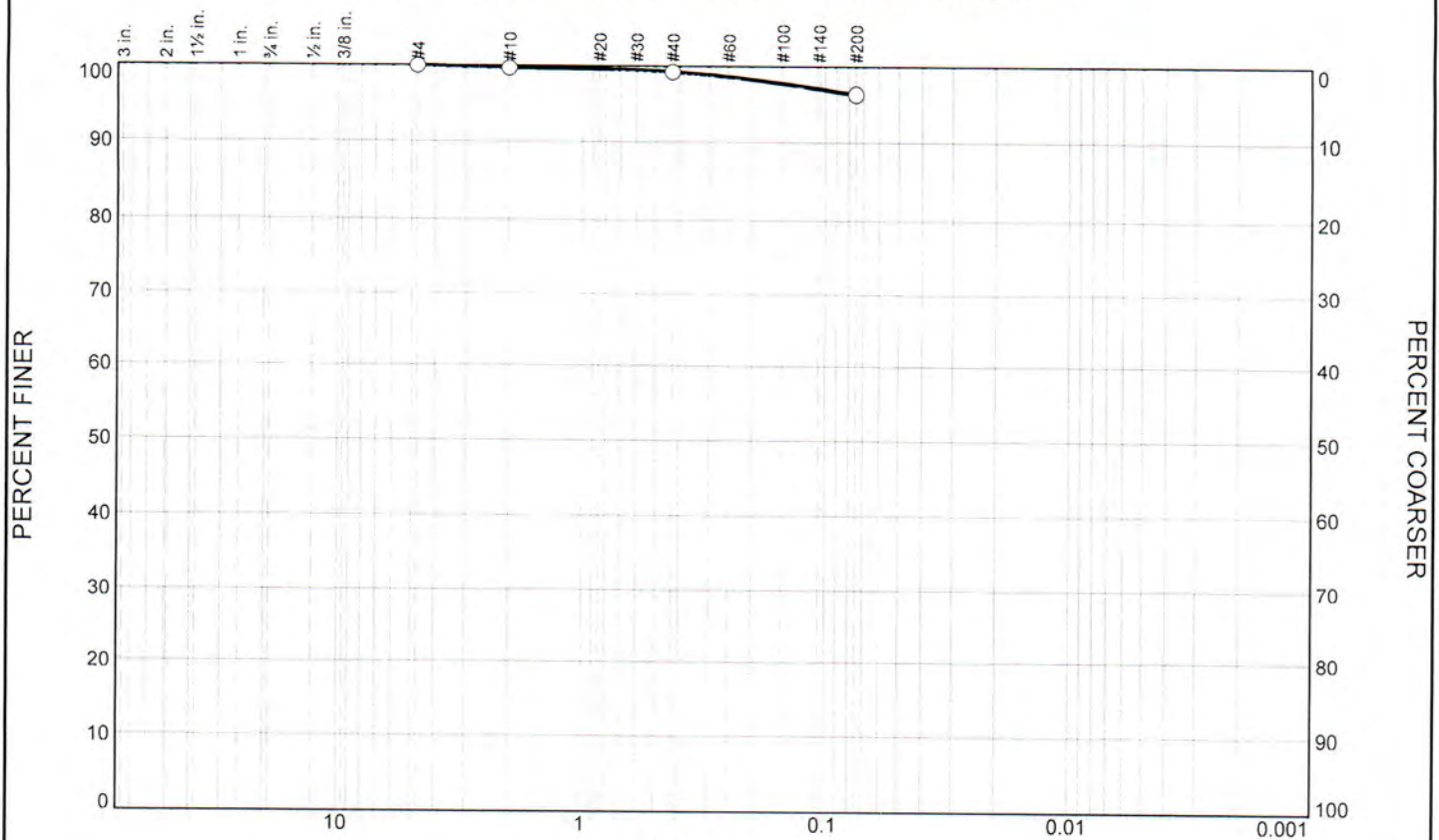
Maximum dry density = 108.4 pcf

Optimum moisture = 16.6 %

Test specification:
ASTM D 698-91 Procedure A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.3	0.5	2.8	96.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.7		
#40	99.2		
#200	96.4		

* (no specification provided)

Material Description
Lean Clay - Reddish Brown

Atterberg Limits
PL= 19 LL= 32 PI= 13

Coefficients
D₉₀= D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CL AASHTO= A-6(12)

Remarks
NT - No Test
F.M.=0.05

Location: Existing Material, Clay Cover

Sample Number: 15-496 Depth: Borrow Material

Date: 8/5/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: 

Laboratory Compaction Characteristics of Soil

Curve No.: 15-598

Project No.: 09-1341

Date: 9/1/2015

50

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material, Clay Cover

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(14)

Nat. Moist. = 10.9 %

Sp.G. = NT

Liquid Limit = 33

Plasticity Index = 16

% > No.4 = 0.7 %

% < No.200 = 92.6 %

TEST RESULTS

Maximum dry density = 111.1 pcf

Optimum moisture = 13.8 %

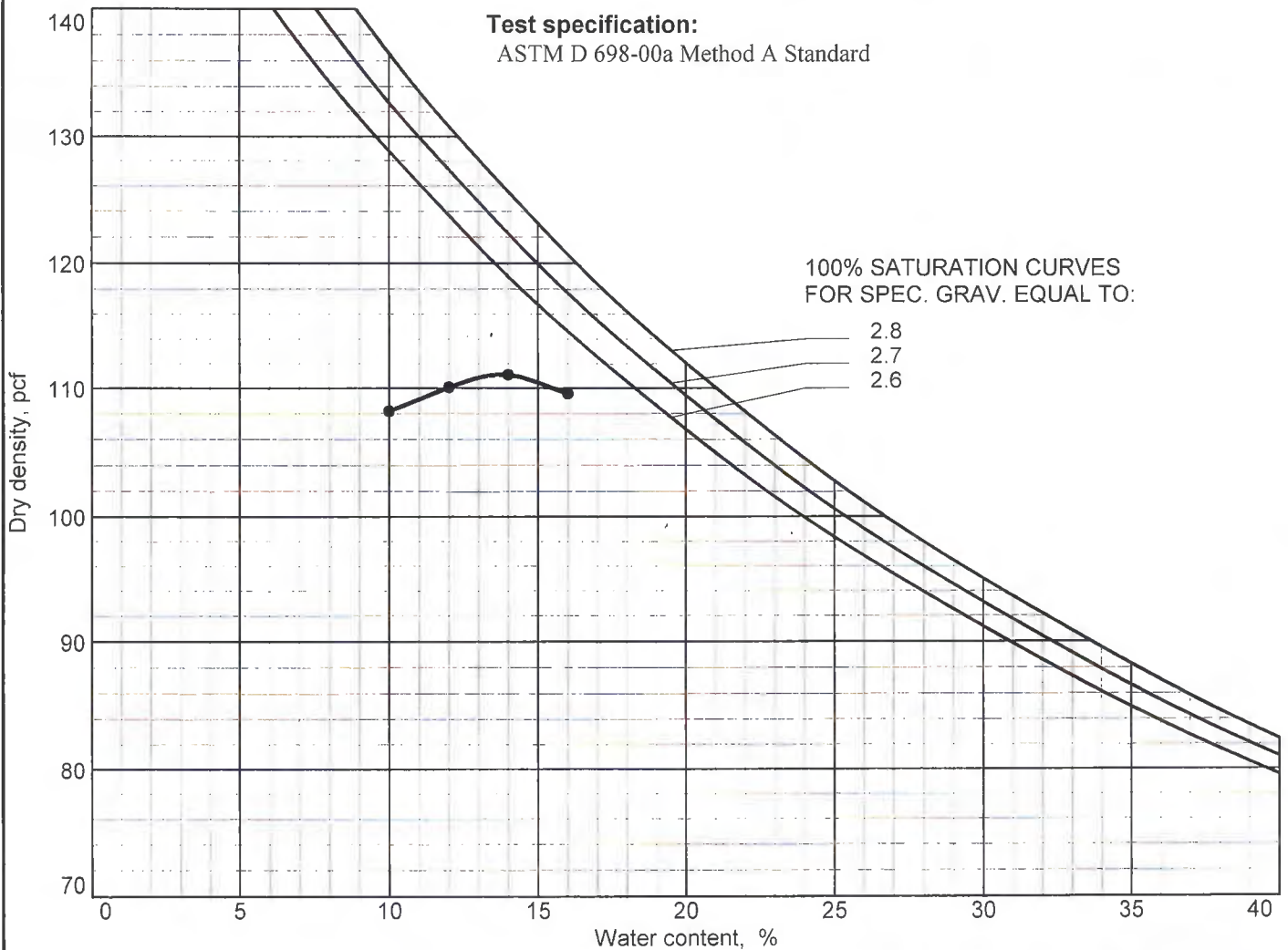
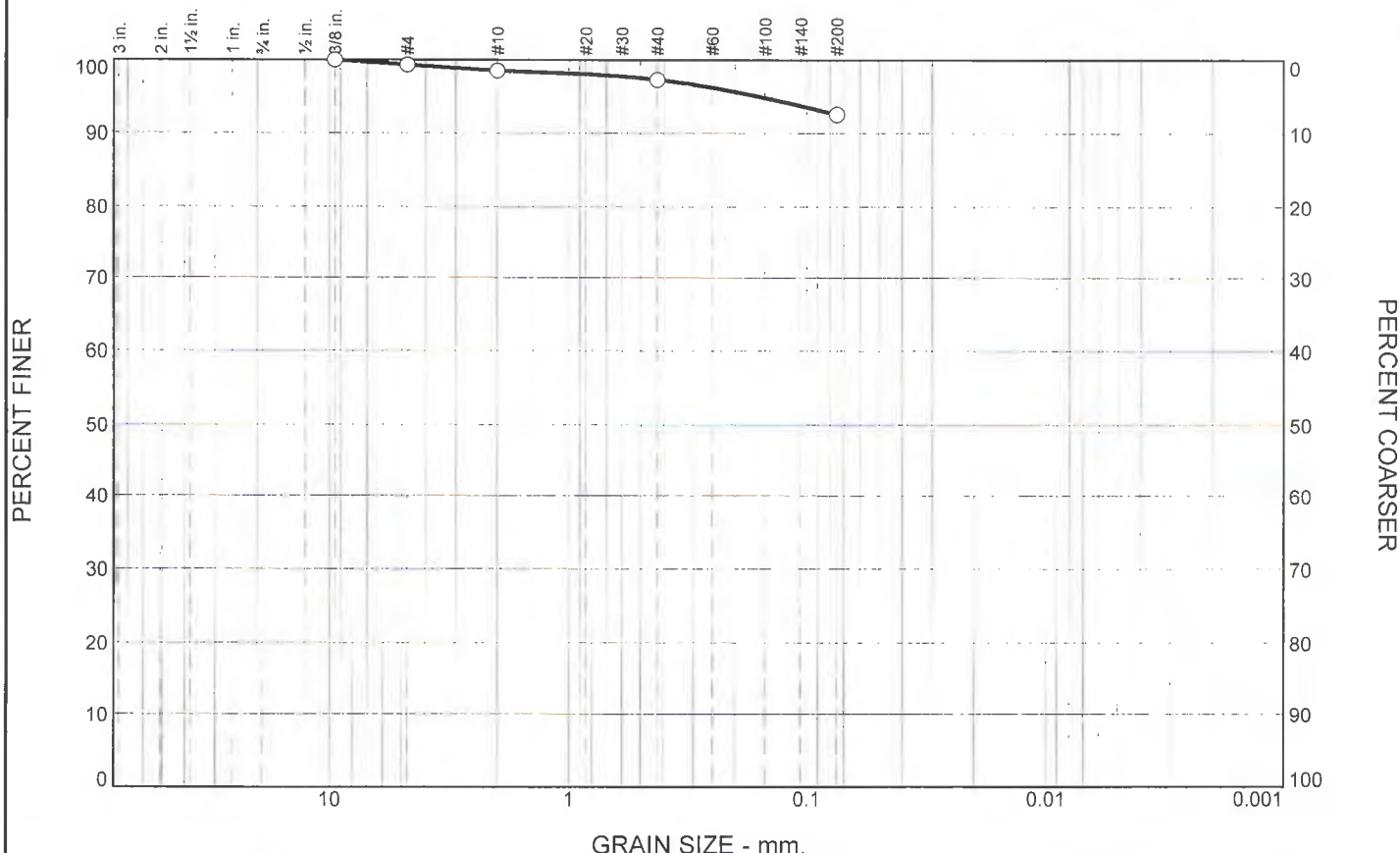


Figure 1 of 2

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.7	0.8	1.2	4.7	92.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	99.3		
#10	98.5		
#40	97.3		
#200	92.6		

* (no specification provided)

Material Description
Lean Clay - Reddish Brown

Atterberg Limits
PL= 17 LL= 33 PI= 16

Coefficients
D₉₀= D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CL AASHTO= A-6(14)

Remarks
NT - No Test
F.M.=0.15

Location: Existing Material, Clay Cover
Sample Number: 15-598 Depth: Subgrade

Date: 9/1/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-599

Project No.: 09-1341

Date: 9/1/2015

SSC

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material, Clay Cover

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(9)

Nat. Moist. = 16.6 %

Sp.G. = NT

Liquid Limit = 29

Plasticity Index = 12

% > No.4 = 1.5 %

% < No.200 = 88.6 %

TEST RESULTS

Maximum dry density = 110.8 pcf

Optimum moisture = 13.8 %

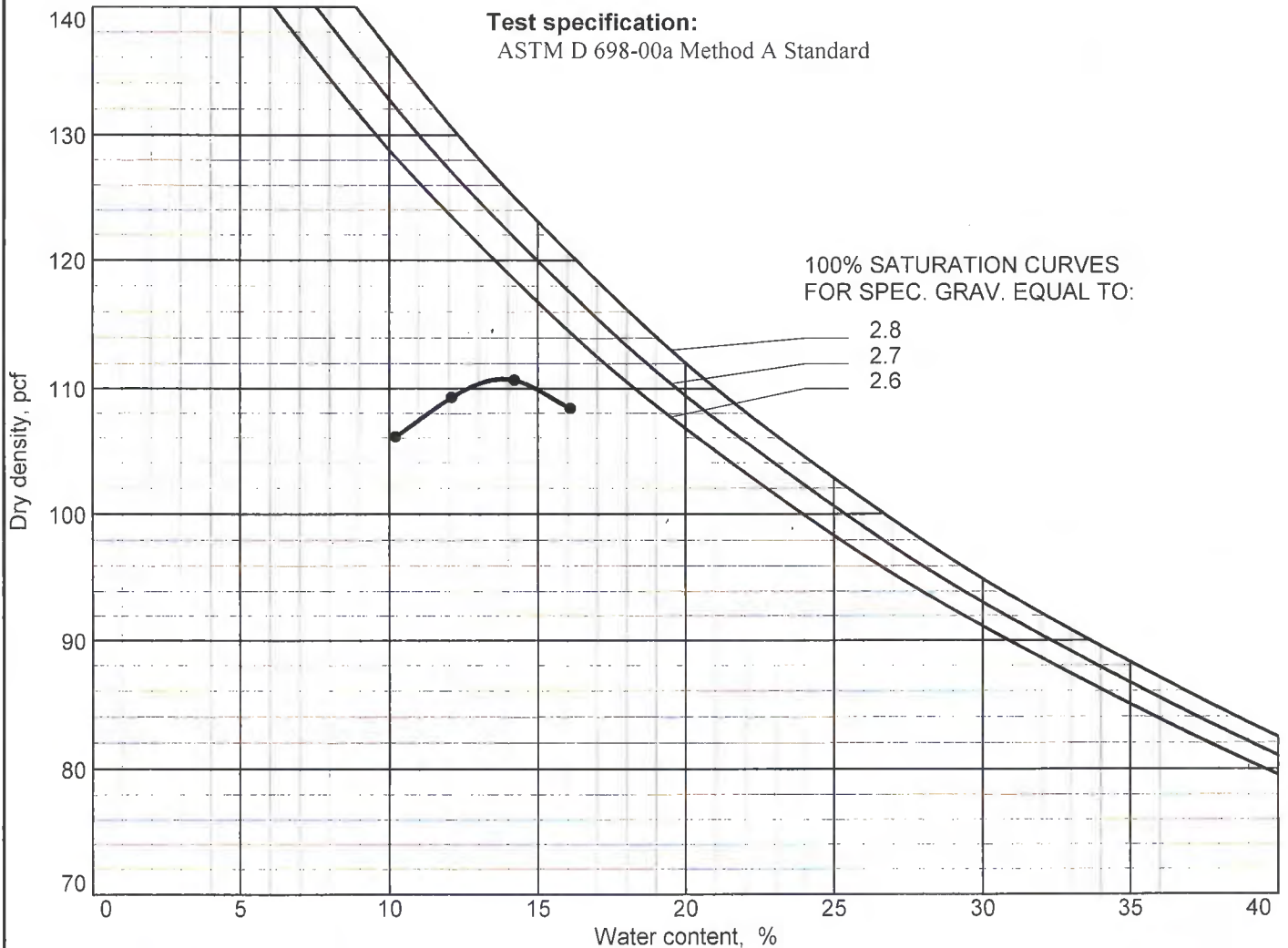
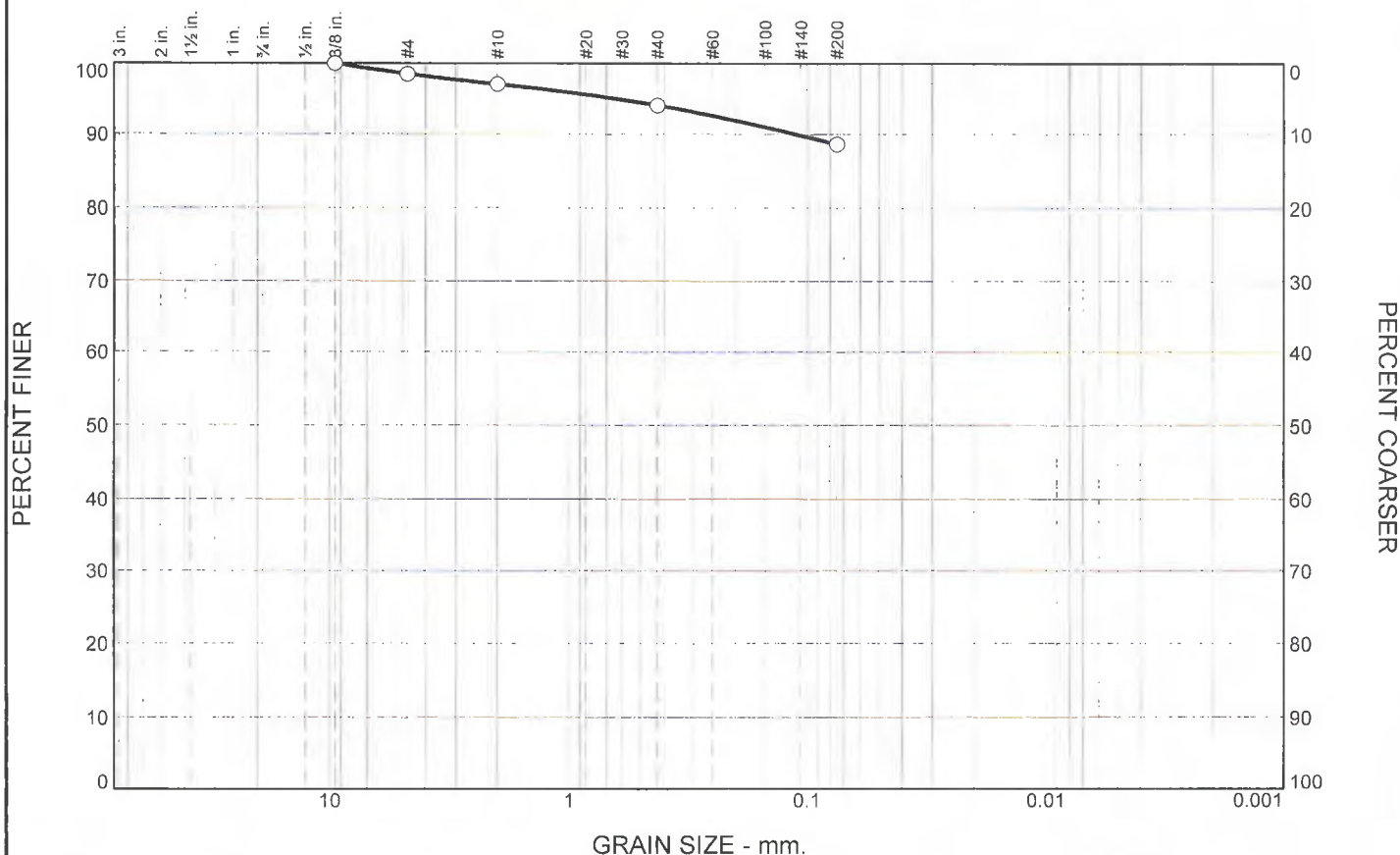


Figure 1 of 2

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.5	1.4	3.0	5.5	88.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	98.5		
#10	97.1		
#40	94.1		
#200	88.6		

* (no specification provided)

Material Description

Lean Clay - Reddish Brown

Atterberg Limits

PL= 17 LL= 29 PI= 12

Coefficients

D₉₀= 0.1117 D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(9)

Remarks

NT - No Test
F.M.=0.29

Location: Existing Material, Clay Cover
Sample Number: 15-599 Depth: Subgrade

Date: 9/1/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-655

Project No.: 09-1341

Date: 9/17/2015

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section A Slope)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(12)

Nat. Moist. = 17.3 %

Sp.G. = NT

Liquid Limit = 32

Plasticity Index = 15

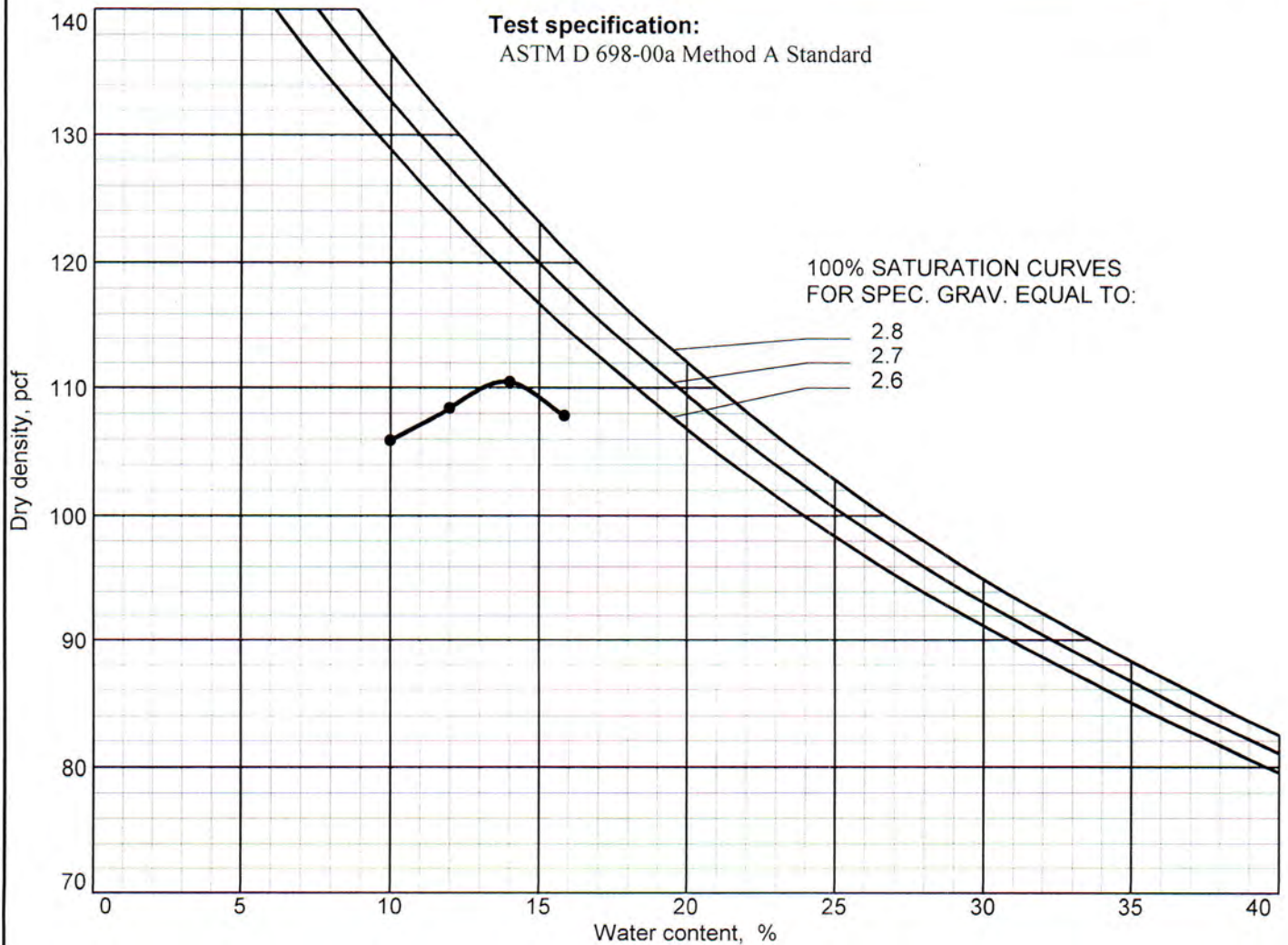
% > No.4 = 1.9 %

% < No.200 = 88.6 %

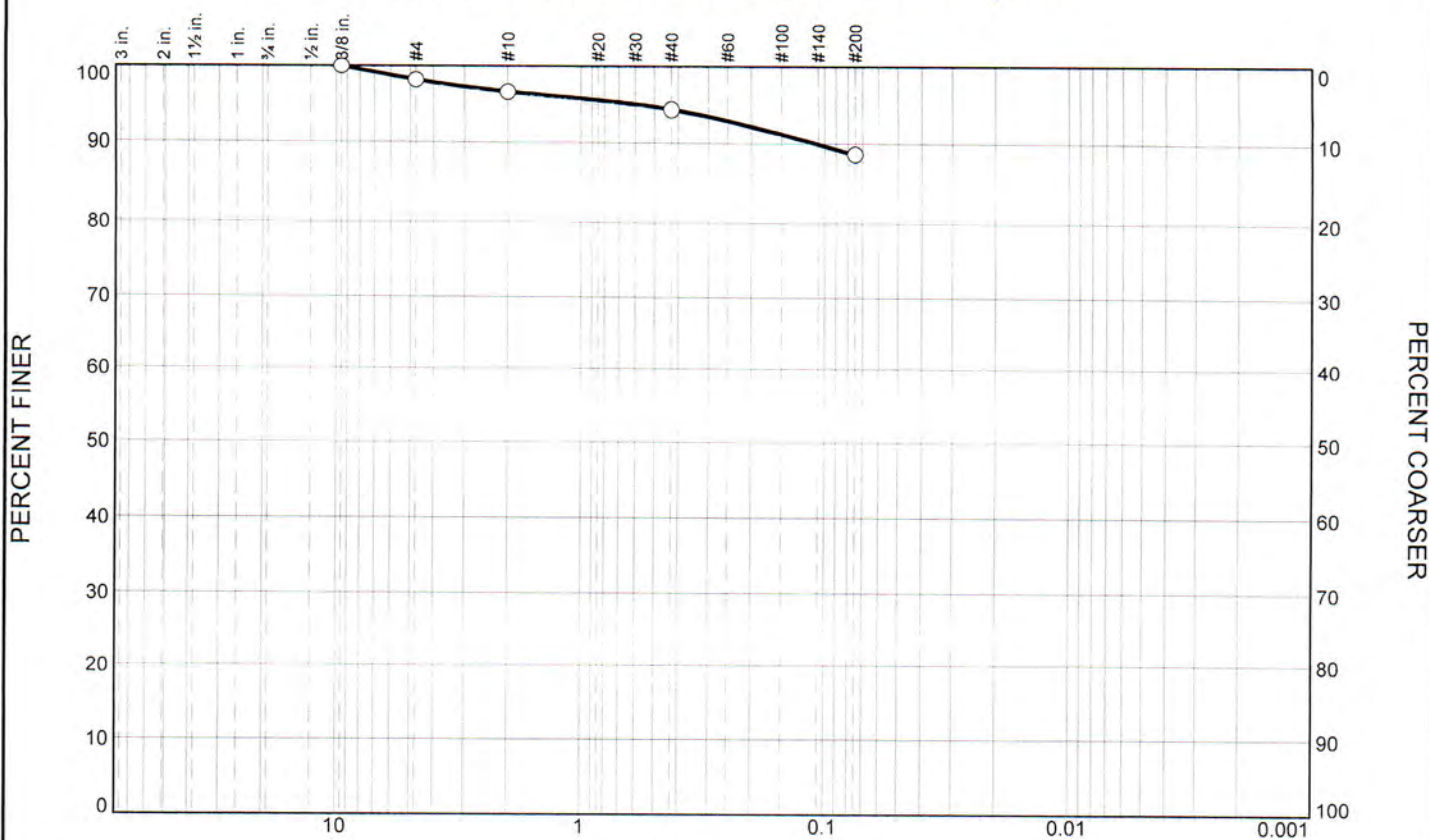
TEST RESULTS

Maximum dry density = 110.5 pcf

Optimum moisture = 13.8 %



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.9	1.6	2.2	5.7	88.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	98.1		
#10	96.5		
#40	94.3		
#200	88.6		

* (no specification provided)

<u>Material Description</u>		
Lean Clay - Reddish Brown		
<u>Atterberg Limits</u>		
PL= 17	LL= 32	PI= 15
<u>Coefficients</u>		
D ₉₀ = 0.1083	D ₈₅ =	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-6(12)	
<u>Remarks</u>		
NT - No Test		
F.M.=0.30		

Location: Existing Material (Section A Slope)
Sample Number: 15-655 Depth: Subgrade

Date: 9/17/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By:

Laboratory Compaction Characteristics of Soil

Curve No.: 15-656

Project No.: 09-1341

Date: 9/17/2015

SD

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section B Slope)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(12)

Nat. Moist. = 12.5 %

Sp.G. = NT

Liquid Limit = 31

Plasticity Index = 14

% > No.4 = 0.8 %

% < No.200 = 91.8 %

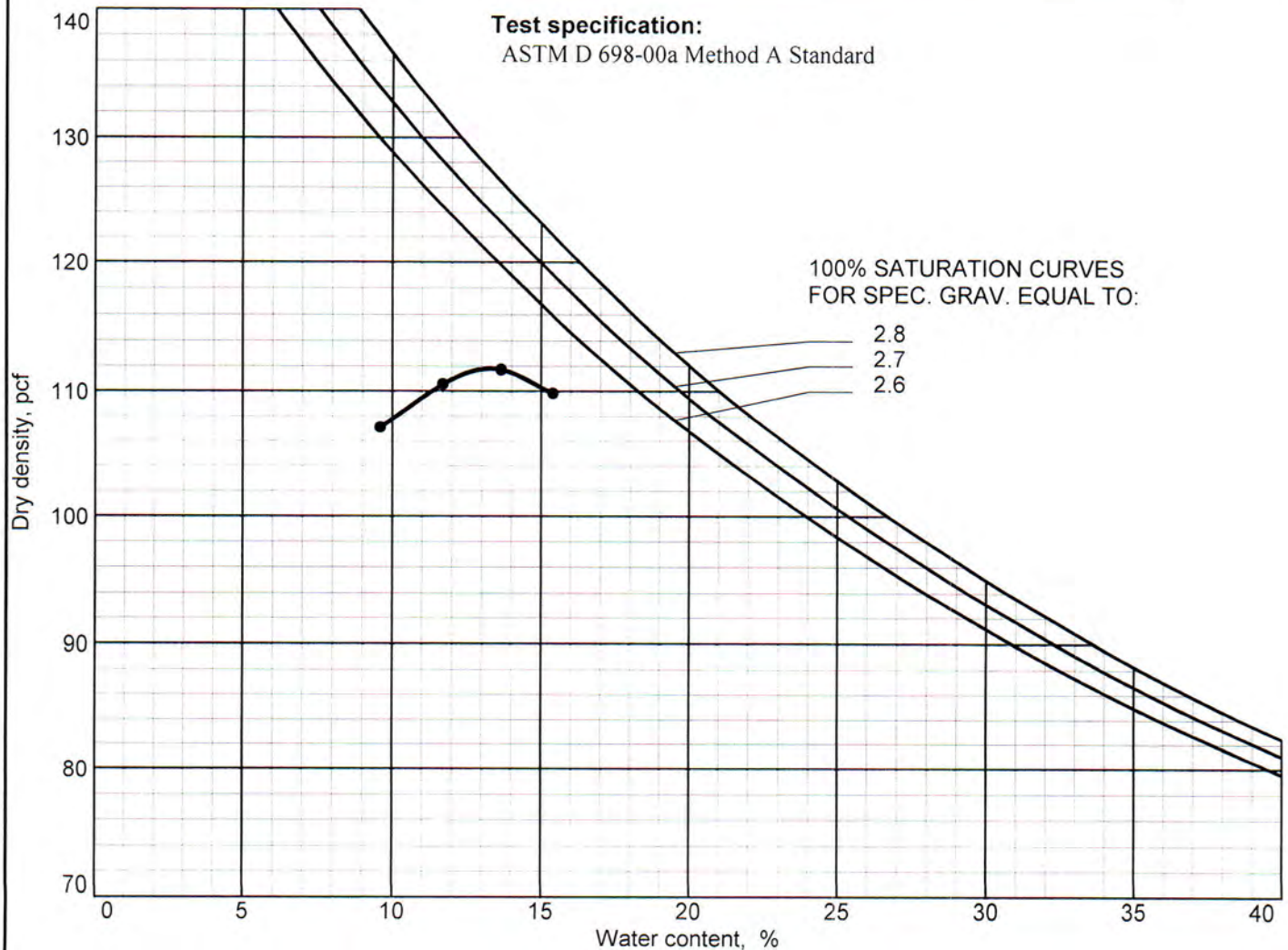
TEST RESULTS

Maximum dry density = 111.8 pcf

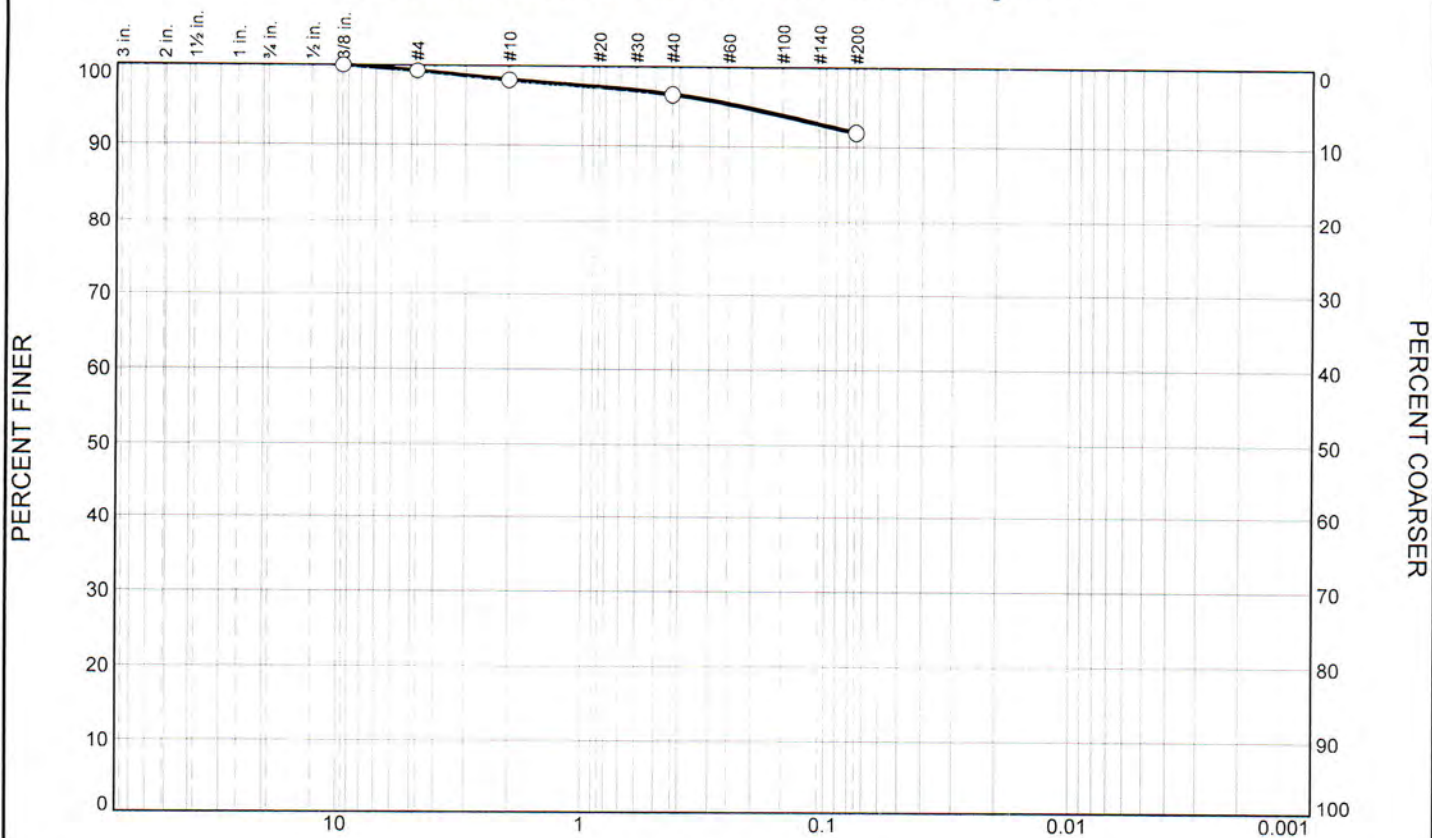
Optimum moisture = 13.3 %

Test specification:

ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.8	1.1	1.8	4.5	91.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	99.2		
#10	98.1		
#40	96.3		
#200	91.8		

* (no specification provided)

<u>Material Description</u>		
Lean Clay - Reddish Brown		
<u>Atterberg Limits</u>		
PL= 17	LL= 31	PI= 14
<u>Coefficients</u>		
D ₉₀ =	D ₈₅ =	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-6(12)	
<u>Remarks</u>		
NT - No Test		
F.M.=0.19		

Location: Existing Material (Section B Slope)
Sample Number: 15-656 Depth: Subgrade

Date: 9/17/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: _____

[Signature]

Laboratory Compaction Characteristics of Soil

Curve No.: 15-666

Project No.: 09-1341

Date: 9/21/2015

SSA

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section D)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(9)

Nat. Moist. = 13.5 %

Sp.G. = NT

Liquid Limit = 30

Plasticity Index = 14

% > No.4 = 4.3 %

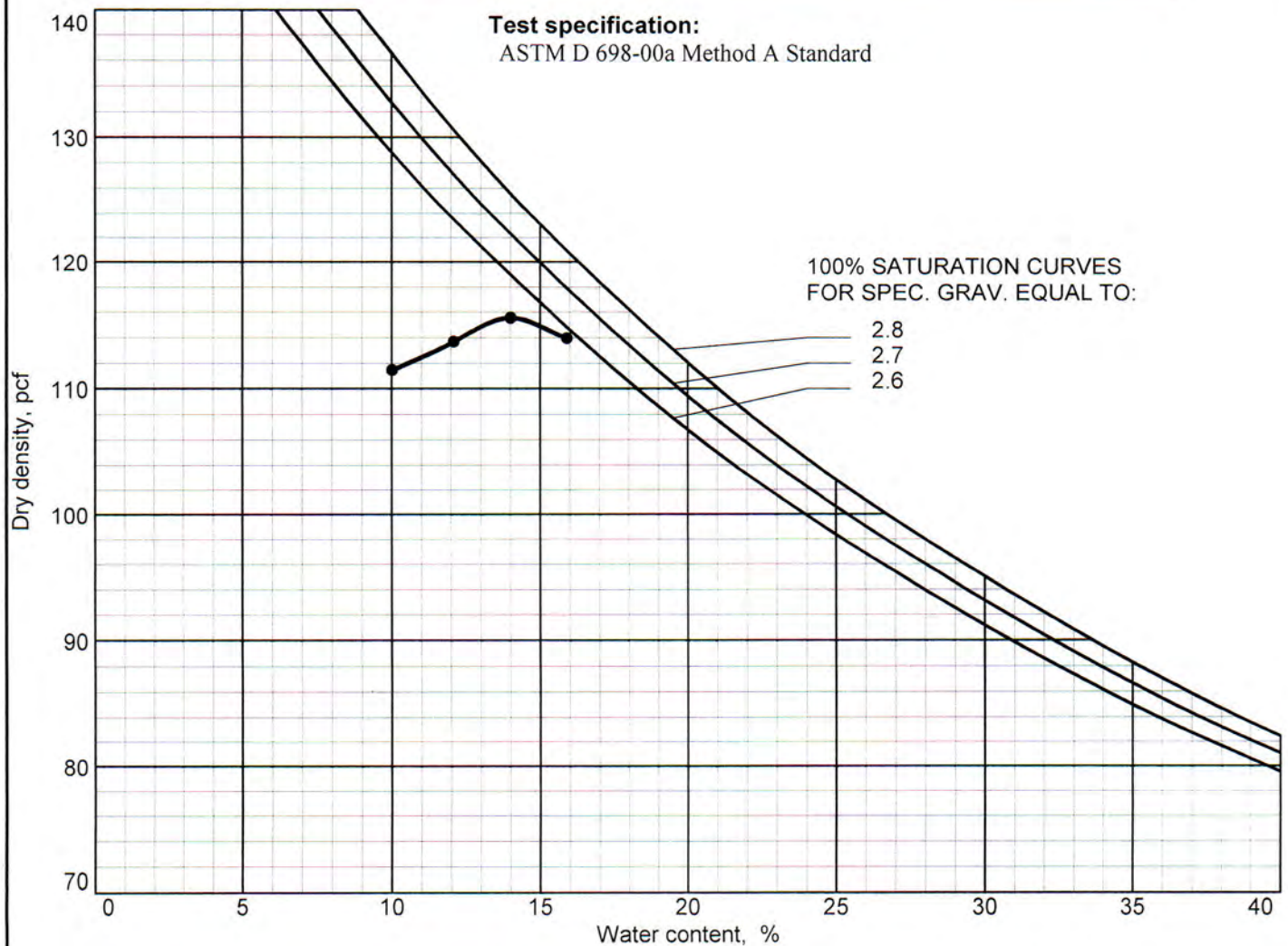
% < No.200 = 77.0 %

TEST RESULTS

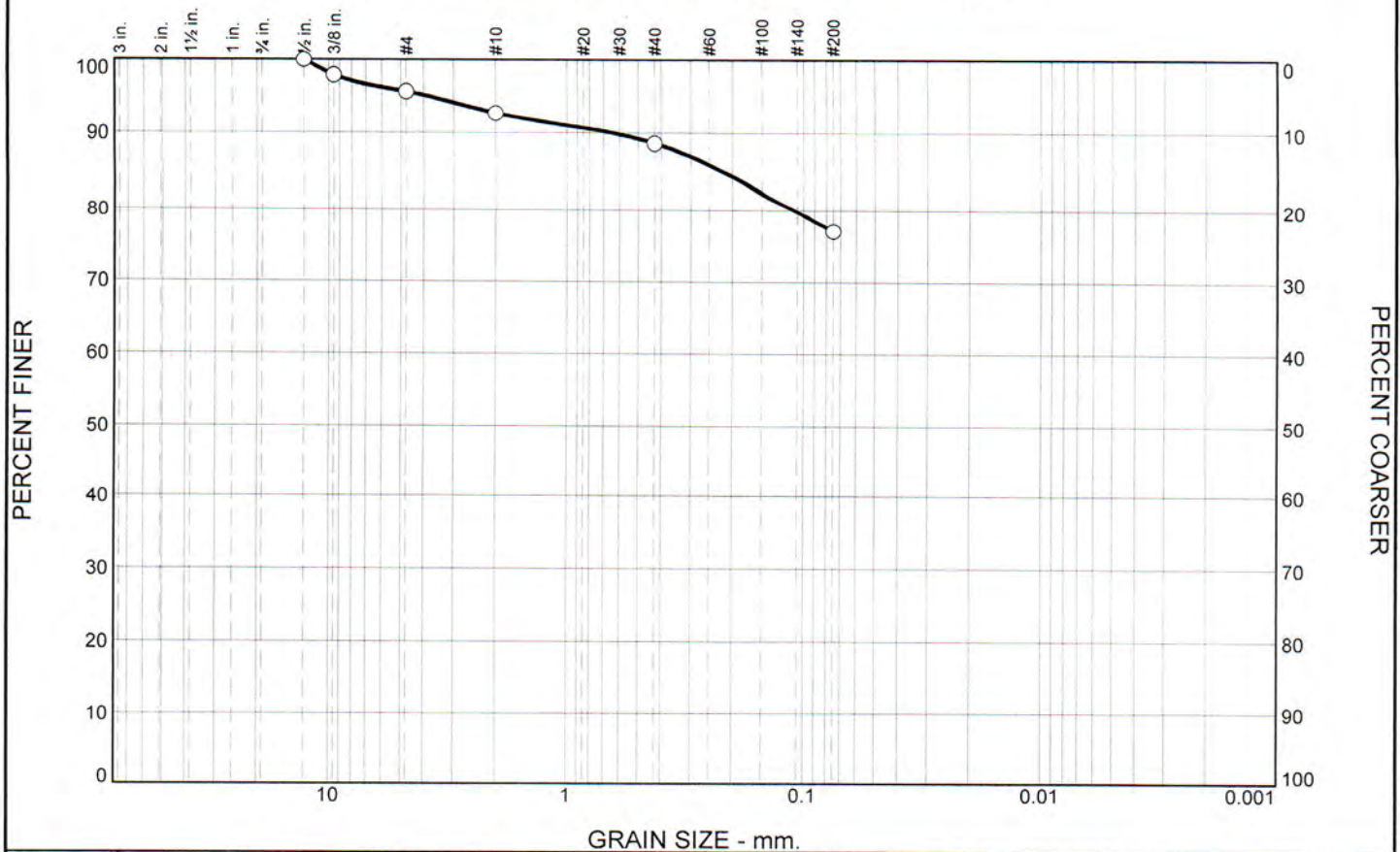
Maximum dry density = 115.5 pcf

Optimum moisture = 14.0 %

Test specification:
ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	4.3	2.9	4.2	11.6	77.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	97.9		
#4	95.7		
#10	92.8		
#40	88.6		
#200	77.0		

* (no specification provided)

Material Description
Lean Clay with Sand - Reddish Brown

PL= 16 **Atterberg Limits** LL= 30 PI= 14

Coefficients
D₉₀= 0.6389 D₈₅= 0.2190 D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

USCS= CL **Classification** AASHTO= A-6(9)

Remarks
NT - No Test
F.M.=0.63

Location: Existing Material (Section D)
Sample Number: 15-666 Depth: Subgrade

Date: 9/21/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: _____

SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-667

Project No.: 09-1341

Date: 9/21/2015

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section D)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(7)

Nat. Moist. = 14.5 %

Sp.G. = NT

Liquid Limit = 28

Plasticity Index = 12

% > No.4 = 3.5 %

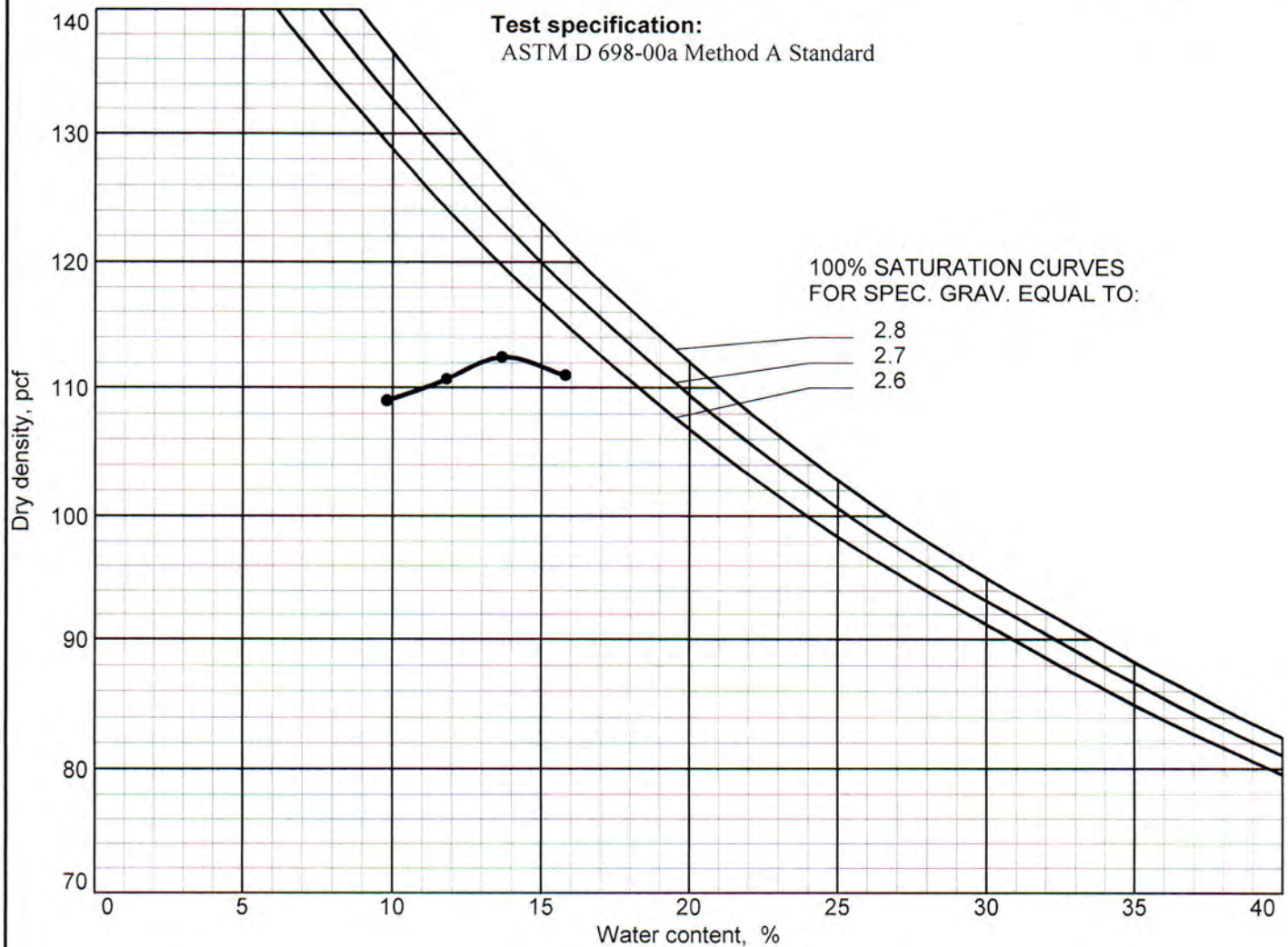
% < No.200 = 77.9 %

TEST RESULTS

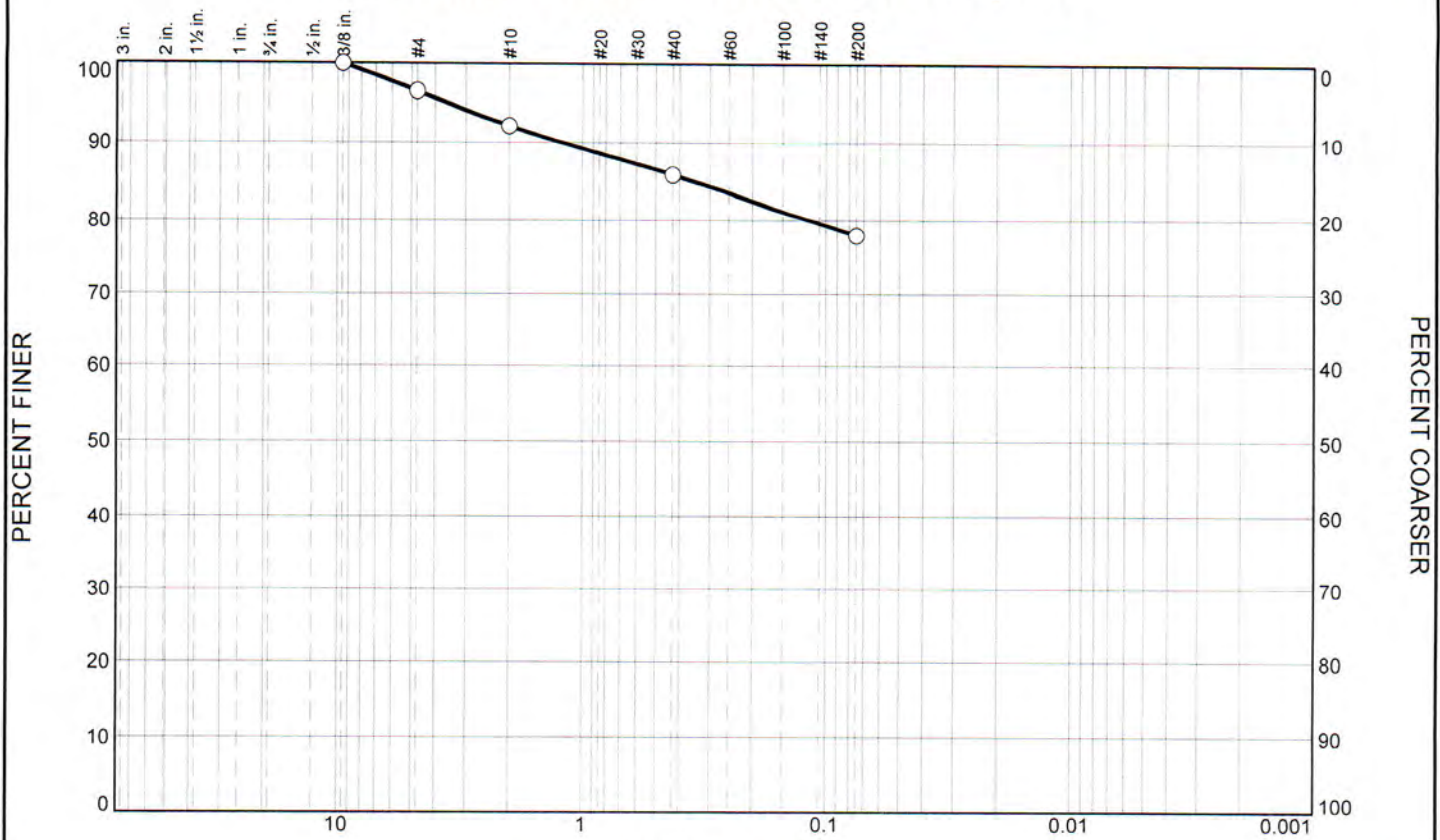
Maximum dry density = 112.4 pcf

Optimum moisture = 13.8 %

Test specification:
ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.5	4.3	6.4	7.9	77.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	96.5		
#10	92.2		
#40	85.8		
#200	77.9		

* (no specification provided)

<u>Material Description</u>		
Lean Clay with Sand - Reddish Brown		
<u>Atterberg Limits</u>		
PL= 16	LL= 28	PI= 12
<u>Coefficients</u>		
D ₉₀ = 1.2070	D ₈₅ = 0.3554	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-6(7)	
<u>Remarks</u>		
NT - No Test		
F.M.=0.68		

Location: Existing Material (Section D)
Sample Number: 15-667 Depth: Subgrade

Date: 9/21/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: 

Laboratory Compaction Characteristics of Soil

Curve No.: 15-668

Project No.: 09-1341

Date: 9/21/2015

SO

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section D)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(9)

Nat. Moist. = 14.5 %

Sp.G. = NT

Liquid Limit = 29

Plasticity Index = 12

% > No.4 = 3.8 %

% < No.200 = 85.2 %

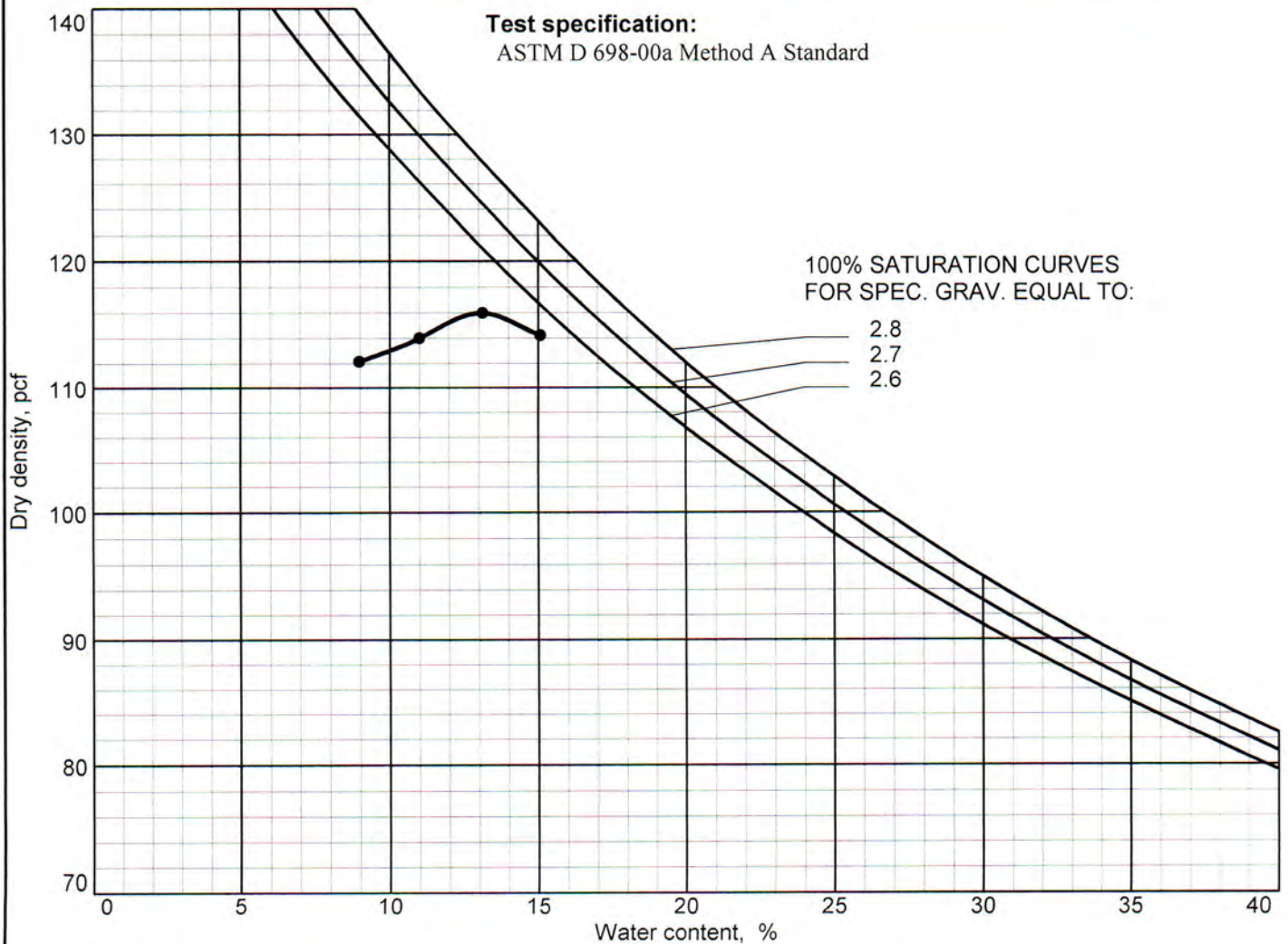
TEST RESULTS

Maximum dry density = 116.0 pcf

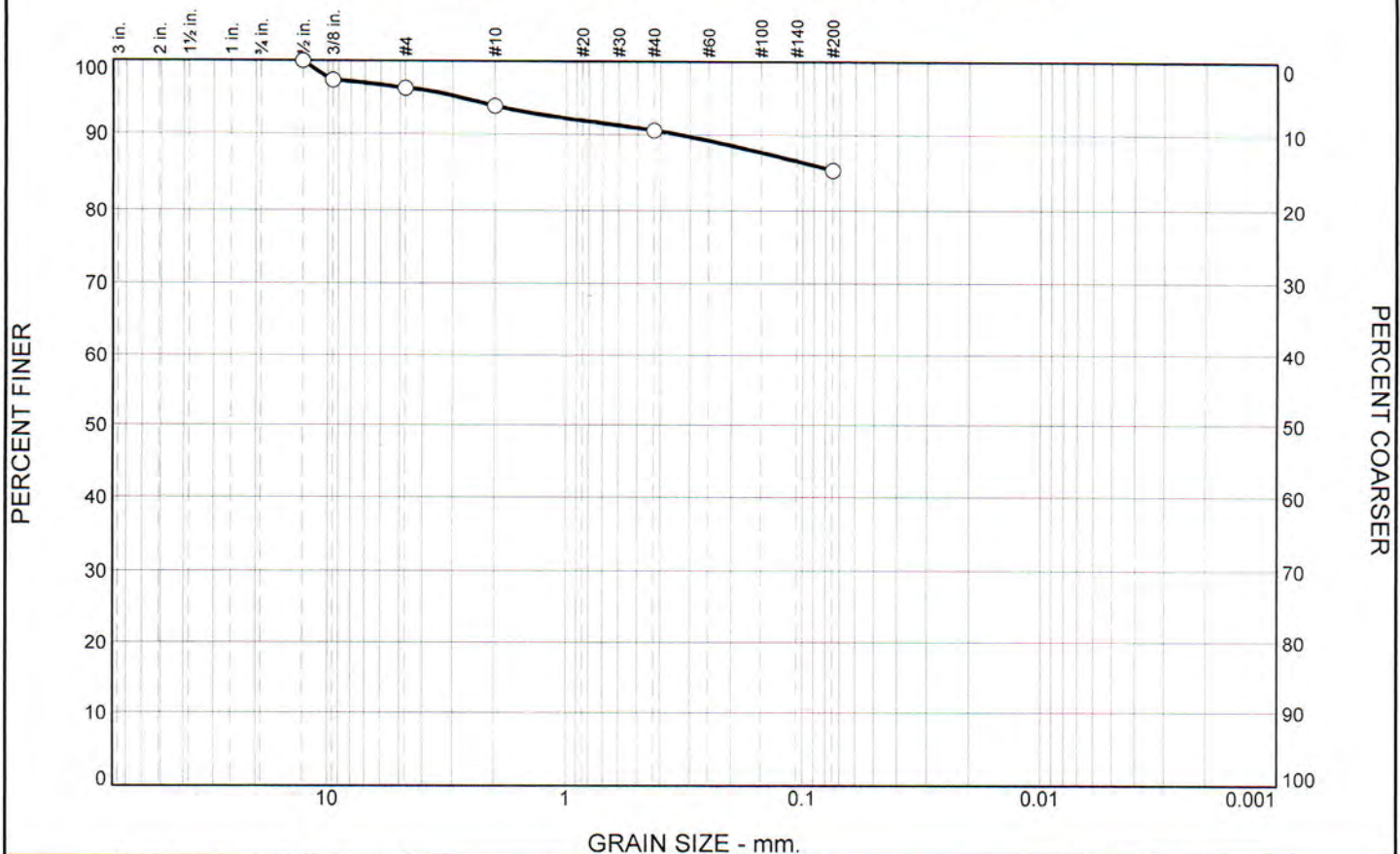
Optimum moisture = 13.1 %

Test specification:

ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.8	2.3	3.3	5.4	85.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	97.3		
#4	96.2		
#10	93.9		
#40	90.6		
#200	85.2		

* (no specification provided)

Material Description

Lean Clay - Reddish Brown

Atterberg Limits

PL= 17 LL= 29 PI= 12

Coefficients

D₉₀= 0.3333 D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(9)

Remarks

NT - No Test
F.M.=0.51

Location: Existing Material (Section D)
Sample Number: 15-668 Depth: Subgrade

Date: 9/21/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SSS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-676

Project No.: 09-1341

Date: 9/22/2015

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section D)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(9)

Nat. Moist. = 11.6 %

Sp.G. = NT

Liquid Limit = 30

Plasticity Index = 15

% > No.4 = 2.5 %

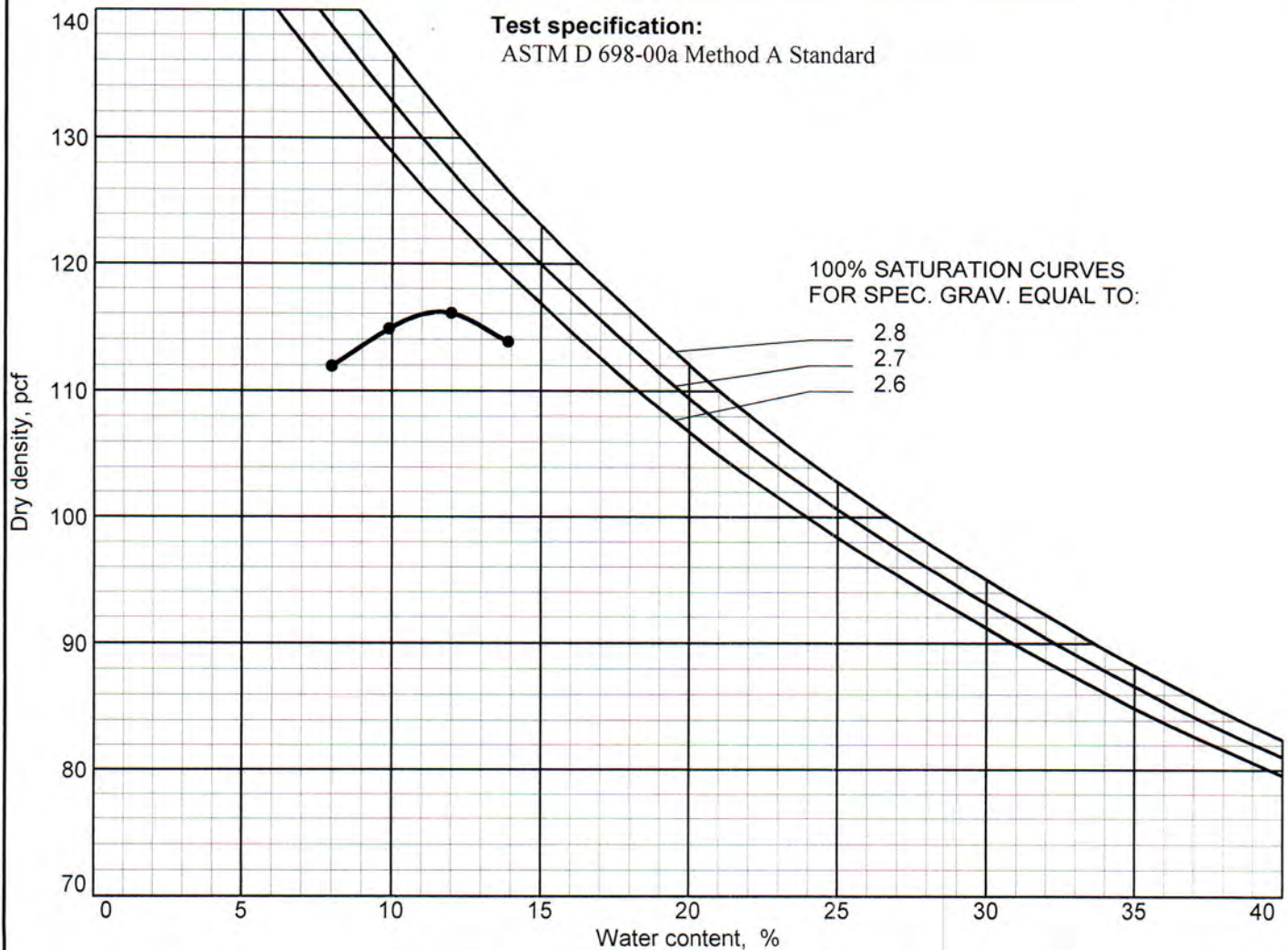
% < No.200 = 77.1 %

TEST RESULTS

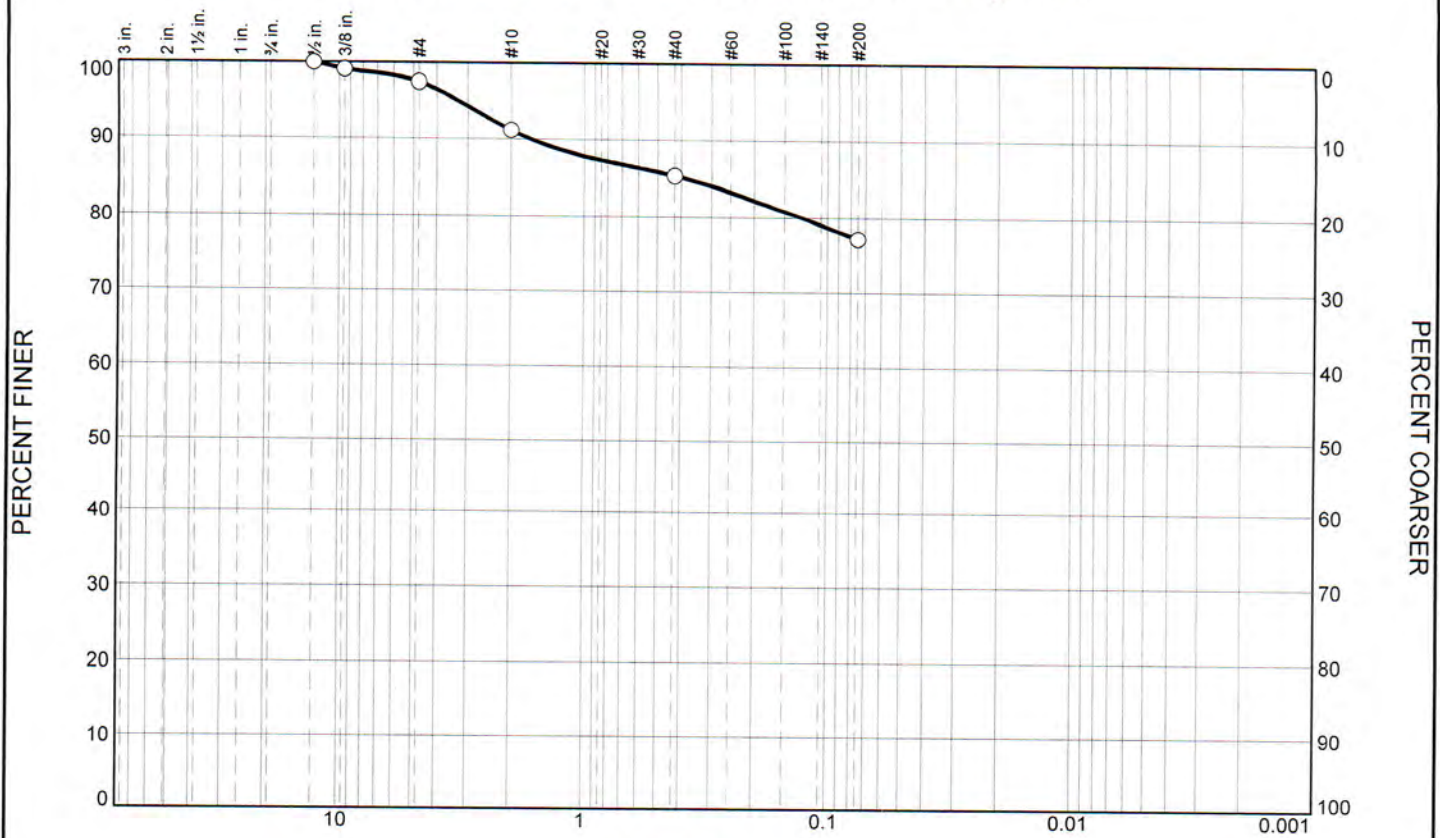
Maximum dry density = 116.1 pcf

Optimum moisture = 11.6 %

Test specification:
ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.5	6.3	5.8	8.3	77.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	99.1		
#4	97.5		
#10	91.2		
#40	85.4		
#200	77.1		

* (no specification provided)

<u>Material Description</u>		
Lean Clay with Sand - Reddish Brown		
<u>Atterberg Limits</u>		
PL= 15	LL= 30	PI= 15
<u>Coefficients</u>		
D ₉₀ = 1.6538	D ₈₅ = 0.3824	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-6(9)	
<u>Remarks</u>		
NT - No Test		
F.M.=0.71		

Location: Existing Material (Section D)
Sample Number: 15-676 Depth: Subgrade

Date: 9/22/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SES

Laboratory Compaction Characteristics of Soil

Curve No.: 15-677

Project No.: 09-1341

Date: 9/22/2015

SS

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section C)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(10)

Nat. Moist. = 13.6 %

Sp.G. = NT

Liquid Limit = 30

Plasticity Index = 12

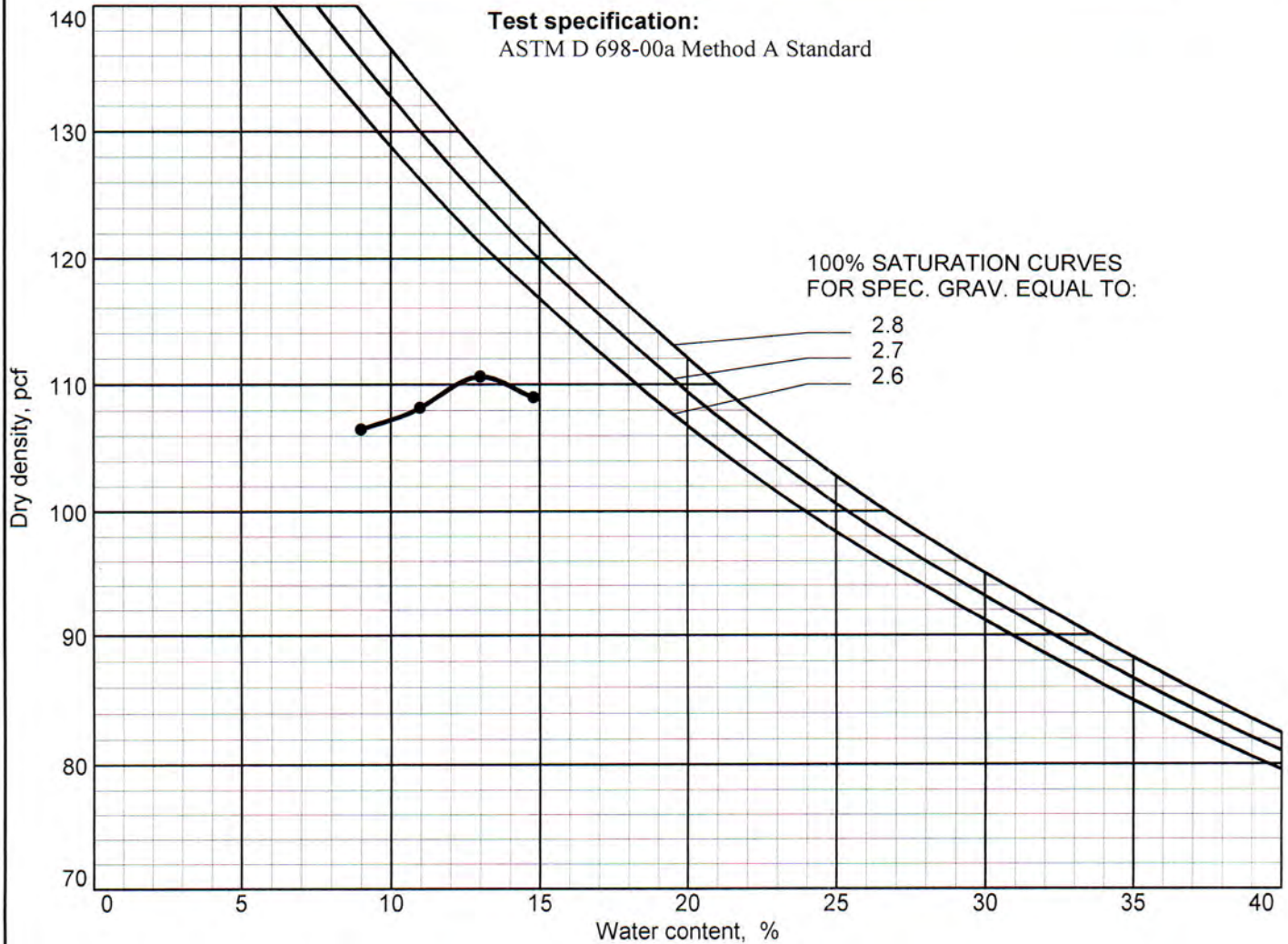
% > No.4 = 2.5 %

% < No.200 = 89.6 %

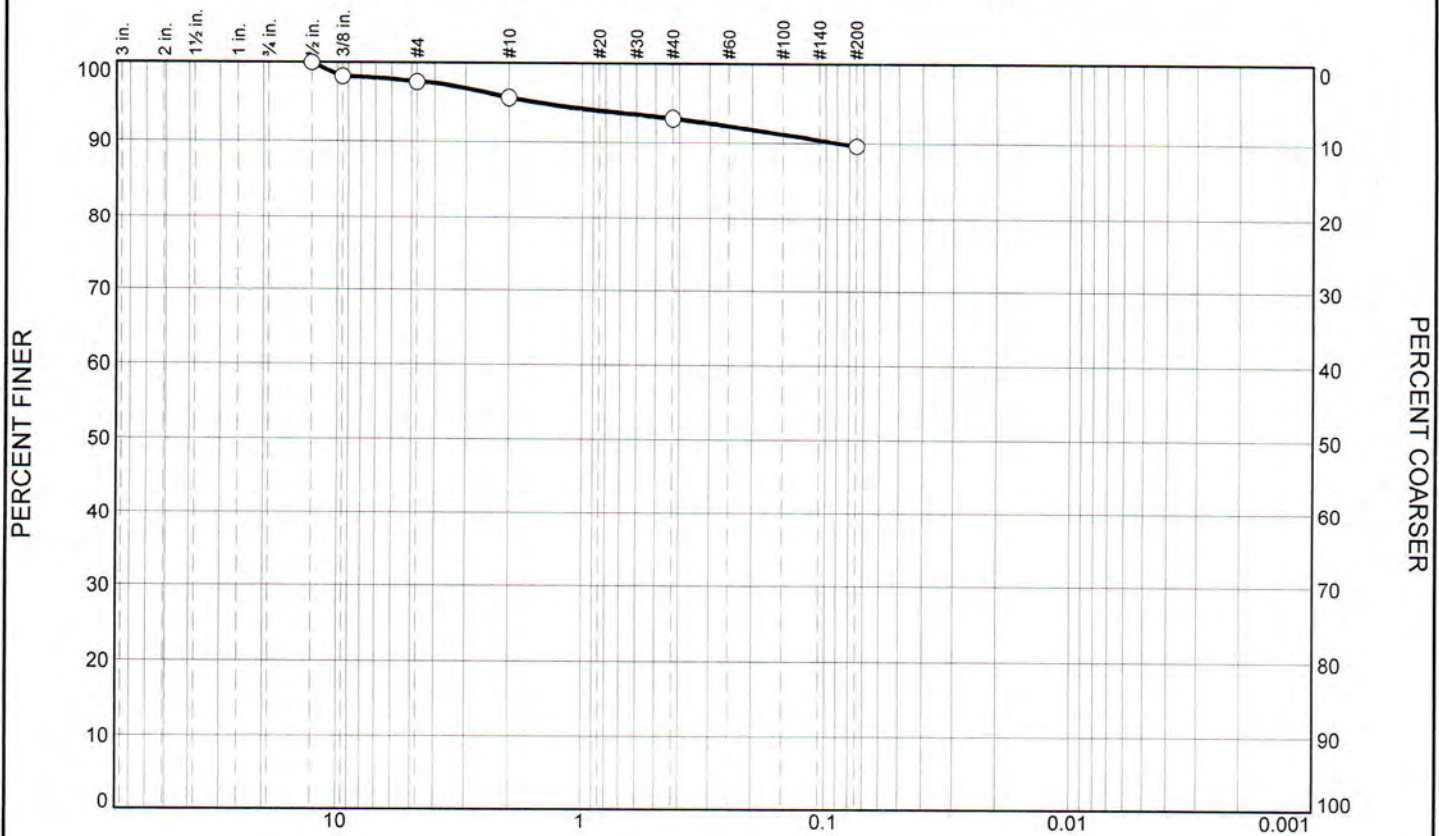
TEST RESULTS

Maximum dry density = 110.6 pcf

Optimum moisture = 13.0 %



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.5	1.9	2.5	3.5	89.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	98.2		
#4	97.5		
#10	95.6		
#40	93.1		
#200	89.6		

* (no specification provided)

Material Description

Lean Clay - Reddish Brown

PL= 18 Atterberg Limits LL= 30 PI= 12

Coefficients
D₉₀= 0.0889 D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

USCS= CL Classification AASHTO= A-6(10)

Remarks
NT - No Test
F.M.=0.37

Location: Existing Material (Section C)
Sample Number: 15-677 Depth: Subgrade

Date: 9/22/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-784

Project No.: 09-1341

Date: 10/15/2015

SD

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section E, Clay Cover)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(9)

Nat. Moist. = 19.1 %

Sp.G. = NT

Liquid Limit = 28

Plasticity Index = 13

% > No.4 = 1.3 %

% < No.200 = 84.2 %

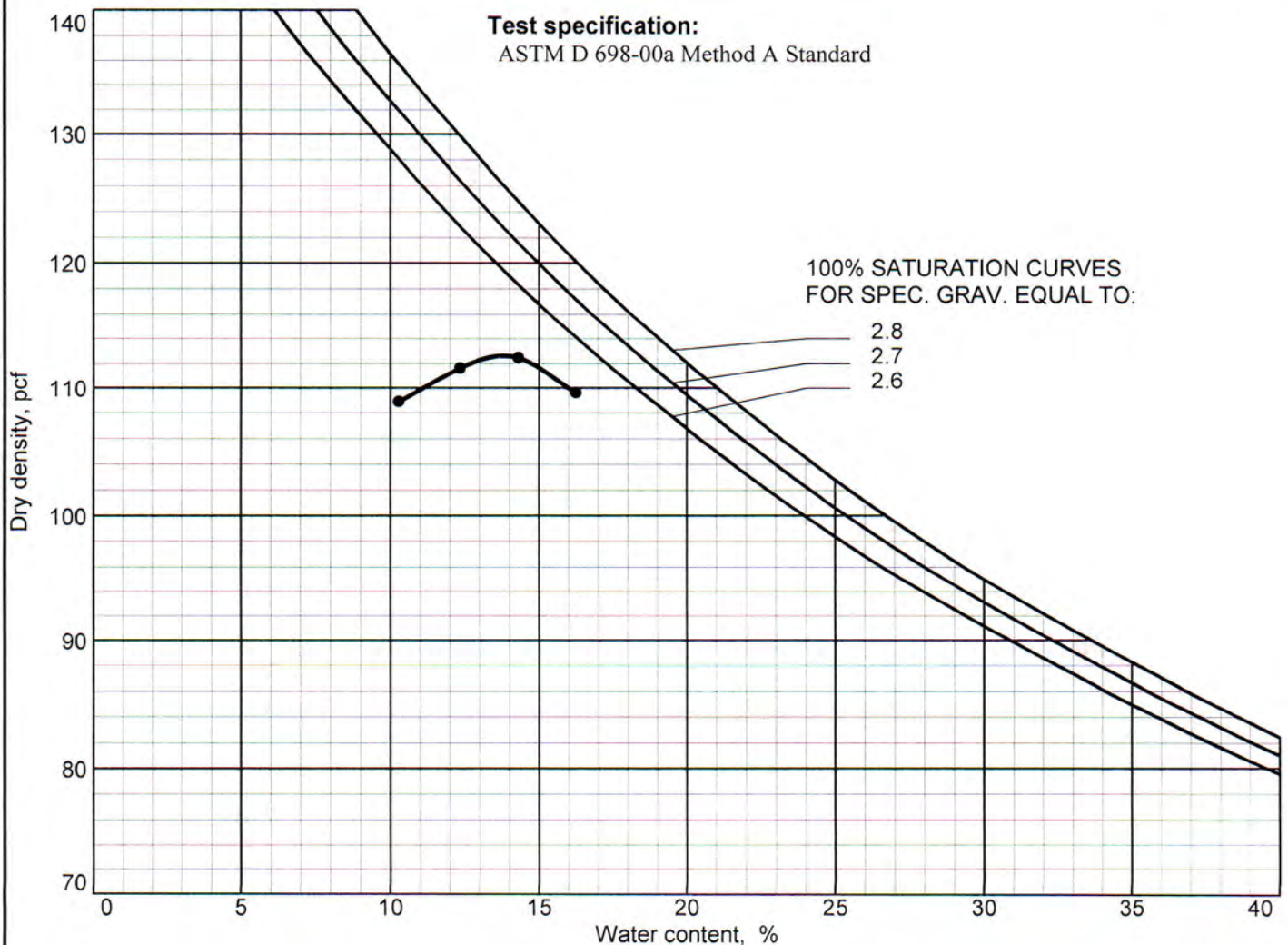
TEST RESULTS

Maximum dry density = 112.6 pcf

Optimum moisture = 13.8 %

Test specification:

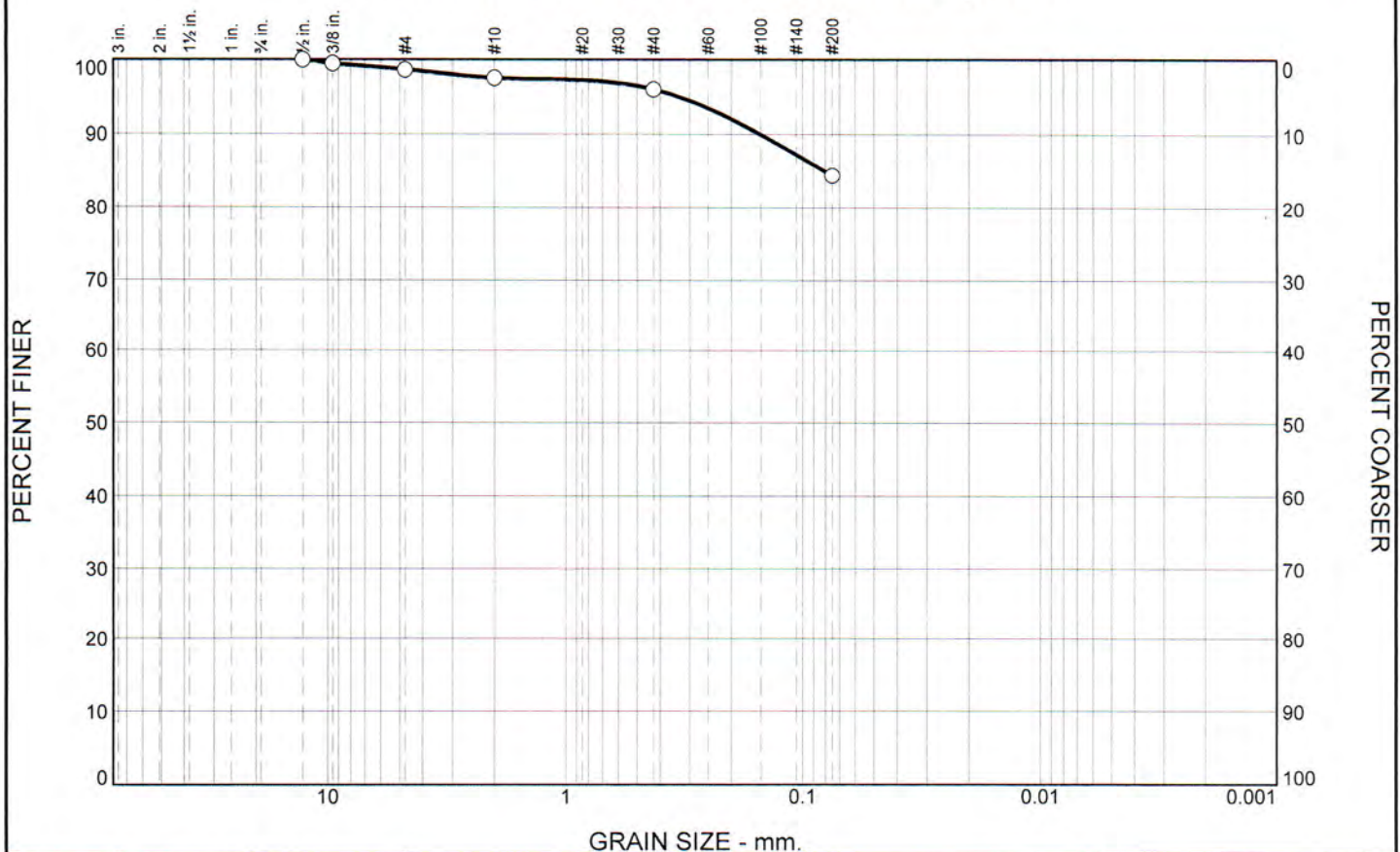
ASTM D 698-00a Method A Standard



100% SATURATION CURVES
FOR SPEC. GRAV. EQUAL TO:

2.8
2.7
2.6

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.3	1.1	1.5	11.9	84.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	99.5		
#4	98.7		
#10	97.6		
#40	96.1		
#200	84.2		

* (no specification provided)

Material Description

Lean Clay with Sand - Reddish Brown

PL= 15 Atterberg Limits LL= 28 PI= 13

Coefficients
D₉₀= 0.1506 D₈₅= 0.0821 D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CL AASHTO= A-6(9)

Remarks

NT - No Test
F.M.=0.25

Location: Existing Material (Section E, Clay Cover)
Sample Number: 15-784 Depth: Subgrade

Date: 10/15/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-785

Project No.: 09-1341

Date: 10/15/2015

SS

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section E, Clay Cover)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(7)

Nat. Moist. = 9.2 %

Sp.G. = NT

Liquid Limit = 26

Plasticity Index = 11

% > No.4 = 2.7 %

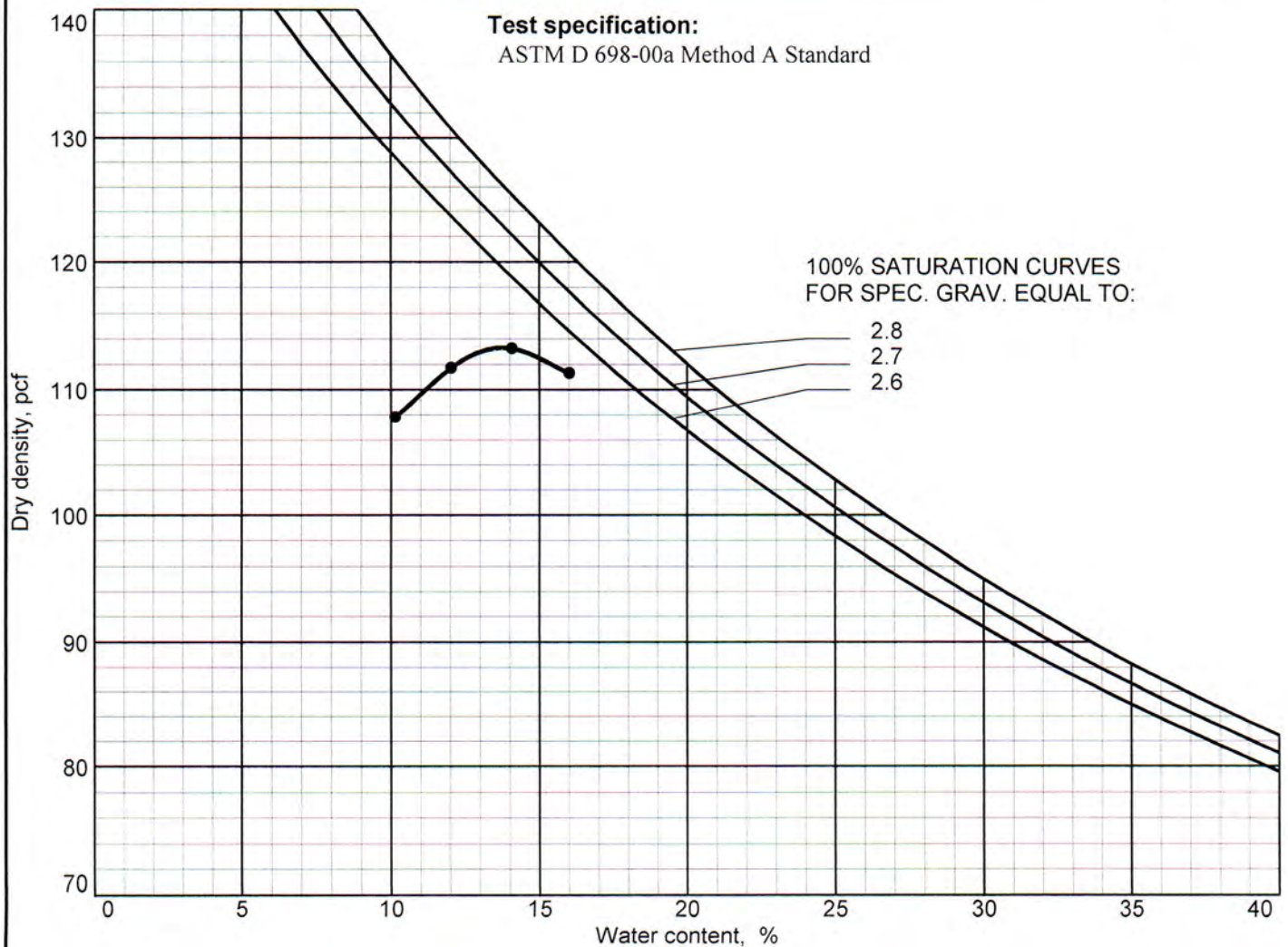
% < No.200 = 83.3 %

TEST RESULTS

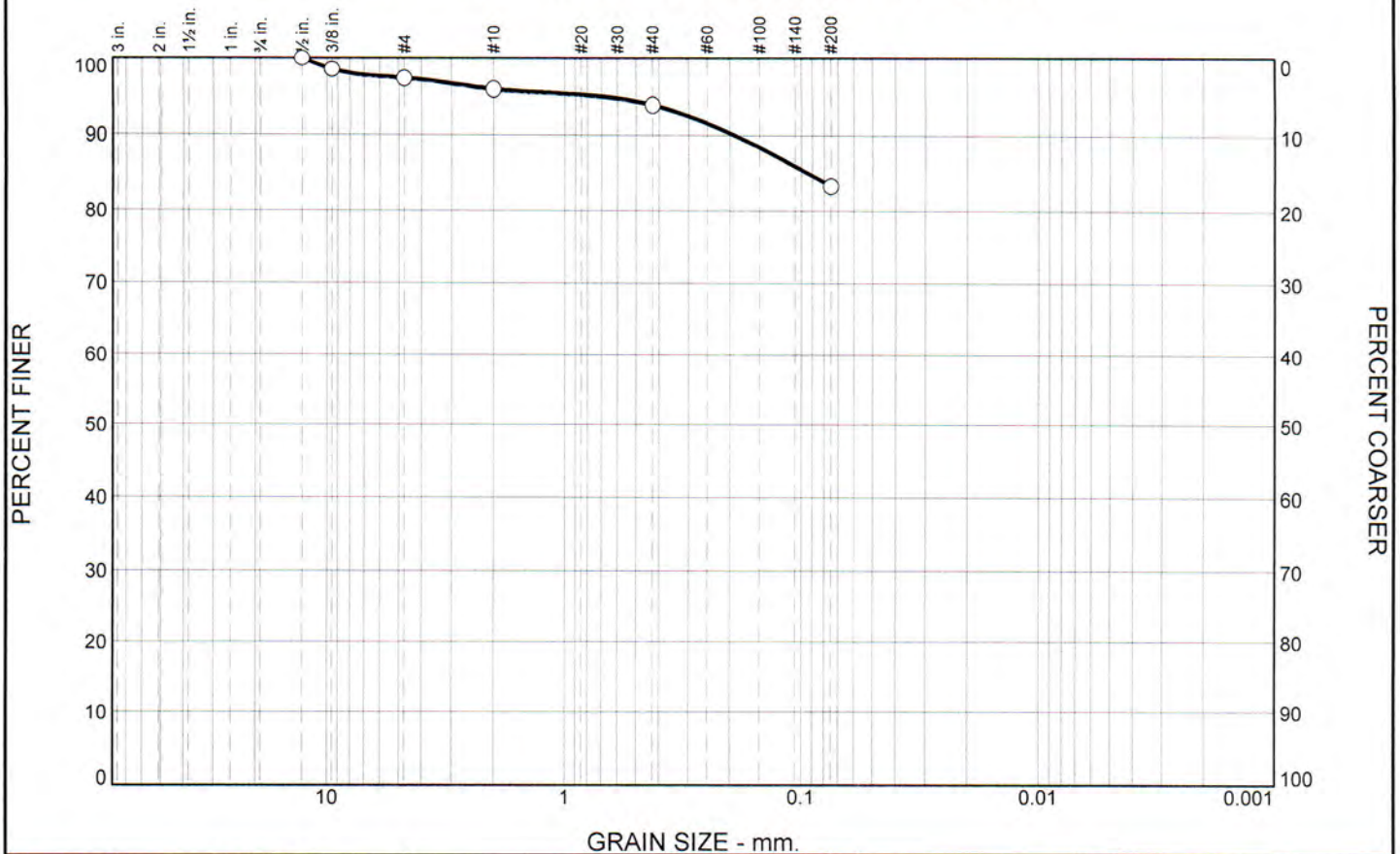
Maximum dry density = 113.3 pcf

Optimum moisture = 13.8 %

Test specification:
ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.7	1.4	2.0	10.6	83.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	98.4		
#4	97.3		
#10	95.9		
#40	93.9		
#200	83.3		

* (no specification provided)

Material Description
Lean Clay with Sand - Reddish Brown

Atterberg Limits
PL= 15 LL= 26 PI= 11

Coefficients
D₉₀= 0.1904 D₈₅= 0.0936 D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CL AASHTO= A-6(7)

Remarks
NT - No Test
F.M.=0.37

Location: Existing Material (Section E, Clay Cover)
Sample Number: 15-785 **Depth:** Subgrade

Date: 10/15/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By:

SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-786

Project No.: 09-1341

Date: 10/15/2015

SG

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section E, Clay Cover)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Yellowish Brown

Classifications -

USCS: CL

AASHTO: A-6(11)

Nat. Moist. = 8.7 %

Sp.G. = NT

Liquid Limit = 33

Plasticity Index = 18

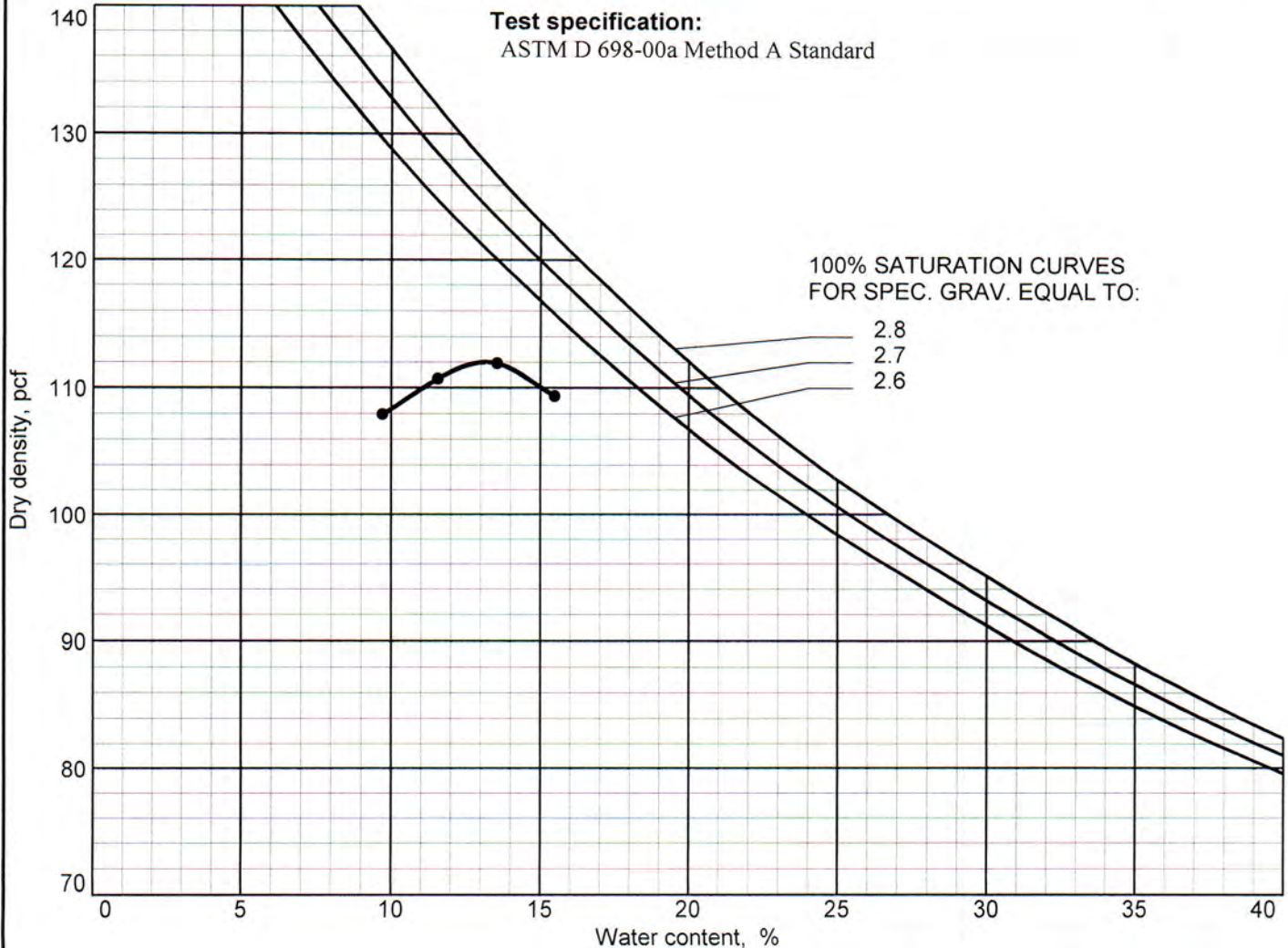
% > No.4 = 10.0 %

% < No.200 = 75.0 %

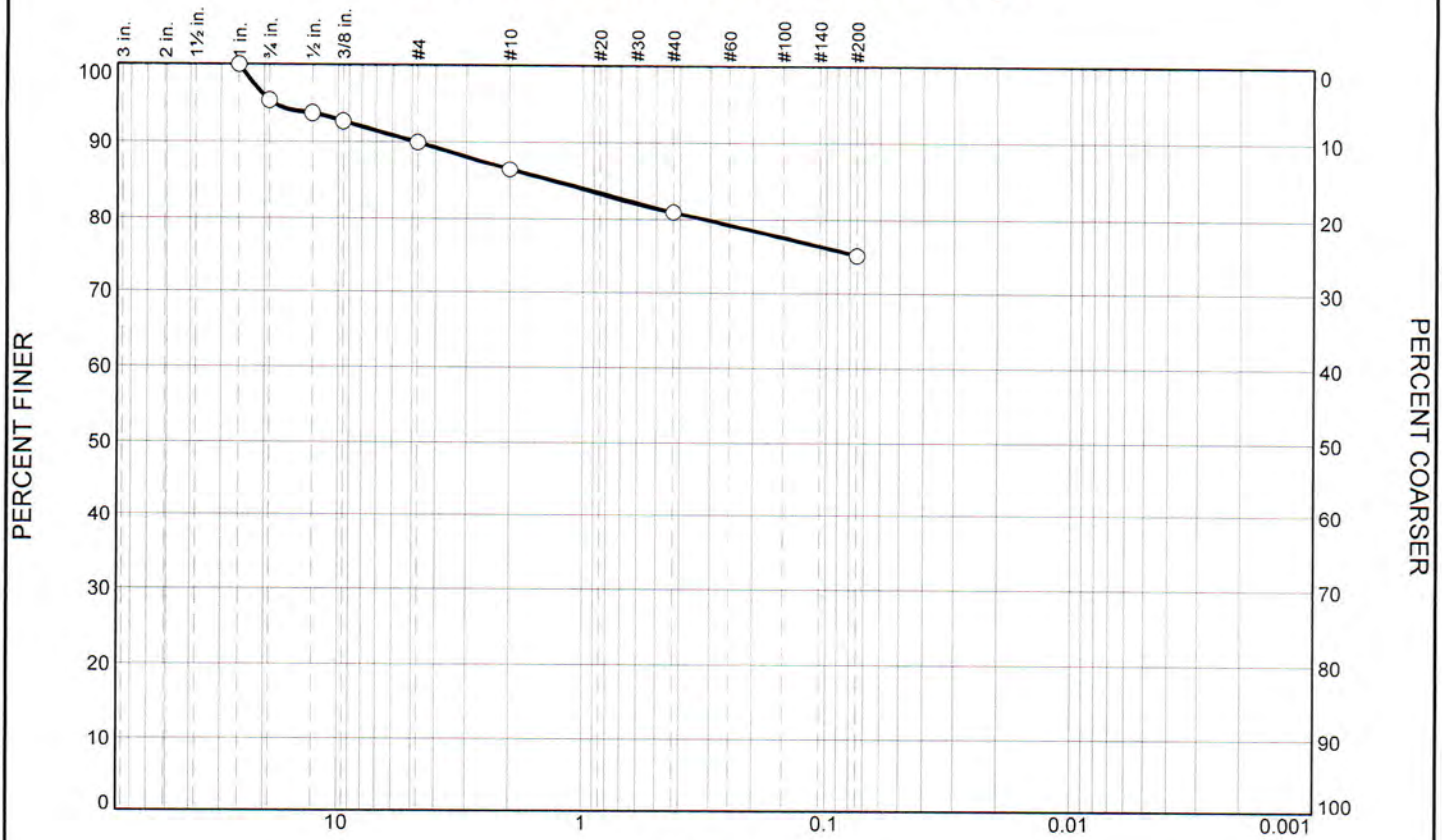
TEST RESULTS

Maximum dry density = 112.0 pcf

Optimum moisture = 13.2 %



Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.7	5.3	3.7	5.3	6.0	75.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0		
0.75"	95.3		
0.5"	93.7		
0.375"	92.7		
#4	90.0		
#10	86.3		
#40	81.0		
#200	75.0		

* (no specification provided)

Material Description

Lean Clay with Sand - Yellowish Brown

Atterberg Limits

PL= 15 LL= 33 PI= 18

Coefficients

D₉₀= 4.8032 D₈₅= 1.4290 D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(11)

Remarks

NT - No Test
F.M.=1.11

Location: Existing Material (Section E, Clay Cover)
Sample Number: 15-786 Depth: Subgrade

Date: 10/15/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By:

[Signature]

Laboratory Compaction Characteristics of Soil

Curve No.: 15-832

Project No.: 09-1341

Date: 11/10/2015

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section F)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Yellow

Classifications -

USCS: CL

AASHTO: A-6(8)

Nat. Moist. = 9.8 %

Sp.G. = NT

Liquid Limit = 28

Plasticity Index = 11

% > No.4 = 2.0 %

% < No.200 = 89.4 %

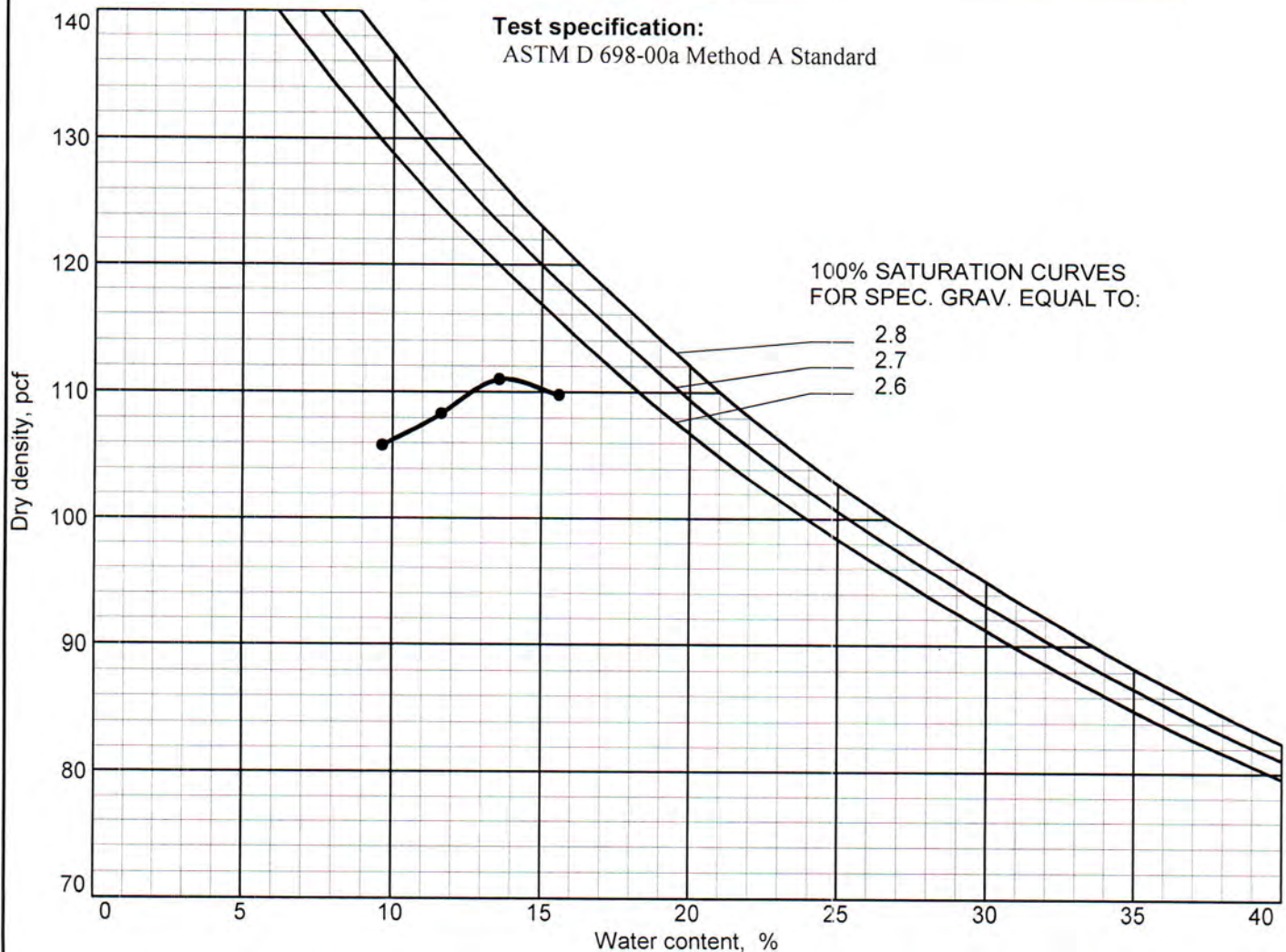
TEST RESULTS

Maximum dry density = 111.0 pcf

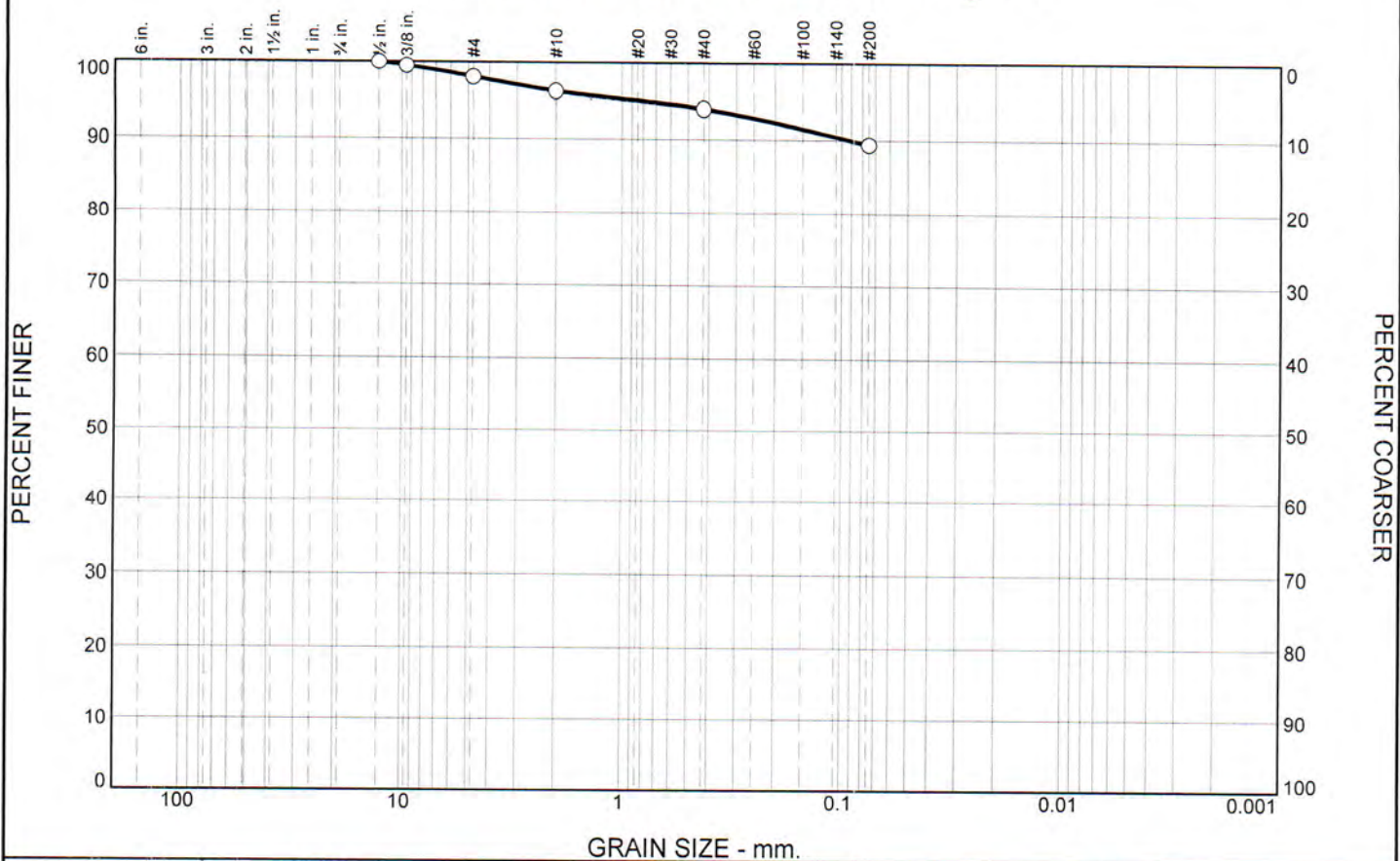
Optimum moisture = 13.8 %

Test specification:

ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.0	1.9	2.1	4.6	89.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	99.5		
#4	98.0		
#10	96.1		
#40	94.0		
#200	89.4		

* (no specification provided)

<u>Material Description</u>		
Lean Clay - Reddish Yellow		
<u>Atterberg Limits</u>		
PL= 17	LL= 28	PI= 11
<u>Coefficients</u>		
D ₉₀ = 0.0911	D ₈₅ =	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-6(8)	
<u>Remarks</u>		
NT - No Test		
F.M.=0.32		

Location: Existing Material (Section F)
Sample Number: 15-832 Depth: Subgrade

Date: 11/10/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-837

Project No.: 09-1341

Date: 11/11/2015

SS

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section E)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Yellowish Brown

Classifications -

USCS: CL

AASHTO: A-6(9)

Nat. Moist. = 10.3 %

Sp.G. = NT

Liquid Limit = 28

Plasticity Index = 11

% > No.4 = 0.1 %

% < No.200 = 92.3 %

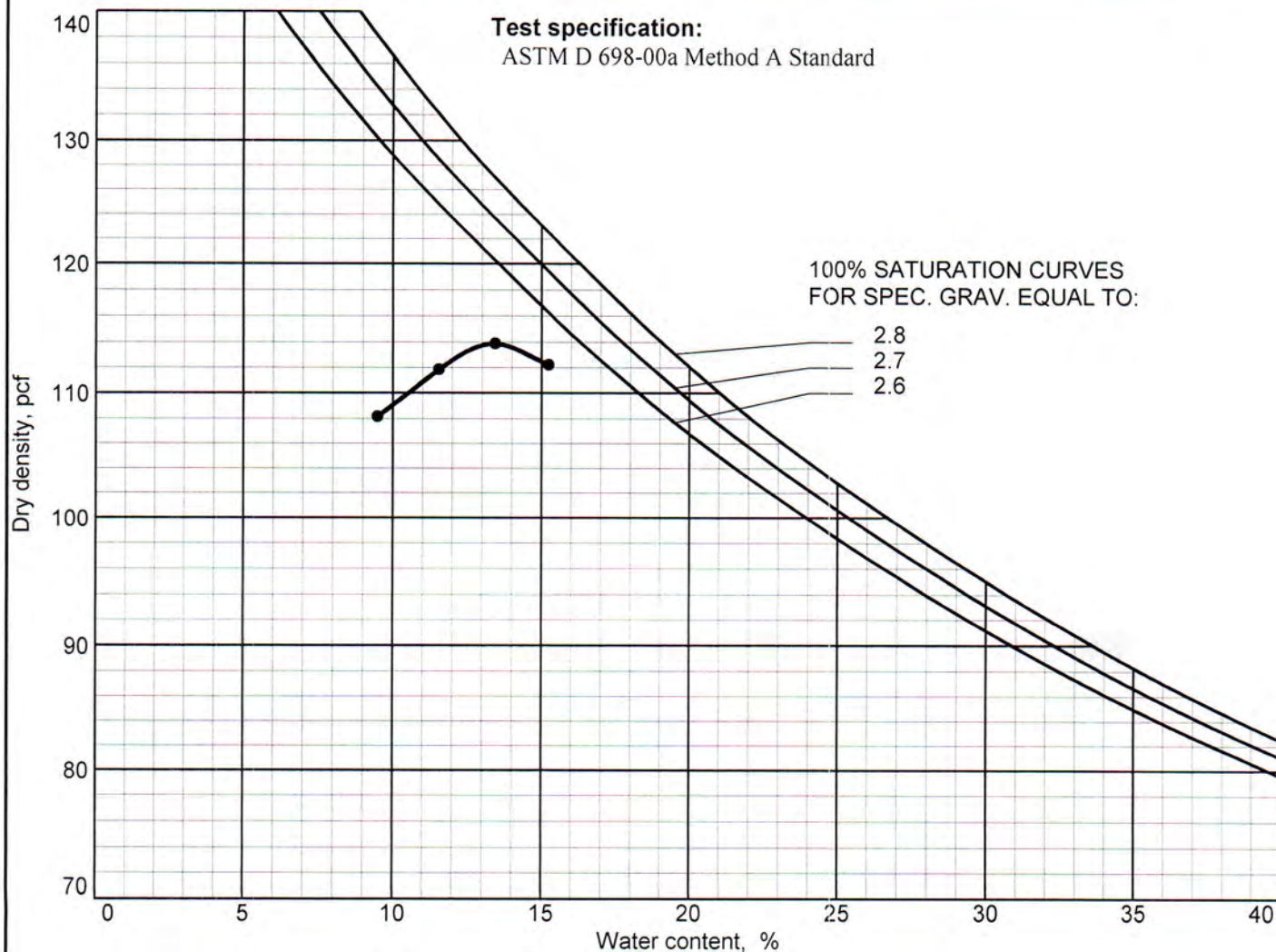
TEST RESULTS

Maximum dry density = 113.9 pcf

Optimum moisture = 13.4 %

Test specification:

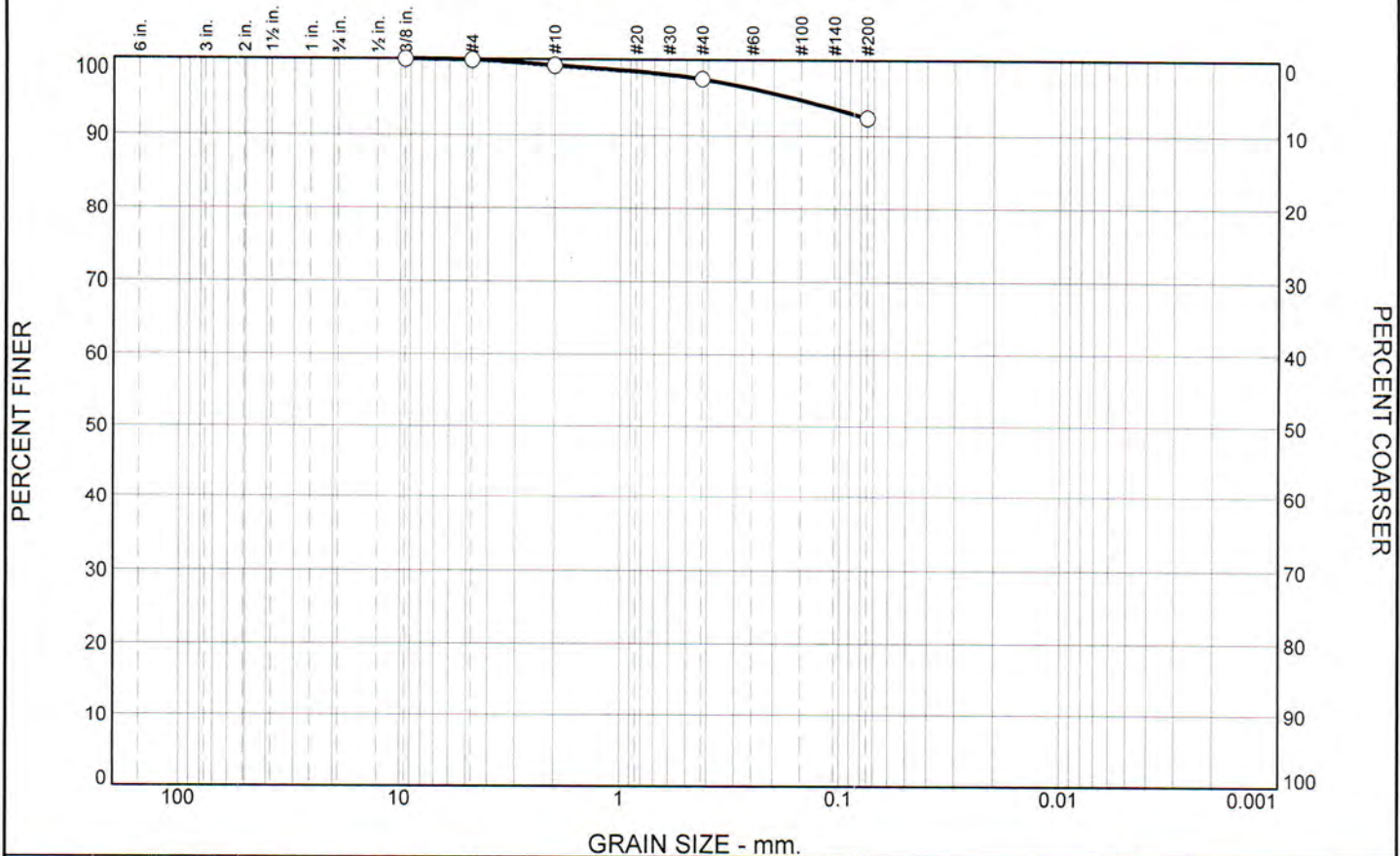
ASTM D 698-00a Method A Standard



100% SATURATION CURVES
FOR SPEC. GRAV. EQUAL TO:

2.8
2.7
2.6

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.1	0.7	1.7	5.2	92.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	99.9		
#10	99.2		
#40	97.5		
#200	92.3		

* (no specification provided)

Material Description		
Lean Clay - Yellowish Brown		
Atterberg Limits		
PL= 17	LL= 28	PI= 11
Coefficients		
D ₉₀ =	D ₈₅ =	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Classification		
USCS= CL	AASHTO= A-6(9)	
Remarks		
NT - No Test F.M.=0.12		

Location: Existing Material (Section E)
Sample Number: 15-837 Depth: Subgrade

Date: 11/11/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-838

Project No.: 09-1341

Date: 11/11/2015 *SS*

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section G)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(15)

Nat. Moist. = 17.4 %

Sp.G. = NT

Liquid Limit = 33

Plasticity Index = 16

% > No.4 = 0.1 %

% < No.200 = 97.7 %

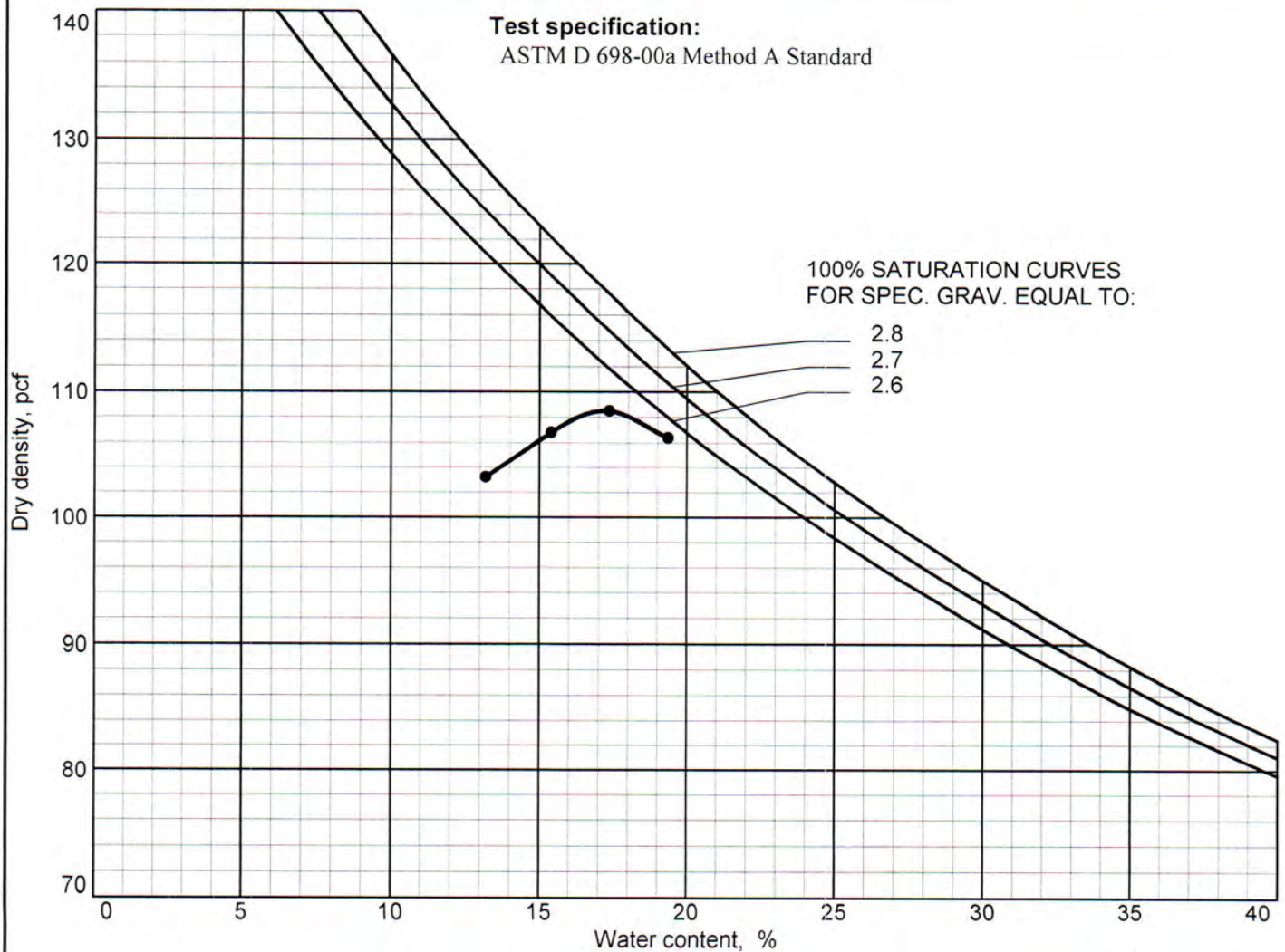
TEST RESULTS

Maximum dry density = 108.5 pcf

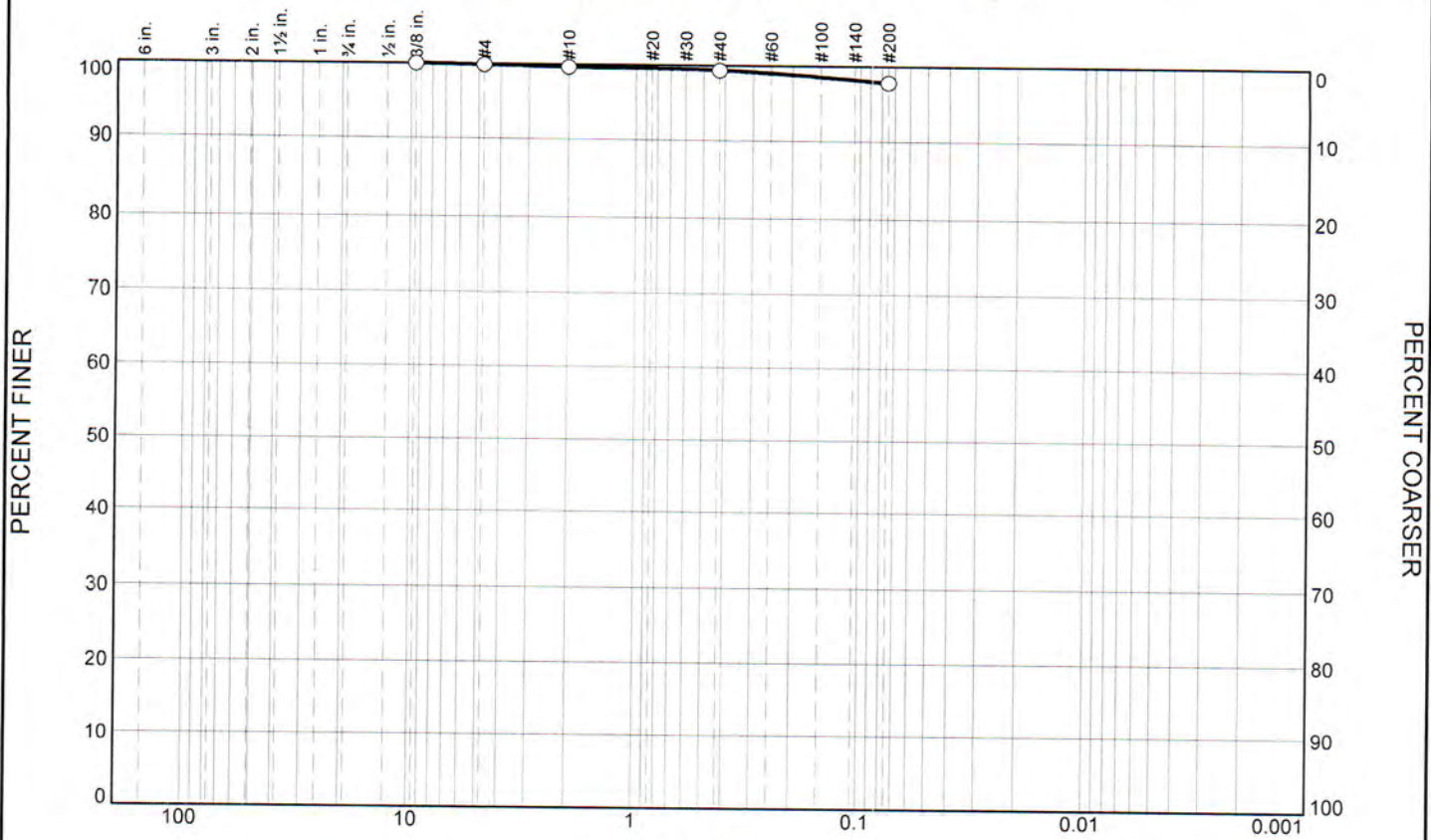
Optimum moisture = 17.2 %

Test specification:

ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.1	0.3	0.3	1.6	97.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	99.9		
#10	99.6		
#40	99.3		
#200	97.7		

* (no specification provided)

Material Description		
Lean Clay - Reddish Brown		
Atterberg Limits PL= 17 LL= 33 PI= 16 Coefficients D₉₀= D₅₀= D₁₀= C_u= D₆₀= D₁₅= C_c=		
Classification USCS= CL AASHTO= A-6(15) Remarks NT - No Test F.M.=0.04		

Location: Existing Material (Section G)
 Sample Number: 15-838 Depth: Subgrade

Date: 11/11/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
 Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By:

[Signature]

Laboratory Compaction Characteristics of Soil

Curve No.: 15-839

Project No.: 09-1341

Date: 11/11/2015 *SO*

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section G)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Yellowish Brown

Classifications -

USCS: CL

AASHTO: A-6(10)

Nat. Moist. = 14.8 %

Sp.G. = NT

Liquid Limit = 28

Plasticity Index = 11

% > No.4 = 0.3 %

% < No.200 = 96.7 %

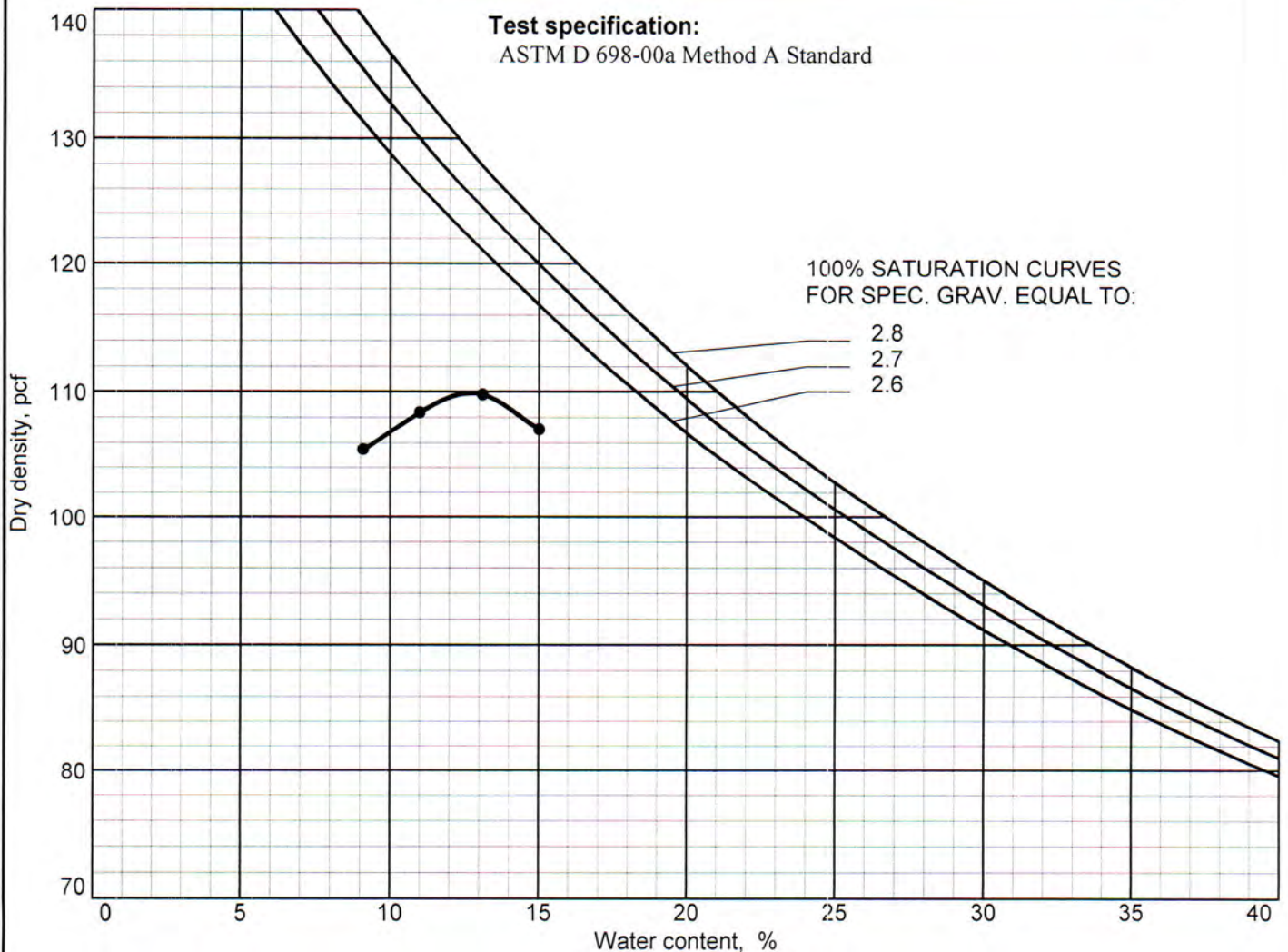
TEST RESULTS

Maximum dry density = 109.9 pcf

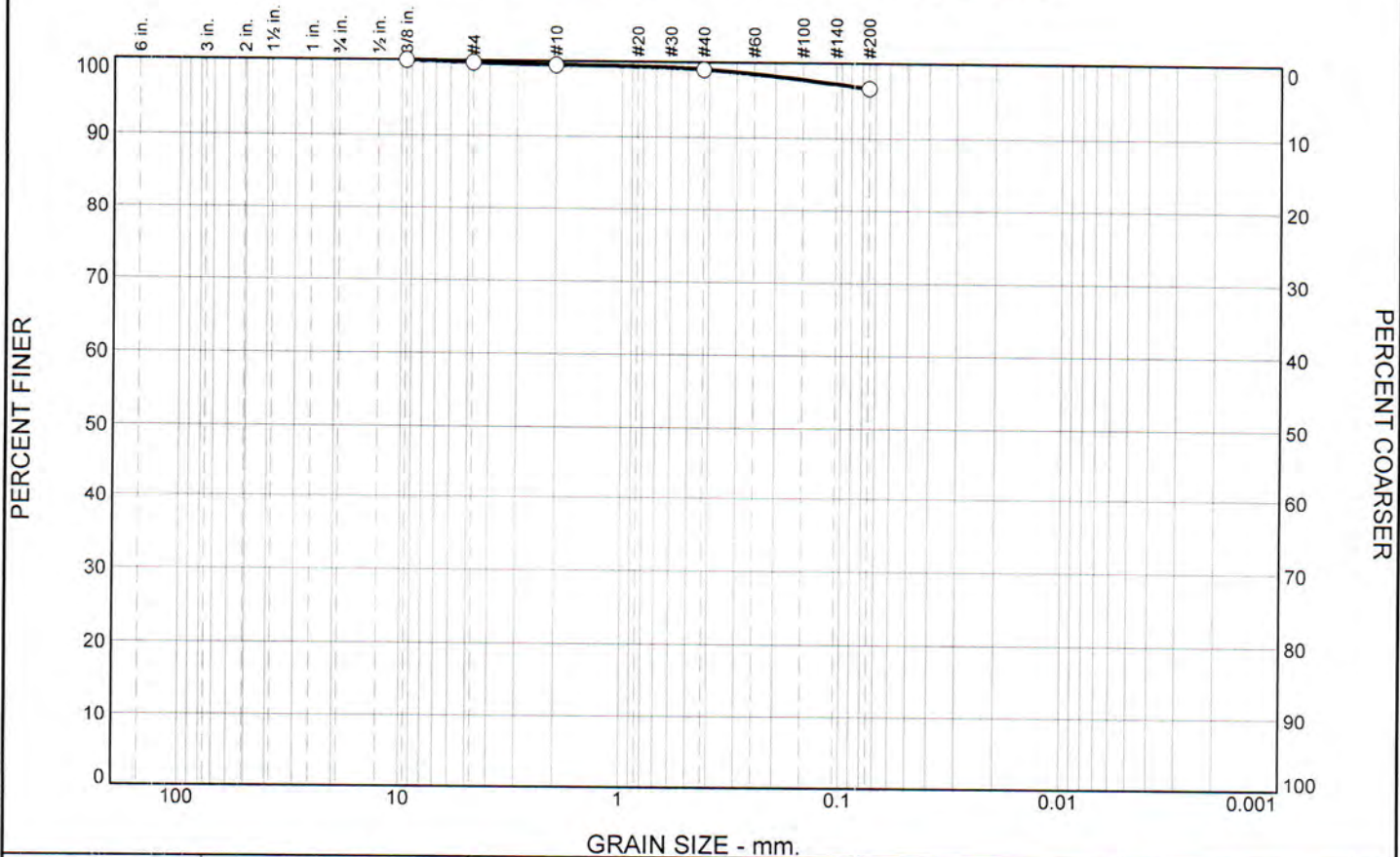
Optimum moisture = 12.7 %

Test specification:

ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.3	0.2	0.4	2.4	96.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	99.7		
#10	99.5		
#40	99.1		
#200	96.7		

* (no specification provided)

Material Description		
Lean Clay - Yellowish Brown		
PL= 17	<u>Atterberg Limits</u> LL= 28	PI= 11
D ₉₀ =	<u>Coefficients</u> D ₈₅ =	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
USCS= CL	<u>Classification</u> AASHTO= A-6(10)	
<u>Remarks</u>		
NT - No Test F.M.=0.06		

Location: Existing Material (Section G)
Sample Number: 15-839 Depth: Subgrade

Date: 11/11/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: _____

Signature

Laboratory Compaction Characteristics of Soil

Curve No.: 15-840

Project No.: 09-1341

Date: 11/11/2015 

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section G)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(9)

Nat. Moist. = 15.9 %

Sp.G. = NT

Liquid Limit = 27

Plasticity Index = 12

% > No.4 = 1.6 %

% < No.200 = 92.7 %

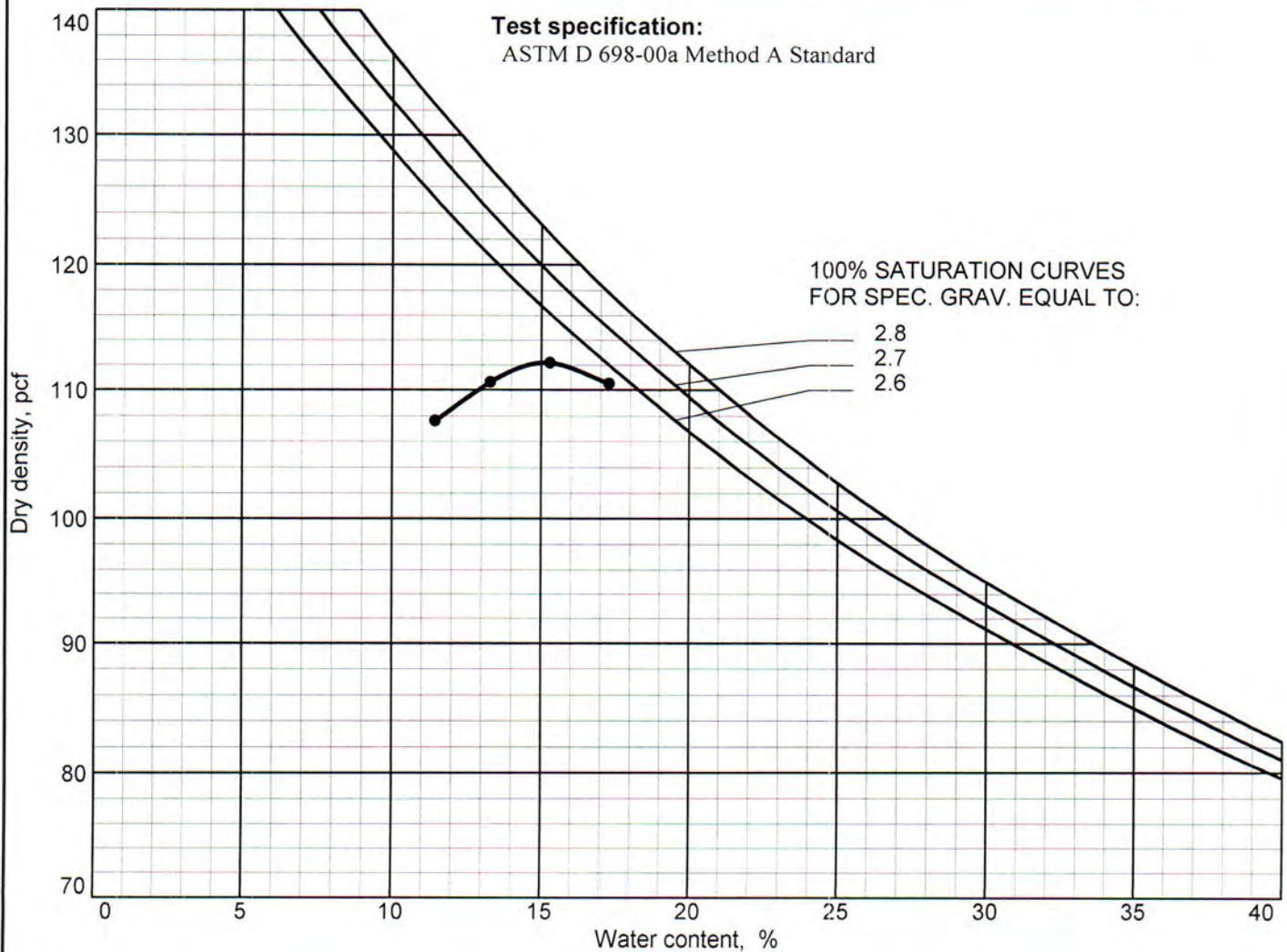
TEST RESULTS

Maximum dry density = 112.2 pcf

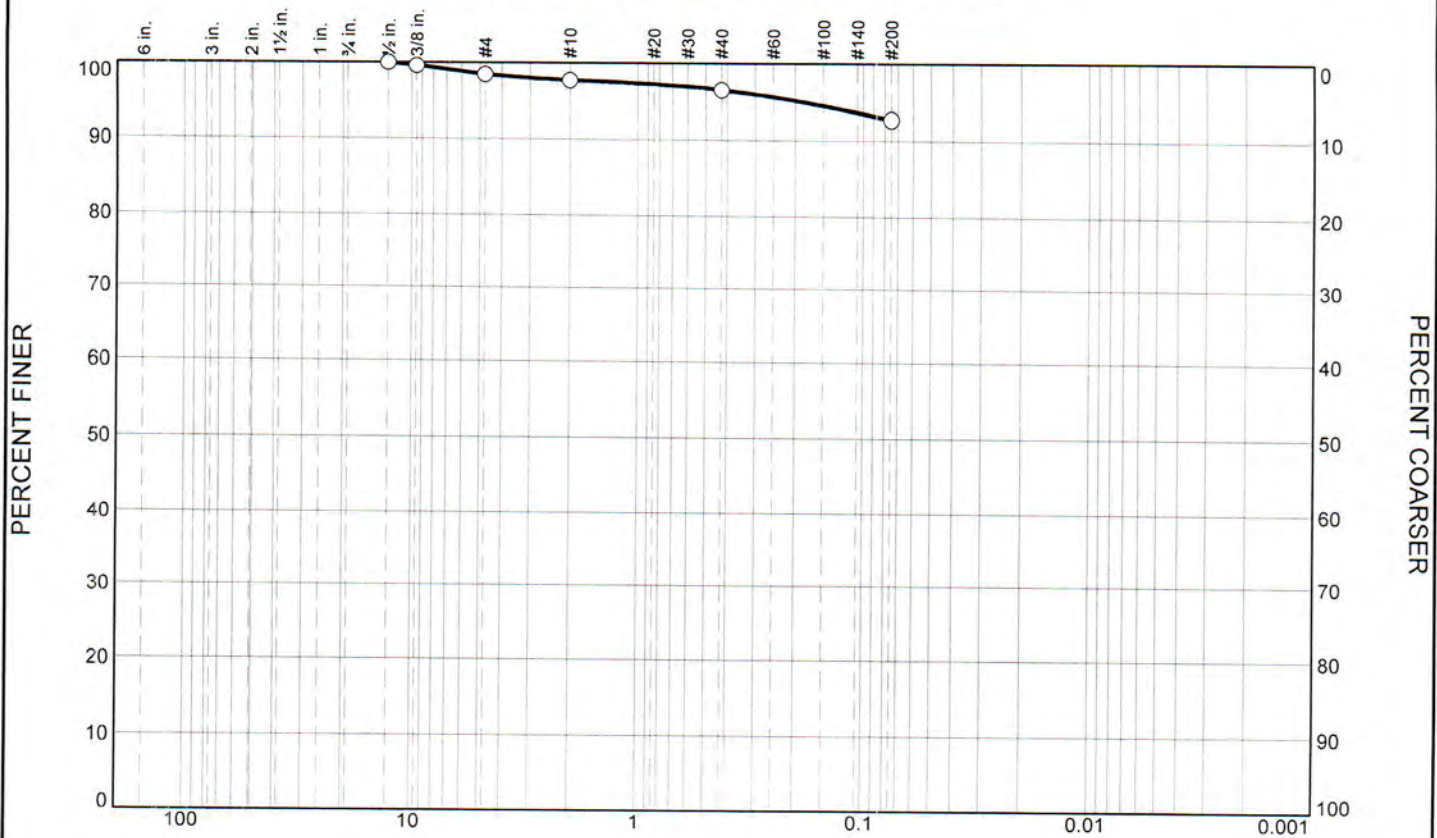
Optimum moisture = 15.1 %

Test specification:

ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.6	0.8	1.2	3.7	92.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	99.6		
#4	98.4		
#10	97.6		
#40	96.4		
#200	92.7		

* (no specification provided)

Material Description		
Lean Clay - Reddish Brown		
Atterberg Limits PL= 15 LL= 27 PI= 12		
Coefficients D₉₀= D₅₀= D₁₀= D₈₅= D₃₀= C_u= D₆₀= D₁₅= C_c=		
Classification USCS= CL AASHTO= A-6(9)		
Remarks NT - No Test F.M.=0.20		

Location: Existing Material (Section G)
Sample Number: 15-840 Depth: Subgrade

Date: 11/11/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

COMPACTION TEST REPORT

Curve No.: 15-857

Project No.: 09-1341

Date: 11/19/2015

Project: CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Existing Material (Section F)

Depth: Subgrade

Sample Number: 15-857

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(10)

Nat. Moist. = 12.0 %

Sp.G. = NT

Liquid Limit = 29

Plasticity Index = 12

% < No.200 = 95.3 %

TEST RESULTS

Maximum dry density = 110.4 pcf

Optimum moisture = 15.3 %

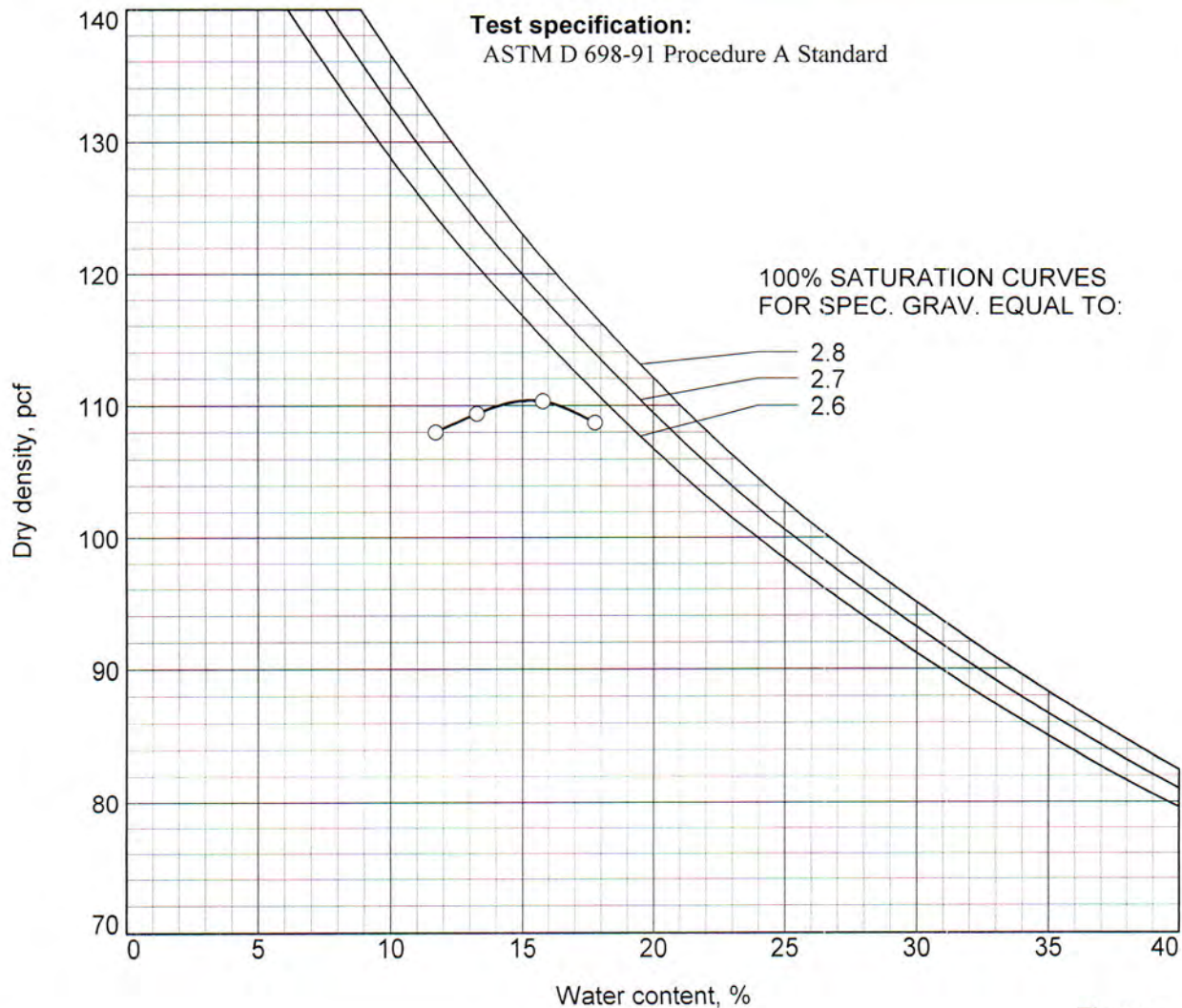
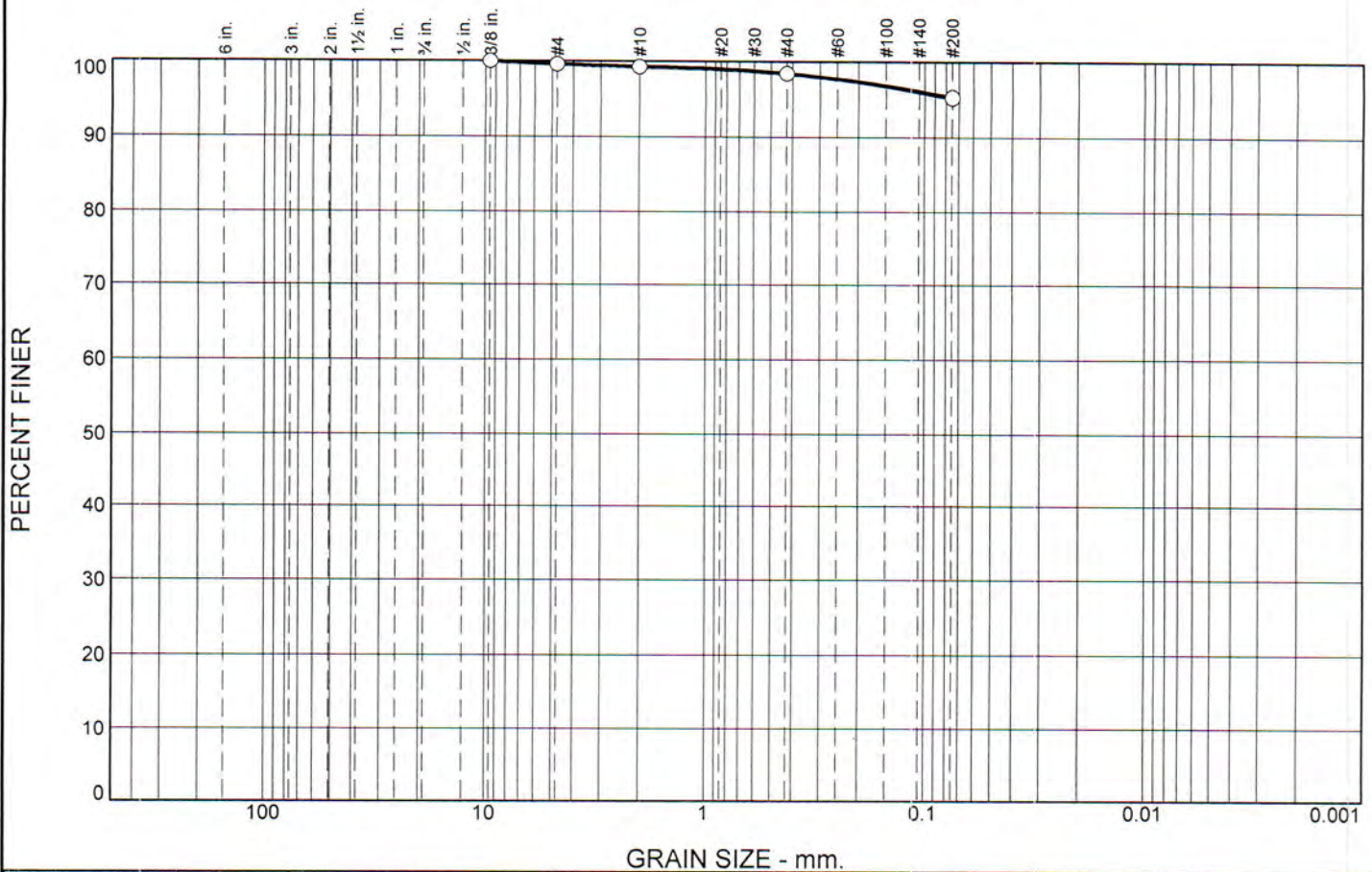


Figure 1 OF 2

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.4	0.3	0.9	3.1	95.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8	100.0		
#4	99.6		
#10	99.3		
#40	98.4		
#200	95.3		

* (no specification provided)

Material Description

Lean Clay - Reddish Brown

Atterberg Limits

PL= 17

LL= 29

PI= 12

Classification

USCS= CL

AASHTO= A-6(10)

Remarks

NT - No Test

Source of Sample: Existing Material (Section F)
Sample Number: 15-857

Depth: Subgrade

Date: 11/19/2015

Quality Testing

Client: SEQUOYAH FUELS
Project: CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

SS

COMPACTION TEST REPORT

Curve No.: 15-870

Project No.: 09-1341

Date: 11/24/2015

SOB

Project: CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Existing Material (Section G)

Depth: Subgrade

Sample Number: 15-870

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(16)

Nat. Moist. = 11.7 %

Sp.G. = NT

Liquid Limit = 35

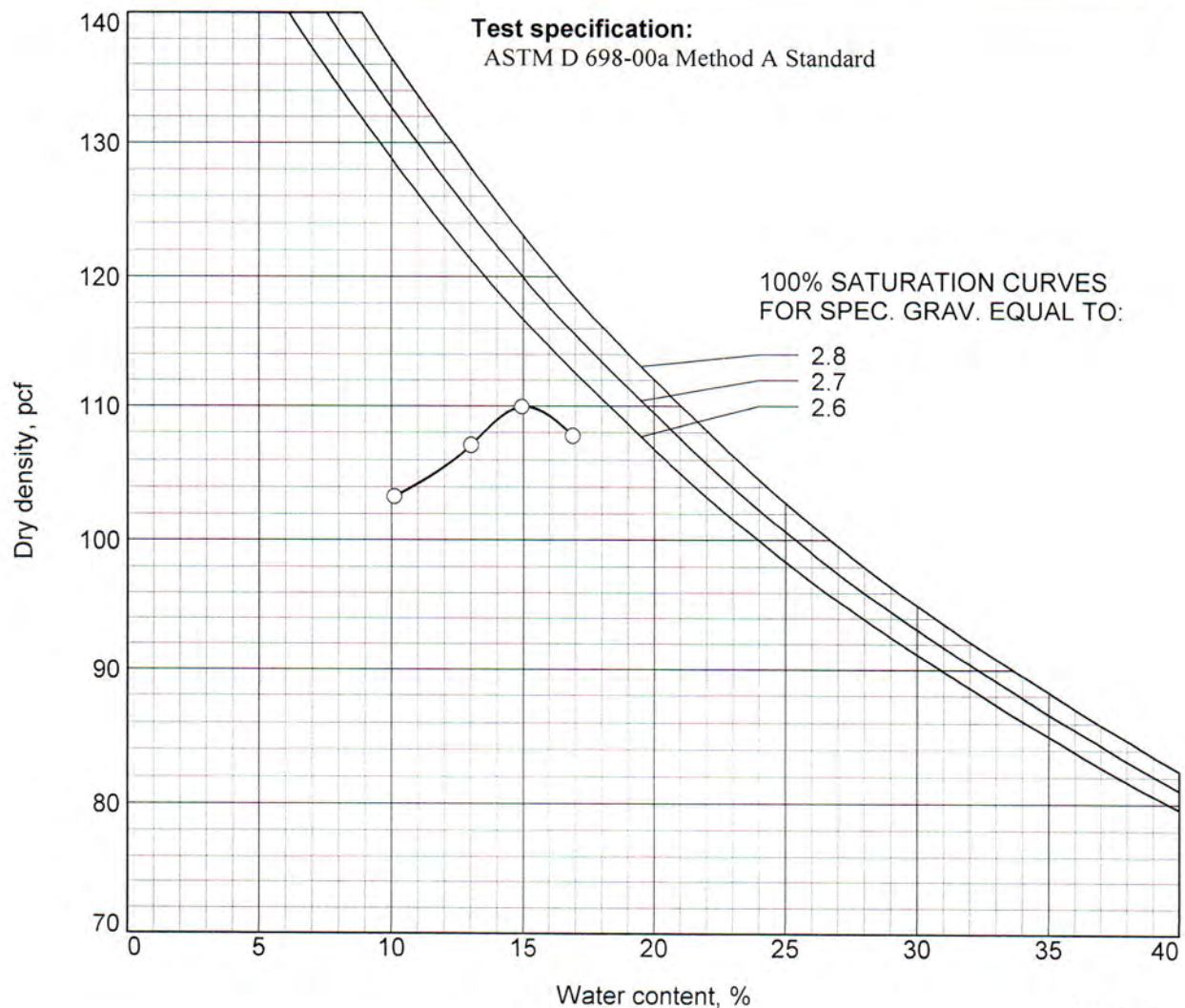
Plasticity Index = 19

% < No.200 = 89.2 %

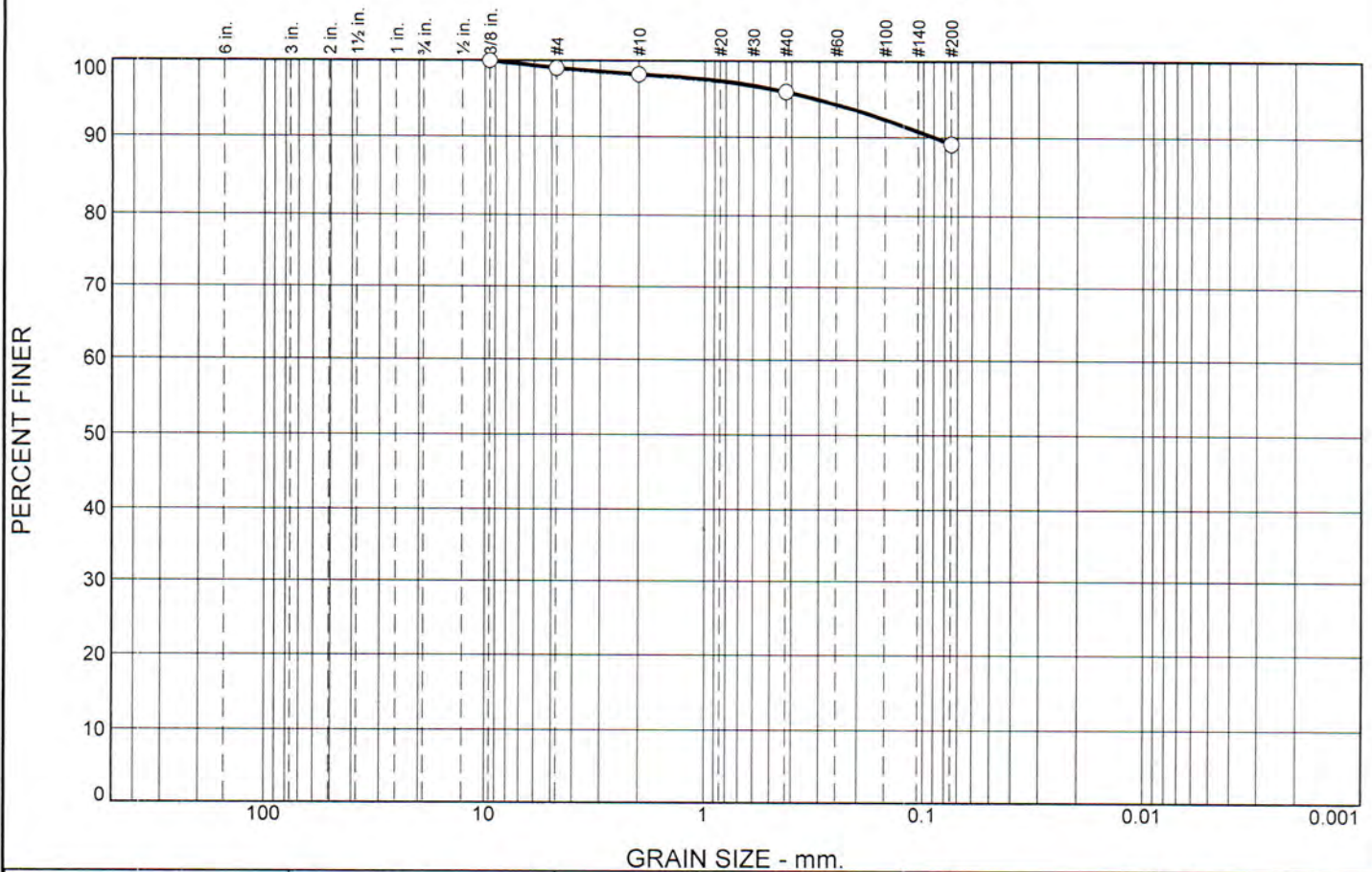
TEST RESULTS

Maximum dry density = 110.0 pcf

Optimum moisture = 15.1 %



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.0	0.8	2.1	6.9	89.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	99.0		
#10	98.2		
#40	96.1		
#200	89.2		

* (no specification provided)

Material Description

Lean Clay - Reddish Brown

Atterberg Limits

PL= 16 LL= 35 PI= 19

Classification

USCS= CL AASHTO= A-6(16)

Remarks

NT - No Test

Source of Sample: Existing Material (Section G)
Sample Number: 15-870

Depth: Subgrade

Date: 11/24/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

COMPACTION TEST REPORT

Curve No.: 15-871

Project No.: 09-1341

Date: 11/24/2015

SES

Project: CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Existing Material (Section F)

Depth: Subgrade

Sample Number: 15-871

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(14)

Nat. Moist. = 9.1 %

Sp.G. = NT

Liquid Limit = 33

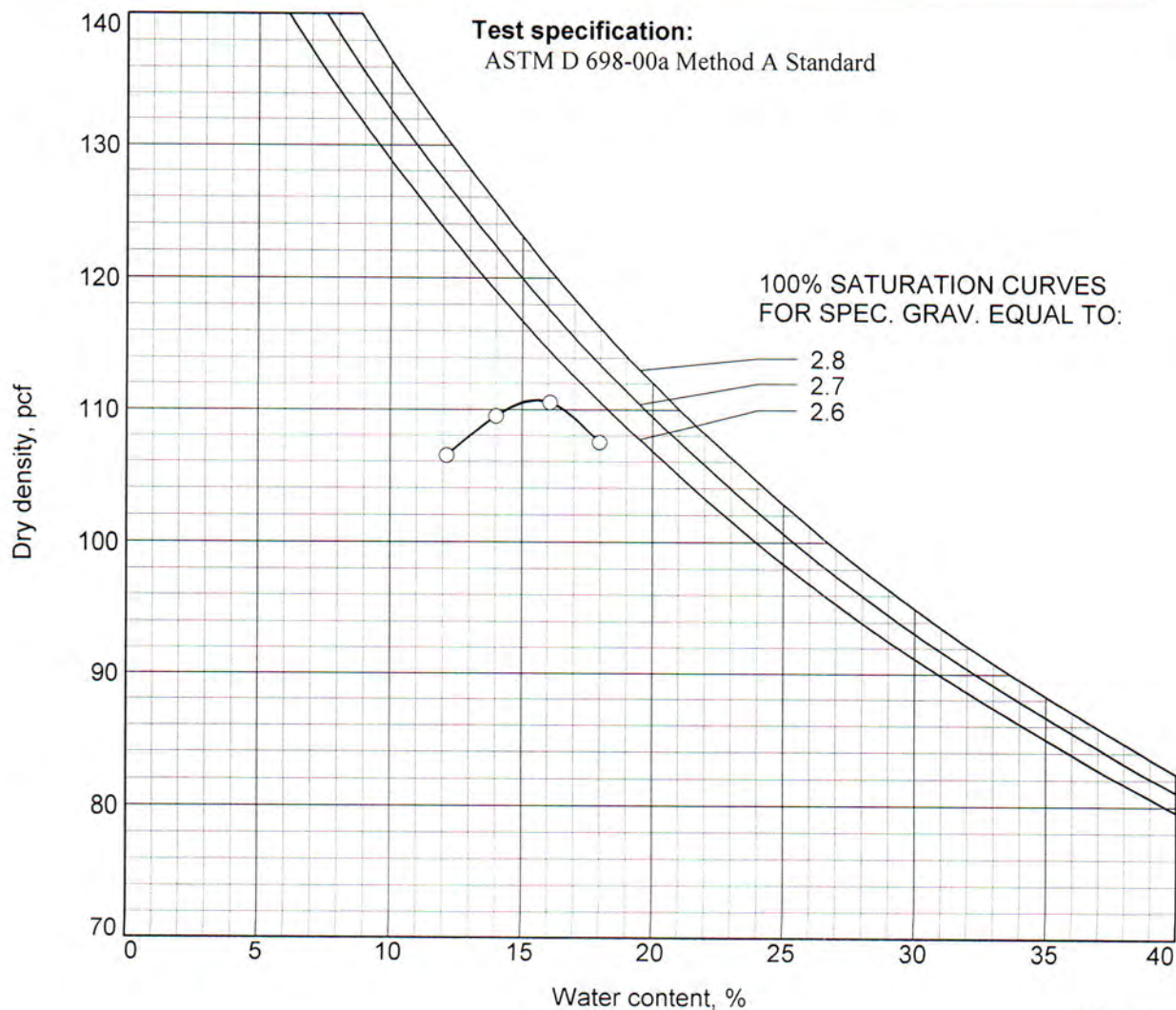
Plasticity Index = 16

% < No.200 = 92.5 %

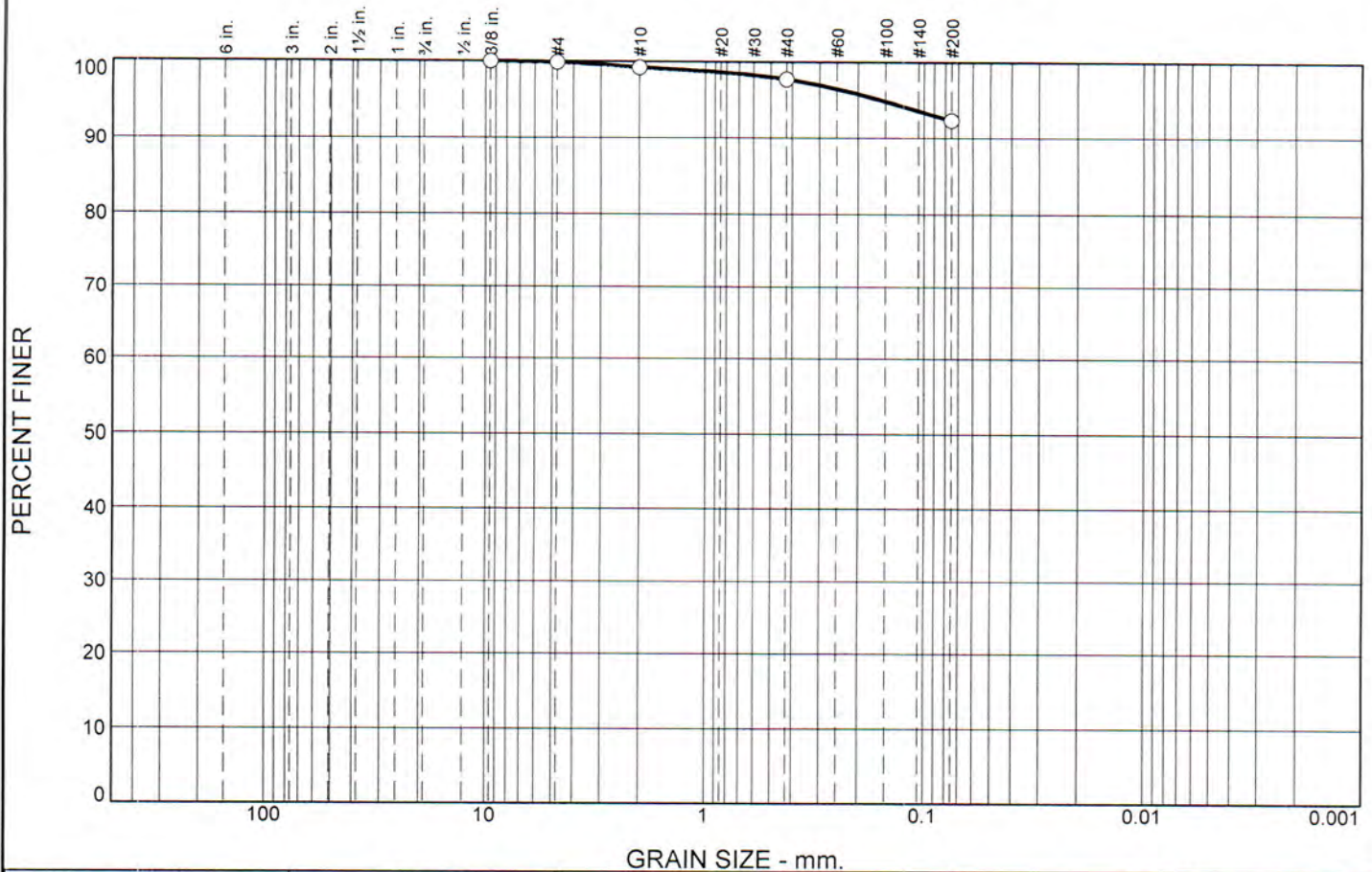
TEST RESULTS

Maximum dry density = 110.7 pcf

Optimum moisture = 15.6 %



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.1	0.7	1.5	5.2	92.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	99.9		
#10	99.2		
#40	97.7		
#200	92.5		

* (no specification provided)

Material Description

Lean Clay - Reddish Brown

Atterberg Limits

PL= 17

LL= 33

PI= 16

Classification

USCS= CL

AASHTO= A-6(14)

Remarks

NT - No Test

Source of Sample: Existing Material (Section F)
Sample Number: 15-871

Depth: Subgrade

Date: 11/24/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

COMPACTION TEST REPORT

Curve No.: 15-872

Project No.: 09-1341

Date: 11/24/2015

50

Project: CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Existing Material (Section F)

Depth: Subgrade

Sample Number: 15-872

Remarks:

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(12)

Nat. Moist. = 10.0 %

Sp.G. = NT

Liquid Limit = 31

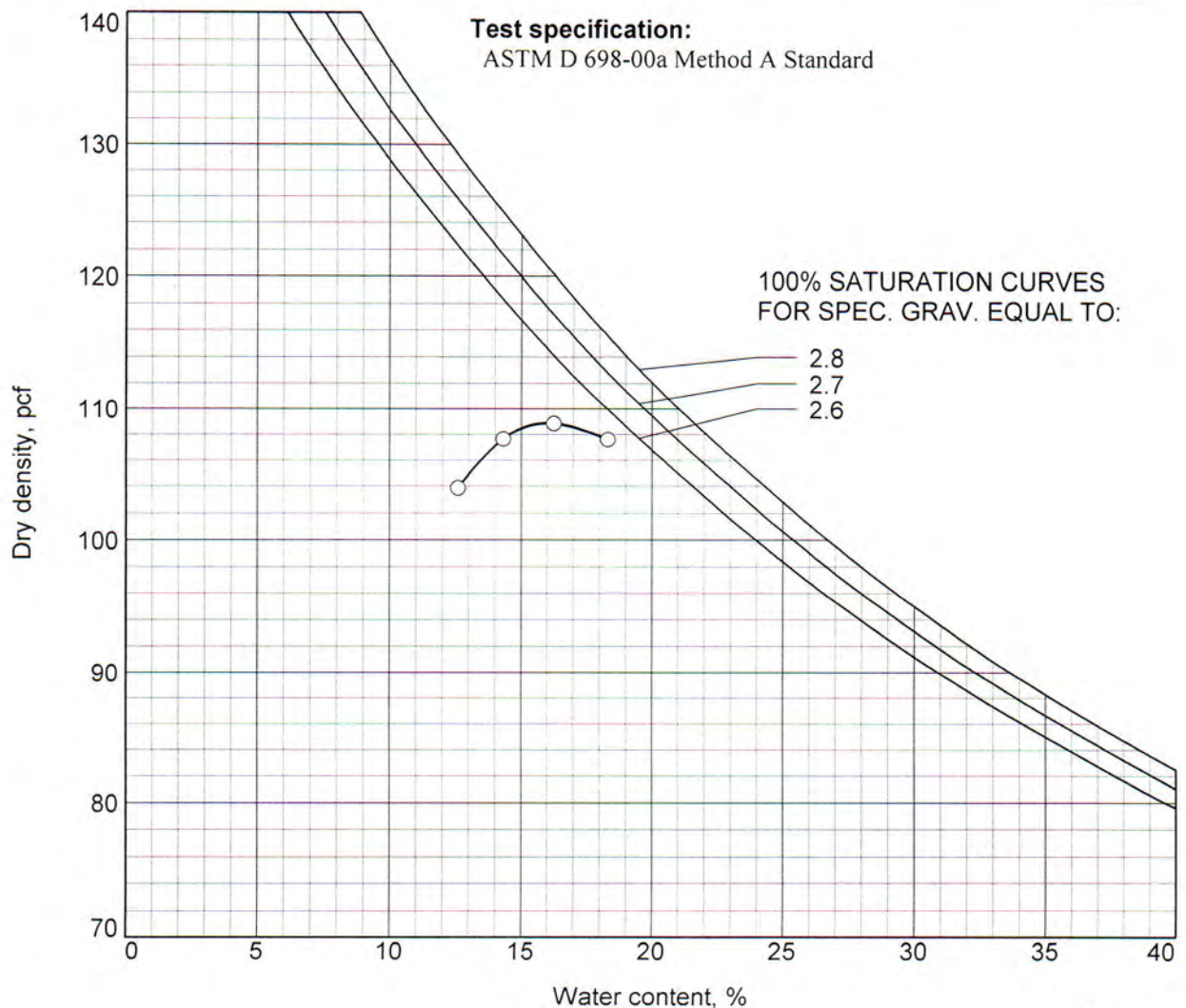
Plasticity Index = 14

% < No.200 = 90.1 %

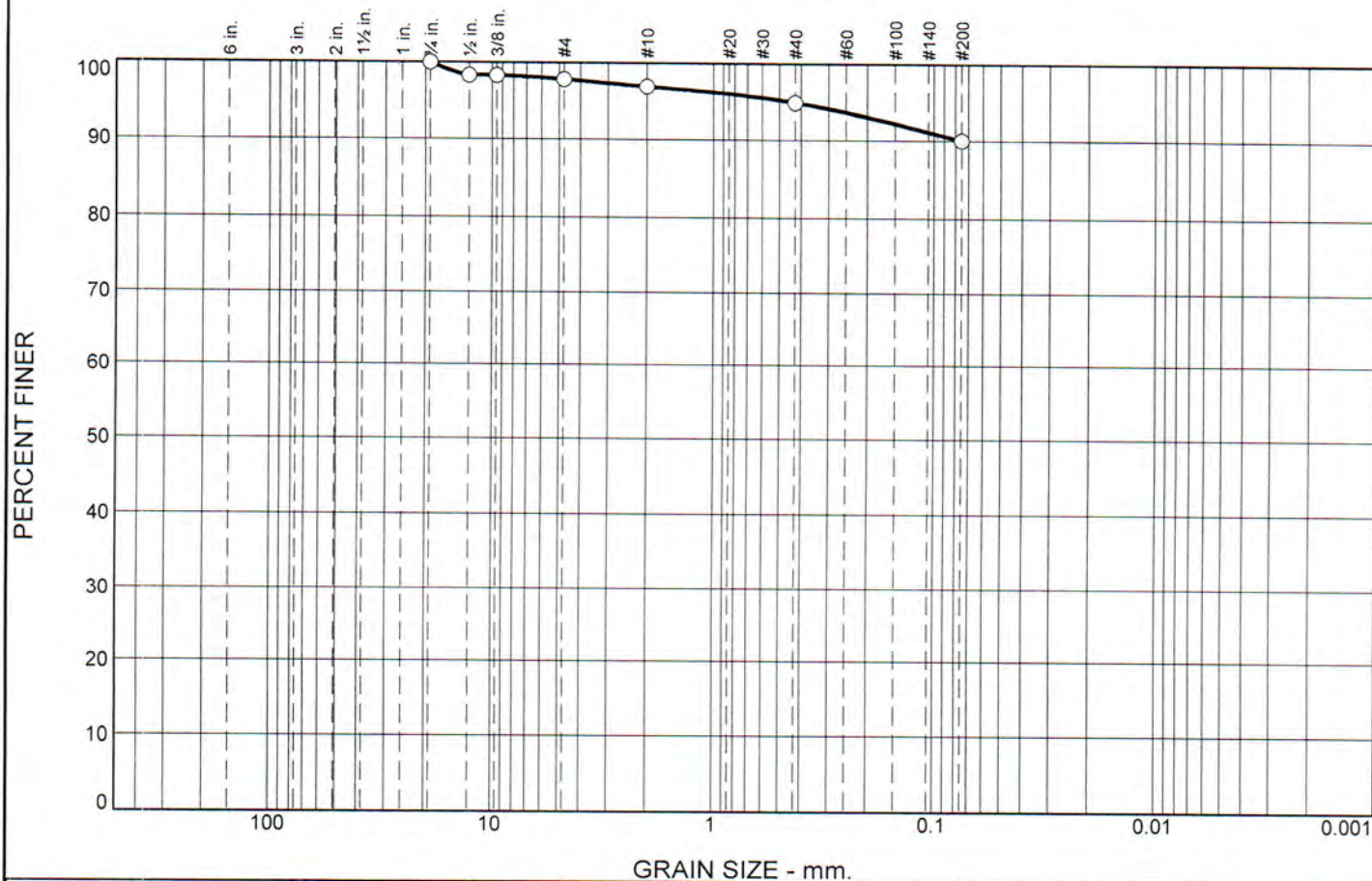
TEST RESULTS

Maximum dry density = 108.9 pcf

Optimum moisture = 16.0 %



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.2	0.9	2.1	4.7	90.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	98.3		
3/8"	98.3		
#4	97.8		
#10	96.9		
#40	94.8		
#200	90.1		

* (no specification provided)

Material Description

Lean Clay - Reddish Brown

Atterberg Limits

PL= 17

LL= 31

PI= 14

Classification

USCS= CL

AASHTO= A-6(12)

Remarks

NT - No Test

Source of Sample: Existing Material (Section F)
Sample Number: 15-872

Depth: Subgrade

Date: 11/24/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

COMPACTION TEST REPORT

Curve No.: 20-839

Project No.: 09-1341

Date: 11/13/2020

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Borrow Material Pond #3 West

Depth: In-Place

Sample Number: 9

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(12)

Nat. Moist. = 15.3 %

Sp.G. = NT

Liquid Limit = 35

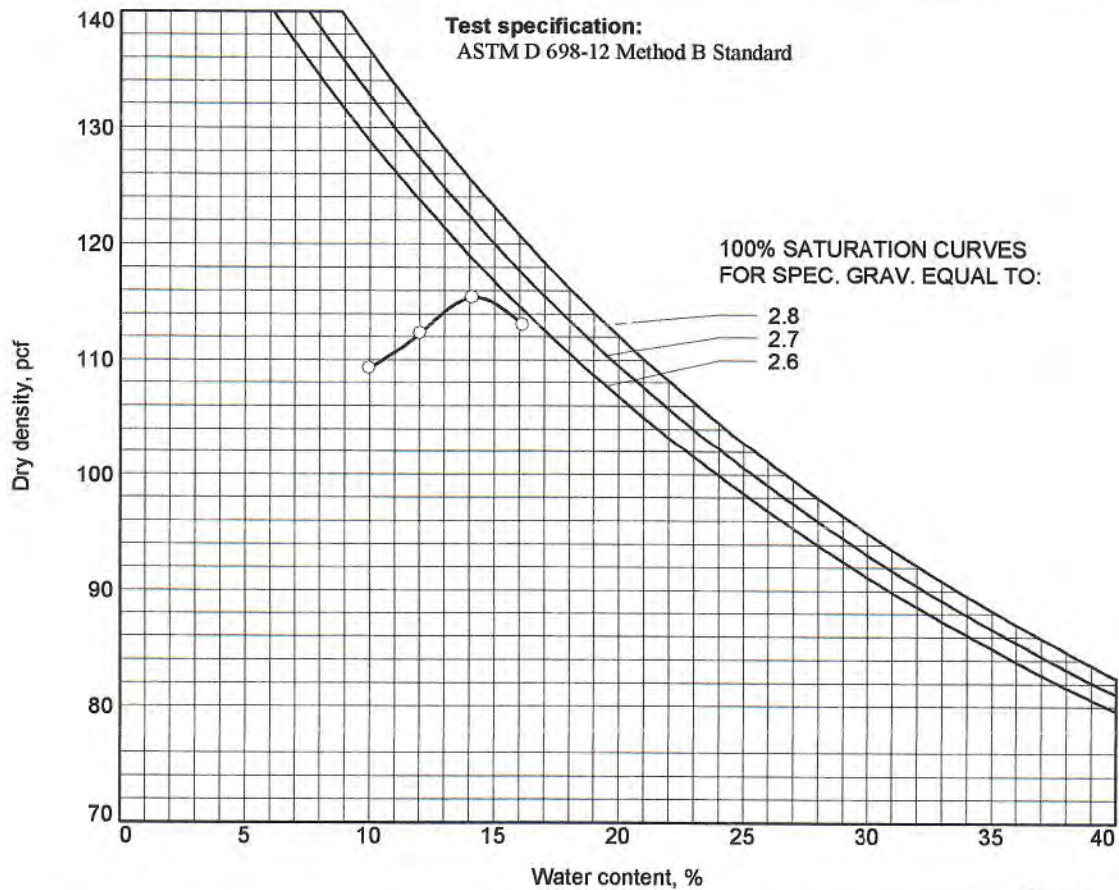
Plasticity Index = 17

% < No.200 = 77.9 %

TEST RESULTS

Maximum dry density = 115.4 pcf

Optimum moisture = 14.2 %

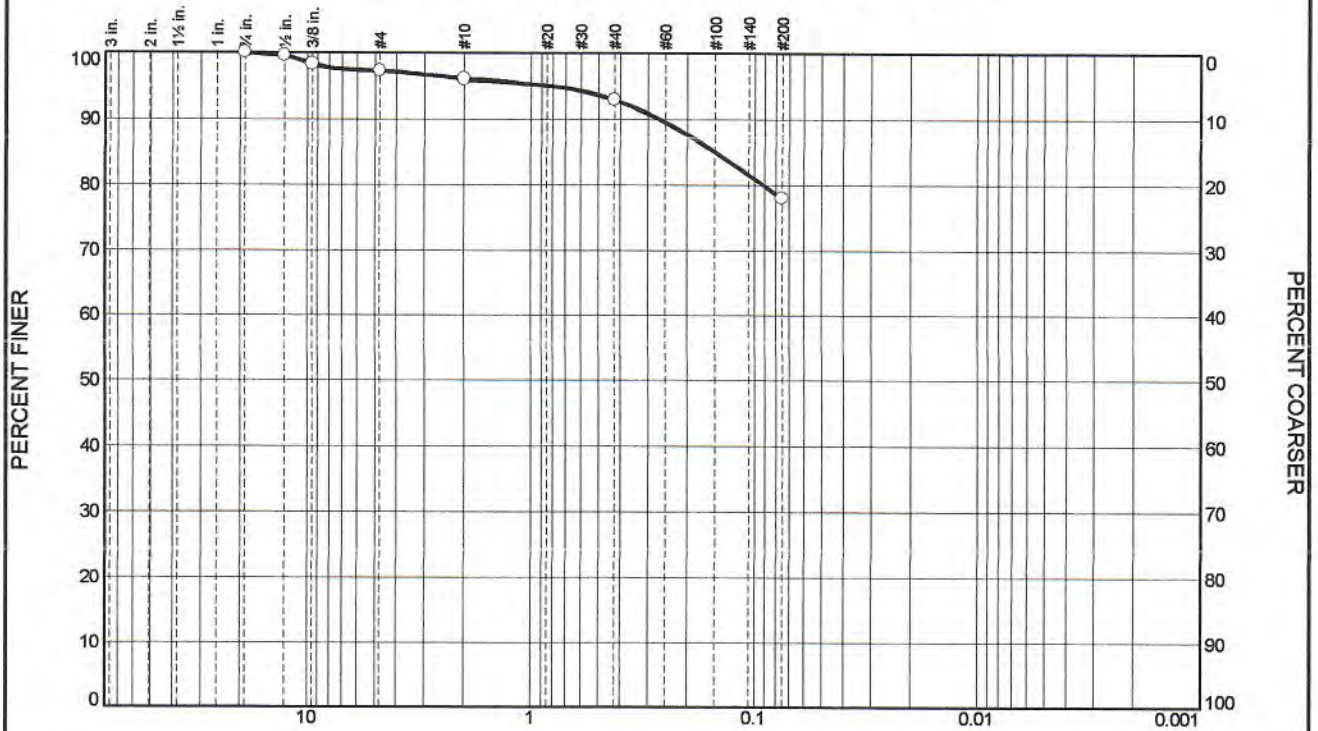


Quality Testing

Figure 1 of 2

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.7	1.2	3.1	15.1	77.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	99.5		
3/8"	98.3		
#4	97.3		
#10	96.1		
#40	93.0		
#200	77.9		

* (no specification provided)

Material Description
Lean Clay with Sand - Reddish Brown

Atterberg Limits
 PL= 18 LL= 35 PI= 17

Coefficients
 D₉₀= 0.2653 D₈₅= 0.1496 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= CL AASHTO= A-6(12)

Remarks
 NT - No Test
 F.M.=0.42

Source of Sample: Borrow Material Pond #3 West
Sample Number: 9

Depth: In-Place

Date: 11/13/2020

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-551

Project No.: 09-1341

Date: 6/27/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Clay Cover North & South Depth: Subgrade

Sample Number: 23-551

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(6)

Nat. Moist. = 13.7 %

Sp.G. = NT

Liquid Limit = 29

Plasticity Index = 11

% < No.200 = 75.3 %

TEST RESULTS

Maximum dry density = 113.8 pcf

Optimum moisture = 13.5 %

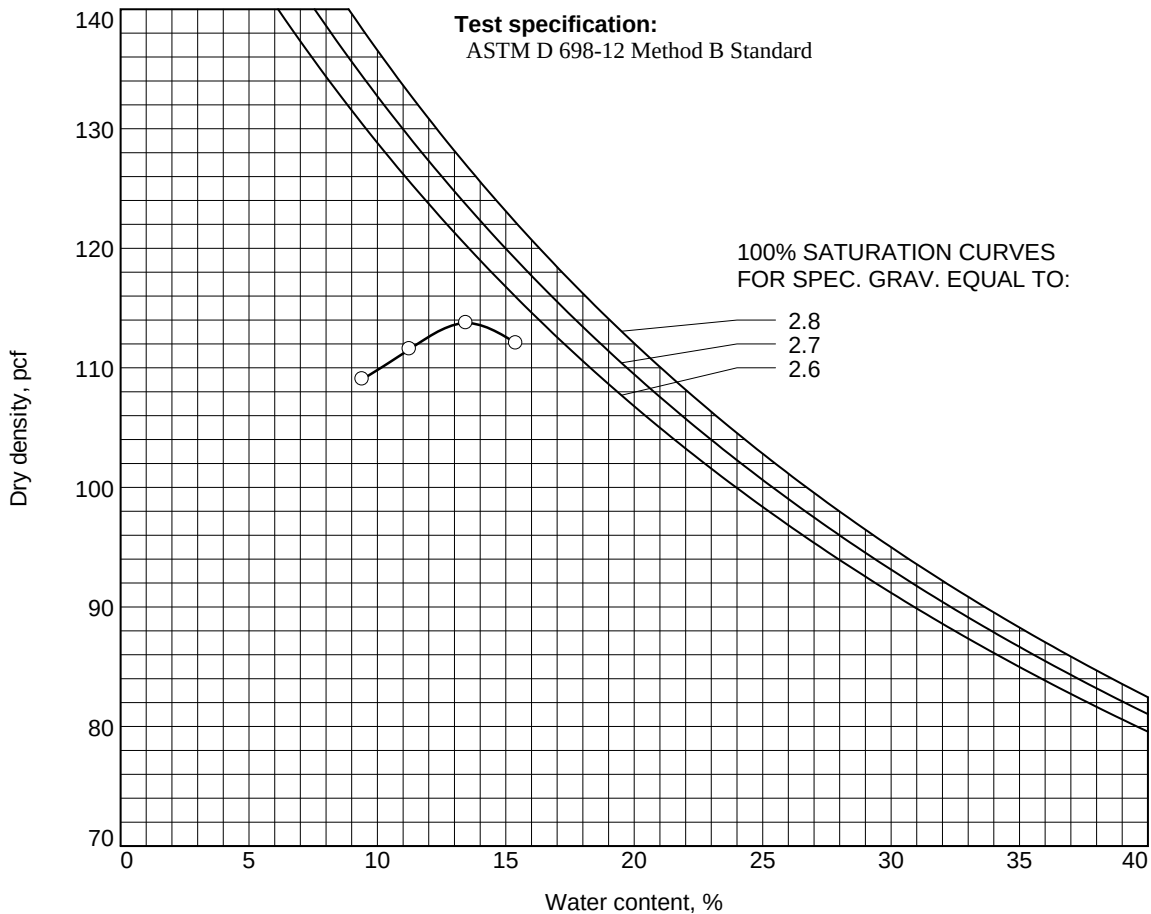


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

PERCENT FINER



% +3"

% Sand

Coarse

Fine

Coarse

Medium

Fine

Silt

Clay

0.0

0.3

0.1

3.3

21.0

75.3

F.M.=0.26

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-552

Project No.: 09-1341

Date: 7/27/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Clay Cover East & West

Depth: Subgrade

Sample Number: 23-552

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Yellowish Red

Classifications -

USCS: CL

AASHTO: A-6(9)

Nat. Moist. = 8.0 %

Sp.G. = NT

Liquid Limit = 33

Plasticity Index = 13

% < No.200 = 76.5 %

TEST RESULTS

Maximum dry density = 121.2 pcf

Optimum moisture = 13.0 %

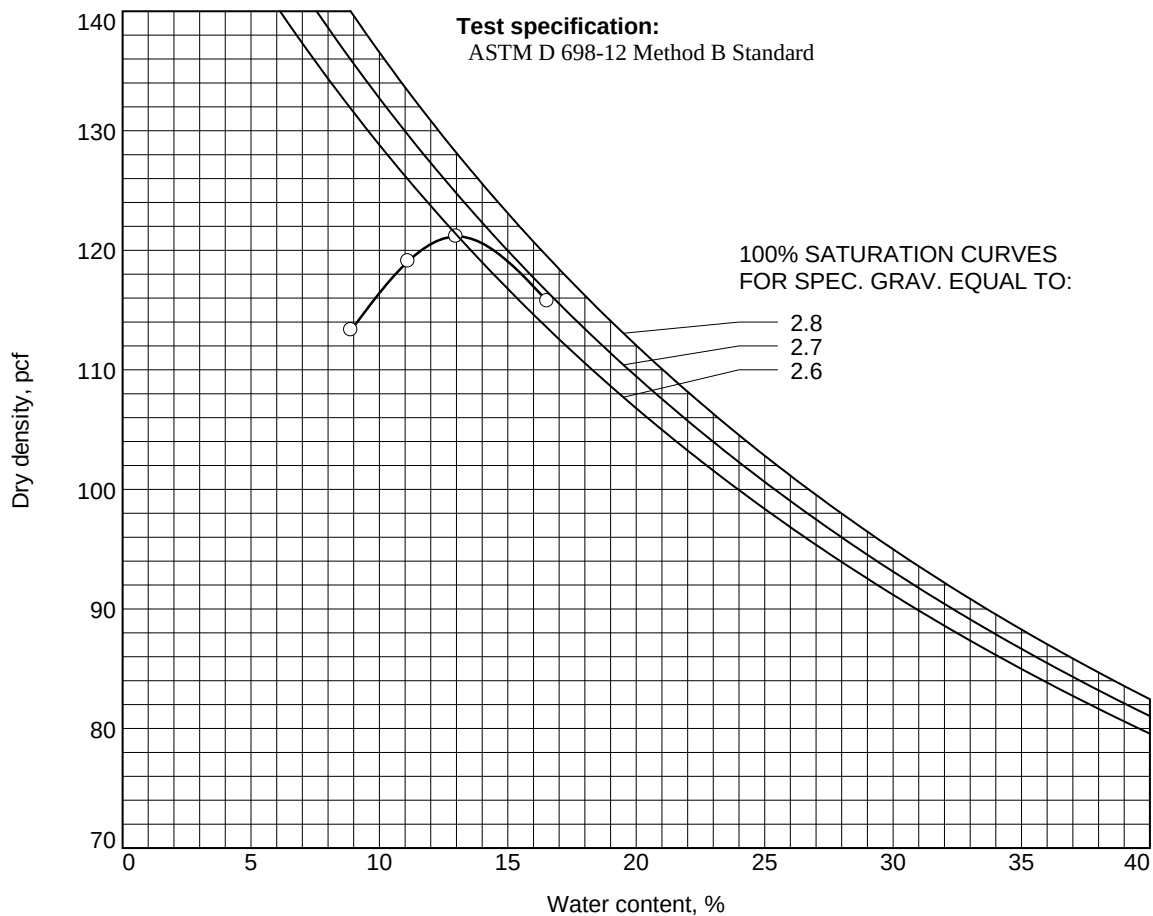


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

PERCENT FINER



<u>Material Description</u>		
Lean Clay with Sand - Yellowish Red		
<u>Atterberg Limits</u>		
PL= 20	LL= 33	PI= 13
<u>Coefficients</u>		
D ₉₀ = 0.2117	D ₈₅ = 0.1399	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO=	A-6(9)
<u>Remarks</u>		
Moisture: 8.0%		
F.M.=0.28		

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-553

Project No.: 09-1341

Date: 6/27/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Clay Cover East & West

Depth: Subgrade

Sample Number: 23-553

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Yellowish Red

Classifications -

USCS: CL

AASHTO: A-6(10)

Nat. Moist. = 11.7 %

Sp.G. = NT

Liquid Limit = 33

Plasticity Index = 15

% < No.200 = 77.9 %

TEST RESULTS

Maximum dry density = 119.2 pcf

Optimum moisture = 14.0 %

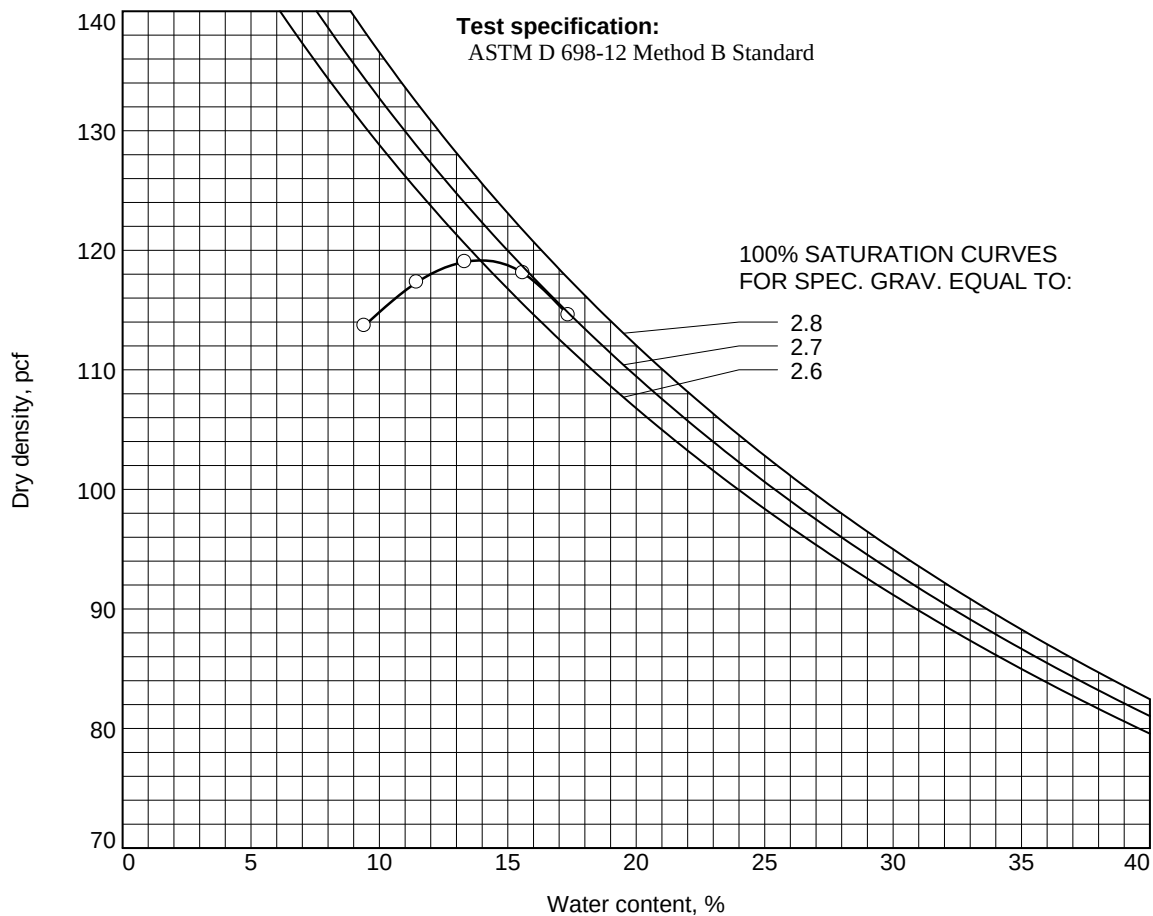
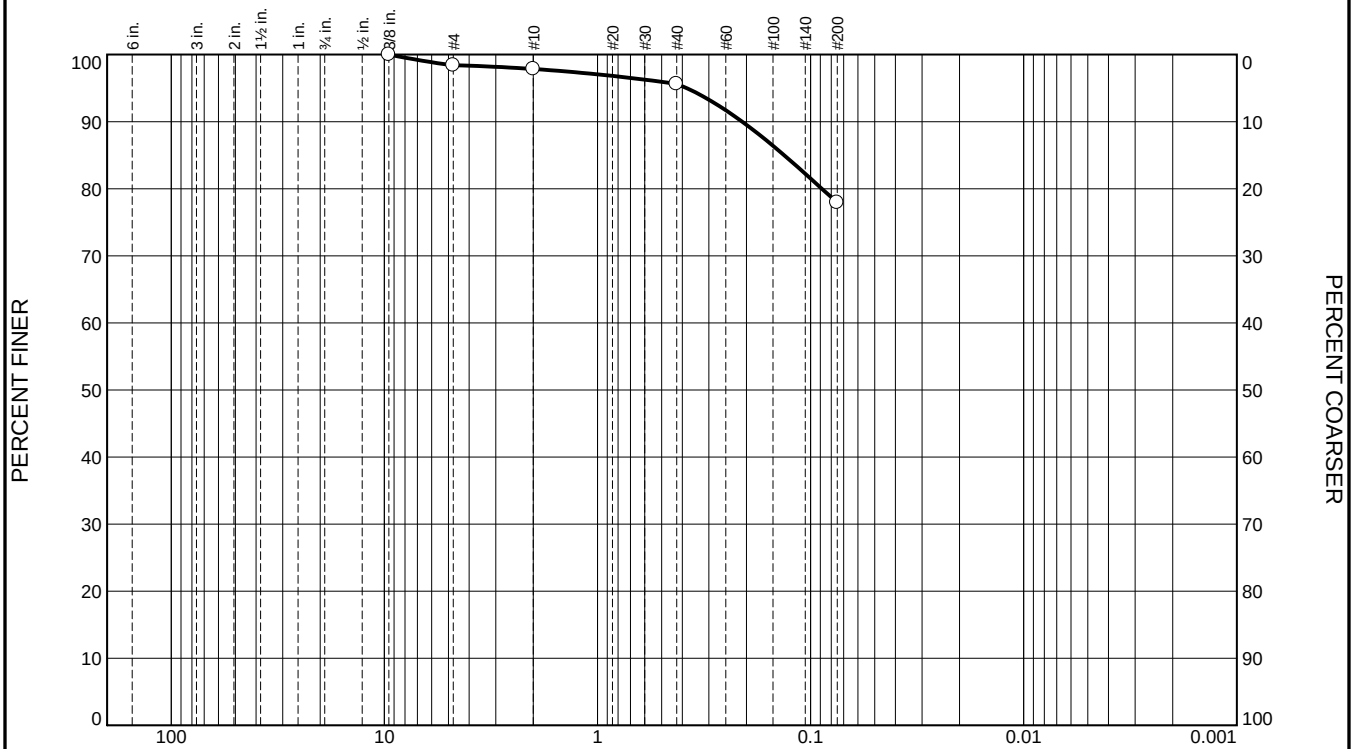


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.6	0.5	2.3	17.7	77.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	98.4		
#10	97.9		
#40	95.6		
#200	77.9		

* (no specification provided)

<u>Material Description</u>		
Lean Clay with Sand - Yellowish Red		
<u>Atterberg Limits</u>		
PL= 18	LL= 33	PI= 15
<u>Coefficients</u>		
D ₉₀ = 0.2094	D ₈₅ = 0.1331	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-6(10)	
<u>Remarks</u>		
Moisture: 11.7%		
F.M.=0.30		

Source of Sample: Clay Cover East & West
Sample Number: 23-553

Depth: Subgrade

Date: 6/27/2023

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-554

Project No.: 09-1341

Date: 6/27/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Clay Cover East & West

Depth: Subgrade

Sample Number: 23-554

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Yellowish Red

Classifications -

USCS: CL

AASHTO: A-6(10)

Nat. Moist. = 7.7 %

Sp.G. = NT

Liquid Limit = 33

Plasticity Index = 14

% < No.200 = 78.1 %

TEST RESULTS

Maximum dry density = 119.3 pcf

Optimum moisture = 13.6 %

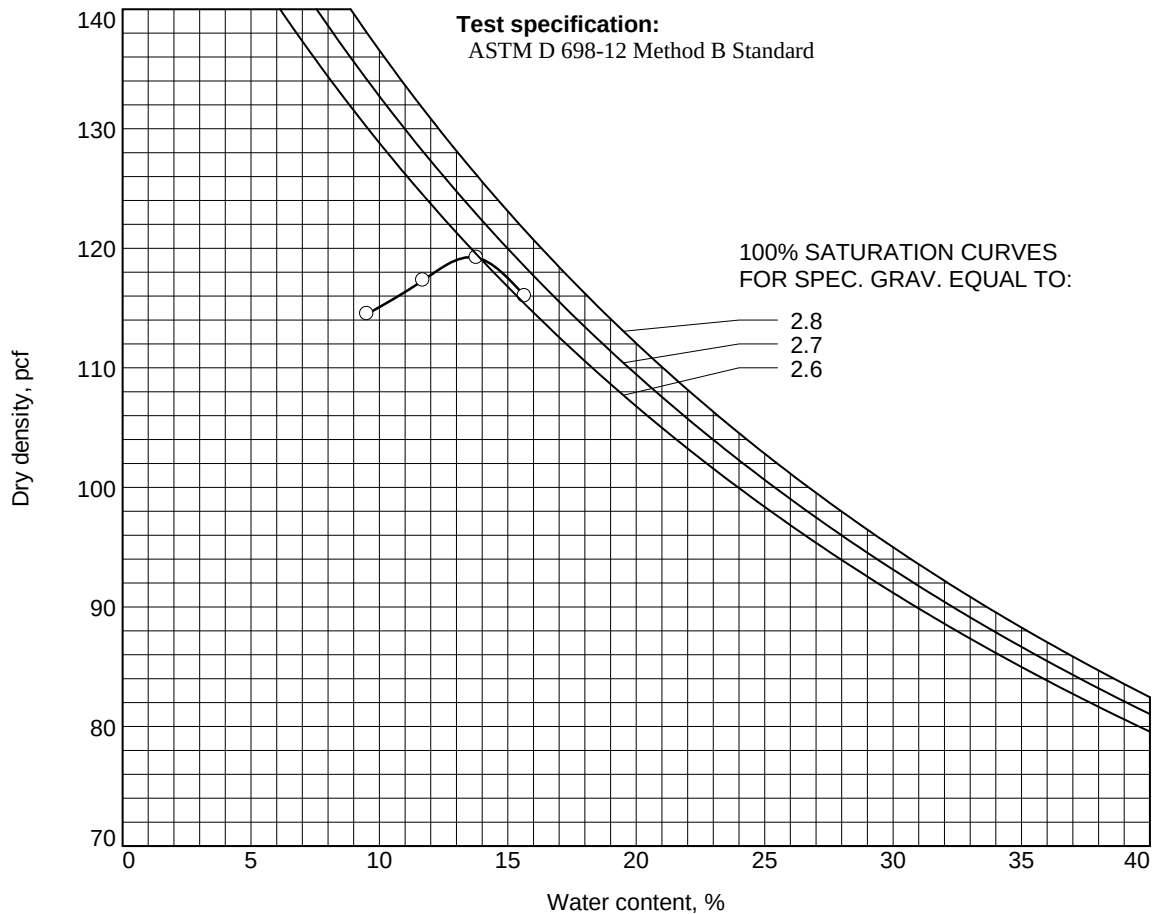
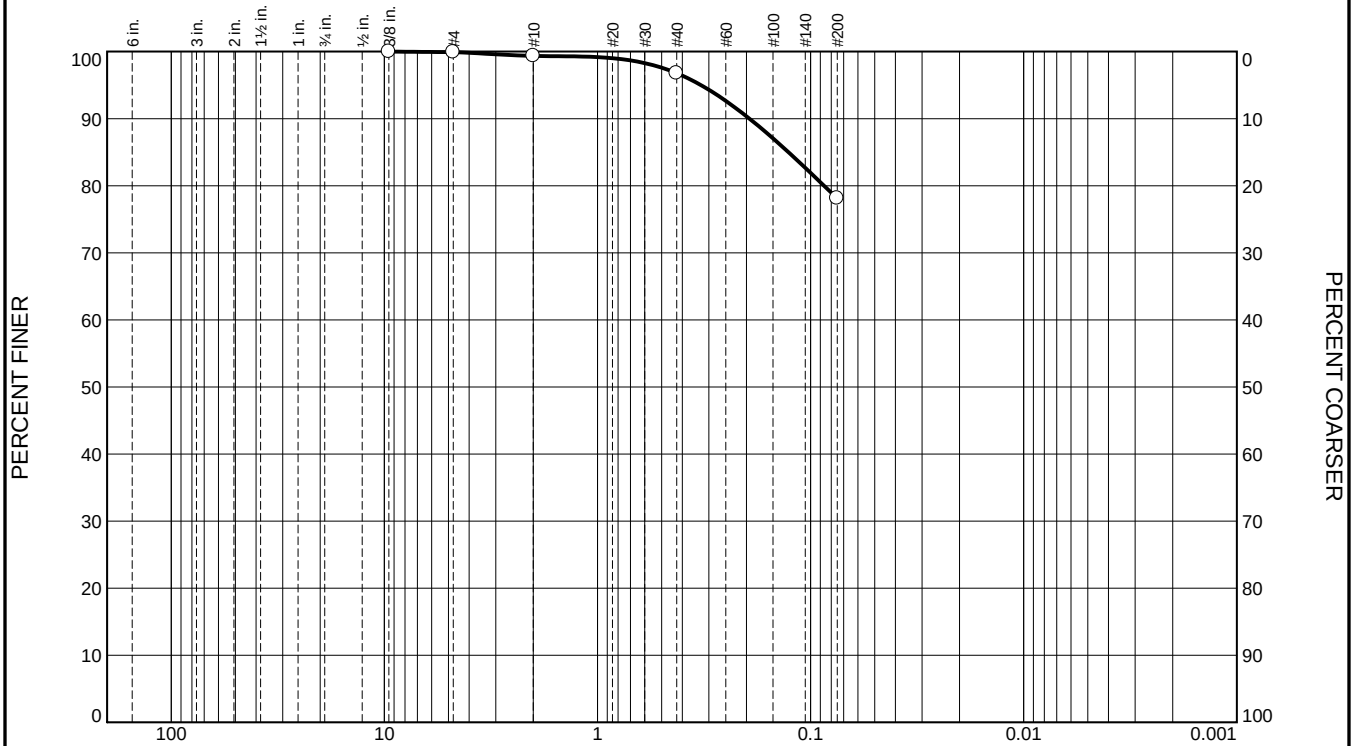


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.1	0.5	2.6	18.7	78.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	99.9		
#10	99.4		
#40	96.8		
#200	78.1		

* (no specification provided)

<u>Material Description</u>		
Lean Clay with Sand - Yellowish Red		
<u>Atterberg Limits</u>		
PL= 19	LL= 33	PI= 14
<u>Coefficients</u>		
D ₉₀ = 0.1936	D ₈₅ = 0.1271	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-6(10)	
<u>Remarks</u>		
Moisture: 7.7%		
F.M.=0.22		

Source of Sample: Clay Cover East & West
Sample Number: 23-554

Depth: Subgrade

Date: 6/27/2023

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-827

Project No.: 09-1341

Date: 9/27/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Clay Cover Sample #1

Depth: Subsoil

Sample Number: 23-827

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(17)

Nat. Moist. = 16.4 %

Sp.G. = NT

Liquid Limit = 39

Plasticity Index = 23

% < No.200 = 77.7 %

TEST RESULTS

Maximum dry density = 116.2 pcf

Optimum moisture = 11.9 %

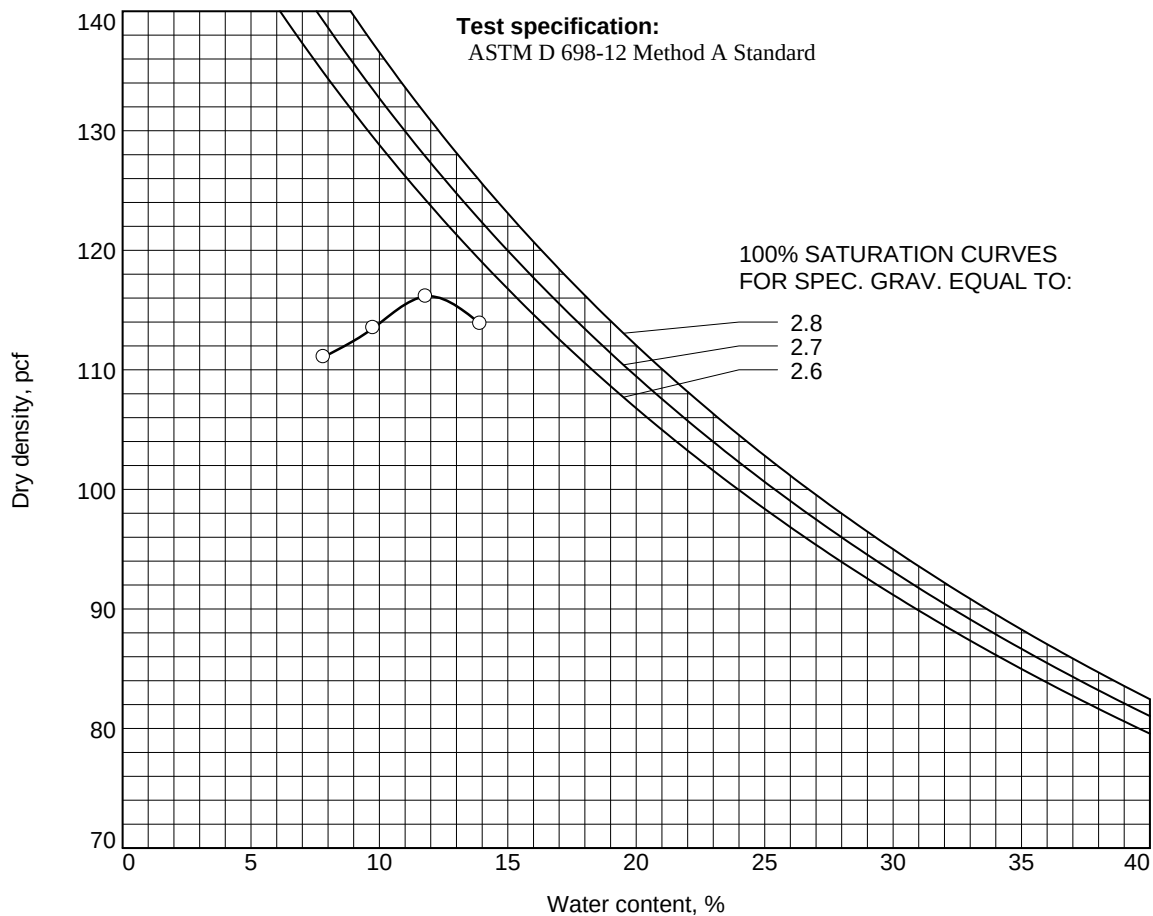


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-828

Project No.: 09-1341

Date: 9/27/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Clay Cover Sample #2

Depth: Subsoil

Sample Number: 23-828

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(15)

Nat. Moist. = 13.1 %

Sp.G. = NT

Liquid Limit = 40

Plasticity Index = 22

% < No.200 = 75.3 %

TEST RESULTS

Maximum dry density = 117.8 pcf

Optimum moisture = 13.6 %

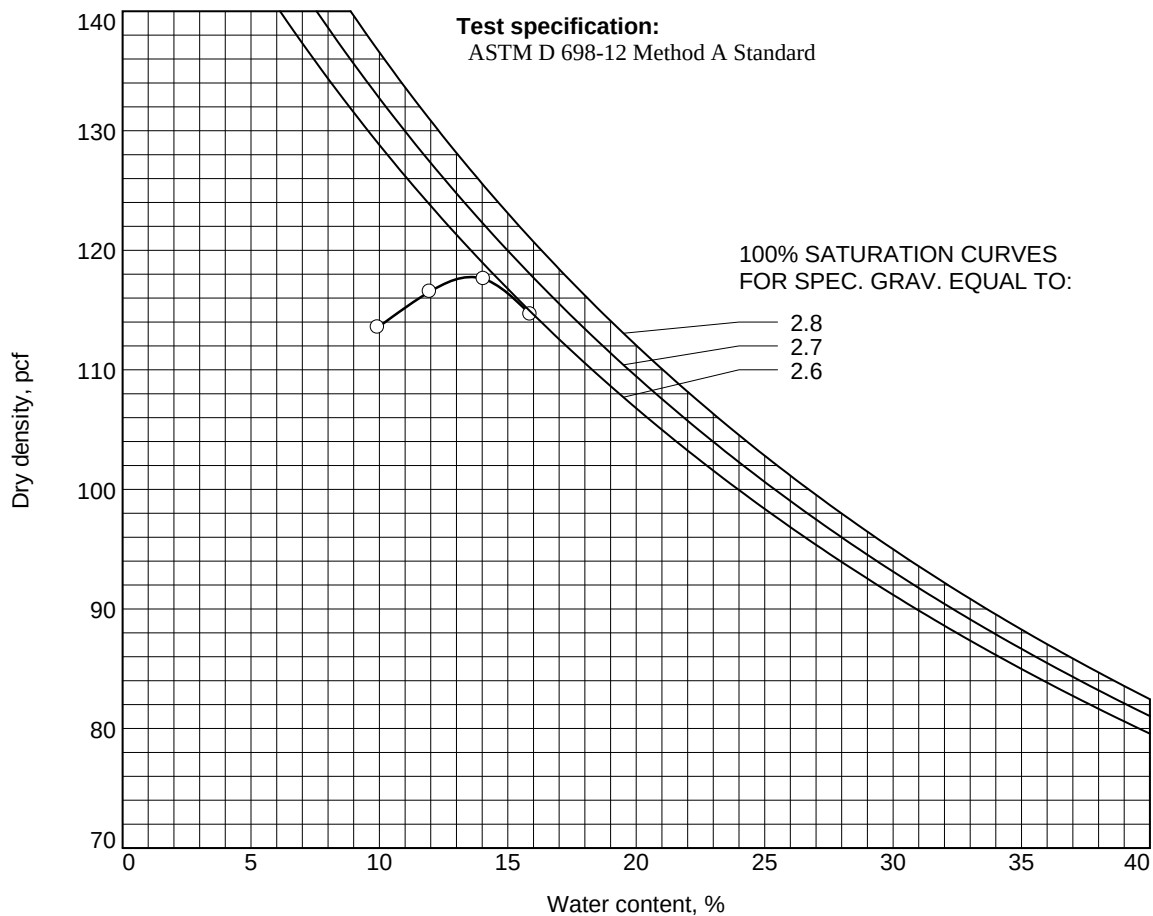
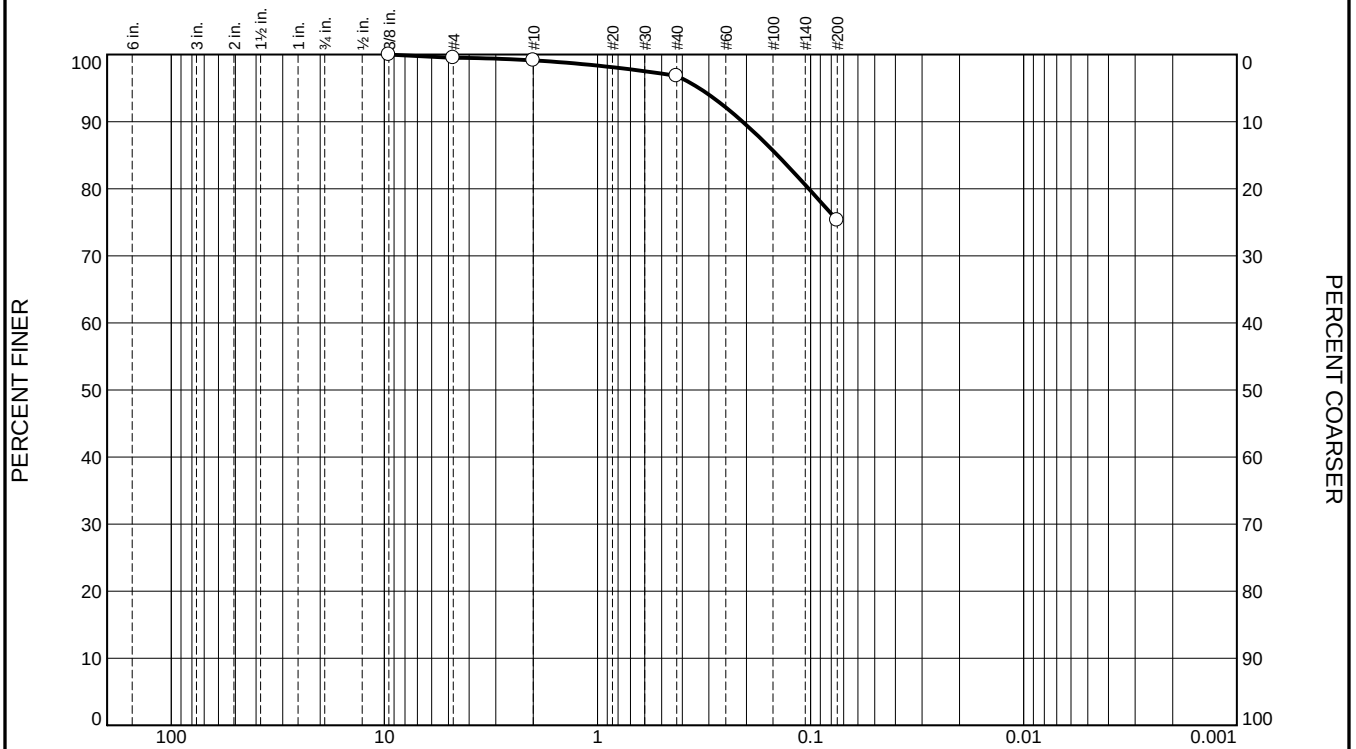


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.5	0.4	2.3	21.5	75.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	99.5		
#10	99.1		
#40	96.8		
#200	75.3		

* (no specification provided)

Material Description		
Lean Clay with Sand - Reddish Brown		
PL= 18	Atterberg Limits LL= 40	PI= 22
D ₉₀ = 0.2085	Coefficients D ₈₅ = 0.1432	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
USCS= CL	Classification AASHTO= A-6(15)	
Remarks		
Moisture: 13.1%		
F.M.=0.25		

Source of Sample: Clay Cover Sample #2
Sample Number: 23-828

Depth: Subsoil

Date: 9/27/2023

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-829

Project No.: 09-1341

Date: 9/27/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Clay Cover Sample #3

Depth: Subsoil

Sample Number: 23-829

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(13)

Nat. Moist. = 12.6 %

Sp.G. = NT

Liquid Limit = 35

Plasticity Index = 19

% < No.200 = 78.3 %

TEST RESULTS

Maximum dry density = 118.6 pcf

Optimum moisture = 12.4 %

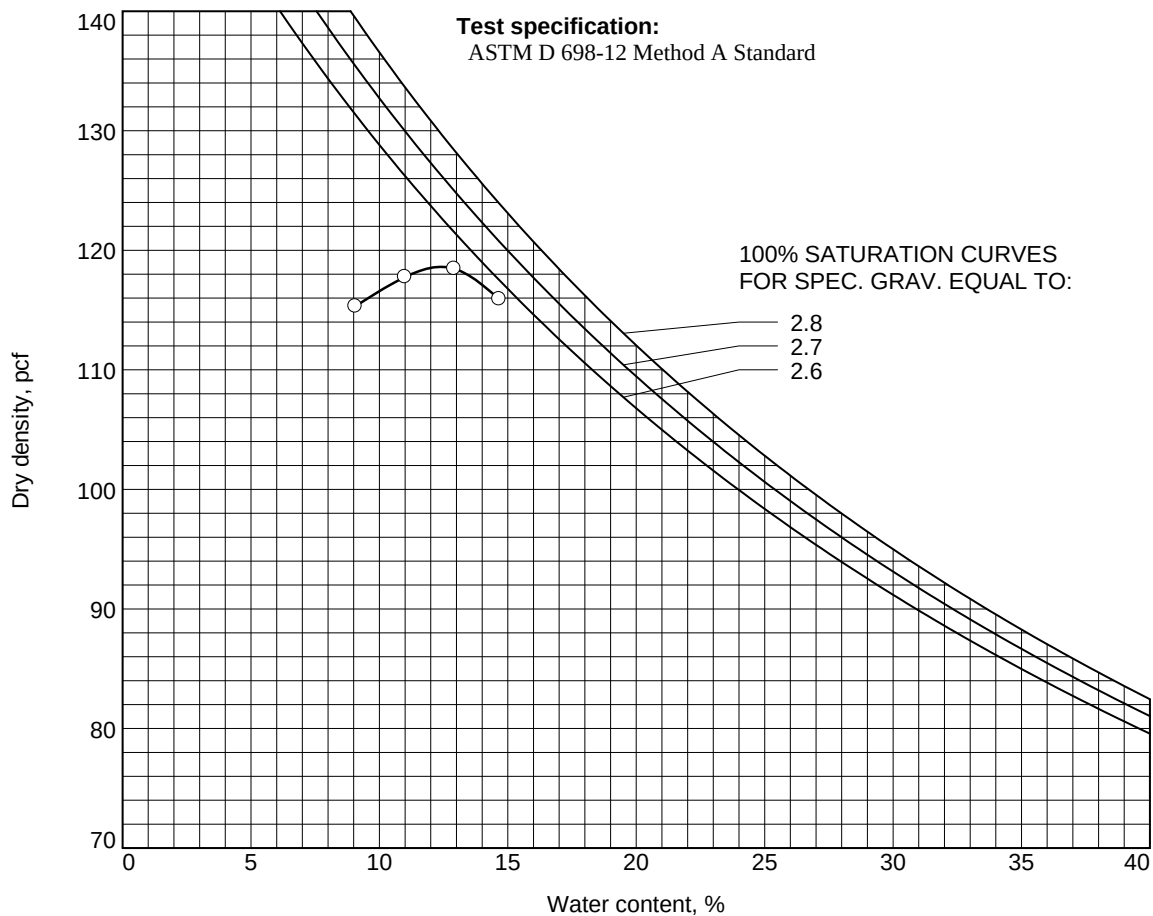


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

PERCENT FINER



% +3"

% Sand

Coarse

Fine

Coarse

Medium

Fine

Silt

Clay

0.0

0.0

0.7

0.4

2.2

18.4

78.3

F.M.=0.25

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-830

Project No.: 09-1341

Date: 9/27/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Clay Cover Sample #4

Depth: Subsoil

Sample Number: 23-830

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Light Reddish Brown

Classifications -

USCS: CL

AASHTO: A-7-6(17)

Nat. Moist. = 11.6 %

Sp.G. = NT

Liquid Limit = 43

Plasticity Index = 24

% < No.200 = 75.4 %

TEST RESULTS

Maximum dry density = 117.5 pcf

Optimum moisture = 12.7 %

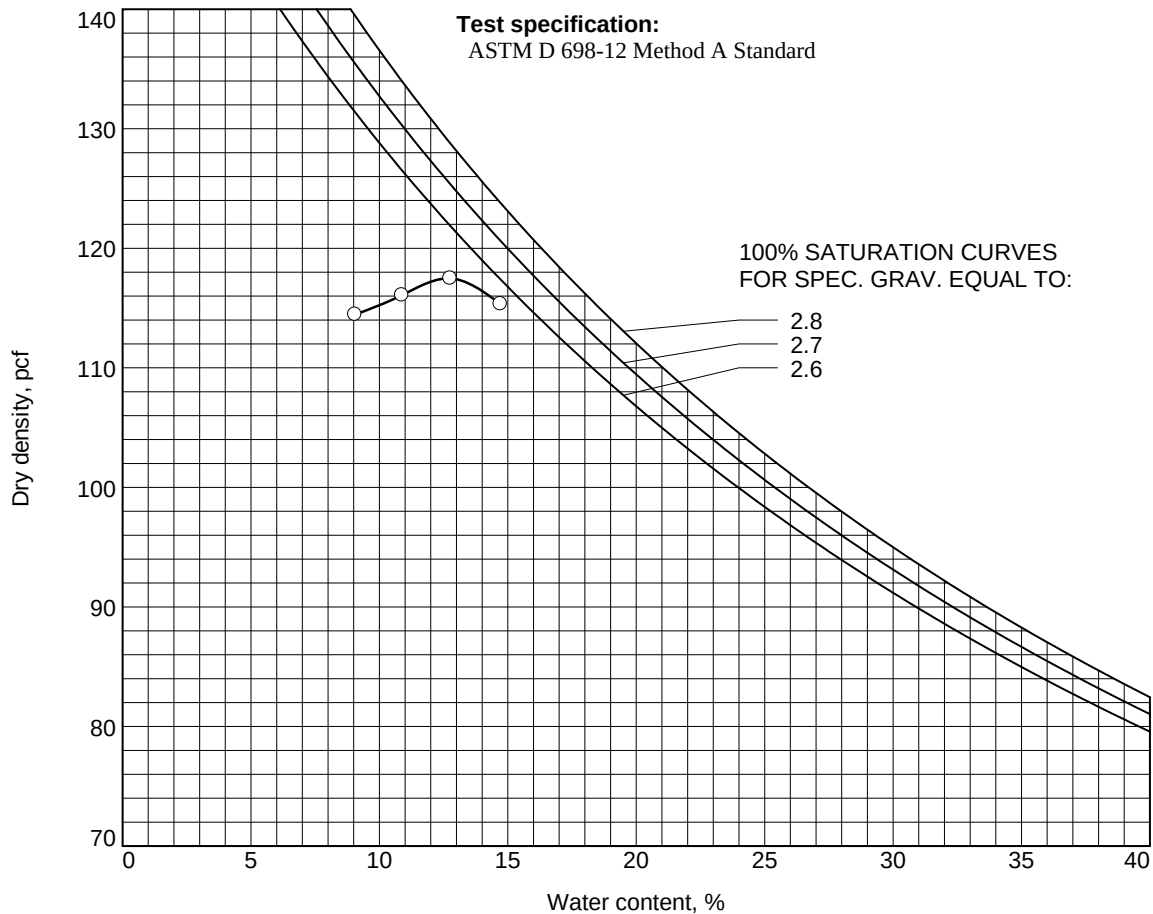
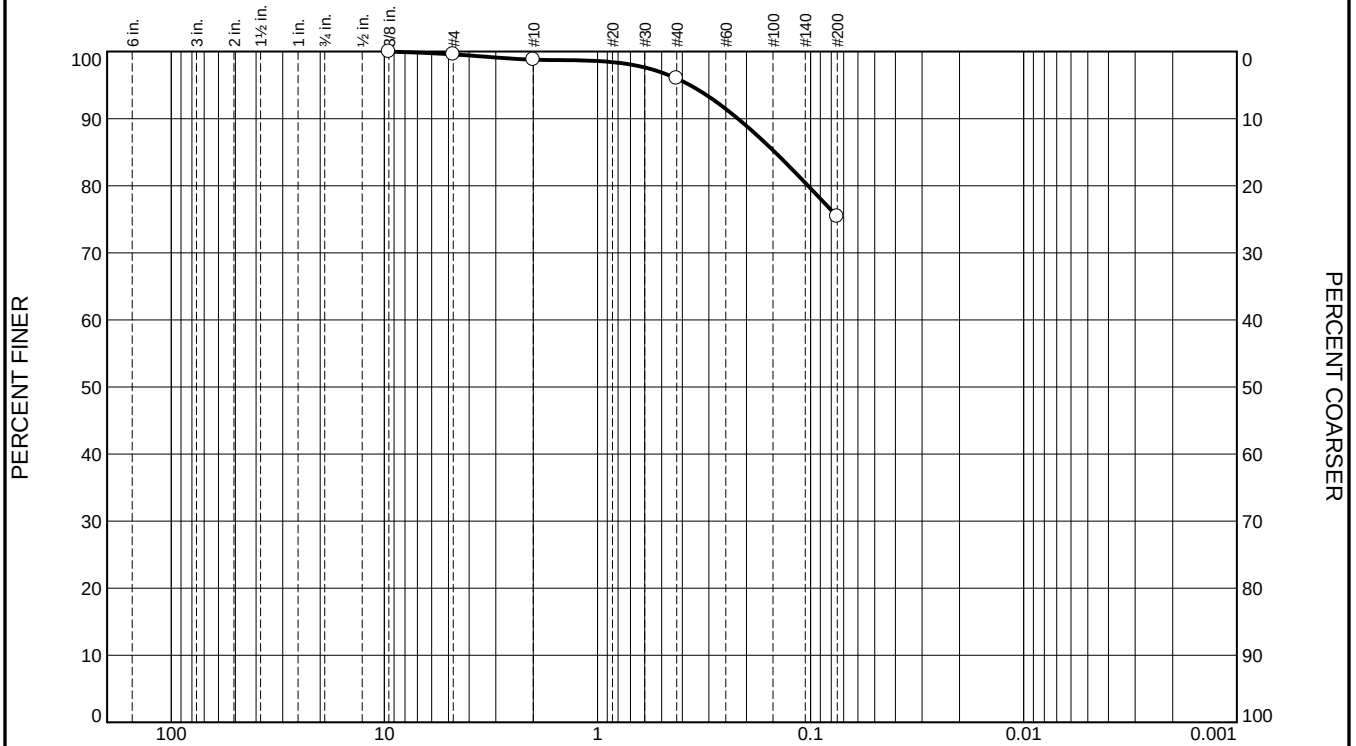


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.4	0.8	2.8	20.6	75.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	99.6		
#10	98.8		
#40	96.0		
#200	75.4		

* (no specification provided)

<u>Material Description</u>		
Lean Clay with Sand - Light Reddish Brown		
<u>Atterberg Limits</u>		
PL= 19	LL= 43	PI= 24
<u>Coefficients</u>		
D ₉₀ = 0.2192	D ₈₅ = 0.1470	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-7-6(17)	
<u>Remarks</u>		
Moisture: 11.6		
F.M.=0.27		

Source of Sample: Clay Cover Sample #4
Sample Number: 23-830

Depth: Subsoil

Date: 9/27/2023

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 24-985

Project No.: 09-1341

Date: 12/4/2024

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Final Waste Section F

Depth: Existing

Sample Number: 24-985

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Yellowish Brown - Sandy Lean Clay

Classifications -

USCS: CL

AASHTO: A-4(2)

Nat. Moist. = 11.2 %

Sp.G. = NT

Liquid Limit = 26

Plasticity Index = 8

% < No.200 = 58.3 %

TEST RESULTS

Maximum dry density = 110.2 pcf

Optimum moisture = 15.9 %

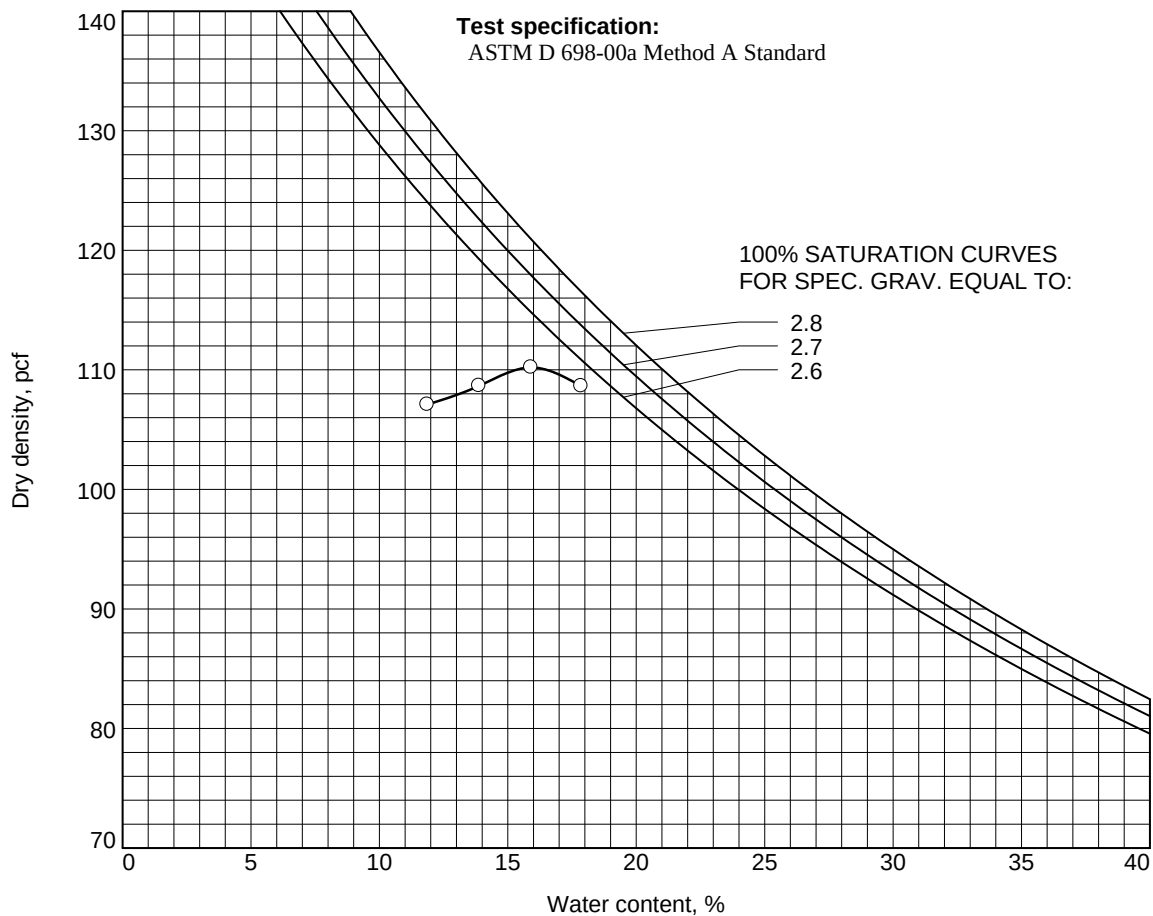
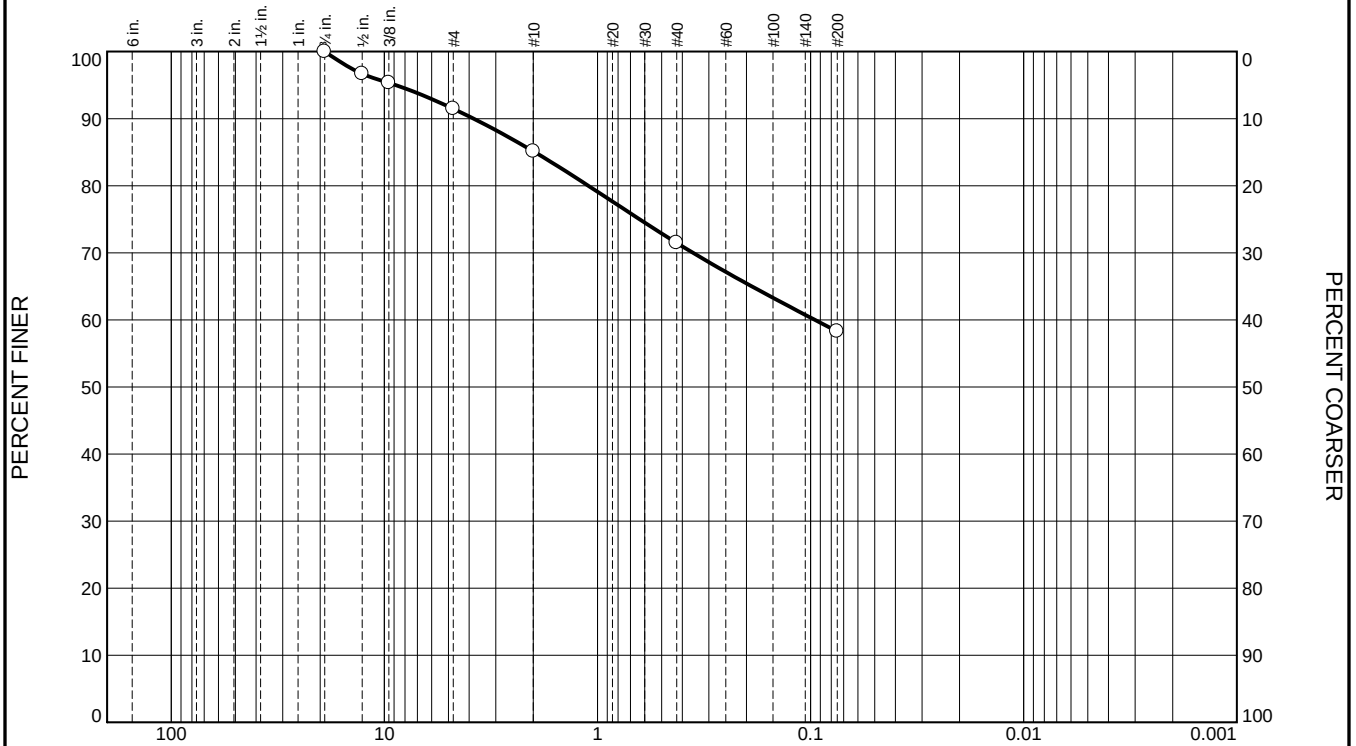


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	8.5	6.4	13.6	13.2	58.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	96.7		
3/8"	95.3		
#4	91.5		
#10	85.1		
#40	71.5		
#200	58.3		

* (no specification provided)

<u>Material Description</u>		
Yellowish Brown - Sandy Lean Clay		
<u>Atterberg Limits</u>		
PL= 18	LL= 26	PI= 8
<u>Coefficients</u>		
D ₉₀ = 3.8161	D ₈₅ = 1.9673	D ₆₀ = 0.0954
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-4(2)	
<u>Remarks</u>		
Moisture: 11.2%		
F.M.=1.40		

Source of Sample: Final Waste Section F
Sample Number: 24-985

Depth: Existing

Date: 12/4/2024

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 24-987

Project No.: 09-1341

Date: 12/4/2024

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Clay Stockpile East Depth: Existing

Sample Number: 24-987

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Yellowish Red - Lean Clay with Sand

Classifications -

USCS: CL

AASHTO: A-6(16)

Nat. Moist. = 18.9 %

Sp.G. = NT

Liquid Limit = 38

Plasticity Index = 19

% < No.200 = 83.6 %

TEST RESULTS

Maximum dry density = 113.3 pcf

Optimum moisture = 14.3 %

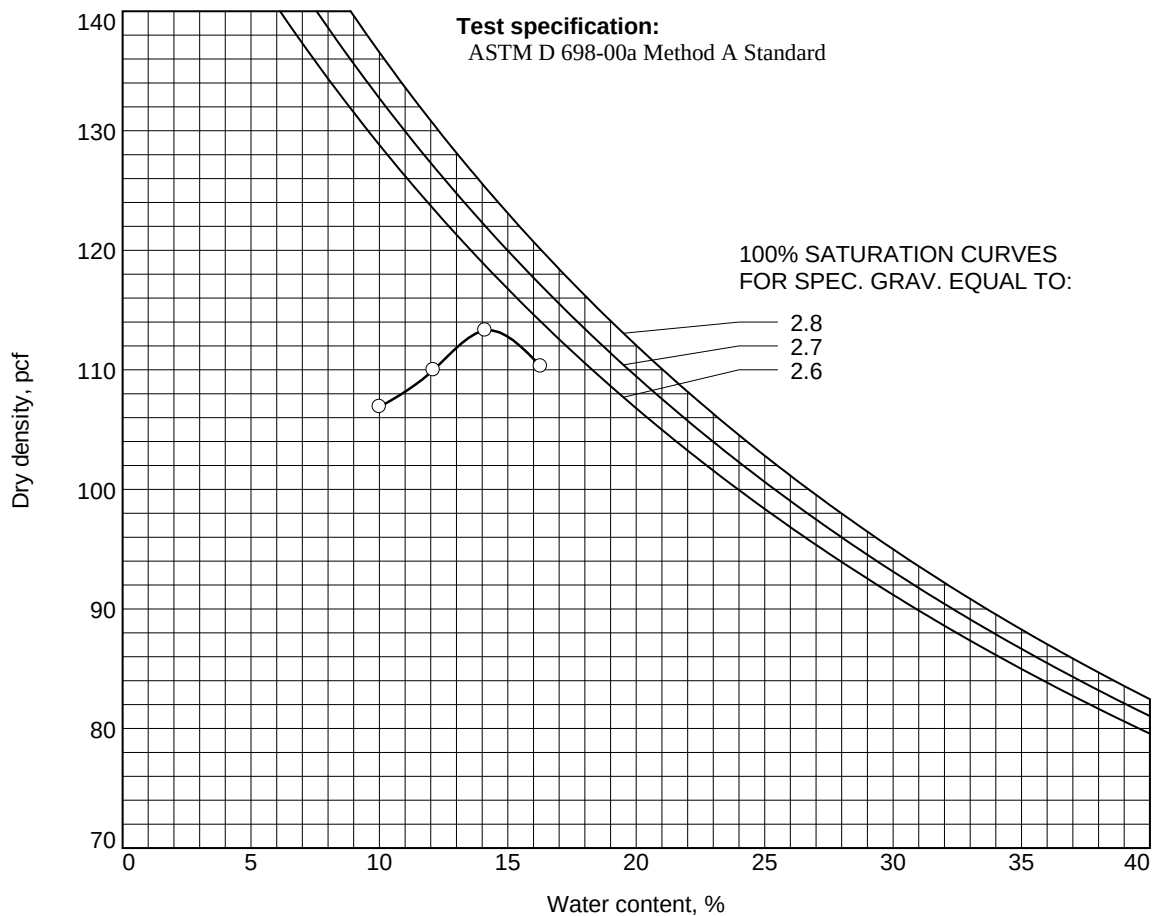
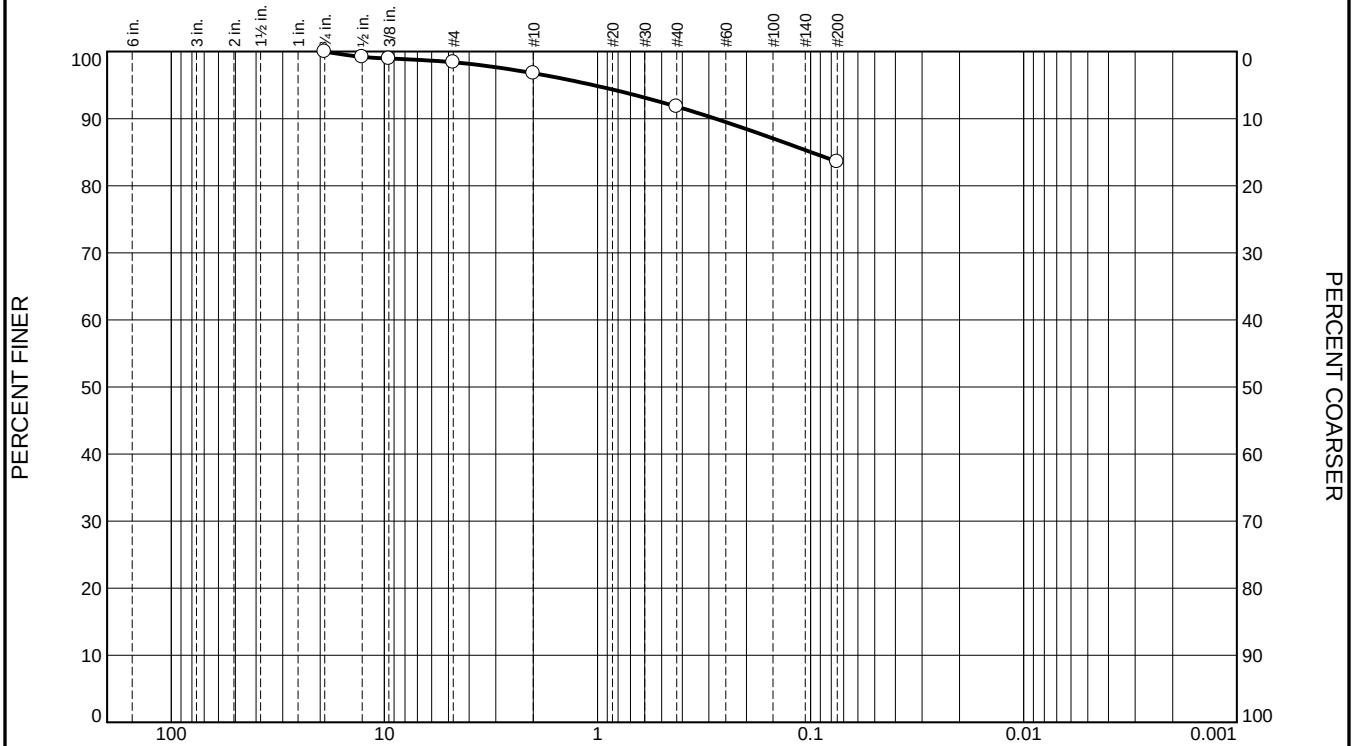


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.6	1.6	5.0	8.2	83.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	99.2		
3/8"	99.0		
#4	98.4		
#10	96.8		
#40	91.8		
#200	83.6		

* (no specification provided)

<u>Material Description</u>		
Yellowish Red - Lean Clay with Sand		
<u>Atterberg Limits</u>		
PL= 19	LL= 38	PI= 19
<u>Coefficients</u>		
D ₉₀ = 0.2796	D ₈₅ = 0.0994	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO=	A-6(16)
<u>Remarks</u>		
Moisture: 18.9%		
F.M.=0.40		

Source of Sample: Clay Stockpile East
Sample Number: 24-987

Depth: Existing

Date: 12/4/2024

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: Shelby Jackson

Laboratory Compaction Characteristics of Soil

Curve No.: 15-335

Project No.: 09-1341

Date: 6/12/2015 

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(14)

Nat. Moist. = 4.3 %

Sp.G. = NT

Liquid Limit = 34

Plasticity Index = 15

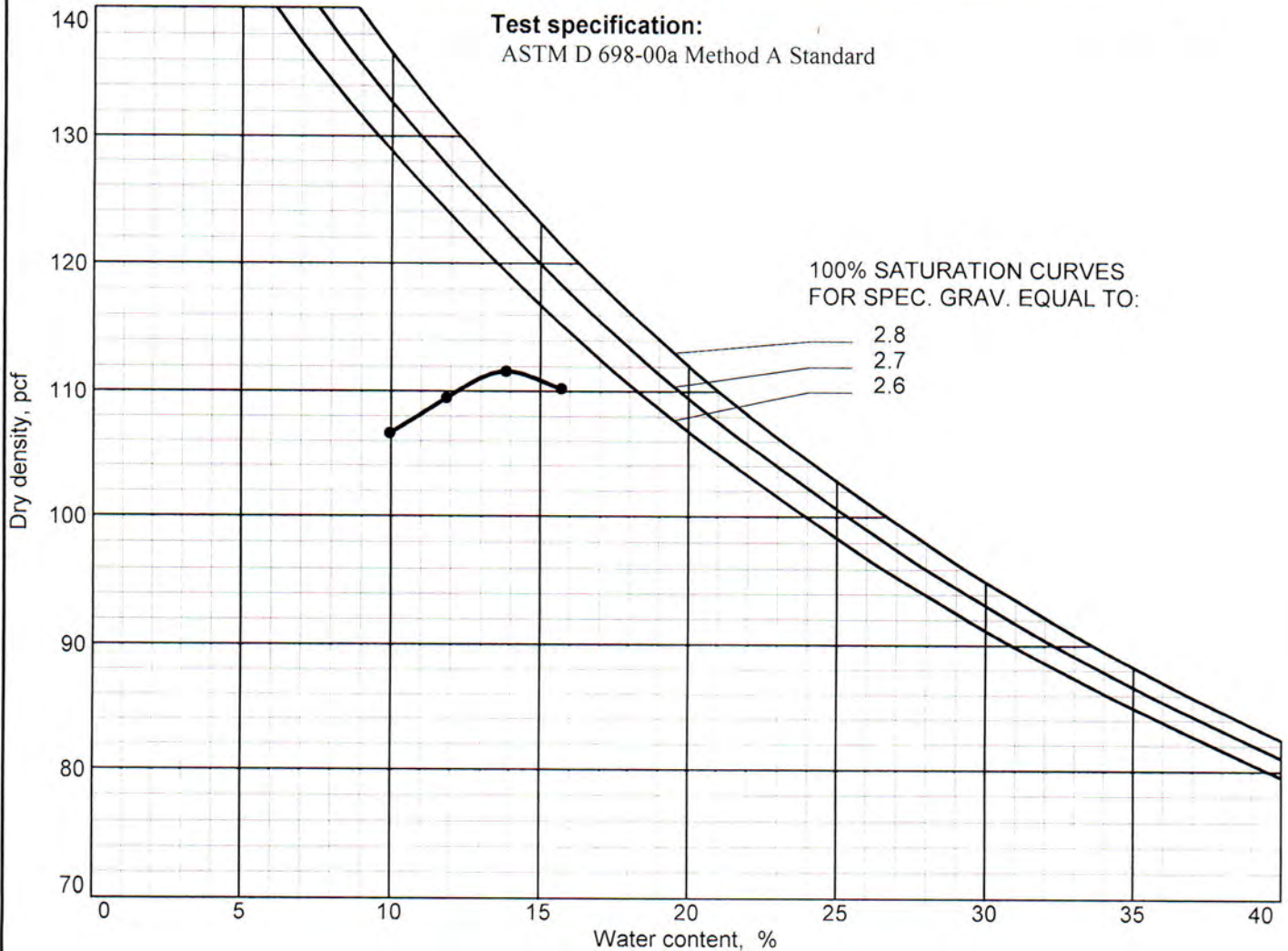
% > No.4 = 0.6 %

% < No.200 = 94.5 %

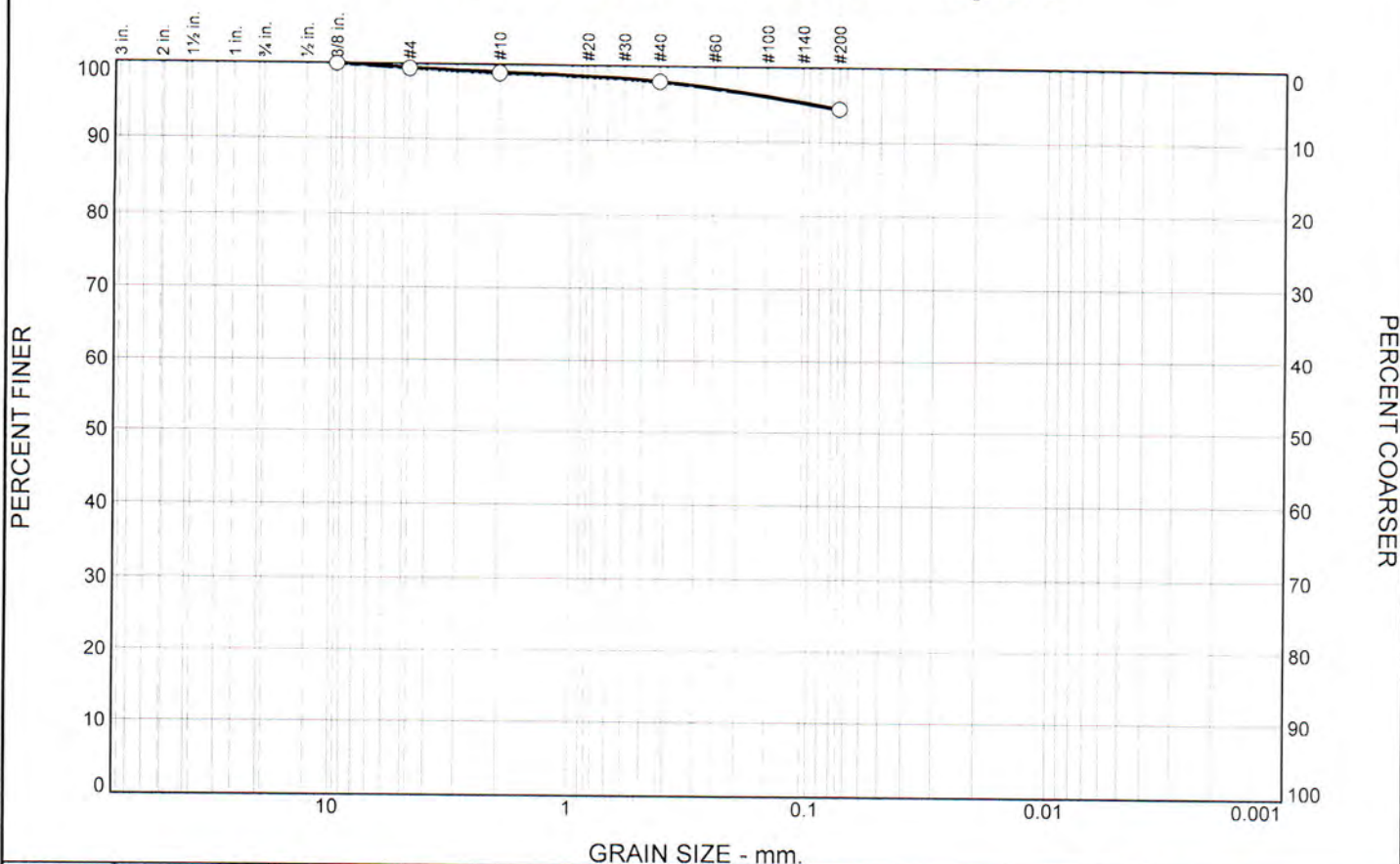
TEST RESULTS

Maximum dry density = 111.6 pcf

Optimum moisture = 13.9 %



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.6	0.5	0.9	3.5	94.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	99.4		
#10	98.9		
#40	98.0		
#200	94.5		

* (no specification provided)

Material Description		
Lean Clay - Reddish Brown		
PL= 19	Atterberg Limits LL= 34	PI= 15
D ₉₀ =	Coefficients D ₈₅ =	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
USCS= CL	Classification AASHTO= A-6(14)	
Remarks		
NT - No Test F.M.=0.11		

Location: Existing Material
Sample Number: 15-335

Depth: Subgrade

Date: 6-12-2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: 

Laboratory Compaction Characteristics of Soil

Curve No.: 15-413

Project No.: 09-1341

Date: 7/15/2015

SO

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material, Section B

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-4(5)

Nat. Moist. = 6.1 %

Sp.G. = NT

Liquid Limit = 26

Plasticity Index = 10

% > No.4 = 2.3 %

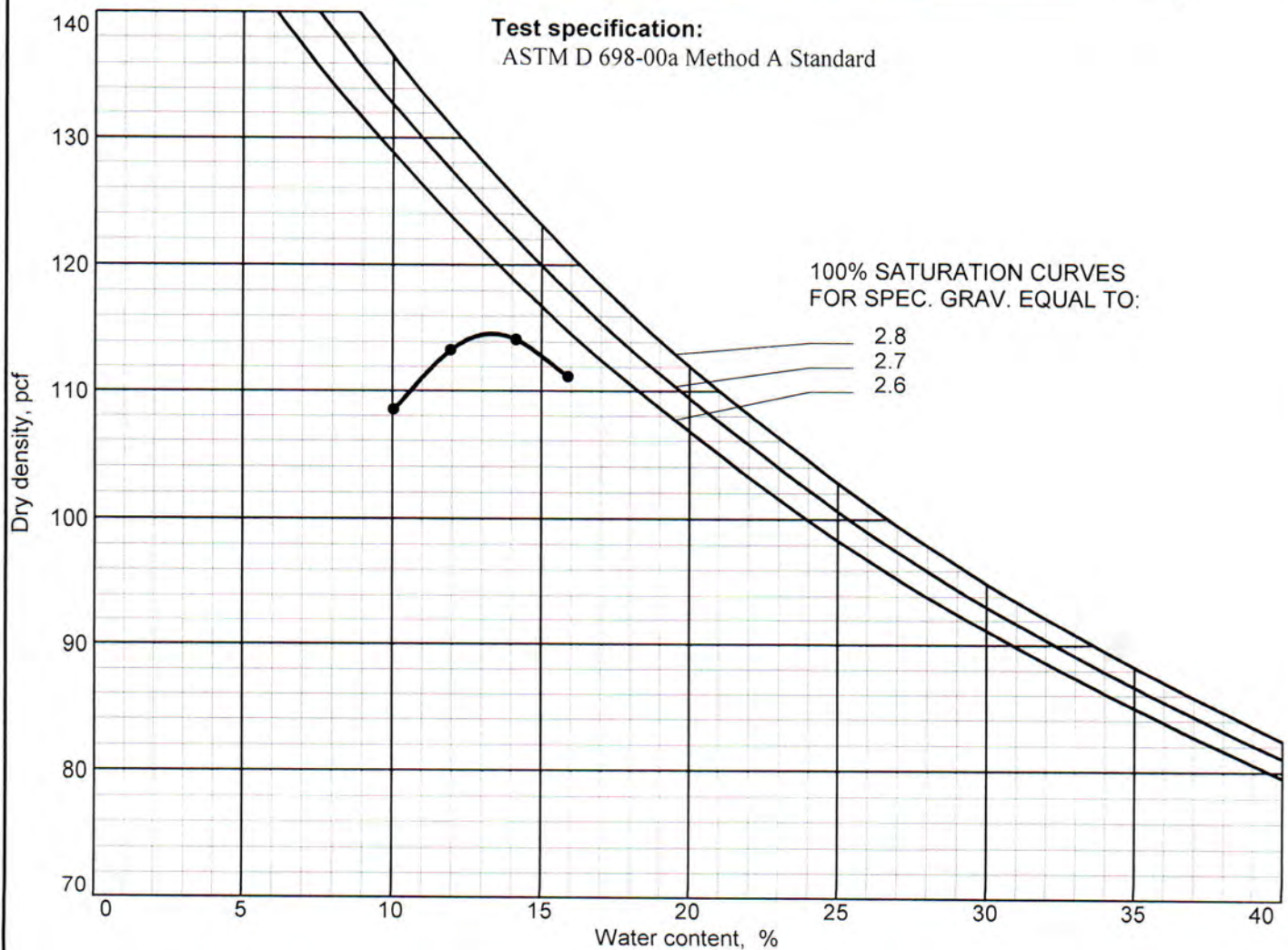
% < No.200 = 75.9 %

TEST RESULTS

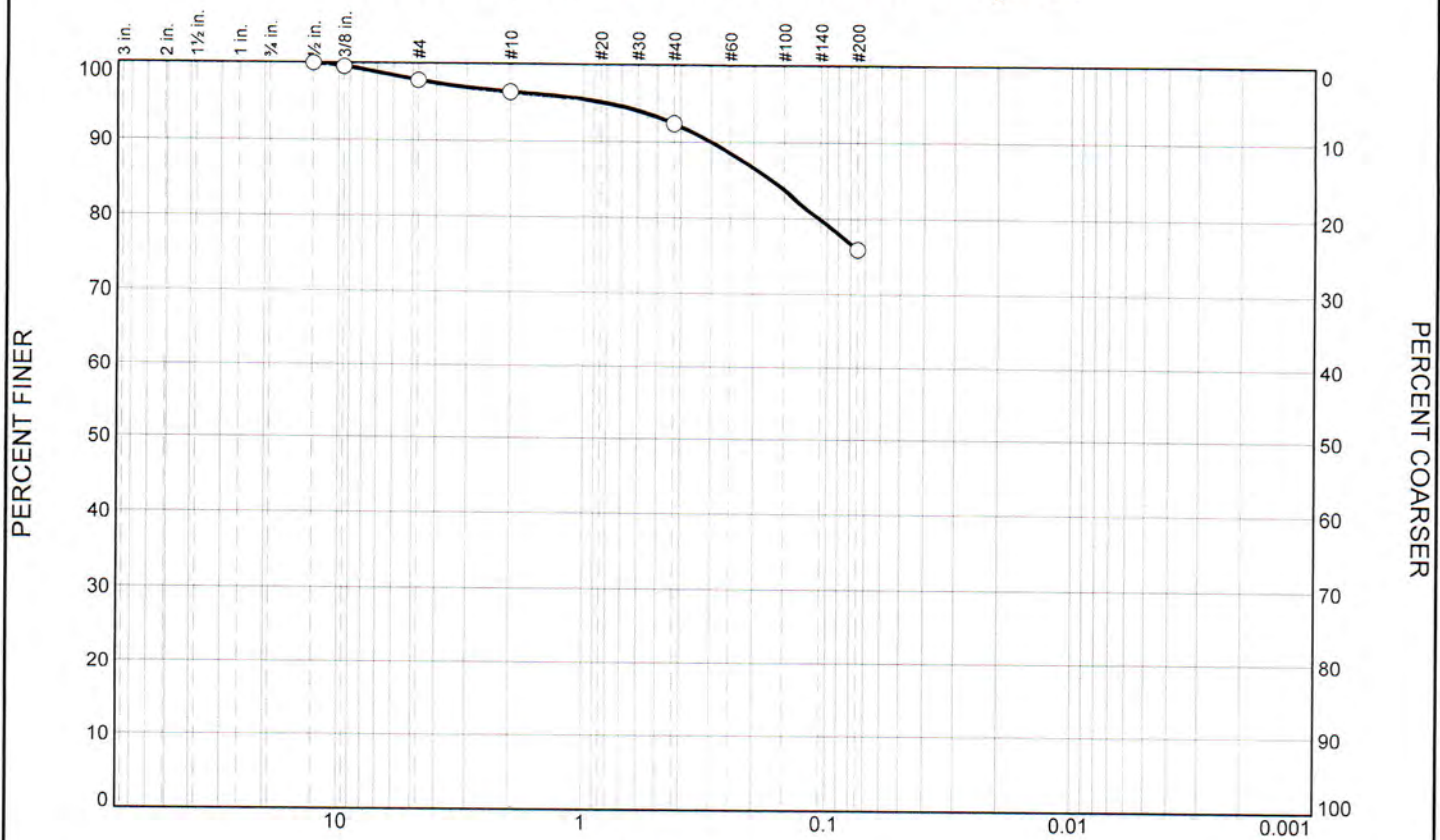
Maximum dry density = 114.6 pcf

Optimum moisture = 13.3 %

Test specification:
ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.3	1.5	3.8	16.5	75.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	99.5		
#4	97.7		
#10	96.2		
#40	92.4		
#200	75.9		

* (no specification provided)

Material Description
Lean Clay with Sand - Reddish Brown

PL= 16 **Atterberg Limits** LL= 26 PI= 10

Coefficients
D₉₀= 0.2984 D₈₅= 0.1719 D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CL AASHTO= A-4(5)

Remarks
NT - No Test
F.M.=0.43

Location: Existing Material, Section B
Sample Number: 15-413 Depth: Subgrade

Date: 7/15/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-577

Project No.: 09-1341

Date: 8/25/2015 *SS*

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material, Slope C

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Sandy Lean Clay - Yellowish Brown

Classifications -

USCS: CL

AASHTO: A-7-6(11)

Nat. Moist. = 12.6 %

Sp.G. = NT

Liquid Limit = 42

Plasticity Index = 23

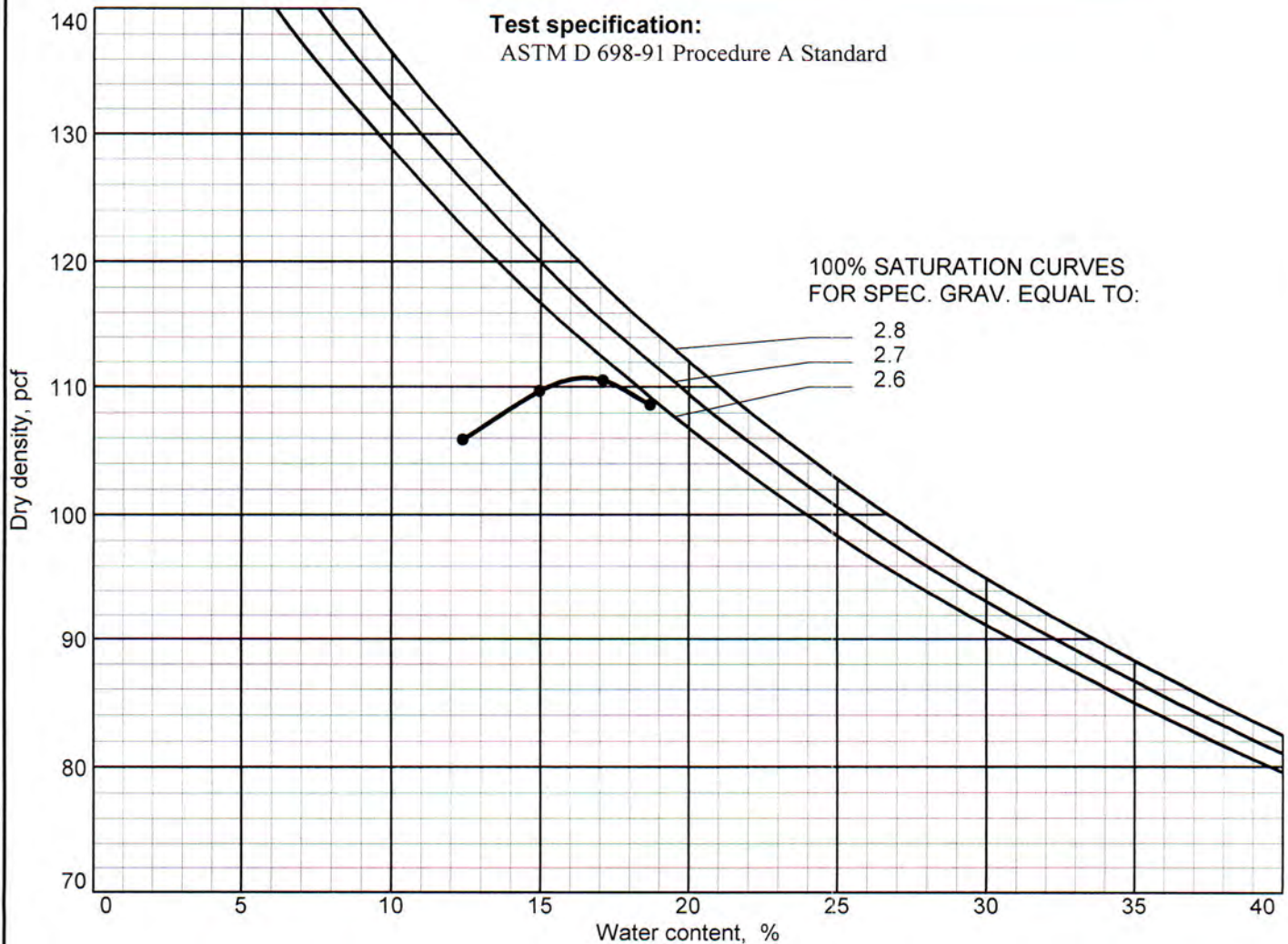
% > No.4 = 5.6 %

% < No.200 = 61.3 %

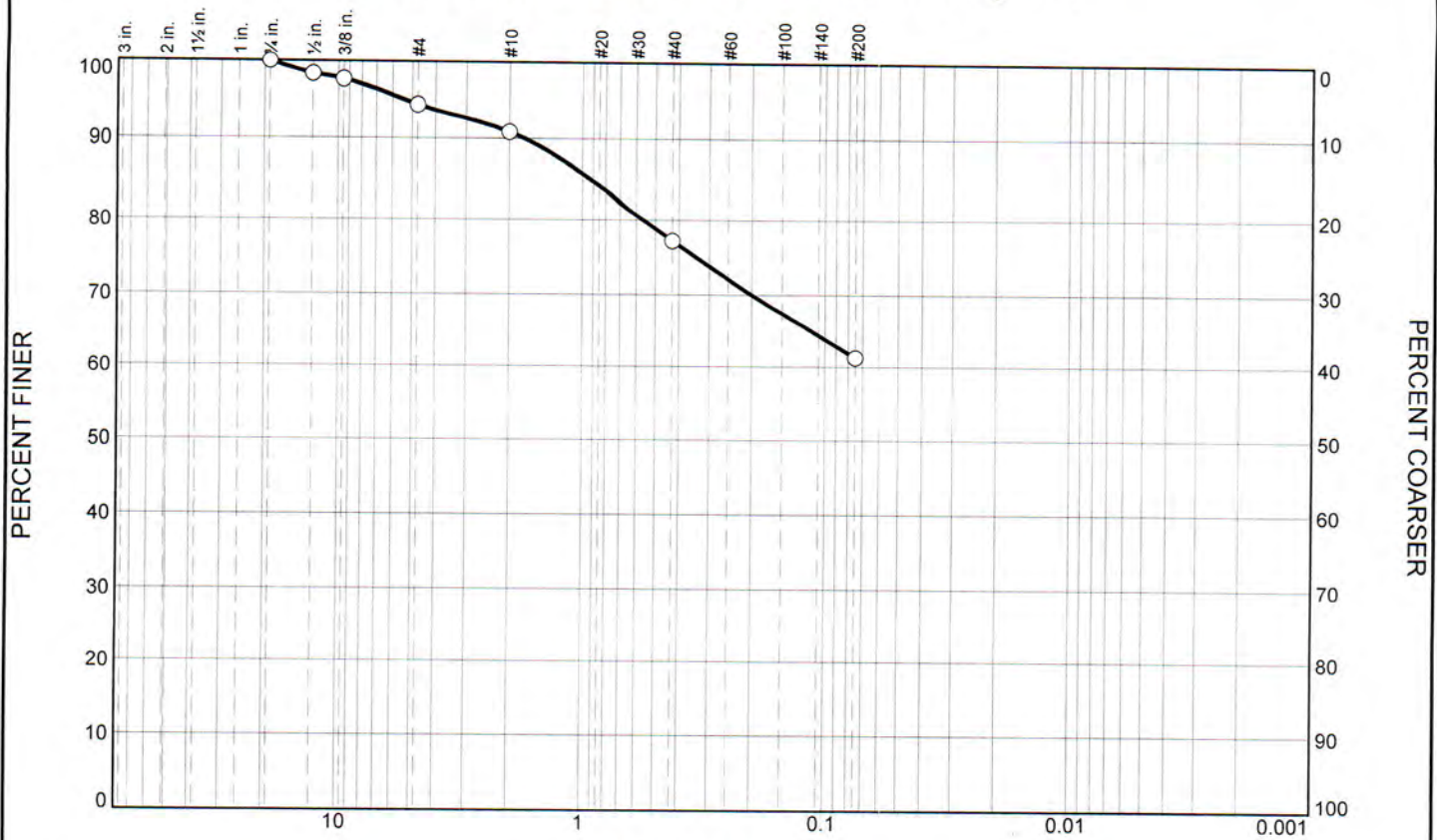
TEST RESULTS

Maximum dry density = 110.7 pcf

Optimum moisture = 16.5 %



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	5.6	3.5	13.7	15.9	61.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75"	100.0		
0.5"	98.3		
0.375"	97.6		
#4	94.4		
#10	90.9		
#40	77.2		
#200	61.3		

* (no specification provided)

Material Description
Sandy Lean Clay - Yellowish Brown

Atterberg Limits
 PL= 19 LL= 42 PI= 23

Coefficients
 D₉₀= 1.7315 D₈₅= 0.9315 D₆₀=
 D₅₀= D₃₀= D₁₅=
 D₁₀= C_u= C_c=

Classification
 USCS= CL AASHTO= A-7-6(11)

Remarks
 NT - No Test
 F.M.=1.07

Location: Existing Material, Slope C

Sample Number: 15-577 Depth: Borrow Material

Date: 8/25/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS

CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SS

Laboratory Compaction Characteristics of Soil

Curve No.: 15-578

Project No.: 09-1341

Date: 8/25/2015

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material, Slope D

Remarks:

MATERIAL DESCRIPTION

Description: Lean Clay - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(12)

Nat. Moist. = 8.3 %

Sp.G. = NT

Liquid Limit = 31

Plasticity Index = 13

% > No.4 = 0.3 %

% < No.200 = 94.9 %

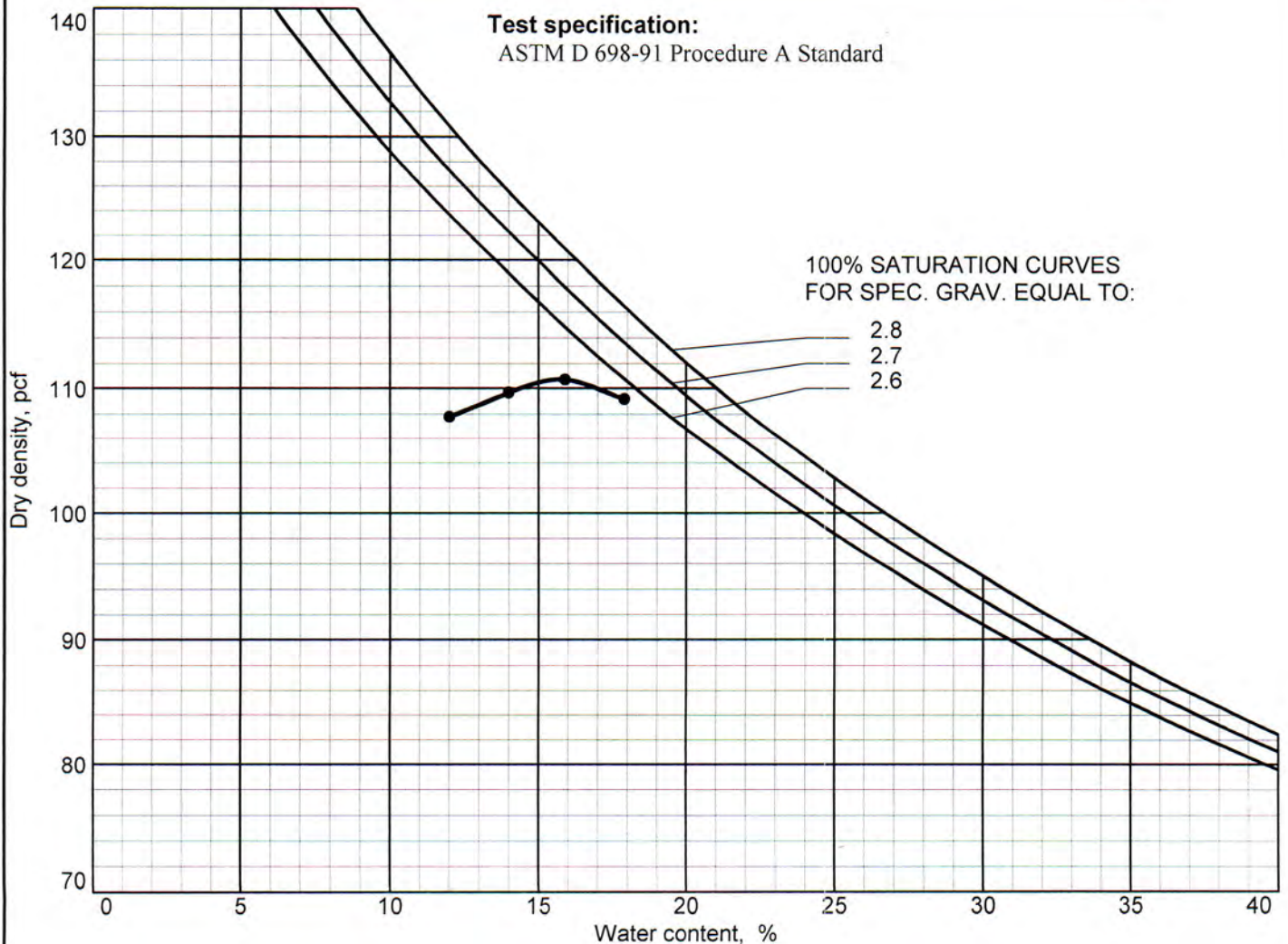
TEST RESULTS

Maximum dry density = 110.7 pcf

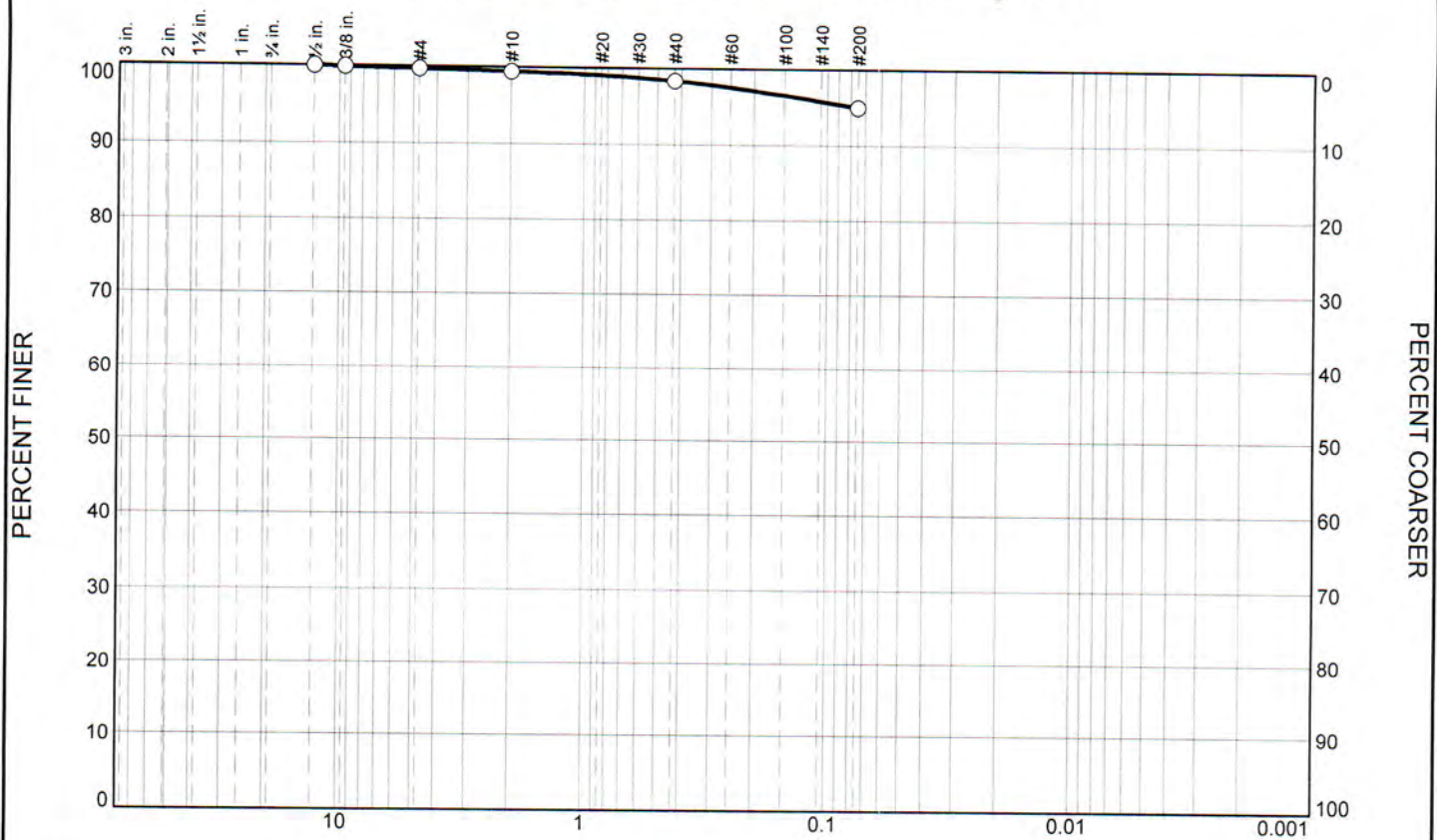
Optimum moisture = 15.7 %

Test specification:

ASTM D 698-91 Procedure A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.3	0.3	1.1	3.4	94.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5"	100.0		
0.375"	99.9		
#4	99.7		
#10	99.4		
#40	98.3		
#200	94.9		

* (no specification provided)

Material Description		
Lean Clay - Reddish Brown		
Atterberg Limits		
PL= 18	LL= 31	PI= 13
Coefficients		
D ₉₀ =	D ₈₅ =	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Classification		
USCS= CL	AASHTO= A-6(12)	
Remarks		
NT - No Test F.M.=0.09		

Location: Existing Material, Slope D

Sample Number: 15-578

Depth: Borrow Material

Date: 8/25/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS

CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: SES

Laboratory Compaction Characteristics of Soil

Curve No.: 15-727

Project No.: 09-1341

Date: 10/5/2015

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section E)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Dark Brown

Classifications -

USCS: CL

AASHTO: A-6(16)

Nat. Moist. = 16.6 %

Sp.G. = NT

Liquid Limit = 38

Plasticity Index = 20

% > No.4 = 2.1 %

% < No.200 = 83.0 %

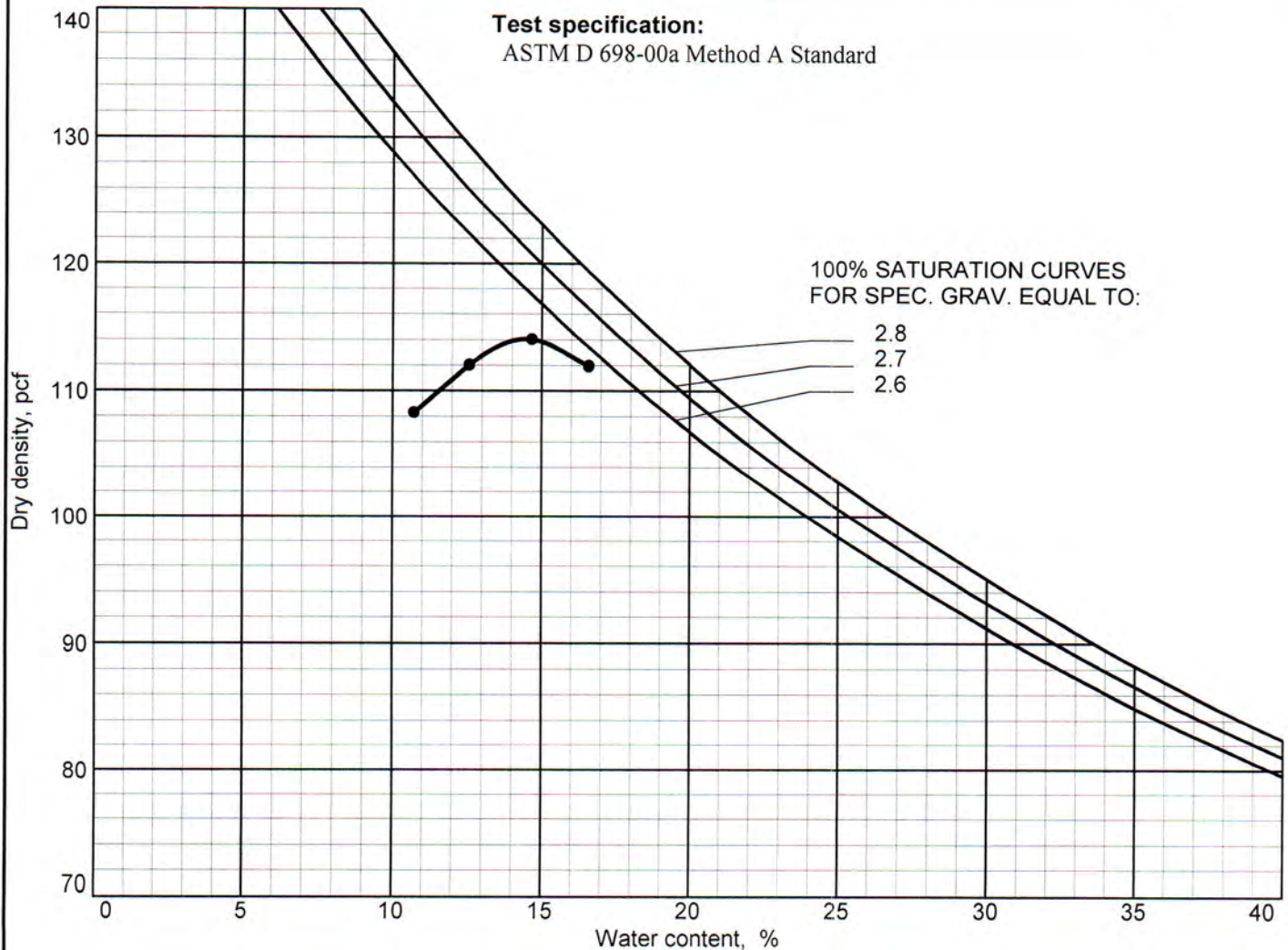
TEST RESULTS

Maximum dry density = 114.1 pcf

Optimum moisture = 14.5 %

Test specification:

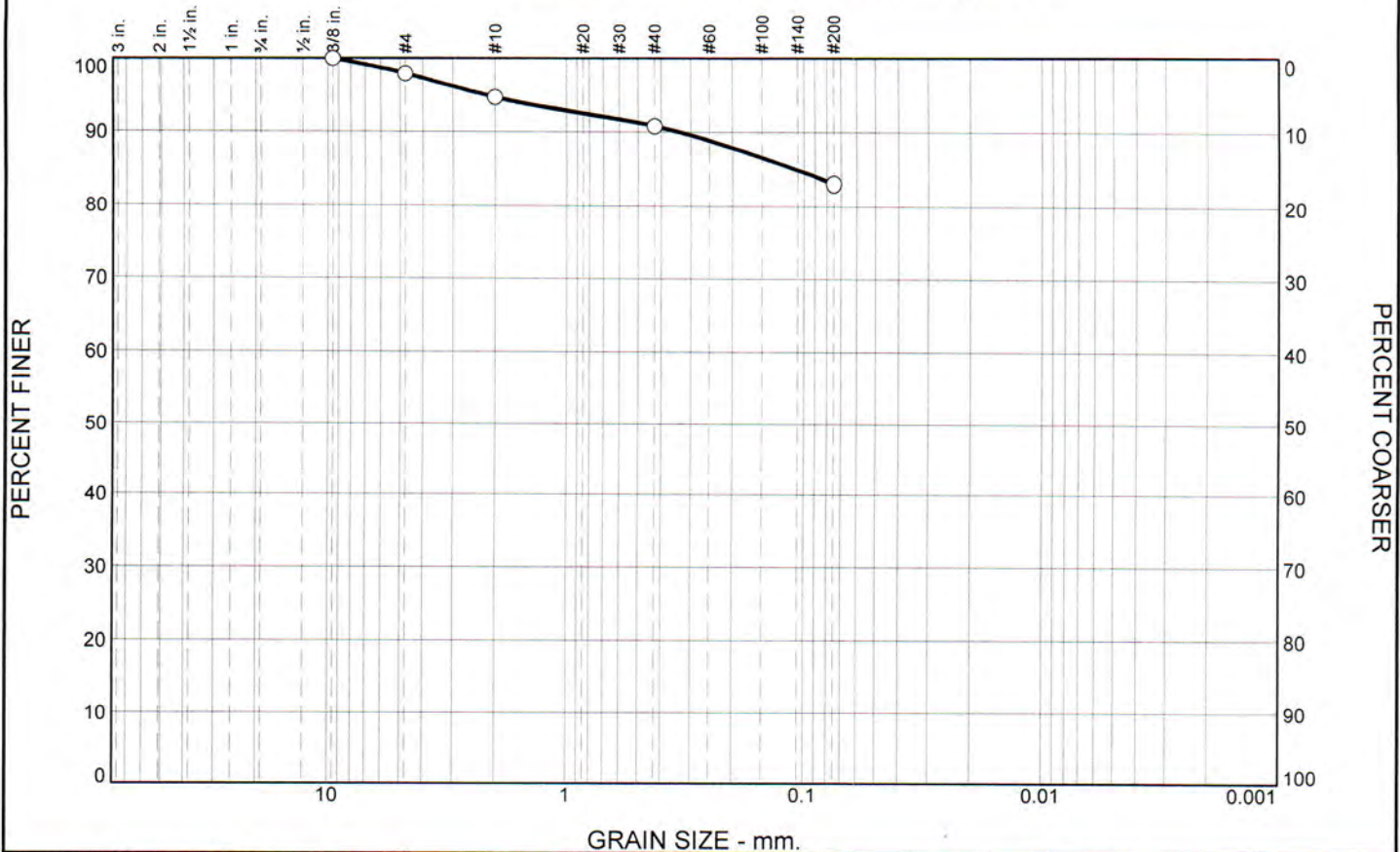
ASTM D 698-00a Method A Standard



100% SATURATION CURVES
FOR SPEC. GRAV. EQUAL TO:

2.8
2.7
2.6

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.1	3.3	3.8	7.8	83.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375"	100.0		
#4	97.9		
#10	94.6		
#40	90.8		
#200	83.0		

* (no specification provided)

Material Description

Lean Clay with Sand - Dark Brown

PL= 18 Atterberg Limits LL= 38 PI= 20

Coefficients
D₉₀= 0.3344 D₈₅= 0.1103 D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CL AASHTO= A-6(16)

Remarks

NT - No Test
F.M.=0.46

Location: Existing Material (Section E)
Sample Number: 15-727 Depth: Subgrade

Date: 10/5/2015

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS
Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: _____

[Signature]

Laboratory Compaction Characteristics of Soil

Curve No.: 15-813

Project No.: 09-1341

Date: 10/27/2015

Project: SEQUOYAH FUELS
CORPORATION - DISPOSAL CELL

Location: Existing Material (Section F, Final Subgrade)

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Reddish Brown

Classifications -

USCS: CL

AASHTO: A-6(14)

Nat. Moist. = 18.1 %

Sp.G. = NT

Liquid Limit = 36

Plasticity Index = 20

% > No.4 = 9.3 %

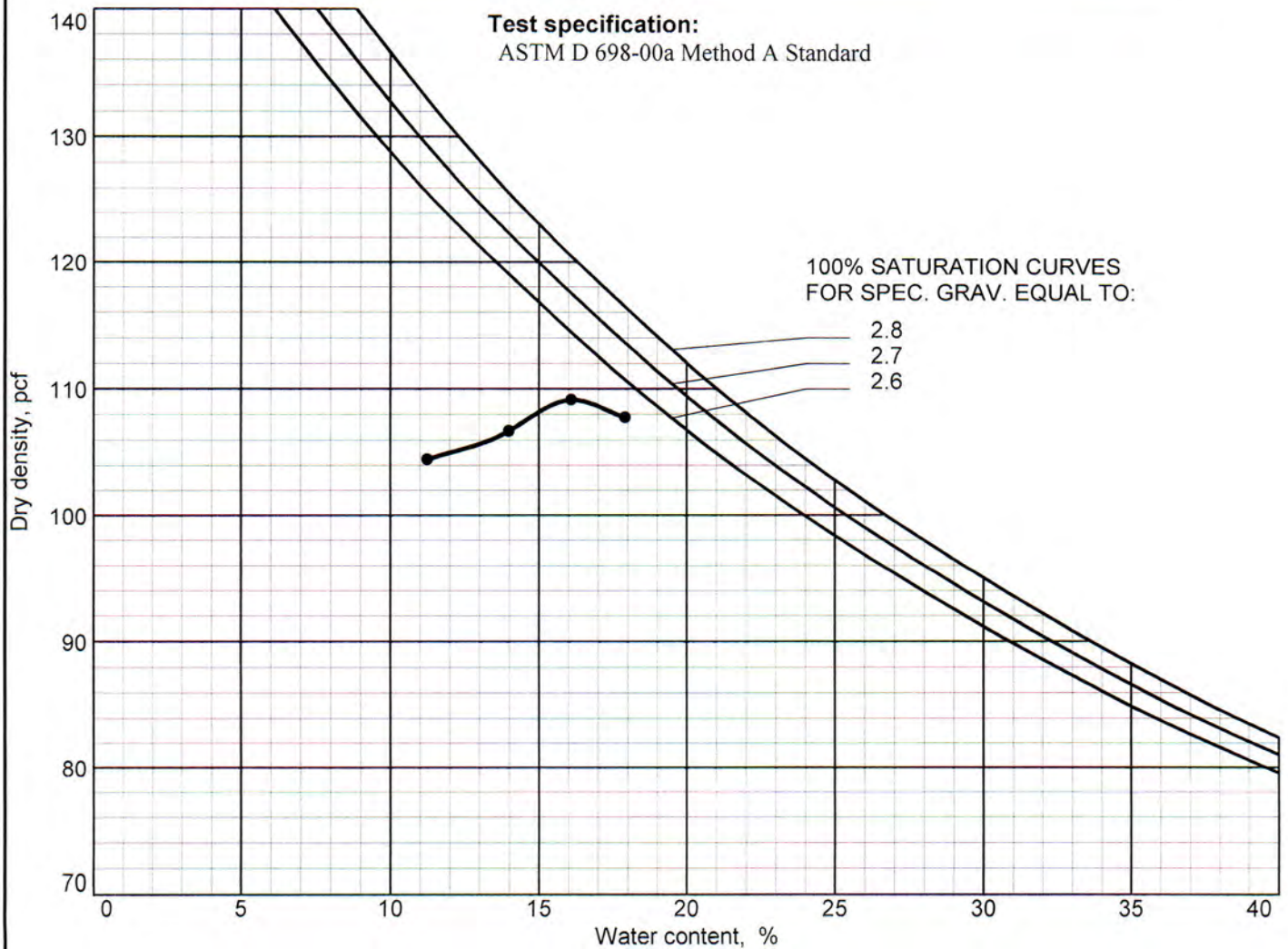
% < No.200 = 78.3 %

TEST RESULTS

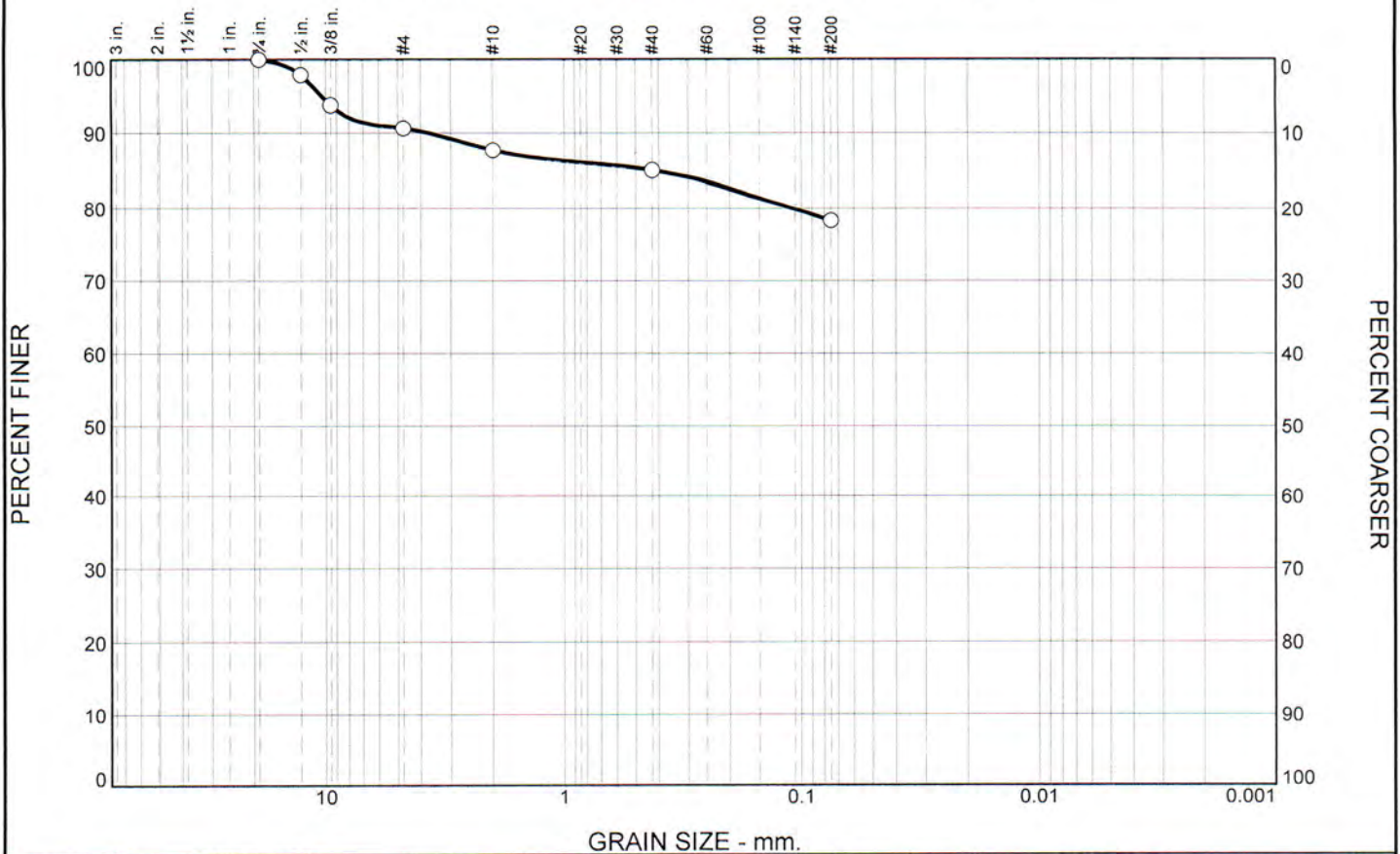
Maximum dry density = 109.2 pcf

Optimum moisture = 16.1 %

Test specification:
ASTM D 698-00a Method A Standard



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	9.3	3.1	2.7	6.6	78.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75"	100.0		
0.5"	97.9		
0.375"	93.8		
#4	90.7		
#10	87.6		
#40	84.9		
#200	78.3		

* (no specification provided)

<u>Material Description</u>		
Lean Clay with Sand - Reddish Brown		
<u>Atterberg Limits</u>		
PL= 16	LL= 36	PI= 20
<u>Coefficients</u>		
D ₉₀ = 3.7134	D ₈₅ = 0.4478	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-6(14)	
<u>Remarks</u>		
NT - No Test		
F.M.=0.90		

Location: Existing Material (Section F, Final Subgrade)
Sample Number: 15-813 Depth: Subgrade

Date: 10/27/2015

Quality Testing Ft. Gibson, OK	Client: SEQUOYAH FUELS
	Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL
	Project No: 09-1341
	Figure 2 of 2

Checked By: 

COMPACTION TEST REPORT

Curve No.: 23-526

Project No.: 09-1341

Date: 6/20/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Top of Cell, Existing Depth: Subgrade

Sample Number: 23-526

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Sandy Lean Clay with Gravel - Light Brown

Classifications -

USCS: CL

AASHTO: A-7-6(11)

Nat. Moist. = 12.1 %

Sp.G. = NT

Liquid Limit = 49

Plasticity Index = 28

% < No.200 = 52.8 %

TEST RESULTS

Maximum dry density = 112.4 pcf

Optimum moisture = 14.2 %

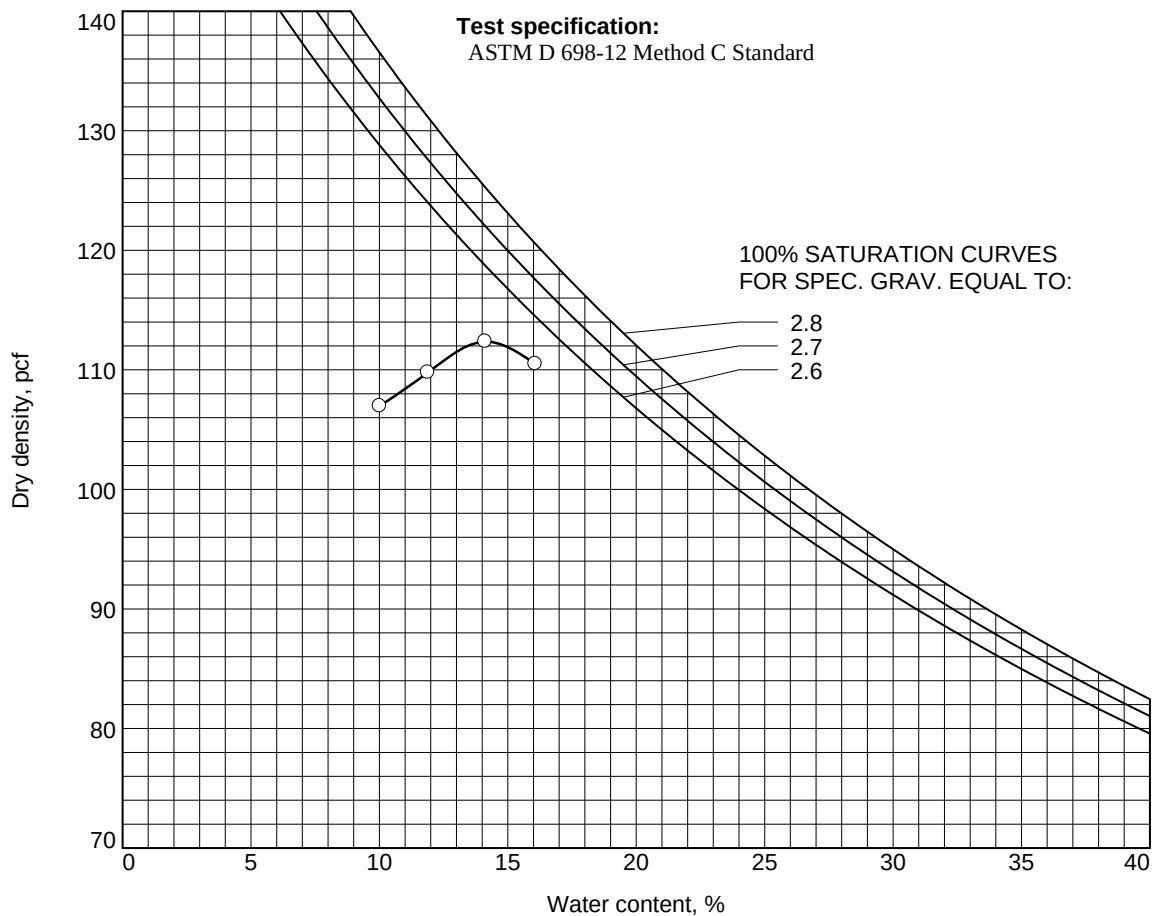
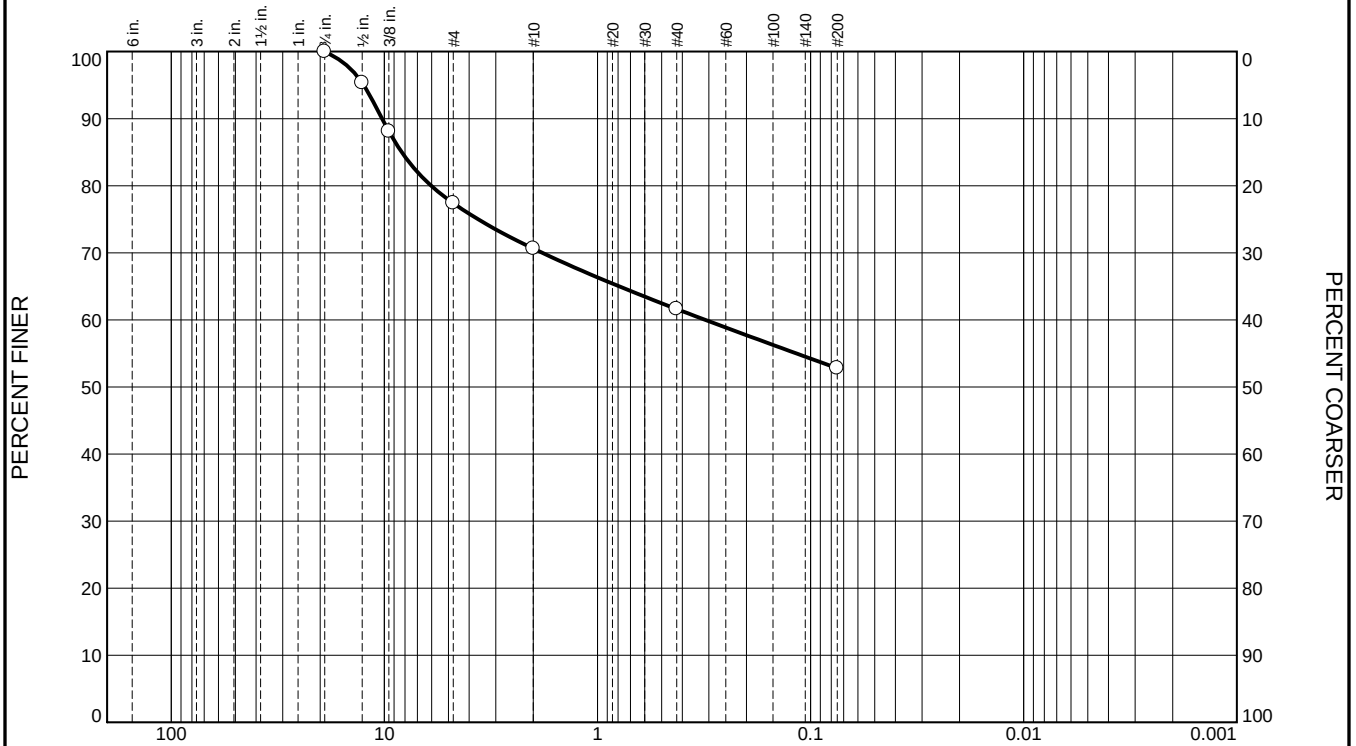


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	22.6	6.8	9.0	8.8	52.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	95.3		
3/8"	88.1		
#4	77.4		
#10	70.6		
#40	61.6		
#200	52.8		

* (no specification provided)

<u>Material Description</u>		
Sandy Lean Clay with Gravel - Light Brown		
<u>Atterberg Limits</u>		
PL= 21	LL= 49	PI= 28
<u>Coefficients</u>		
D ₉₀ = 10.2505	D ₈₅ = 8.2819	D ₆₀ = 0.3120
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-7-6(11)	
<u>Remarks</u>		
Moisture: 12.1%		
F.M.=2.16		

Source of Sample: Top of Cell, Existing
Sample Number: 23-526

Depth: Subgrade

Date: 6/20/2023

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-527

Project No.: 09-1341

Date: 6/20/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Top of Cell, Existing Depth: Subgrade

Sample Number: 23-527

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: Lean Clay with Sand - Light Brown

Classifications -

USCS: CL

AASHTO: A-6(11)

Nat. Moist. = 11.9 %

Sp.G. = NT

Liquid Limit = 36

Plasticity Index = 18

% < No.200 = 73.0 %

TEST RESULTS

Maximum dry density = 115.2 pcf

Optimum moisture = 15.4 %

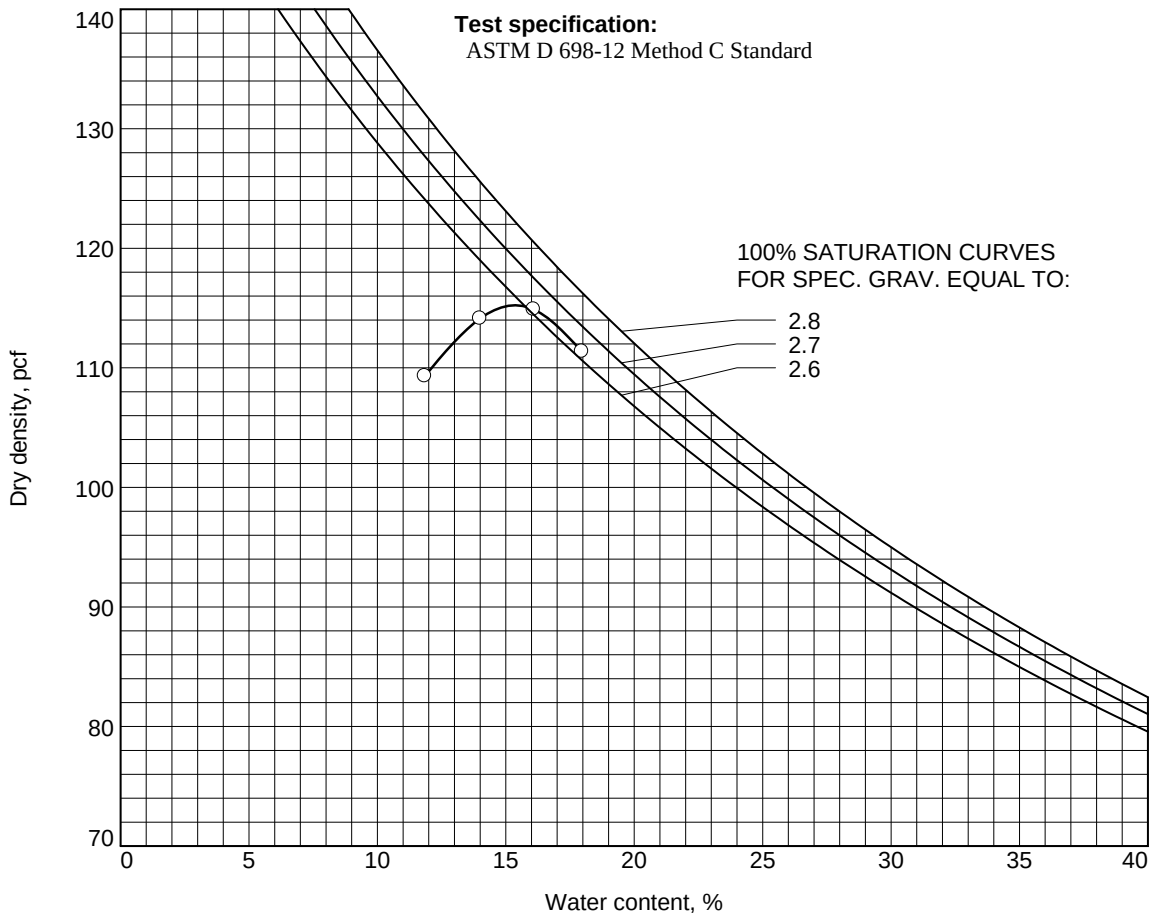
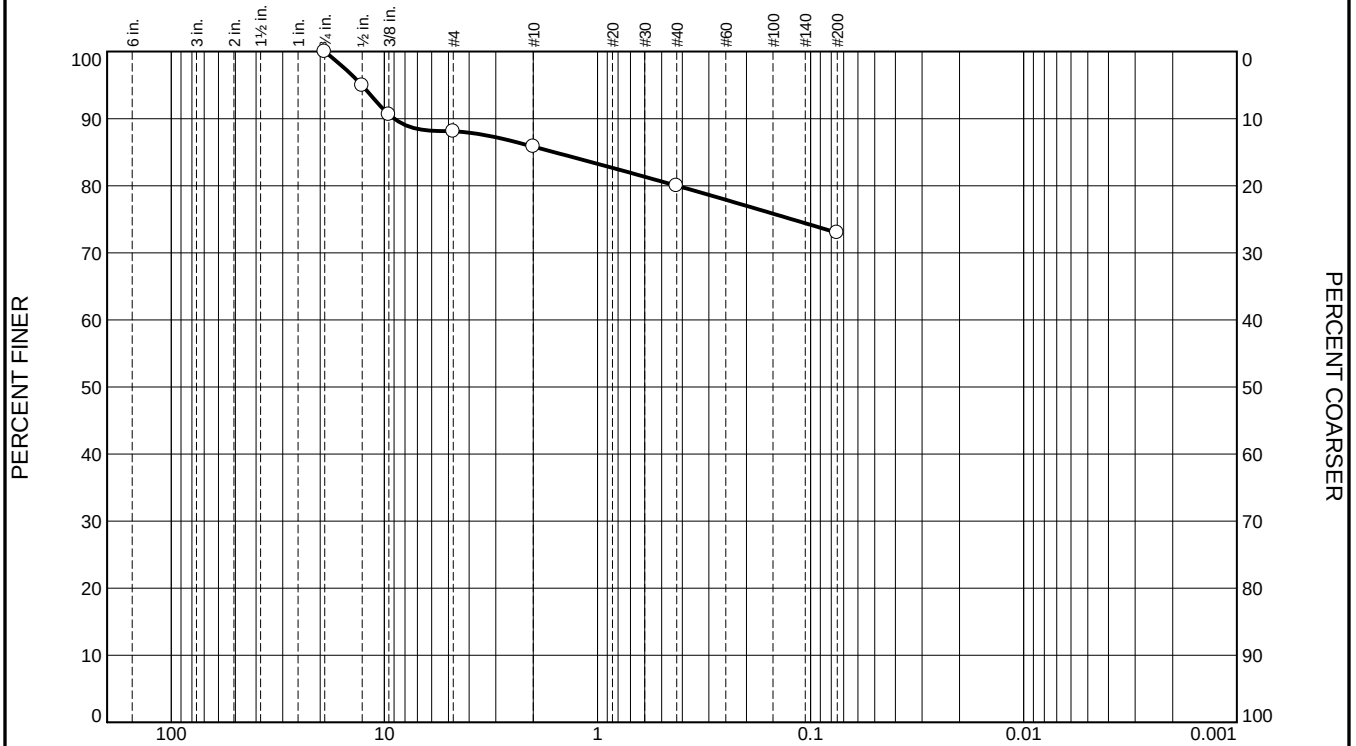


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	11.9	2.3	5.8	7.0	73.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	94.9		
3/8"	90.6		
#4	88.1		
#10	85.8		
#40	80.0		
#200	73.0		

* (no specification provided)

<u>Material Description</u>		
Lean Clay with Sand - Light Brown		
<u>Atterberg Limits</u>		
PL= 18	LL= 36	PI= 18
<u>Coefficients</u>		
D ₉₀ = 8.9996	D ₈₅ = 1.5961	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-6(11)	
<u>Remarks</u>		
Moisture: 11.9%		
F.M.=1.15		

Source of Sample: Top of Cell, Existing
Sample Number: 23-527

Depth: Subgrade

Date: 6/20/2023

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 2 of 2

Checked By: Shelby Jackson

COMPACTION TEST REPORT

Curve No.: 23-528

Project No.: 09-1341

Date: 6/20/2023

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Client: SEQUOYAH FUELS

Source of Sample: Top of Cell, Existing Depth: Subgrade

Sample Number: 23-528

Remarks: NT - No Test

MATERIAL DESCRIPTION

Description: "Sandy Lean Clay"
Weathered Shale - Dark Brown Shale

Classifications - USCS: CL

AASHTO: A-7-6(10)

Nat. Moist. = 11.4 %

Sp.G. = NT

Liquid Limit = 47

Plasticity Index = 25

% < No.200 = 52.3 %

TEST RESULTS

Maximum dry density = 113.7 pcf

Optimum moisture = 16.0 %

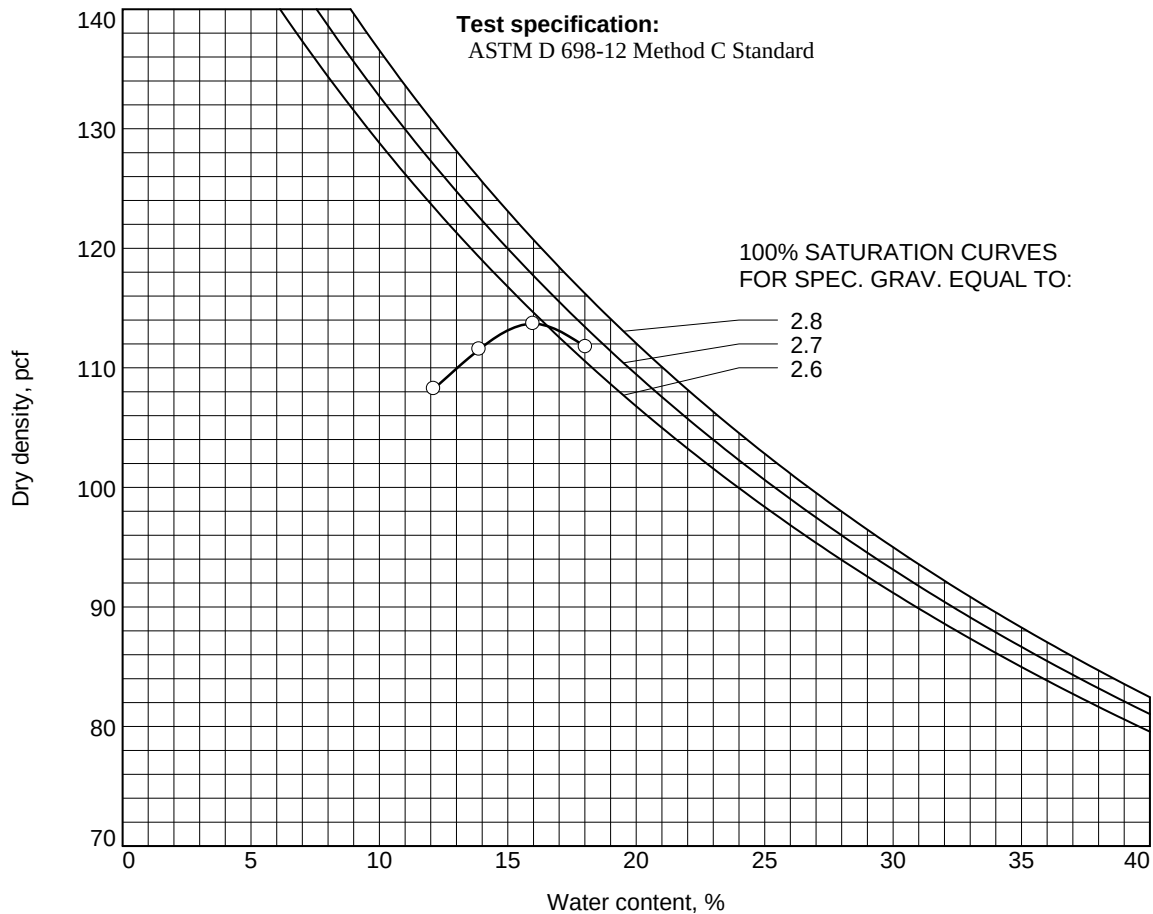
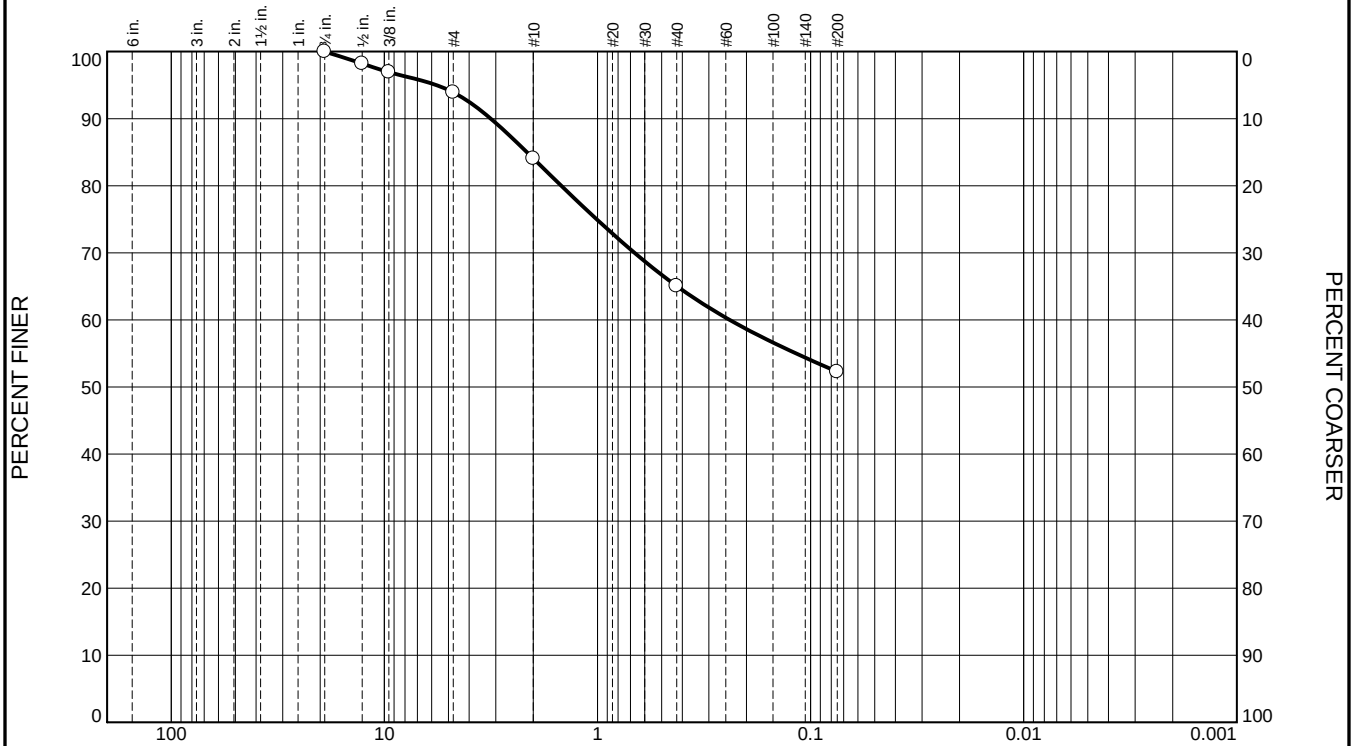


Figure 1 of 2

Quality Testing

Checked By: Shelby Jackson

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	6.1	9.8	19.1	12.7	52.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	98.2		
3/8"	96.9		
#4	93.9		
#10	84.1		
#40	65.0		
#200	52.3		

* (no specification provided)

<u>Material Description</u>		
"Sandy Lean Clay"		
Weathered Shale - Dark Brown Shale		
<u>Atterberg Limits</u>		
PL= 22	LL= 47	PI= 25
<u>Coefficients</u>		
D ₉₀ = 3.1667	D ₈₅ = 2.1441	D ₆₀ = 0.2396
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
<u>Classification</u>		
USCS= CL	AASHTO= A-7-6(10)	
<u>Remarks</u>		
Moisture: 11.4%		
F.M.=1.59		

Source of Sample: Top of Cell, Existing
Sample Number: 23-528

Depth: Subgrade

Date: 6/20/2023

Quality Testing

Ft. Gibson, OK

Client: SEQUOYAH FUELS

Project: SEQUOYAH FUELS CORPORATION - DISPOSAL CELL

Project No: 09-1341

Figure 1 of 2

Checked By: Shelby Jackson

PHASE IV (COVER) AS-BUILT REPORT

Appendix C Laboratory and Field QA Test Results

C.3 DENSITY TEST RESULTS





Construction Materials Testing Laboratories

1486 East Poplar Street
Fort Gibson, OK 74434

918.478.3930 Office
918.478.5498 Fax

Lab No. 15-429

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION
JOHN ELLIS
PO BOX 916
GORE, OK 74435

PROJECT: 09-1341

SEQUOYAH FUELS CORPORATION
DISPOSAL CELL
GORE, OKLAHOMA

DATE: 7/20/2015
TESTED BY: MIKE WALTERS

TEST NO.	1	2	3					
PROCTOR LAB NO.	15-428	15-428	15-428					
DEPTH OF TEST, (in.)	6	6	6					
TEST LOCATION	Section A Clay Cover	Section A Clay Cover	Section A Clay Cover					
ELEVATION, (ft.) or LIFT NO.	1	1	1					
RETEST OF TEST NO. (if needed)	-	-	-					
WET DENSITY, lbs./cu.ft.	126.0	124.1	119.8					
FIELD MOISTURE CONTENT, (%)	13.6	13.2	13.3					
DRY DENSITY, (lbs./cu.ft.)	110.9	109.6	105.7					
COMPACTION REQUIRED, (%)	95%	95%	95%					
COMPACTION, (%)	101.4%	100.2%	96.7%					
PASS/FAIL	PASS	PASS	PASS					
PROCTOR LAB NO.	15-428	15-428	15-428					
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown					
MAXIMUM DRY DENSITY, (pcf)	109.4	109.4	109.4					
OPTIMUM MOISTURE, (%)	15.1	15.1	15.1					

REMARKS:

CC & INVOICE: Sequoyah Fuels Corporation
CC: jhellis@sequoyahfuels.com
bwreid@omega-ps.com
khschlag@omega-ps.com
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS: Compaction: Minimum 95% of Standard Proctor Density
Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Fort Gibson, OK 74434

918.478.5498 Fax

Lab No. **15-453**

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 7/28/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2						
PROCTOR LAB NO.	15-452	15-452						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	Section A Clay Cover	Section A Clay Cover						
ELEVATION, (ft.) or LIFT NO.	2	3						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	118.3	120.6						
FIELD MOISTURE CONTENT, (%)	12.3	14.1						
DRY DENSITY, (lbs./cu.ft.)	105.3	105.7						
COMPACTION REQUIRED, (%)	95%	95%						
COMPACTION, (%)	95.2%	95.5%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	15-452	15-452						
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	110.7	110.7						
OPTIMUM MOISTURE, (%)	14.2	14.2						

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Lab No. 15-497

Fort Gibson, OK 74434

918.478.5498 Fax

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 8/5/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3					
PROCTOR LAB NO.	15-495	15-495	15-496					
DEPTH OF TEST, (in.)	6	6	6					
TEST LOCATION	Section B Clay Cover	Section B Clay Cover	Section B Clay Cover					
ELEVATION, (ft.) or LIFT NO.	1	2	3					
RETEST OF TEST NO. (if needed)	-	-	-					
WET DENSITY, lbs./cu.ft.	124.3	124.0	123.8					
FIELD MOISTURE CONTENT, (%)	14.4	14.7	14.9					
DRY DENSITY, (lbs./cu.ft.)	108.7	108.1	107.7					
COMPACTION REQUIRED, (%)	95%	95%	95%					
COMPACTION, (%)	100.0%	99.5%	99.4%					
PASS/FAIL	PASS	PASS	PASS					
PROCTOR LAB NO.	15-495	15-495	15-496					
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown					
MAXIMUM DRY DENSITY, (pcf)	108.7	108.7	108.4					
OPTIMUM MOISTURE, (%)	16.2	16.2	16.6					

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street
Fort Gibson, OK 74434

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Lab No. **15-600**

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS
PO BOX 916
GORE, OK 74435

SEQUOYAH FUELS CORPORATION
DISPOSAL CELL
GORE, OKLAHOMA

DATE: 9/1/2015
TESTED BY: MIKE WALTERS

TEST NO.	1	2	3	4	5	6		
PROCTOR LAB NO.	15-598	15-598	15-598	15-598	15-599	15-599		
DEPTH OF TEST, (in.)	6	6	6	6	6	6		
TEST LOCATION	Section C South Clay Cover	Section C North Clay Cover	Section C East Clay Cover	Section C West Clay Cover	Section C North Clay Cover	Section C South Clay Cover		
ELEVATION, (ft.) or LIFT NO.	1	1	2	2	3	3		
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-		
WET DENSITY, lbs./cu.ft.	128.6	126.1	121.4	126.3	125.4	124.5		
FIELD MOISTURE CONTENT, (%)	14.8	15.7	13.2	14.0	14.3	13.1		
DRY DENSITY, (lbs./cu.ft.)	112.0	109.0	107.2	110.8	109.7	110.1		
COMPACTION REQUIRED, (%)	95%	95%	95%	95%	95%	95%		
COMPACTION, (%)	100.8%	98.1%	96.5%	99.7%	99.0%	99.3%		
PASS/FAIL	PASS	PASS	PASS	PASS	PASS	PASS		
PROCTOR LAB NO.	15-598	15-598	15-598	15-598	15-599	15-599		
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown		
MAXIMUM DRY DENSITY, (pcf)	111.1	111.1	111.1	111.1	110.8	110.8		
OPTIMUM MOISTURE, (%)	13.8	13.8	13.8	13.8	13.8	13.8		

REMARKS:

CC & INVOICE:
CC:

Sequoyah Fuels Corporation
jhellis@sequoyahfuels.com
bwreid@omega-ps.com
khschlag@omega-ps.com
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density
Moisture: ± 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Lab No. 15-657

Fort Gibson, OK 74434

918.478.5498 Fax

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 9/17/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	15-655	15-655	15-656	15-656				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Section A, Slope South Clay Cover	Section A, Slope North Clay Cover	Section B, Slope East Clay Cover	Section B, Slope West Clay Cover				
ELEVATION, (ft.) or LIFT NO.	4	4	4	4				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	123.8	121.5	123.1	119.1				
FIELD MOISTURE CONTENT, (%)	12.3	13.8	12.0	11.4				
DRY DENSITY, (lbs./cu.ft.)	110.2	106.8	109.9	106.9				
COMPACTION REQUIRED, (%)	95%	95%	95%	95%				
COMPACTION, (%)	99.8%	96.6%	98.3%	95.6%				
PASS/FAIL	PASS	PASS	PASS	PASS				
PROCTOR LAB NO.	15-655	15-655	15-656	15-656				
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown				
MAXIMUM DRY DENSITY, (pcf)	110.5	110.5	111.8	111.8				
OPTIMUM MOISTURE, (%)	13.8	13.8	13.3	13.3				

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

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bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

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Lab No. 15-657

Fort Gibson, OK 74434

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NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 9/17/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	15-655	15-655	15-656	15-656				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Section A, Slope South Final Material	Section A, Slope North Final Material	Section B, Slope East Final Material	Section B, Slope West Final Material				
ELEVATION, (ft.) or LIFT NO.	Final	Final	Final	Final				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	123.8	121.5	123.1	119.1				
FIELD MOISTURE CONTENT, (%)	12.3	13.8	12.0	11.4				
DRY DENSITY, (lbs./cu.ft.)	110.2	106.8	109.9	106.9				
COMPACTION REQUIRED, (%)	90%	90%	90%	90%				
COMPACTION, (%)	99.8%	96.6%	98.3%	95.6%				
PASS/FAIL	PASS	PASS	PASS	PASS				
PROCTOR LAB NO.	15-655	15-655	15-656	15-656				
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown				
MAXIMUM DRY DENSITY, (pcf)	110.5	110.5	111.8	111.8				
OPTIMUM MOISTURE, (%)	13.8	13.8	13.3	13.3				

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

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bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 90% of Standard Proctor Density

Moisture: - 4/+ 1 percent of optimum moisture content.



Construction Materials Testing Laboratories

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Fort Gibson, OK 74434

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Lab No. 15-669

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 9/21/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4	5	6		
PROCTOR LAB NO.	15-666	15-666	15-667	15-667	15-668	15-668		
DEPTH OF TEST, (in.)	6	6	6	6	6	6		
TEST LOCATION	Section D, South Clay Cover	Section D, North Clay Cover	Section D, South Clay Cover	Section D, North Clay Cover	Section D, South Clay Cover	Section D, North Clay Cover		
ELEVATION, (ft.) or LIFT NO.	1	1	2	2	3	3		
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-		
WET DENSITY, lbs./cu.ft.	131.5	131.3	128.3	125.3	125.7	126.2		
FIELD MOISTURE CONTENT, (%)	13.2	14.3	14.5	12.8	12.7	13.3		
DRY DENSITY, (lbs./cu.ft.)	116.2	114.9	112.1	111.1	111.5	111.4		
COMPACTION REQUIRED, (%)	95%	95%	95%	95%	95%	95%		
COMPACTION, (%)	100.6%	99.5%	99.7%	98.8%	96.2%	96.0%		
PASS/FAIL	PASS	PASS	PASS	PASS	PASS	PASS		
PROCTOR LAB NO.	15-666	15-655	15-656	15-656	15-656	15-656		
DESCRIPTION OF MATERIAL	Lean Clay with Sand- Reddish Brown	Lean Clay with Sand- Reddish Brown	Lean Clay with Sand- Reddish Brown	Lean Clay with Sand- Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown		
MAXIMUM DRY DENSITY, (pcf)	115.5	115.5	112.4	112.4	116.0	116.0		
OPTIMUM MOISTURE, (%)	14.0	14.0	13.8	13.8	13.1	13.1		

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

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FILE

Respectfully submitted,

Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

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Fort Gibson, OK 74434

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Lab No. 15-678

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 9/22/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	15-676	15-676	15-677	15-677				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Section D, North Clay Cover	Section D, South Clay Cover	Section C, East Clay Cover	Section C, West Clay Cover				
ELEVATION, (ft.) or LIFT NO.	4	4	4	4				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	124.6	127.1	120.4	121.6				
FIELD MOISTURE CONTENT, (%)	10.2	12.0	11.7	13.8				
DRY DENSITY, (lbs./cu.ft.)	113.1	113.5	107.8	106.9				
COMPACTION REQUIRED, (%)	95%	95%	95%	95%				
COMPACTION, (%)	97.4%	97.7%	97.5%	96.6%				
PASS/FAIL	PASS	PASS	PASS	PASS				
PROCTOR LAB NO.	15-676	15-676	15-677	15-677				
DESCRIPTION OF MATERIAL	Lean Clay with Sand- Reddish Brown	Lean Clay with Sand- Reddish Brown	Lean Clay Reddish Brown	Lean Clay Reddish Brown				
MAXIMUM DRY DENSITY, (pcf)	116.1	116.1	110.6	110.6				
OPTIMUM MOISTURE, (%)	11.6	11.6	13.0	13.0				

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

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FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

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Lab No. **15-787**

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 10/15/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4	5	6	7	
PROCTOR LAB NO.	15-784	15-784	15-784	15-785	15-785	15-786	15-786	
DEPTH OF TEST, (in.)	6	6	6	6	6	6	6	
TEST LOCATION	Section E, Slope North Clay Cover	Section E, Slope North Clay Cover	Section E, Slope South Clay Cover	Section E, Slope North Clay Cover	Section E, Slope South Clay Cover	Section E, Slope East Clay Cover	Section E, Slope West Clay Cover	
ELEVATION, (ft.) or LIFT NO.	1	1	1	2	2	3	3	
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-	-	
WET DENSITY, lbs./cu.ft.	122.4	125.4	124.9	124.9	122.6	121.5	125.1	
FIELD MOISTURE CONTENT, (%)	13.0	14.1	12.8	14.9	12.0	11.4	13.1	
DRY DENSITY, (lbs./cu.ft.)	108.3	109.9	110.7	108.7	109.5	109.1	110.6	
COMPACTION REQUIRED, (%)	95%	95%	95%	95%	95%	95%	95%	
COMPACTION, (%)	96.2%	97.6%	98.3%	95.9%	96.6%	97.4%	98.8%	
PASS/FAIL	PASS	PASS	PASS	PASS	PASS	PASS	PASS	
PROCTOR LAB NO.	15-784	15-784	15-784	15-785	15-785	15-786	15-786	
DESCRIPTION OF MATERIAL	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Yellowish Brown	Lean Clay with Sand Yellowish Brown	
MAXIMUM DRY DENSITY, (pcf)	112.6	112.6	112.6	113.3	113.3	112.0	112.0	
OPTIMUM MOISTURE, (%)	13.8	13.8	13.8	13.8	13.8	13.2	13.2	

REMARKS:

CC & INVOICE:
CC:

Sequoyah Fuels Corporation
jhellis@sequoyahfuels.com
bwreid@omega-ps.com
khschlag@omega-ps.com
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density
Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

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Lab No. 15-835

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 11/10/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2						
PROCTOR LAB NO.	15-832	15-832						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	Section F, Clay Cover West	Section F, Clay Cover East						
ELEVATION, (ft.) or LIFT NO.	1	1						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	118.8	119.2						
FIELD MOISTURE CONTENT, (%)	12.4	12.5						
DRY DENSITY, (lbs./cu.ft.)	105.7	106.0						
COMPACTION REQUIRED, (%)	90%	90%						
COMPACTION, (%)	95.2%	95.5%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	15-832	15-832						
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Yellow	Lean Clay - Reddish Yellow						
MAXIMUM DRY DENSITY, (pcf)	111.0	111.0						
OPTIMUM MOISTURE, (%)	13.8	13.8						

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

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bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 90% of Standard Proctor Density

Moisture: - 4/+ 1 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

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Lab No. **15-841**

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 11/11/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4	5	6	7	8
PROCTOR LAB NO.	15-837	15-837	15-837	15-838	15-838	15-839	15-839	15-840
DEPTH OF TEST, (in.)	6	6	6	6	6	6	6	6
TEST LOCATION	Section E, Clay Cover North	Section E, Clay Cover North	Section E, Clay Cover South	Section G, Clay Cover North	Section G, Clay Cover South	Section G, Clay Cover North	Section G, Clay Cover South	Section G, Clay Cover North
ELEVATION, (ft.) or LIFT NO.	4	4	4	3	3	2	2	1
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-	-	-
WET DENSITY, lbs./cu.ft.	122.5	123.8	122.1	119.0	119.2	117.0	117.2	122.7
FIELD MOISTURE CONTENT, (%)	12.7	12.4	11.4	15.4	15.3	11.2	11.0	13.5
DRY DENSITY, (lbs./cu.ft.)	108.7	110.1	109.6	103.1	103.4	105.2	105.6	108.1
COMPACTION REQUIRED, (%)	95%	95%	95%	95%	95%	95%	95%	95%
COMPACTION, (%)	95.4%	96.7%	96.2%	95.0%	95.3%	95.7%	96.1%	96.4%
PASS/FAIL	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
PROCTOR LAB NO.	15-837	15-837	15-837	15-838	15-838	15-839	15-839	15-840
DESCRIPTION OF MATERIAL	Lean Clay - Yellowish Brown	Lean Clay - Yellowish Brown	Lean Clay - Yellowish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Yellowish Brown	Lean Clay - Yellowish Brown	Lean Clay - Reddish Brown
MAXIMUM DRY DENSITY, (pcf)	113.9	113.9	113.9	108.5	108.5	109.9	109.9	112.2
OPTIMUM MOISTURE, (%)	13.4	13.4	13.4	17.2	17.2	12.7	12.7	15.1

REMARKS:

CC & INVOICE:
CC:

Sequoyah Fuels Corporation
jhellis@sequoyahfuels.com
bwreid@omega-ps.com
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FILE

Respectfully submitted,
Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density
Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

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Lab No. 15-841

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 11/11/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	9							
PROCTOR LAB NO.	15-840							
DEPTH OF TEST, (in.)	6							
TEST LOCATION	Section C, Clay Cover							
ELEVATION, (ft.) or LIFT NO.	1							
RETEST OF TEST NO. (if needed)	-							
WET DENSITY, lbs./cu.ft.	121.8							
FIELD MOISTURE CONTENT, (%)	13.2							
DRY DENSITY, (lbs./cu.ft.)	107.6							
COMPACTION REQUIRED, (%)	95%							
COMPACTION, (%)	95.9%							
PASS/FAIL	PASS							
PROCTOR LAB NO.	15-840							
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown							
MAXIMUM DRY DENSITY, (pcf)	112.2							
OPTIMUM MOISTURE, (%)	15.1							

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

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khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

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Fort Gibson, OK 74434

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Lab No. 15-858

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 11/20/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2						
PROCTOR LAB NO.	15-857	15-857						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	Section F, Clay Cover North	Section F, Clay Cover North						
ELEVATION, (ft.) or LIFT NO.	2	2						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	121.9	121.1						
FIELD MOISTURE CONTENT, (%)	14.0	13.6						
DRY DENSITY, (lbs./cu.ft.)	106.9	106.6						
COMPACTION REQUIRED, (%)	95%	95%						
COMPACTION, (%)	96.9%	96.6%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	15-857	15-857						
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	110.4	110.4						
OPTIMUM MOISTURE, (%)	15.3	15.3						

REMARKS:

CC & INVOICE:
CC:

Sequoyah Fuels Corporation
jhellis@sequoyahfuels.com
bwreid@omega-ps.com
khschlag@omega-ps.com
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density
Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Fort Gibson, OK 74434

918.478.5498 Fax

Lab No. 15-873

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 11/24/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4	5	6		
PROCTOR LAB NO.	15-870	15-870	15-871	15-871	15-872	15-872		
DEPTH OF TEST, (in.)	6	6	6	6	6	6		
TEST LOCATION	Section G, Clay Cover North	Section G, Clay Cover South	Section F, Clay Cover East	Section F, Clay Cover West	Section F, Clay Cover North	Section F, Clay Cover South		
ELEVATION, (ft.) or LIFT NO.	4	4	3	3	4	4		
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-		
WET DENSITY, lbs./cu.ft.	125.4	122.8	122.7	122.1	124.0	125.6		
FIELD MOISTURE CONTENT, (%)	13.6	14.0	14.0	14.0	14.5	14.7		
DRY DENSITY, (lbs./cu.ft.)	110.4	107.7	107.6	107.1	108.3	109.5		
COMPACTION REQUIRED, (%)	95%	95%	95%	95%	95%	95%		
COMPACTION, (%)	100.4%	97.9%	97.2%	96.8%	99.4%	100.6%		
PASS/FAIL	PASS	PASS	PASS	PASS	PASS	PASS		
PROCTOR LAB NO.	15-870	15-870	15-871	15-871	15-872	15-872		
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown		
MAXIMUM DRY DENSITY, (pcf)	110.0	110.0	110.7	110.7	108.9	108.9		
OPTIMUM MOISTURE, (%)	15.1	15.1	15.6	15.6	16.0	16.0		

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Fort Gibson, OK 74434

918.478.5498 Fax

Lab No. 15-895

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 12/4/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2						
PROCTOR LAB NO.	15-870	15-870						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	Section G, Clay Cover North	Section G, Clay Cover South						
ELEVATION, (ft.) or LIFT NO.	4	4						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	120.3	123.5						
FIELD MOISTURE CONTENT, (%)	13.7	13.4						
DRY DENSITY, (lbs./cu.ft.)	105.8	108.9						
COMPACTION REQUIRED, (%)	95%	95%						
COMPACTION, (%)	96.2%	99.0%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	15-870	15-870						
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	110.0	110.0						
OPTIMUM MOISTURE, (%)	15.1	15.1						

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: 20-840

Nuclear Density Report

Client: Sequoyah Fuels Corporation

P.O. Box 916

Gore, OK 74435

Project: 09-1341

Sequoyah Fuels Corporation

Disposal Cell

Gore, Oklahoma

Date: 11/13/2020

Tested By: Josh Fritz

TEST NO.	1	2						
PROCTOR LAB NO.	20-839	20-839						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	Section A East haul ramp	Section A						
ELEVATION, (ft.) or LIFT NO.	2	3						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	131.7	131.0						
FIELD MOISTURE CONTENT, (%)	14.6	15.1						
DRY DENSITY, (lbs./cu.ft.)	114.9	113.8						
COMPACTION REQUIRED, (%)	95%	95%						
COMPACTION, (%)	99.6%	98.6%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	20-839	20-839						
DESCRIPTION OF MATERIAL	Lean Clay with Sand - Reddish Brown	Lean Clay with Sand - Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	115.4	115.4						
OPTIMUM MOISTURE, (%)	14.2	14.2						

Remarks:

CC & Invoice:

Sequoyah Fuels Corporation

CC:

kschlag18@gmail.com

FILE

Respectfully submitted,
Quality Testing

Shelby Jackson

Shelby Jackson
Director of Laboratories

Specifications

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.

Taken on East haul ramp



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: **23-555**

Nuclear Density Report

Client: Sequoyah Fuels Corporation
P.O. Box 916
Gore, OK 74435

Project: 09-1341
Sequoyah Fuels Corporation
Disposal Cell
Gore, Oklahoma

Date: 6/27/2023
Tested By: Eric Walters

TEST NO.	1	2	3	4	5	6	7	8
PROCTOR LAB NO.	23-551	23-551	23-552	23-552	23-553	23-553	23-554	23-554
DEPTH OF TEST, (in.)	6	6	6	6	6	6	6	6
TEST LOCATION	Clay Cover North Top S.E. of North Half	Clay Cover South Top S.E. of North Half	Clay Cover East Top Middle of North Half	Clay Cover West Top Middle of North Half	Clay Cover East Top N.W. of North Half	Clay Cover West Top N.W. of North Half	Clay Cover East Top N.E. of North Half	Clay Cover West Top N.E. of North Half
ELEVATION, (ft.) or LIFT NO.	1	1	2	2	3	3	4	4
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-	-	-
WET DENSITY, lbs./cu.ft.	127.2	131.2	135.2	132.8	133.5	134.4	136.5	135.4
FIELD MOISTURE CONTENT, (%)	13.8	15.1	11.3	11.0	12.6	12.3	13.7	13.3
DRY DENSITY, (lbs./cu.ft.)	111.8	114.0	121.5	119.6	118.6	119.7	120.1	119.5
COMPACTION REQUIRED, (%)	95%	95%	95%	95%	95%	95%	95%	95%
COMPACTION, (%)	98.2%	100.2%	100.2%	98.7%	99.5%	100.4%	100.6%	100.2%
PASS/FAIL	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
PROCTOR LAB NO.	23-551	23-551	23-552	23-552	23-553	23-553	23-554	23-554
DESCRIPTION OF MATERIAL	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Yellowish Red	Lean Clay with Sand Yellowish Red	Lean Clay with Sand Yellowish Red	Lean Clay with Sand Yellowish Red	Lean Clay with Sand Yellowish Red	Lean Clay with Sand Yellowish Red
MAXIMUM DRY DENSITY, (pcf)	113.8	113.8	121.2	121.2	119.2	119.2	119.3	119.3
OPTIMUM MOISTURE, (%)	13.5	13.5	13.0	13.0	14.0	14.0	13.6	13.6

Remarks:

CC & Invoice: Sequoyah Fuels Corporation
CC: kschlag18@gmailcom
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson

Shelby Jackson
Director of Laboratories

Specifications

Compaction: Minimum 95% of Standard Proctor Density
Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: **23-831**

Nuclear Density Report

Client: Sequoyah Fuels Corporation

P.O. Box 916

Gore, OK 74435

Project: 09-1341

Sequoyah Fuels Corporation

Disposal Cell

Gore, Oklahoma

Date: 9/27/2023

Tested By: Josh Fritz

TEST NO.	1	2	3	4	5	6	7	8
PROCTOR LAB NO.	23-827	23-827	23-828	23-828	23-829	23-829	23-830	23-830
DEPTH OF TEST, (in.)	6	6	6	6	6	6	6	6
TEST LOCATION	Clay Cover West Top South End of South Half	Clay Cover East Top South End of South Half	Clay Cover East Top South Middle of South Half	Clay Cover West Top South Middle of South Half	Clay Cover East Top North Middle of South Half	Clay Cover West Top North Middle of South Half	Clay Cover West Top North End of South Half	Clay Cover East Top North End of South Half
ELEVATION, (ft.) or LIFT NO.	1	1	2	2	3	3	4	4
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-	-	-
WET DENSITY, lbs./cu.ft.	128.3	127.2	131.5	133.3	132.9	129.3	131.2	130.1
FIELD MOISTURE CONTENT, (%)	13.5	13.1	12.4	12.9	13.8	11.4	12.6	12.0
DRY DENSITY, (lbs./cu.ft.)	113.0	112.5	117.0	118.1	116.8	116.1	116.5	116.2
COMPACTION REQUIRED, (%)	95%	95%	95%	95%	95%	95%	95%	95%
COMPACTION, (%)	97.3%	96.8%	99.3%	100.2%	98.5%	97.9%	99.2%	98.9%
PASS/FAIL	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
PROCTOR LAB NO.	23-827	23-827	23-828	23-828	23-829	23-829	23-830	23-830
DESCRIPTION OF MATERIAL	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Light Reddish Brown	Lean Clay with Sand Light Reddish Brown
MAXIMUM DRY DENSITY, (pcf)	116.2	116.2	117.8	117.8	118.6	118.6	117.5	117.5
OPTIMUM MOISTURE, (%)	11.9	11.9	13.6	13.6	12.4	12.4	12.7	12.7

Remarks:

CC & Invoice:

Sequoyah Fuels Corporation

CC:

kschlag18@gmailcom

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Shelby Jackson

Director of Laboratories

Specifications

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: **24-986**

Nuclear Density Report

Client: Sequoyah Fuels Corporation
P.O. Box 916
Gore, OK 74435

Project: 09-1341
Sequoyah Fuels Corporation
Disposal Cell
Gore, Oklahoma

Date: 12/4/2024
Tested By: Eric Walters

TEST NO.	1	2						
PROCTOR LAB NO.	23-553	23-526						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	Final Waste Section F Top of South Ramp	Final Waste Section F Bottom of South Ramp						
ELEVATION, (ft.) or LIFT NO.	Final	Final						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	136.5	126.1						
FIELD MOISTURE CONTENT, (%)	14.4	12.4						
DRY DENSITY, (lbs./cu.ft.)	119.3	112.2						
COMPACTION REQUIRED, (%)	90%	90%						
COMPACTION, (%)	100.1%	99.8%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	23-553	23-526						
DESCRIPTION OF MATERIAL	Yellowish Red Lean Clay with Sand	Light Brown Sandy Lean Clay with Gravel						
MAXIMUM DRY DENSITY, (pcf)	119.2	112.4						
OPTIMUM MOISTURE, (%)	14.0	14.2						

Remarks:

CC & Invoice: Sequoyah Fuels Corporation
CC: kschlag18@gmailcom
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson

Shelby Jackson
Director of Laboratories

Specifications

Compaction: Minimum 90% of Standard Proctor Density
Moisture: -4 +1 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: 25-222

Nuclear Density Report

Client: Sequoyah Fuels Corporation
P.O. Box 916
Gore, OK 74435

Project: 09-1341
Sequoyah Fuels Corporation
Disposal Cell
Gore, Oklahoma

Date: 3/6/2025
Tested By: Eric Walters

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	24-985	24-987	24-987	24-987				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Clay Cover Section F South Ramp	Clay Cover Section F South Ramp	Clay Cover Section F South Ramp	Clay Cover Section F South Ramp				
ELEVATION, (ft.) or LIFT NO.	1	2	3	4				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	124.7	128.5	131.3	129.2				
FIELD MOISTURE CONTENT, (%)	17.2	14.3	15.3	14.2				
DRY DENSITY, (lbs./cu.ft.)	106.4	112.4	113.9	113.1				
COMPACTION REQUIRED, (%)	95%	95%	95%	95%				
COMPACTION, (%)	96.6%	99.2%	100.5%	99.9%				
PASS/FAIL	PASS	PASS	PASS	PASS				
PROCTOR LAB NO.	24-985	24-987	24-987	24-987				
DESCRIPTION OF MATERIAL	Yellowish Brown Sandy Lean Clay	Yellowish Red Sandy Lean Clay	Yellowish Red Sandy Lean Clay	Yellowish Red Sandy Lean Clay				
MAXIMUM DRY DENSITY, (pcf)	110.2	113.3	113.3	113.3				
OPTIMUM MOISTURE, (%)	15.9	14.3	14.3	14.3				

Remarks:

CC & Invoice: Sequoyah Fuels Corporation
CC: kschlag18@gmailcom
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson

Shelby Jackson
Director of Laboratories

Specifications

Compaction: Minimum 95% of Standard Proctor Density
Moisture: +/- 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Lab No. 15-405 A

Fort Gibson, OK 74434

918.478.5498 Fax

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 7/15/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3					
PROCTOR LAB NO.	15-335	15-413	15-413					
DEPTH OF TEST, (in.)	6	6	6					
TEST LOCATION	Section A, Slope Final Material	Section B, Slope Final Material	Section B, Slope Final Material					
ELEVATION, (ft.) or LIFT NO.	-	-	-					
RETEST OF TEST NO. (if needed)	-	-	-					
WET DENSITY, lbs./cu.ft.	119.0	126.1	128.2					
FIELD MOISTURE CONTENT, (%)	6.8	11.8	11.4					
DRY DENSITY, (lbs./cu.ft.)	111.4	112.8	115.1					
COMPACTION REQUIRED, (%)	90%	90%	90%					
COMPACTION, (%)	99.8%	98.4%	100.4%					
PASS/FAIL	FAIL	PASS	PASS					
PROCTOR LAB NO.	15-335	15-413	15-413					
DESCRIPTION OF MATERIAL	Lean Clay - Reddish Brown	Lean Clay with Sand - Reddish Brown	Lean Clay with Sand - Reddish Brown					
MAXIMUM DRY DENSITY, (pcf)	111.6	114.6	114.6					
OPTIMUM MOISTURE, (%)	13.9	13.3	13.3					

REMARKS:

Failed test is due to low moisture.

Compaction meets Specifications.

CC & INVOICE:

CC:

Sequoyah Fuels Corporation

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 90% of Standard Proctor Density

Moisture: - 4/ + 1 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Lab No. 15-405

Fort Gibson, OK 74434

918.478.5498 Fax

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 7/15/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4	5	6	7	
PROCTOR LAB NO.	15-403	15-403	15-403	15-413	15-413	15-404	15-404	
DEPTH OF TEST, (in.)	6	6	6	6	6	6	6	
TEST LOCATION	Section A, Tow	Section A, Tow	Section A, Slope	Section B, Slope	Section B, Slope	Section B, Tow	Section B, Tow	
ELEVATION, (ft.) or LIFT NO.	-	-	-	-	-	-	-	
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-	-	
WET DENSITY, lbs./cu.ft.	112.7	116.2	119.0	126.1	128.2	114.2	115.6	
FIELD MOISTURE CONTENT, (%)	10.2	9.3	6.8	11.8	11.4	10.9	11.8	
DRY DENSITY, (lbs./cu.ft.)	102.3	106.3	111.4	112.8	115.1	103.0	103.4	
COMPACTION REQUIRED, (%)	90%	90%	90%	90%	90%	90%	90%	
COMPACTION, (%)	92.6%	96.2%	100.8%	98.4%	100.4%	94.4%	94.8%	
PASS/FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	
PROCTOR LAB NO.	15-403	15-403	15-403	15-413	15-413	15-404	15-404	
DESCRIPTION OF MATERIAL	Lean Clay - Yellowish Brown	Lean Clay - Yellowish Brown	Lean Clay - Yellowish Brown	Lean Clay with Sand - Reddish Brown	Lean Clay with Sand - Reddish Brown	Lean Clay with Sand - Reddish Brown	Lean Clay with Sand - Reddish Brown	
MAXIMUM DRY DENSITY, (pcf)	110.5	110.5	110.5	114.6	114.6	109.1	109.1	
OPTIMUM MOISTURE, (%)	14.4	14.4	14.4	13.3	13.3	16.5	16.5	

REMARKS:

Failed test is due to low moisture.

Compaction meets Specifications.

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 90% of Standard Proctor Density



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Lab No. 15-579

Fort Gibson, OK 74434

918.478.5498 Fax

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 8/25/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	15-577	15-577	15-578	15-578				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Section C, Slope East Final Material	Section C, Slope West Final Material	Section D, Slope North Final Material	Section D, Slope South Final Material				
ELEVATION, (ft.) or LIFT NO.	Final	Final	Final	Final				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	117.3	124.1	112.1	114.3				
FIELD MOISTURE CONTENT, (%)	13.4	13.8	12.4	11.9				
DRY DENSITY, (lbs./cu.ft.)	103.4	109.1	99.7	102.1				
COMPACTION REQUIRED, (%)	90%	90%	90%	90%				
COMPACTION, (%)	93.4%	98.5%	90.1%	92.3%				
PASS/FAIL	PASS	PASS	PASS	PASS				
PROCTOR LAB NO.	15-577	15-577	15-578	15-578				
DESCRIPTION OF MATERIAL	Sandy Lean Clay - Yellowish Brown	Sandy Lean Clay - Yellowish Brown	Lean Clay - Reddish Brown	Lean Clay - Reddish Brown				
MAXIMUM DRY DENSITY, (pcf)	110.7	110.7	110.7	110.7				
OPTIMUM MOISTURE, (%)	16.5	16.5	15.7	15.7				

REMARKS:

CC & INVOICE:

CC:

Sequoyah Fuels Corporation

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 90% of Standard Proctor Density

Moisture: - 4/ + 1 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Fort Gibson, OK 74434

918.478.5498 Fax

Lab No. 15-728

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 10/5/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	15-727	15-727	15-727	15-727				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Section E, Final Material South	Section E, Final Material South	Section E, Final Material North	Section E, Final Material North				
ELEVATION, (ft.) or LIFT NO.	Final	Final	Final	Final				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	122.4	122.3	119.4	119.2				
FIELD MOISTURE CONTENT, (%)	11.9	12.6	12.9	12.0				
DRY DENSITY, (lbs./cu.ft.)	109.4	108.6	105.8	106.4				
COMPACTION REQUIRED, (%)	90%	90%	90%	90%				
COMPACTION, (%)	95.9%	95.2%	92.7%	93.3%				
PASS/FAIL	PASS	PASS	PASS	PASS				
PROCTOR LAB NO.	15-727	15-727	15-727	15-727				
DESCRIPTION OF MATERIAL	Lean Clay with Sand - Dark Brown	Lean Clay with Sand - Dark Brown	Lean Clay with Sand - Dark Brown	Lean Clay with Sand - Dark Brown				
MAXIMUM DRY DENSITY, (pcf)	114.1	114.1	114.1	114.1				
OPTIMUM MOISTURE, (%)	14.5	14.5	14.5	14.5				

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 90% of Standard Proctor Density

Moisture: - 4/+ 1 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Fort Gibson, OK 74434

918.478.5498 Fax

Lab No. 15-815

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 10/27/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	15-813	15-813	15-814	15-814				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Section F, Final Material West	Section F, Final Material East	Section G, Final Material South	Section G, Final Material North				
ELEVATION, (ft.) or LIFT NO.	Final	Final	Final	Final				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	125.0	125.6	120.5	123.0				
FIELD MOISTURE CONTENT, (%)	13.4	15.9	12.7	12.4				
DRY DENSITY, (lbs./cu.ft.)	110.2	108.4	106.9	109.4				
COMPACTION REQUIRED, (%)	90%	90%	90%	90%				
COMPACTION, (%)	100.9%	99.2%	95.0%	97.2%				
PASS/FAIL	PASS	PASS	PASS	PASS				
PROCTOR LAB NO.	15-813	15-813	15-814	15-814				
DESCRIPTION OF MATERIAL	Lean Clay with Sand - Reddish Brown	Lean Clay with Sand - Reddish Brown	Lean Clay with Sand - Dark Brown	Lean Clay with Sand - Dark Brown				
MAXIMUM DRY DENSITY, (pcf)	109.2	109.2	112.6	112.6				
OPTIMUM MOISTURE, (%)	16.1	16.1	15.5	15.5				

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 90% of Standard Proctor Density

Moisture: - 4/+ 1 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: **23-530**

Nuclear Density Report

Client: Sequoyah Fuels Corporation

P.O. Box 916

Gore, OK 74435

Project: 09-1341

Sequoyah Fuels Corporation

Disposal Cell

Gore, Oklahoma

Date: 6/20/2023

Tested By: Eric Walters

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	23-527	23-526	23-526	23-528				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Waste #1 (Near #31)	Waste #2 (Near #51)	Waste #3 (Near #33)	Waste #4 (Near #87)				
ELEVATION, (ft.) or LIFT NO.	Final	Final	Final	Final				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	128.2	124.1	124.9	128.1				
FIELD MOISTURE CONTENT, (%)	11.7	11.8	12.9	14.7				
DRY DENSITY, (lbs./cu.ft.)	114.8	111.0	110.6	111.7				
COMPACTION REQUIRED, (%)	90%	90%	90%	90%				
COMPACTION, (%)	99.6%	98.8%	98.4%	98.8%				
PASS/FAIL	PASS	PASS	PASS	PASS				
PROCTOR LAB NO.	23-527	23-526	23-526	23-528				
DESCRIPTION OF MATERIAL	Lean Clay with Sand Light Brown	Sandy Lean Clay with Gravel Light Brown	Sandy Lean Clay with Gravel Light Brown	Weathered Shale Dark Brown				
MAXIMUM DRY DENSITY, (pcf)	115.2	112.4	112.4	113.0				
OPTIMUM MOISTURE, (%)	15.4	14.2	14.2	16.0				

Remarks:

CC & Invoice:

CC:

Sequoyah Fuels Corporation

kschlag18@gmailcom

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Shelby Jackson

Director of Laboratories

Specifications

Compaction: Minimum 95% of Standard Proctor Density

Moisture: +1 - 4 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Fort Gibson, OK 74434

918.478.5498 Fax

Lab No. 14-719

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 12/12/2014

PO BOX 916

DISPOSAL CELL, PHASE III

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2						
PROCTOR LAB NO.	14-718	14-718						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	DUFH Building Pad	DUFH Building Pad						
ELEVATION, (ft.) or LIFT NO.	3	3						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	129.1	129.4						
FIELD MOISTURE CONTENT, (%)	10.4	10.4						
DRY DENSITY, (lbs./cu.ft.)	116.9	117.2						
COMPACTION REQUIRED, (%)	90%	90%						
COMPACTION, (%)	99.3%	99.5%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	14-718	14-718						
DESCRIPTION OF MATERIAL	Gravelly Silty Clay - Dark Reddish Brown	Gravelly Silty Clay - Dark Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	117.8	117.8						
OPTIMUM MOISTURE, (%)	11.2	11.2						

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 90% of Standard Proctor Density



Construction Materials Testing Laboratories

1486 East Poplar Street
Fort Gibson, OK 74434

918.478.3930 Office
918.478.5498 Fax

Lab No. 14-719

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

JOHN ELLIS
PO BOX 916
GORE, OK 74435

PROJECT: 09-1341

SEQUOYAH FUELS CORPORATION
DISPOSAL CELL, PHASE III
GORE, OKLAHOMA

DATE: 12/12/2014

TESTED BY: MIKE WALTERS

TEST NO.	1	2						
PROCTOR LAB NO.	14-718	14-718						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	DUFH Building Pad	DUFH Building Pad						
ELEVATION, (ft.) or LIFT NO.	3	3						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	129.1	129.4						
FIELD MOISTURE CONTENT, (%)	10.4	10.4						
DRY DENSITY, (lbs./cu.ft.)	116.9	117.2						
COMPACTION REQUIRED, (%)	90%	90%						
COMPACTION, (%)	99.3%	99.5%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	14-718	14-718						
DESCRIPTION OF MATERIAL	Gravelly Silty Clay - Dark Reddish Brown	Gravelly Silty Clay - Dark Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	117.8	117.8						
OPTIMUM MOISTURE, (%)	11.2	11.2						

REMARKS:

CC & INVOICE:
CC:

Sequoyah Fuels Corporation
jhellis@sequoyahfuels.com
bwreid@omega-ps.com
khschlag@omega-ps.com
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS: Compaction: Minimum 90% of Standard Proctor Density



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Lab No. 15-302

Fort Gibson, OK 74434

918.478.5498 Fax

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 6/8/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2						
PROCTOR LAB NO.	15-301	15-301						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	North Phase 1	North Phase 2						
ELEVATION, (ft.) or LIFT NO.	3	4						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	129.5	127.8						
FIELD MOISTURE CONTENT, (%)	10.5	10.6						
DRY DENSITY, (lbs./cu.ft.)	117.2	115.6						
COMPACTION REQUIRED, (%)	90%	90%						
COMPACTION, (%)	100.2%	98.8%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	15-301	15-301						
DESCRIPTION OF MATERIAL	Lean Clay with Sand Reddish Brown	Lean Clay with Sand Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	117.0	117.0						
OPTIMUM MOISTURE, (%)	11.9	11.9						

REMARKS:

CC & INVOICE: Sequoyah Fuels Corporation
CC: jhellis@sequoyahfuels.com
bwreid@omega-ps.com
khschlag@omega-ps.com
FILE

Respectfully submitted,

Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS: Compaction: Minimum 90% of Standard Proctor Density



Construction Materials Testing Laboratories

1486 East Poplar Street

918.478.3930 Office

Lab No. 15-330

Fort Gibson, OK 74434

918.478.5498 Fax

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION

PROJECT: 09-1341

JOHN ELLIS

SEQUOYAH FUELS CORPORATION

DATE: 6/12/2015

PO BOX 916

DISPOSAL CELL

TESTED BY: MIKE WALTERS

GORE, OK 74435

GORE, OKLAHOMA

TEST NO.	1	2	3					
PROCTOR LAB NO.	15-328	15-329	15-335					
DEPTH OF TEST, (in.)	6	6	6					
TEST LOCATION	West Phase 2	West Phase 2, 10' South	East Side of Cell					
ELEVATION, (ft.) or LIFT NO.	Subgrade	Subgrade	Subgrade					
RETEST OF TEST NO. (if needed)	-	-	-					
WET DENSITY, lbs./cu.ft.	119.3	131.6	118.3					
FIELD MOISTURE CONTENT, (%)	12.5	12.9	11.4					
DRY DENSITY, (lbs./cu.ft.)	106.0	116.6	106.2					
COMPACTION REQUIRED, (%)	90%	90%	90%					
COMPACTION, (%)	94.9%	99.6%	95.2%					
PASS/FAIL	PASS	PASS	PASS					
PROCTOR LAB NO.	15-328	15-329	15-335					
DESCRIPTION OF MATERIAL	Lean Clay with Sand - Dark Brown	Lean Clay with Sand Reddish Brown	Lean Clay - Reddish Brown					
MAXIMUM DRY DENSITY, (pcf)	111.8	117.0	111.6					
OPTIMUM MOISTURE, (%)	14.0	11.9	13.9					

REMARKS:

CC & INVOICE:

Sequoyah Fuels Corporation

CC:

jhellis@sequoyahfuels.com

bwreid@omega-ps.com

khschlag@omega-ps.com

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Director of Laboratories

SPECIFICATIONS:

Compaction: Minimum 90% of Standard Proctor Density



Construction Materials Testing Laboratories

1486 East Poplar Street
Fort Gibson, OK 74434

918.478.3930 Office
918.478.5498 Fax

Lab No. 15-405 B

NUCLEAR DENSITY REPORT

CLIENT: SEQUOYAH FUELS CORPORATION
JOHN ELLIS
PO BOX 916
GORE, OK 74435

PROJECT: 09-1341

SEQUOYAH FUELS CORPORATION
DISPOSAL CELL
GORE, OKLAHOMA

DATE: 7/15/2015
TESTED BY: MIKE WALTERS

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	15-403	15-403	15-404	15-404				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Section A, Tow	Section A, Tow	Section B, Tow	Section B, Tow				
ELEVATION, (ft.) or LIFT NO.	-	-	-	-				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	112.7	116.2	114.2	115.6				
FIELD MOISTURE CONTENT, (%)	10.2	9.3	10.9	11.8				
DRY DENSITY, (lbs./cu.ft.)	102.3	106.3	103.0	103.4				
COMPACTION REQUIRED, (%)	90%	90%	90%	90%				
COMPACTION, (%)	92.6%	96.2%	94.4%	94.8%				
PASS/FAIL	FAIL	FAIL	FAIL	FAIL				
PROCTOR LAB NO.	15-403	15-403	15-404	15-404				
DESCRIPTION OF MATERIAL	Lean Clay - Yellowish Brown	Lean Clay - Yellowish Brown	Lean Clay with Sand - Reddish Brown	Lean Clay with Sand - Reddish Brown				
MAXIMUM DRY DENSITY, (pcf)	110.5	110.5	109.1	109.1				
OPTIMUM MOISTURE, (%)	14.4	14.4	16.5	16.5				

REMARKS: Failed test is due to low moisture.
Compaction meets Specifications.

CC & INVOICE: Sequoyah Fuels Corporation
CC: jhellis@sequoyahfuels.com
bwreid@omega-ps.com
khschlag@omega-ps.com
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson
Director of Laboratories

SPECIFICATIONS: Compaction: Minimum 90% of Standard Proctor Density
Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street
Fort Gibson, OK 74434

918.616.1113 Office

Lab No: 20-708

Nuclear Density Report

Client: Sequoyah Fuels Corporation
P.O. Box 916
Gore, OK 74435

Project: 09-1341
Sequoyah Fuels Corporation
Disposal Cell
Gore, Oklahoma

Date: 9/17/2020
Tested By: Eric Walters

TEST NO.	1	2	3	4				
PROCTOR LAB NO.	20-706	20-706	20-707	20-707				
DEPTH OF TEST, (in.)	6	6	6	6				
TEST LOCATION	Section C Part 1	Section B Part 4	Section D North	Section D South				
ELEVATION, (ft.) or LIFT NO.	Subgrade	Subgrade	Subgrade	Subgrade				
RETEST OF TEST NO. (if needed)	-	-	-	-				
WET DENSITY, lbs./cu.ft.	129.5	132.1	138.0	135.8				
FIELD MOISTURE CONTENT, (%)	12.6	11.0	16.9	15.8				
DRY DENSITY, (lbs./cu.ft.)	115.0	119.0	118.0	117.3				
COMPACTION REQUIRED, (%)	95%	95%	95%	95%				
COMPACTION, (%)	96.3%	99.7%	100.0%	99.3%				
PASS/FAIL	PASS	PASS	PASS	PASS				
PROCTOR LAB NO.	20-706	20-706	20-707	20-707				
DESCRIPTION OF MATERIAL	Clayey Sand with Gravel Yellowish Brown	Clayey Sand with Gravel Yellowish Brown	Clayey Sand Yellowish Brown	Clayey Sand Yellowish Brown				
MAXIMUM DRY DENSITY, (pcf)	119.4	119.4	118.1	118.1				
OPTIMUM MOISTURE, (%)	12.7	12.7	14.8	14.8				

Remarks:

CC & Invoice: Sequoyah Fuels Corporation
CC: kschlag18@gmailcom
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson

Shelby Jackson
Director of Laboratories

Specifications

Compaction: Minimum 90% of Standard Proctor Density
Moisture: $\pm$ 3 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street
Fort Gibson, OK 74434

918.616.1113 Office

Lab No: 20-743

Nuclear Density Report

Client: Sequoyah Fuels Corporation
P.O. Box 916
Gore, OK 74435

Project: 09-1341
Sequoyah Fuels Corporation
Disposal Cell
Gore, Oklahoma

Date: 9/25/2020
Tested By: Josh Fritz

TEST NO.	1	2	3	4	5	6	7	8
PROCTOR LAB NO.	20-738	20-738	20-739	20-739	20-740	20-740	20-741	20-741
DEPTH OF TEST, (in.)	6	6	6	6	6	6	6	6
TEST LOCATION	Section A North End	Section B East End	Section B Part #1	Section B Part #2	Section B Part #1	Section B Part #2	Section C Part #3	Section C Part #4
ELEVATION, (ft.) or LIFT NO.	Apron Bench	Apron Bench	Subgrade	Subgrade	Subgrade	Subgrade	Subgrade	Subgrade
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-	-	-
WET DENSITY, lbs./cu.ft.	131.5	130.5	134.4	127.7	132.5	128.0	132.6	131.1
FIELD MOISTURE CONTENT, (%)	10.1	9.9	11.3	13.1	11.3	10.9	10.2	11.6
DRY DENSITY, (lbs./cu.ft.)	119.4	118.7	120.8	112.9	119.0	115.4	120.3	117.5
COMPACTION REQUIRED, (%)	90%	90%	90%	90%	90%	90%	90%	90%
COMPACTION, (%)	99.8%	99.2%	99.1%	92.7%	99.0%	96.0%	98.7%	96.4%
PASS/FAIL	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
PROCTOR LAB NO.	20-738	20-738	20-739	20-739	20-740	20-740	20-741	20-741
DESCRIPTION OF MATERIAL	Sandy Lean Clay with Gravel Yellowish Brown	Sandy Lean Clay with Gravel Yellowish Brown	Clayey Sand with Gravel Dark Brown	Clayey Sand with Gravel Dark Brown	Clayey Sand with Gravel Dark Brown	Clayey Sand with Gravel Dark Brown	Clayey Sand with Gravel Dark Brown	Clayey Sand with Gravel Dark Brown
MAXIMUM DRY DENSITY, (pcf)	119.7	119.7	121.8	121.8	120.2	120.2	121.9	121.9
OPTIMUM MOISTURE, (%)	12.8	12.8	11.8	11.8	12.2	12.2	12.6	12.6

Remarks:

CC & Invoice: Sequoyah Fuels Corporation
CC: kschlag18@gmailcom
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson

Shelby Jackson
Director of Laboratories

Specifications

Compaction: Minimum 90% of Standard Proctor Density
Moisture: $\pm$ 3 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: 20-743

Nuclear Density Report

Client: Sequoyah Fuels Corporation

P.O. Box 916

Gore, OK 74435

Project: 09-1341

Sequoyah Fuels Corporation

Disposal Cell

Gore, Oklahoma

Date: 9/25/2020

Tested By: Josh Fritz

TEST NO.	9	10						
PROCTOR LAB NO.	20-742	20-742						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	Section C Part #4	Section C Part #3						
ELEVATION, (ft.) or LIFT NO.	Apron Bench	Apron Bench						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	126.9	123.1						
FIELD MOISTURE CONTENT, (%)	14.8	13.6						
DRY DENSITY, (lbs./cu.ft.)	110.5	108.4						
COMPACTION REQUIRED, (%)	90%	90%						
COMPACTION, (%)	97.6%	95.6%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	20-742	20-742						
DESCRIPTION OF MATERIAL	Sandy Lean Clay with Gravel Reddish Brown	Sandy Lean Clay with Gravel Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	113.3	113.3						
OPTIMUM MOISTURE, (%)	15.0	15.0						

Remarks:

CC & Invoice:

CC:

Sequoyah Fuels Corporation

kschlag18@gmailcom

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Shelby Jackson

Director of Laboratories

Specifications

Compaction: Minimum 90% of Standard Proctor Density

Moisture: $\pm$ 3 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: 20-807

Nuclear Density Report

Client: Sequoyah Fuels Corporation

P.O. Box 916

Gore, OK 74435

Project: 09-1341

Sequoyah Fuels Corporation

Disposal Cell

Gore, Oklahoma

Date: 10/22/2020

Tested By: Josh Fritz

TEST NO.	1	2						
PROCTOR LAB NO.	20-806	20-806						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	Section G	Section G						
ELEVATION, (ft.) or LIFT NO.	Subgrade	Subgrade						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	128.6	127.2						
FIELD MOISTURE CONTENT, (%)	13.5	14.0						
DRY DENSITY, (lbs./cu.ft.)	113.3	111.6						
COMPACTION REQUIRED, (%)	90%	90%						
COMPACTION, (%)	99.9%	98.4%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	20-806	20-806						
DESCRIPTION OF MATERIAL	Sandy Lean Clay with Sand - Light Reddish Brown	Sandy Lean Clay with Sand - Light Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	113.4	113.4						
OPTIMUM MOISTURE, (%)	15.1	15.1						

Remarks:

CC & Invoice:

CC:

Sequoyah Fuels Corporation

kschlag18@gmailcom

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Shelby Jackson

Director of Laboratories

Specifications

Compaction: Minimum 95% of Standard Proctor Density

Moisture: $\pm$ 2 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: **21-394**

Nuclear Density Report

Client: Sequoyah Fuels Corporation

P.O. Box 916

Gore, OK 74435

Project: 09-1341

Sequoyah Fuels Corporation

Disposal Cell

Gore, Oklahoma

Date: 4/27/2021

Tested By: Josh Fritz

TEST NO.	1	2						
PROCTOR LAB NO.	21-393	21-393						
DEPTH OF TEST, (in.)	6	6						
TEST LOCATION	Section F Apron Bench Area, East	Section F Apron Bench Area, West						
ELEVATION, (ft.) or LIFT NO.	1	1						
RETEST OF TEST NO. (if needed)	-	-						
WET DENSITY, lbs./cu.ft.	133.1	132.5						
FIELD MOISTURE CONTENT, (%)	14.2	12.9						
DRY DENSITY, (lbs./cu.ft.)	116.5	117.4						
COMPACTION REQUIRED, (%)	90%	90%						
COMPACTION, (%)	99.7%	100.4%						
PASS/FAIL	PASS	PASS						
PROCTOR LAB NO.	21-393	21-393						
DESCRIPTION OF MATERIAL	Sandy Lean Clay - Light Reddish Brown	Sandy Lean Clay - Light Reddish Brown						
MAXIMUM DRY DENSITY, (pcf)	116.9	116.9						
OPTIMUM MOISTURE, (%)	12.8	12.8						

Remarks:

CC & Invoice:

CC:

Sequoyah Fuels Corporation

kschlag18@gmailcom

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Shelby Jackson

Director of Laboratories

Specifications

Compaction: Minimum 90% of Standard Proctor Density

Moisture: $\pm$ 3 percent of optimum moisture content.



Construction Materials Testing Laboratories

1486 East Poplar Street

918.616.1113 Office

Fort Gibson, OK 74434

Lab No: **23-530**

Nuclear Density Report

Client: Sequoyah Fuels Corporation

P.O. Box 916

Gore, OK 74435

Project: 09-1341

Sequoyah Fuels Corporation

Disposal Cell

Gore, Oklahoma

Date: 6/20/2023

Tested By: Eric Walters

TEST NO.	1	2	3	4	5	6	7	8
PROCTOR LAB NO.								
DEPTH OF TEST, (in.)	6	6	6	6	6	6	6	6
TEST LOCATION	Waste #1 (Near #31)	Waste #2 (Near #51)	Waste #3 (Near #33)	Waste #4 (Near #87)	#38	#39	#40	E52
ELEVATION, (ft.) or LIFT NO.	Final	Final	Final	Final	Final	Final	Final	Final
RETEST OF TEST NO. (if needed)	-	-	-	-	-	-	-	-
WET DENSITY, lbs./cu.ft.	128.2	124.1	124.9	128.1	128.2	124.1	124.9	128.1
FIELD MOISTURE CONTENT, (%)	11.7	11.8	12.9	14.7	10.7	11.8	12.9	128.1
DRY DENSITY, (lbs./cu.ft.)	114.8	111.0	110.6	111.7	115.8	111.0	110.6	14.7
COMPACTION REQUIRED, (%)								
COMPACTION, (%)								
PASS/FAIL								
PROCTOR LAB NO.								
DESCRIPTION OF MATERIAL								
MAXIMUM DRY DENSITY, (pcf)								
OPTIMUM MOISTURE, (%)								

Remarks:

CC & Invoice:

CC:

Sequoyah Fuels Corporation

kschlag18@gmailcom

FILE

Respectfully submitted,

Quality Testing

Shelby Jackson

Shelby Jackson

Director of Laboratories

Specifications



Construction Materials Testing Laboratories

1486 East Poplar Street
Fort Gibson, OK 74434

918.616.1113 Office

Lab No: **23-530**

Nuclear Density Report

Client: Sequoyah Fuels Corporation
P.O. Box 916
Gore, OK 74435

Project: 09-1341
Sequoyah Fuels Corporation
Disposal Cell
Gore, Oklahoma

Date: 6/20/2023
Tested By: Eric Walters

TEST NO.	9	10	11					
PROCTOR LAB NO.								
DEPTH OF TEST, (in.)	6	6	6					
TEST LOCATION	#57	#65	#74					
ELEVATION, (ft.) or LIFT NO.	Final	Final	Final					
RETEST OF TEST NO. (if needed)	-	-	-					
WET DENSITY, lbs./cu.ft.	130.9	132.7	130.1					
FIELD MOISTURE CONTENT, (%)	10.2	9.3	10.2					
DRY DENSITY, (lbs./cu.ft.)	118.8	121.4	118.1					
COMPACTION REQUIRED, (%)								
COMPACTION, (%)								
PASS/FAIL								
PROCTOR LAB NO.								
DESCRIPTION OF MATERIAL								
MAXIMUM DRY DENSITY, (pcf)								
OPTIMUM MOISTURE, (%)								

Remarks:

CC & Invoice: Sequoyah Fuels Corporation
CC: kschlag18@gmailcom
FILE

Respectfully submitted,
Quality Testing

Shelby Jackson

Shelby Jackson
Director of Laboratories

Specifications

PHASE IV (COVER) AS-BUILT REPORT

Appendix C Laboratory and Field QA Test Results

C.4 ROCK DURABILITY TEST RESULTS





August 22, 2018

Revised: August 28, 2018

Stantec Consulting Services, Inc.
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Matthew Kapp EIT
Geotechnical Engineer in Training
P: (970) 449-3631
E: matthew.kapp@stantec.com

Re: Laboratory Test Results
Riprap Durability Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20181002

Dear Mr. Kapp:

Terracon Consultants, Inc. (Terracon) has completed the laboratory testing services for the project referenced above. These services were performed in general accordance with the Master Services Subconsultant Agreement Task Order (MSA # 40844-US SC, MSA dated November 20, 2013, Task Order #61-356-9961 fully executed on August 15, 2018). The first sample of the second round of samples with a total of six (6) 5-gallon bucket samples of limestone riprap were shipped directly from Sequoyah Fuels in Gore, Oklahoma to Terracon's office in Fort Collins, Colorado. A brief description of the requested laboratory testing procedures and details associated with each test performed for this project are presented below. Test results are summarized in the attached reports.

Impact Hammer Testing for Rock

Terracon performed laboratory testing to determine the rebound hardness number of rock material using a spring-driven steel impact hammer (Schmidt Hammer, Type N) in general accordance with ASTM D 5873. The specimens selected for rock hardness testing consisted of blocks of limestone riprap with rough dimensions of approximately 6" by 8" by 8". Prior to performing our testing, a smooth surface was cut on one side of each of the blocks using a wet mason saw. The blocks were allowed to dry at room temperature for three days prior to performing rock hardness testing. The impact hammer used to perform our testing consisted of an ELE Model #35-1475. The blocks were secured in a v-block and ten tests were conducted on each of the prepared face of the riprap samples in Position B (vertical). Testing was performed in our laboratory with an ambient air temperature of about 71 degrees Fahrenheit. A correction factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 39.

Terracon Consultants, Inc. 1901 Sharp Point Drive, Suite C Fort Collins, Colorado 80525
P [970] 484 0359 F [970] 484 0454 terracon.com



Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
August 22, 2018 ■ Terracon Project No. 20181002



Los Angeles Abrasion

A portion of the riprap sample was also subjected to Los Angeles Abrasion testing which was performed in general accordance with ASTM C 535. However, we were requested to reduce the number of revolutions to 100 for this testing in accordance with NRC NUREG-1623 Appendix D Procedures for Designing Riprap Erosion Protection. After visual representative sample selection and crushing to the required size fractions utilizing a single-jaw laboratory crusher, testing was performed in accordance with Grading 1 presented in Table 1 of the ASTM standard. We measured an L.A. Abrasion value of 11 percent.

Specific Gravity

Specific gravity and absorption testing was also performed on a portion of the riprap sample in general accordance with ASTM C 127. Test results for the applicable separate size fractions and are report on the attached Physical Properties of Riprap report.

Sodium Sulfate Soundness

Terracon is performing the laboratory testing to determine the soundness of the riprap by use of sodium sulfate in general accordance with ASTM C 88. It is our understanding that the Client sampled and delivered material smaller in size fraction than is specified and will be utilized in application. It is cautioned that the size of material provided test results that may vary significantly from in-place materials based upon rock quality and size dimensions. The following data was will be recorded upon completion of the test and a revised report will be provided.

Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.	3127.2	0.4
2 to 1½ in.	2051.6	
1½ to 1 in.	1003.9	0.6
1 to ¾ in.	506.3	

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
August 22, 2018 ■ Terracon Project No. 20181002

Terracon

Sincerely,
Terracon Consultants, Inc.



Eric R. Reifschneider
Project Manager



Craig L. Nelson
Project Manager

Attachments: Physical Properties of Riprap
Copies to: Addressee (via e-mail)

Physical Properties of Riprap

1901 Sharp Point Drive, Unit C
Fort Collins, Colorado 80525
Tel: (970) 484-0359
Fax: (970) 484-0454

Client Name: Stantec Consulting Services, Inc.
Address: 3325 South Timberline Road, #150
Fort Collins, Colorado 80525
Attn: Mr. Matthew Kapp EIT
Project Name: Sequoyah Fuels Corporation Testing
Location: Gore, Oklahoma

Project No.: 20181002 **Date of Report:** 8/22/2018
Sample I.D.# or Description: **Revised:** 8/28/2018
Riprap Durability Testing for the Sequoyah Fuels
Corporation, Gore, Oklahoma
Round 2 - Sample 1

Sampled By: Client **Date:** 8/13/18
Submitted By: Client **Date:** 8/17/18

Soil-Aggregate Type:
Proposed riprap materials
Reviewed By: Eric R. Reifschneider
Project Manager

Sieve Analysis, ASTM C136				Test Standards are ASTM unless otherwise indicated w/ "T" designation			
Sieve Size	X Passing Retained	Specification		Test	Standard	Results	Specifi-cation
		Min.	Max.				
	% Accumulative			Fineness Modulus	C125		
6"				Rebound Hardness Number, H _R	D5873	39	
5"				Lightweight Pieces, %	C123		
4"				LA Abrasion, % Grade 1	C535	11	
3"				Soundness %	Sodium 2-1/2 to 2 in.	C88	0.4
2-1/2"					2 to 1-1/2 in.	C88	
2"					1-1/2 to 1 in.	C88	0.6
1-1/2"					1 to 3/4 in.	C88	
1"				Specific Gravity 4"	Absorption, %	C127	0.39
3/4"					Bulk (Dry)	C127	2.653
1/2"					Bulk (SSD)	C127	2.664
3/8"				Specific Gravity 3"	Apparent	C127	2.681
#4					Absorption, %	C127	0.43
#8					Bulk (Dry)	C127	2.658
#10					Bulk (SSD)	C127	2.670
#16				Specific Gravity 2"	Apparent	C127	2.689
#20					Absorption, %	C127	0.64
#30					Bulk (Dry)	C127	2.656
#40					Bulk (SSD)	C127	2.673
#50				Specific Gravity -2"+3/4"	Apparent	C127	2.702
#80					Absorption, %	C127	0.80
#100					Bulk (Dry)	C127	2.652
#200					Bulk (SSD)	C127	2.673
					Apparent	C127	2.710

Comments: Soundness Testing - Terracon was not provided with the full grain-size distribution for the riprap materials delivered to our office. Terracon can provide weighted calculations if provided with the grain-size distribution test results, upon your request. Refer to attached letter dated 7/26/17 for additional information.

Copies to: Addressee (via e-mail)



October 5, 2018

Revised: October 22, 2018

Stantec Consulting Services, Inc.
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Matthew Kapp EIT
Geotechnical Engineer in Training
P: (970) 449-3631
E: matthew.kapp@stantec.com

Re: Laboratory Test Results
Riprap Durability Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20181002

Dear Mr. Kapp:

Terracon Consultants, Inc. (Terracon) has completed the laboratory testing services for the project referenced above. These services were performed in general accordance with the Master Services Subconsultant Agreement Task Order (MSA # 40844-US SC, MSA dated November 20, 2013, Task Order #61-356-9961 fully executed on August 15, 2018). The second sample of the second round of samples with a total of five (5) 5-gallon bucket samples of limestone riprap were shipped directly from Sequoyah Fuels in Gore, Oklahoma to Terracon's office in Fort Collins, Colorado. A brief description of the requested laboratory testing procedures and details associated with each test performed for this project are presented below. Test results are summarized in the attached reports.

Impact Hammer Testing for Rock

Terracon performed laboratory testing to determine the rebound hardness number of rock material using a spring-driven steel impact hammer (Schmidt Hammer, Type N) in general accordance with ASTM D 5873. The specimens selected for rock hardness testing consisted of blocks of limestone riprap with rough dimensions of approximately 6" by 8" by 8". Prior to performing our testing, a smooth surface was cut on one side of each of the blocks using a wet mason saw. The blocks were allowed to dry at room temperature for three days prior to performing rock hardness testing. The impact hammer used to perform our testing consisted of an ELE Model #35-1475. The blocks were secured in a v-block and ten tests were conducted on each of the prepared face of the riprap samples in Position B (vertical). Testing was performed in our laboratory with an ambient air temperature of about 71 degrees Fahrenheit. A correction factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 41.

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Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 22, 2018 ■ Terracon Project No. 20181002



Los Angeles Abrasion

A portion of the riprap sample was also subjected to Los Angeles Abrasion testing which was performed in general accordance with ASTM C 535. However, we were requested to reduce the number of revolutions to 100 for this testing in accordance with NRC NUREG-1623 Appendix D Procedures for Designing Riprap Erosion Protection. After visual representative sample selection and crushing to the required size fractions utilizing a single-jaw laboratory crusher, testing was performed in accordance with Grading 1 presented in Table 1 of the ASTM standard. We measured an L.A. Abrasion value of 8 percent.

Specific Gravity

Specific gravity and absorption testing was also performed on a portion of the riprap sample in general accordance with ASTM C 127. Test results for the applicable separate size fractions and are report on the attached Physical Properties of Riprap report.

Sodium Sulfate Soundness

Terracon is performing the laboratory testing to determine the soundness of the riprap by use of sodium sulfate in general accordance with ASTM C 88. It is our understanding that the Client sampled and delivered material smaller in size fraction than is specified and will be utilized in application. It is cautioned that the size of material provided test results that may vary significantly from in-place materials based upon rock quality and size dimensions. The following data was recorded upon completion of the test.

Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.	3010.9	0.8
2 to 1½ in.	1971.8	
1½ to 1 in.	1042.9	0.5
1 to ¾ in.	686.8	

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 22, 2018 ■ Terracon Project No. 20181002

Terracon

Sincerely,

Terracon Consultants, Inc.



Eric R. Reifschneider
Project Manager



Todd A. Turney
Department Manager

Attachments: Physical Properties of Riprap

Copies to: Addressee (via e-mail)

Physical Properties of Riprap

1901 Sharp Point Drive, Unit C
Fort Collins, Colorado 80525
Tel: (970) 484-0359
Fax: (970) 484-0454

Client Name: Stantec Consulting Services, Inc.
Address: 3325 South Timberline Road, #150
Fort Collins, Colorado 80525
Attn: Mr. Matthew Kapp EIT
Project Name: Sequoyah Fuels Corporation Testing
Location: Gore, Oklahoma

Project No.: 20181002 **Date of Report:** 10/5/2018
Sample I.D.# or Description: **Revised:** 10/22/2018
Riprap Durability Testing for the Sequoyah Fuels
Corporation, Gore, Oklahoma
Round 2 - Sample 2

Sampled By: Client **Date:** 9/26/2018
Submitted By: Client **Date:** 9/28/2018

Soil-Aggregate Type:
Proposed riprap materials
Reviewed By: Eric R. Reifschneider
Project Manager

Sieve Analysis, ASTM C136				Test Standards are ASTM unless otherwise indicated w/ "T" designation			
Sieve Size	X Passing Retained % Accumulative	Specification		Test	Standard	Results	Specifi- cation
		Min.	Max.				
6"				Fineness Modulus	C125		
				Rebound Hardness Number, H _R	D5873	41	
5"				Lightweight Pieces, %	C123		
4"				LA Abrasion, % Grade 1	C535	8	
3"				Sodium 2-1/2 to 2 in.	C88	0.8	
				Sound- 2 to 1-1/2 in.	C88		
2-1/2"				ness 1-1/2 to 1 in.	C88	0.5	
2"					% 1 to 3/4 in.		C88
1-1/2"				Specific Gravity 4"	Absorption, %	C127	0.55
1"					Bulk (Dry)	C127	2.673
3/4"					Bulk (SSD)	C127	2.687
1/2"					Apparent	C127	2.713
3/8"				Specific Gravity 3"	Absorption, %	C127	0.57
#4					Bulk (Dry)	C127	2.670
#8					Bulk (SSD)	C127	2.686
#10					Apparent	C127	2.712
#16				Specific Gravity 2"	Absorption, %	C127	0.58
#20					Bulk (Dry)	C127	2.669
#30					Bulk (SSD)	C127	2.684
#40					Apparent	C127	2.711
#50				Specific Gravity -2"+3/4"	Absorption, %	C127	0.60
#80					Bulk (Dry)	C127	2.666
#100					Bulk (SSD)	C127	2.682
#200					Apparent	C127	2.709

Comments: Soundness Testing - Terracon was not provided with the full grain-size distribution for the riprap materials delivered to our office. Terracon can provide weighted calculations if provided with the grain-size distribution test results, upon your request. Refer to attached letter dated 10/22/18 for additional information.

Copies to: Addressee (via e-mail)



October 5, 2018

Revised: October 22, 2018

Stantec Consulting Services, Inc.
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Matthew Kapp EIT
Geotechnical Engineer in Training
P: (970) 449-3631
E: matthew.kapp@stantec.com

Re: Laboratory Test Results
Riprap Durability Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20181002

Dear Mr. Kapp:

Terracon Consultants, Inc. (Terracon) has completed the laboratory testing services for the project referenced above. These services were performed in general accordance with the Master Services Subconsultant Agreement Task Order (MSA # 40844-US SC, MSA dated November 20, 2013, Task Order #61-356-9961 fully executed on August 15, 2018). The third sample of the second round of samples with a total of five (5) 5-gallon bucket samples of limestone riprap were shipped directly from Sequoyah Fuels in Gore, Oklahoma to Terracon's office in Fort Collins, Colorado. A brief description of the requested laboratory testing procedures and details associated with each test performed for this project are presented below. Test results are summarized in the attached reports.

Impact Hammer Testing for Rock

Terracon performed laboratory testing to determine the rebound hardness number of rock material using a spring-driven steel impact hammer (Schmidt Hammer, Type N) in general accordance with ASTM D 5873. The specimens selected for rock hardness testing consisted of blocks of limestone riprap with rough dimensions of approximately 6" by 8" by 8". Prior to performing our testing, a smooth surface was cut on one side of each of the blocks using a wet mason saw. The blocks were allowed to dry at room temperature for three days prior to performing rock hardness testing. The impact hammer used to perform our testing consisted of an ELE Model #35-1475. The blocks were secured in a v-block and ten tests were conducted on each of the prepared face of the riprap samples in Position B (vertical). Testing was performed in our laboratory with an ambient air temperature of about 71 degrees Fahrenheit. A correction



Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 22, 2018 ■ Terracon Project No. 20181002



factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 39.

Los Angeles Abrasion

A portion of the riprap sample was also subjected to Los Angeles Abrasion testing which was performed in general accordance with ASTM C 535. However, we were requested to reduce the number of revolutions to 100 for this testing in accordance with NRC NUREG-1623 Appendix D Procedures for Designing Riprap Erosion Protection. After visual representative sample selection and crushing to the required size fractions utilizing a single-jaw laboratory crusher, testing was performed in accordance with Grading 1 presented in Table 1 of the ASTM standard. We measured an L.A. Abrasion value of 11 percent.

Specific Gravity

Specific gravity and absorption testing was also performed on a portion of the riprap sample in general accordance with ASTM C 127. Test results for the applicable separate size fractions and are report on the attached Physical Properties of Riprap report.

Sodium Sulfate Soundness

Terracon is performing the laboratory testing to determine the soundness of the riprap by use of sodium sulfate in general accordance with ASTM C 88. It is our understanding that the Client sampled and delivered material smaller in size fraction than is specified and will be utilized in application. It is cautioned that the size of material provided test results that may vary significantly from in-place materials based upon rock quality and size dimensions. The following data was recorded upon completion of the test.

Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.	3026.4	0.7
2 to 1½ in.	2017.2	
1½ to 1 in.	1005.6	1.2
1 to ¾ in.	544.4	

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 22, 2018 ■ Terracon Project No. 20181002

Terracon

Sincerely,

Terracon Consultants, Inc.



Eric R. Reifschneider
Project Manager



Todd A. Turney
Department Manager

Attachments: Physical Properties of Riprap

Copies to: Addressee (via e-mail)



October 5, 2018

Revised: October 22, 2018

Stantec Consulting Services, Inc.
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Matthew Kapp EIT
Geotechnical Engineer in Training
P: (970) 449-3631
E: matthew.kapp@stantec.com

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Riprap Durability Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20181002

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Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 22, 2018 ■ Terracon Project No. 20181002



factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 39.

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Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.	3026.4	0.7
2 to 1½ in.	2017.2	
1½ to 1 in.	1005.6	1.2
1 to ¾ in.	544.4	

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 22, 2018 ■ Terracon Project No. 20181002



Sincerely,
Terracon Consultants, Inc.

Eric R. Reifschneider
Project Manager

Todd A. Turney
Department Manager

Attachments: Physical Properties of Riprap
Copies to: Addressee (via e-mail)

Physical Properties of Riprap

1901 Sharp Point Drive, Unit C
Fort Collins, Colorado 80525
Tel: (970) 484-0359
Fax: (970) 484-0454

Client Name: Stantec Consulting Services, Inc.
Address: 3325 South Timberline Road, #150
Fort Collins, Colorado 80525
Attn: Mr. Matthew Kapp EIT
Project Name: Sequoyah Fuels Corporation Testing
Location: Gore, Oklahoma

Project No.: 20181002 **Date of Report:** 10/5/2018
Sample I.D.# or Description:
Riprap Durability Testing for the Sequoyah Fuels
Corporation, Gore, Oklahoma
Round 2 - Sample 3

Sampled By: Client **Date:** 9/26/2018
Submitted By: Client **Date:** 9/28/2018

Soil-Aggregate Type:
Proposed riprap materials
Reviewed By: Eric R. Reifschneider
Project Manager

Sieve Analysis, ASTM C136				Test Standards are ASTM unless otherwise indicated w/ "T" designation				
Sieve Size	X Passing Retained	Specification		Test		Standard	Results	Specifi-cation
	% Accumulative	Min.	Max.	Fineness Modulus		C125		
					Rebound Hardness Number, H _R		D5873	39
6"				Lightweight Pieces, %		C123		
5"				LA Abrasion, % Grade 1		C535	11	
4"				Sodium Soundness %	2-1/2 to 2 in.	C88	Pending	
3"					2 to 1-1/2 in.	C88		
2-1/2"					1-1/2 to 1 in.	C88	Pending	
2"					1 to 3/4 in.	C88		
1-1/2"				Specific Gravity 4"	Absorption, %	C127	0.67	
1"					Bulk (Dry)	C127	2.658	
3/4"					Bulk (SSD)	C127	2.676	
1/2"					Apparent	C127	2.707	
3/8"				Specific Gravity 3"	Absorption, %	C127	0.72	
#4					Bulk (Dry)	C127	2.654	
#8					Bulk (SSD)	C127	2.674	
#10					Apparent	C127	2.706	
#16				Specific Gravity 2"	Absorption, %	C127	0.75	
#20					Bulk (Dry)	C127	2.655	
#30					Bulk (SSD)	C127	2.675	
#40					Apparent	C127	2.709	
#50				Specific Gravity -2"+3/4"	Absorption, %	C127	0.76	
#80					Bulk (Dry)	C127	2.653	
#100					Bulk (SSD)	C127	2.673	
#200					Apparent	C127	2.708	

Comments: Soundness Testing - Terracon was not provided with the full grain-size distribution for the riprap materials delivered to our office. Terracon can provide weighted calculations if provided with the grain-size distribution test results, upon your request. Refer to attached letter dated 7/26/17 for additional information.

Copies to: Addressee (via e-mail)



October 5, 2018

Revised:

Stantec Consulting Services, Inc.
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Matthew Kapp EIT
Geotechnical Engineer in Training
P: (970) 449-3631
E: matthew.kapp@stantec.com

Re: Laboratory Test Results
Riprap Durability Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20181002

Dear Mr. Kapp:

Terracon Consultants, Inc. (Terracon) has completed the laboratory testing services for the project referenced above. These services were performed in general accordance with the Master Services Subconsultant Agreement Task Order (MSA # 40844-US SC, MSA dated November 20, 2013, Task Order #61-356-9961 fully executed on August 15, 2018). The third sample of the second round of samples with a total of five (5) 5-gallon bucket samples of limestone riprap were shipped directly from Sequoyah Fuels in Gore, Oklahoma to Terracon's office in Fort Collins, Colorado. A brief description of the requested laboratory testing procedures and details associated with each test performed for this project are presented below. Test results are summarized in the attached reports.

Impact Hammer Testing for Rock

Terracon performed laboratory testing to determine the rebound hardness number of rock material using a spring-driven steel impact hammer (Schmidt Hammer, Type N) in general accordance with ASTM D 5873. The specimens selected for rock hardness testing consisted of blocks of limestone riprap with rough dimensions of approximately 6" by 8" by 8". Prior to performing our testing, a smooth surface was cut on one side of each of the blocks using a wet mason saw. The blocks were allowed to dry at room temperature for three days prior to performing rock hardness testing. The impact hammer used to perform our testing consisted of an ELE Model #35-1475. The blocks were secured in a v-block and ten tests were conducted on each of the prepared face of the riprap samples in Position B (vertical). Testing was performed in our laboratory with an ambient air temperature of about 71 degrees Fahrenheit. A correction factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 39.

Terracon Consultants, Inc. 1901 Sharp Point Drive, Suite C Fort Collins, Colorado 80525
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Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 5, 2018 ■ Terracon Project No. 20181002



Los Angeles Abrasion

A portion of the riprap sample was also subjected to Los Angeles Abrasion testing which was performed in general accordance with ASTM C 535. However, we were requested to reduce the number of revolutions to 100 for this testing in accordance with NRC NUREG-1623 Appendix D Procedures for Designing Riprap Erosion Protection. After visual representative sample selection and crushing to the required size fractions utilizing a single-jaw laboratory crusher, testing was performed in accordance with Grading 1 presented in Table 1 of the ASTM standard. We measured an L.A. Abrasion value of 11 percent.

Specific Gravity

Specific gravity and absorption testing was also performed on a portion of the riprap sample in general accordance with ASTM C 127. Test results for the applicable separate size fractions and are report on the attached Physical Properties of Riprap report.

Sodium Sulfate Soundness

Terracon is performing the laboratory testing to determine the soundness of the riprap by use of sodium sulfate in general accordance with ASTM C 88. It is our understanding that the Client sampled and delivered material smaller in size fraction than is specified and will be utilized in application. It is cautioned that the size of material provided test results that may vary significantly from in-place materials based upon rock quality and size dimensions. The following data will be recorded upon completion of the test and a revised report will be provided.

Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.		Pending
2 to 1½ in.		
1½ to 1 in.		Pending
1 to ¾ in.		

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

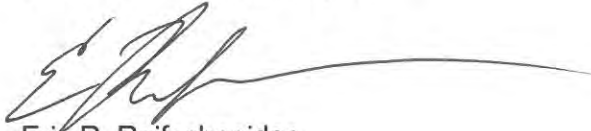
Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 5, 2018 ■ Terracon Project No. 20181002

Terracon

Sincerely,

Terracon Consultants, Inc.



Eric R. Reifschneider
Project Manager



Todd Turney
Department Manager

Attachments: Physical Properties of Riprap

Copies to: Addressee (via e-mail)

Physical Properties of Riprap

1901 Sharp Point Drive, Unit C
Fort Collins, Colorado 80525
Tel: (970) 484-0359
Fax: (970) 484-0454

Client Name: Stantec Consulting Services, Inc.
Address: 3325 South Timberline Road, #150
Fort Collins, Colorado 80525
Attn: Mr. Matthew Kapp EIT
Project Name: Sequoyah Fuels Corporation Testing
Location: Gore, Oklahoma

Project No.: 20181002 **Date of Report:** 10/5/2018

Sample I.D.# or Description:
Riprap Durability Testing for the Sequoyah Fuels
Corporation, Gore, Oklahoma
Round 2 - Sample 3

Sampled By: Client **Date:** 9/26/2018
Submitted By: Client **Date:** 9/28/2018

Soil-Aggregate Type:
Proposed riprap materials
Reviewed By: Eric R. Reifschneider
Project Manager

Sieve Analysis, ASTM C136				Test Standards are ASTM unless otherwise indicated w/ "T" designation				
Sieve Size	X Passing Retained % Accumulative	Specification		Test		Standard	Results	Specifi- cation
		Min.	Max.	Fineness Modulus		C125		
				Rebound Hardness Number, H _R		D5873	39	
6"				Lightweight Pieces, %		C123		
5"				LA Abrasion, % Grade 1		C535	11	
4"				Sodium Sound- ness %	2-1/2 to 2 in.	C88	Pending	
3"					2 to 1-1/2 in.	C88		
2-1/2"					1-1/2 to 1 in.	C88	Pending	
2"					1 to 3/4 in.	C88		
1-1/2"				Specific Gravity 4"	Absorption, %	C127	0.67	
1"					Bulk (Dry)	C127	2.658	
3/4"					Bulk (SSD)	C127	2.676	
1/2"					Apparent	C127	2.707	
3/8"				Specific Gravity 3"	Absorption, %	C127	0.72	
#4					Bulk (Dry)	C127	2.654	
#8					Bulk (SSD)	C127	2.674	
#10					Apparent	C127	2.706	
#16				Specific Gravity 2"	Absorption, %	C127	0.75	
#20					Bulk (Dry)	C127	2.655	
#30					Bulk (SSD)	C127	2.675	
#40					Apparent	C127	2.709	
#50				Specific Gravity -2"+3/4"	Absorption, %	C127	0.76	
#80					Bulk (Dry)	C127	2.653	
#100					Bulk (SSD)	C127	2.673	
#200					Apparent	C127	2.708	

Comments: Soundness Testing - Terracon was not provided with the full grain-size distribution for the riprap materials delivered to our office. Terracon can provide weighted calculations if provided with the grain-size distribution test results, upon your request. Refer to attached letter dated 7/26/17 for additional information.

Copies to: Addressee (via e-mail)



October 5, 2018

Revised: October 22, 2018

Stantec Consulting Services, Inc.
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Matthew Kapp EIT
Geotechnical Engineer in Training
P: (970) 449-3631
E: matthew.kapp@stantec.com

Re: Laboratory Test Results
Riprap Durability Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20181002

Dear Mr. Kapp:

Terracon Consultants, Inc. (Terracon) has completed the laboratory testing services for the project referenced above. These services were performed in general accordance with the Master Services Subconsultant Agreement Task Order (MSA # 40844-US SC, MSA dated November 20, 2013, Task Order #61-356-9961 fully executed on August 15, 2018). The fourth sample of the second round of samples with a total of five (5) 5-gallon bucket samples of limestone riprap were shipped directly from Sequoyah Fuels in Gore, Oklahoma to Terracon's office in Fort Collins, Colorado. A brief description of the requested laboratory testing procedures and details associated with each test performed for this project are presented below. Test results are summarized in the attached reports.

Impact Hammer Testing for Rock

Terracon performed laboratory testing to determine the rebound hardness number of rock material using a spring-driven steel impact hammer (Schmidt Hammer, Type N) in general accordance with ASTM D 5873. The specimens selected for rock hardness testing consisted of blocks of limestone riprap with rough dimensions of approximately 6" by 8" by 8". Prior to performing our testing, a smooth surface was cut on one side of each of the blocks using a wet mason saw. The blocks were allowed to dry at room temperature for three days prior to performing rock hardness testing. The impact hammer used to perform our testing consisted of an ELE Model #35-1475. The blocks were secured in a v-block and ten tests were conducted on each of the prepared face of the riprap samples in Position B (vertical). Testing was performed in our laboratory with an ambient air temperature of about 71 degrees Fahrenheit. A correction factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 39.

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Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 22, 2018 ■ Terracon Project No. 20181002



Los Angeles Abrasion

A portion of the riprap sample was also subjected to Los Angeles Abrasion testing which was performed in general accordance with ASTM C 535. However, we were requested to reduce the number of revolutions to 100 for this testing in accordance with NRC NUREG-1623 Appendix D Procedures for Designing Riprap Erosion Protection. After visual representative sample selection and crushing to the required size fractions utilizing a single-jaw laboratory crusher, testing was performed in accordance with Grading 1 presented in Table 1 of the ASTM standard. We measured an L.A. Abrasion value of 10 percent.

Specific Gravity

Specific gravity and absorption testing was also performed on a portion of the riprap sample in general accordance with ASTM C 127. Test results for the applicable separate size fractions and are report on the attached Physical Properties of Riprap report.

Sodium Sulfate Soundness

Terracon is performing the laboratory testing to determine the soundness of the riprap by use of sodium sulfate in general accordance with ASTM C 88. It is our understanding that the Client sampled and delivered material smaller in size fraction than is specified and will be utilized in application. It is cautioned that the size of material provided test results that may vary significantly from in-place materials based upon rock quality and size dimensions. The following data was recorded upon completion of the test.

Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.	3082.1	1.0
2 to 1½ in.	1935.6	
1½ to 1 in.	1031.8	0.8
1 to ¾ in.	512.9	

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
October 22, 2018 ■ Terracon Project No. 20181002

Terracon

Sincerely,

Terracon Consultants, Inc.



Eric R. Reifschneider
Project Manager



Todd A. Turney
Department Manager

Attachments: Physical Properties of Riprap

Copies to: Addressee (via e-mail)

Physical Properties of Riprap

1901 Sharp Point Drive, Unit C
Fort Collins, Colorado 80525
Tel: (970) 484-0359
Fax: (970) 484-0454

Client Name: Stantec Consulting Services, Inc.
Address: 3325 South Timberline Road, #150
Fort Collins, Colorado 80525
Attn: Mr. Matthew Kapp EIT
Project Name: Sequoyah Fuels Corporation Testing
Location: Gore, Oklahoma

Project No.: 20181002 **Date of Report:** 10/5/2018
Sample I.D.# or Description: **Revised:** 10/22/2018
Riprap Durability Testing for the Sequoyah Fuels
Corporation, Gore, Oklahoma
Round 2 - Sample 4

Sampled By: Client **Date:** 9/26/2018
Submitted By: Client **Date:** 9/28/2018

Soil-Aggregate Type:
Proposed riprap materials
Reviewed By: Eric R. Reifschneider
Project Manager

Sieve Analysis, ASTM C136				Test Standards are ASTM unless otherwise indicated w/ "T" designation				
Sieve Size	X Passing Retained	Specification		Test		Standard	Results	Specifi- cation
	% Accumulative	Min.	Max.	Fineness Modulus	C125			
6"				Rebound Hardness Number, H _R	D5873	39		
5"				Lightweight Pieces, %	C123			
4"				LA Abrasion, % Grade 1	C535	10		
3"				Sodium Sound- ness %	2-1/2 to 2 in.	C88	1.0	
2-1/2"					2 to 1-1/2 in.	C88		
2"					1-1/2 to 1 in.	C88	0.8	
1-1/2"					1 to 3/4 in.	C88		
1"				Specific Gravity 1	Absorption, %	C127	0.74	
3/4"					Bulk (Dry)	C127	2.643	
1/2"					Bulk (SSD)	C127	2.662	
3/8"					Apparent	C127	2.695	
#4				Specific Gravity 2	Absorption, %	C127	0.75	
#8					Bulk (Dry)	C127	2.648	
#10					Bulk (SSD)	C127	2.668	
#16					Apparent	C127	2.702	
#20				Specific Gravity 3	Absorption, %	C127	0.76	
#30					Bulk (Dry)	C127	2.646	
#40					Bulk (SSD)	C127	2.666	
#50					Apparent	C127	2.701	
#80				Specific Gravity 4	Absorption, %	C127	.80	
#100					Bulk (Dry)	C127	2.644	
#200					Bulk (SSD)	C127	2.665	
					Apparent	C127	2.701	

Comments: Soundness Testing - Terracon was not provided with the full grain-size distribution for the riprap materials delivered to our office. Terracon can provide weighted calculations if provided with the grain-size distribution test results, upon your request. Refer to attached letter dated 10/22/18 for additional information.

Copies to: Addressee (via e-mail)



July 26, 2017

MWH, now a part of Stantec
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Jason M. Cumbers, P.E.
Associate/Geotechnical Engineer
P: (970) 377-9410
E: jason.cumbers@stantec.com

Re: Laboratory Test Results
Riprap Durability and Remolded Clay Cover Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20175056

Dear Mr. Cumbers:

Terracon Consultants, Inc. (Terracon) has completed the laboratory testing services for the project referenced above. These services were performed in general accordance with the Master Services Subconsultant Agreement Task Order (MSA # 40844-US SC, MSA dated November 20, 2013, Task Order fully executed on July 21, 2017). A total of nine (9) 5-gallon bucket samples of limestone riprap were shipped directly from Sequoyah Fuels in Gore, Oklahoma to Terracon's office in Fort Collins, Colorado. A sample of the clay to be remolded for the cover was also shipped directly from Sequoyah Fuels to Terracon's office in Wheat Ridge, Colorado for hydraulic conductivity testing. A brief description of the requested laboratory testing procedures and details associated with each test performed for this project are presented below. Test results are summarized in the attached reports.

Impact Hammer Testing for Rock

Terracon performed laboratory testing to determine the rebound hardness number of rock material using a spring-driven steel impact hammer (Schmidt Hammer) in general accordance with ASTM D 5873. The specimens selected for rock hardness testing consisted of blocks of limestone riprap with rough dimensions of approximately 6" by 8" by 8". Prior to performing our testing, a smooth surface was cut on one side of each of the blocks using a wet mason saw. The blocks were allowed to dry at room temperature for three days prior to performing rock hardness testing. The impact hammer used to perform our testing consisted of an ELE Model #35-1475. The blocks were secured in a v-block and ten tests were conducted on each of the prepared face of the riprap samples in Position B (vertical). Testing was performed in our laboratory with an ambient air temperature of about 71 degrees Fahrenheit. A correction factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 39.

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Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
July 26, 2017 ■ Terracon Project No. 20175056



Los Angeles Abrasion

A portion of the riprap sample was also subjected to Los Angeles Abrasion testing which was performed in general accordance with ASTM C 535. However, we were requested to reduce the number of revolutions to 100 for this testing in accordance with NRC NUREG-1623 Appendix D Procedures for Designing Riprap Erosion Protection. After visual representative sample selection and crushing to the required size fractions utilizing a single-jaw laboratory crusher, testing was performed in accordance with Grading 1 presented in Table 1 of the ASTM standard. We measured an L.A. Abrasion value of 14 percent.

Specific Gravity

Specific gravity and absorption testing was also performed on a portion of the riprap sample in general accordance with ASTM C 127. Test results for the applicable separate size fractions and are report on the attached Physical Properties of Riprap report.

Sodium Sulfate Soundness

Terracon also performed laboratory testing to determine the soundness of the riprap by use of sodium sulfate in general accordance with ASTM C 88. It is our understanding that the Client sampled and delivered material smaller in size fraction than is specified and will be utilized in application. It is cautioned that the size of material provided test results that may vary significantly from in-place materials based upon rock quality and size dimensions. The following data was recorded during completion of the test.

Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.	3112.6	0.3
2 to 1½ in.	2031.0	
1½ to 1 in.	1072.4	0.2
1 to ¾ in.	518.7	

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

Direct Tensile Strength of Rock

Core samples were obtained from several of the riprap specimens delivered to our office for tensile strength performed in general accordance with ASTM D2936. Three (3), approximately 2-inch diameter core samples were obtained and shipped to our office in Cincinnati, Ohio for tensile strength testing. One of the samples was disturbed and tensile strength was not reported.

Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
July 26, 2017 ■ Terracon Project No. 20175056

Terracon

The two (2) samples tested indicated tensile strengths of 160 and 215 psi. The report of test results is attached for your reference.

Hydraulic Conductivity (Flexible Wall Permeameter) of Clay Cover

A sample of the clay cover material was delivered to our Wheat Ridge, Colorado office for hydraulic conductivity testing. We understand laboratory compaction characteristics (Proctor – ASTM D698) of the clay cover materials indicated a maximum dry unit weight of 108.4 pounds per cubic foot (pcf) and an optimum moisture content of 16.6 percent. We were requested to remold the clay cover specimen to about 95 percent of the maximum dry unit weight (about 103 pcf) and about 2 percent below the optimum moisture content (14.6 percent). Test results indicated a hydraulic conductivity of about 7.39×10^{-8} centimeters per second (cm/sec). The report of test results is attached for your reference.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the laboratory test results, or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants, Inc.


Eric D. Bernhardt, P.E.
Geotechnical Department Manager




Todd A. Turney
Materials Department Manager

Attachments: Physical Properties of Riprap
Direct Tensile Strength of Intact Rock Core Specimens Test Results
Hydraulic Conductivity Determination Flexible Wall Permeameter Test Results
Copies to: Addressee (via e-mail)

Physical Properties of Riprap

1901 Sharp Point Drive, Unit C
Fort Collins, Colorado 80525
Tel: (970) 484-0359
Fax: (970) 484-0454

Client Name: MWH, now a part of Stantec
Address: 3325 South Timberline Road, #150
Fort Collins, Colorado 80525
Attn: Mr. Jason M. Cumbers, P.E.

Project Name Sequoyah Fuels Corporation Testing
Location: Gore, Oklahoma

Project No.: 20175056 **Date of Report** 26-Jul-17

Sample I.D.# or Description:
Riprap Durability Testing for the Sequoyah Fuels
Corporation, Gore, Oklahoma

Sampled By: Client **Date:** 3-Jul-17
Submitted By: Client **Date:** 3-Jul-17

Soil-Aggregate Type:
Proposed riprap materials
Reviewed By: Eric D. Bernhardt, P.E.
Senior Project Manager

Sieve Analysis, ASTM C136				Test Standards are ASTM unless otherw ise indicated w / "T" designation				
Sieve Size	X Passing Retained % Accumulative	Specification		Test		Standard	Results	Specifi- cation
		Min.	Max.	Fineness Modulus	C125			
6"				Rebound Hardness Number, H _R		D5873	39	
5"				Lightweight Pieces, %		C123		
4"				LA Abrasion, % Grade 1		C535	14	
3"				Sound- ness %	Sodium 2-1/2 to 2 in.	C88	0.3	
2-1/2"					2 to 1-1/2 in.	C88		
2"					1-1/2 to 1 in.	C88	0.2	
1-1/2"					1 to 3/4 in.	C88		
1"				Specific Gravity 4"	Absorption, %	C127	0.5	
3/4"					Bulk (Dry)	C127	2.659	
1/2"					Bulk (SSD)	C127	2.672	
3/8"					Apparent	C127	2.694	
#4				Specific Gravity 3"	Absorption, %	C127	0.6	
#8					Bulk (Dry)	C127	2.661	
#10					Bulk (SSD)	C127	2.678	
#16					Apparent	C127	2.706	
#20				Specific Gravity 2"	Absorption, %	C127	0.7	
#30					Bulk (Dry)	C127	2.659	
#40					Bulk (SSD)	C127	2.678	
#50					Apparent	C127	2.711	
#80				Specific Gravity -2"+3/4"	Absorption, %	C127	0.9	
#100					Bulk (Dry)	C127	2.658	
#200					Bulk (SSD)	C127	2.681	
					Apparent	C127	2.721	

Comments: Soundness Testing - Terracon was not provided with the full grain-size distribution for the riprap materials delivered to our office. Terracon can provide weighted calculations if provided with the grain-size distribution test results, upon your request. Refer to attached letter dated 7/26/17 for additional information.

Copies to: Addressee (via e-mail)

DIRECT TENSILE STRENGTH OF INTACT ROCK CORE SPECIMENS – ASTM D2936

Terracon

Client: Stantec Consulting Services, Inc. **Order No.** 20175056
Project: MWH Misc. Lab Testing **Date Typed:** 7-25-17
Date Drilled:

Description of Pavement or Structure: Limestone (Cored Rip Rap)

BOND TENSILE STRENGTH TESTS

Lab No.	5761	5762	5763
Condition of Core	Good	Good	Good
Length of Core (Approx)	2.029	2.046	2.216
Weight, gm.	262.67	268.54	287.01
Trimmed Length (in.)	2.029	2.046	2.216
Diameter of Core (in.)	1.977	1.970	1.973
Area of Core (sq.in.)	3.070	3.048	3.057
Total Load, Lbs.	660	N/A	494
Shear Strength (psi)	215	N/A	160

Respectfully submitted

Terracon



Tim Goodall,
Laboratory Manager

Terracon, 611 Lunken Park Drive, Cincinnati, Ohio 45226
P [513] 321-5816 F [513] 321-0294 terracon.com

HYDRAULIC CONDUCTIVITY DETERMINATION FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME (Mercury Permeometer Test)

Project : Sequoyah Fuels Disposal Cell

Date: 7/6/2017

Panel Number : P-1

Project No. : 20175056

Permeometer Data

Boring No.:	-	$a_p = 0.031416 \text{ cm}^2$	Set Mercury to Pipet Rp at beginning	Equilibrium	1.6	cm^3
Sample:	Remolded Clay Cover	$a_a = 0.767120 \text{ cm}^2$		Pipet Rp	16.8	cm^3
Depth (ft):	-	$M_1 = 0.030180$	$C = 0.0004288$	Annulus Ra	1.0	cm^3
Other Location:	Remolded	$M_2 = 1.040953$	$T = 0.0658646$			

Material Description : Sandy Lean Clay, 95% @ -2% omc

SAMPLE DATA

Wet Wt. sample + ring or tare :	534.44	g						
Tare or ring Wt. :	0.0	g						
Wet Wt. of Sample :	534.44	g						
Diameter :	2.80	in	7.11	cm ²	Before Test	After Test		
Length :	2.80	in	7.11	cm	Tare No.:	328	Tare No.:	123
Area:	6.16	in^2	39.73	cm ²	Wet Wt.+tare:	110.36	Wet Wt.+tare:	671.21
Volume :	17.24	in^3	282.53	cm ³	Dry Wt.+tare:	98.98	Dry Wt.+tare:	568.60
Unit Wt.(wet):	118.04	pcf	1.89	g/cm ^{^3}	Tare Wt:	21.04	Tare Wt:	101.91
Unit Wt.(dry):	103.00	pcf	1.65	g/cm ^{^3}	Dry Wt.:	77.94	Dry Wt.:	466.69
					Water Wt.:	11.38	Water Wt.:	102.61
					% moist.:	14.6	% moist.:	22.0

Assumed Specific Gravity: 2.70 Max Dry Density(pcf) = 108.4 OMC = 16.6

% of max = 95.0 +/- OMC = -2.00

Calculated % saturation: 93.26 Void ratio (e) = 0.64 Porosity (n) = 0.39

Test Pressures During Hydraulic Conductivity Test

Cell Pressure (psi) = 55.00 Back Pressure (psi) = 50.00 Confining Pressure = 5.00 psi

Note: The above value is Effective Confining Pressure

TEST READINGS

Z_1 (Mercury Height Difference @ t_1): 15.8 cm Hydraulic Gradient = 28.00

Date	elapsed t (seconds)	Z (pipet @ t)	DZp (cm)	temp (deg C)	a (temp corr)	k (cm/sec)	k (ft./day)	Reset = *
6/17/2013	300	16	0.782666	21	0.977	7.39E-08	2.09E-04	
6/17/2013	600	15.25	1.532666	21	0.977	7.43E-08	2.11E-04	
6/17/2013	900	14.55	2.232666	21	0.977	7.40E-08	2.10E-04	
6/17/2013	1200	13.9	2.882666	21	0.977	7.35E-08	2.08E-04	

SUMMARY

$k_a = 7.39\text{E-}08 \text{ cm/sec}$	Acceptance criteria = 50 %
k_i	V_m
$k_1 = 7.39\text{E-}08 \text{ cm/sec}$	0.0 %
$k_2 = 7.43\text{E-}08 \text{ cm/sec}$	0.5 %
$k_3 = 7.40\text{E-}08 \text{ cm/sec}$	0.1 %
$k_4 = 7.35\text{E-}08 \text{ cm/sec}$	0.6 %
	$V_m = \frac{ k_a - k_i }{k_a} \times 100$

Hydraulic conductivity	$k = 7.39\text{E-}08 \text{ cm/sec}$	$2.10\text{E-}04 \text{ ft/day}$
Void Ratio	$e = 0.64$	
Porosity	$n = 0.39$	
Bulk Density	$g = 1.89 \text{ g/cm}^3$	118.0 pcf
Water Content	$W = 0.24 \text{ cm}^3/\text{cm}^3$	(at 20 deg C)
Intrinsic Permeability	$k_{int} = 7.57\text{E-}13 \text{ cm}^2$	(at 20 deg C)



April 2, 2018

Stantec Consulting Services, Inc.
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Jason M. Cumbers, P.E.
Associate/Geotechnical Engineer
P: (970) 377-9410
E: jason.cumbers@stantec.com

Re: Laboratory Test Results
Riprap Durability Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20181002

Dear Mr. Cumbers:

Terracon Consultants, Inc. (Terracon) has completed the laboratory testing services for the project referenced above. These services were performed in general accordance with the Master Services Subconsultant Agreement Task Order (MSA # 40844-US SC, MSA dated November 20, 2013, Task Order fully executed on February 16, 2018). A total of six (6) 5-gallon bucket samples of limestone riprap were shipped directly from Sequoyah Fuels in Gore, Oklahoma to Terracon's office in Fort Collins, Colorado. A brief description of the requested laboratory testing procedures and details associated with each test performed for this project are presented below. Test results are summarized in the attached reports.

Impact Hammer Testing for Rock

Terracon performed laboratory testing to determine the rebound hardness number of rock material using a spring-driven steel impact hammer (Schmidt Hammer) in general accordance with ASTM D 5873. The specimens selected for rock hardness testing consisted of blocks of limestone riprap with rough dimensions of approximately 6" by 8" by 8". Prior to performing our testing, a smooth surface was cut on one side of each of the blocks using a wet mason saw. The blocks were allowed to dry at room temperature for three days prior to performing rock hardness testing. The impact hammer used to perform our testing consisted of an ELE Model #35-1475. The blocks were secured in a v-block and ten tests were conducted on each of the prepared face of the riprap samples in Position B (vertical). Testing was performed in our laboratory with an ambient air temperature of about 71 degrees Fahrenheit. A correction factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 38.



Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
April 2, 2018 ■ Terracon Project No. 20181002



Los Angeles Abrasion

A portion of the riprap sample was also subjected to Los Angeles Abrasion testing which was performed in general accordance with ASTM C 535. However, we were requested to reduce the number of revolutions to 100 for this testing in accordance with NRC NUREG-1623 Appendix D Procedures for Designing Riprap Erosion Protection. After visual representative sample selection and crushing to the required size fractions utilizing a single-jaw laboratory crusher, testing was performed in accordance with Grading 1 presented in Table 1 of the ASTM standard. We measured an L.A. Abrasion value of 11 percent.

Specific Gravity

Specific gravity and absorption testing was also performed on a portion of the riprap sample in general accordance with ASTM C 127. Test results for the applicable separate size fractions and are report on the attached Physical Properties of Riprap report.

Sodium Sulfate Soundness

Terracon also performed laboratory testing to determine the soundness of the riprap by use of sodium sulfate in general accordance with ASTM C 88. It is our understanding that the Client sampled and delivered material smaller in size fraction than is specified and will be utilized in application. It is cautioned that the size of material provided test results that may vary significantly from in-place materials based upon rock quality and size dimensions. The following data was recorded during completion of the test.

Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.	3013.4	0.8
2 to 1½ in.	1948.0	
1½ to 1 in.	1017.9	2.0
1 to ¾ in.	502.4	

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
April 2, 2018 ■ Terracon Project No. 20181002



Sincerely,

Terracon Consultants, Inc.

Eric R. Reifschneider
Project Manager

Todd A. Turney
Materials Department Manager

Attachments: Physical Properties of Riprap

Copies to: Addressee (via e-mail)

Physical Properties of Riprap

1901 Sharp Point Drive, Unit C
Fort Collins, Colorado 80525
Tel: (970) 484-0359
Fax: (970) 484-0454

Client Name: Stantec Consulting Services, Inc.
Address: 3325 South Timberline Road, #150
Fort Collins, Colorado 80525
Attn: Mr. Jason M. Cumbers, P.E.
Project Name: Sequoyah Fuels Corporation Testing
Location: Gore, Oklahoma

Project No.: 20181002 **Date of Report:** 3/30/2018
Sample I.D.# or Description:
Riprap Durability Testing for the Sequoyah Fuels Corporation, Gore, Oklahoma

Sampled By: Client **Date:** 3/9/18
Submitted By: Client **Date:** 3/16/18

Soil-Aggregate Type:
Proposed riprap materials
Reviewed By: Eric R. Reifschneider
Project Manager

Sieve Analysis, ASTM C136				Test Standards are ASTM unless otherwise indicated w/ "T" designation				
Sieve Size	X Passing Retained % Accumulative	Specification		Test		Standard	Results	Specifi- cation
		Min.	Max.					
6"				Fineness Modulus		C125		
5"				Rebound Hardness Number, H _R		D5873	38	
4"				Lightweight Pieces, %		C123		
3"				LA Abrasion, %		Grade 1 C535	11	
2-1/2"				Sodium Sound- ness %	2-1/2 to 2 in.	C88	0.8	
2"					2 to 1-1/2 in.	C88		
1-1/2"					1-1/2 to 1 in.	C88	2.0	
1"					1 to 3/4 in.	C88		
3/4"				Specific Gravity 4"	Absorption, %	C127	.9	
1/2"					Bulk (Dry)	C127	2.623	
3/8"					Bulk (SSD)	C127	2.648	
#4					Apparent	C127	2.689	
#8				Specific Gravity 3"	Absorption, %	C127	.6	
#10					Bulk (Dry)	C127	2.654	
#16					Bulk (SSD)	C127	2.671	
#20					Apparent	C127	2.699	
#30				Specific Gravity 2"	Absorption, %	C127	1.00	
#40					Bulk (Dry)	C127	2.623	
#50					Bulk (SSD)	C127	2.648	
#80					Apparent	C127	2.692	
#100				Specific Gravity -2"+3/4"	Absorption, %	C127	1.00	
#200					Bulk (Dry)	C127	2.631	
					Bulk (SSD)	C127	2.657	
					Apparent	C127	2.701	

Comments: Soundness Testing - Terracon was not provided with the full grain-size distribution for the riprap materials delivered to our office. Terracon can provide weighted calculations if provided with the grain-size distribution test results, upon your request. Refer to attached letter dated 7/26/17 for additional information.

Copies to: Addressee (via e-mail)



June 13, 2018

Stantec Consulting Services, Inc.
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Jason M. Cumbers, P.E.
Associate/Geotechnical Engineer
P: (970) 377-9410
E: jason.cumbers@stantec.com

Re: Laboratory Test Results
Riprap Durability Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20181002

Dear Mr. Cumbers:

Terracon Consultants, Inc. (Terracon) has completed the laboratory testing services for the project referenced above. These services were performed in general accordance with the Master Services Subconsultant Agreement Task Order (MSA # 40844-US SC, MSA dated November 20, 2013, Task Order fully executed on February 16, 2018). A second round of samples with a total of six (6) 5-gallon bucket samples of limestone riprap were shipped directly from Sequoyah Fuels in Gore, Oklahoma to Terracon's office in Fort Collins, Colorado. A brief description of the requested laboratory testing procedures and details associated with each test performed for this project are presented below. Test results are summarized in the attached reports.

Impact Hammer Testing for Rock

Terracon performed laboratory testing to determine the rebound hardness number of rock material using a spring-driven steel impact hammer (Schmidt Hammer) in general accordance with ASTM D 5873. The specimens selected for rock hardness testing consisted of blocks of limestone riprap with rough dimensions of approximately 6" by 8" by 8". Prior to performing our testing, a smooth surface was cut on one side of each of the blocks using a wet mason saw. The blocks were allowed to dry at room temperature for three days prior to performing rock hardness testing. The impact hammer used to perform our testing consisted of an ELE Model #35-1475. The blocks were secured in a v-block and ten tests were conducted on each of the prepared face of the riprap samples in Position B (vertical). Testing was performed in our laboratory with an ambient air temperature of about 71 degrees Fahrenheit. A correction factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 40.



Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
June 13, 2018 ■ Terracon Project No. 20181002



Los Angeles Abrasion

A portion of the riprap sample was also subjected to Los Angeles Abrasion testing which was performed in general accordance with ASTM C 535. However, we were requested to reduce the number of revolutions to 100 for this testing in accordance with NRC NUREG-1623 Appendix D Procedures for Designing Riprap Erosion Protection. After visual representative sample selection and crushing to the required size fractions utilizing a single-jaw laboratory crusher, testing was performed in accordance with Grading 1 presented in Table 1 of the ASTM standard. We measured an L.A. Abrasion value of 10 percent.

Specific Gravity

Specific gravity and absorption testing was also performed on a portion of the riprap sample in general accordance with ASTM C 127. Test results for the applicable separate size fractions and are report on the attached Physical Properties of Riprap report.

Sodium Sulfate Soundness

Terracon also performed laboratory testing to determine the soundness of the riprap by use of sodium sulfate in general accordance with ASTM C 88. It is our understanding that the Client sampled and delivered material smaller in size fraction than is specified and will be utilized in application. It is cautioned that the size of material provided test results that may vary significantly from in-place materials based upon rock quality and size dimensions. The following data was recorded during completion of the test.

Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.	3009.3	0.2
2 to 1½ in.	1995.0	
1½ to 1 in.	1004.7	0.4
1 to ¾ in.	504.0	

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
June 13, 2018 ■ Terracon Project No. 20181002

Terracon

Sincerely,

Terracon Consultants, Inc.



Eric R. Reifschneider
Project Manager



Craig L. Nelson
Project Manager

Attachments: Physical Properties of Riprap

Copies to: Addressee (via e-mail)

Physical Properties of Riprap

1901 Sharp Point Drive, Unit C
Fort Collins, Colorado 80525
Tel: (970) 484-0359
Fax: (970) 484-0454

Client Name: Stantec Consulting Services, Inc.
Address: 3325 South Timberline Road, #150
Fort Collins, Colorado 80525
Attn: Mr. Jason M. Cumbers, P.E.
Project Name: Sequoyah Fuels Corporation Testing
Location: Gore, Oklahoma

Project No.: 20181002 **Date of Report:** 6/13/2018
Sample I.D.# or Description:
Riprap Durability Testing for the Sequoyah Fuels
Corporation, Gore, Oklahoma
Sample #2

Sampled By: Client **Date:** 5/28/2018
Submitted By: Client **Date:** 5/28/2018

Soil-Aggregate Type:
Proposed riprap materials
Reviewed By: Eric R. Reifschneider
Project Manager

Sieve Analysis, ASTM C136				Test Standards are ASTM unless otherwise indicated w/ "T" designation				
Sieve Size	X Passing Retained	% Accumulative	Specification		Test	Standard	Results	Specifi- cation
			Min.	Max.				
6"					Fineness Modulus	C125		
5"					Rebound Hardness Number, H _R	D5873	40	
4"					Lightweight Pieces, %	C123		
3"					LA Abrasion, % Grade 1	C535	10	
2-1/2"					Sodium Sound- ness %	2-1/2 to 2 in.	0.2	
2"						2 to 1-1/2 in.		
1-1/2"						1-1/2 to 1 in.	0.4	
1"						1 to 3/4 in.		
3/4"					Specific Gravity 4"	Absorption, %	C127	0.41
1/2"						Bulk (Dry)	C127	2.655
3/8"						Bulk (SSD)	C127	2.666
#4						Apparent	C127	2.684
#8					Specific Gravity 3"	Absorption, %	C127	0.49
#10						Bulk (Dry)	C127	2.654
#16						Bulk (SSD)	C127	2.667
#20						Apparent	C127	2.689
#30					Specific Gravity 2"	Absorption, %	C127	0.64
#40						Bulk (Dry)	C127	2.655
#50						Bulk (SSD)	C127	2.672
#80						Apparent	C127	2.700
#100					Specific Gravity -2"+3/4"	Absorption, %	C127	0.72
#200						Bulk (Dry)	C127	2.654
						Bulk (SSD)	C127	2.673
						Apparent	C127	2.706

Comments: Soundness Testing - Terracon was not provided with the full grain-size distribution for the riprap materials delivered to our office. Terracon can provide weighted calculations if provided with the grain-size distribution test results, upon your request. Refer to attached letter dated 6/13/18 for additional information.

Copies to: Addressee (via e-mail)



July 12, 2018

Stantec Consulting Services, Inc.
3325 South Timberline Road, #150
Fort Collins, Colorado 80525

Attn: Mr. Jason M. Cumbers, P.E.
Associate/Geotechnical Engineer
P: (970) 377-9410
E: jason.cumbers@stantec.com

Re: Laboratory Test Results
Riprap Durability Testing for the Sequoyah Fuels Corporation
Gore, Oklahoma
Terracon Project No. 20181002

Dear Mr. Cumbers:

Terracon Consultants, Inc. (Terracon) has completed the laboratory testing services for the project referenced above. These services were performed in general accordance with the Master Services Subconsultant Agreement Task Order (MSA # 40844-US SC, MSA dated November 20, 2013, Task Order fully executed on February 16, 2018). A third round of samples with a total of six (6) 5-gallon bucket samples of limestone riprap were shipped directly from Sequoyah Fuels in Gore, Oklahoma to Terracon's office in Fort Collins, Colorado. A brief description of the requested laboratory testing procedures and details associated with each test performed for this project are presented below. Test results are summarized in the attached reports.

Impact Hammer Testing for Rock

Terracon performed laboratory testing to determine the rebound hardness number of rock material using a spring-driven steel impact hammer (Schmidt Hammer) in general accordance with ASTM D 5873. The specimens selected for rock hardness testing consisted of blocks of limestone riprap with rough dimensions of approximately 6" by 8" by 8". Prior to performing our testing, a smooth surface was cut on one side of each of the blocks using a wet mason saw. The blocks were allowed to dry at room temperature for three days prior to performing rock hardness testing. The impact hammer used to perform our testing consisted of an ELE Model #35-1475. The blocks were secured in a v-block and ten tests were conducted on each of the prepared face of the riprap samples in Position B (vertical). Testing was performed in our laboratory with an ambient air temperature of about 71 degrees Fahrenheit. A correction factor of 1.0 was applied to the average rebound hardness number, H_R which was determined to be 41.



Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
July 12, 2018 ■ Terracon Project No. 20181002



Los Angeles Abrasion

A portion of the riprap sample was also subjected to Los Angeles Abrasion testing which was performed in general accordance with ASTM C 535. However, we were requested to reduce the number of revolutions to 100 for this testing in accordance with NRC NUREG-1623 Appendix D Procedures for Designing Riprap Erosion Protection. After visual representative sample selection and crushing to the required size fractions utilizing a single-jaw laboratory crusher, testing was performed in accordance with Grading 1 presented in Table 1 of the ASTM standard. We measured an L.A. Abrasion value of 8 percent.

Specific Gravity

Specific gravity and absorption testing was also performed on a portion of the riprap sample in general accordance with ASTM C 127. Test results for the applicable separate size fractions and are report on the attached Physical Properties of Riprap report.

Sodium Sulfate Soundness

Terracon also performed laboratory testing to determine the soundness of the riprap by use of sodium sulfate in general accordance with ASTM C 88. It is our understanding that the Client sampled and delivered material smaller in size fraction than is specified and will be utilized in application. It is cautioned that the size of material provided test results that may vary significantly from in-place materials based upon rock quality and size dimensions. The following data was recorded during completion of the test.

Soundness of Riprap		
Sieve Size	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test
2½ to 2 in.	3010.8	0.1
2 to 1½ in.	1997.2	
1½ to 1 in.	1005.8	0.4
1 to ¾ in.	506.6	

Note: We were not provided with a grain-size distribution for the riprap materials delivered to our office for testing and therefore a weighted percent loss was unable to be determined.

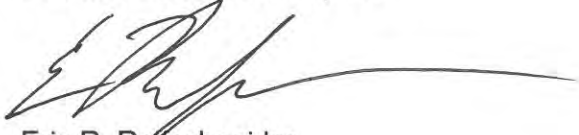
Laboratory Test Results

Sequoyah Fuels Corporation Riprap and Clay Cover ■ Gore, Oklahoma
July 12, 2018 ■ Terracon Project No. 20181002

Terracon

Sincerely,

Terracon Consultants, Inc.



Eric R. Reitschneider
Project Manager



Todd A. Turney
Materials Department Manager

Attachments: Physical Properties of Riprap

Copies to: Addressee (via e-mail)

Physical Properties of Riprap

1901 Sharp Point Drive, Unit C
Fort Collins, Colorado 80525
Tel: (970) 484-0359
Fax: (970) 484-0454

Client Name: Stantec Consulting Services, Inc.
Address: 3325 South Timberline Road, #150
Fort Collins, Colorado 80525
Attn: Mr. Jason M. Cumbers, P.E.
Project Name: Sequoyah Fuels Corporation Testing
Location: Gore, Oklahoma

Project No.: 20181002 **Date of Report:** 7/12/2018
Sample I.D.# or Description:
Riprap Durability Testing for the Sequoyah Fuels
Corporation, Gore, Oklahoma
Sample #3

Sampled By: Client **Date:** 6/20/18
Submitted By: Client **Date:** 6/20/18

Soil-Aggregate Type:
Proposed riprap materials
Reviewed By: Eric R. Reifschneider
Project Manager

Sieve Analysis, ASTM C136				Test Standards are ASTM unless otherwise indicated w/ "T" designation				
Sieve Size	X Passing Retained	% Accumulative	Specification		Test	Standard	Results	Specifi- cation
			Min.	Max.				
6"					Fineness Modulus	C125		
5"					Rebound Hardness Number, H _R	D5873	41	
4"					Lightweight Pieces, %	C123		
3"					LA Abrasion, % Grade 1	C535	8	
2-1/2"					Sodium Sound- ness %	2-1/2 to 2 in.	0.1	
2"						2 to 1-1/2 in.		
1-1/2"						1-1/2 to 1 in.	0.4	
1"						1 to 3/4 in.		
3/4"					Specific Gravity 4"	Absorption, %	C127	0.32
1/2"						Bulk (Dry)	C127	2.656
3/8"						Bulk (SSD)	C127	2.665
#4						Apparent	C127	2.679
#8					Specific Gravity 3"	Absorption, %	C127	0.44
#10						Bulk (Dry)	C127	2.655
#16						Bulk (SSD)	C127	2.667
#20						Apparent	C127	2.686
#30					Specific Gravity 2"	Absorption, %	C127	0.71
#40						Bulk (Dry)	C127	2.653
#50						Bulk (SSD)	C127	2.672
#80						Apparent	C127	2.704
#100					Specific Gravity -2"+3/4"	Absorption, %	C127	0.73
#200						Bulk (Dry)	C127	2.655
						Bulk (SSD)	C127	2.666
						Apparent	C127	2.669

Comments: Soundness Testing - Terracon was not provided with the full grain-size distribution for the riprap materials delivered to our office. Terracon can provide weighted calculations if provided with the grain-size distribution test results, upon your request. Refer to attached letter dated 7/26/17 for additional information.

Copies to: Addressee (via e-mail)

PHASE IV (COVER) AS-BUILT REPORT

Appendix C Laboratory and Field QA Test Results

C.5 CLAY PERMEABILITY TEST RESULTS



HYDRAULIC CONDUCTIVITY DETERMINATION FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME (Mercury Permeometer Test)

Project : Sequoyah Fuels Disposal Cell

Date: 7/6/2017

Panel Number : P-1

Project No. : 20175056

Permeometer Data

Boring No.:	-	$a_p = 0.031416 \text{ cm}^2$	Set Mercury to Pipet Rp at beginning	Equilibrium	1.6	cm^3
Sample:	Remolded Clay Cover	$a_a = 0.767120 \text{ cm}^2$		Pipet Rp	16.8	cm^3
Depth (ft):	-	$M_1 = 0.030180$	$C = 0.0004288$	Annulus Ra	1.0	cm^3
Other Location:	Remolded	$M_2 = 1.040953$	$T = 0.0658646$			

Material Description : Sandy Lean Clay, 95% @ -2% omc

SAMPLE DATA

Wet Wt. sample + ring or tare :	534.44	g						
Tare or ring Wt. :	0.0	g						
Wet Wt. of Sample :	534.44	g						
Diameter :	2.80	in	7.11	cm ²	Before Test	After Test		
Length :	2.80	in	7.11	cm	Tare No.:	328	Tare No.:	123
Area:	6.16	in^2	39.73	cm ²	Wet Wt.+tare:	110.36	Wet Wt.+tare:	671.21
Volume :	17.24	in^3	282.53	cm ³	Dry Wt.+tare:	98.98	Dry Wt.+tare:	568.60
Unit Wt.(wet):	118.04	pcf	1.89	g/cm ^{^3}	Tare Wt:	21.04	Tare Wt:	101.91
Unit Wt.(dry):	103.00	pcf	1.65	g/cm ^{^3}	Dry Wt.:	77.94	Dry Wt.:	466.69
					Water Wt.:	11.38	Water Wt.:	102.61
					% moist.:	14.6	% moist.:	22.0

Assumed Specific Gravity: 2.70 Max Dry Density(pcf) = 108.4 OMC = 16.6

% of max = 95.0 +/- OMC = -2.00

Calculated % saturation: 93.26 Void ratio (e) = 0.64 Porosity (n) = 0.39

Test Pressures During Hydraulic Conductivity Test

Cell Pressure (psi) = 55.00 Back Pressure (psi) = 50.00 Confining Pressure = 5.00 psi

Note: The above value is Effective Confining Pressure

TEST READINGS

Z_1 (Mercury Height Difference @ t_1): 15.8 cm Hydraulic Gradient = 28.00

Date	elapsed t (seconds)	Z (pipet @ t)	DZp (cm)	temp (deg C)	a (temp corr)	k (cm/sec)	k (ft./day)	Reset = *
6/17/2013	300	16	0.782666	21	0.977	7.39E-08	2.09E-04	
6/17/2013	600	15.25	1.532666	21	0.977	7.43E-08	2.11E-04	
6/17/2013	900	14.55	2.232666	21	0.977	7.40E-08	2.10E-04	
6/17/2013	1200	13.9	2.882666	21	0.977	7.35E-08	2.08E-04	

SUMMARY

$k_a = 7.39\text{E-}08 \text{ cm/sec}$	Acceptance criteria = 50 %
k_i	V_m
$k_1 = 7.39\text{E-}08 \text{ cm/sec}$	0.0 %
$k_2 = 7.43\text{E-}08 \text{ cm/sec}$	0.5 %
$k_3 = 7.40\text{E-}08 \text{ cm/sec}$	0.1 %
$k_4 = 7.35\text{E-}08 \text{ cm/sec}$	0.6 %
	$V_m = \frac{ k_a - k_i }{k_a} \times 100$

Hydraulic conductivity	$k = 7.39\text{E-}08 \text{ cm/sec}$	$2.10\text{E-}04 \text{ ft/day}$
Void Ratio	$e = 0.64$	
Porosity	$n = 0.39$	
Bulk Density	$g = 1.89 \text{ g/cm}^3$	118.0 pcf
Water Content	$W = 0.24 \text{ cm}^3/\text{cm}^3$	(at 20 deg C)
Intrinsic Permeability	$k_{int} = 7.57\text{E-}13 \text{ cm}^2$	(at 20 deg C)

PHASE IV (COVER) AS-BUILT REPORT

Appendix C Laboratory and Field QA Test Results

C.6 LINER BEDDING PERMEABILITY TEST RESULTS



**Construction Materials Testing Laboratories**

1486 East Poplar Street 121 East College Street
Fort Gibson, OK 74434 Broken Arrow, OK 74012
918.478.6300 Office 918.258.9442 Office
918.478.5498 Fax 918.258.9488 Fax

Lab No. 09-900

Summary Results of Tests - Permeability

Client: Sequoyah Fuels Corp.
PO Box 610
Gore, OK 74435

Report Date: December 19, 2009

Project: 09-1341

Sequoyah Fuels Corporation - Disposal Cell
Gore, Oklahoma

Location	Sample Description	Average Permeability (cm/sec)
Main Plant Site	Silty Sand - Strong Brown	3.11E-03

Remarks:

CC & Invoice: Sequoyah Fuels Corporation
CC: jhellis@sequoyahfuels.com
FILE

Respectfully submitted,
Cook & Associates Engineering, Inc.

Nathan Coe
Director of Laboratories

PHASE IV (COVER) AS-BUILT REPORT

Appendix C Laboratory and Field QA Test Results

C.7 SAND CONE TEST RESULTS



**Construction Materials Testing Laboratories**1486 East Poplar Street
Fort Gibson, OK 74434
918.478.6300 Office
918.478.5498 Fax121 East College Street
Broken Arrow, OK 74012
918.258.9442 Office
918.258.9488 FaxLab No. **13-511****Sand Cone Density Test****Client:** Sequoyah Fuels Corporation

John Ellis

P.O. Box 916

Gore, OK 74435

Report Date: August 29, 2013**Project:** 09-1341

Sequoyah Fuels Corporation, Disposal Cell

Gore, Oklahoma

1	Wt. of Proctor Mold	2042.8	= W1
2	Wt. of Proctor Mold + Sand	3573.4	= W2
3	Volume of Mold	0.0332	= V1
4	Dry Unit Wt. = (W2 - W1) / V1	50.8	= Yd

Calibration Cone

5	Wt. of Plastic Gallon + Cone + Sand (before use)	7146.4	= W3
6	Wt. of Plastic Gallon + Cone + Sand (after use)	5469.7	= W4
7	Wt. of Sand to Fill Cone = W3 - W4	1676.7	= Wc

Field Test Results

8	Wt. of Plastic Gallon + Cone + Sand (before use)	7053.5	= W5
9	Wt. of Plastic Gallon + Cone + Sand (after use)	4303.0	= W6
10	Volume of Hole = (W5 - W6 - WC)/Yd	21.131	= V2
11	Moisture, Pan Wt.	1042.0	= W7
12	Moisture, Wet Wt. + Pan	3078.0	= W8
13	Moisture, Dry Wt. + Pan	2781.0	= W9
14	Moist Unit Wt. soil in the field = (W8 - W7)/V2	96.4	= Yt
15	Moisture in field = (W8 - W9) / (W9 - W7) *100	17.1	
16	Dry Unit Wt. in the field	82.3	

Remarks: Calcium Flouride Sludge & Flyash

CC & Invoice: Sequoyah Fuels Corporation
CC: FILERespectfully Submitted,
Quality testingShelby Jackson
Director of Laboratories

CLAY BASE MOISTURE CONTENTS

LOD 83013

Test Conducted by: Kenny Schlag

Sample Material: Calcium Fluoride Sludge

Equation: $w = [(M_{cws} - M_{cs}) / (M_{cs} - M_c)] \times 100 = M_w / M_s \times 100$

		1	2	3	4	Totals	Combined
w	water content, %						
M_{cws}	mass of container and wet specimen, g	745	828	754	751	3078	2036
M_{cs}	mass of container and dry specimen, g	672	746	688	675	2781	1739
M_c	mass of container, g	260	261	261	260	1042	1042
M_w	mass of water ($M_w = M_{cws} - M_{cws}$), g	73	82	66	76	297	297
M_s	mass of solid particles ($M_s = M_{cws} - M_c$), g	412	485	427	415	1739	1739
	% Moisture Content	17.7	16.9	15.5	18.3	17.1	17.1

NOTE:

Entire Wet Sample = 2036 gms

Sample was split four X for drying

Entire dry Sample = 1739 gms

PHASE IV (COVER) AS-BUILT REPORT

Appendix D Synthetic Liner Installation Reports

Appendix D SYNTHETIC LINER INSTALLATION REPORTS

Appendix Contents:

D.1 2015 Liner Installation Reports

D.2 2020 Liner Installation Reports

D.3 2021 Liner Installation Reports

D.4 2023 Liner Installation Reports

D.5 2025 Liner Installation Reports

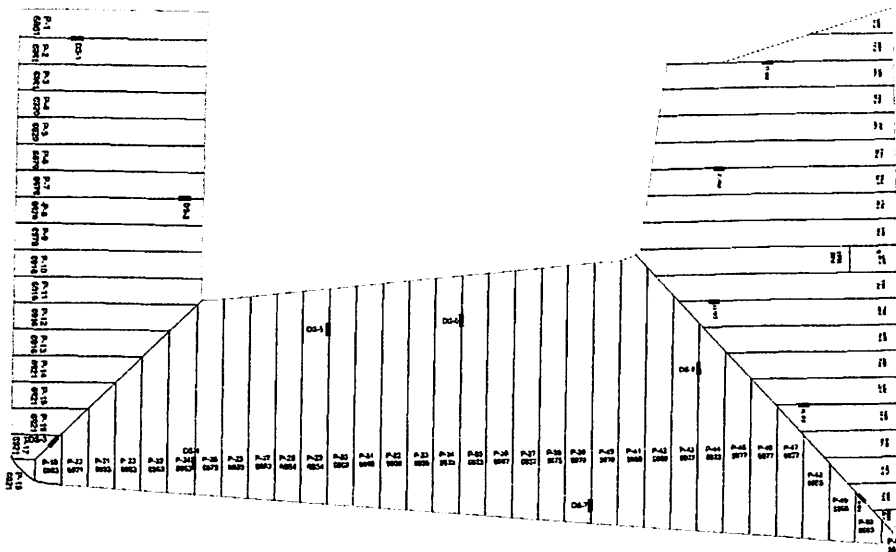


PHASE IV (COVER) AS-BUILT REPORT

Appendix D Synthetic Liner Installation Reports

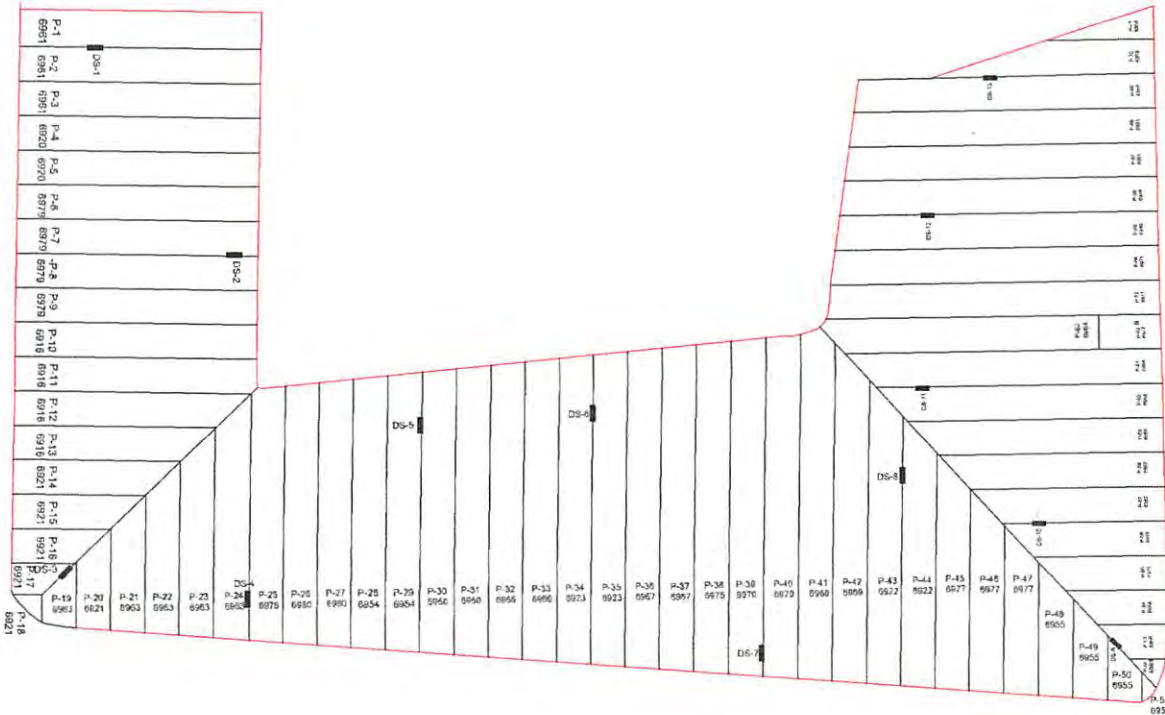
D.1 2015 LINER INSTALLATION REPORTS





EnivroCon Systems inc.
#150603

Sequoyah Fuel disposal cell
A, B, C, and D
outside slope
Hdpe 60 mil texture liner
Gore, Ok



EnivroCon Systems inc.
#150603

Sequoyah Fuel disposal cell
A, B, C, and D
outside slope
Hdpe 60 mil texture liner
Gore, Ok

P.O. Box 673048 Bus: 281-443-2597
Houston, TX 77267 Fax: 281-443-7551
Toll Free: 1-888-449-3236

PROJECT NO.: 150603
PROJECT NAME: Sequoyah Fuel Cell cap
CLIENT: Sequoyah Fuel Corp.
JOB DESCRIPTION: Liner Cap
% COMPLETE OF TOTAL JOB: 100%

I, the undersigned, duly authorized representative of: _____ do
hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge
the work has been completed in accordance with specifications and the terms and conditions of the contract.

Certificate accepted by EnviroCon Systems Inc. Representative.

Name Yoko Saeganshuwa	Signature 	Title Supt.	Date 9/28/15
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Envirocon Systems Trial Weld Log

Project Name: Sequoyah Fuels Disposal cell cap								Site Supervisor: Youko S									
Location: Gore, Ok								Material: HDPE									
Job Number: 150603								Sheet Thickness: 60 mil Extrusion weld: 78 PPI				Minimum Shear: 120					
Q.A. Tech : Youko S								Smooth Liner				Minimum Peel: 91 ppl Minimum Shear: 120 ppl					
Trial No.	Date of Trial	Time of Trial	Technicians ID Number	Machine Number	Machine Temp.	Wedge Speed	Speed Preheat	Peel ppl	Peel ppl	Peel ppl	Sheet Weld	Shear ppl	Shear ppl	Material Weld		FTB Y / N	Pass / Fail
1	9-22-15	7:30	O.Y	W-94	850	5.00		136	144	131	hdpe	203	212	hdpe		Y	Pass
2	9-22-15	7:23	M.R	W-93	850	5.00		140	133	138	hdpe	186	197	hdpe		Y	Pass
3	9-22-15	1:07	M.R	W-93	850	5.00		134	145	161	hdpe	186	197	hdpe		Y	Pass
4	9-22-15	1:03	O.Y	W-94	850	5.00		145	156	136	hdpe	195	196	hdpe		Y	Pass
5	9-23-15	7:31	M.R	W-93	850	5.00		143	144	139	hdpe	195	196	hdpe		Y	Pass
6	9-23-15	7:30	O.Y	W-94	850	5.0		138	134	143	hdpe	187	187	hdpe		Y	Pass
7	9-23-15	11:00	O.Y	EXT-21	265	5		144	140	146	hdpe	191	187	hdpe		Y	Pass
8	9-23-15	11:30	M.M	EXT-21	265	7		124	120	127	hdpe	191	187	hdpe		Y	Pass
9	9-25-15	7:49	MR	W-93	850	5.00		140	156	158	hdpe	203	198	hdpe		Y	Pass
10	9-25-15	8:02	O.Y	W-94	850	5.00		142	140	136	hdpe	203	198	hdpe		Y	Pass
11	9-25-15	1:15	O.Y	W-94	850	5.00		177	178	176	hdpe	206	224	hdpe		Y	Pass
12	9-25-15	1:20	M.R	W-93	850	5.00		161	158	135	hdpe	177	170	hdpe		Y	Pass
13	9-26-15	7:38	M.R	W-93	850	5.00		94	98	86	hdpe	177	170	hdpe		Y	Pass
14	9-26-15	7:35	O.Y	W-94	850	5.00		136	123	134	hdpe	171	171	hdpe		Y	Pass
15								167	140	156	hdpe	220	223	hdpe		Y	
								168	156	130	hdpe	210	208	hdpe		Y	Pass
								157	156	169	hdpe	210	208	hdpe		Y	Pass
								168	149	147	hdpe	181	178	hdpe		Y	Pass
								143	141	139	hdpe	181	178	hdpe		Y	Pass
								146	138	146	hdpe	159	160	hdpe		Y	Pass
								126	131	125	hdpe	159	160	hdpe		Y	Pass
								113	124	129	hdpe	219	227	hdpe		Y	Pass
								153	155	154	hdpe	219	227	hdpe		Y	Pass
								174	149	150	hdpe	216	212	hdpe		Y	Pass
								150	150	157	hdpe	216	212	hdpe		Y	Pass
								160	150	146	hdpe			hdpe		Y	

Envirocon Systems Panel Placement Log

Project Name: Sequoyah fuels disposal cap				Site Supervisor : YoukoS		
Location: Gore, OK				Material: HDPE		
Job Number: 150603				Sheet Thickness: 60 ml		
Q.A. Tech : Arturo V				Texture Liner		
Panel Number	Roll Number	Deployment Date	Width (Feet)	Length (Feet)		Location
1	6961	09/21/15	22	155'		East slope
2	6961	09/21/15	22	155'		East slope
3	6961	09/21/15	22	155'		East slope
4	6920	09/21/15	22	155'		East slope
5	6920	09/21/15	22	155'		East slope
6	6920	09/21/15	22	155'		East slope
7	6979	09/21/15	22	160'		East slope
8	6979	09/21/15	22	169'		East slope
9	6979	09/21/15	22	159'		East slope
10	6916	09/21/15	22	136'		East slope
11	6916	09/21/15	22	107'		East slope
12	6916	09/21/15	22	91'		East slope
13	6916	09/21/15	22	71'		East slope
14	6921	09/21/15	22	53'		East slope
15	6921	09/21/15	22	37'		East slope
16	6921	09/21/15	22	22'		East slope
17	6921	09/21/15	22	22'		East slope
18	6921	09/21/15	22	22'		East slope
19	6963	09/22/15	22	57'		North slope
20	6921	09/22/15	22	87'		North slope
21	6963	09/22/15	22	116'		North slope
22	6963	09/22/15	22	146'		North slope
23	6963	09/22/15	22	173'		North slope
24	6978	09/22/15	22	183'		North slope
25	6978	09/22/15	22	195'		North slope
26	6980	09/22/15	22	211'		North slope
27	6980	09/22/15	22	213'		North slope
28	6954	09/22/15	22	212'		North slope
29	6954	09/22/15	22	211'		North slope
30	6960	09/22/15	22	213'		North slope
31	6960	09/22/15	22	213'		North slope
32	6966	09/22/15	22	214'		North slope
33	6966	09/22/15	22	213'		North slope

Envirocon Systems Panel Placement Log

Project Name: Sequoyah fuels disposal cap					Site Supervisor : YoukoS	
Location: Gore, OK					Material: HDPE	
Job Number: 150603					Sheet Thickness: 60 ml	
Q.A. Tech : Arturo V					Texture Liner	
Panel Number	Roll Number	Deployment Date	Width (Feet)	Length (Feet)		Location
34	6923	09/22/15	22	213'		North slope
35	6923	09/22/15	22	209'		North slope
36	6967	09/22/15	22	206'		North slope
37	6967	09/22/15	22	211'		North slope
38	6975	09/22/15	22	216'		North slope
39	6875	09/22/15	22	217'		North slope
40	6970	09/25/15	22	224'		North slope
41	6970	09/25/15	22	237'		North slope
42	6969	09/25/15	22	243'		North slope
43	6969	09/25/15	22	232'		North slope
44	6922	09/25/15	22	213'		North slope
45	6922	09/25/15	22	190'		North slope
46	6977	09/25/15	22	172'		North slope
47	6977	09/25/15	22	148'		North slope
48	6977	09/25/15	22	126'		North slope
49	6955	09/25/15	22	103'		North slope
50	6922	09/25/15	22	93'		North slope
51	6922	09/25/15	22	18'		North slope
52	6968	09/25/15	22	22'		west slope
53	6968	09/25/15	22	87'		west slope
54	6968	09/25/15	22	133'		west slope
55	6976	09/25/15	22	173'		west slope
56	6976	09/25/15	22	203'		west slope
57	6957	09/25/15	22	233'		west slope
58	6957	09/25/15	22	257'		west slope
59	6955	09/25/15	22	258'		west slope
60	6968	09/26/15	22	253'		west slope
61	6964	09/26/15	22	251'		west slope
62	6964	09/26/15	22	226'		west slope
63	6971	09/26/15	22	251'		west slope
64	6971	09/26/15	22	252'		west slope
65	6946	09/26/15	22	253'		west slope
66	6946	09/26/15	22	252'		west slope

Envirocon Systems Panel Placement Log

[illegible]

NORTH-EAST-CORNER Tie in N.E.C.T

Envirocon Systems Seam Log

Project Name: Sequoyah Fuel Cell Cap				Site Supervisor: Youko S		
Location: Gore, Ok				Material: HDPE		
Job Number: 150603				Sheet Thickness: 60 ml Texture		
Q.A. Tech : YoukoS				Smooth Liner		
Seam Number	Location of Weld	Date of Weld	Type of Weld	Length of Seam	Machine Number	Technician ID Number
P1-P2	EAST-SLOPE	9-21-15	Fusion	155' FOOT	93	M.R
P2-P3	EAST-SLOPE	9-21-15	Fusion	155'	94	O.Y
P3-P4	EAST-SLOPE	9-21-15	Fusion	155'	93	M.R
P4-P5	EAST-SLOPE	9-21-15	Fusion	155'	94	O.Y
P5-P6	EAST-SLOPE	9-21-15	Fusion	155'	93	M.R
P6-P7	EAST-SLOPE	9-21-15	Fusion	155'	93	M.R
P7-P8	EAST-SLOPE	9-21-15	Fusion	160'	94	O.Y
P8-P9	EAST-SLOPE	9-21-15	Fusion	169'	93	M.R
P9-P10	EAST-SLOPE	9-21-15	Fusion	159'	94	O.Y
P10-P11	EAST-SLOPE	9-21-15	Fusion	135'	93	M.R
P11-P12	EAST-SLOPE	9-21-15	Fusion	121'	93	M.R
P12-P13	EAST-SLOPE	9-21-15	Fusion	107'	94	O.Y
P13-P14	EAST-SLOPE	9-21-15	Fusion	91'	93	M.R
P14-P15	EAST-SLOPE	9-21-15	Fusion	71'	94	O.Y
P15-P16	EAST-SLOPE	9-21-15	Fusion	53'	93	M.R
P16-P17	EAST-SLOPE	9-21-15	Fusion	37'	94	O.Y
P17-P18	EAST-SLOPE	9-21-15	Fusion	22'	93	M.R
P18-P19	N.E.C.T	9-22-15	Fusion	22'	93	M.R
P17-P19	N.E.C.T	9-22-15	Fusion	26'	93	M.R
P16-P19	N.E.C.T	9-22-15	Fusion	15'	93	M.R
P16-P20	N.E.C.T	9-22-15	Fusion	12'	93	M.R
P15-P20	N.E.C.T	9-22-15	Fusion	27'	93	M.R
P14-P21	N.E.C.T	9-22-15	Fusion	28'	93	M.R
P13-P21	N.E.C.T	9-22-15	Fusion	9'	93	M.R
P13-P22	N.E.C.T	9-22-15	Fusion	18'	93	M.R
P12-P22	N.E.C.T	9-22-15	Fusion	20'	93	M.R
P12-P23	N.E.C.T	9-22-15	Fusion	7'	93	M.R
P11-P23	N.E.C.T	9-22-15	Fusion	27'	93	M.R
P10-P24	N.E.C.T	9-22-15	Fusion	27'	93	M.R
P9-P24B	N.E.C.T	9-22-15	Fusion	13'	93	M.R
P9-P25	N.E.C.T	9-22-15	Fusion	13'	93	M.R

Seam 240 NORTH-EAST CORNER Tie-in ✓

Envirocon Systems Seam Log

Project Name: Sequoyah Fuel Cell Cap				Site Supervisor: Youko S		
Location: Gore, Ok				Material: HDPE		
Job Number: 150603				Sheet Thickness: 60 ml Texture		
Q.A. Tech : YoukoS				Smooth Liner		
Seam Number	Location of Weld	Date of Weld	Type of Weld	Length of Seam	Machine Number	Technician ID Number
P19-P20	NORT-SLOPE	9-22-15	Fusion	57'	94	O.Y
P20-P21	NORT-SLOPE	9-22-15	Fusion	87'	93	M.R
P21-P22	NORT-SLOPE	9-22-15	Fusion	115'	94	O.Y
P22-P23	NORT-SLOPE	9-22-15	Fusion	146'	93	M.R
P23-P24	NORT-SLOPE	9-22-15	Fusion	173'	93	M.R
P25-P24B	NORT-SLOPE	9-22-15	Fusion	11'	93	M.R
P24-P25	NORT-SLOPE	9-22-15	Fusion	195'	93	M.R
P25-P26	NORT-SLOPE	9-22-15	Fusion	211'	93	M.R
P26-P27	NORT-SLOPE	9-22-15	Fusion	213'	94	O.Y
P27-P28	NORT-SLOPE	9-22-15	Fusion	212'	93	M.R
P28-P29	NORT-SLOPE	9-22-15	Fusion	211'	94	O.Y
P29-P30	NORT-SLOPE	9-22-15	Fusion	213'	93	M.R
P30-P31	NORT-SLOPE	9-22-15	Fusion	213'	94	O.Y
P31-P32	NORT-SLOPE	9-22-15	Fusion	214'	93	M.R
P32-P33	NORT-SLOPE	9-22-15	Fusion	213'	94	O.Y
P33-P34	NORT-SLOPE	9-22-15	Fusion	213'	93	M.R
P34-P35	NORT-SLOPE	9-22-15	Fusion	209'	93	M.R
P35-P36	NORT-SLOPE	9-22-15	Fusion	206'	94	O.Y
P36-P37	NORT-SLOPE	9-22-15	Fusion	211'	93	M.R
P37-P38	NORT-SLOPE	9-22-15	Fusion	216'	93	M.R
P38-P39	NORT-SLOPE	9-22-15	Fusion	217'	94	O.Y
P39-P40	NORT-SLOPE	9-22-15	Fusion	224'	93	M.R
P40-P41	NORT-SLOPE	9-22-15	Fusion	237'	93	M.R
P41-P42	NORT-SLOPE	9-22-15	Fusion	243'	94	O.Y
P42-P43	NORT-SLOPE	9-22-15	Fusion	232'	93	M.R
P43-P44	NORT-SLOPE	9-22-15	Fusion	213'	93	M.R
P44-P45	NORT-SLOPE	9-22-15	Fusion	190'	94	O.Y
P45-P46	NORT-SLOPE	9-22-15	Fusion	172'	93	M.R
P46-P47	NORT-SLOPE	9-22-15	Fusion	148'	93	M.R
P47-P48	NORT-SLOPE	9-22-15	Fusion	126'	94	O.Y
P48-P49	NORT-SLOPE	9-22-15	Fusion	103'	94	O.Y
P49-P50	NORT-SLOPE	9-22-15	Fusion	93'	93	M.R
P50-P51	NORT-EAST	9-22-15	Fusion	18'	94	O.Y
P51-P52	NORT-EAST	9-22-15	Fusion	22'	93	M.R

Envirocon Systems Seam Log

[illegible]

9-22-15

N-E = NORT. EAST

C.S.M = Cross.Sec.m

Envirocon Systems Non-Destructive Testing Sequoyah Fuel Cell cap

Air Test (AT): Time 5 minutes Pressure 30+ psi Maximum Change in Pressure: 3 lbs (drop)

Vacuum Test (VT): Time 5 Seconds Pressure 5 psi

Date	Seam or Panel #	Location	Remarks	Air Test			Vac Test		QC	Test Technician		
				In	Out	Drop	Pass	Fail				
9-22-15	1-2	EAST-SLOPE		30	30		Pass		Av	AV		
9-22-15	2-3	EAST-SL		30	29	-1	Pass		Av	AV		
9-22-15	3-4	EAST-SL		30	29	-1	Pass		Av	AV		
9-22-15	4-5	EAST-SL		30	30		Pass		Av	AV		
9-22-15	5-6	EAST-SL		30	29	-1	Pass		Av	AV		
9-22-15	6-7	EAST-SL		30	30		Pass		Av	AV		
9-22-15	7-8	EAST-SL		30	30		Pass		Av	AV		
9-22-15	8-9	EAST SL		30	30		Pass		Av	AV		
9-22-15	9-10	EAST SL		30	30		Pass		Av	AV		
9-22-15	10-11	EAST SL		30	30		Pass		Av	AV		
9-22-15	11-12	EAST SL		30	29	-1	Pass		Av	AV		
9-22-15	12-13	EAST SL		30	29	-1	Pass		Av	AV		
9-22-15	13-14	EAST SL		30	30		Pass		Av	AV		
9-22-15	14-15	EAST SL		30	30		Pass		Av	AV		
9-22-15	15-16	EAST SL		30	29	-1	Pass		Av	AV		
9-22-15	16-17	EAST SL		30	29	-1	Pass		Av	AV		
9-22-15	17-18	EAST-SL		30	30		Pass		Av	AV		
9-22-15	18-19	NORT-EAST SL	CROSS-SEC	30	29	-1	Pass		Av	AV		
9-22-15	17-19	NORT-EAST SL	CROSS-SEC	30	28	-2	Pass		Av	AV		
9-22-15	16-19	NORT-EAST-SL	CROSS-SEC	30	29	-1	Pass		Av	AV		
9-22-15	16-20	NORT-EAST-SL	CROSS-SEC	30	30		Pass		Av	AV		
9-22-15	15-20	NORT-EAST-SL	CROSS-SEC	30	29	-1	Pass		Av	AV		
9-22-15	14-21	NORT-EAST	CROSS-SEC	30	29	-1	Pass		Av	AV		
9-22-15	13-21	NORT-EAST	CROSS-SEC	30	30		Pass		Av	AV		
9-22-15	13-22	NORT-EAST	CROSS-SEC	30	29	-1	Pass		Av	AV		
9-22-15	12-22	NORT-EAST	CROSS-SEC	30	30		Pass		Av	AV		
9-22-15	12-23	NORT-EAST	CROSS-SEC	30	30		Pass		Av	AV		
9-22-15	11-23	NORT-EAST	CROSS-SEC	30	30		Pass		Av	AV		
9-22-15	10-24	NORT-EAST	CROSS-SEC	30	29	-1	Pass		Av	AV		
9-22-15	24-24B	N-E	CROSS-SEC	30	30		Pass		Av	AV		
9-22-15	9-24B	N-E	C.S.M	30	28	-2	Pass		Av	AV		
9-22-15	9-25	N-E	C.S.M	30	30		Pass		Av	AV		
9-22-15	19-20	NORT		30	29	-1	Pass		Av	AV		
9-22-15	20-21	NORT		30	30		Pass		Av	AV		
	21-22	NORT		30	29	-1	Pass		Av	AV		

AT

N.W.T.C = NORTH WEST Tie in corner

Envirocon Systems Non-Destructive Testing Sequoyah Fuel Cell cap

Air Test (AT): Time 5 minutes Pressure 30 psi

Maximum Change in Pressure: 3 lbs (drop)

Vacuum Test (VT): Time 5 Seconds

Pressure 5 psi

Date	Seam or Panel #	Location	Remarks	Air Test			Vac Test		QC	Test Technician		
				In	Out	Drop	Pass	Fail				
9-22-15	22-23	NORTH SLOPE		30	30		Pass		Av	AV		
9-22-15	23-24	NORTH SLOPE		30	29	-1	Pass		Av	AV		
9-22-15	24-25	NORTH SLOPE		30	29	-1	Pass		Av	AV		
9-23-15	25-26	NORTH SLOPE		30	29	-1	Pass		Av	AV		
9-23-15	26-27	NORTH SLOPE		30	30		Pass		Av	AV		
9-23-15	27-28	NORTH SLOPE		30	30		Pass		Av	AV		
9-23-15	28-29	NORTH SLOPE		30	30		Pass		Av	AV		
9-23-15	29-30	NORTH SLOPE		30	30		Pass		Av	AV		
9-23-15	30-31	NORTH SLOPE		30	30		Pass		Av	AV		
9-23-15	31-32	NORTH SLOPE		30	28	-2	Pass		Av	AV		
9-23-15	32-33	NORTH SLOPE		30	30		Pass		Av	AV		
9-23-15	33-34	NORTH SLOPE		30	29	-1	Pass		Av	AV		
9-23-15	34-35	NORTH SLOPE		30	30		Pass		Av	AV		
9-23-15	35-36	NORTH SLOPE		30	30		Pass		Av	AV		
9-23-15	36-37	NORTH SLOPE		30	29	-1	Pass		Av	AV		
9-25-15	37-38	NORTH SLOPE		30	30		Pass		Av	AV		
9-25-15	38-39	NORTH SLOPE		30	30		Pass		Av	AV		
9-25-15	39-40	NORTH SLOPE		30	29	-1	Pass		Av	AV		
9-25-15	40-41	NORTH SLOPE	burn-up	30	30		Pass		Av	AV		
9-25-15	41-42	NORTH SLOPE	burn-up	30	30		Pass		Av	AV		
9-25-15	42-43	NORTH SLOPE		30	30		Pass		Av	AV		
9-25-15	43-44	NORTH SLOPE		30	30		Pass		Av	AV		
9-25-15	44-45	NORTH SLOPE		30	29	-1	Pass		Av	AV		
9-25-15	45-46	NORTH SLOPE		30	30		Pass		Av	AV		
9-25-15	46-47	NORTH SLOPE		30	30		Pass		Av	AV		
9-25-15	47-48	NORTH SLOPE		30	30		Pass		Av	AV		
9-25-15	48-49	NORTH SLOPE		30	30		Pass		Av	AV		
9-25-15	49-50	NORTH SLOPE	burn-up	30	30		Pass		Av	AV		
9-25-15	50-51	NORTH SLOPE		30	30		Pass		Av	AV		
9-26-15	51-52	NORTH WEST COR. Tie-in .c		30	30		Pass		Av	AV		
9-26-15	50-52	N.W.T.C		30	29	-1	Pass		Av	AV		
9-26-15	52-53	WEST SLOPE		30	30		Pass		Av	AV		
9-26-15	50-53	N.W.T.C		30	29	-1	Pass		Av	AV		

NORT WEST Tie in corner * N.W.T-C

Envirocon Systems Non-Destructive Testing Sequoyah Fuel Cell cap

Air Test (AT): Time 5 minutes Pressure 30+ psi Maximum Change in Pressure: 3 lbs (drop)

Vacuum Test (VT): Time 5 Seconds Pressure 5 psi

Date	Seam or Panel #	Location	Remarks	Air Test			Vac Test		QC	Test Technician		
				In	Out	Drop	Pass	Fail				
9-26-15	55-53	N.W.T.C		30	30		Pass		Av	AV		
9-26-15	53-54	west Slope		30	30		Pass		Av	AV		
9-26-15	49-54	N.W.T.C		30	29	-1	Pass		Av	AV		
9-26-15	48-54	N.W.T-C		30	29	-1	Pass		Av	AV		
9-26-15	47-54	N.W.T.C		30	29	-1	Pass		Av	AV		
9-26-15	54-55	west slope		30	30		Pass		Av	AV		
9-26-15	47-55	N.W.T.C		30	30		Pass		Av	AV		
9-26-15	46-55	N.W.T-C		30	29	-1	Pass		Av	AV		
9-26-15	46-56	N.W.T-C		30	29	-1	Pass		Av	AV		
9-26-15	45-56	N.W.T-C		30	29	-1	Pass		Av	AV		
9-26-15	44-57	N.W.T.C		30	30		Pass		Av	AV		
9-26-15	43-57	N.W.T-C		30	30		Pass		Av	AV		
9-26-15	43-58	N.W.T.C		30	30		Pass		Av	AV		
9-26-15	42-58	N.W.T-C		30	30		Pass		Av	AV		
9-26-15	55-56	WEST-SLOPE		30	30		Pass		Av	AV		
9-26-15	56-57	WEST-SLOPE		30	29	-1	Pass		Av	AV		
9-26-15	57-58	WEST-SLOPE		30	30		Pass		Av	AV		
9-26-15	58-59	WEST-SLOPE		30	30		Pass		Av	AV		
9-26-15	59-60	WEST-SLOPE		30	29	-1	Pass		Av	AV		
9-26-15	59-60B	west-slope		30	30		Pass		Av	AV		
9-26-15	60-60B	WEST-SLOPE Cross-Seam	Cross-S	30	30		Pass		Av	AV		
9-26-15	60-61	west-slope		30	30		Pass		Av	AV		
9-26-15	60-61	west-Slope	burn-up	30	30		Pass		Av	AV		
9-26-15	60B-61	west-slope		30	29	-1	Pass		Av	AV		
9-26-15	60B-61B	WEST-SLOPE		30	29	-1	Pass		Av	AV		
9-26-15	61-61B	WEST-SLOPE Cross-Seam		30	30		Pass		Av	AV		
9-26-15	61-62B	WEST-SLOPE		30	29	-1	Pass		Av	AV		
9-26-15	62-62B	WEST-SLOPE Cross-Seam		30	28	-2	Pass		Av	AV		
9-26-15	61-62	WEST-SLOPE		30	28	-2	Pass		Av	AV		
9-26-15	62B-63	WEST-SLOPE		30	30		Pass		Av	AV		
9-26-15	62-63	WEST-SLOPE		30	30		Pass		Av	AV		
9-26-15	63-64	WEST-SLOPE		30	30		Pass		Av	AV		
9-26-15	63-64	WEST-SLOPE	burn-up	30	30		Pass		Av	AV		
9-26-15	64-65	WEST-SLOPE		30	30		Pass		Av	AV		
9-26-15	65-66	WEST-SLOPE		30	30		Pass		Av	AV		

60.B
60B

Envirocon Systems Non-Destructive Testing Sequoyah Fuel Cell cap

Air Test (AT): Time _5_ minutes Pressure _30+_psi

Maximum Change in Pressure: 3 lbs (drop)

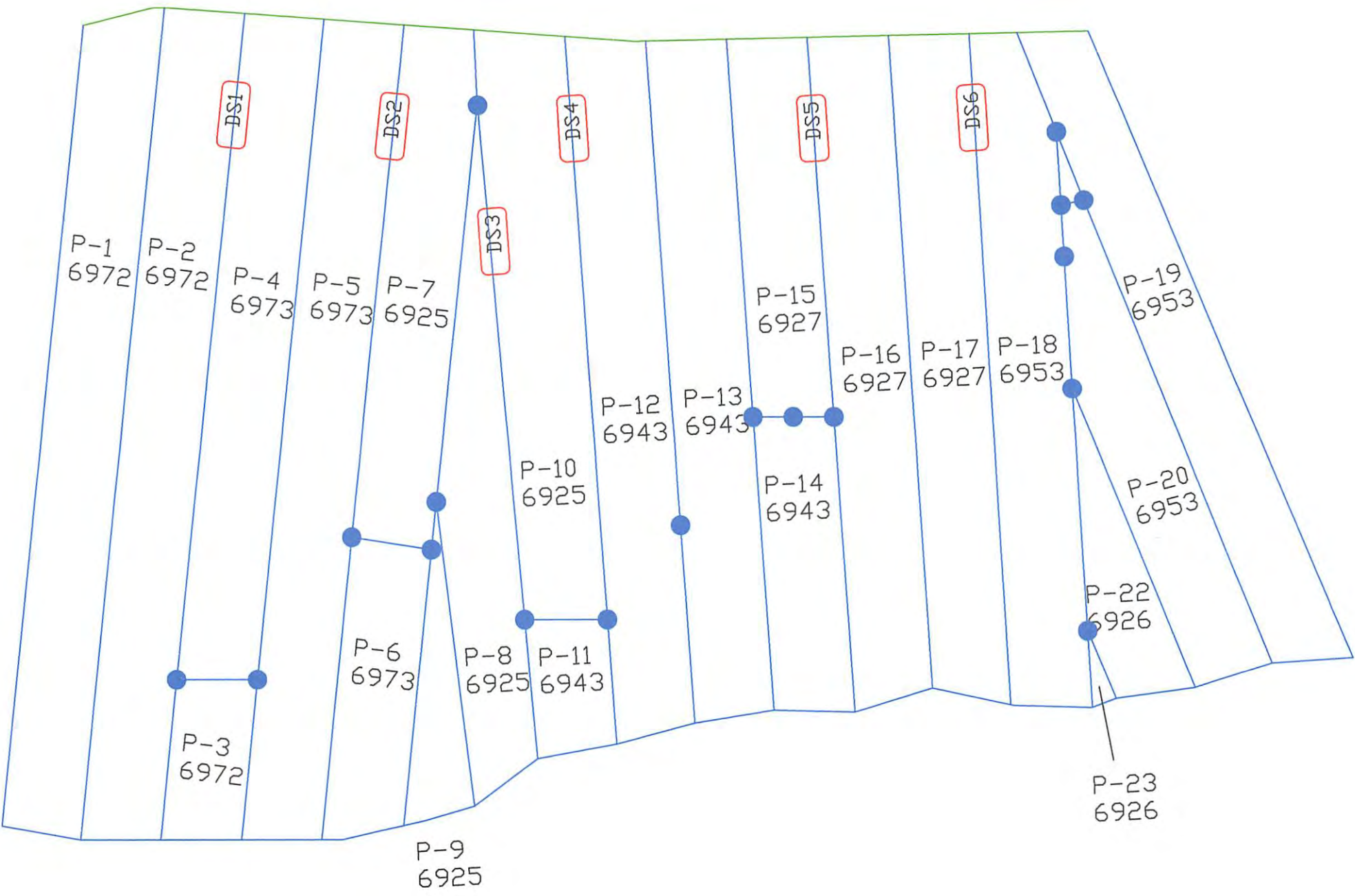
Vacuum Test (VT): Time 5 Seconds

Pressure 5 psi

[illegible]

Destructive Test Log

Page 1 of 1



ENVIROCON SYSTEM, INC.

CERTIFICATE OF ACCEPTANCE

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner
CLIENT: Sequoyah Fuels
JOB NUMBER: 150603
JOB DESCRIPTION: Disposal Cell Cap Liner
% COMPLETE OF TOTAL JOB: 100%

MATERIAL	ESTIMATED SQ. FEET	FINAL QUANTITY / DESCRIPTION
60 MIL HDPE TEXTURED LDPE LINER	-	64,457
WELDING ROD BOX	-	2EA

I, the undersigned, duly authorized representative of: _____
the work has been completed in accordance with specifications and the terms and conditions of the contract.

Name <u>Billy W. Reid</u>	Signature <u>Billy W. Reid</u>	Title <u>Director, Decommissioning Projects</u>	Date <u>11/13/15</u>
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Certificate accepted by EnviroCon Systems, Inc. Representative.

Name <u>Mark</u>	Signature <u>Mark</u>	Title <u></u>	Date <u>11-13-15</u>
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ENVIROCON SYSTEM, INC.

PAGE 1 OF 3

PANEL PLACEMENT FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/PANEL LOCATION
11/12/2015	P1	6972	230'	22'	SLOPE PANELS
					5038
11/12/2015	P2	6972	230'	22'	SLOPE PANELS
					5071
11/12/2015	P3	6972	42'	22'	SLOPE PANELS
					858
11/12/2015	P4	6973	194'	22'	SLOPE PANELS
					4213
11/12/2015	P5	6973	230'	19'	SLOPE PANELS
					4719
11/12/2015	P6	6973	87'	22'	SLOPE PANELS
					1793
11/12/2015	P7	6925	137'	22'	SLOPE PANELS
					2962
11/12/2015	P8	6925	179'	22'	SLOPE PANELS
					2893
11/12/2015	P9	6925	84'	20'	SLOPE PANELS
					840

ENVIROCON SYSTEM, INC.

PAGE 2 OF 3

PANEL PLACEMENT FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/PANEL LOCATION
11/12/2015	P10	6925	167'	22'	SLOPE PANELS
					3663
11/12/2015	P11	6943	38'	22'	SLOPE PANELS
					759
11/12/2015	P12	6943	198'	22'	SLOPE PANELS
					4279
11/12/2015	P13	6943	191'	22'	SLOPE PANELS
					4169
11/12/2015	P14	6943	80'	22'	SLOPE PANELS
					1694
11/12/2015	P15	6927	114'	22'	SLOPE PANELS
					2508
11/12/2015	P16	6927	188'	22'	SLOPE PANELS
					4081
11/12/2015	P17	6927	183'	22'	SLOPE PANELS
					4081
11/12/2015	P18	6953	188'	22'	SLOPE PANELS
					3316

ENVIROCON SYSTEM, INC.

PAGE 3 OF 3

PANEL PLACEMENT FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/PANEL LOCATION
11/12/2015	P19	6953	190'	22'	SLOPE PANELS
					4180
11/12/2015	P20	6953	136'	22'	SLOPE PANELS
					1986
11/12/2015	P21	6953	20'	7'	SLOPE PANELS
					70
11/12/2015	P22	6926	88'	22'	SLOPE PANELS
					1210
11/12/2015	P23	6926	21'	7'	SLOPE PANELS
					74
-	-	-	-	-	DAILY TOTAL
					64457
-	-	-	-	-	TOTAL
					65324

ENVIROCON SYSTEM, INC.

PAGE 1 OF 1

TRIAL WELD INFORMATION

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner

PROJEC NUMBER: 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

[illegible]

ENVIROCON SYSTEM, INC.

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PANEL SEAMING FORM

PROJECT NAME: Squoyah Fuels Disposal Cell Cap Liner

Project No. 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM TIME	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST (P/F)	COMMENTS
11/12/2015	AM	P1/2	230'	KPJ	W-1	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P2/4	189'	CHK	W-2	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P2/3	42'	CHK	W-2	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P4/5	194'	KPJ	W-1	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P3/5	36'	KPJ	W-1	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P3/4	22'	KPJ	W-1	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P5/7	142'	CHK	W-2	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P5/6	87'	CHK	W-2	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P6/7	22'	CHK	W-2	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P7/10	25'	KPJ	W-1	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P8/10	141'	KPJ	W-1	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	PM	P8/11	38'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	AM	P7/8	109'	KPJ	W-1	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P7/9	13'	KPJ	W-1	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	AM	P6/9	76'	KPJ	W-1	850	CLEAR	10MPH	48°	P	TESTED
11/12/2015	PM	P10/11	22'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P10/12	167'	CHK	W-2	850	CLEAR	15MPH	65°	P	TESTED

ENVIROCON SYSTEM, INC.

PAGE 2 OF 3

PANEL SEAMING FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap LinerProject No. 150603MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM TIME	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST (P/F)	COMMENTS
11/12/2015	PM	P11/12	31'	CHK	W-2	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P12/13	191'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P13/15	108'	CHK	W-2	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P13/14	80'	CHK	W-2	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P14/15	22'	CHK	W-2	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P15/16	114'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P14/16	74'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P16/17	178'	CHK	W-2	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P17/18	188'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P18/19	34'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P18/21	20'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P18/20	50'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P18/22	66'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P18/23	21'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P22/23	21'	KPJ	W-1	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P20/21	7'	CHK	W-2	850	CLEAR	15MPH	65°	P	TESTED
11/12/2015	PM	P19/21	20'	CHK	W-2	850	CLEAR	15MPH	65°	P	TESTED

ENVIROCON SYSTEM, INC.

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PANEL SEAMING FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner

Project No. 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

[illegible]

ENVIROCON SYSTEM, INC.

PAGE 1 OF 3

NON-DESTRUCTIVE FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM NUMBER	TESTER INITIALS	AIR TESTING					COMPLETE Y/N	VACCUM COMPLETE Y/N	LOCATION/COMMENTS
			TIME		DROP	PRESSURE				
			START	END			START	END		
11/12/2015	P1/2	CAS	10:05	10:10	2	35	35	Y	-	0 - EOS
11/12/2015	P2/4	CAS	10:55	11:00	-	35	35	Y	-	0 - EOS
11/12/2015	P2/3	CAS	10:55	11:00	-	35	35	Y	-	0 - EOS
11/12/2015	P4/5	CAS	11:10	11:15	-	35	35	Y	-	0 - EOS
11/12/2015	P3/5	CAS	11:10	11:15	-	35	35	Y	-	0 - EOS
11/12/2015	P3/4	CAS	10:55	11:00	-	35	35	Y	-	0 - EOS
11/12/2015	P5/7	CAS	14:10	14:15	-	35	35	Y	-	0 - EOS
11/12/2015	P5/6	CAS	14:10	14:15	-	35	35	Y	-	0 - EOS
11/12/2015	P6/7	CAS	14:10	14:15	-	35	35	Y	-	0 - EOS
11/12/2015	P7/10	CAS	14:42	14:47	-	35	35	Y	-	0 - EOS
11/12/2015	P8/10	CAS	14:30	14:35	-	35	35	Y	-	0 - EOS
11/12/2015	P8/11	CAS	14:30	14:35	-	35	35	Y	-	0 - EOS
11/12/2015	P7/8	CAS	14:44	14:49	-	35	35	Y	-	0 - EOS
11/12/2015	P7/9	CAS	14:18	14:23	-	35	35	Y	-	0 - EOS
11/12/2015	P6/9	CAS	14:18	14:23	-	35	35	Y	-	0 - EOS
11/12/2015	P10/11	CAS	14:30	14:35	-	35	35	Y	-	0 - EOS
11/12/2015	P10/12	CAS	14:52	14:57	-	35	35	Y	-	0 - EOS
11/12/2015	P11/12	CAS	14:52	14:57	-	35	35	Y	-	0 - EOS
11/12/2015	P12/13	CAS	14:52	14:57	-	35	35	Y	-	132' - EOS

ENVIROCON SYSTEM, INC.

PAGE 2 OF 3

NON-DESTRUCTIVE FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM NUMBER	TESTER INITIALS	AIR TESTING					COMPLETE Y/N	VACCUM COMPLETE Y/N	LOCATION/COMMENTS
			TIME		DROP	PRESSURE				
			START	END			START	END		
11/12/2015	P12/13	CAS	15:00	15:05	-	35	35			0 - 132
11/12/2015	P13/15	CAS	15:08	15:13	-	35	35	Y	-	0 - EOS
11/12/2015	P13/14	CAS	15:08	15:13	-	35	35	Y	-	0 - EOS
11/12/2015	P14/15	CAS	15:08	15:13	-	35	35	Y	-	0 - 11
11/12/2015	P14/15	CAS	15:18	15:23	-	35	35	Y	-	11 - EOS
11/12/2015	P15/16	CAS	15:18	15:23	-	35	35	Y	-	0 - EOS
11/12/2015	P14/16	CAS	15:18	15:23	-	35	35	Y	-	0 - EOS
11/12/2015	P16/17	CAS	15:42	15:47	-	35	35	Y	-	0 - EOS
11/13/2015	P17/18	CAS	8:30	8:35	-	35	35	Y	-	0 - EOS
11/13/2015	P18/19	CAS	8:30	8:35	-	35	35	Y	-	0 - EOS
11/13/2015	P19/20	CAS	8:35	8:40	-	35	35	Y	-	0 - EOS
11/13/2015	P20/21	CAS	8:35	8:40	-	35	35	Y	-	0 - EOS
11/13/2015	P19/21	CAS	8:35	8:40	-	35	35	Y	-	0 - EOS
11/13/2015	P18/21	CAS	8:45	8:50	-	35	35	Y	-	0 - EOS
11/13/2015	P18/20	CAS	8:45	8:50	-	35	35	Y	-	0 - EOS
11/13/2015	P20/22	CAS	8:50	8:55	-	35	35	Y	-	0 - EOS
11/13/2015	P18/22	CAS	8:50	8:55	-	35	35	Y	-	0 - EOS

ENVIROCON SYSTEM, INC.
NON-DESTRUCTIVE FORM

PAGE 3 OF 3

PROJECT NAME:	Sequoyah Fuels Disposal Cell Cap Liner	Project No	150603	MATERIAL DESCRIPTION:	60 mil HDPE Textured
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[illegible]

ENVIROCON SYSTEM, INC.

PAGE 1 OF 1

DESTRUCTIVE TESTING LOG

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner

Project No. 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

[illegible]

ENVIROCON SYSTEM, INC.

REPAIR REPORT

PAGE 1 OF 3

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

FIELD SEAM NUMBER	PANEL NUMBER	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST PASS/ FAIL	COMMENTS/PANEL LOCATION
P12/13	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP. 132' SOUTH
P14/15	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP. 11' WEST
P18/20	-	11/13/2015	KPJ	G-10	11/13/2015	CHK	PASS	REP. 14' SOUTH
P2/3/4	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP. INT
P3/4/5	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP. INT
P5/6/7	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP. INT
P6/7/9	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP. INT
P7/8/9	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP. INT
P7/8/10	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP. INT
P8/10/11	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP. INT

ENVIROCON SYSTEM, INC.

PAGE 2 OF 3

REPAIR REPORT

PROJECT NAME:	<u>Sequoyah Fuels Disposal Cell Cap Liner</u>	Project No.	<u>150603</u>	MATERIAL DESCRIPTION:	<u>60 mil HDPE Textured</u>
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FIELD SEAM NUMBER	PANEL NUMBER	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST PASS/ FAIL	COMMENTS/PANEL LOCATION
P10/11/12	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	REP.
								INT
P18/19/21	-	11/13/2015	KPJ	G-10	11/13/2015	CHK	PASS	REP.
								INT
P18/20/21	-	11/13/2015	KPJ	G-10	11/13/2015	CHK	PASS	REP.
								INT
P19/20/21	-	11/13/2015	KPJ	G-10	11/13/2015	CHK	PASS	REP.
								INT
P18/20/22	-	11/13/2015	KPJ	G-10	11/13/2015	CHK	PASS	REP.
								INT
P18/22/23	-	11/13/2015	KPJ	G-10	11/13/2015	CHK	PASS	REP.
								INT
P2/4	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	DS1
								15' SOUTH
P5/7	-	11/13/2015	HS	G-10	11/13/2015	CHK	PASS	DS2
								15' SOUTH

ENVIROCON SYSTEM, INC.

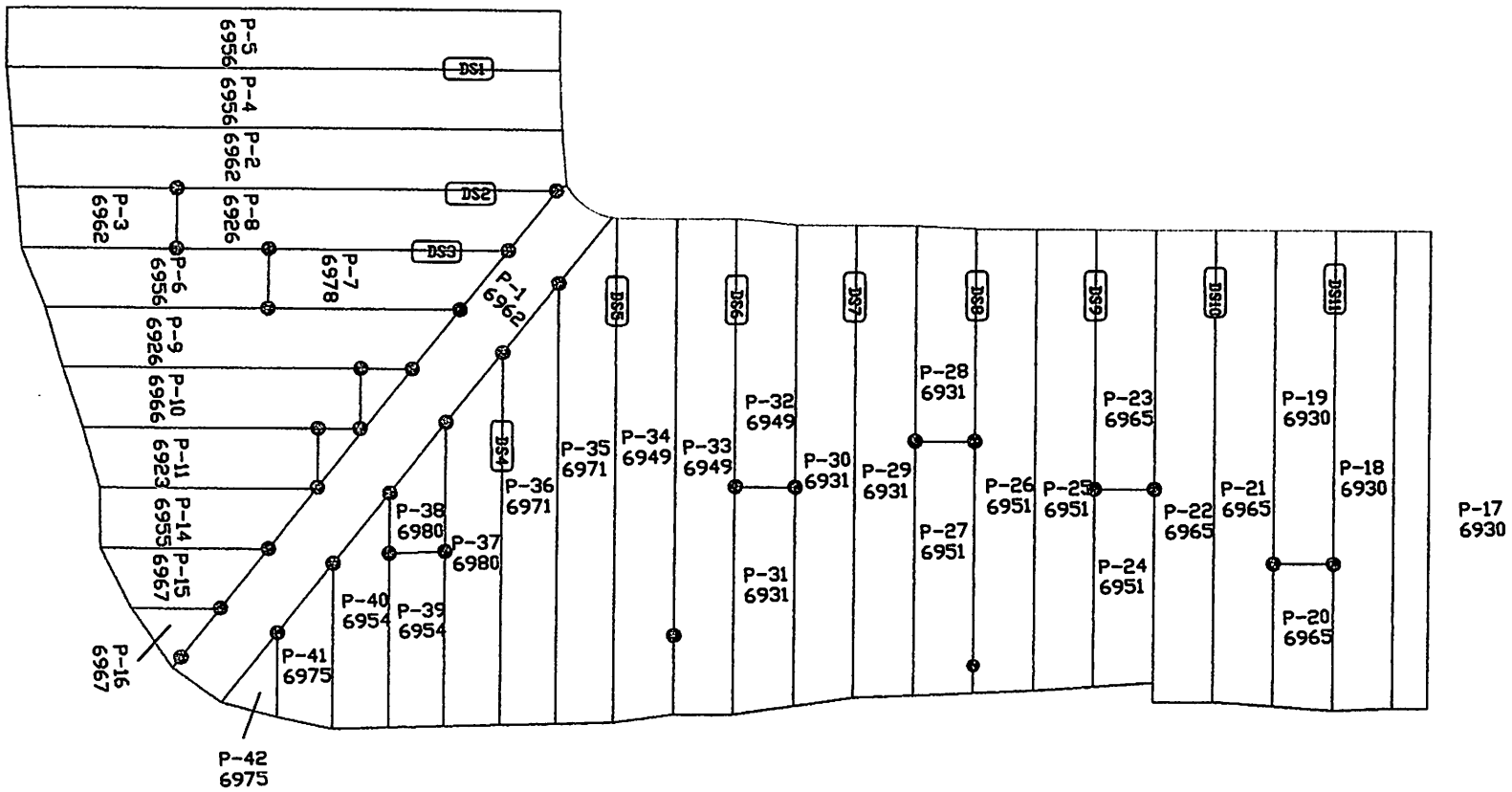
REPAIR REPORT

PAGE 3 OF 3

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner **Project No.** 150603 **MATERIAL DESCRIPTION:** 60 mil HDPE Textured

[illegible]

Section F



Section G

ENVIROCON SYSTEM, INC.

CERTIFICATE OF ACCEPTANCE

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner
CLIENT: Sequoyah Fuels
JOB NUMBER: 150603
JOB DESCRIPTION: Disposal Cell Cap Liner
% COMPLETE OF TOTAL JOB: 100%

MATERIAL	ESTIMATED SQ. FEET	FINAL QUANTITY / DESCRIPTION
60 MIL HDPE TEXTURED LDPE LINER	-	107,200
WELDING ROD BOX	-	3EA

I, the undersigned, duly authorized representative of: _____
the work has been completed in accordance with specifications and the terms and conditions of the contract.

Name	Signature	Title	Date

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date

ENVIROCON SYSTEM, INC.

PAGE 1 OF 6

PANEL PLACEMENT FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/PANEL LOCATION
12/4/2015	P1	6962	236'	22'	SLOPE PANELS
					5247
12/4/2015	P2	6962	208'	23'	SLOPE PANELS
					4598
12/4/2015	P3	6962	61'	22'	SLOPE PANELS
					1298
12/4/2015	P4	6956	209'	23'	SLOPE PANELS
					4587
12/4/2015	P5	6956	209'	22'	SLOPE PANELS
					4598
12/4/2015	P6	6956	89'	22'	SLOPE PANELS
					1881
12/4/2015	P7	6978	89'	29'	SLOPE PANELS
					1760
12/4/2015	P8	6926	140'	29'	SLOPE PANELS
					2871
12/4/2015	P9	6926	153'	29'	SLOPE PANELS
					3102

ENVIROCON SYSTEM, INC.

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PANEL PLACEMENT FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/PANEL LOCATION
12/4/2015	P10	6966	110'	22'	SLOPE PANELS
					2354
12/4/2015	P11	6923	87'	22'	SLOPE PANELS
					1837
12/4/2015	P12	6926	19'	29'	SLOPE PANELS
					209
12/4/2015	P13	6978	18'	29'	SLOPE PANELS
					187
12/4/2015	P14	6955	81'	29'	SLOPE PANELS
					1562
12/4/2015	P15	6967	62'	29'	SLOPE PANELS
					1045
12/4/2015	P16	6967	33'	29'	SLOPE PANELS
					478
-	-	-	-	-	DAILY TOTAL
					37614

ENVIROCON SYSTEM, INC.

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PANEL PLACEMENT FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/PANEL LOCATION
12/5/2015	P17	6930	180'	13'	SLOPE PANELS
					3960
12/5/2015	P18	6930	180'	22'	SLOPE PANELS
					3960
12/5/2015	P19	6930	122'	22'	SLOPE PANELS
					2794
12/5/2015	P20	6965	54'	22'	SLOPE PANELS
					1188
12/5/2015	P21	6965	178'	22'	SLOPE PANELS
					3949
12/5/2015	P22	6965	178'	22'	SLOPE PANELS
					3850
12/5/2015	P23	6965	101'	22'	SLOPE PANELS
					2222
12/5/2015	P24	6951	72'	22'	SLOPE PANELS
					1584
12/5/2015	P25	6951	174'	22'	SLOPE PANELS
					3817

ENVIROCON SYSTEM, INC.

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PANEL PLACEMENT FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/PANEL LOCATION
12/5/2015	P26	6951	175'	22'	SLOPE PANELS
					3839
12/5/2015	P27	6951	93'	22'	SLOPE PANELS
					2046
12/5/2015	P28	6931	84'	22'	SLOPE PANELS
					1848
12/5/2015	P29	6931	178'	22'	SLOPE PANELS
					3905
12/5/2015	P30	6931	178'	22'	SLOPE PANELS
					3883
12/5/2015	P31	6931	74'	22'	SLOPE PANELS
					1628
12/5/2015	P32	6949	103'	22'	SLOPE PANELS
					2244
12/5/2015	P33	6949	180'	22'	SLOPE PANELS
					3927
12/5/2015	P34	6949	190'	22'	SLOPE PANELS
					4070

ENVIROCON SYSTEM, INC.

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PANEL PLACEMENT FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	PANEL NUMBER	ROLL NUMBER	PANEL LENGTH	PANEL WIDTH	COMMENTS/PANEL LOCATION
12/5/2015	P35	6971	190'	31'	SLOPE PANELS
					3861
12/5/2015	P36	6971	161'	33'	SLOPE PANELS
					3234
12/5/2015	P37	6980	133'	33'	SLOPE PANELS
					2662
12/5/2015	P38	6980	47'	33'	SLOPE PANELS
					759
12/5/2015	P39	6954	64'	22'	SLOPE PANELS
					1386
12/5/2015	P40	6954	86'	33'	SLOPE PANELS
					1617
12/5/2015	P41	6975	61'	33'	SLOPE PANELS
					1012
12/5/2015	P42	6975	31'	33'	SLOPE PANELS
					341
-	-	-	-	-	DAILY TOTAL
					69586

ENVIROCON SYSTEM, INC.

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PANEL PLACEMENT FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner **Project No.** 150603 **MATERIAL DESCRIPTION:** 60 mil HDPE Textured

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ENVIROCON SYSTEM, INC.

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TRIAL WELD INFORMATION

PROJECT NAME: Sequoia Fuels Disposal Cell Cap Liner

PROJEC NUMBER: 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE/ TIME	AMBIENT TEMP	QC INITIALS	MACHINE NUMBER	SEAMER INITIAL	EXTRUSION WELDS				FUSION WELD				PEEL/SHEAR VALUES				PASS/ FAIL	COMENTS
					EXTRUDER		PREHEAT TEMP		WEDGE TEMP		MEASURED SPEED	SPEED SETTING						
					SET	PYRO	SET	PYRO	SET	PYRO								
12/4/2015 1:00	55°	CAS	W-1	KPJ	-	-	-	-	850	-	6'	300	136	140	142	233	PASS	SM/SM
					-	-	-	-	-	-	139	137	135	230				
12/4/2015 1:00	55°	CAS	W-2	CHK	-	-	-	-	850	-	6.5	320	131	139	140	227	PASS	SM/SM
					-	-	-	-	-	-	135	136	134	221				
12/5/2015 7:45	35°	CAS	W-1	KPJ	-	-	-	-	850	-	6'	300	133	136	137	220	PASS	SM/SM
					-	-	-	-	-	-	131	135	138	223				
12/5/2015 7:45	35°	CAS	W-2	CHK	-	-	-	-	850	-	6.5	320	132	133	142	226	PASS	SM/SM
					-	-	-	-	-	-	134	135	140	200				
12/5/2015 1:15	55°	CAS	W-1	KPJ	-	-	-	-	850	-	6'	300	130	132	137	225	PASS	SM/SM
					-	-	-	-	-	-	131	135	136	228				
12/5/2015 1:15	55°	CAS	W-2	CHK	-	-	-	-	850	-	6.5	320	130	138	131	230	PASS	SM/SM
					-	-	-	-	-	-	134	137	133	232				
12/6/2015 7:50	37°	CAS	G-10	HS	285	-	6	-	-	-	-	-	126	128	125	185	PASS	TXT/TXT
					-	-	-	-	-	-	-	-	-	-	179			
12/7/2015 8:00	30°	CAS	G-1	KPJ	285	-	6	-	-	-	-	-	115	118	121	183	PASS	TXT/TXT
					-	-	-	-	-	-	-	-	-	-	180			
12/7/2015 8:00	30°	CAS	G-10	HS	285	-	6	-	-	-	-	-	134	131	128	180	PASS	TXT/TXT
-													-	-	-	182		

DESTRUCTIVE TESTING LOG

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner

Project No. 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SAMPLE I.D.	SEAM NUMBER	MACHINE NUMBER	SEAMER INITIALS	PEEL/SHEAR VALUES - LBS/INCH					PASS/FAIL	DATE TO LAB/PKG SLIP #	LAB PASS/FAIL	LOCATION/COMMENT
12/7/2015	DS1	P4/5	W-1	KPJ	138 135	134 136	133 137	138 139	134 135	PASS	-	-	10' SOUTH
-	-	-	-	-	220	223	226	220	230	-	-	-	-
12/7/2015	DS2	P2/8	W-2	CHK	130 128	127 125	126 124	126 125	127 125	PASS	-	-	10' SOUTH
-	-	-	-	-	221	223	224	226	220	-	-	-	-
12/7/2015	DS3	P7/8	W-2	CHK	130 121	125 127	126 124	127 124	121 120	PASS	-	-	10' SOUTH
-	-	-	-	-	223	226	224	227	230	-	-	-	-
12/7/2015	DS4	P36/37	W-2	CHK	132 132	131 130	135 134	137 135	131 128	PASS	-	-	10' EAST
-	-	-	-	-	225	231	233	225	228	-	-	-	-
12/7/2015	DS5	P34/35	W-2	CHK	133 135	130 130	135 134	137 135	136 137	PASS	-	-	10' EAST
-	-	-	-	-	224	223	228	224	229	-	-	-	-
12/7/2015	DS6	P32/33	W-2	CHK	137 135	134 132	133 134	131 130	137 131	PASS	-	-	10' EAST
-	-	-	-	-	227	230	232	235	234	-	-	-	-
12/7/2015	DS7	P29/30	W-2	CHK	128 125	131 125	127 129	127 126	125 126	PASS	-	-	10' EAST
-	-	-	-	-	225	223	224	226	225	-	-	-	-
12/7/2015	DS8	P26/28	W-2	CHK	135 133	134 131	135 137	138 133	136 137	PASS	-	-	10' EAST
-	-	-	-	-	230	228	229	225	221	-	-	-	-
12/7/2015	DS9	P23/25	W-2	CHK	130 135	139 126	127 128	124 125	129 125	PASS	-	-	10' EAST
-	-	-	-	-	228	220	225	224	228	-	-	-	-

ENVIROCON SYSTEM, INC.

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DESTRUCTIVE TESTING LOG

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Limer

Project No. 150603

MATERIAL DESCRIPTION: 60 ml HDPE Textured

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ENVIROCON SYSTEM, INC.

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PANEL SEAMING FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner

Project No. 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM TIME	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST (P/F)	COMMENTS
12/4/2015	PM	P2/3	61'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P2/4	208'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P4/5	209'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P3/8	22'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P2/8	140'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P6/7	22'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P3/6	57'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P6/8	32'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P7/8	89'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P6/9	82'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P7/9	71'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P9/10	110'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P10/11	87'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P12/9	19'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P10/12	22'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P10/13	17'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/4/2015	PM	P11/13	22'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED

ENVIROCON SYSTEM, INC.

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PANEL SEAMING FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner

Project No. 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

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ENVIROCON SYSTEM, INC.

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PANEL SEAMING FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner

Project No. 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM TIME	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST (P/F)	COMMENTS
12/5/2015	AM	P17/18	180'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P18/19	122'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P18/20	53'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P19/20	22'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P19/21	122'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P20/21	54'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P21/22	178'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P22/23	96'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P22/24	71'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P23/24	22'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P23/25	100'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P24/25	72'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P25/26	174'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P26/27	92'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P26/28	83'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P27/28	22'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P27/29	93'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED

ENVIROCON SYSTEM, INC.

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PANEL SEAMING FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap LinerProject No. 150603MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM TIME	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST (P/F)	COMMENTS
12/5/2015	AM	P28/29	84'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P29/30	178'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P30/31	74'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P30/32	96'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P31/32	22'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P31/33	74'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P32/33	103'	CHK	W-2	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	AM	P33/34	180'	KPJ	W-1	850	CLEAR	5MPH	35°	P	TESTED
12/5/2015	PM	P34/35	190'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/5/2015	PM	P35/36	161'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/5/2015	PM	P36/37	133'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/5/2015	PM	P37/38	47'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/5/2015	PM	P37/39	62'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/5/2015	PM	P38/39	22'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED
12/5/2015	PM	P38/40	22'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/5/2015	PM	P39/40	64'	CHK	W-2	850	CLEAR	9MPH	55°	P	TESTED
12/5/2015	PM	P40/41	61'	KPJ	W-1	850	CLEAR	9MPH	55°	P	TESTED

ENVIROCON SYSTEM, INC.

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PANEL SEAMING FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner

Project No. 150603

MATERIAL DESCRIPTION: 60 mil HDPE Textured

[illegible]

ENVIROCON SYSTEM, INC.

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NON-DESTRUCTIVE FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM NUMBER	TESTER INITIALS	AIR TESTING					COMPLETE Y/N	VACCUM COMPLETE Y/N	LOCATION/COMMENTS
			TIME		DROP	PRESSURE				
			START	END			START	END		
12/6/2015	P2/3	CAS	8:09	8:14	-	35	35	Y	-	0 - EOS
12/6/2015	P2/4	CAS	8:07	8:12	-	35	35	Y	-	0 - EOS
12/6/2015	P4/5	CAS	8:08	8:13	-	35	35	Y	-	0 - EOS
12/6/2015	P3/8	CAS	8:08	8:13	-	35	35	Y	-	0 - EOS
12/6/2015	P2/8	CAS	8:00	8:05	-	35	35	Y	-	0 - EOS
12/6/2015	P6/7	CAS	8:10	8:15	-	35	35	Y	-	0 - EOS
12/6/2015	P3/6	CAS	8:09	8:14	-	35	35	Y	-	0 - EOS
12/6/2015	P6/8	CAS	8:09	8:14	-	35	35	Y	-	0 - EOS
12/6/2015	P7/8	CAS	8:10	8:15	-	35	35	Y	-	0 - EOS
12/6/2015	P6/9	CAS	8:12	8:17	-	35	35	Y	-	0 - EOS
12/6/2015	P7/9	CAS	8:11	8:16	-	35	35	Y	-	0 - EOS
12/6/2015	P9/10	CAS	8:17	8:22	-	35	35	Y	-	0 - EOS
12/6/2015	P10/11	CAS	8:21	8:26	-	35	35	Y	-	0 - EOS
12/6/2015	P12/9	CAS	8:17	8:22	-	35	35	Y	-	0 - EOS
12/6/2015	P10/12	CAS	8:20	8:25	-	35	35	Y	-	0 - EOS
12/6/2015	P10/13	CAS	8:21	8:26	-	35	35	Y	-	0 - EOS
12/6/2015	P11/13	CAS	8:24	8:29	-	35	35	Y	-	0 - EOS
12/6/2015	P11/14	CAS	8:24	8:29	-	35	35	Y	-	0 - EOS
12/6/2015	P14/15	CAS	8:26	8:31	-	35	35	Y	-	0 - EOS

ENVIROCON SYSTEM, INC.

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NON-DESTRUCTIVE FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM NUMBER	TESTER INITIALS	AIR TESTING					COMPLETE Y/N	VACCUM COMPLETE Y/N	LOCATION/COMMENTS
			TIME		DROP	PRESSURE				
			START	END			START	END		
12/6/2015	P15/16	CAS	8:24	8:29	-	35	35	Y	-	0 - EOS
12/6/2015	P2/1	CAS	8:00	8:05	-	35	35	Y	-	0 - EOS
12/6/2015	P8/1	CAS	8:00	8:05	-	35	35	Y	-	0 - EOS
12/6/2015	P7/1	CAS	8:15	8:20	-	35	35	Y	-	0 - EOS
12/6/2015	P9/1	CAS	8:16	8:21	-	35	35	Y	-	0 - EOS
12/6/2015	P12/1	CAS	8:19	8:24	-	35	35	Y	-	0 - EOS
12/6/2015	P13/1	CAS	8:20	8:25	-	35	35	Y	-	0 - EOS
12/6/2015	P14/1	CAS	8:25	8:30	-	35	35	Y	-	0 - EOS
12/6/2015	P15/1	CAS	8:26	8:31	-	35	35	Y	-	0 - EOS
12/6/2015	P16/1	CAS	8:30	8:35	-	35	35	Y	-	0 - EOS
12/6/2015	P17/18	CAS	9:57	10:02	-	35	35	Y	-	0 - EOS
12/6/2015	P18/19	CAS	9:50	9:55	-	35	35	Y	-	0 - EOS
12/6/2015	P18/20	CAS	9:50	9:55	-	35	35	Y	-	0 - EOS
12/6/2015	P19/20	CAS	9:46	9:51	-	35	35	Y	-	0 - EOS
12/6/2015	P20/21	CAS	9:45	9:50	-	35	35	Y	-	0 - EOS
12/6/2015	P19/21	CAS	9:40	9:45	-	35	35	Y	-	0 - EOS
12/6/2015	P21/22	CAS	9:48	9:53	-	35	35	Y	-	0 - EOS
12/6/2015	P22/23	CAS	9:40	9:45	-	35	35	Y	-	0 - EOS

ENVIROCON SYSTEM, INC.

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NON-DESTRUCTIVE FORM

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

DATE	SEAM NUMBER	TESTER INITIALS	AIR TESTING					COMPLETE Y/N	VACCUM COMPLETE Y/N	LOCATION/COMMENTS
			TIME		DROP	PRESSURE				
			START	END			START	END		
12/6/2015	P22/24	CAS	9:40	9:45	-	35	35	Y	-	0 - EOS
12/6/2015	P23/24	CAS	9:35	9:40	-	35	35	Y	-	0 - EOS
12/6/2015	P23/25	CAS	9:37	9:42	-	35	35	Y	-	0 - EOS
12/6/2015	P24/25	CAS	9:30	9:35	-	35	35	Y	-	0 - EOS
12/6/2015	P25/26	CAS	9:25	9:30	-	35	35	Y	-	0 - EOS
12/6/2015	P26/27	CAS	9:25	9:30	-	35	35	Y	-	0 - EOS
12/6/2015	P26/28	CAS	9:22	9:27	-	35	35	Y	-	0 - EOS
12/6/2015	P27/28	CAS	9:21	9:26	-	35	35	Y	-	0 - EOS
12/6/2015	P27/29	CAS	9:25	9:30	-	35	35	Y	-	0 - EOS
12/6/2015	P28/29	CAS	9:20	9:25	-	35	35	Y	-	0 - EOS
12/6/2015	P29/30	CAS	9:17	9:22	-	35	35	Y	-	0 - EOS
12/6/2015	P30/31	CAS	9:20	9:25	-	35	35	Y	-	0 - EOS
12/6/2015	P30/32	CAS	9:15	9:20	-	35	35	Y	-	0 - EOS
12/6/2015	P31/32	CAS	9:17	9:22	-	35	35	Y	-	0 - EOS
12/6/2015	P31/33	CAS	9:21	9:26	-	35	35	Y	-	0 - EOS
12/6/2015	P32/33	CAS	9:10	9:15	-	35	35	Y	-	0 - EOS
12/6/2015	P33/34	CAS	9:10	9:15	-	35	35	Y	-	0 - EOS
12/6/2015	P34/35	CAS	9:07	9:12	-	35	35	Y	-	0 - EOS
12/6/2015	P35/36	CAS	9:05	9:10	-	35	35	Y	-	0 - EOS

ENVIROCON SYSTEM, INC.

PAGE 4 OF 4

NON-DESTRUCTIVE FORM

PROJECT NAME:	Sequoyah Fuels Disposal Cell Cap Liner	Project No	150603	MATERIAL DESCRIPTION:	60 mil HDPE Textured
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[illegible]

ENVIROCON SYSTEM, INC.

PAGE 1 OF 5

REPAIR REPORT

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner **Project No.** 150603 **MATERIAL DESCRIPTION:** 60 mil HDPE Textured

FIELD SEAM NUMBER	PANEL NUMBER	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST PASS/ FAIL	COMMENTS/PANEL LOCATION
P2/3/8	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P3/6/8	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P6/7/8	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P6/7/9	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P9/10/12	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P10/11/13	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P15/16/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P14/15/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P11/14/1/13	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P10/13/12/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT

PAGE 2 OF 5

FIELD SEAM NUMBER	PANEL NUMBER	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST PASS/ FAIL	COMMENTS/PANEL LOCATION
P9/12/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P7/9/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P7/8/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P2/8/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P41/42/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P40/41/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P38/40/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P37/38/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P36/37/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P35/36/1	-	12/6/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT

ENVIROCON SYSTEM, INC.

REPAIR REPORT

PAGE 4 OF 5

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner **Project No.** 150603 **MATERIAL DESCRIPTION:** 60 mil HDPE Textured

FIELD SEAM NUMBER	PANEL NUMBER	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST PASS/FAIL	COMMENTS/PANEL LOCATION
P19/20/21	-	12/7/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P18/19/20	-	12/7/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								INT
P26/27	-	12/7/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								10' WEST
P33/34	-	12/7/2015	HS	G-10	12/7/2015	CHK	PASS	REP.
								29' WEST
P4/5	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS1
								10' SOUTH
P2/8	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS2
								10' SOUTH
P7/8	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS3
								10' SOUTH
P36/37	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS4
								10' EAST

ENVIROCON SYSTEM, INC.

REPAIR REPORT

PAGE 5 OF 5

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner Project No. 150603 MATERIAL DESCRIPTION: 60 mil HDPE Textured

FIELD SEAM NUMBER	PANEL NUMBER	REPAIR DATE	REPAIR CREW	MACHINE NUMBER	TEST DATE	TEST CREW	TEST PASS/ FAIL	COMMENTS/PANEL LOCATION
P34/35	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS5
								10' EAST
P32/33	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS6
								10' EAST
P29/30	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS7
								10' EAST
P26/28	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS8
								10' EAST
P23/25	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS9
								10' EAST
P21/22	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS10
								10' EAST
P18/19	-	12/7/2015	KPJ	G-1	12/7/2015	CHK	PASS	DS11
								10' EAST

PHASE IV (COVER) AS-BUILT REPORT

Appendix D Synthetic Liner Installation Reports

D.2 2020 LINER INSTALLATION REPORTS



Job Description: CELL CAP A | Material Description: 60MIL HDPE TEXTILE

Customer I name: SEQUOYAH FUEL DISPOSAL

Job No.: 150603

Job Location: GORE,OKLAHOMA

% COMPLETE OF TOTAL JOB: 100%

[illegible]

I, the undersigned, duly authorized representative of SEQUOYAH FUEL DISPOSAL
do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the work
has been completed in accordance with specifications and the terms and conditions of the contract.

Name <i>Kenny Schlag</i>	Signature <i>Kenny Schlag</i>	Title <i>QA Mgr</i>	Date <i>11/19/2020</i>
-----------------------------	----------------------------------	------------------------	---------------------------

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name john pitia	Signature 	Title supervisor	Date 11/19/2020
--------------------	--	---------------------	--------------------

SUBGRADE SURFACE PREPARATION ACCEPTANCE

Job Description: CELL CAP A | Material Description: 60MIL HDPE TEXTILE

Customer Name: Field | SEQUOYAH FUEL DISPOSAL

Job No.: 150603

Job Location: GORE, OKLAHOMA

DATE: 11/16/2020

I, the undersigned duly-authorized representative of EnviroCon Systems, Inc., certify that upon visual inspection, the subgrade or surface described below meets the cleanliness and smoothness criteria for installation of a 60MIL HDPE TEXTILE Liner. By signing below, however, EnviroCon Systems, Inc. acknowledges no responsibility for the subgrade or surface design, degree of moisture or compaction, integrity, elevation, or maintenance thereof, in any way.

Description of Area: SLOPE CAP CELL A SUBGRADE

Approximate Size of Area: 18,281sf

Certificate accepted by Quality Representative.

Name	Signature	Title	Date
Kenny Schlegel		QA Mgr	11/19/2020

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
john pitia		supervisor	11/16/2020

customer SEQUOYAH FUEL DISPOS. job location, GORE, OKLAHOMA

QC/QA name, PITIA KIDIKI JOHN

Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

Customer Name: SEQUOYAH FUEL DISPOSAL job location, GORE, OKLAHOMA

Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

Customer Name: SEQUOYAH FUELS DISPOSAL

Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

Customer Name: " SEQUOYAH FUEL DISPOSAL

Job Description: CELL CAP A

Job No.: 150603 Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

Customer Name: SEQUOYAH job location, GORE, OKLAHOMA

QC/QA name ,PITIA KIDIKI JOHN

Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

customer ... SEQUOYAH FUEL DISPOS; job location, GORE, OKLAHOMA

QC/QA name, PITIA KIDIKI JOHN

Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

P.O. Box 673048 Main: 281-443-2597
Houston, TX 77267 Fax: 281-443-7551
Toll Free: 1-888-449-3236

TRIAL WELD INFO

Customer Name: SEQUOYAH CELL job location, GORE, OKLAHOMA QC/QA name , PITIA KIDIKI JOHN

Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

PANEL PLACEMENT DIAGRAM

Customer Name: . . . SEQUOYAH

Job location. GORE, OKLAHOMA

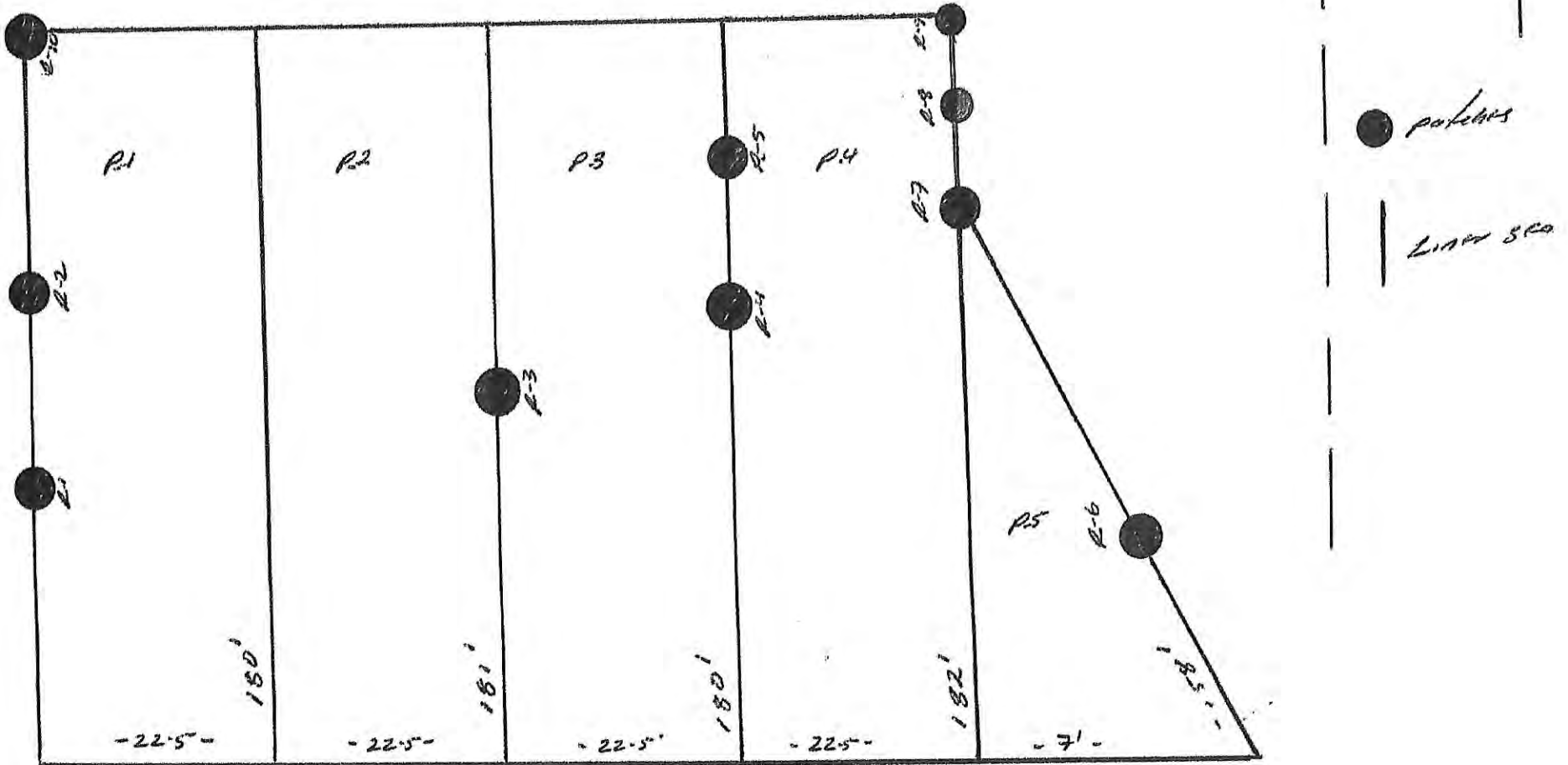
Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE

Form ECW-STD-0001 REV. 0 Date 3-Dec-19 | Use Project-Specific diagram instructions. If the project requires a diagram, but does not provide a specified template or other instructions, then use this form.

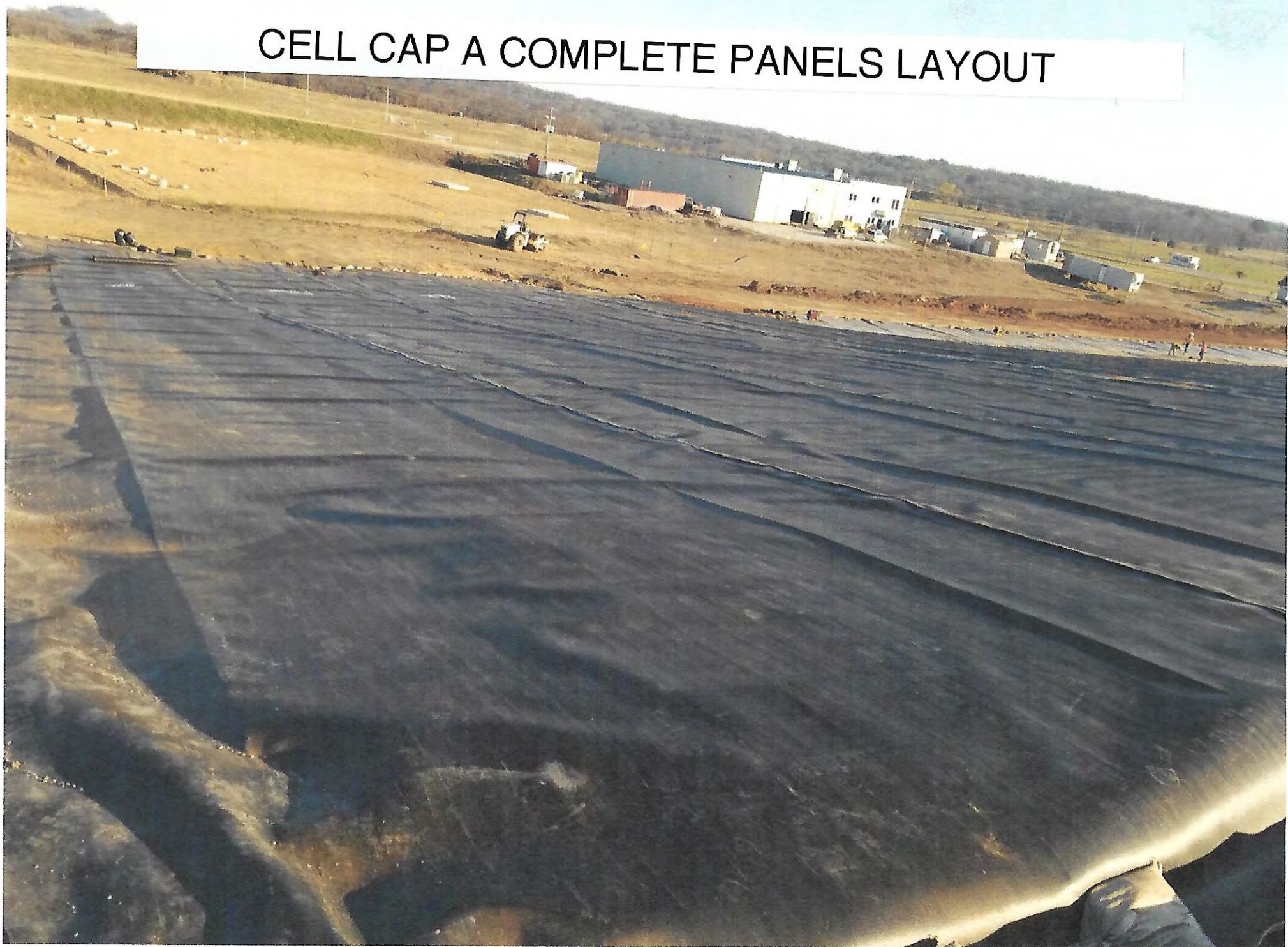
CELL CAP A



CELL CAP A SUBGRADE



CELL CAP A COMPLETE PANELS LAYOUT



CELL CAP A EXTRUDED PATCHES



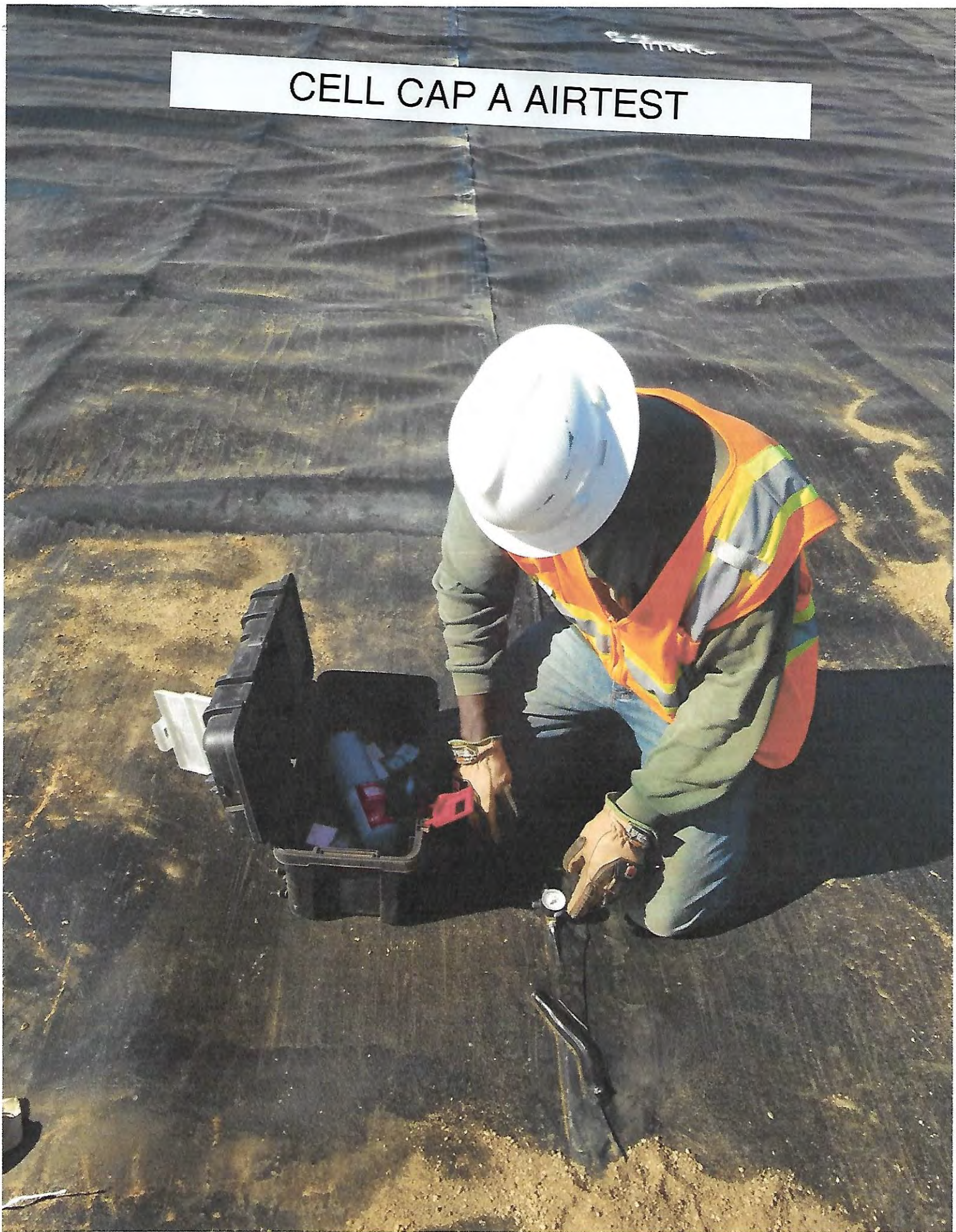
CELL CAP A WEDGE SEAMS



CELL CAP A VACCUM TEST



CELL CAP A AIRTEST



CELL CAP A TRENCH BACKFILL



PANEL PLACEMENT DIAGRAM

Customer Name: SEQUOYAH

job location. GORE, OKLAHOMA

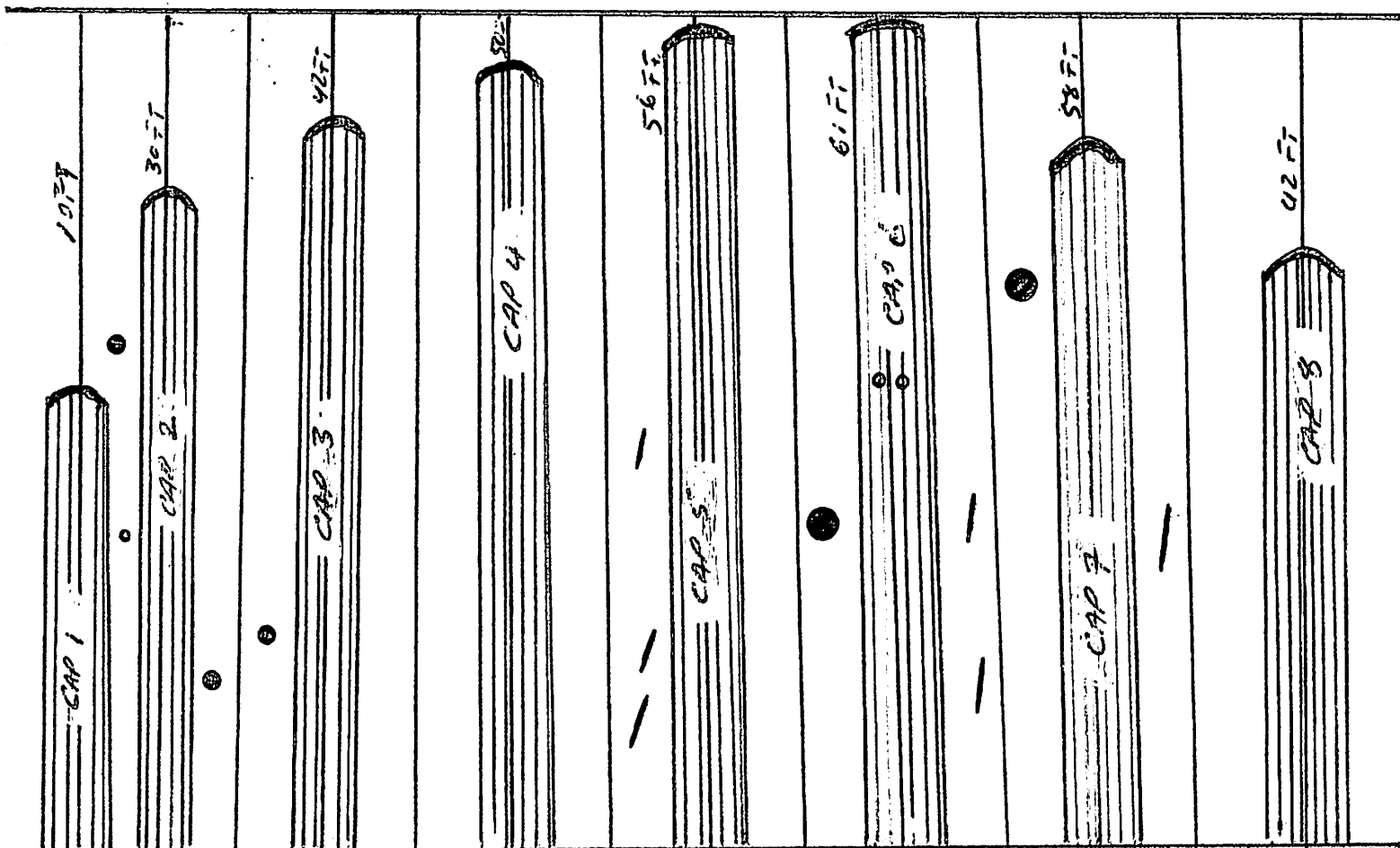
Job Description: CELL CAP D

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE

Form ECW-STD-0001 REV. 0 Date 3-Dec-19 | Use Project-Specific diagram instructions. If the project requires a diagram, but does not provide a specified template or other instructions, then use this form.

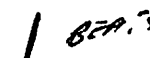
CELL CAP D



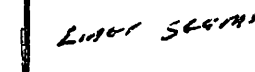
CAP



PANELS



BERMS



LINER SEAMS

Job Description: CELL CAP D | Material Description: 60MIL HDPE TEXTILE
Customer Name: SEQUOYAH FUEL DISPOSAL
Job No.: 150603
Job Location: GORE, OKLAHOMA
% COMPLETE OF TOTAL JOB: 100%

MATERIAL	ESTIMATED SQ. FEET	FINAL QUANTITY / DESCRIPTION
<i>Job Description</i>		
60mil HDPE textile	1,745	1,745
welding RODS	1	1
mob/demo	1	1
patches	3x3	3
patches	1X1	4
patches	5x5	1
beats	5	5

I, the undersigned, duly authorized representative of SEQUOYAH FUEL DISPOSAL
do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the work
has been completed in accordance with specifications and the terms and conditions of the contract.

Name	Signature	Title	Date
Kenny Schlag		QA Mgr	11/18/2020

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
john pitia		supervisor	11/18/2020

Form ECW-STD-0001 REV 0 Date 3/Dec-19

SUBGRADE SURFACE PREPARATION ACCEPTANCE

Job Description: CELL CAP D | Material Description: 60MIL HDPE TEXTILE

Customer Name: SEQUOYAH FUEL DISPOSAL

Job No.: 150603

Job Location: GORE, OKLAHOMA

DATE: 11/12/2020

I, the undersigned duly-authorized representative of EnviroCon Systems, Inc., certify that upon visual inspection, the subgrade or surface described below meets the cleanliness and smoothness criteria for installation of a 60MIL HDPE TEXTILE Liner. By signing below, however, EnviroCon Systems, Inc. acknowledges no responsibility for the subgrade or surface design, degree of moisture or compaction, integrity, elevation, or maintenance thereof, in any way.

Description of Area: FLOOR CAP CELL D SUBGRADE

Approximate Size of Area: 24,600ft

Certificate accepted by Quality Representative.

Name	Signature	Title	Date
Kenny Schlag		QA Mgr	11/12/2020

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
john pitia		supervisor	11/12/2020

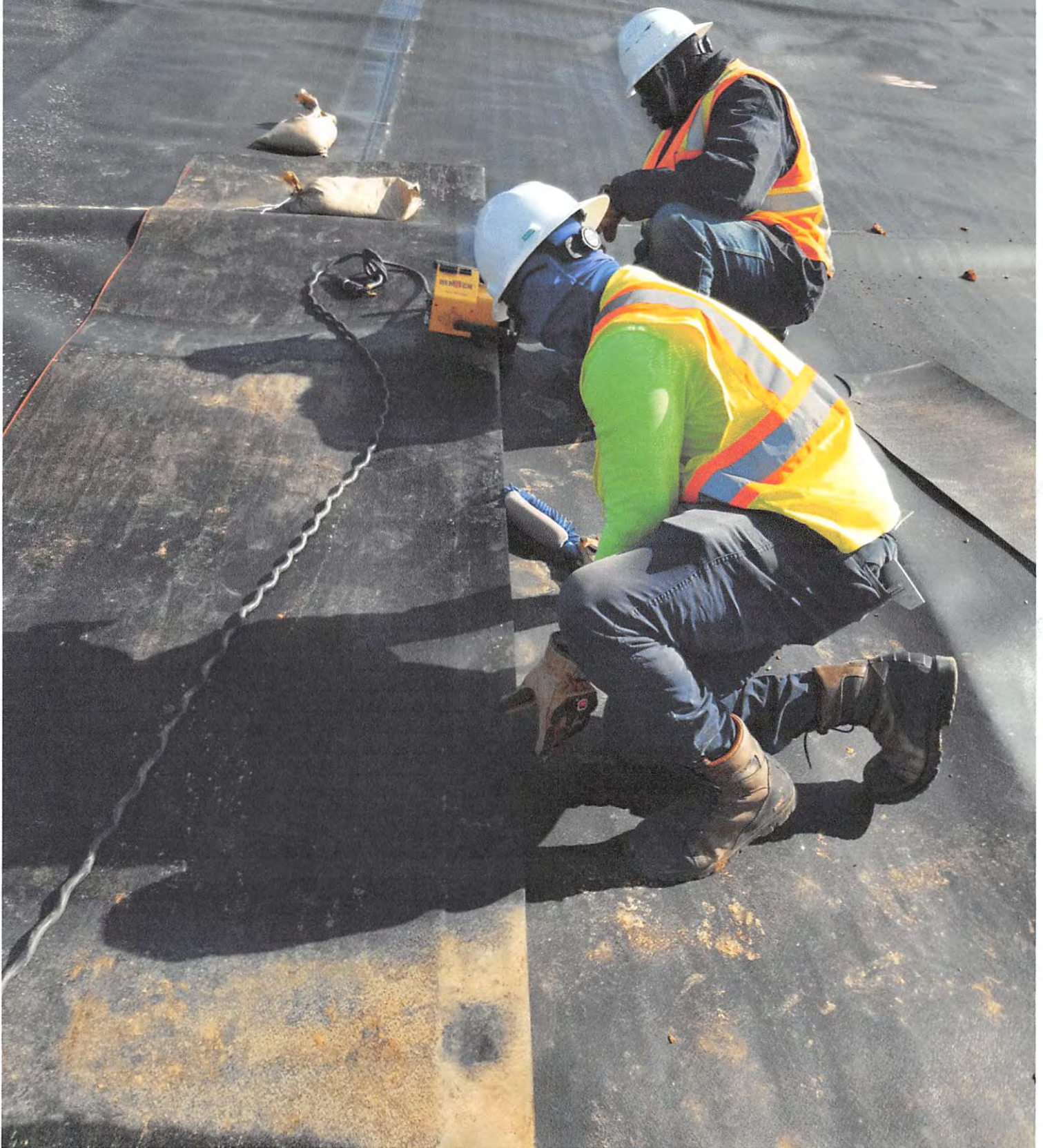
CELL CAP D 100% COMPLETE



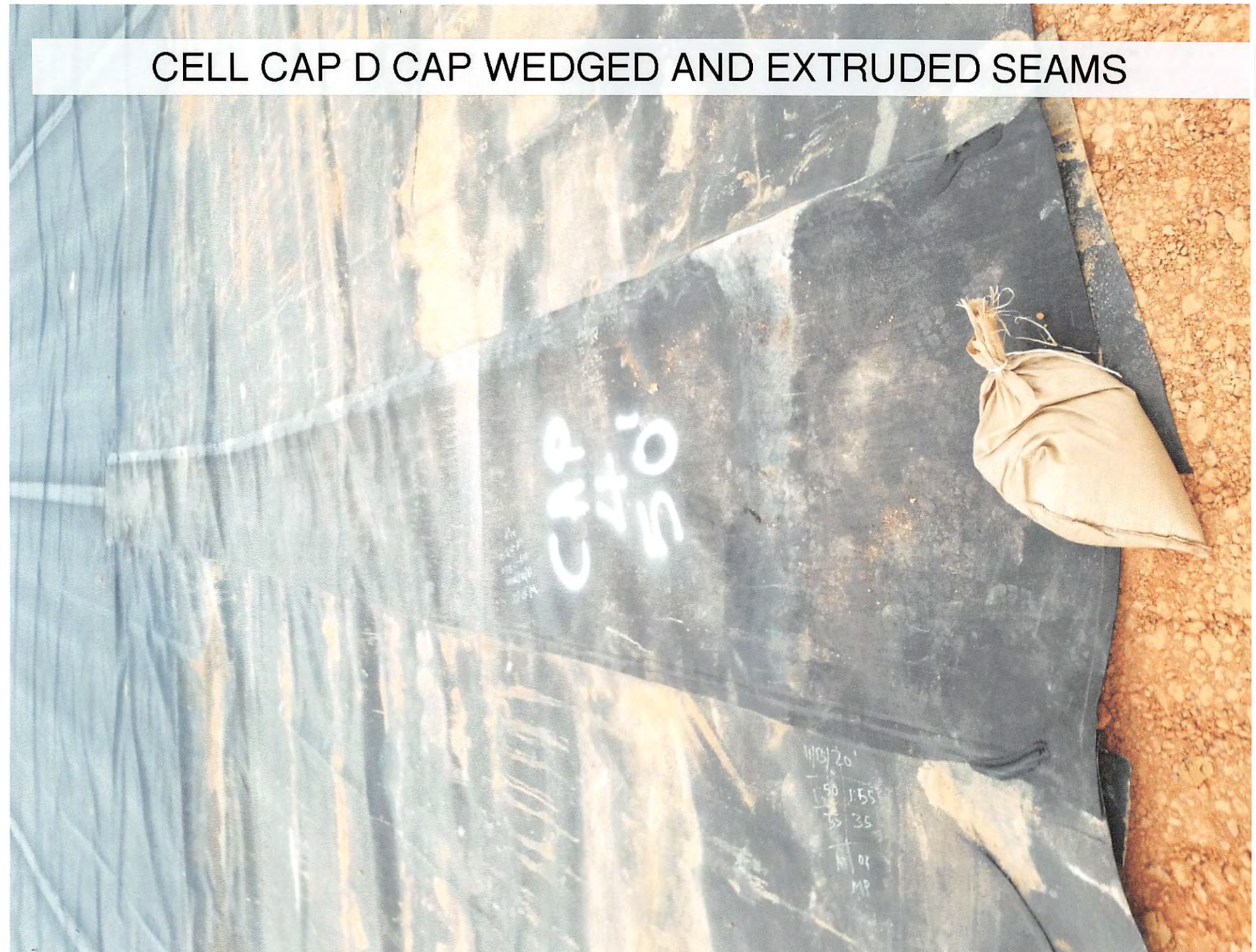
CELL CAP D SUBGRADE



CELL CAP D CAP WEDGING



CELL CAP D CAP WEDGED AND EXTRUDED SEAMS



Customer Name: SEQUOYAH FUEL DISPOSAL

Job Description: CELL CAP D

Job No.: 150603 Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]



Page 1 of 2

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

Filename: Copy of CQC_Guide_-_Liner_ECW-STD-0001_QA_Forms_Rev_00
Tab: Panel Seaming

Customer Name: SEQUOYAH job location, GORE, OKLAHOMA

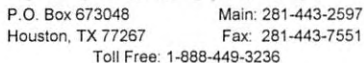
QC/QA name ,PITIA KIDIKI JOHN

Job Description: CELL CAP D

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

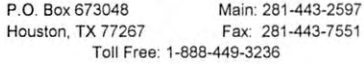


Page 1 of 1

QC/QA name, PITIA KIDIKI JOHN

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]



Page 1 of 1

QC/QA name, PITIA KIDIKI JOHN

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

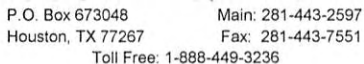
Customer Name: SEQUOYAH FUEL DISPOSAL job location, GORE, OKLAHOMA

Job Description: CELL CAP D

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]



Page 1 of 2

Customer Name: SEQUOYAH CELL job location, , GORE, OKLAHOMA QC/QA name , PITIA KIDIKI JOHN

Job Description: CELL CAP D

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

Liners • HDPE Pipe • Portable Containment Berms
www.enviroconsystems.com

PANEL PLACEMENT DIAGRAM

Customer Name: . . . SEQUOYAH

Job location. GORE, OKLAHOMA

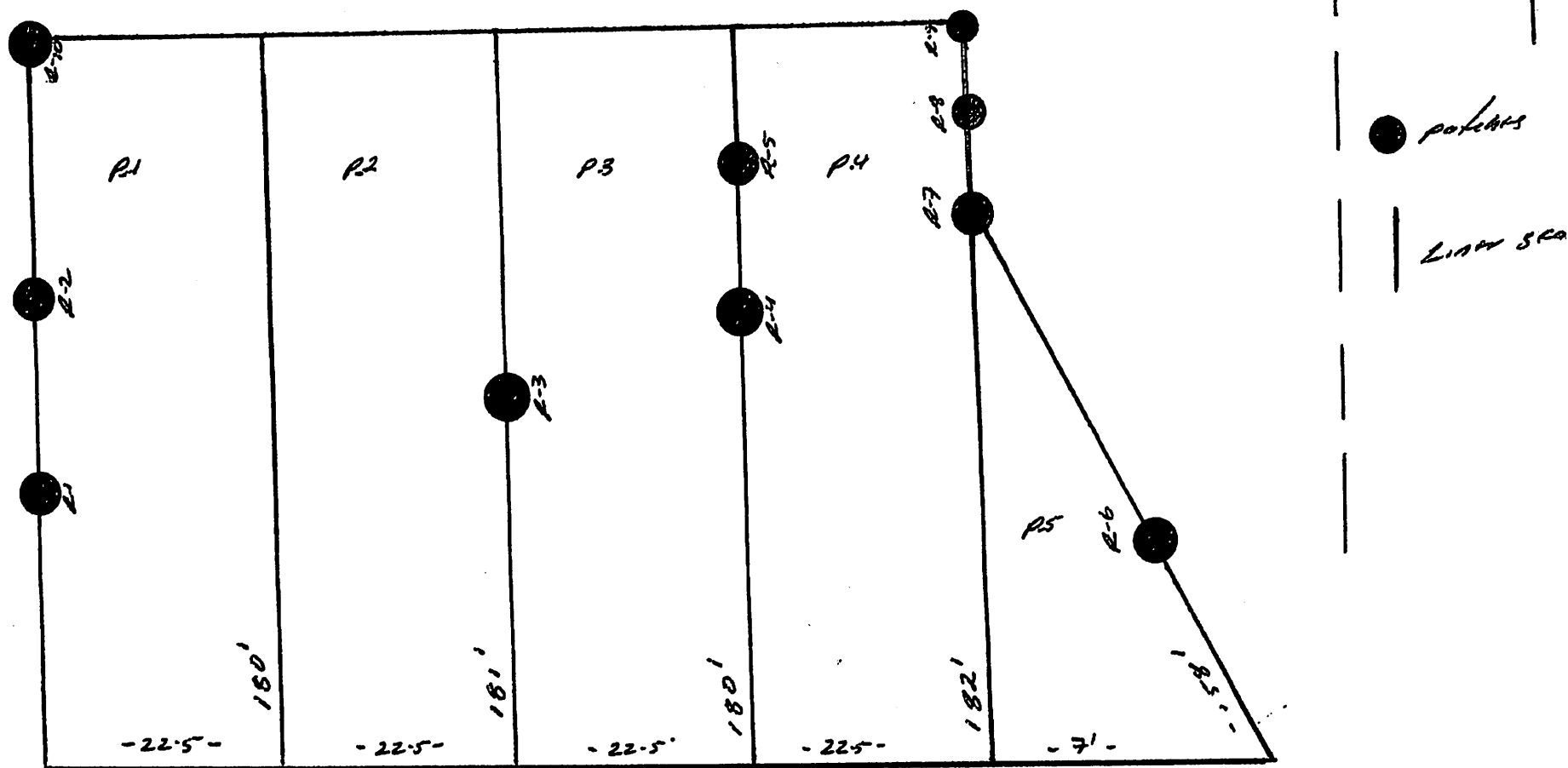
Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE

Form ECW-STD-0001 REV. 0 Date 3-Dec-19 | Use Project-Specific diagram instructions. If the project requires a diagram, but does not provide a specified template or other instructions, then use this form.

CELL CAP A



ENVIROCON CERTIFICATE OF ACCEPTANCE

SYSTEMS, INC.

Page 1 of 1

P.O. Box 673048 Main: 281-443-2597
Houston, TX 77267 Fax: 281-443-7551
Toll Free: 1-888-449-3236

Job Description: CELL CAP A | Material Description: 60MIL HDPE TEXTILE

Customer Name: SEQUOYAH FUEL DISPOSAL

Job No.: 150603

Job Location: GORE, OKLAHOMA

% COMPLETE OF TOTAL JOB: 100%

MATERIAL	ESTIMATED SQ. FEET	FINAL QUANTITY / DESCRIPTION
Job Description		
60mil HDPE textile	18,281sf	18,281sf
welding RODS	2	2
mob/demo	1	1
patches	3x3	10

I, the undersigned, duly authorized representative of SEQUOYAH FUEL DISPOSAL
do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the work
has been completed in accordance with specifications and the terms and conditions of the contract.

Name	Signature	Title	Date
Kenny Schlag		QA Mgr	11/19/2020

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
john pitia		supervisor	11/19/2020

Form ECW STD-0001 REV 0 Date 3-Dec-19

SUBGRADE SURFACE PREPARATION ACCEPTANCE

Job Description: CELL CAP A | Material Description: 60MIL HDPE TEXTILE

Customer Name: Field, SEQUOYAH FUEL DISPOSAL

Job No.: 150603

Job Location: GORE, OKLAHOMA

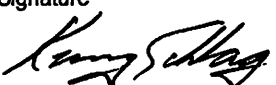
DATE: 11/16/2020

I, the undersigned duly-authorized representative of EnviroCon Systems, Inc., certify that upon visual inspection, the subgrade or surface described below meets the cleanliness and smoothness criteria for installation of a 60MIL HDPE TEXTILE Liner. By signing below, however, EnviroCon Systems, Inc. acknowledges no responsibility for the subgrade or surface design, degree of moisture or compaction, integrity, elevation, or maintenance thereof, in any way.

Description of Area: SLOPE CAP CELL A SUBGRADE

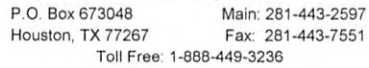
Approximate Size of Area: 18,281sf

Certificate accepted by Quality Representative.

Name	Signature	Title	Date
Kenny Schlag		QA mgr	11/16/2020

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
john pitia		supervisor	11/16/2020



Page 1 of 2

Job No.: 150603 Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

Filename: Copy of CQC_Guide_-_Liner_ECW-STD-0001_QA_Forms_Rev_00
Tab: Panel Placement



Page 1 of 2

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

Filename: Copy of CQC_Guide_-_Liner_ECW-STD-0001_QA_Forms_Rev_00
Tab: Panel Seaming



Page 1 of 2

Customer Name: SEQUOYAH CELL job location, GORE,OKLAHOMA QC/QA name ,PITIA KIDIKI JOHN

Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

Filename: Copy of CQC_Guide_-_Liner_ECW-STD-0001_QA_Forms_Rev_00
Tab: Preweld Trial

Customer Name: SEQUOYAH job location: GORE, OKLAHOMA

QC/QA name ,PITIA KIDIKI JOHN

Job Description: CELL CAP A

Job No.: 150603

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

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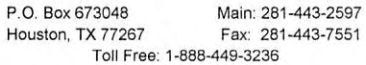


Page 1 of 1

QC/QA name, PITIA KIDIKI JOHN

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

Filename: Copy of CQC_Guide_-_Liner_ECW-STD-0001_QA_Forms_Rev_00
Tab: Non-Destructive



Page 1 of 1

QC/QA name, PITIA KIDIKI JOHN

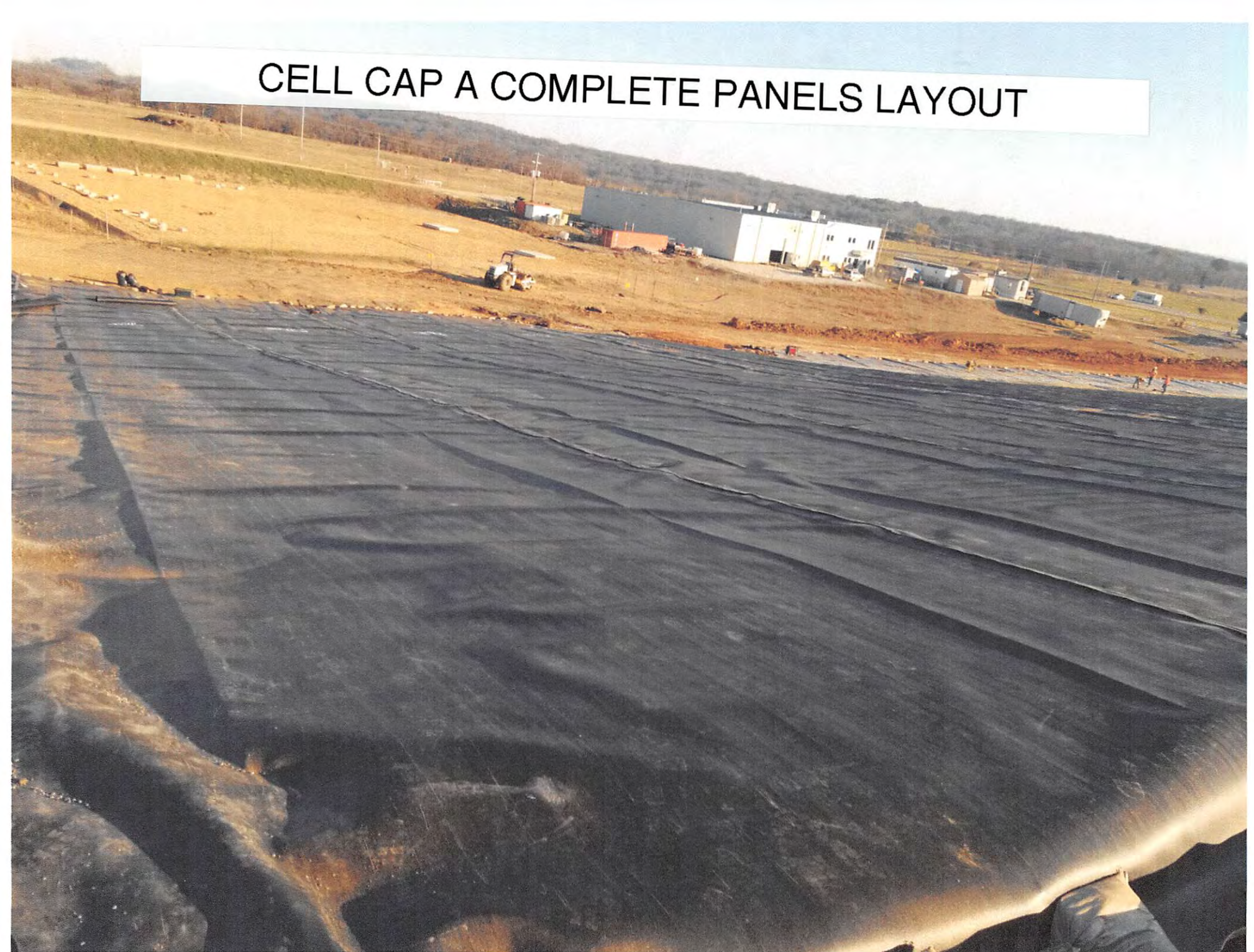
Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

Filename: Copy of CQC_Guide_-_Liner_ECW-STD-0001_QA_Forms_Rev_00
Tab: Non-Destructive

Material Description: 60MIL HDPE TEXTILE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

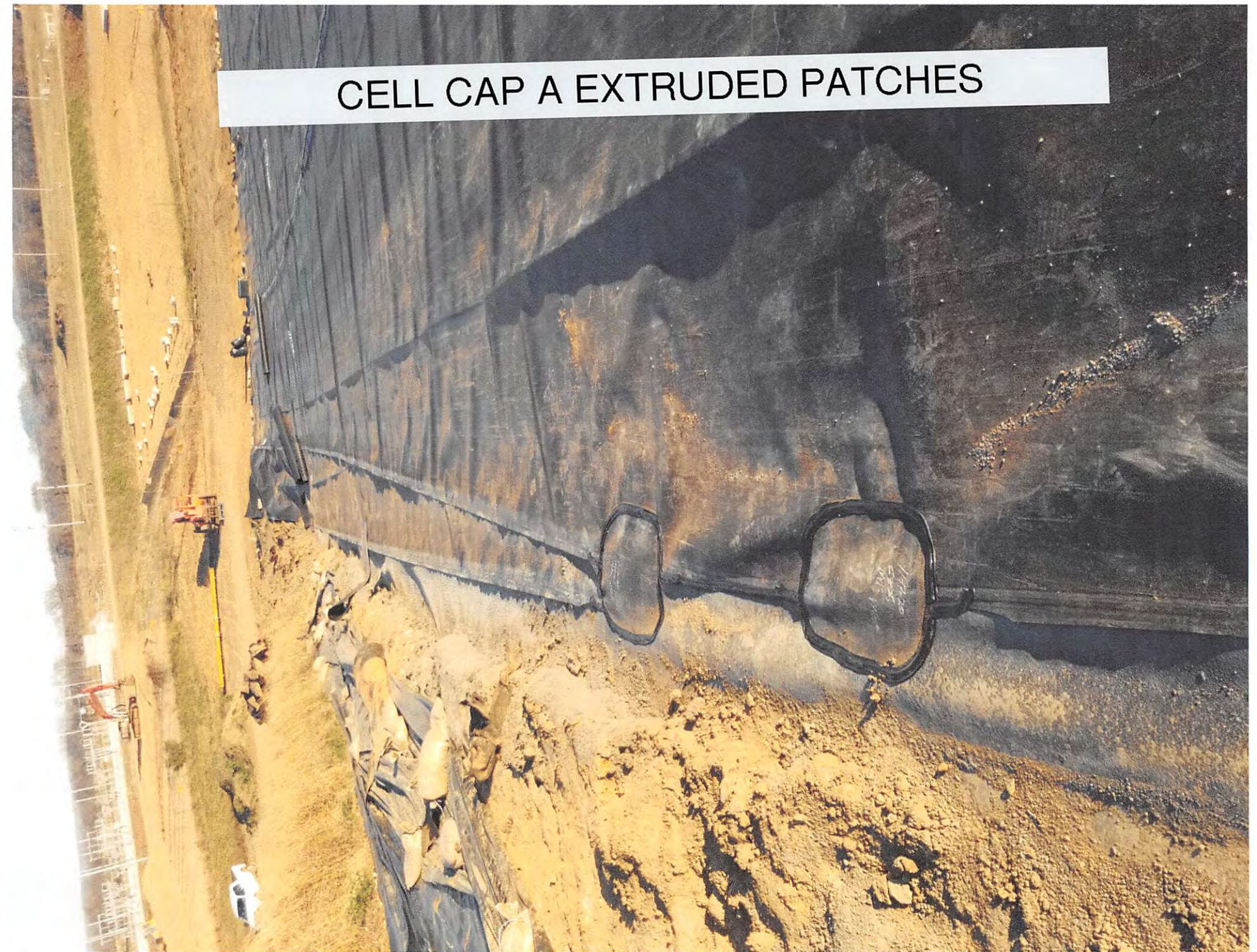
CELL CAP A COMPLETE PANELS LAYOUT



CELL CAP A SUBGRADE



CELL CAP A EXTRUDED PATCHES



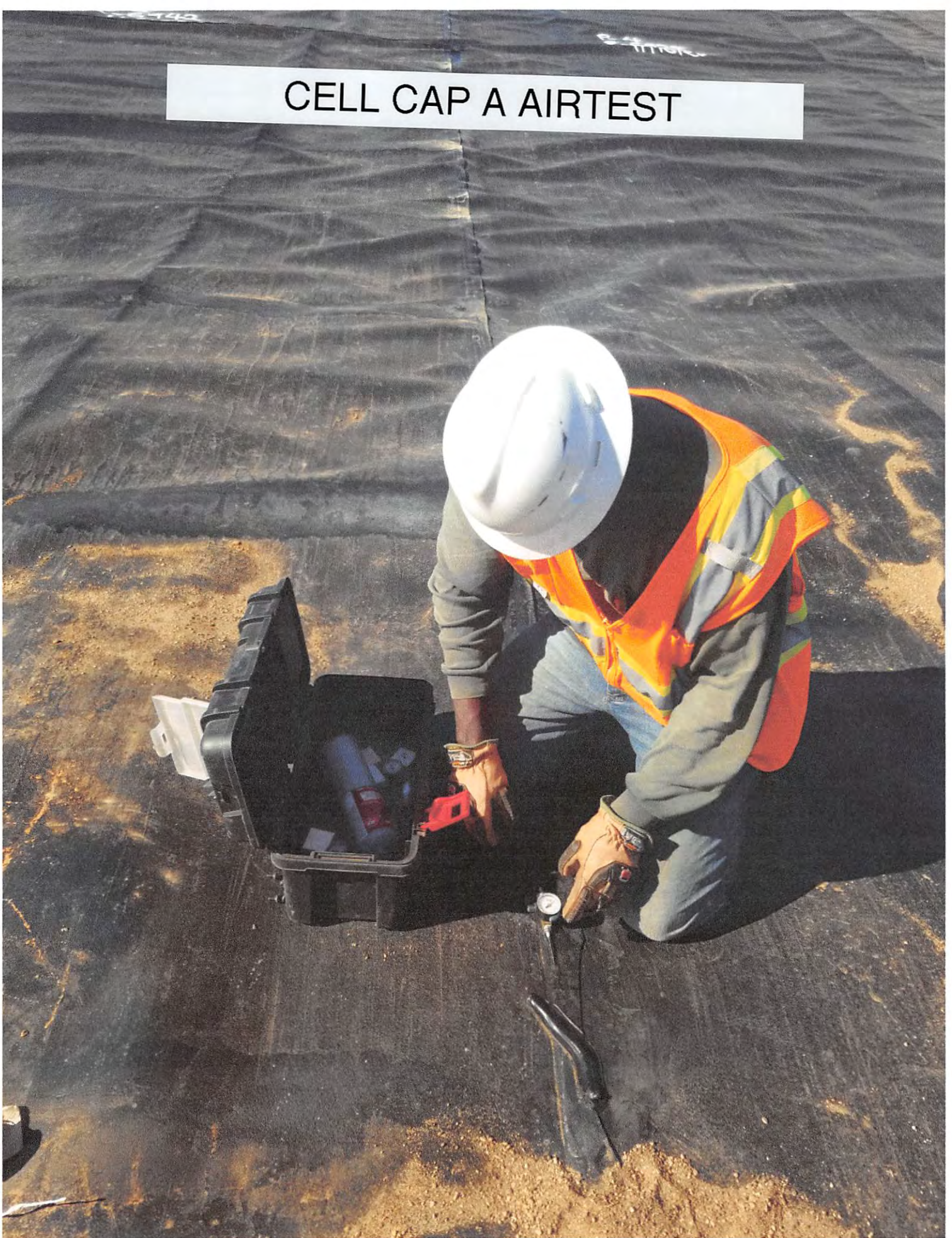
CELL CAP A WEDGE SEAMS



CELL CAP A TRENCH BACKFILL



CELL CAP A AIRTEST



CELL CAP A VACCUM TEST



PANEL PLACEMENT DIAGRAM

Customer Name: SEQUOYAH

Job location: GORE, OKLAHOMA

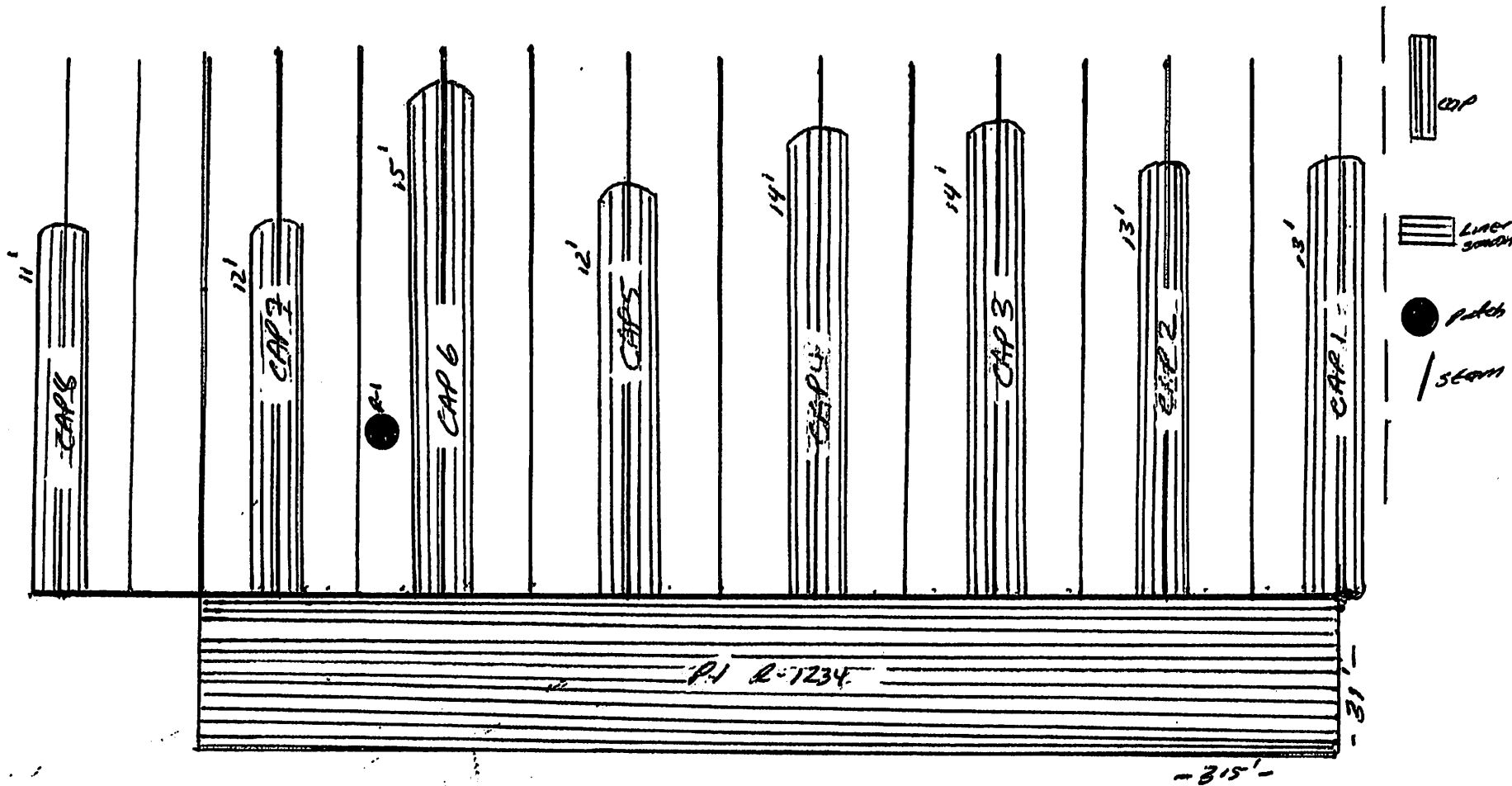
Job Description: CELL CAP G

Job No.: 150603

Material Description: 60MIL SMOOTH HDPE

Form ECW-STD-0001 REV. 0 Date 3-Dec-19 | Use Project-Specific diagram instructions. If the project requires a diagram, but does not provide a specified template or other instructions, then use this form.

CELL CAP G DIAGRAM



% COMPLETE OF TOTAL JOB: 100%

I, the undersigned, duly authorized representative of SEQUOYAH FUEL DISPOSAL
do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the work
has been completed in accordance with specifications and the terms and conditions of the contract.

Certificate accepted by EnviroCon Systems, Inc. Representative.

Form ECW-SID-0001 REV. 0 Date: 3-Dec-19

**SUBGRADE SURFACE
PREPARATION ACCEPTANCE**

Job Description: CELL CAP G | Material Description: 60MIL SMOOTH HDPE

Customer Name: Field SEQUOYAH FUEL DISPOSAL

Job No.: 150603

Job Location: GORE, OKLAHOMA

DATE: 11/19/2020

I, the undersigned duly-authorized representative of EnviroCon Systems, Inc., certify that upon visual inspection, the subgrade or surface described below meets the cleanliness and smoothness criteria for installation of a 60MIL SMOOTH HDPE Liner. By signing below, however, EnviroCon Systems, Inc. acknowledges no responsibility for the subgrade or surface design, degree of moisture or compaction, integrity, elevation, or maintenance thereof, in any way.

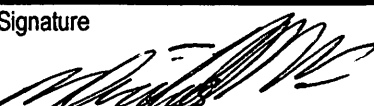
Description of Area: FLOOR CELL CAP G SUBGRADE

Approximate Size of Area: 9,765sf

Certificate accepted by Quality Representative.

Name	Signature	Title	Date
Kenny Schlegel		QA Mgr	11/19/2020

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
john pitia		supervisor	11/19/2020

customer ne SEQUOYAH FUEL DISPOS job location, GORE, OKLAHOMA

QC/QA name, PITIA KIDIKI JOHN

Job Description: CELL CAP G

Job No.: 150603

Material Description: 60MIL SMOOTH HDPE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

Filename: Copy of CQC_Guide_-_Linear_ECW-STD-0001_QA_Forms_Rev_00
Tab: Non-Destructive

Customer Name: SEQUOYAH job location, GORE, OKLAHOMA

QC/QA name ,PITIA KIDIKI JOHN

Job Description: CELL CAP G

Job No.: 150603

Material Description: 60MIL SMOOTH HDPE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]



Page 1 of 2

Job Description: CELL CAP G

Job No.: 150603 Material Description: 60MIL SMOOTH HDPE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

Filename: Copy of CQC_Guide_-_Liner_ECW-STD-0001_QA_Forms_Rev_00
Tab: Panel Placement

Customer Name: SEQUOYAH FUEL DISPOSAL job location, GORE, OKLAHOMA

Job Description: CELL CAP G

Job No.: 150603

Material Description: 60MIL SMOOTH HDPE | Form ECW-STD-0001 REV. 0 Date 3-Dec-19

[illegible]

CELL CAP G EXTRUDED CAP



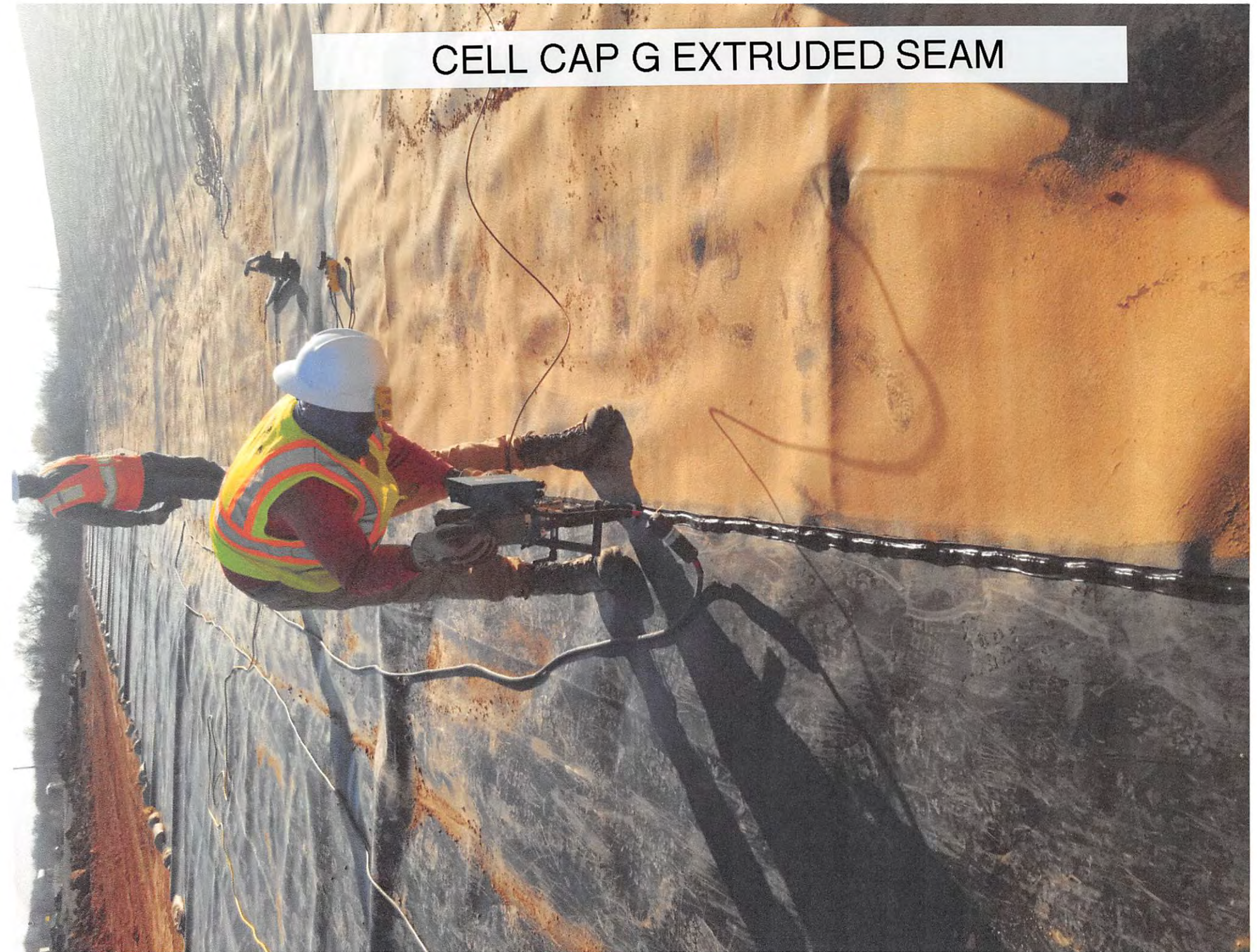
CELL CAP G VACCUM TEST



CELL CAP G 100% COMPLETE



CELL CAP G EXTRUDED SEAM



CELL CAP G SUBGRADE



PHASE IV (COVER) AS-BUILT REPORT

Appendix D Synthetic Liner Installation Reports

D.3 2021 LINER INSTALLATION REPORTS



PANEL PLACEMENT DIAGRAM

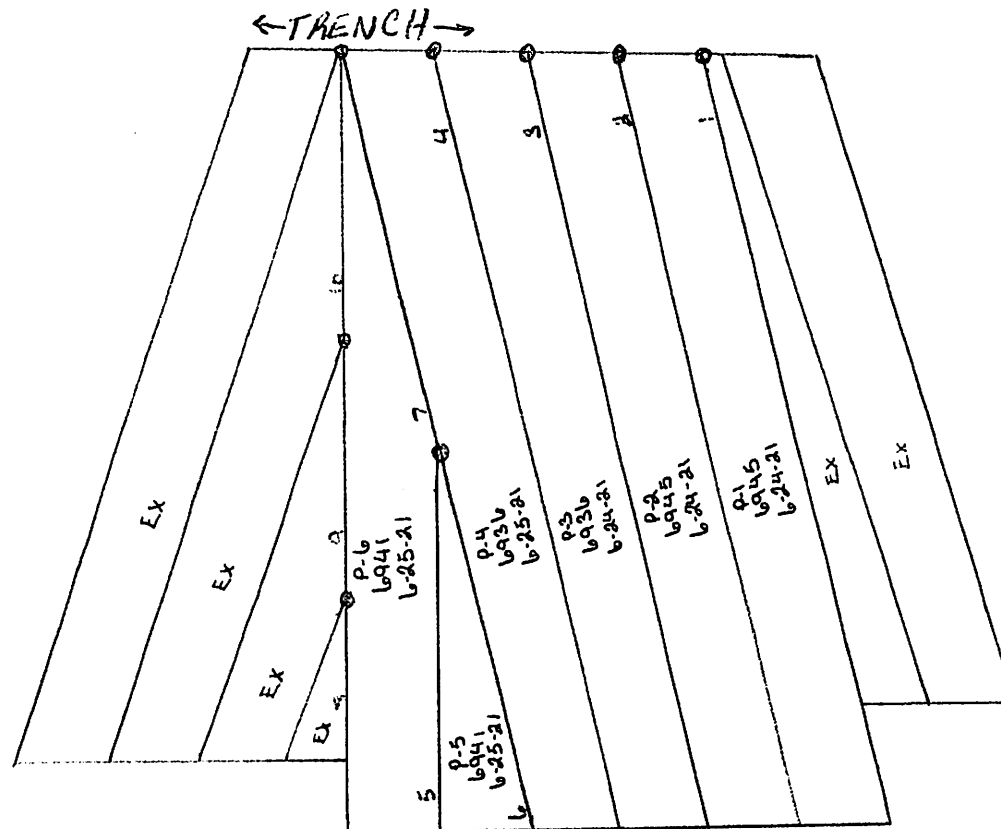
Customer Name: Sequoyah Fuels | Job Location: Gore, Oklahoma

Job Description: Landfill Area D Ramp Enclosure

Order No.: 150603

Material Description: 60 mil Texture HDPE

Form ECW-STD0001 REV. 11 Date 21-Feb-20 | Use Project-Specific diagram instructions. If this project requires a diagram, but does not provide a specified template or other instructions, then use this form.



Customer Name: Sequoyah Fuels | Job Location: Gore , Oklahoma

Job Description: Landfill Area D Ramp Enclosure

Order No.: 150603

Material Description: 60 mil Texture HDPE | Form ECW-STD-0001 REV. 1 Date 21-Feb-20

Date	Panel Number	Roll Number	Panel Length (ft)	Panel Width (ft)	COMMENTS/PANEL LOCATION
6-24-21	1	6945	246'	22'	Area D 26,719 SF Total
6-24-21	2	6945	246'	22'	
6-24-21	3	6936	246'	22'	
6-25-21	4	6936	246'	22'	
6-25-21	5	6941	110' x 24'	22'	
6-25-21	6	6941	110' x 24'	22'	

TRIAL WELD INFO

Customer Name: Sequoyah Fuels | Job Location: Gore, Oklahoma

Job Description: Landfill Area D Ramp Enclosure

Order No.: 150603

Material Description: 60 mil Texture HDPE

Form ECW-STD-0001 REV. 1 Date 21-Feb-20

Date Time	Ambient Temp (°F)	QC Initials	Machine #	Seamer Initial	Extrusion Welds				Fusion Weld				Tests					Comments	
					Extruder Temp		Preheat Temp		Wedge Temp		Test Value								
					Extr Set	Extr Pyro	Pre Ht Set	Pre Ht Pyro	Wdg T Set	Wdg T Pyro	Measured Speed (ft/min)	Speed Setting	Peel1	Peel2	Peel3	Shear	Pass/ Fail		
6-24-21	1:20	94°	T.D.	W-46	A.B.					850°		600		127	119	122	136	P	
														124	123	125			
6-25-21	7:00	82°	T.D.	W-46	A.B.					850°		600		119	120	121	137	P	
														121	118	123			
6-25-21	1:05	96°	T.D.	G-90	D.A.	260°	3							126	123	124	139	P	

Customer Name: Sequoyah Fuels | Job Location: Gore , Oklahoma

Job Description: Landfill Area D Ramp Enclosure Order No.: 150603 Material Description: 60 mil Texture HDPE Form ECW-STD-0001 REV. 1 Date 21-Feb-20

[illegible]

REPAIR REPORT

Customer Name: Sequoyah Fuels | Job Location: Gore, Oklahoma

Job Description: Landfill Area D Ramp Enclosure Order No.: 150603 Material Description: 60 mil Texture HDPE | Form ECW-STD-0001 REV. 1 Date 21-Feb-20

Repair

Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description of Damage, Type/Size of Repair
1	Ex + P-1	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Trench
2	P-1 + P-2	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Trench
3	P-2 + P-3	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Trench
4	P-3 + P-4	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Trench
5	P-4, Ex, Ex	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Trench
6	P-4, P-5, P-6	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Cross Seam
7	P-6, Ex, Ex	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Cross Seam
8	P-6, Ex, Ex	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Cross Seam
9	P-6, Ex, Ex	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Cross Seam
10	P-3 + P-4	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Burn Out
11	P-3 + P-4	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Burn Out
12	P-2 + P-3	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Burn Out
13	P-2 + P-3	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Burn Out
14	P-1 + P-2	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Burn Out
15	P-1 + P-2	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Burn Out
16	Ex + P-1	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Burn Out
17	Ex + P-1	6-25-21	D.A.	G-90	6-25-21	T.C.	P	Burn Out

NON-DESTRUCTIVE FORM

Customer Name: Sequoyah Fuels | Job Location: Gore, Oklahoma

Job Description: Landfill Area D Ramp Enclosure Order No.: 150603 Material Description: 60 mil Texture HDPE | Form ECW-STD-0001 REV. 1 Date 21-Feb-20

			Air/Vacuum Testing							
			Time		Pressure			Driver/ Vac Test	Pass/ Fail	Location/Comments
Date	Panel Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press			
6-25-21	Ex + P-1	A.B.	1:06	1:11	0	35	35	A.T.	P	
6-25-21	P-1 + P-2	A.B.	1:21	1:26	0	35	35	A.T.	P	
6-25-21	P-2 + P-3	A.B.	1:28	1:33	0	35	35	A.T.	P	
6-25-21	P-3 + P-4	A.B.	1:31	1:36	0	35	35	A.T.	P	
6-25-21	P-5 + P-6	A.B.	1:35	1:40	0	35	35	A.T.	P	
6-25-21	P-4 + P-5	A.B.	2:07	2:12	0	35	35	A.T.	P	
6-25-21	P-4 + P-6	A.B.	2:10	2:15	0	35	35	A.T.	P	
6-25-21	P-6 + Ex	A.B.	2:16	2:21	0	35	35	A.T.	P	
6-25-21	P-6 + Ex	T.D.	3:33	3:38	0	35	35	A.T.	P	
6-25-21	P-6 + Ex	T.D.	3:31	3:36	0	35	35	A.T.	P	

PANEL PLACEMENT DIAGRAM

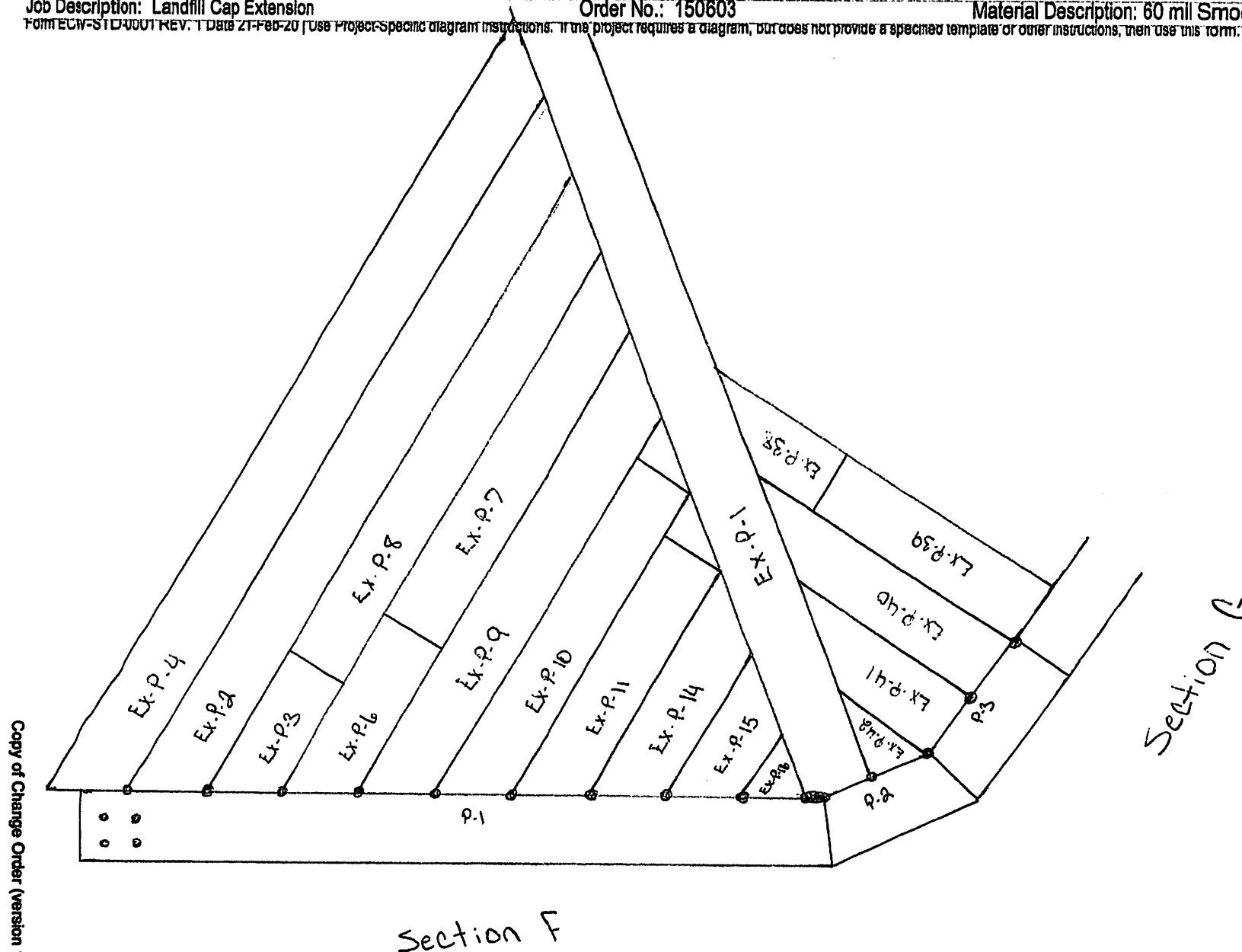
Customer Name: Sequoyah Fuels | Job Location: Gore, Oklahoma

Job Description: Landfill Cap Extension

Order No.: 150603

Material Description: 60 mil Smooth HDPE

FORM ENV-S10-0001 REV. 1 DATE 21-FEB-20 (Use Project-Specific diagram instructions. If the project requires a diagram, but does not provide a specified template or other instructions, then use this form.)



Copy of Change Order (version 1)

TRIAL WELD INFO

Customer Name: Sequoyah Fuels | Job Location: Gore, Oklahoma

Job Description: Landfill Cap Extension

Order No.: 150603

Material Description: 60 mil Smooth HDPE | Form ECW-STD-0001 REV. 1 Date 21-Feb-20

Date Time	Ambient Temp (°F)	QC Initials	Machine #	Seamer Initial	Extrusion Welds				Fusion Weld				Tests					Comments	
					Extruder Temp		Preheat Temp		Wedge Temp		Measured Speed (ft/min)	Speed Setting	Test Value						
					Extr Set	Extr Pyro	Pre Ht Set	Pre Ht Pyro	Wdg T Set	Wdg T Pyro					Peel1	Peel2	Peel3	Shear	Pass/ Fail
6-19-21 9:00	81°	T.D.	W-46	A.B.					850°		600			121 119	123 121	120 124	143	P	
6-19-21 1:15	89°	T.D.	G-90	D.A.	260°		3							124	128	127	141	P	
6-21-21 7:05	75°	T.D.	G-90	D.A.	260°		4							119	116	116	137	P	
6-22-21 7:10	70°	T.D.	G-90	D.A.	260°		4							121	118	120	136	P	
6-22-21 12:55	78°	T.D.	G-90	D.A.	260°		3							123	124	121	137	P	
															</				

Copy of Change Order (version 1)

P.O. Box 673048
Houston, TX 77267
Toll Free: 1-888-449-3236

Customer Name: Sequoyah Fuels | **Job Location:** Gore , Oklahoma

Job Description: Landfill Cap Extension

Order No.: 150603 Material Description: 60 mil Smooth HDPE Form ECW-STD-0001 REV. 1 Date 21-Feb-20

Date	Panel Number	Roll Number	Panel Length (ft)	Panel Width (ft)	COMMENTS/PANEL LOCATION
6-19-21	1	None	123'	22'	Cap extension
6-19-21	2	None	50'	22'	
6-19-21	3	None	55'	22'	1
					5,016 sf

REPAIR REPORT

Customer Name: Sequoyah Fuels | Job Location: Gore, Oklahoma

Job Description: Landfill Cap Extension

Order No.: 150603

Material Description: 60 mil Smooth HDPE

Form ECW-STD-0001 REV. 1 Date 21-Feb-20

Panel Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description or Damage, Type/Size of Repair
1	1, E.P. 4, E.P. 2	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
2	1, E.P. 2, E.P. 3	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
3	1, E.P. 3, E.P. 6	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
4	1, E.P. 6, E.P. 9	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
5	1, E.P. 9, E.P. 10	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
6	1, E.P. 10, E.P. 11	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
7	1, E.P. 11, E.P. 14	6-21-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
8	1, E.P. 14, E.P. 15	6-21-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
9	1, E.P. 15, E.P. 16	6-21-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
10	1, E.P. 16, E.P. 1	6-21-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
11	1, 2, E.P. 1	6-19-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
12	2, E.P. 1, E.P. 4	6-19-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
13	2, 3, E.P. 4, E.P. 41	6-19-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
14	3, E.P. 41, E.P. 40	6-19-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
15	3, E.P. 40, E.P. 39	6-19-21	D.A.	G-90	6-22-21	T.C.	Pass	Cross Seam
16	P-1	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Hole
17	P-1	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Hole
18	P-1	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Hole
19	P-1	6-22-21	D.A.	G-90	6-22-21	T.C.	Pass	Hole

NON-DESTRUCTIVE FORM

Customer Name: Sequoyah Fuels | Job Location: Gore, Oklahoma

Job Description: Landfill Cap Extension

Order No.: 150603

Material Description: 60 mil Smooth HDPE

Form ECW-STD-0001 REV. 1 Date 21-Feb-20

Air/Vacuum Testing

Time

Pressure

Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Driver/ Vac Test	Pass/ Fail	Location/Comments
6-19-21	1+2	A.B.	1:32	1:37	0	35	35	A.T.	P	
6-19-21	2+3	A.B.	1:10	1:15	0	35	35	A.T.	P	
6-19-21	1+EX P-4	A.B.	2:30	2:35	0	35	35	A.T.	P	
6-19-21	1+EX P-2	A.B.	2:27	2:32	0	35	35	A.T.	P	
6-19-21	1+EX P-3	A.B.	2:20	2:25	0	35	35	A.T.	P	
6-19-21	1+EX P-6	A.B.	2:13	2:18	0	35	35	A.T.	P	
6-19-21	1+EX P-9	A.B.	2:10	2:15	0	35	35	A.T.	P	
6-19-21	1+EX P-10	A.B.	2:07	2:12	0	35	35	A.T.	P	
6-19-21	1+EX P-11	A.B.	2:00	2:05	0	35	35	A.T.	P	
6-19-21	1+EX P-14	A.B.	1:43	1:48	0	35	35	A.T.	P	
6-19-21	1+EX P-15	A.B.	1:40	1:45	0	35	35	A.T.	P	
6-19-21	1+EX P-16	A.B.	1:38	1:43	0	35	35	A.T.	P	
6-19-21	1+EX P-1	T.C.						A.T.	P	
6-19-21	2+EX P-1	A.B.	1:23	1:28	0	35	35	A.T.	P	
6-19-21	2+EX P-42	A.B.	1:19	1:24	0	35	35	A.T.	P	
6-19-21	3+EX P-41	A.B.	1:08	1:13	0	35	35	A.T.	P	
6-19-21	3+EX P-40	A.B.	1:00	1:05	0	35	35	A.T.	P	
6-19-21	3+EX P-1*	T.C.						A.T.	P	

PHASE IV (COVER) AS-BUILT REPORT

Appendix D Synthetic Liner Installation Reports

D.4 2023 LINER INSTALLATION REPORTS



CERTIFICATE OF ACCEPTANCE

PROJECT NO:150603

PROJECT: Sequoyah Fuels Cap-North Half of the landfill
CLIENT: Sequoyah Fuels Corp.

CLIENT: Sequoyah Fuels Corp.

JOB DESCRIPTION: Landfill Cap

% COMPLETE OF TOTAL JOB: 100%

[illegible]

I, the undersigned, duly authorized representative of: SFC do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the work has been completed in accordance with specifications and the terms and conditions of the contract.

Name <i>Kenny Schlag</i>	Signature <i>Kenny Schlag</i>	Title <i>QA Mgr</i>	Date <i>8/01/23</i>
-----------------------------	----------------------------------	------------------------	------------------------

Certificate accepted by EnviroCon Systems, Inc. Representative

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
May Prakonekham			8-1-23

P.O. Box 673048 Main: 281-443-2597
Houston, TX 77267 Fax: 281-443-7551
Toll Free: 1-888-449-3236

	CONSTRUCTION QUALITY CONTROL		
	ECW-STD-0001	REV. 2.1	
		DATE:	1-Aug-23

CONSTRUCTION QUALITY CONTROL GUIDE - LINER INSTALLATION RECORDS FORMS

Customer Name:	Sequoyah Fuels Corp.		
Job No:	150603		
Job Description:	Sequoyah Fuels Cap-North Half of land		
Job Location:	Gore, Oklahoma		
Material Description:	60 mil textured HDPE Liner		
APPROVER	Gregg DeJarnett	Sign	
	Construction Quality Manager		
REVIEWER	Chris Swires		
	Sales Manager		
TECHNICAL AUTHORITY	Larry Munger		
	Construction Operations Manager		
ORIGINATOR	Frank Amigo		
	Project Engineer		
		SIGNATURE	DATE
			8/1/2023

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

PANEL PLACEMENT FORM

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Panel Number	Roll Number	Panel Length (ft)	Panel Width (ft)	COMMENTS/PANEL LOCATION
7/28/2023	P1	6939	36	22	Liner
7/28/2023	P2	6939	38	22	Liner
7/28/2023	P3	6939	38	22	Liner
7/28/2023	P4	6939	44	22	Liner
7/28/2023	P5	6939	52	22	Liner
7/28/2023	P6	6939	55	22	Liner
7/28/2023	P7	6939	57	22	Liner
7/28/2023	P8	6939	60	22	Liner
7/28/2023	P9	6939	61	22	Liner
7/28/2023	P10	6939	67	22	Liner
7/28/2023	P11	6939	68	22	Liner
7/28/2023	P12	6939	68	22	Liner
7/28/2023	P13	6939	68	22	Liner
7/28/2023	P14	6939	68	22	Liner
7/28/2023	P15	6939	65	22	Liner
7/28/2023	P16	6939	60	22	Liner
7/28/2023	P17	6934	50	22	Liner
7/28/2023	P18	6934	38	22	Liner
7/28/2023	P19	6934	410	22	Liner
7/28/2023	P18A	6934	11	6	Liner
7/29/2023	P20	6940	412	22	Liner
7/29/2023	P21	6940	106	22	Liner
7/29/2023	P22	6940	305	22	Liner
7/29/2023	P23	6940	212	22	Liner
7/29/2023	P24	6940	200	22	Liner

PANEL PLACEMENT FORM

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Panel Number	Roll Number	Panel Length (ft)	Panel Width (ft)	COMMENTS/PANEL LOCATION
7/29/2023	P25	6924	312	22	Liner
7/29/2023	P26	6932	100	22	Liner
7/29/2023	P27	6932	410	22	Liner
7/29/2023	P28	6937	405	22	Liner
7/29/2023	P28A	6937	6	22	Liner
7/29/2023	P29	6937	40	22	Liner
7/31/2023	P30	6944	33	22	Liner
7/31/2023	P31	6944	34	22	Liner
7/31/2023	P32	6944	36	22	Liner
7/31/2023	P33	6944	36	22	Liner
7/31/2023	P34	6944	35	22	Liner
7/31/2023	P35	6944	34	22	Liner
7/31/2023	P36	6944	153	22	Liner
7/31/2023	P37	6944	64	22	Liner
7/31/2023	P38	6944	118	22	Liner
7/31/2023	P39	6944	80	22	Liner
7/31/2023	P40	6944	92	22	Liner
7/31/2023	P41	6944	104	22	Liner
7/31/2023	P42	6944	180	22	Liner
7/31/2023	P43	6944	175	22	Liner
7/31/2023	P44	6944	78	22	Liner
7/31/2023	P45	6944	24	22	Liner
7/31/2023	P46	6944	42	10	Liner
7/31/2023	P47	6944	42	22	Liner

TRIAL WELD INFO

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

					Extrusion Welds				Fusion Weld				Tests					
					Extruder Temp		Preheat Temp		Wedge Temp				Test Value					
Date Time	Ambient Temp (°F)	QC Initials	Machine #	Seamer Initial	Extr Set	Extr Pyro	Pre Ht Set	Pre Ht Pyro	Wdg T Set	Wdg T Pyro	Measured Speed (ft/min)	Speed Setting	Peel1	Peel2	Peel3	Shear	Pass/Fail	Comments
7/28/2023	81°	MP	W-31	SP	-	-	-	-	860°	-	-	450	120	123	128	145	PASS	fusion
7:00	-	-	-	-	-	-	-	-	-	-	-	-	101	105	108	143	-	-
7/28/2023	81°	MP	W-33	SS	-	-	-	-	860°	-	-	450	103	121	102	140	PASS	fusion
7:08	-	-	-	-	-	-	-	-	-	-	-	-	122	105	118	146	-	-
7/29/2023	82°	MP	W-31	SP	-	-	-	-	860°	-	-	450	108	121	124	141	PASS	fusion
7:03	-	-	-	-	-	-	-	-	-	-	-	-	123	107	109	140	-	-
7/29/2023	82°	MP	W-33	SS	-	-	-	-	860°	-	-	450	105	121	103	145	PASS	fusion
7:06	-	-	-	-	-	-	-	-	-	-	-	-	118	106	120	148	-	-
7/29/2023	82°	MP	W-34	MA	-	-	-	-	860°	-	-	450	104	116	110	139	PASS	fusion
7:05	-	-	-	-	-	-	-	-	-	-	-	-	118	108	120	143	-	-
7/31/2023	77°	MP	W-33	SS	-	-	-	-	860°	-	-	450	105	113	118	145	PASS	fusion
7:08	-	-	-	-	-	-	-	-	-	-	-	-	119	102	110	140	-	-
7/31/2023	77°	MP	W-34	MA	-	-	-	-	860°	-	-	450	106	100	112	139	PASS	fusion
7:11	-	-	-	-	-	-	-	-	-	-	-	-	110	115	105	143	-	-
7/31/2023	77°	MP	G-5	MV	275°	-	5°	-	-	-	-	-	103	105	100	136	PASS	extrusion
12:35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135	-	-
7/31/2023	77°	MP	G-50	SS	278°	-	6°	-	-	-	-	-	108	110	113	138	PASS	extrusion
12:45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	133	-	-

TRIAL WELD INFO

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

					Extrusion Welds				Fusion Weld				Tests					
					Extruder Temp		Preheat Temp		Wedge Temp				Test Value					
Date Time	Ambient Temp (°F)	QC Initials	Machine #	Seamer Initial	Extr Set	Extr Pyro	Pre Ht Set	Pre Ht Pyro	Wdg T Set	Wdg T Pyro	Measured Speed (ft/min)	Speed Setting	Peel1	Peel2	Peel3	Shear	Pass/ Fail	Comments
8/1/2023	78°	MP	G-5	MV	275°	-	5°	-	-	-	-	-	110	111	113	130	PASS	extrusion
7:15		-	-	-	-	-	-	-	-	-	-	-	-	-	-	132	-	-
8/1/2023	78°	MP	G-50	SS	278°	-	6°	-	-	-	-	-	109	105	106	133	PASS	extrusion
7:20		-	-	-	-	-	-	-	-	-	-	-	-	-	-	128	-	-

PANEL SEAMING

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/28/2023	7:28	P1/2	37	SS	W-33	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:38	P2/3	40	SS	W-33	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:36	P3/4	44	SP	W-31	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:45	P4/5	49	SS	W-33	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:48	P5/6	53	SP	W-31	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:54	P6/7	55	SS	W-33	860	CLOUDY	LIGHT	81°	P	
7/28/2023	8:00	P7/8	58	SP	W-31	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:06	P8/9	62	SS	W-33	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:19	P9/10	63	SP	W-31	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:28	P10/11	66	SS	W-33	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:35	P11/12	66	SP	W-31	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:42	P12/13	66	SS	W-33	860	SUNNY	LIGHT	83°	P	
7/28/2023	9:07	P13/14	66	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:10	P14/15	63	SS	W-33	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:23	P15/16	58	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:25	P16/17	48	SS	W-33	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:38	P17/18	36	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:16	P18/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:39	P18/18A	15	SS	W-33	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:21	P17/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:24	P16/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:28	P15/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:32	P14/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:36	P13/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:39	P12/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	

PANEL SEAMING

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/28/2023	10:43	P11/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:47	P10/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:50	P9/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:54	P8/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:58	P7/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:02	P6/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:06	P5/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:10	P4/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:13	P3/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:17	P2/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:21	P1/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/29/2023	7:40	P20/21	104	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:25	P21/24	109	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	7:33	P21/22	22	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	7:58	P20/22	304	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:45	P22/24	93	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	7:28	P19/20	402	SP	W-31	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:48	P19/20	5	SP	W-31	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:12	P23/24	22	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	9:02	P22/23	213	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:54	P25/26	22	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:53	P24/25	208	SP	W-31	860	CLOUDY	8MPH	82°	P	
7/29/2023	9:13	P25/27	315	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	9:30	P23/25	107	SP	W-31	860	CLOUDY	8MPH	82°	P	

PANEL SEAMING

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/29/2023	9:48	P23/26	103	SP	W-31	860	CLOUDY	8MPH	82°	P	
7/29/2023	10:03	P26/27	105	SS	W-33	860	CLOUDY	8MPH	89°	P	
7/29/2023	9:47	P27/28	405	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	10:35	P28/28A	22	SS	W-33	860	CLOUDY	8MPH	89°	P	
7/29/2023	10:42	P28/29	38	SS	W-33	860	CLOUDY	8MPH	89°	P	
7/31/2023	7:20	P29/30	33	SS	W-33	860	SUNNY	LIGTH	77°	P	
7/31/2023	7:25	P30/31	33	SP	W-34	860	SUNNY	LIGTH	77°	P	
7/31/2023	7:28	P31/32	34	SS	W-33	860	SUNNY	LIGTH	77°	P	
7/31/2023	7:31	P32/33	35	SP	W-34	860	SUNNY	LIGTH	77°	P	
7/31/2023	7:40	P33/34	35	SS	W-33	860	SUNNY	LIGTH	77°	P	
7/31/2023	7:50	P34/35	33	SS	W-33	860	SUNNY	LIGTH	77°	P	
7/31/2023	11:05	P34/44	22	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	11:11	P33/43	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	11:03	P32/42	22	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	12:45	P31/40	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	11:00	P30/38	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:55	P29/36	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:30	P28/36	134	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:43	P36/38	119	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:38	P36/39	28	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:04	P38/39	22	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	7:52	P36/37	22	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:29	P37/39	55	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:30	P28/36	10	SP	W-34	860	SUNNY	LIGHT	88°	P	

PANEL SEAMING

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/31/2023	9:27	P39/41	85	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:24	P38/41	17	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:08	P40/38	94	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:05	P40/41	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:15	P41/42	102	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:33	P40/42	91	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:45	P42/43	174	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:24	P43/44	77	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:31	P44/45	24	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:19	P45/35	24	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:59	P44/46	10	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:15	P43/46	42	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:59	P30/36	6	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	11:04	P31/38	5	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	12:46	P35/47	33	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:19	P35/45	24	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:29	P37/39	55	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:30	P28/36	10	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:27	P39/41	85	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:24	P38/41	17	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:08	P38/40	94	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:05	P40/41	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:15	P41/42	102	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:38	P40/42	91	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:45	P42/43	174	SS	W-33	860	SUNNY	LIGHT	88°	P	

PANEL SEAMING

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/31/2023	10:24	P43/44	77	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:19	P35/45	24	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:59	P44/46	10	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:15	P43/46	42	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:31	P44/45	24	SS	W-33	860	SUNNY	LIGHT	88°	P	

NON-DESTRUCTIVE FORM

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

			Air/Vacuum Testing							
			Time		Pressure					
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Air/ Driver/ Vac Test	Pass/ Fail	Location/Comments
7/28/2023	P1/19	SS	12:56	13:01	-	35	35	Air	pass	-
7/28/2023	P1/2	SS	12:55	13:00	1	35	34	Air	pass	-
7/28/2023	P2/19	SS	12:57	13:02	-	35	35	Air	pass	-
7/28/2023	P2/3	SS	14:30	14:35	-	35	35	Air	pass	-
7/28/2023	P19/3	SS	14:31	14:36	1	35	34	Air	pass	-
7/28/2023	P3/4	SS	14:34	14:39	-	35	35	Air	pass	-
7/28/2023	P19/4	SS	14:35	14:40	-	35	35	Air	pass	-
7/28/2023	P4/5	SS	14:39	14:44	-	35	35	Air	pass	-
7/28/2023	P19/5	SS	14:40	14:45	-	35	35	Air	pass	-
7/28/2023	P5/6	SS	14:43	14:48	-	35	35	Air	pass	-
7/28/2023	P19/6	SS	14:42	14:47	-	35	35	Air	pass	-
7/28/2023	P6/7	SS	14:46	14:51	1	35	34	Air	pass	-
7/28/2023	P19/7	SS	14:45	14:50	-	35	35	Air	pass	-
7/28/2023	P7/8	SS	14:49	14:54	-	35	35	Air	pass	-
7/28/2023	P19/8	SS	14:48	14:53	-	35	35	Air	pass	-
7/28/2023	P8/9	SS	15:30	15:35	1	35	34	Air	pass	-
7/28/2023	P19/9	SS	15:31	15:36	-	35	35	Air	pass	-
7/28/2023	P9/10	SS	15:33	15:38	-	35	35	Air	pass	-
7/28/2023	P19/10	SS	15:34	15:39	-	35	35	Air	pass	-
7/28/2023	P10/11	SS	15:40	15:45	-	35	35	Air	pass	-
7/28/2023	P19/11	SS	15:41	15:46	-	35	35	Air	pass	-
7/28/2023	P11/12	SS	15:44	15:49	-	35	35	Air	pass	-
7/28/2023	P19/12	SS	15:45	15:50	-	35	35	Air	pass	-
7/29/2023	P12/13	SS	7:08	7:13	-	35	35	Air	pass	-

NON-DESTRUCTIVE FORM

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

			Air/Vacuum Testing							
			Time		Pressure					
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Air/ Driver/ Vac Test	Pass/ Fail	Location/Comments
7/29/2023	P19/13	SS	7:09	7:14	-	35	35	Air	pass	-
7/29/2023	P13/14	SS	7:10	7:15	-	35	35	Air	pass	-
7/29/2023	P19/14	SS	7:11	7:16	-	35	35	Air	pass	-
7/29/2023	P14/15	SS	7:15	7:20	-	35	35	Air	pass	-
7/29/2023	P19/15	SS	7:16	7:21	1	35	34	Air	pass	-
7/29/2023	P15/16	SS	7:19	7:24	-	35	35	Air	pass	-
7/29/2023	P19/6	SS	7:18	7:23	-	35	35	Air	pass	-
7/29/2023	P16/17	SS	7:28	7:33	-	35	35	Air	pass	-
7/29/2023	P17/19	SS	7:29	7:34	-	35	35	Air	pass	-
7/29/2023	P17/18	SS	7:32	7:37	1	35	34	Air	pass	-
7/29/2023	P19/18	SS	7:33	7:38	-	35	35	Air	pass	-
7/29/2023	P18/18A	SS	7:35	7:40	-	35	35	Air	pass	-
7/29/2023	P19/20	SS	12:15	12:20	-	35	35	Air	pass	-
7/29/2023	P20/21	SS	13:20	13:25	-	35	35	Air	pass	-
7/29/2023	P21/22	SS	13:21	13:26	1	35	34	Air	pass	-
7/29/2023	P20/22	SS	13:22	13:27	-	35	35	Air	pass	-
7/29/2023	P21/24	SS	13:27	13:32	-	35	35	Air	pass	-
7/29/2023	P22/24	SS	13:28	13:33	-	35	35	Air	pass	-
7/29/2023	P22/23	SS	13:30	13:35	-	35	35	Air	pass	-
7/29/2023	P23/24	SS	13:31	13:36	-	35	35	Air	pass	-
7/29/2023	P23/25	SS	13:33	13:38	-	35	35	Air	pass	-
7/29/2023	P24/25	SS	13:34	13:39	1	35	34	Air	pass	-
7/29/2023	P25/26	SS	13:41	13:46	-	35	35	Air	pass	-
7/29/2023	P23/26	SS	13:40	13:45	-	35	35	Air	pass	-
7/29/2023	P25/27	SS	13:47	13:52	-	35	35	Air	pass	-

NON-DESTRUCTIVE FORM

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

			Air/Vacuum Testing							
			Time		Pressure					
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Air/ Driver/ Vac Test	Pass/ Fail	Location/Comments
7/29/2023	P26/27	SS	13:48	13:53	-	35	35	Air	pass	-
7/29/2023	P27/28	SS	13:50	13:55	-	35	35	Air	pass	-
8/1/2023	P38/40	SS	7:25	7:30	-	35	35	Air	pass	-
8/1/2023	P38/36	SS	7:30	7:35	-	35	35	Air	pass	-
8/1/2023	P29/30	SS	7:31	7:36	-	35	35	Air	pass	-
8/1/2023	P29/36	SS	7:32	7:37	-	35	35	Air	pass	-
8/1/2023	P28/29	SS	7:35	7:40	-	35	35	Air	pass	-
8/1/2023	P28/28A	SS	7:36	7:41	-	35	35	Air	pass	-
8/1/2023	P27/28A	SS	7:33	7:38	-	35	35	Air	pass	-
8/1/2023	P41/42	SS	7:40	7:45	-	35	35	Air	pass	-
8/1/2023	P40/41	SS	7:41	7:46	-	35	35	Air	pass	-
8/1/2023	P46/44	SS	7:47	7:52	-	35	35	Air	pass	-
8/1/2023	P46/43	SS	7:48	7:53	1	35	34	Air	pass	-
8/1/2023	P39/41	SS	7:47	7:52	-	35	35	Air	pass	-
8/1/2023	P39/38	SS	7:51	7:56	1	35	34	Air	pass	-
8/1/2023	P38/41	SS	7:50	7:55	-	35	35	Air	pass	-
8/1/2023	P36/37	SS	8:07	8:12	-	35	35	Air	pass	-
8/1/2023	P37/39	SS	8:05	8:10	-	35	35	Air	pass	-
8/1/2023	P36/39	SS	8:06	8:11	1	35	34	Air	pass	-
8/1/2023	P28/37	SS	8:11	8:16	-	35	35	Air	pass	-
8/1/2023	P28/36	SS	8:10	8:15	1	35	34	Air	pass	-
8/1/2023	P47/35	SS	6:50	6:55	-	35	35	Air	pass	-
8/1/2023	P35/45	SS	6:57	7:02	-	35	35	Air	pass	-
8/1/2023	P44/45	SS	6:59	7:04	-	35	35	Air	pass	-

NON-DESTRUCTIVE FORM

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

			Air/Vacuum Testing							
			Time		Pressure					
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Air/ Driver/ Vac Test	Pass/ Fail	Location/Comments
8/1/2023	P44/35	SS	6:55	7:00	1	35	34	Air	pass	-
8/1/2023	P35/44	SS	7:00	7:05	-	35	35	Air	pass	-
8/1/2023	P34/44	SS	7:01	7:06	-	35	35	Air	pass	-
8/1/2023	P34/33	SS	7:08	7:13	-	35	35	Air	pass	-
8/1/2023	P44/43	SS	7:10	7:15	-	35	35	Air	pass	-
8/1/2023	P43/33	SS	7:09	7:14	-	35	35	Air	pass	-
8/1/2023	P42/43	SS	7:12	7:17	1	-	34	Air	pass	-
8/1/2023	P42/32	SS	7:11	7:16	-	35	35	Air	pass	-
8/1/2023	P32/33	SS	7:13	7:18	-	35	35	Air	pass	-
8/1/2023	P40/42	SS	7:16	7:21	-	35	35	Air	pass	-
8/1/2023	P40/32	SS	7:17	7:22	-	35	35	Air	pass	-
8/1/2023	P42/31	SS	7:21	7:26	-	35	35	Air	pass	-
8/1/2023	P31/32	SS	7:20	7:25	-	35	35	Air	pass	-
8/1/2023	P30/38	SS	7:27	7:32	-	35	35	Air	pass	-
8/1/2023	P30/31	SS	7:28	7:33	-	35	35	Air	pass	-

DESTRUCTIVE TESTING LOG

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Sample I.D.	Seam Number	Machine Number	Seamer Initials	Peel/Shear Values (1) lbs/in	Peel/Shear Values (2) lbs/in	Peel/Shear Values (3) lbs/in	Peel/Shear Values (4) lbs/in	Peel/Shear Values (5) lbs/in	Peel/Shear Pass/Fail	Tensiometer Calibration Date (Latest)	Pass/Fail	Break Locale Parent/Weld Comment
7/28/2023	DS1	P16/17	W-33	SS	124/129	117/128	112/115	111/111	118/109	PASS	-	PEEL	
					151/153	146/148	148/150	152/148	153/154	PASS	-	SHEAR	
7/28/2023	DS2	P10/19	W-31	SP	108/110	104/107	109/113	109/112	112/119	PASS	-	PEEL	
					145/160	148/158	147/160	161/155	149/161	PASS	-	SHEAR	
7/29/2023	DS3	P22/23	W-34	MA	107/110	103/112	108/110	106/107	105/112	PASS	-	PEEL	
					149/158	151/159	147/161	143/159	145/160	PASS	-	SHEAR	
7/29/2023	DS4	P25/26	W-33	SS	115/116	106/119	122/141	116/120	117/121	PASS	-	PEEL	
					160/161	163/161	161/162	161/157	160/162	PASS	-	SHEAR	
7/29/2023	DS5	P24/25	W-31	SP	126/130	122/108	118/120	122/107	98/122	PASS	-	PEEL	
					140/145	143/146	141/146	145/143	142/146	PASS	-	SHEAR	
7/31/2023	DS6	P41/42	W-31	SP	108/110	106/114	109/123	105/125	110/111	PASS	-	PEEL	
					145/163	144/161	140/160	141/161	148/162	PASS	-	SHEAR	
7/31/2023	DS7	P42/43	W-33	SS	105/102	108/123	104/112	105/113	102/106	PASS	-	PEEL	
					159/148	143/160	145/160	148/161	149/158	PASS	-	SHEAR	

REPAIR REPORT

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Field Seam Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description of Damage, Type/Size of Repair
1	P1/2/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
2	P2/3/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
3	P3/4/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
4	P4/5/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
5	P5/6/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
6	P6/7/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
7	P7/8/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
8	P8/9/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
9	P9/10/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
10	P10/11/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
11	P11/12/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
12	P12/13/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
13	P13/14/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
14	P14/15/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
15	P15/16/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
16	P16/17/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
17	P17/18/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
18	P18/18A/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
19	P19/20	7/31/2023	MV	G-5	8/1/2023	MA	PASS	10' WEST
20	P20/21/22	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
21	P21/22/24	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
22	P22/23/24	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
23	P23/24/25	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
24	P23/25/26	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION

REPAIR REPORT

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Field Seam Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description of Damage, Type/Size of Repair
25	P25/26/27	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
26	P27/28/28A	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
27	P28/28A/29	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
28	P28/29/36	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
29	P29/30/36	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
30	P36/38/30	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
31	P30/31/38	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
32	P38/40/31	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
33	P31/32/40/42	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
34	P32/33/42/43	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
35	P33/34/43/44	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
36	P34/35/44/45	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
37	P28/36/37	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
38	P36/37/39	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
39	P36/38/39	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
40	P38/39/41	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
41	P38/40/41	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
42	P40/41/42	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
43	P43/44/46	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
44	P44/45/46	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
45	P16/17	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS1
46	P10/19	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS2
47	P22/23	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS3
48	P25/26	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS4
49	P24/25	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS5

REPAIR REPORT

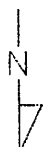
Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

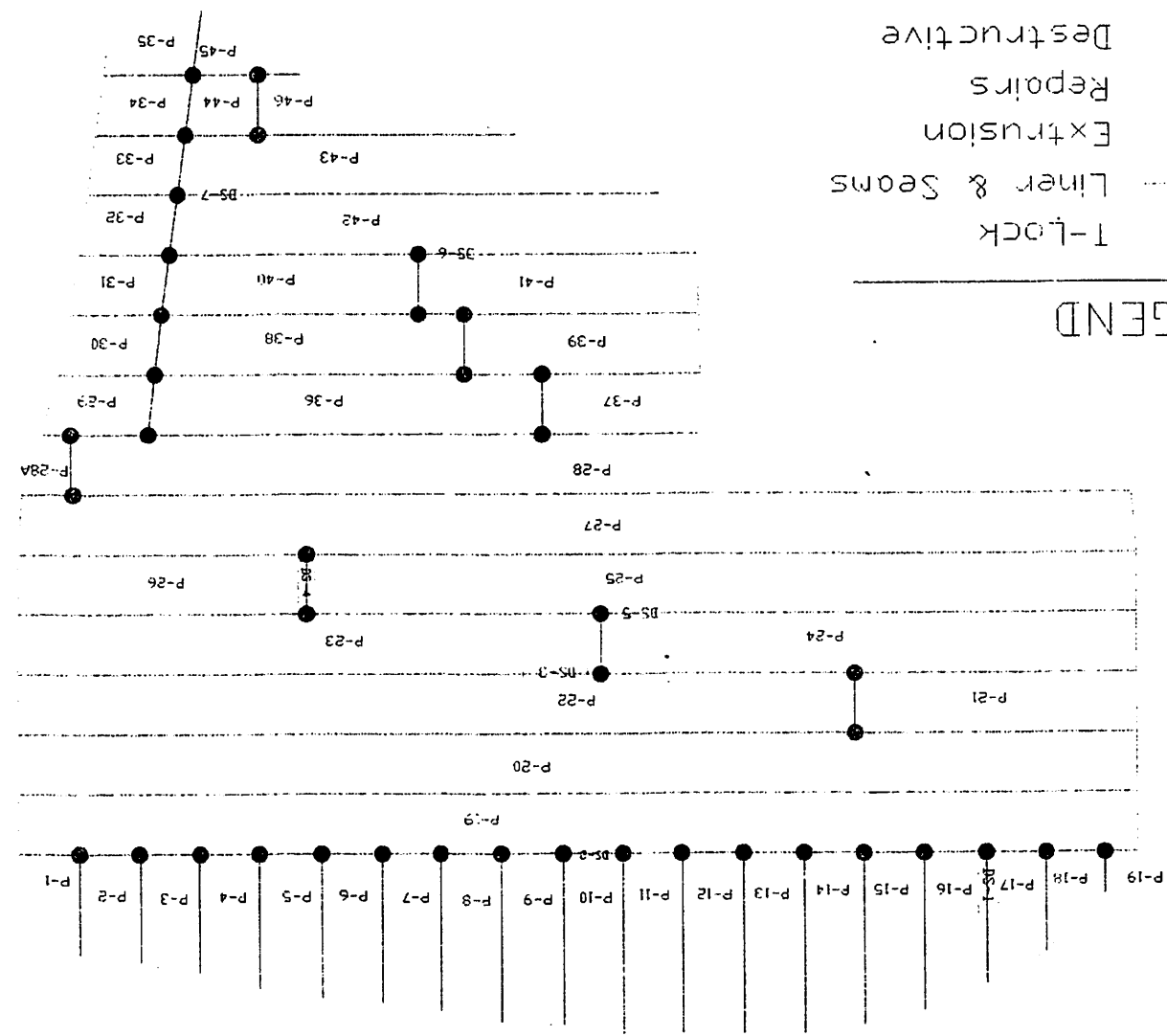
| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Field Seam Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description of Damage, Type/Size of Repair
50	P41/42	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS6
51	P42/43	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS7



LEGEND

- T-LOCK
- Liner & Seams
- Extrusion
- Repairs
- DS- Destructive



General Notes

Sequoyah
Fuels Cop-North
Half of the landfill

GORE, OKLAHOMA

Project
GEOMEMBRANE 60 MIL

Date
8/1/2023

Scale
Not to Scale

CERTIFICATE OF ACCEPTANCE

PROJECT NO:150603

PROJECT: Sequoyah Fuels Cap-North Half of the landfill
CLIENT: Sequoyah Fuels Corp.

CLIENT: Sequoyah Fuels Corp.

JOB DESCRIPTION: Landfill Cap

% COMPLETE OF TOTAL JOB: 100%

[illegible]

I, the undersigned, duly authorized representative of: SFC do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the work has been completed in accordance with specifications and the terms and conditions of the contract.

Name <i>Kenny Schlag</i>	Signature <i>Kenny Schlag</i>	Title <i>QA Mgr</i>	Date <i>8/01/23</i>
Certificate accepted by EnviroCon Systems, Inc. Representative.			
Name <i>May Prakonekham</i>	Signature <i>May Prakonekham</i>	Title <i>Super</i>	Date <i>8-1-23</i>

P.O. Box 873048 Main: 281-443-2587
Houston, TX 77267 Fax: 281-443-7551
Toll Free: 1-888-449-3236**CONSTRUCTION QUALITY CONTROL**

REV. 2.1

ECW-STD-0001

DATE:

1-Aug-23

**CONSTRUCTION QUALITY CONTROL GUIDE - LINER
INSTALLATION RECORDS FORMS****Customer Name:**

Sequoyah Fuels Corp.

Job No:

150603

Job Description:

Sequoyah Fuels Cap-North Half of land

Job Location:

Gore, Oklahoma

Material Description:

60 mil textured HDPE Liner

APPROVER

Gregg DeJarnett

Construction Quality Manager

REVIEWER

Chris Swires

Sales Manager

**TECHNICAL
AUTHORITY**

Larry Munger

Construction Operations Manager

ORIGINATOR

Frank Amigo

Project Engineer

SIGNATURE

DATE

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

8/1/2023



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PANEL PLACEMENT FORM

Page 1 of 2

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Panel Number	Roll Number	Panel Length (ft)	Panel Width (ft)	COMMENTS/PANEL LOCATION
7/28/2023	P1	6939	36	22	Liner
7/28/2023	P2	6939	38	22	Liner
7/28/2023	P3	6939	38	22	Liner
7/28/2023	P4	6939	44	22	Liner
7/28/2023	P5	6939	52	22	Liner
7/28/2023	P6	6939	55	22	Liner
7/28/2023	P7	6939	57	22	Liner
7/28/2023	P8	6939	60	22	Liner
7/28/2023	P9	6939	61	22	Liner
7/28/2023	P10	6939	67	22	Liner
7/28/2023	P11	6939	68	22	Liner
7/28/2023	P12	6939	68	22	Liner
7/28/2023	P13	6939	68	22	Liner
7/28/2023	P14	6939	68	22	Liner
7/28/2023	P15	6939	65	22	Liner
7/28/2023	P16	6939	60	22	Liner
7/28/2023	P17	6934	50	22	Liner
7/28/2023	P18	6934	38	22	Liner
7/28/2023	P19	6934	410	22	Liner
7/28/2023	P18A	6934	11	6	Liner
7/29/2023	P20	6940	412	22	Liner
7/29/2023	P21	6940	106	22	Liner
7/29/2023	P22	6940	305	22	Liner
7/29/2023	P23	6940	212	22	Liner
7/29/2023	P24	6940	200	22	Liner



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PANEL PLACEMENT FORM

Page 2 of 2

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfield

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Panel Number	Roll Number	Panel Length (ft)	Panel Width (ft)	COMMENTS/PANEL LOCATION
7/29/2023	P25	6924	312	22	Liner
7/29/2023	P26	6932	100	22	Liner
7/29/2023	P27	6932	410	22	Liner
7/29/2023	P28	6937	405	22	Liner
7/29/2023	P28A	6937	6	22	Liner
7/29/2023	P29	6937	40	22	Liner
7/31/2023	P30	6944	33	22	Liner
7/31/2023	P31	6944	34	22	Liner
7/31/2023	P32	6944	36	22	Liner
7/31/2023	P33	6944	36	22	Liner
7/31/2023	P34	6944	35	22	Liner
7/31/2023	P35	6944	34	22	Liner
7/31/2023	P36	6944	153	22	Liner
7/31/2023	P37	6944	64	22	Liner
7/31/2023	P38	6944	118	22	Liner
7/31/2023	P39	6944	80	22	Liner
7/31/2023	P40	6944	92	22	Liner
7/31/2023	P41	6944	104	22	Liner
7/31/2023	P42	6944	180	22	Liner
7/31/2023	P43	6944	175	22	Liner
7/31/2023	P44	6944	78	22	Liner
7/31/2023	P45	6944	24	22	Liner
7/31/2023	P46	6944	42	10	Liner
7/31/2023	P47	6944	42	22	Liner

TRIAL WELD INFO

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

					Extrusion Welds				Fusion Weld				Tests					
					Extruder Temp		Preheat Temp		Wedge Temp		Test Value							
Date Time	Ambient Temp (°F)	QC Initials	Machine #	Seamer Initial	Extr Set	Extr Pyro	Pre Ht Set	Pre Ht Pyro	Wdg T Set	Wdg T Pyro	Measured Speed (ft/min)	Speed Setting	Peel1	Peel2	Peel3	Shear	Pass/Fail	Comments
7/28/2023	81°	MP	W-31	SP	-	-	-	-	860°	-	-	450	120	123	128	145	PASS	fusion
7:00	-	-	-	-	-	-	-	-	-	-	-	-	101	105	108	143	-	-
7/28/2023	81°	MP	W-33	SS	-	-	-	-	860°	-	-	450	103	121	102	140	PASS	fusion
7:08	-	-	-	-	-	-	-	-	-	-	-	-	122	105	118	146	-	-
7/29/2023	82°	MP	W-31	SP	-	-	-	-	860°	-	-	450	108	121	124	141	PASS	fusion
7:03	-	-	-	-	-	-	-	-	-	-	-	-	123	107	109	140	-	-
7/29/2023	82°	MP	W-33	SS	-	-	-	-	860°	-	-	450	105	121	103	145	PASS	fusion
7:06	-	-	-	-	-	-	-	-	-	-	-	-	118	106	120	148	-	-
7/29/2023	82°	MP	W-34	MA	-	-	-	-	860°	-	-	450	104	116	110	139	PASS	fusion
7:05	-	-	-	-	-	-	-	-	-	-	-	-	118	108	120	143	-	-
7/31/2023	77°	MP	W-33	SS	-	-	-	-	860°	-	-	450	105	113	118	145	PASS	fusion
7:08	-	-	-	-	-	-	-	-	-	-	-	-	119	102	110	140	-	-
7/31/2023	77°	MP	W-34	MA	-	-	-	-	860°	-	-	450	106	100	112	139	PASS	fusion
7:11	-	-	-	-	-	-	-	-	-	-	-	-	110	115	105	143	-	-
7/31/2023	77°	MP	G-5	MV	275°	-	5°	-	-	-	-	-	103	105	100	136	PASS	extrusion
12:35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135	-	-
7/31/2023	77°	MP	G-50	SS	278°	-	6°	-	-	-	-	-	108	110	113	138	PASS	extrusion
12:45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	133	-	-



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TRIAL WELD INFO

Page 2 of 2

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

					Extrusion Welds				Fusion Weld				Tests					
					Extruder Temp		Preheat Temp		Wedge Temp				Test Value					
Date Time	Ambient Temp (°F)	QC Initials	Machine #	Seamer Initial	Extr Set	Extr Pyro	Pre Ht Set	Pre Ht Pyro	Wdg T Set	Wdg T Pyro	Measured Speed (ft/min)	Speed Setting	Peel1	Peel2	Peel3	Shear	Pass/ Fail	Comments
8/1/2023	78°	MP	G-5	MV	275°	-	5°	-	-	-	-	-	110	111	113	130	PASS	extrusion
7:15		-	-	-	-	-	-	-	-	-	-	-	-	-	-	132	-	-
8/1/2023	78°	MP	G-50	SS	278°	-	6°	-	-	-	-	-	109	105	106	133	PASS	extrusion
7:20		-	-	-	-	-	-	-	-	-	-	-	-	-	-	128	-	-



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PANEL SEAMING

Page 1 of 5

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfield Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/28/2023	7:28	P1/2	37	SS	W-33	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:38	P2/3	40	SS	W-33	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:36	P3/4	44	SP	W-31	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:45	P4/5	49	SS	W-33	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:48	P5/6	53	SP	W-31	860	CLOUDY	LIGHT	81°	P	
7/28/2023	7:54	P6/7	55	SS	W-33	860	CLOUDY	LIGHT	81°	P	
7/28/2023	8:00	P7/8	58	SP	W-31	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:06	P8/9	62	SS	W-33	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:19	P9/10	63	SP	W-31	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:28	P10/11	66	SS	W-33	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:35	P11/12	66	SP	W-31	860	SUNNY	LIGHT	83°	P	
7/28/2023	8:42	P12/13	66	SS	W-33	860	SUNNY	LIGHT	83°	P	
7/28/2023	9:07	P13/14	66	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:10	P14/15	63	SS	W-33	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:23	P15/16	58	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:25	P16/17	48	SS	W-33	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:38	P17/18	36	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:16	P18/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	9:39	P18/18A	15	SS	W-33	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:21	P17/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:24	P16/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:28	P15/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:32	P14/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:36	P13/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:39	P12/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	

Filename: GC Field Sequoyah Fuels Cap-North Half of the landfill
Tab: Panel Seaming

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PANEL SEAMING

Page 2 of 5

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfield Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/28/2023	10:43	P11/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:47	P10/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:50	P9/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:54	P8/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:58	P7/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:02	P6/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:06	P5/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:10	P4/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	10:13	P3/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:17	P2/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/28/2023	11:21	P1/19	22	SP	W-31	860	SUNNY	LIGHT	87°	P	
7/29/2023	7:40	P20/21	104	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:25	P21/24	109	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	7:33	P21/22	22	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	7:58	P20/22	304	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:45	P22/24	93	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	7:28	P19/20	402	SP	W-31	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:48	P19/20	5	SP	W-31	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:12	P23/24	22	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	9:02	P22/23	213	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:54	P25/26	22	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	8:53	P24/25	208	SP	W-31	860	CLOUDY	8MPH	82°	P	
7/29/2023	9:13	P25/27	315	SS	W-33	860	CLOUDY	8MPH	82°	P	
7/29/2023	9:30	P23/25	107	SP	W-31	860	CLOUDY	8MPH	82°	P	

Filename: GC 150603 Sequoyah Fuels Cap-North Half of the landfield
Tab: Panel Seaming

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PANEL SEAMING

Page 3 of 5

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/29/2023	9:48	P23/26	103	SP	W-31	860	CLOUDY	8MPH	82°	P	
7/29/2023	10:03	P26/27	105	SS	W-33	860	CLOUDY	8MPH	89°	P	
7/29/2023	9:47	P27/28	405	MA	W-34	860	CLOUDY	8MPH	82°	P	
7/29/2023	10:35	P28/28A	22	SS	W-33	860	CLOUDY	8MPH	89°	P	
7/29/2023	10:42	P28/29	38	SS	W-33	860	CLOUDY	8MPH	89°	P	
7/31/2023	7:20	P29/30	33	SS	W-33	860	SUNNY	LIGHT	77°	P	
7/31/2023	7:25	P30/31	33	SP	W-34	860	SUNNY	LIGHT	77°	P	
7/31/2023	7:28	P31/32	34	SS	W-33	860	SUNNY	LIGHT	77°	P	
7/31/2023	7:31	P32/33	35	SP	W-34	860	SUNNY	LIGHT	77°	P	
7/31/2023	7:40	P33/34	35	SS	W-33	860	SUNNY	LIGHT	77°	P	
7/31/2023	7:50	P34/35	33	SS	W-33	860	SUNNY	LIGHT	77°	P	
7/31/2023	11:05	P34/44	22	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	11:11	P33/43	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	11:03	P32/42	22	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	12:45	P31/40	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	11:00	P30/38	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:55	P29/36	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:30	P28/36	134	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:43	P36/38	119	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:38	P36/39	28	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:04	P38/39	22	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	7:52	P36/37	22	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:29	P37/39	55	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:30	P28/36	10	SP	W-34	860	SUNNY	LIGHT	88°	P	

Filename: QC Field Sequoyah Fuels Cap-North Half of the landfill
Tab: Panel Seaming

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PANEL SEAMING

Page 4 of 5

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/31/2023	9:27	P39/41	85	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:24	P38/41	17	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:08	P40/38	94	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:05	P40/41	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:15	P41/42	102	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:33	P40/42	91	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:45	P42/43	174	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:24	P43/44	77	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:31	P44/45	24	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:19	P45/35	24	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:59	P44/46	10	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:15	P43/46	42	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:59	P30/36	6	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	11:04	P31/38	5	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	12:46	P35/47	33	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:19	P35/45	24	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:29	P37/39	55	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:30	P28/36	10	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:27	P39/41	85	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:24	P38/41	17	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:08	P38/40	94	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	8:05	P40/41	22	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:15	P41/42	102	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:38	P40/42	91	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:45	P42/43	174	SS	W-33	860	SUNNY	LIGHT	88°	P	

Filename: CC Field Sequoyah Fuels CapNorth half of the landfill
Tab: Panel Seaming

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PANEL SEAMING

Page 5 of 5

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfield Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
7/31/2023	10:24	P43/44	77	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:19	P35/45	24	SS	W-33	860	SUNNY	LIGHT	88°	P	
7/31/2023	9:59	P44/46	10	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:15	P43/46	42	SP	W-34	860	SUNNY	LIGHT	88°	P	
7/31/2023	10:31	P44/45	24	SS	W-33	860	SUNNY	LIGHT	88°	P	



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NON-DESTRUCTIVE FORM

Page 1 of 4

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

			Air/Vacuum Testing							
			Time		Pressure					
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Air/ Driver/ Vac Test	Pass/ Fail	Location/Comments
7/28/2023	P1/19	SS	12:56	13:01	-	35	35	Air	pass	-
7/28/2023	P1/2	SS	12:55	13:00	1	35	34	Air	pass	-
7/28/2023	P2/19	SS	12:57	13:02	-	35	35	Air	pass	-
7/28/2023	P2/3	SS	14:30	14:35	-	35	35	Air	pass	-
7/28/2023	P19/3	SS	14:31	14:36	1	35	34	Air	pass	-
7/28/2023	P3/4	SS	14:34	14:39	-	35	35	Air	pass	-
7/28/2023	P19/4	SS	14:35	14:40	-	35	35	Air	pass	-
7/28/2023	P4/5	SS	14:39	14:44	-	35	35	Air	pass	-
7/28/2023	P19/5	SS	14:40	14:45	-	35	35	Air	pass	-
7/28/2023	P5/6	SS	14:43	14:48	-	35	35	Air	pass	-
7/28/2023	P19/6	SS	14:42	14:47	-	35	35	Air	pass	-
7/28/2023	P6/7	SS	14:46	14:51	1	35	34	Air	pass	-
7/28/2023	P19/7	SS	14:45	14:50	-	35	35	Air	pass	-
7/28/2023	P7/8	SS	14:49	14:54	-	35	35	Air	pass	-
7/28/2023	P19/8	SS	14:48	14:53	-	35	35	Air	pass	-
7/28/2023	P8/9	SS	15:30	15:35	1	35	34	Air	pass	-
7/28/2023	P19/9	SS	15:31	15:36	-	35	35	Air	pass	-
7/28/2023	P9/10	SS	15:33	15:38	-	35	35	Air	pass	-
7/28/2023	P19/10	SS	15:34	15:39	-	35	35	Air	pass	-
7/28/2023	P10/11	SS	15:40	15:45	-	35	35	Air	pass	-
7/28/2023	P19/11	SS	15:41	15:46	-	35	35	Air	pass	-
7/28/2023	P11/12	SS	15:44	15:49	-	35	35	Air	pass	-
7/28/2023	P19/12	SS	15:45	15:50	-	35	35	Air	pass	-
7/29/2023	P12/13	SS	7:08	7:13	-	35	35	Air	pass	-

Filename: 02_Fuels Sequoyah Fuels Cap-North Half of the landfill
Tab: NonDestructive

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NON-DESTRUCTIVE FORM

Page 2 of 4

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfield Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

			Air/Vacuum Testing							
			Time		Pressure					
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Air/Driver/Vac Test	Pass/Fail	Location/Comments
7/29/2023	P19/13	SS	7:09	7:14	-	35	35	Air	pass	-
7/29/2023	P13/14	SS	7:10	7:15	-	35	35	Air	pass	-
7/29/2023	P19/14	SS	7:11	7:16	-	35	35	Air	pass	-
7/29/2023	P14/15	SS	7:15	7:20	-	35	35	Air	pass	-
7/29/2023	P19/15	SS	7:16	7:21	1	35	34	Air	pass	-
7/29/2023	P15/16	SS	7:19	7:24	-	35	35	Air	pass	-
7/29/2023	P19/6	SS	7:18	7:23	-	35	35	Air	pass	-
7/29/2023	P16/17	SS	7:28	7:33	-	35	35	Air	pass	-
7/29/2023	P17/19	SS	7:29	7:34	-	35	35	Air	pass	-
7/29/2023	P17/18	SS	7:32	7:37	1	35	34	Air	pass	-
7/29/2023	P19/18	SS	7:33	7:38	-	35	35	Air	pass	-
7/29/2023	P18/18A	SS	7:35	7:40	-	35	35	Air	pass	-
7/29/2023	P19/20	SS	12:15	12:20	-	35	35	Air	pass	-
7/29/2023	P20/21	SS	13:20	13:25	-	35	35	Air	pass	-
7/29/2023	P21/22	SS	13:21	13:26	1	35	34	Air	pass	-
7/29/2023	P20/22	SS	13:22	13:27	-	35	35	Air	pass	-
7/29/2023	P21/24	SS	13:27	13:32	-	35	35	Air	pass	-
7/29/2023	P22/24	SS	13:28	13:33	-	35	35	Air	pass	-
7/29/2023	P22/23	SS	13:30	13:35	-	35	35	Air	pass	-
7/29/2023	P23/24	SS	13:31	13:36	-	35	35	Air	pass	-
7/29/2023	P23/25	SS	13:33	13:38	-	35	35	Air	pass	-
7/29/2023	P24/25	SS	13:34	13:39	1	35	34	Air	pass	-
7/29/2023	P25/26	SS	13:41	13:46	-	35	35	Air	pass	-
7/29/2023	P23/26	SS	13:40	13:45	-	35	35	Air	pass	-
7/29/2023	P25/27	SS	13:47	13:52	-	35	35	Air	pass	-

Filename: EC Field Sequoyah Fuels Cap-North Half of the landfield
Type: Non-Destructive

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NON-DESTRUCTIVE FORM

Page 3 of 4

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfill Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

			Air/Vacuum Testing							
			Time		Pressure					
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Air/Driver/Vac Test	Pass/Fail	Location/Comments
7/29/2023	P26/27	SS	13:48	13:53	-	35	35	Air	pass	-
7/29/2023	P27/28	SS	13:50	13:55	-	35	35	Air	pass	-
8/1/2023	P38/40	SS	7:25	7:30	-	35	35	Air	pass	-
8/1/2023	P38/36	SS	7:30	7:35	-	35	35	Air	pass	-
8/1/2023	P29/30	SS	7:31	7:36	-	35	35	Air	pass	-
8/1/2023	P29/36	SS	7:32	7:37	-	35	35	Air	pass	-
8/1/2023	P28/29	SS	7:35	7:40	-	35	35	Air	pass	-
8/1/2023	P28/28A	SS	7:36	7:41	-	35	35	Air	pass	-
8/1/2023	P27/28A	SS	7:33	7:38	-	35	35	Air	pass	-
8/1/2023	P41/42	SS	7:40	7:45	-	35	35	Air	pass	-
8/1/2023	P40/41	SS	7:41	7:46	-	35	35	Air	pass	-
8/1/2023	P46/44	SS	7:47	7:52	-	35	35	Air	pass	-
8/1/2023	P46/43	SS	7:48	7:53	1	35	34	Air	pass	-
8/1/2023	P39/41	SS	7:47	7:52	-	35	35	Air	pass	-
8/1/2023	P39/38	SS	7:51	7:56	1	35	34	Air	pass	-
8/1/2023	P38/41	SS	7:50	7:55	-	35	35	Air	pass	-
8/1/2023	P36/37	SS	8:07	8:12	-	35	35	Air	pass	-
8/1/2023	P37/39	SS	8:05	8:10	-	35	35	Air	pass	-
8/1/2023	P36/39	SS	8:06	8:11	1	35	34	Air	pass	-
8/1/2023	P28/37	SS	8:11	8:16	-	35	35	Air	pass	-
8/1/2023	P28/36	SS	8:10	8:15	1	35	34	Air	pass	-
8/1/2023	P47/35	SS	6:50	6:55	-	35	35	Air	pass	-
8/1/2023	P35/45	SS	6:57	7:02	-	35	35	Air	pass	-
8/1/2023	P44/45	SS	6:59	7:04	-	35	35	Air	pass	-

Filename: GC Field Sequoyah Fuels Cap-North Half of the landfill
Tab: NonDestructive

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NON-DESTRUCTIVE FORM

Page 4 of 4

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfield Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

			Air/Vacuum Testing								
			Time		Pressure						
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Air/Driver/Vac Test	Pass/Fail	Location/Comments	
8/1/2023	P44/35	SS	6:55	7:00	1	35	34	Air	pass	-	
8/1/2023	P35/44	SS	7:00	7:05	-	35	35	Air	pass	-	
8/1/2023	P34/44	SS	7:01	7:06	-	35	35	Air	pass	-	
8/1/2023	P34/33	SS	7:08	7:13	-	35	35	Air	pass	-	
8/1/2023	P44/43	SS	7:10	7:15	-	35	35	Air	pass	-	
8/1/2023	P43/33	SS	7:09	7:14	-	35	35	Air	pass	-	
8/1/2023	P42/43	SS	7:12	7:17	1	-	34	Air	pass	-	
8/1/2023	P42/32	SS	7:11	7:16	-	35	35	Air	pass	-	
8/1/2023	P32/33	SS	7:13	7:18	-	35	35	Air	pass	-	
8/1/2023	P40/42	SS	7:16	7:21	-	35	35	Air	pass	-	
8/1/2023	P40/32	SS	7:17	7:22	-	35	35	Air	pass	-	
8/1/2023	P42/31	SS	7:21	7:26	-	35	35	Air	pass	-	
8/1/2023	P31/32	SS	7:20	7:25	-	35	35	Air	pass	-	
8/1/2023	P30/38	SS	7:27	7:32	-	35	35	Air	pass	-	
8/1/2023	P30/31	SS	7:28	7:33	-	35	35	Air	pass	-	

DESTRUCTIVE TESTING LOG

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfield

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Date	Sample I.D.	Seam Number	Machine Number	Seamer Initials	Peel/Shear Values (1) lb/in	Peel/Shear Values (2) lb/in	Peel/Shear Values (3) lb/in	Peel/Shear Values (4) lb/in	Peel/Shear Values (5) lb/in	Peel/Shear Pass/Fail	Tensiometer Calibration Date (Latest)	Pass/Fail	Break Locale Parent/Weld Comment
7/28/2023	DS1	P16/17	W-33	SS	124/129	117/128	112/115	111/111	118/109	PASS	-	PEEL	
					151/153	146/148	148/150	152/148	153/154	PASS	-	SHEAR	
7/28/2023	DS2	P10/19	W-31	SP	108/110	104/107	109/113	109/112	112/119	PASS	-	PEEL	
					145/160	148/158	147/160	161/155	149/161	PASS	-	SHEAR	
7/29/2023	DS3	P22/23	W-34	MA	107/110	103/112	108/110	106/107	105/112	PASS	-	PEEL	
					149/158	151/159	147/161	143/159	145/160	PASS	-	SHEAR	
7/29/2023	DS4	P25/26	W-33	SS	115/116	106/119	122/141	116/120	117/121	PASS	-	PEEL	
					160/161	163/161	161/162	161/157	160/162	PASS	-	SHEAR	
7/29/2023	DS5	P24/25	W-31	SP	126/130	122/108	118/120	122/107	98/122	PASS	-	PEEL	
					140/145	143/146	141/146	145/143	142/146	PASS	-	SHEAR	
7/31/2023	DS6	P41/42	W-31	SP	108/110	106/114	109/123	105/125	110/111	PASS	-	PEEL	
					145/163	144/161	140/160	141/161	148/162	PASS	-	SHEAR	
7/31/2023	DS7	P42/43	W-33	SS	105/102	108/123	104/112	105/113	102/106	PASS	-	PEEL	
					159/148	143/160	145/160	148/161	149/158	PASS	-	SHEAR	

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma
Job Description: Sequoyah Fuels Cap-North Half of landfield
Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

REPAIR REPORT

Field Seam Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description of Damage, Type/Size of Repair
1	P1/2/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
2	P2/3/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
3	P3/4/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
4	P4/5/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
5	P5/6/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
6	P6/7/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
7	P7/8/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
8	P8/9/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
9	P9/10/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
10	P10/11/19	7/31/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
11	P11/12/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
12	P12/13/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
13	P13/14/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
14	P14/15/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
15	P15/16/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
16	P16/17/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
17	P17/18/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
18	P18/18A/19	7/31/2023	MV	G-5	8/1/2023	MA	PASS	INTERSECTION
19	P19/20	7/31/2023	MV	G-5	8/1/2023	MA	PASS	10' WEST
20	P20/21/22	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
21	P21/22/24	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
22	P22/23/24	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
23	P23/24/25	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
24	P23/25/26	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION

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Report EC-1188 Sequoyah Fuels Cap-North Half of the landfield
The Repair Report



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REPAIR REPORT

Page 2 of 3

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

Job Description: Sequoyah Fuels Cap-North Half of landfield

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Field Seam Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description of Damage, Type/Size of Repair
25	P25/26/27	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
26	P27/28/28A	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
27	P28/28A/29	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
28	P28/29/36	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
29	P29/30/36	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
30	P36/38/30	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
31	P30/31/38	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
32	P38/40/31	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
33	P31/32/40/42	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
34	P32/33/42/43	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
35	P33/34/43/44	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
36	P34/35/44/45	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
37	P28/36/37	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
38	P36/37/39	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
39	P36/38/39	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
40	P38/39/41	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
41	P38/40/41	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
42	P40/41/42	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
43	P43/44/46	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
44	P44/45/46	8/1/2023	SS	G-50	8/1/2023	MA	PASS	INTERSECTION
45	P16/17	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS1
46	P10/19	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS2
47	P22/23	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS3
48	P25/26	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS4
49	P24/25	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS5



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REPAIR REPORT

Page 3 of 3

Customer Name: Sequoyah Fuels Corp. | Job Location: Gore, Oklahoma

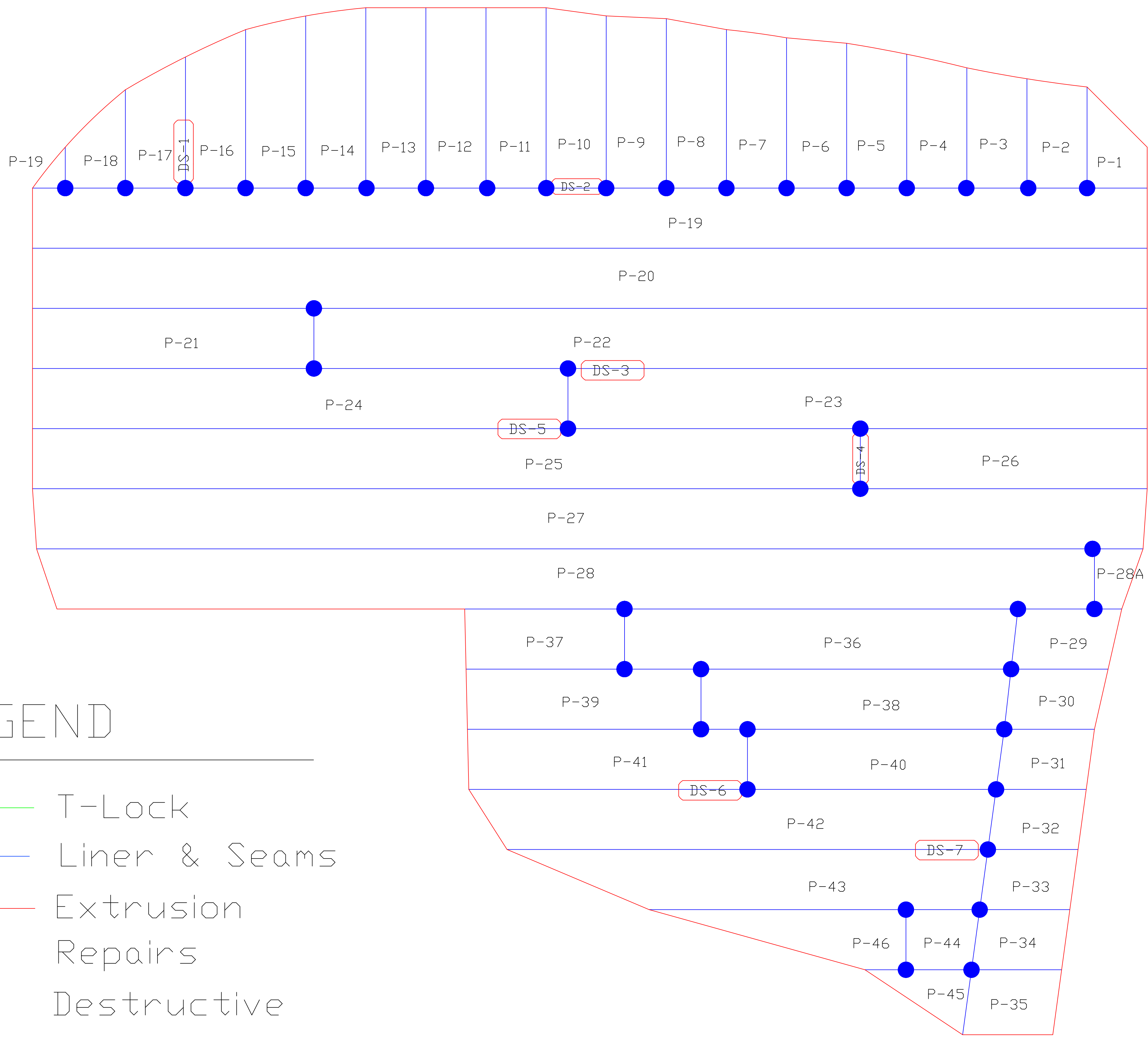
Job Description: Sequoyah Fuels Cap-North Half of landfield

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 1-Aug-23

Field Seam Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description of Damage, Type/Size of Repair
50	P41/42	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS6
51	P42/43	8/1/2023	MV	G-5	8/1/2023	MA	PASS	DS7

4
N



General Notes

Sequoyah
Fuels Cap-North
Half of the landfill

GORE, OKLAHOMA

Project
GEOMEMBRANE 60 MIL

Date
8/1/2023

Scale
Not to Scale

Sheet

1



SYSTEMS, INC.

1910 Rankin Road
Houston, TX 77073

Bus: 281-443-2592
Fax: 281-443-7551

Toll Free: 1-888-449-3236

**SEQUOYAH FUELS CORPORATION
SEQUOYAH, OK**

PROJECT MANUAL

**ENVIROCON SYSTEMS, INC.
PROJECT NUMBER 150603**

PROJECT COMPLETION DATE: October 24, 2023

TABLE OF CONTENTS

Certificate of Acceptance.....	Insert No. 1
Installation Warranty.....	Insert No. 2
Material Warranty.....	Insert No. 3
Trial Weld Forms.....	Insert No. 4
Panel Placement Forms.....	Insert No. 5
Panel Seaming Forms.....	Insert No. 6
Non-Destructive Test Forms.....	Insert No. 7
Destructive Test Forms.....	Insert No. 8
Repair Reports.....	Insert No. 9
As-Built Drawings.....	Insert No.10

INSERT NO. 1

CERTIFICATE OF ACCEPTANCE

Job Description: FCA-Fuels Disposal Cell Cap | _____

Customer Name: Sequoyah Fuels Corp.

Job No: 150603

Job Location: Sequoyah, OK

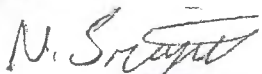
% COMPLETE OF TOTAL JOB: _____

MATERIAL	ESTIMATED SQ. FEET	FINAL QUANTITY / DESCRIPTION
<i>Job Description, More Specifics/Sub-Description if Necessary</i>		
60 mils HDPE Liner	72,922 sq ft	72,922 sq ft
Welding Rod (box)	10 bx	10 bx
Additional Repairs (6 techs)	8 hrs	8 hrs
Mobilization	1 ea	1ea
Demobilization	1 ea	1 ea

I, the undersigned, duly authorized representative of Sequoyah Fuels Corp.
do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the
work has been completed in accordance with specifications and the terms and conditions of the contract.

Name	Signature	Title	Date
Kenny Schlag		QA Manager	10/24/2023

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
Nopporn Sriyuth		Liner Supervisor	10/24/2023

Form ECN-STD-0001 REV. 2.1 Date: 24-Oct-23

INSERT NO. 2

INSTALLATION WARRANTY



P.O. Box 673048 Main: 281-443-2597
Houston, TX 77267 Fax: 281-443-6227
Toll Free: 1-888-449-3236

LINER INSTALLATION WARRANTY

OWNER: Sequoyah Fuels

PROJECT NAME: Sequoyah Fuels Corporation-Sequoyah, OK
PROJECT NO.: 150603

INSTALLATION DATE: 10/19/2023 to 10/24/2023
EFFECTIVE DATE: 10/24/2023

EnviroCon Systems, Inc. hereby warrants to (and only to) Sequoyah Fuels that the linings installed by EnviroCon Systems, Inc. at the location and for the intended use described below (the "Linings") shall be installed free from defects in EnviroCon Systems Inc.'s workmanship. The warranty set forth in the preceding sentence (the "Workmanship Warranty") shall commence on the date that EnviroCon Systems, Inc. completes the installation of the Linings, shall apply until the last day of a period of One (1) year from said date, and shall be subject to the following conditions:

1. The Workmanship Warranty shall extend only to the proper installation of the Linings. The Workmanship Warranty shall not apply to any alleged defect in installation that is occasioned by fire, Acts of God or acts of any person or entity other than EnviroCon Systems, Inc. or its agent, including without limitation abuse, negligence, misuse, improper treatment, vandalism or any alleged defects caused, directly or indirectly, by falling objects, abnormal environmental conditions, improper site preparation, subgrade settlement or by any event beyond the reasonable control of EnviroCon Systems, Inc.
2. The Workmanship Warranty shall not be effective unless EnviroCon Systems, Inc. receives Company's written claim therefore within 30 days after the date of discovery of such defect and within the warranty period. EnviroCon Systems, Inc. shall have the right to verify by its own representative the nature and extent of the defects complained of.
3. The extent of EnviroCon Systems, Inc.'s liability for breach of the Workmanship Warranty shall be limited to timely repairing or replacing the defective installation workmanship. If it is necessary for EnviroCon Systems, Inc. to repair or replace any defective workmanship with respect to the Linings, Company shall afford EnviroCon Systems, Inc. clear and unrestricted access to the Linings, which shall not be encumbered by any overlying material or liquid, and Company shall cooperate in all respects with EnviroCon Systems, Inc. to accomplish said repair. In no event will EnviroCon Systems, Inc. be liable for the cost of labor expended by any person or entity other than EnviroCon Systems, Inc. or its agent on any defective workmanship with respect to the installation of the Linings. Under no circumstances shall EnviroCon Systems, Inc. have any liability for consequential damages arising from loss of production or product owing to the failure of the material or installation, and no allowances will be made for repairs, replacement or alterations made by Company without EnviroCon Systems, Inc.'s written consent. EnviroCon Systems, Inc. neither assumes nor authorizes any person (other than an officer of EnviroCon Systems, Inc.) to assume for it any other or additional liability in connection with the Liner. Any repairs, replacements or alterations made without EnviroCon Systems, Inc.'s written consent or any attempted assumption of any such liability will void this Workmanship Warranty.

ENVIROCON SYSTEMS, INC.

4. The Workmanship Warranty is extended to Company only and is non-transferable and non-assignable. No rights against EnviroCon Systems, Inc. shall be created by any attempted transfer or assignment, nor shall any rights against EnviroCon Systems, Inc. survive any attempted transfer or assignment. This Workmanship Warranty does not extend to any materials furnished or installed by others in connection with the intended use of the linings.
5. No terms or conditions other than those stated herein and no agreement or understanding, oral or written, and no course of conduct or performance in any way purporting to modify the Workmanship Warranty or to waive EnviroCon Systems, Inc. rights hereunder shall be binding on EnviroCon Systems, Inc. unless the same shall be clearly described in written memorandum that expressly refers to the Workmanship Warranty and is separately sign by a duly authorized officer of EnviroCon Systems, Inc.. Moreover, additional liabilities of or limitation upon the rights and remedies of EnviroCon Systems, Inc. contained in such documents as purchase orders, order acknowledgments or change orders which may subsequently be exchanged between parties shall have no force or effect upon the Workmanship Warranty. All proposals, negotiations and representation, if any, made prior to the date hereof or with reference hereto are merged herein.
6. This Workmanship Warranty shall not be effective unless payment in full has been made to EnviroCon Systems, Inc. for all labor, installation and other services provided.
7. THE LAWS OF THE STATE OF TEXAS SHALL GOVERN THE RIGHTS AND DUTIES OF THE PARTIES UNDER THIS WARRANTY. VENUE FOR ALL LEGAL PROCEEDINGS INVOLVING THE WORKMANSHIP WARRANTY OR ANY OTHER MATTER CONTAINED WITHIN SHALL BE IN HARRIS COUNTY, TEXAS.

THE FOREGOING WORKMANSHIP WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES (EXCEPT OF TITLE), EXPRESS, IMPLIED, OR STATUTORY. IN NO EVENT SHALL ENVIROCON SYSTEMS, INC. BE LIABLE FOR LOSS OF PROFITS OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSSES RESULTING FROM ANY DEFECTS IN IT'S WORKMANSHIP, INCLUDING WITHOUT LIMITATION IMPROPER INSTALLATION OF THE LININGS.

PURCHASER: Sequoyah Fuels

LOCATION OF INSTALLATION: Sequoyah, OK

DESCRIPTION OF INTENDED USE: Fuels Disposal Cell Cap

PROJECT NO.:150603

ENVIROCON SYSTEMS, INC.



Signature

Gregg L. DeJarnett
Print or Type Name

Construction Manager
Title

INSERT NO. 3

MATERIAL WARRANTY



LIMITED WARRANTY

PROJECT:	FCA-Fuels Disposal Cell Cap		
WARRANTOR:	Solmax Geosynthetics, LLC		
WARRANTOR ADDRESS:	19103 Gundle Road, Houston, Texas, 77073		
WARRANTY TERM:	5 years from the Effective Date		
Project Address:	OK-10, Gore, OK 74435 USA		
Owner:	Sequoyah Fuels	Warranty Number:	ECS-14-11-23
Sales Order N°:	SO-096110,	Effective Date:	October 24, 2023
Product(s):	1101533 HDPE 60 mil Black Top Side Single Textured ST (t		

WHEREAS pursuant to the Sales Purchase Order referenced herein (the "Sales Order") between the Warrantor and the buyer identified in the said Sales Order (the "Buyer"), the Buyer purchased the Product for the Project and for which the owner of the Project is the end user/customer of the Product (the "Owner");

WHEREAS the Project was designed exclusively by the Owner and/or its general contractor, professionals (such as engineers, architects, surveyors), subcontractors, land experts, suppliers (collectively the "Owner's Professionals");

WHEREAS the Warrantor is not a design professional nor did the Warrantor participate in the design/conception of the Project;

NOW, THEREFORE, in consideration of the foregoing, and subject to the terms and conditions of this Limited Warranty, the Warrantor hereby represents and warrants to the Owner that as of the date of sale of the Product to the Purchaser for the said Project, the Product conforms to the Warrantor's specifications and that the Product will be free from manufacturing defects which appear during the Warranty Term for the Product's normal use in approved applications (the "Normal Use").

LIMITATIONS AND DISCLAIMERS

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY EXCLUDED HEREIN. Warrantor's liability hereunder is the sole and exclusive obligation of Warrantor with regard to the Product. Warrantor shall have no liability for any claim except as specified hereunder. Warrantor shall not be liable for labor or any other costs incurred in connection with the use, repair, removal, installation or replacement of any Product covered by this Limited Warranty, or for any direct or indirect damages, labor, removal, installation, incidental or consequential damages, loss of profits or sales, injury to property or any other damages, losses or contingencies due to or arising out of the Product, whether under alleged breach of contract, tort, personal injury, property damage, environmental liability or otherwise, regardless of whether or not the Product is subject to a defect.

The Warrantor shall not be held liable or responsible to the Owner nor be deemed to have defaulted under or breached this Limited Warranty for failure or delay in fulfilling or performing any term of this Limited Warranty when such failure or delay is caused by or results from causes beyond the reasonable control of the Warrantor, including but not limited to fire, floods, embargoes, war, acts of war (whether war is declared or not), insurrections, riots, civil commotions, the existence or administration of any laws, rules or regulations, strikes, lockouts or other labor disturbances, acts of God or acts, omissions or delays in acting by any governmental authority; provided, however, that the Warrantor shall use reasonable commercial efforts to avoid or remove such causes of non-performance, and shall continue performance hereunder with reasonable dispatch whenever such causes are removed. This Limited Warranty does not cover damages or defects resulting from normal wear and tear, faulty installation, maintenance or repair, misuse or negligent use of the Product as well as damages caused by acts of God, natural disasters such as earthquakes, floods, piercing hail, or tornadoes. The term "Normal Use" as used herein does not include usage for which the Product was not designed or intended, faulty design and/or construction of the facility into which the Product is installed, failure to install the Product in compliance with Warrantor's Product technical materials and/or bulletins, or exposure of the Product to harmful chemicals. Chemical resistance performance is the responsibility of the Owner since it has control over and of the Project's production/ design/composition and

exposure conditions (including chemicals, concentration, time and temperature). As such, any proposed product, including the Product, should be thoroughly evaluated for its intended application by the Owner and the Owner's Professionals. Also, the term "Normal Use" as used herein does not include damage to the Product by machinery, equipment, people, animals; improper site preparation or covering materials; existing conditions, including, but not limited to, subsurface conditions beneath the geosynthetic product such as a settlement of the ground, cave-in, etc., excessive pressures or stresses from any source or improper application. There shall be no intended or incidental third-party beneficiary hereof. In no event shall Warrantor have any liability for any patent defects or discrepancies which were or could have been discovered prior to the installation of the Product.

Subject to the terms and conditions hereof, after receipt of a timely valid claim hereunder, Warrantor will have the right to inspect and determine the cause of any alleged defect in the Product and if coverage is confirmed, then Warrantor shall have the option, in its sole discretion, to repair the affected area of the Product or to ship replacement product reasonably equivalent to the affected area of the Product proven to be subject to the covered defect. Warrantor is not a design professional and has not performed any design services for the Project and disclaims any alleged design liability regarding use of the Product at or for the Project, it being understood that any design was performed exclusively by the Owner or the Owner's Professionals. Warrantor shall not be obligated to perform repairs or replacements under this Limited Warranty until the area to be repaired or replaced is clean, dry and unencumbered, including, without limitation, the area having been made available for repair and/or replacement free from all water, dirt, sludge, residuals and liquids of any kind. If Warrantor determines that a claim is invalid, Owner shall reimburse Warrantor for its inspection and analysis costs.

Notwithstanding any contrary provision hereof, in no event shall any liability of Warrantor hereunder exceed the actual per square foot cost of the Product required to repair or replace (in Warrantor's sole discretion) in the affected area of the Product (the "Liability Limit"); provided however, that Warrantor's Liability Limit hereunder shall, starting on the first (1st) anniversary of the Effective Date, be reduced each year during the Warranty Term by a calculated fraction, where the numerator corresponds to the expired number of years in the Warranty Term prior to Warrantor's receipt of a written notice of claim, and the denominator corresponds to the Warranty Term.

Any claim for any alleged defect under this Limited Warranty must be made in writing, by certified mail, to Warrantor at the Warrantor's address specified above within ten (10) business days of the Owner becoming aware of the alleged defect. Any failure to timely issue such notice shall void any warranty coverage.

Warrantor makes no representations, expressed or implied, not specified herein. No representative, agent or employee of Warrantor, or any other person, including the Buyer, is authorized to assume for Warrantor any additional liability or responsibility except as described above. In the event any term or provision of this Limited Warranty is inconsistent with or in conflict with any writing, purchase order, representations, statements, contract, or any other document, then, to the extent such inconsistency or conflict exists, the terms and conditions of this Limited Warranty shall control in all respects. The Limited Warranty is valid only for the original Owner and is not assignable or transferable under any circumstances. The terms hereof shall be governed by the laws provided in the contract or Sales Order entered into between the Warrantor and the Buyer and any dispute arising out and in connection with this Limited Warranty shall be settled in accordance with the provisions of the said contract or Sales Order. If it is determined and adjudicated that the exclusive remedy provided herein fails in its essential purpose, then in that event only, Owner shall be entitled to a return of that portion of the purchase price equal to the Liability Limit (as reduced as provided above) for so much of the Product as Warrantor determines to be defective. If any provision of this Limited Warranty is held to be invalid or unenforceable, such provision shall be deemed to be modified to the extent necessary for the balance hereof to be enforceable, and this Limited Warranty shall be enforced to the maximum extent permissible.

NOTWITHSTANDING ANY CONTRARY PROVISION HEREOF, AN EXPRESS CONDITION PRECEDENT TO ANY AND ALL OBLIGATION OF WARRANTOR HEREUNDER SHALL BE WARRANTOR'S TIMELY RECEIPT OF FULL PAYMENT FOR THE PRODUCT.

INSERT NO. 4

TRIAL WELD FORMS

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

[illegible]

INSERT NO. 5

PANEL PLACEMENT FORMS

PANEL PLACEMENT FORM

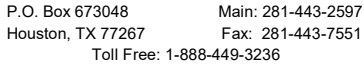
Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

Date	Panel Number	Roll Number	Panel Length (ft)	Panel Width (ft)	COMMENTS/PANEL LOCATION
10/19/2023	1	6933	125'	22.50'	2812.5
10/19/2023	2	6933	125'	22.50'	2812.5
10/19/2023	3	6933	125'	22.50'	2812.5
10/19/2023	4	6933	126'	22.50'	2835.5
10/19/2023	5	6933	103'	22.50'	2317.5
10/19/2023	6	6938	17'	22.50'	382.5
10/19/2023	7	6938	100'	22.50'	2250
10/19/2023	8	6938	109'	22.50'	2452.5
10/19/2023	9	6938	157'	22.50'	3532.5
10/20/2023	10	00000	166'	22.50'	3735
10/20/2023	11	1782	110'	22.50'	2475
10/20/2023	12	1782	179'	22.50'	4027.5
10/20/2023	13	1782	146'	22.50'	3285
10/20/2023	14	1786	127'	22.50'	2857.5
10/20/2023	15	1786	99'	22.50'	2227.5
10/20/2023	16	1786	31'	22.50'	697.5
10/20/2023	17	1786	57'	22.50'	1282.5
10/20/2023	18	1786	54'	22.50'	1215
10/20/2023	19	1786	52'	22.50'	1170
10/20/2023	20	1786	54'	22.50'	1215
10/20/2023	21	1786	52'	22.50'	1170
10/20/2023	22	1784	52'	22.50'	1170
10/20/2023	23	1784	48'	22.50'	1080
10/20/2023	24	1784	45'	22.50'	1012.5
10/20/2023	25	1782	10'	22.50'	225
10/20/2023	26	1786	28'	22.50'	630
10/20/2023	27	1784	220'	22.50'	4950
10/20/2023	28	1784	190'	22.50'	4275
10/20/2023	29	1783	35'	22.50'	787.5
10/20/2023	30	1783	189'	22.50'	3577.5
10/20/2023	31	1783	154'	22.50'	3465



Page 2 of 12

| Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

Filename: Copy of Newest LIner 2
Tab: Panel Placement

INSERT NO. 6

PANEL SEAMING FORMS

PANEL SEAMING

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
10/19/2023	10:17	P1-P2	125'	KK	2	850	Good	NO	60F		
10/19/2023	10:46	P2-P3	125'	KK	2	850	Good	NO	63F		
10/19/2023	11:10	P3-P4	125'	KK	2	850	Good	NO	67F		
10/19/2023	12:55	P4-P5	103'	KK	2	850	Good	NO	75F		
10/19/2023	12:45	P5-P6	22'	KK	2	850	Good	NO	75F		
10/19/2023	13:30	P3-P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:26	P4-P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:20	P6-P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:32	P2/P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:36	P1-P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:10	P4-P6	17'	KK	2	850	Good	Mild	75F		
10/19/2023	13:42	P7-P8	100'	KK	2	850	Good	Mild	75F		
10/19/2023	14:15	P-8. N.Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	14:20	P7. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:03	P8. E. Ext	11'	KK	2	850	Good	Mild	75F		
10/19/2023	15:05	P8. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:09	P8. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:13	P8. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:17	P8. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:59	P8-P9	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:57	P6-P9	8'	KK	2	850	Good	Mild	75F		
10/19/2023	16:05	P9. N. Ext	20'	KK	2	850	Good	Mild	75F		
10/19/2023	16:19	P9. N. Ext	31'	KK	2	850	Good	Mild	75F		
10/19/2023	16:27	P9. N. Ext	40'	KK	2	850	Good	Mild	75F		
10/19/2023	16:35	P9. N. Ext	40'	KK	2	850	Good	Mild	75F		
10/20/2023	8:04	P9-P11	22'	KK	2	850	Sunny	No	48F		
10/20/2023	8:20	P10-P11	22'	KK	2	850	Sunny	No	48F		
10/20/2023	7:50	P10-P10	136'	KK	2	850	Sunny	No	48F		
10/20/2023	8:32	P10-P12	167'	KK	2	850	Sunny	No	56F		
10/20/2023	9:00	P11-P12	109'	KK	2	850	Sunny	Mild	56F		
10/20/2023	9:54	P12-P13	144'	KK	2	850	Sunny	Mild	60F		

PANEL SEAMING

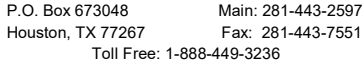
Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	Comments
10/20/2023	9:34	P12-PI4	126'	KK	2	850	Sunny	Mild	60F		
10/20/2023	9:20	P13-P14	22'	KK	2	850	Sunny	Mild	60F		
10/20/2023	10:27	P5-P15	98'	KK	2	850	Sunny	Mild	62F		
10/20/2023	10:53	P15-P16	31'	KK	2	850	Sunny	Mild	65F		
10/20/2023	10:48	P16-P17	28'	KK	2	850	Sunny	Mild	67F		
10/20/2023	10:58	P15 -17	31'	KK	2	850	Sunny	Mild	69F		
10/20/2023	11:04	P17-P18	54'	KK	2	850	Sunny	Mild	69F		
10/20/2023	11:13	P18-P19	52'	KK	2	850	Sunny	Mild	69F		
10/20/2023	12:43	P19-P20	50'	KK	2	850	Sunny	Mild	80F		
10/20/2023	12:53	P20-P21	48'	KK	2	850	Sunny	Mild	80F		
10/20/2023	13:50	P21-P22	50'	KK	2	850	Sunny	Mild	82F		
10/20/2023	13:59	P22-P23	48'	KK	2	850	Sunny	Mild	82F		
10/20/2023	14:09	P23-P24	45'	KK	2	850	Sunny	Mild	83F		
10/20/2023	13:12	P25-P12	15'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:10	P25-P15	10'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:14	P25-P17	10'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:16	P25-P18	5'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:20	P12-P15	4'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:22	P10-P15	18'	KK	2	850	Sunny	Mild	84F		
10/20/2023	15:15	P14-P26	22'	KK	2	850	Sunny	Mild	84F		
10/20/2023	15:04	P20.P27	22'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:18	P20-P20	18'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:21	P14-P18	11'	KK	2	850	Sunny	Mild	85		
10/20/2023	13:24	P14-P19	11'	KK	2	850	Sunny	Mild	85		
10/20/2023	13:19	P19-P26	5'	KK	2	850	Sunny	Mild	85		
10/20/2023	15:20	P14-P27	220'	KK	2	850	Sunny	Mild	85		
10/20/2023	15:55	P27-P29	35'	KK	2	850	Sunny	Mild	85		
10/20/2023	16:06	P21-P29	14'	VP	1	850	Sunny	Mild	85		
10/20/2023	16:04	P22-P29	14'	VP	1	850	Sunny	Mild	85		
10/20/2023	13:56	P28-P29	22'	VP	1	850	Sunny	Mild	85		
10/20/2023	16:16	P29-P30	23'	VP	1	850	Sunny	Mild	85		



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Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

Filename: Copy of Newest Liner 2
Tab: Panel Seaming

INSERT NO. 7

NON-DESTRUCTIVE TEST REPORTS

NON-DESTRUCTIVE FORM

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

			Air/Vacuum Testing							
			Time		Pressure					
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Driver/ Vac Test	Pass/ Fail	Location/Comments
10/19/2023	PI-P2	VX	12:30	12:35	0	30	30			
10/19/2023	P2-P3	VX	12:37	12:42	0	30	30			
10/19/2023	P3-P4	VX	12:43	12:47	0	30	30			
10/19/2023	P4-P5	VX	12:45	12:50	0	30	30			
10/19/2023	95-P6	VX	13:00	13:05	0	30	30			
10/19/2023	P4-P6	VX	13:20	13:25	0	30	30			
10/19/2023	P6-P7	VX	13:45	13:50	0	30	30			
10/19/2023	P4-P7	VX	13:49	13:54	0	30	30			
10/19/2023	P1-P7	VX	14:04	14:09	0	30	30			
10/19/2023	P2-P7	VX	13:56	14:01	0	30	30			
10/19/2023	P3-P7	VX	13:52	13:57	0	30	30			
10/19/2023	P7-P8	VX	14:42	13:45	0	30	30			
10/19/2023	P8-Ext1	VX	15:35	15:40	0	30	30			
10/19/2023	P8-Ext2	VX	15:38	15:43	0	30	30			
10/19/2023	P8-Ext3	VX	15:45	15:50	0	30	30			
10/20/2023	P5-PI5	VX	12:30	12:35	0	30	30			
10/20/2023	PI5-P16	VX	12:33	12:38	0	30	30			
10/20/2023	PI5-PI7	VX	12:36	12:41	0	30	30			
10/20/2023	PI6-PI7	VX	12:40	12:45	0	30	30			
10/20/2023	PI6-Ext.	VX	12:43	12:48	0	30	30			
10/20/2023	P17-P18	VX	12:50	12:55	0	30	30			
10/20/2023	PI8-PI9	VX	12:53	12:58	0	30	30			
10/20/2023	P19-P20	VX	14:20	14:25	0	30	30			
10/20/2023	P20-P21	VX	14:23	14:28	0	30	30			
10/20/2023	P21-P22	VX	14:30	14:35	0	30	30			
10/20/2023	P22-P23	VX	14:33	14:38	0	30	30			
10/20/2023	P23-P24	VX	11:40	14:45	0	30	30			
10/20/2023	P25-P12	VX	14:43	14:48	0	30	30			

NON-DESTRUCTIVE FORM

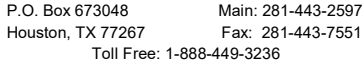
Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

| Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

			Air/Vacuum Testing							
			Time		Pressure					
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Driver/ Vac Test	Pass/ Fail	Location/Comments
10/20/2023	P25-P15	VX	14:46	14:51	0	30	30			
10/20/2023	P25-P17	VX	14:50	14:55	0	30	30			
10/20/2023	P25-P18	VX	14:54	14:59	0	30	30			
10/20/2023	P12-P15	VX	15:02	15:07	0	30	30			
10/20/2023	P10-P15	VX	15:05	15:10	0	30	30			
10/20/2023	P14-P26	VX	15:31	15:36	0	30	30			
10/20/2023	P26-P27	VX	15:35	15:40	0	30	30			
10/20/2023	P20-P26	VX	15:38	15:43	0	30	30			
10/20/2023	P14-P18	VX	15:44	15:49	0	30	30			
10/20/2023	P14-P19	VX	15:47	15:52	0	30	30			
10/20/2023	P19-P26	VX	15:50	15:55	0	30	30			
10/21/2023	P14-P27	VX	8:00	8:05	0	30	30			
10/21/2023	P27-P29	VX	8:04	8:09	0	30	30			
10/21/2023	P21-P29	VX	8:10	8:15	0	30	30			
10/21/2023	P22-P29	VX	8:13	8:18	0	30	30			
10/21/2023	P28-P29	VX	10:20	10:25	0	30	30			
10/21/2023	P29-P30	VX	10:23	10:28	0	30	30			
10/21/2023	P28-P30	VX	10:26	10:31	0	30	30			
10/21/2023	P30-P31	VX	10:30	10:35	0	30	30			
10/21/2023	P34-P33	VX	10:38	10:43	0	30	30			
10/21/2023	P33-P32	VX	10:44	10:45	0	30	30			
10/21/2023	P31-P34	VX	10:46	10:51	0	30	30			
10/21/2023	P35-N,Ext	VX	10:53	10:58	0	30	30			
10/21/2023	P6-P10	VX	12:30	12:35	0	30	30			
10/21/2023	P7-P9	VX	12:36	12:41	0	30	30			
10/21/2023	P8-P9	VX	12:39	12:44	0	30	30			
10/21/2023	P8-E.Ext	VX	12:43	12:48	0	30	30			
10/21/2023	P9-N.Ext1	VX	12:29	12:54	0	30	30			



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Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

Liners • HDPE Pipe • Portable Containment Berms
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INSERT NO. 8

DESTRUCTIVE TEST REPORTS

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

[illegible]

INSERT NO. 9

REPAIR REPORTS

REPAIR REPORT

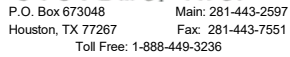
Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

Field Seam Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description of Damage, Type/Size of Repair		
P1-N.Ext	1	10/19/2023	NS	113	10/19/2023	VP	Pass	125'W	Gap	2x3
P2-W.Ext	2	10/19/2023	NS	113	10/19/2023	VP	Pass	125'W	TJ	2x3
P15-W.Ext	3	10/19/2023	NS	113	10/19/2023	VP	Pass	125'W	TJ	1x5
W.Ext	4	10/21/2023	NS	113	10/21/2023	VP	Pass	98'W	TJ	2x2
W. Ext	5	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in	TJ	2x2
W.Ext	6	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in	TJ	2x2
W.Ext	7	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in	TJ	2x2
W.Ext	8	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in	TJ	2x2
W.Ext	9	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in	TJ	2x2
W.Ext	10	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in	TJ	2x2
W.Ext	11	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in	TJ	2x2
W.Ext	12	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in	TJ	2x2
P24-W-Ext	13	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in	TJ	2x3
P24-P31	14	10/21/2023	KK	113	10/21/2023	VP	Pass	45' W	TJ	2x3
24-30-31	15	10/21/2023	KK	113	10/21/2023	VP	Pass	47'W	TJ	2x2
23-24-30-31	16	10/21/2023	KK	113	10/21/2023	VP	Pass	154'E	TJ	2x2
22-23-30	17	10/21/2023	KK	113	10/21/2023	VP	Pass	48'W	TJ	2x3
22-28-30	18	10/21/2023	KK	113	10/21/2023	VP	Pass	159'E	TJ	2x3
20-21-25-28	19	10/21/2023	KK	113	10/21/2023	VP	Pass	220'E	TJ	2x2
14-25-27	20	10/21/2023	KK	113	10/21/2023	VP	Pass	220'E	TJ	2x2
14.26-18-19	21	10/21/2023	KK	113	10/21/2023	VP	Pass	50'W	TJ	2x2
14.18.19	22	10/21/2023	KK	113	10/21/2023	VP	Pass	50'W	TJ	2x4
14-18-25	23	10/21/2023	KK	113	10/21/2023	VP	Pass	54'W	TJ	3x5
12-14-18-25	24	10/21/2023	KK	113	10/21/2023	VP	Pass	109'E	TJ	2x2
15-17-25	25	10/21/2023	KK	113	10/21/2023	VP	Pass	98'W	TJ	2x2
10-12-15	26	10/21/2023	KK	113	10/21/2023	VP	Pass	99'W	TJ	2x2
15-16-17	27	10/21/2023	KK	113	10/21/2023	VP	Pass	31'W	TJ	2x2
5-6-10-15	28	10/21/2023	KK	113	10/21/2023	VP	Pass	103'W	TJ	2x2
4-5-6	29	10/21/2023	KK	113	10/21/2023	VP	Pass	103'W	TJ	2x2
4-6-7	30	10/21/2023	KK	113	10/21/2023	VP	Pass	126'W	TJ	2x2
3-4-7	31	10/21/2023	KK	113	10/21/2023	VP	Pass	125'W	TJ	2x2
2-3-7	32	10/21/2023	KK	113	10/21/2023	VP	Pass	125'W	TJ	2x2
1-2-7	33	10/21/2023	KK	113	10/21/2023	VP	Pass	125'W	TJ	2x2
1-7-N-Ext.	34	10/21/2023	KK	113	10/21/2023	VP	Pass	125'W	TJ	2x2
7-8-N-Ext.	35	10/21/2023	KK	113	10/21/2023	VP	Pass	147'W	TJ	2x2
8-N-E-Ext	36	10/21/2023	KK	113	10/21/2023	VP	Pass	169'W	TJ	2x2
8- E-Ext	37	10/21/2023	KK	113	10/21/2023	VP	Pass	22'N	TJ	2x2
8- E-Ext	38	10/21/2023	KK	113	10/21/2023	VP	Pass	44'N	TJ	2x2
8- E-Ext	39	10/21/2023	KK	113	10/21/2023	VP	Pass	66'N	TJ	2x2



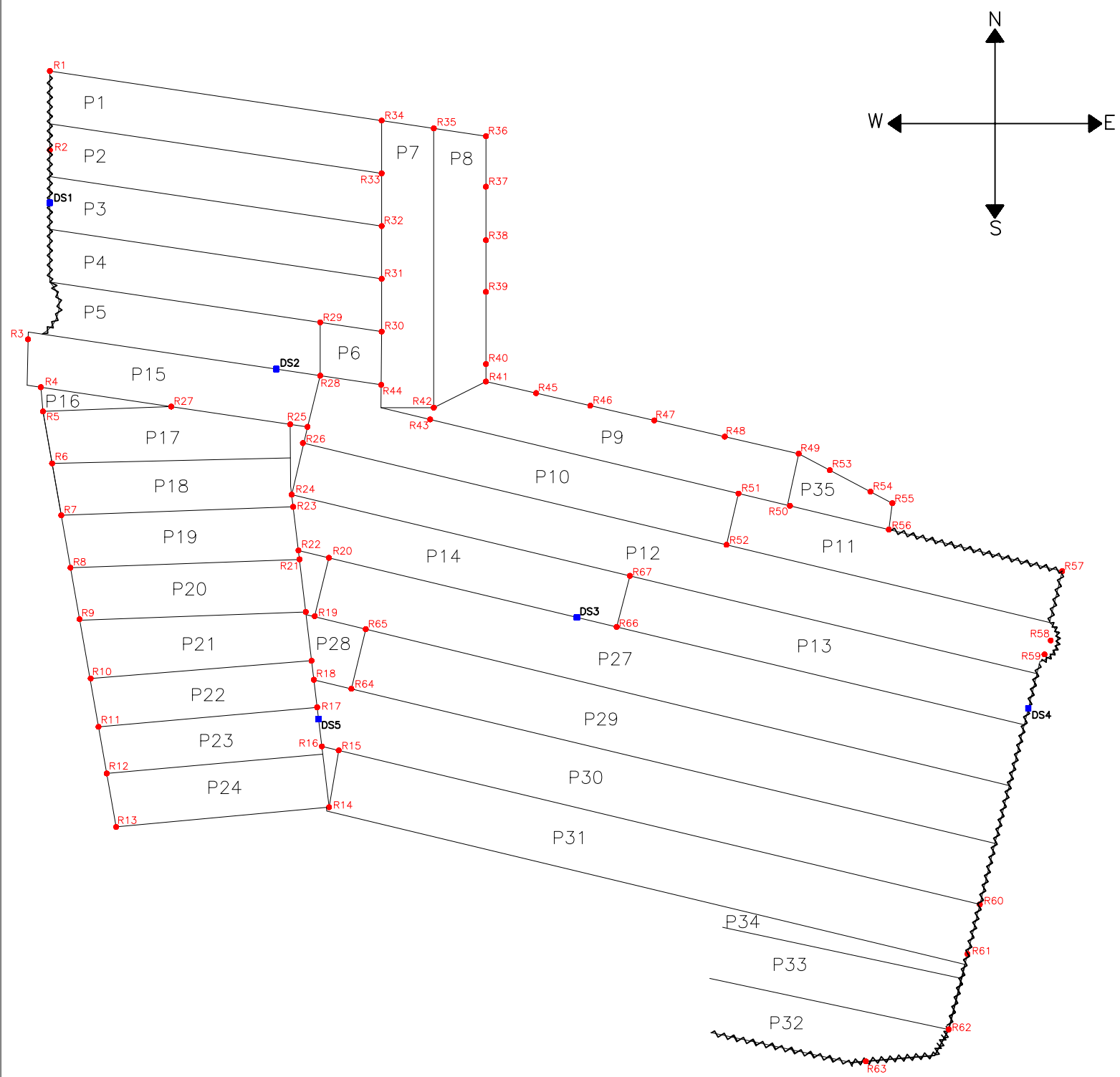
Page 2 of 8

Form ECW-STD-0001 REV. 2.1 Date 24-Oct-23

Filename: Copy of Newest Liner 2
Tab: Repair Report

INSERT NO. 10

AS BUILT DRAWINGS



Legend

- Repair
- Liner
- AAA Extrusion
- Destructs

General Notes

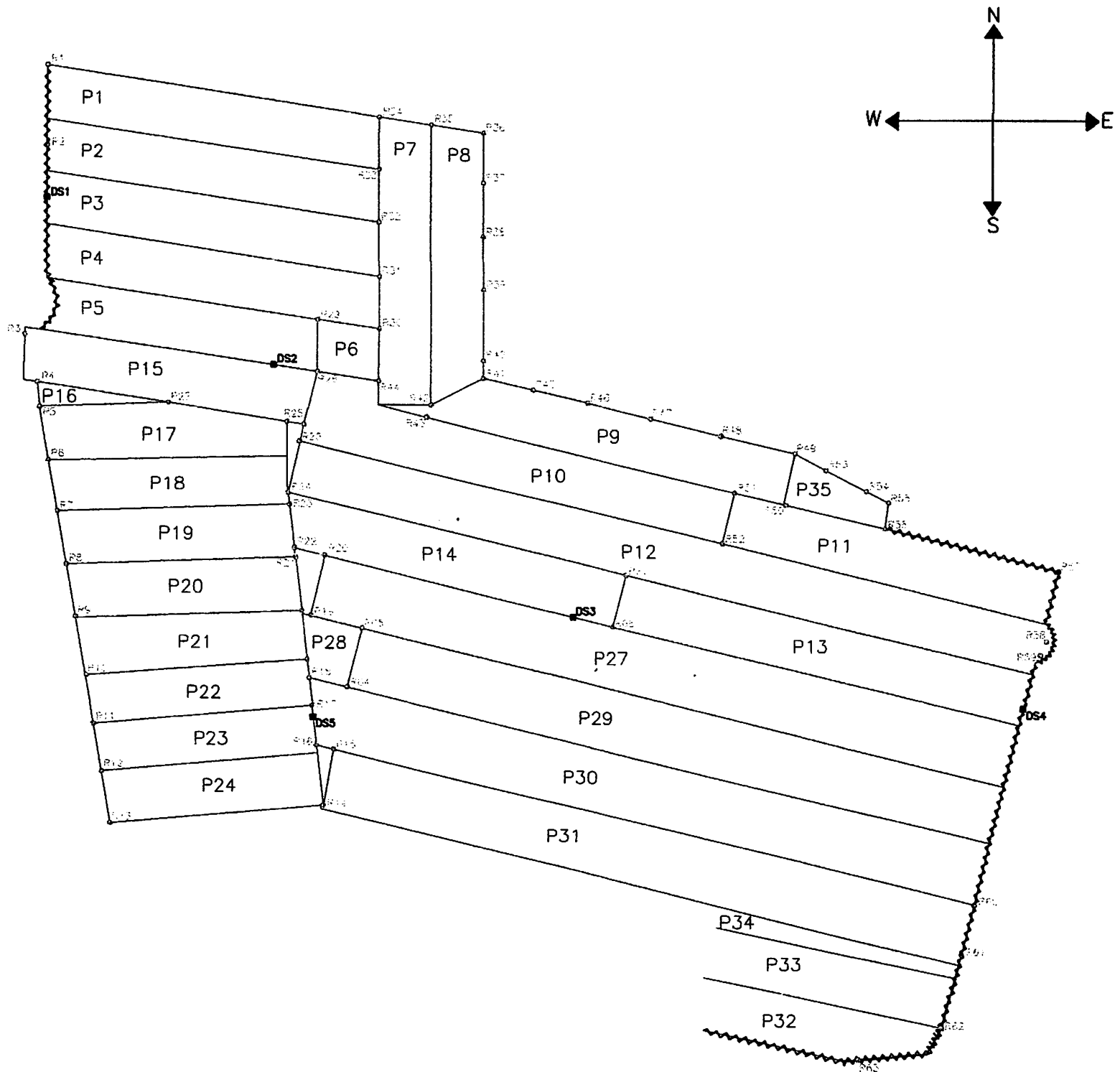
NOTES

Project Name and Address

Job#:150603
Sequoyah Fuels Corporation
Sequoyah, OK

Project	Sheet
Date	1
Scale	

Top South 1/2



ENVIROCON
SYSTEMS, INC.

1910 Rankin Road
Houston, TX 77073

Bus: 281-443-2592
Fax: 281-443-7551

Toll Free: 1-888-449-3236

SEQUOYAH FUELS CORPORATION
SEQUOYAH, OK

PROJECT MANUAL

ENVIROCON SYSTEMS, INC.
PROJECT NUMBER 150603

PROJECT COMPLETION DATE: October 24, 2023

TABLE OF CONTENTS

Certificate of Acceptance.....	Insert No. 1
Installation Warranty.....	Insert No. 2
Material Warranty.....	Insert No. 3
Trial Weld Forms.....	Insert No. 4
Panel Placement Forms.....	Insert No. 5
Panel Seaming Forms.....	Insert No. 6
Non-Destructive Test Forms.....	Insert No. 7
Destructive Test Forms.....	Insert No. 8
Repair Reports.....	Insert No. 9
As-Built Drawings.....	Insert No.10

INSERT NO. 1

CERTIFICATE OF ACCEPTANCE

Job Description: FCA-Fuels Disposal Cell Cap | _____

Customer Name: Sequoyah Fuels Corp.

Job No: 150603

Job Location: Sequoyah, OK

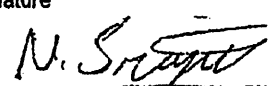
% COMPLETE OF TOTAL JOB: _____

MATERIAL	ESTIMATED SQ. FEET	FINAL QUANTITY / DESCRIPTION
<i>Job Description, More Specifics/Sub-Description if Necessary</i>		
60 mils HDPE Liner	72,922 sq ft	72,922 sq ft
Welding Rod (box)	10 bx	10 bx
Additional Repairs (6 techs)	8 hrs	8 hrs
Mobilization	1 ea	1ea
Demobilization	1 ea	1 ea

I, the undersigned, duly authorized representative of **Sequoyah Fuels Corp.**
do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the work has been completed in accordance with specifications and the terms and conditions of the contract.

Name	Signature	Title	Date
Kenny Schlag		QA Manager	10/24/2023

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
Nopporn Sriyuth		Liner Supervisor	10/24/2023

Form ECMS10007 REV. 2.1 Date 24-Oct-22

INSERT NO. 2

INSTALLATION WARRANTY

ENVIROCON

SYSTEMS, INC.

P.O. Box 673048 Main: 281-443-2597
Houston, TX 77267 Fax: 281-443-6227
Toll Free: 1-888-449-3236

LINER INSTALLATION WARRANTY

OWNER: Sequoyah Fuels

PROJECT NAME: Sequoyah Fuels Corporation-Sequoyah, OK

PROJECT NO.: 150603

INSTALLATION DATE: 10/19/2023 to 10/24/2023

EFFECTIVE DATE: 10/24/2023

EnviroCon Systems, Inc. hereby warrants to (and only to) Sequoyah Fuels that the linings installed by EnviroCon Systems, Inc. at the location and for the intended use described below (the "Linings") shall be installed free from defects in EnviroCon Systems Inc.'s workmanship. The warranty set forth in the preceding sentence (the "Workmanship Warranty") shall commence on the date that EnviroCon Systems, Inc. completes the installation of the Linings, shall apply until the last day of a period of One (1) year from said date, and shall be subject to the following conditions:

1. The Workmanship Warranty shall extend only to the proper installation of the Linings. The Workmanship Warranty shall not apply to any alleged defect in installation that is occasioned by fire, Acts of God or acts of any person or entity other than EnviroCon Systems, Inc. or its agent, including without limitation abuse, negligence, misuse, improper treatment, vandalism or any alleged defects caused, directly or indirectly, by falling objects, abnormal environmental conditions, improper site preparation, subgrade settlement or by any event beyond the reasonable control of EnviroCon Systems, Inc.
2. The Workmanship Warranty shall not be effective unless EnviroCon Systems, Inc. receives Company's written claim therefore within 30 days after the date of discovery of such defect and within the warranty period. EnviroCon Systems, Inc. shall have the right to verify by its own representative the nature and extent of the defects complained of.
3. The extent of EnviroCon Systems, Inc.'s liability for breach of the Workmanship Warranty shall be limited to timely repairing or replacing the defective installation workmanship. If it is necessary for EnviroCon Systems, Inc. to repair or replace any defective workmanship with respect to the Linings, Company shall afford EnviroCon Systems, Inc. clear and unrestricted access to the Linings, which shall not be encumbered by any overlying material or liquid, and Company shall cooperate in all respects with EnviroCon Systems, Inc. to accomplish said repair. In no event will EnviroCon Systems, Inc. be liable for the cost of labor expended by any person or entity other than EnviroCon Systems, Inc. or its agent on any defective workmanship with respect to the installation of the Linings. Under no circumstances shall EnviroCon Systems, Inc. have any liability for consequential damages arising from loss of production or product owing to the failure of the material or installation, and no allowances will be made for repairs, replacement or alterations made by Company without EnviroCon Systems, Inc.'s written consent. EnviroCon Systems, Inc. neither assumes nor authorizes any person (other than an officer of EnviroCon Systems, Inc.) to assume for it any other or additional liability in connection with the Liner. Any repairs, replacements or alterations made without EnviroCon Systems, Inc.'s written consent or any attempted assumption of any such liability will void this Workmanship Warranty.

ENVIROCON

SYSTEMS, INC.

4. The Workmanship Warranty is extended to Company only and is non-transferable and non-assignable. No rights against EnviroCon Systems, Inc. shall be created by any attempted transfer or assignment, nor shall any rights against EnviroCon Systems, Inc. survive any attempted transfer or assignment. This Workmanship Warranty does not extend to any materials furnished or installed by others in connection with the intended use of the linings.

5. No terms or conditions other than those stated herein and no agreement or understanding, oral or written, and no course of conduct or performance in any way purporting to modify the Workmanship Warranty or to waive EnviroCon Systems, Inc. rights hereunder shall be binding on EnviroCon Systems, Inc. unless the same shall be clearly described in written memorandum that expressly refers to the Workmanship Warranty and is separately sign by a duly authorized officer of EnviroCon Systems, Inc.. Moreover, additional liabilities of or limitation upon the rights and remedies of EnviroCon Systems, Inc. contained in such documents as purchase orders, order acknowledgments or change orders which may subsequently be exchanged between parties shall have no force or effect upon the Workmanship Warranty. All proposals, negotiations and representation, if any, made prior to the date hereof or with reference hereto are merged herein.

6. This Workmanship Warranty shall not be effective unless payment in full has been made to EnviroCon Systems, Inc. for all labor, installation and other services provided.

7. THE LAWS OF THE STATE OF TEXAS SHALL GOVERN THE RIGHTS AND DUTIES OF THE PARTIES UNDER THIS WARRANTY. VENUE FOR ALL LEGAL PROCEEDINGS INVOLVING THE WORKMANSHIP WARRANTY OR ANY OTHER MATTER CONTAINED WITHIN SHALL BE IN HARRIS COUNTY, TEXAS.

THE FOREGOING WORKMANSHIP WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES (EXCEPT OF TITLE), EXPRESS, IMPLIED, OR STATUTORY. IN NO EVENT SHALL ENVIROCON SYSTEMS, INC. BE LIABLE FOR LOSS OF PROFITS OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSSES RESULTING FROM ANY DEFECTS IN IT'S WORKMANSHIP, INCLUDING WITHOUT LIMITATION IMPROPER INSTALLATION OF THE LININGS.

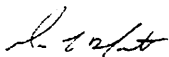
PURCHASER: Sequoyah Fuels

LOCATION OF INSTALLATION: Sequoyah, OK

DESCRIPTION OF INTENDED USE: Fuels Disposal Cell Cap

PROJECT NO.:150603

ENVIROCON SYSTEMS, INC.



Signature

Gregg L. DeJarnett

Print or Type Name

Construction Manager

Title

INSERT NO. 3

MATERIAL WARRANTY



SOLMAX

LIMITED WARRANTY

PROJECT:	FCA-Fuels Disposal Cell Cap		
WARRANTOR:	Solmax Geosynthetics, LLC		
WARRANTOR ADDRESS:	19103 Gundle Road, Houston, Texas, 77073		
WARRANTY TERM:	5 years from the Effective Date		
Project Address:	OK-10, Gore, OK 74435 USA		
Owner:	Sequoyah Fuels	Warranty Number:	ECS-14-11
Sales Order N°:	SO-096110,	Effective Date:	October 2
Product(s):	1101533 HDPE 60 mil Black Top Side Single Textured ST (t		

WHEREAS pursuant to the Sales Purchase Order referenced herein (the "Sales Order") between the Warrantor and the Buyer identified in the said Sales Order (the "Buyer"), the Buyer purchased the Product for the Project and for which the Project is the end user/customer of the Product (the "Owner");

WHEREAS the Project was designed exclusively by the Owner and/or its general contractor, professionals (such as architects, surveyors), subcontractors, land experts, suppliers (collectively the "Owner's Professionals");

WHEREAS the Warrantor is not a design professional nor did the Warrantor participate in the design/conception of the Project;

NOW, THEREFORE, in consideration of the foregoing, and subject to the terms and conditions of this Limited Warranty, the Warrantor hereby represents and warrants to the Owner that as of the date of sale of the Product to the Buyer for the Project, the Product conforms to the Warrantor's specifications and that the Product will be free from manufacturing defects that appear during the Warranty Term for the Product's normal use in approved applications (the "Normal Use").

LIMITATIONS AND DISCLAIMERS

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT INCLUDING, A WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXCLUDED HEREIN. Warrantor's liability hereunder is the sole and exclusive obligation of Warrantor with regard to the Product. Warrantor shall have no liability for any claim except as specified hereunder. Warrantor shall not be liable for labor or materials costs incurred in connection with the use, repair, removal, installation or replacement of any Product covered by this Warranty, or for any direct or indirect damages, labor, removal, installation, incidental or consequential damages, loss of use, injury to property or any other damages, losses or contingencies due to or arising out of the Product, whether caused in whole or in part by a breach of contract, tort, personal injury, property damage, environmental liability or otherwise, regardless of whether the Product is subject to a defect.

The Warrantor shall not be held liable or responsible to the Owner nor be deemed to have defaulted under or breached this Warranty for failure or delay in fulfilling or performing any term of this Limited Warranty when such failure or delay results from causes beyond the reasonable control of the Warrantor, including but not limited to fire, floods, earthquakes, acts of war (whether war is declared or not), insurrections, riots, civil commotions, the existence or administration of laws or regulations, strikes, lockouts or other labor disturbances, acts of God or acts, omissions or delays in acting by any governmental authority; provided, however, that the Warrantor shall use reasonable commercial efforts to avoid or remove such causes from performance, and shall continue performance hereunder with reasonable dispatch whenever such causes are removed. This Warranty does not cover damages or defects resulting from normal wear and tear, faulty installation, maintenance, misuse or negligent use of the Product as well as damages caused by acts of God, natural disasters such as earthquakes, floods, hurricanes or tornadoes. The term "Normal Use" as used herein does not include usage for which the Product was not designed, including but not limited to: faulty design and/or construction of the facility into which the Product is installed, failure to install the Product

exposure conditions (including chemicals, concentration, time and temperature). As such, any proposed pro Product, should be thoroughly evaluated for its intended application by the Owner and the Owner's Profession "Normal Use" as used herein does not include damage to the Product by machinery, equipment, people, ani preparation or covering materials; existing conditions, including, but not limited to, subsurface conditions benea product such as a settlement of the ground, cave-in, etc., excessive pressures or stresses from any source or im There shall be no intended or incidental third-party beneficiary hereof. In no event shall Warrantor have any lial defects or discrepancies which were or could have been discovered prior to the installation of the Product.

Subject to the terms and conditions hereof, after receipt of a timely valid claim hereunder, Warrantor will have and determine the cause of any alleged defect in the Product and if coverage is confirmed, then Warrantor shall its sole discretion, to repair the affected area of the Product or to ship replacement product reasonably equival area of the Product proven to be subject to the covered defect. Warrantor is not a design professional and has design services for the Project and disclaims any alleged design liability regarding use of the Product at or for t understood that any design was performed exclusively by the Owner or the Owner's Professionals. Warrantor sh to perform repairs or replacements under this Limited Warranty until the area to be repaired or replacemc unencumbered, including, without limitation, the area having been made available for repair and/or replacement dirt, sludge, residuals and liquids of any kind. If Warrantor determines that a claim is invalid, Owner shall reimburs inspection and analysis costs.

Notwithstanding any contrary provision hereof, in no event shall any liability of Warrantor hereunder exceed th foot cost of the Product required to repair or replace (in Warrantor's sole discretion) in the affected area c "Liability Limit"); provided however, that Warrantor's Liability Limit hereunder shall, starting on the first (1st) Effective Date, be reduced each year during the Warranty Term by a calculated fraction, where the numerator expired number of years in the Warranty Term prior to Warrantor's receipt of a written notice of claim, an corresponds to the Warranty Term.

Any claim for any alleged defect under this Limited Warranty must be made in writing, by certified mail, to Warrantor's address specified above within ten (10) business days of the Owner becoming aware of the alleged to timely issue such notice shall void any warranty coverage.

Warrantor makes no representations, expressed or implied, not specified herein. No representative, agei Warrantor, or any other person, including the Buyer, is authorized to assume for Warrantor any additional liabil except as described above. In the event any term or provision of this Limited Warranty is inconsistent with or writing, purchase order, representations, statements, contract, or any other document, then, to the extent su conflict exists, the terms and conditions of this Limited Warranty shall control in all respects. The Limited Warra the original Owner and is not assignable or transferable under any circumstances. The terms hereof shall be go provided in the contract or Sales Order entered into between the Warrantor and the Buyer and any dispute connection with this Limited Warranty shall be settled in accordance with the provisions of the said contract or determined and adjudicated that the exclusive remedy provided herein fails in its essential purpose, then in that shall be entitled to a return of that portion of the purchase price equal to the Liability Limit (as reduced as pro much of the Product as Warrantor determines to be defective. If any provision of this Limited Warranty is h unenforceable, such provision shall be deemed to be modified to the extent necessary for the balance hereof to l this Limited Warranty shall be enforced to the maximum extent permissible.

NOTWITHSTANDING ANY CONTRARY PROVISION HEREOF, AN EXPRESS CONDITION PRECEDENT TO ANY AND A WARRANTOR HEREUNDER SHALL BE WARRANTOR'S TIMELY RECEIPT OF FULL PAYMENT FOR THE PRODUCT.

INSERT NO. 4

TRIAL WELD FORMS

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

[illegible]

INSERT NO. 5

PANEL PLACEMENT FORMS

PANEL PLACEMENT FORM

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

| Form ECW-

Date	Panel Number	Roll Number	Panel Length (ft)	Panel Width (ft)	COMMENTS/PANEL LOCATION
10/19/2023	1	6933	125'	22.50'	2812.5
10/19/2023	2	6933	125'	22.50'	2812.5
10/19/2023	3	6933	125'	22.50'	2812.5
10/19/2023	4	6933	126'	22.50'	2835.5
10/19/2023	5	6933	103'	22.50'	2317.5
10/19/2023	6	6938	17'	22.50'	382.5
10/19/2023	7	6938	100'	22.50'	2250
10/19/2023	8	6938	109'	22.50'	2452.5
10/19/2023	9	6938	157'	22.50'	3532.5
10/20/2023	10	00000	166'	22.50'	3735
10/20/2023	11	1782	110'	22.50'	2475
10/20/2023	12	1782	179'	22.50'	4027.5
10/20/2023	13	1782	146'	22.50'	3285
10/20/2023	14	1786	127'	22.50'	2857.5
10/20/2023	15	1786	99'	22.50'	2227.5
10/20/2023	16	1786	31'	22.50'	697.5
10/20/2023	17	1786	57'	22.50'	1282.5
10/20/2023	18	1786	54'	22.50'	1215
10/20/2023	19	1786	52'	22.50'	1170
10/20/2023	20	1786	54'	22.50'	1215
10/20/2023	21	1786	52'	22.50'	1170
10/20/2023	22	1784	52'	22.50'	1170
10/20/2023	23	1784	48'	22.50'	1080
10/20/2023	24	1784	45'	22.50'	1012.5
10/20/2023	25	1782	10'	22.50'	225
10/20/2023	26	1786	28'	22.50'	630
10/20/2023	27	1784	220'	22.50'	4950
10/20/2023	28	1784	190'	22.50'	4275
10/20/2023	29	1783	35'	22.50'	787.5
10/20/2023	30	1783	189'	22.50'	3577.5
10/20/2023	31	1783	154'	22.50'	3465

PANEL PLACEMENT FORM

P.O. Box 673048
Houston, TX 77267
Toll Free: 1-888-449-3236

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

Form ECW-

[illegible]

INSERT NO. 6

PANEL SEAMING FORMS

PANEL SEAMING

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

| Form ECW

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	
10/19/2023	10:17	P1-P2	125'	KK	2	850	Good	NO	60F		
10/19/2023	10:46	P2-P3	125'	KK	2	850	Good	NO	63F		
10/19/2023	11:10	P3-P4	125'	KK	2	850	Good	NO	67F		
10/19/2023	12:55	P4-P5	103'	KK	2	850	Good	NO	75F		
10/19/2023	12:45	P5-P6	22'	KK	2	850	Good	NO	75F		
10/19/2023	13:30	P3-P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:26	P4-P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:20	P6-P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:32	P2/P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:36	P1-P7	22'	KK	2	850	Good	Mild	75F		
10/19/2023	13:10	P4-P6	17'	KK	2	850	Good	Mild	75F		
10/19/2023	13:42	P7-P8	100'	KK	2	850	Good	Mild	75F		
10/19/2023	14:15	P-8. N.Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	14:20	P7. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:03	P8. E. Ext	11'	KK	2	850	Good	Mild	75F		
10/19/2023	15:05	P8. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:09	P8. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:13	P8. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:17	P8. E. Ext	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:59	P8-P9	22'	KK	2	850	Good	Mild	75F		
10/19/2023	15:57	P6-P9	8'	KK	2	850	Good	Mild	75F		
10/19/2023	16:05	P9. N. Ext	20'	KK	2	850	Good	Mild	75F		
10/19/2023	16:19	P9. N. Ext	31'	KK	2	850	Good	Mild	75F		
10/19/2023	16:27	P9. N. Ext	40'	KK	2	850	Good	Mild	75F		
10/19/2023	16:35	P9. N. Ext	40'	KK	2	850	Good	Mild	75F		
10/20/2023	8:04	P9-P11	22'	KK	2	850	Sunny	No	48F		
10/20/2023	8:20	P10-P11	22'	KK	2	850	Sunny	No	48F		
10/20/2023	7:50	P10-P10	136'	KK	2	850	Sunny	No	48F		
10/20/2023	8:32	P10-P12	167'	KK	2	850	Sunny	No	56F		
10/20/2023	9:00	P11-P12	109'	KK	2	850	Sunny	Mild	56F		
10/20/2023	9:54	P12-P13	144'	KK	2	850	Sunny	Mild	60F		

PANEL SEAMING

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

| Form ECW

Date	Seam time	Panel Number	Seam Length	Seamer Initials	Machine Number	Temp Setting	Weather	Winds	Ambient Temp	Test (P/F)	
10/20/2023	9:34	P12-PI4	126'	KK	2	850	Sunny	Mild	60F		
10/20/2023	9:20	P13-P14	22'	KK	2	850	Sunny	Mild	60F		
10/20/2023	10:27	P5-P15	98'	KK	2	850	Sunny	Mild	62F		
10/20/2023	10:53	P15-P16	31'	KK	2	850	Sunny	Mild	65F		
10/20/2023	10:48	P16-P17	28'	KK	2	850	Sunny	Mild	67F		
10/20/2023	10:58	P15 -17	31'	KK	2	850	Sunny	Mild	69F		
10/20/2023	11:04	P17-P18	54'	KK	2	850	Sunny	Mild	69F		
10/20/2023	11:13	P18-P19	52'	KK	2	850	Sunny	Mild	69F		
10/20/2023	12:43	P19-P20	50'	KK	2	850	Sunny	Mild	80F		
10/20/2023	12:53	P20-P21	48'	KK	2	850	Sunny	Mild	80F		
10/20/2023	13:50	P21-P22	50'	KK	2	850	Sunny	Mild	82F		
10/20/2023	13:59	P22-P23	48'	KK	2	850	Sunny	Mild	82F		
10/20/2023	14:09	P23-P24	45'	KK	2	850	Sunny	Mild	83F		
10/20/2023	13:12	P25-P12	15'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:10	P25-P15	10'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:14	P25-P17	10'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:16	P25-P18	5'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:20	P12-P15	4'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:22	P10-P15	18'	KK	2	850	Sunny	Mild	84F		
10/20/2023	15:15	P14-P26	22'	KK	2	850	Sunny	Mild	84F		
10/20/2023	15:04	P20.P27	22'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:18	P20-P20	18'	KK	2	850	Sunny	Mild	84F		
10/20/2023	13:21	P14-P18	11'	KK	2	850	Sunny	Mild	85		
10/20/2023	13:24	P14-P19	11'	KK	2	850	Sunny	Mild	85		
10/20/2023	13:19	P19-P26	5'	KK	2	850	Sunny	Mild	85		
10/20/2023	15:20	P14-P27	220'	KK	2	850	Sunny	Mild	85		
10/20/2023	15:55	P27-P29	35'	KK	2	850	Sunny	Mild	85		
10/20/2023	16:06	P21-P29	14'	VP	1	850	Sunny	Mild	85		
10/20/2023	16:04	P22-P29	14'	VP	1	850	Sunny	Mild	85		
10/20/2023	13:56	P28-P29	22'	VP	1	850	Sunny	Mild	85		
10/20/2023	16:16	P29-P30	23'	VP	1	850	Sunny	Mild	85		

PANEL SEAMING

P.O. Box 673048
Houston, TX 77267
Toll Free: 1-888-449-3236

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

Form ECW

[illegible]

INSERT NO. 7

NON-DESTRUCTIVE TEST REPORTS

NON-DESTRUCTIVE FORM

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

| Form ECW-1

			Air/Vacuum Testing						
			Time		Pressure				
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Driver/ Vac Test	Pass/ Fail
10/19/2023	PI-P2	VX	12:30	12:35	0	30	30		
10/19/2023	P2-P3	VX	12:37	12:42	0	30	30		
10/19/2023	P3-P4	VX	12:43	12:47	0	30	30		
10/19/2023	P4-P5	VX	12:45	12:50	0	30	30		
10/19/2023	95-P6	VX	13:00	13:05	0	30	30		
10/19/2023	P4-P6	VX	13:20	13:25	0	30	30		
10/19/2023	P6-P7	VX	13:45	13:50	0	30	30		
10/19/2023	P4-P7	VX	13:49	13:54	0	30	30		
10/19/2023	P1-P7	VX	14:04	14:09	0	30	30		
10/19/2023	P2-P7	VX	13:56	14:01	0	30	30		
10/19/2023	P3-P7	VX	13:52	13:57	0	30	30		
10/19/2023	P7-P8	VX	14:42	13:45	0	30	30		
10/19/2023	P8-Ext1	VX	15:35	15:40	0	30	30		
10/19/2023	P8-Ext2	VX	15:38	15:43	0	30	30		
10/19/2023	P8-Ext3	VX	15:45	15:50	0	30	30		
10/20/2023	P5-PI5	VX	12:30	12:35	0	30	30		
10/20/2023	PI5-P16	VX	12:33	12:38	0	30	30		
10/20/2023	PI5-PI7	VX	12:36	12:41	0	30	30		
10/20/2023	PI6-PI7	VX	12:40	12:45	0	30	30		
10/20/2023	PI6-Ext.	VX	12:43	12:48	0	30	30		
10/20/2023	P17-P18	VX	12:50	12:55	0	30	30		
10/20/2023	PI8-PI9	VX	12:53	12:58	0	30	30		
10/20/2023	P19-P20	VX	14:20	14:25	0	30	30		
10/20/2023	P20-P21	VX	14:23	14:28	0	30	30		
10/20/2023	P21-P22	VX	14:30	14:35	0	30	30		
10/20/2023	P22-P23	VX	14:33	14:38	0	30	30		
10/20/2023	P23-P24	VX	11:40	14:45	0	30	30		
10/20/2023	P25-P12	VX	14:43	14:48	0	30	30		

NON-DESTRUCTIVE FORM

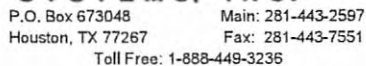
Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

| Form ECW-1

			Air/Vacuum Testing						
			Time		Pressure				
Date	Seam Number	Tester Initials	Start Time	End Time	Drop	Initial Press	Final Press	Driver/ Vac Test	Pass/ Fail
10/20/2023	P25-P15	VX	14:46	14:51	0	30	30		
10/20/2023	P25-P17	VX	14:50	14:55	0	30	30		
10/20/2023	P25-P18	VX	14:54	14:59	0	30	30		
10/20/2023	P12-P15	VX	15:02	15:07	0	30	30		
10/20/2023	P10-P15	VX	15:05	15:10	0	30	30		
10/20/2023	P14-P26	VX	15:31	15:36	0	30	30		
10/20/2023	P26-P27	VX	15:35	15:40	0	30	30		
10/20/2023	P20-P26	VX	15:38	15:43	0	30	30		
10/20/2023	P14-P18	VX	15:44	15:49	0	30	30		
10/20/2023	P14-P19	VX	15:47	15:52	0	30	30		
10/20/2023	P19-P26	VX	15:50	15:55	0	30	30		
10/21/2023	P14-P27	VX	8:00	8:05	0	30	30		
10/21/2023	P27-P29	VX	8:04	8:09	0	30	30		
10/21/2023	P21-P29	VX	8:10	8:15	0	30	30		
10/21/2023	P22-P29	VX	8:13	8:18	0	30	30		
10/21/2023	P28-P29	VX	10:20	10:25	0	30	30		
10/21/2023	P29-P30	VX	10:23	10:28	0	30	30		
10/21/2023	P28-P30	VX	10:26	10:31	0	30	30		
10/21/2023	P30-P31	VX	10:30	10:35	0	30	30		
10/21/2023	P34-P33	VX	10:38	10:43	0	30	30		
10/21/2023	P33-P32	VX	10:44	10:45	0	30	30		
10/21/2023	P31-P34	VX	10:46	10:51	0	30	30		
10/21/2023	P35-N,Ext	VX	10:53	10:58	0	30	30		
10/21/2023	P6-P10	VX	12:30	12:35	0	30	30		
10/21/2023	P7-P9	VX	12:36	12:41	0	30	30		
10/21/2023	P8-P9	VX	12:39	12:44	0	30	30		
10/21/2023	P8-E.Ext	VX	12:43	12:48	0	30	30		
10/21/2023	P9-N.Ext1	VX	12:29	12:54	0	30	30		



Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job No: 150603

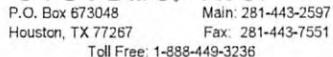
Form ECW-1

Filename: Copy of Newcast Limer 2
Tab: Non-Destructive

Liners • HDPE Pipe • Portable Containment Berms
www.enviroconsystems.com

INSERT NO. 8

DESTRUCTIVE TEST REPORTS



Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

Form ECW.

Filename: Copy of Nervous Under 2
Tab: Destructives

Liners • HDPE Pipe • Portable Containment Berms
www.enviroconsystems.com

INSERT NO. 9

REPAIR REPORTS

REPAIR REPORT

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 2/

Field Seam Number	Panel Number	Repair Date	Repair Crew	Machine Number	Test Date	Test Crew	Test Pass/Fail	Comments, Panel Location, Description, Damage, Type/Size of Repair
P1-N.Ext	1	10/19/2023	NS	113	10/19/2023	VP	Pass	125'W Gap 2x3
P2-W.Ext	2	10/19/2023	NS	113	10/19/2023	VP	Pass	125'W TJ 2x3
P15-W.Ext	3	10/19/2023	NS	113	10/19/2023	VP	Pass	125'W TJ 1x5
W.Ext	4	10/21/2023	NS	113	10/21/2023	VP	Pass	98'W TJ 2x2
W. Ext	5	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in TJ 2x
W.Ext	6	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in TJ 2x
W.Ext	7	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in TJ 2x
W.Ext	8	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in TJ 2x
W.Ext	9	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in TJ 2x
W.Ext	10	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in TJ 2x
W.Ext	11	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in TJ 2x
W.Ext	12	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in TJ 2x
P24-W-Ext	13	10/21/2023	KK	113	10/21/2023	VP	Pass	@ W. Tie-in TJ 2x
P24-P31	14	10/21/2023	KK	113	10/21/2023	VP	Pass	45' W TJ 2x3
24-30-31	15	10/21/2023	KK	113	10/21/2023	VP	Pass	47'W TJ 2x2
23-24-30-31	16	10/21/2023	KK	113	10/21/2023	VP	Pass	154'E TJ 2x2
22-23-30	17	10/21/2023	KK	113	10/21/2023	VP	Pass	48'W TJ 2x3
22-28-30	18	10/21/2023	KK	113	10/21/2023	VP	Pass	159'E TJ 2x3
20-21-25-28	19	10/21/2023	KK	113	10/21/2023	VP	Pass	220'E TJ 2x2
14-25-27	20	10/21/2023	KK	113	10/21/2023	VP	Pass	220'E TJ 2x2
14.26-18-19	21	10/21/2023	KK	113	10/21/2023	VP	Pass	50'W TJ 2x2
14.18.19	22	10/21/2023	KK	113	10/21/2023	VP	Pass	50'W TJ 2x4
14-18-25	23	10/21/2023	KK	113	10/21/2023	VP	Pass	54'W TJ 3x5
12-14-18-25	24	10/21/2023	KK	113	10/21/2023	VP	Pass	109'E TJ 2x2
15-17-25	25	10/21/2023	KK	113	10/21/2023	VP	Pass	98'W TJ 2x2
10-12-15	26	10/21/2023	KK	113	10/21/2023	VP	Pass	99'W TJ 2x1
15-16-17	27	10/21/2023	KK	113	10/21/2023	VP	Pass	31'W TJ 2x2
5-6-10-15	28	10/21/2023	KK	113	10/21/2023	VP	Pass	103'W TJ 2x2
4-5-6	29	10/21/2023	KK	113	10/21/2023	VP	Pass	103'W TJ 2x2
4-6-7	30	10/21/2023	KK	113	10/21/2023	VP	Pass	126'W TJ 2x2
3-4-7	31	10/21/2023	KK	113	10/21/2023	VP	Pass	125'W TJ 2x2
2-3-7	32	10/21/2023	KK	113	10/21/2023	VP	Pass	125'W TJ 2x2
1-2-7	33	10/21/2023	KK	113	10/21/2023	VP	Pass	125'W TJ 2x2
1-7-N-Ext.	34	10/21/2023	KK	113	10/21/2023	VP	Pass	125'W TJ 2x2
7-8-N-Ext.	35	10/21/2023	KK	113	10/21/2023	VP	Pass	147'W TJ 2x2
8-N-E-Ext	36	10/21/2023	KK	113	10/21/2023	VP	Pass	169'W TJ 2x2
8- E-Ext	37	10/21/2023	KK	113	10/21/2023	VP	Pass	22'N TJ 2x2
8- E-Ext	38	10/21/2023	KK	113	10/21/2023	VP	Pass	44'N TJ 2x2
8- E-Ext	39	10/21/2023	KK	113	10/21/2023	VP	Pass	66'N TJ 2x2

REPAIR REPORT

Customer Name: Sequoyah Fuels | Job Location: Sequoyah, OK

Job Description: FCA-Fuels Disposal Cell Cap

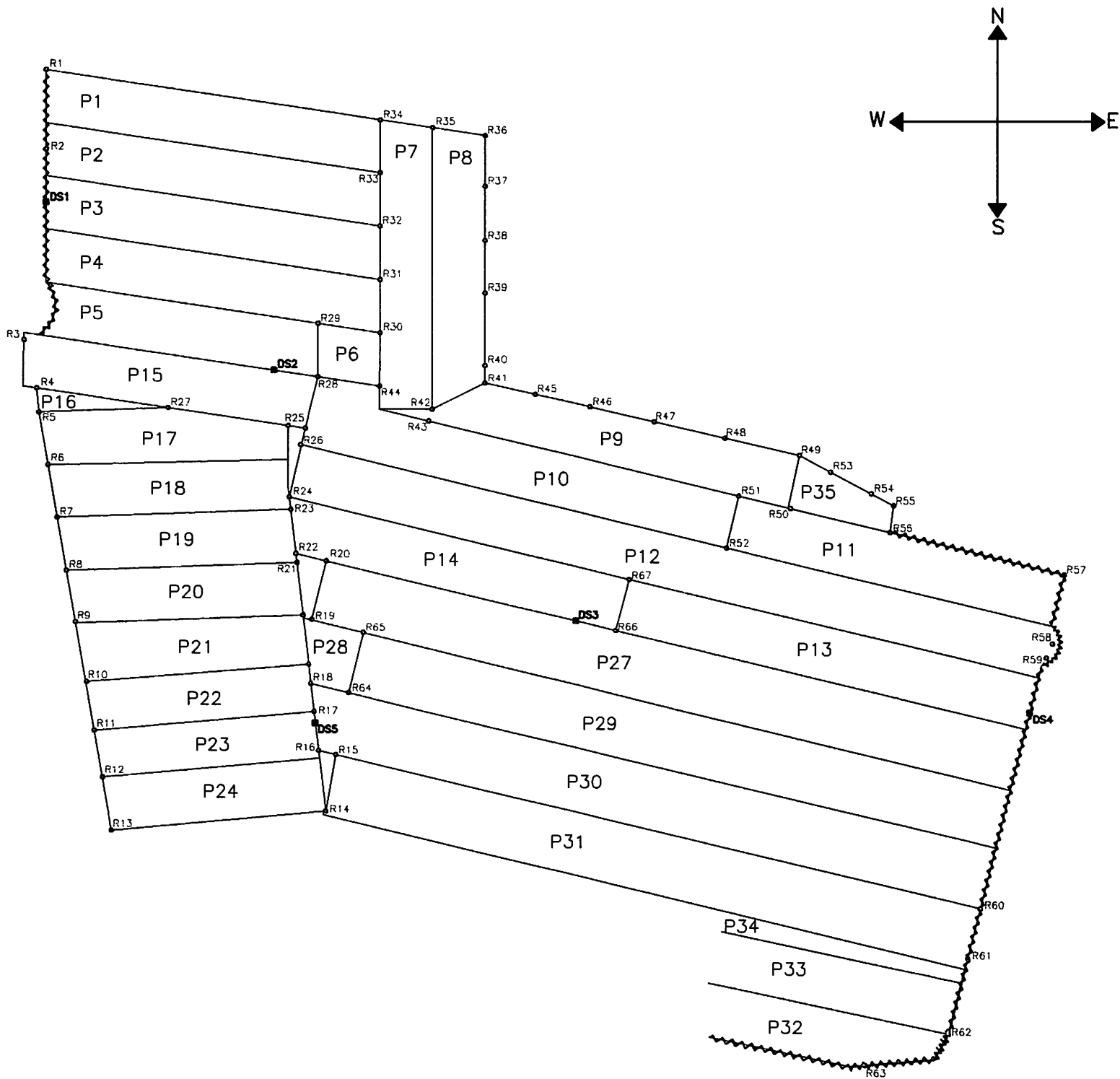
Job No: 150603

Form ECW-STD-0001 REV. 2.1 Date 2/

[illegible]

INSERT NO. 10

AS BUILT DRAWINGS



Job Description: FCA-Fuels Disposal Cell Cap | _____

Customer Name: Sequoyah Fuels Corp. _____

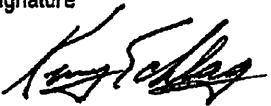
Job No: 150603

Job Location: Sequoyah, OK

% COMPLETE OF TOTAL JOB: _____

MATERIAL	ESTIMATED SQ. FEET	FINAL QUANTITY / DESCRIPTION
<i>Job Description, More Specifics/Sub-Description if Necessary</i>		
60 mils HDPE Liner	72,922 sq ft	72,922 sq ft
Welding Rod (box)	10 bx	10 bx
Additional Repairs (6 techs)	8 hrs	8 hrs
Mobilization	1 ea	1ea
Demobilization	1 ea	1 ea

I, the undersigned, duly authorized representative of **Sequoyah Fuels Corp.**
do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the
work has been completed in accordance with specifications and the terms and conditions of the contract.

Name	Signature	Title	Date
Kenny Schlag		QA Manager	10/24/2023

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
Nopporn Sriyuth		Liner Supervisor	10/24/2023

Form ECNSTD-001 REV. 2.1 Date 24-Dec-22

PHASE IV (COVER) AS-BUILT REPORT

Appendix D Synthetic Liner Installation Reports

D.5 2025 LINER INSTALLATION REPORTS





SYSTEMS, INC.

1910 Rankin Road
Houston, TX 77073

Bus: 281-443-2592
Fax: 281-443-7551

Toll Free: 1-888-449-3236

**SEQUOYAH FUEL DISPOSAL
CELL CAP LINER CLOSURE
GORE, OK**

PROJECT MANUAL

**ENVIROCON SYSTEMS, INC.
PROJECT NUMBER: 150603**

PROJECT COMPLETION DATE: March 12, 2025

TABLE OF CONTENTS

Certificate of Acceptance.....	Insert No. 1
Installation Warranty.....	Insert No. 2
Material Warranty.....	Insert No. 3
Trial Weld Forms.....	Insert No. 4
Panel Placement Forms.....	Insert No. 5
Panel Seaming Forms.....	Insert No. 6
Non-Destructive Test Forms.....	Insert No. 7
Repair Reports.....	Insert No. 8
As-Built Drawings.....	Insert No. 9

INSERT NO. 1

CERTIFICATE OF ACCEPTANCE

P.O. Box 673048
Houston, TX 77267
Toll Free: 1-888-449-3236

Job Description: sequoyah fuel cell cap | _____

Customer Name: sequoyah

Job No: 150603

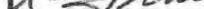
Job Location: gore, ok

% COMPLETE OF TOTAL JOB: 100%

[illegible]

I, the undersigned, duly authorized representative of sequoyah

do hereby take and accept the work described above from the date hereof and confirm that to the best of my knowledge the work has been completed in accordance with specifications and the terms and conditions of the contract.

Name	Signature	Title	Date
Kenny Schlag		QA Mgr	3/12/2025

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
john pitia		supervisor	3/12/2025

Form ECR-STD-001 REV 2.1 Date 27-Oct-22

SUBGRADE SURFACE PREPARATION ACCEPTANCE

Job Description: sequoyah fuel cell cap | _____**Customer Name:** sequoyah**Job No:** _____ 150603**Job Location:** gore, ok**DATE:** 12-Mar-25

I, the undersigned duly-authorized representative of EnviroCon Systems, Inc., certify that upon visual inspection, the subgrade or surface described below meets the cleanliness and smoothness criteria for installation of a 60mil Liner. By signing below, however, EnviroCon Systems, Inc. acknowledges no responsibility for the subgrade or surface design, degree of moisture or compaction, integrity, elevation, or maintenance thereof, in any way.

Description of Area:

floor subgrade surfaces.

Approximate Size of Area:

34,500 sf

Certificate accepted by Quality Representative.

Name	Signature	Title	Date
Kenny Schlag		QA mgr	3/12/2025

Certificate accepted by EnviroCon Systems, Inc. Representative.

Name	Signature	Title	Date
john pitia		sup	3/12/2025

INSERT NO. 2

INSTALLATION WARRANTY

ENVIROCON SYSTEMS, INC.

P.O. Box 673048
Houston, TX 77267

Main: 281-443-2597
Fax: 281-443-6227

Toll Free: 1-888-449-3236

LINER INSTALLATION WARRANTY

OWNER: Sequoyah Fuels Corporation

PROJECT NAME: Sequoyah Fuels Disposal Cell Cap Liner
PROJECT NO.: 150603

INSTALLATION DATE: 03/10/2025 – 03/12/2025
EFFECTIVE DATE: 03/12/2025

EnviroCon Systems, Inc. hereby warrants to (and only to) Sequoyah Fuels Corporation (the "Owner") that the linings installed by EnviroCon Systems, Inc. at the location and for the intended use described below (the "Linings") shall be installed free from defects in EnviroCon Systems Inc.'s workmanship. The warranty set forth in the preceding sentence (the "Workmanship Warranty") shall commence on the date that EnviroCon Systems, Inc. completes the installation of the Linings, shall apply until the last day of a period of One (1) year from said date, and shall be subject to the following conditions:

1. The Workmanship Warranty shall extend only to the proper installation of the Linings. The Workmanship Warranty shall not apply to any alleged defect in installation that is occasioned by fire, Acts of God or acts of any person or entity other than EnviroCon Systems, Inc. or its agent, including without limitation abuse, negligence, misuse, improper treatment, vandalism or any alleged defects caused, directly or indirectly, by falling objects, abnormal environmental conditions, improper site preparation, subgrade settlement or by any event beyond the reasonable control of EnviroCon Systems, Inc.
2. The Workmanship Warranty shall not be effective unless EnviroCon Systems, Inc. receives Company's written claim therefore within 30 days after the date of discovery of such defect and within the warranty period. EnviroCon Systems, Inc. shall have the right to verify by its own representative the nature and extent of the defects complained of.
3. The extent of EnviroCon Systems, Inc.'s liability for breach of the Workmanship Warranty shall be limited to timely repairing or replacing the defective installation workmanship. If it is necessary for EnviroCon Systems, Inc. to repair or replace any defective workmanship with respect to the Linings, Company shall afford EnviroCon Systems, Inc. clear and unrestricted access to the Linings, which shall not be encumbered by any overlying material or liquid, and Company shall cooperate in all respects with EnviroCon Systems, Inc. to accomplish said repair. In no event will EnviroCon Systems, Inc. be liable for the cost of labor expended by any person or entity other than EnviroCon Systems, Inc. or its agent on any defective workmanship with respect to the installation of the Linings. Under no circumstances shall EnviroCon Systems, Inc. have any liability for consequential damages arising from loss of production or product owing to the failure of the material or installation, and no allowances will be made for repairs, replacement or alterations made by Company without EnviroCon Systems, Inc.'s written consent. EnviroCon Systems, Inc. neither assumes nor authorizes any person (other than an officer of EnviroCon Systems, Inc.) to assume for it any other or additional liability in connection with the Liner. Any repairs, replacements or alterations made without EnviroCon Systems, Inc.'s written consent or any attempted assumption of any such liability will void this Workmanship Warranty.

ENVIROCON

SYSTEMS, INC.

4. The Workmanship Warranty is extended to Company only and is non-transferable and non-assignable. No rights against EnviroCon Systems, Inc. shall be created by any attempted transfer or assignment, nor shall any rights against EnviroCon Systems, Inc. survive any attempted transfer or assignment. This Workmanship Warranty does not extend to any materials furnished or installed by others in connection with the intended use of the linings.

5. No terms or conditions other than those stated herein and no agreement or understanding, oral or written, and no course of conduct or performance in any way purporting to modify the Workmanship Warranty or to waive EnviroCon Systems, Inc. rights hereunder shall be binding on EnviroCon Systems, Inc. unless the same shall be clearly described in written memorandum that expressly refers to the Workmanship Warranty and is separately sign by a duly authorized officer of EnviroCon Systems, Inc.. Moreover, additional liabilities of or limitation upon the rights and remedies of EnviroCon Systems, Inc. contained in such documents as purchase orders, order acknowledgments or change orders which may subsequently be exchanged between parties shall have no force or effect upon the Workmanship Warranty. All proposals, negotiations and representation, if any, made prior to the date hereof or with reference hereto are merged herein.

6. This Workmanship Warranty shall not be effective unless payment in full has been made to EnviroCon Systems, Inc. for all labor, installation and other services provided.

7. THE LAWS OF THE STATE OF TEXAS SHALL GOVERN THE RIGHTS AND DUTIES OF THE PARTIES UNDER THIS WARRANTY. VENUE FOR ALL LEGAL PROCEEDINGS INVOLVING THE WORKMANSHIP WARRANTY OR ANY OTHER MATTER CONTAINED WITHIN SHALL BE IN HARRIS COUNTY, TEXAS.

THE FOREGOING WORKMANSHIP WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES (EXCEPT OF TITLE), EXPRESS, IMPLIED, OR STATUTORY. IN NO EVENT SHALL ENVIROCON SYSTEMS, INC. BE LIABLE FOR LOSS OF PROFITS OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSSES RESULTING FROM ANY DEFECTS IN IT'S WORKMANSHIP, INCLUDING WITHOUT LIMITATION IMPROPER INSTALLATION OF THE LININGS.

PURCHASER: Sequoyah Fuels Corporation

LOCATION OF INSTALLATION: Gore, OK

DESCRIPTION OF INTENDED USE: Cell Cap Liner

PROJECT NO.: 150603

ENVIROCON SYSTEMS, INC.



Gregg L. DeJarnett
Print or Type Name

Chief Operating Officer
Title

INSERT NO. 3

MATERIAL WARRANTY



LIMITED WARRANTY

PROJECT:	Sequoyah Fuels Disposal Cell Cap Liner		
WARRANTOR:	Solmax Geosynthetics, LLC		
WARRANTOR ADDRESS:	19103 Gundle Road, Houston, Texas, 77073		
WARRANTY TERM:	5 years from the Effective Date		
Project Address:	140 N Highway 10 Gore, OK 74435		
Owner:	Sequoyah Fuels Corporation	Warranty Number:	ECS-15-04-25
Sales Order N°:	SO-096110,	Effective Date:	March 12, 2025
Product(s):	1101533 GSE HD 60mil/1.50mm G Black STEX-TOP		
Roll Numbers:	0102-211785, 0102-211786, 0102-211790,		

WHEREAS pursuant to the Sales Purchase Order referenced herein (the "Sales Order") between the Warrantor and the buyer identified in the said Sales Order (the "Buyer"), the Buyer purchased the Product for the Project and for which the owner of the Project is the end user/customer of the Product (the "Owner");

WHEREAS the Project was designed exclusively by the Owner and/or its general contractor, professionals (such as engineers, architects, surveyors), subcontractors, land experts, suppliers (collectively the "Owner's Professionals");

WHEREAS the Warrantor is not a design professional nor did the Warrantor participate in the design/conception of the Project;

NOW, THEREFORE, in consideration of the foregoing, and subject to the terms and conditions of this Limited Warranty, the Warrantor hereby represents and warrants to the Owner that as of the date of sale of the Product to the Purchaser for the said Project, the Product conforms to the Warrantor's specifications and that the Product will be free from manufacturing defects which appear during the Warranty Term for the Product's normal use in approved applications (the "Normal Use").

LIMITATIONS AND DISCLAIMERS

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY EXCLUDED HEREIN. Warrantor's liability hereunder is the sole and exclusive obligation of Warrantor with regard to the Product. Warrantor shall have no liability for any claim except as specified hereunder. Warrantor shall not be liable for labor or any other costs incurred in connection with the use, repair, removal, installation or replacement of any Product covered by this Limited Warranty, or for any direct or indirect damages, labor, removal, installation, incidental or consequential damages, loss of profits or sales, injury to property or any other damages, losses or contingencies due to or arising out of the Product, whether under alleged breach of contract, tort, personal injury, property damage, environmental liability or otherwise, regardless of whether or not the Product is subject to a defect.

The Warrantor shall not be held liable or responsible to the Owner nor be deemed to have defaulted under or breached this Limited Warranty for failure or delay in fulfilling or performing any term of this Limited Warranty when such failure or delay is caused by or results from causes beyond the reasonable control of the Warrantor, including but not limited to fire, floods, embargoes, war, acts of war (whether war is declared or not), insurrections, riots, civil commotions, the existence or administration of any laws, rules or regulations, strikes, lockouts or other labor disturbances, acts of God or acts, omissions or delays in acting by any governmental authority; provided, however, that the Warrantor shall use reasonable commercial efforts to avoid or remove such causes of non-performance, and shall continue performance hereunder with reasonable dispatch whenever such causes are removed. This Limited Warranty does not cover damages or defects resulting from normal wear and tear, faulty installation, maintenance or repair, misuse or negligent use of the Product as well as damages caused by acts of God, natural disasters such as earthquakes, floods, piercing hail, or tornadoes. The term "Normal Use" as used herein does not include usage for which the Product was not designed or intended, faulty design and/or construction of the facility into which the Product is installed, failure to install the Product in compliance with Warrantor's Product technical materials and/or bulletins, or exposure of the Product to harmful chemicals. Chemical resistance performance is the responsibility of the Owner since it has control over and of the Project's production/ design/composition and

exposure conditions (including chemicals, concentration, time and temperature). As such, any proposed product, including the Product, should be thoroughly evaluated for its intended application by the Owner and the Owner's Professionals. Also, the term "Normal Use" as used herein does not include damage to the Product by machinery, equipment, people, animals; improper site preparation or covering materials; existing conditions, including, but not limited to, subsurface conditions beneath the geosynthetic product such as a settlement of the ground, cave-in, etc., excessive pressures or stresses from any source or improper application. There shall be no intended or incidental third-party beneficiary hereof. In no event shall Warrantor have any liability for any patent defects or discrepancies which were or could have been discovered prior to the installation of the Product.

Subject to the terms and conditions hereof, after receipt of a timely valid claim hereunder, Warrantor will have the right to inspect and determine the cause of any alleged defect in the Product and if coverage is confirmed, then Warrantor shall have the option, in its sole discretion, to repair the affected area of the Product or to ship replacement product reasonably equivalent to the affected area of the Product proven to be subject to the covered defect. Warrantor is not a design professional and has not performed any design services for the Project and disclaims any alleged design liability regarding use of the Product at or for the Project, it being understood that any design was performed exclusively by the Owner or the Owner's Professionals. Warrantor shall not be obligated to perform repairs or replacements under this Limited Warranty until the area to be repaired or replaced is clean, dry and unencumbered, including, without limitation, the area having been made available for repair and/or replacement free from all water, dirt, sludge, residuals and liquids of any kind. If Warrantor determines that a claim is invalid, Owner shall reimburse Warrantor for its inspection and analysis costs.

Notwithstanding any contrary provision hereof, in no event shall any liability of Warrantor hereunder exceed the actual per square foot cost of the Product required to repair or replace (in Warrantor's sole discretion) in the affected area of the Product (the "Liability Limit"); provided however, that Warrantor's Liability Limit hereunder shall, starting on the first (1st) anniversary of the Effective Date, be reduced each year during the Warranty Term by a calculated fraction, where the numerator corresponds to the expired number of years in the Warranty Term prior to Warrantor's receipt of a written notice of claim, and the denominator corresponds to the Warranty Term.

Any claim for any alleged defect under this Limited Warranty must be made in writing, by certified mail, to Warrantor at the Warrantor's address specified above within ten (10) business days of the Owner becoming aware of the alleged defect. Any failure to timely issue such notice shall void any warranty coverage.

Warrantor makes no representations, expressed or implied, not specified herein. No representative, agent or employee of Warrantor, or any other person, including the Buyer, is authorized to assume for Warrantor any additional liability or responsibility except as described above. In the event any term or provision of this Limited Warranty is inconsistent with or in conflict with any writing, purchase order, representations, statements, contract, or any other document, then, to the extent such inconsistency or conflict exists, the terms and conditions of this Limited Warranty shall control in all respects. The Limited Warranty is valid only for the original Owner and is not assignable or transferable under any circumstances. The terms hereof shall be governed by the laws provided in the contract or Sales Order entered into between the Warrantor and the Buyer and any dispute arising out and in connection with this Limited Warranty shall be settled in accordance with the provisions of the said contract or Sales Order. If it is determined and adjudicated that the exclusive remedy provided herein fails in its essential purpose, then in that event only, Owner shall be entitled to a return of that portion of the purchase price equal to the Liability Limit (as reduced as provided above) for so much of the Product as Warrantor determines to be defective. If any provision of this Limited Warranty is held to be invalid or unenforceable, such provision shall be deemed to be modified to the extent necessary for the balance hereof to be enforceable, and this Limited Warranty shall be enforced to the maximum extent permissible.

NOTWITHSTANDING ANY CONTRARY PROVISION HEREOF, AN EXPRESS CONDITION PRECEDENT TO ANY AND ALL OBLIGATION OF WARRANTOR HEREUNDER SHALL BE WARRANTOR'S TIMELY RECEIPT OF FULL PAYMENT FOR THE PRODUCT.

INSERT NO. 4

TRIAL WELD FORMS

Customer Name: sequoyah | Job Location: gore, ok

Job Description: sequoyah fuel cell cap

job number 240939

| Form ECW-STD-0001 REV. 2.1 Date 27-Oct-22

[illegible]

INSERT NO. 5

PANEL PLACEMENT FORMS

PANEL PLACEMENT FORM

Customer Name: sequoyah | Job Location: gore, ok

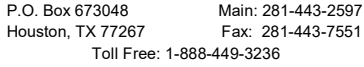
Job Description: sequoyah fuel cell cap

job number 150603

[illegible]

INSERT NO. 6

PANEL SEAMING FORMS



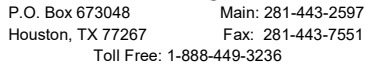
Page 6 of 11

Job Description: sequoyah fuel cell cap job number 1nber 150603

Filename: sequoyah Workbook
Tab: Panel Seaming

INSERT NO. 7

NON-DESTRUCTIVE TEST REPORTS



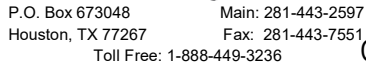
Page 8 of 11

| Form ECW-STD-0001 REV. 2.1 Date 27-Oct-22

Filename: sequoyah Workbook
Tab: Non-Destructive

INSERT NO. 8

REPAIR REPORTS



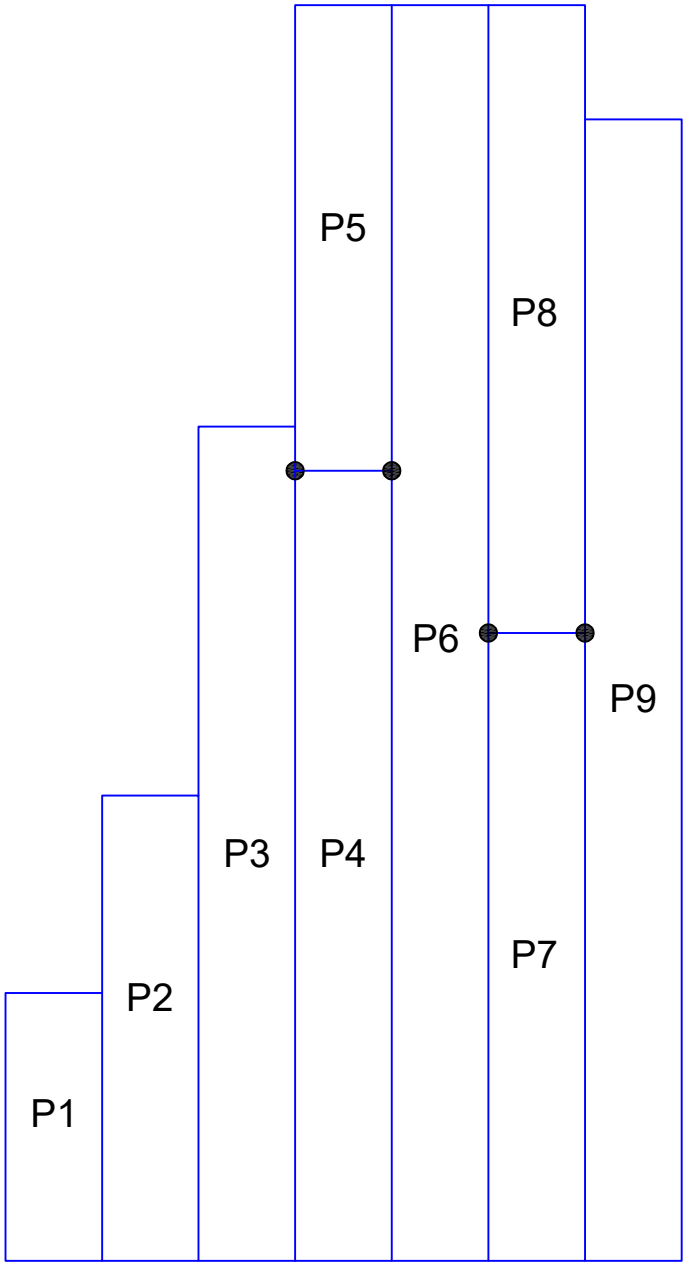
REPAIR REPORT

Job Description: sequoyah fuel cell cap	job no	150603
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[illegible]

INSERT NO. 9

AS BUILT DRAWINGS



LEGEND

Liner

Patches

		ZONE	DATE	BY	APR.
Sequoyah Fuels Disposal Cell Cap Liner		O. T. NO.			
150603		MODEL NO.			
Gore, OK		SCALE			
DRAWN BY DG		DATE			
CHECKED BY		NEXT ASST. NO.		ITEM	
APPROVED BY		COWL NO.			
CUSTOMER APPROVAL					

EnviroCon
Systems, Inc.

Appendix E CONSTRUCTION PHOTOS





Photo 1. Cover clay liner placement and compaction (Sep 2015)



Photo 2. Cover clay liner on east side of Cell, looking northeast (Sep 2015)



Photo 3. Cover geomembrane on west side of Cell, looking west (Jul 2016)



Photo 4. Cover geomembrane on east side of Cell with temporary anchor trench, looking south



Photo 5. Cover geomembrane on north side of Cell with temporary anchor trench, looking west



Photo 6. Drainage layer sand and first lift of subsoil placed on cover geomembrane on north side of cell, looking north toward riprap stockpile (Jan 2020)



Photo 7. North side of Cell showing initial lifts of drainage sand and subsoil on cover geomembrane, looking southeast (Jan 2020)



Photo 8. West side of Cell showing drainage sand and multiple lifts of subsoil on cover geomembrane, looking south (Mar 2021)



Photo 9. East side of Cell showing drainage sand placement on geomembrane, with former and new OG&E substations in the background, looking east (Oct 2019)



Photo 10. Apron bench on north side of Cell prior to apron rock and slope riprap placement, looking west (May 2020)



Photo 11. Extent of cover layers on east side of Cell, showing subsoil, drainage sand, and geomembrane in temporary anchor trench, looking south (Mar 2021)



Photo 12. Cover geomembrane on east side of Cell, removed from temporary anchor trench in preparation for extension of cover system to top of cell, looking north (Sep 2023)



Photo 13. Souter Quarry, source of limestone riprap and apron rock for Cell (Jan 2018)



Photo 14. Souter Quarry screening operations (Jan 2018)



Photo 15. West side of Cell, showing subsoil and riprap placement, looking west (Mar 2021)



Photo 16. East side of Cell, showing riprapped surface, looking north (May 2020)



Photo 17. Topsoil spread on top of riprap, looking up slope (May 2020)



Photo 18. Typical rock mulch surface prior to establishing vegetation, looking down slope to apron bench on east side of Cell (Mar 2021)



Photo 19. North side of Cell showing apron bench and topsoil-covered slope, looking west (Mar 2022)



Photo 20. North side of Cell showing apron bench and vegetated slope, looking east (Apr 2024)



Photo 21. Cover geomembrane, drainage sand, and subsoil on top surface of Cell, looking north (Sep 2023)



Photo 24. Topsoil placement on top surface of cell, looking east (Apr 2024)



Photo 25. Topsoil-covered riprap on upper surface of east side of Cell, looking northeast over East Diversion Channel and new OG&E substation (Apr 2024)



Photo 26. Topsoil-covered riprap on upper surface of north side of Cell, looking west (Apr 2024)



Photo 27. Extension of riprap onto top surface of Cell, prior to covering with topsoil, looking south (Apr 2024)



Photo 28. Placement of topsoil over the extension of riprap onto top surface, west side of Cell, looking north (Apr 2024)



Photo 29. Clay placement and compaction for cover completion in access ramp on south side of Cell (Feb 2025)



Photo 30. West side of Cell, looking south (Feb 2025)



Photo 31. North side of Cell, looking west (Feb 2025)