GEOTECHNICAL INVESTIGATION REPORT ARS Fulfillment Center Project Loki / SBD4 / Lot 44W Victorville, California

Prepared For:

Prologis, Inc. 3546 Concours Street, Suite 100 Ontario, California

Prepared By:

Langan Engineering and Environmental Services, Inc. 18575 Jamboree Road, Suite 150 Irvine, California 92612



Shaun Wilkins, PG, CEG Senior Project Geologist

Christopher J. Zadoorian, PE, GE Associate Geotechnical Engineer

9 April 2021 700089101





18575 Jamboree Road, Suite 150 Irvine, CA 92612

T: 949.561.9200

F: 949.561.9201

www.langan.com

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9 April 2021

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Mr. Thomas Donahue Prologis 3546 Concours St., Suite 100 Ontario, CA 91764

Subject: Geotechnical Investigation Report ARS Fulfillment Center Project Loki / SBD4 / Lot 44W Victorville, California Langan Project: 700089101

Dear Mr. Donahue:

Langan Engineering & Environmental Services, Inc. is pleased to submit this geotechnical investigation report for the proposed traditional non-sort fulfillment center project in Victorville, California.

This report was prepared in general accordance with our proposal dated 16 February 2021 and the Agreement between Owner and Consultant, executed 2 March 2021.

*** * ***

We sincerely appreciate the opportunity to be of service to you on this project. Please contact us if you have questions regarding this report.

Sincerely,

Langan Engineering and Environmental Services, Inc.

Christopher J. Zadoorian Associate

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1.0 INTRODUCTION

As requested by Prologis, Langan Engineering and Environmental Services, Inc. (LANGAN) performed a geotechnical investigation for the proposed traditional non-sort fulfillment center project (SBD4), located within the Southern California Logistics Center in Victorville, California. The site location is shown on Figure 1. The project is identified as Project Loki and Lot 44W.

These services were performed in accordance with our 16 February 2021 proposal, authorized by Prologis on 2 March 2021.

This report presents a brief summary of our understanding of the proposed development, an overview of the available geotechnical information, and our recommendations regarding geotechnical design and construction considerations as they pertain to the project.

2.0 **PROJECT OVERVIEW**

2.1 Site Description

The site is located along the east side of Adelanto Road between Chamberlain Road and Auburn Avenue. The site is currently undeveloped with the exception of an existing historic structure referred to as "Fire-In Butt" located along the eastern edge of the site. Additionally, a concrete foundation and a large concrete trough are present on-site northwest of the "Fire-In Butt."

The ground surface level at the site generally slopes gently down from the south to the north and ranges from approximately Elevation 2,869 to Elevation 2,851.

The site is located within the limits of what was previously known as George Air Force Base (AFB). George AFB was closed in 1992 and is currently the Southern California Logistics Airport.

The property is bordered on the north and east by vacant land and on the south by a large industrial warehouse. Access to this neighboring warehouse is via Gateway Drive, which runs along the eastern side of the warehouse property and terminates approximately 1,200 feet south of the subject property. The existing portion of Gateway Drive is an asphalt-paved two- to three-lane road. Access to the site will be provided by an extension and expansion of Gateway Drive, which is within the scope of this investigation.

Based on a limited historical aerial photo analysis on Google Earth, the subject property contained at least one airport runway and several access roads. Between 2017 and 2020 the parcels were utilized for automobile storage.

2.2 Proposed Development

2.2.1 <u>On-Site Development</u>

Based on our review of *Civil Improvements Plans, Project Loki, Overall Site Plan* dated 2 April 2021, prepared by our firm, the proposed development will include construction of an approximately 1.1 million square foot traditional non-sort fulfillment center with 98 loading docks, 1,010 auto parking spaces, and 396 trailer parking spaces.

The development will also include approximately 36,000 square feet of office space and an approximately 250,000 square foot mezzanine as shown on Figure 2.

The lowest finish floor level of the proposed fulfillment center building will be established at Elevation 2,866. Fill on the order of approximately nine feet in thickness and cuts on the order of one foot are required to establish the proposed finish floor level.



HSA & Associates, Inc. (HSA) provided column loading information on 15 February 2021. Based on the information provided, typical dead-plus-live columns loading will range from approximately 400 kips to 800 kips.

2.2.2 Off-Site Development

Proposed off-site improvements include expansion of existing Gateway Drive, located south of the proposed development. The existing portion of Gateway Drive is approximately 4,500 feet in length and extends north from Air Expressway to its northern terminus on the eastern side of the neighboring warehouse. The existing portion of Gateway Drive will be widened to a four-lane road and will reportedly include curb and gutter and sidewalks.

The proposed extension of Gateway Drive will include the construction of approximately 4,000 lineal feet (LF) of a new four-lane road. The proposed new road will include curb and gutter and sidewalks and will be constructed along the eastern edge of the site. This new road is proposed to connect to the existing Gateway Drive. The proposed limits of the off-site developments are shown on Figure 3.

3.0 SUBSURFACE INVESTIGATION

3.1 Field Explorations

We drilled 48 borings (LB-1 through LB-48) for the proposed on-site development and 22 borings (RB-1through RB-22) for the proposed off-site development at the approximate locations are shown on Figures 2 and 3.

Prior to drilling, proposed boring locations were surveyed and marked with stakes and we contacted Underground Service Alert (USA) to locate and mark out known underground utilities within the public right-of-way at the site.

Under our direction, 2R Drilling Inc. drilled 52 borings (42 on-site and nine off-site) on 4 March 2021 and 5 March 2021, and 19 borings (six 'on-site and 13 off-site) on 29 March 2021 and 30 March 2021. The borings were drilled to depths ranging from approximately 6½ to 101½ feet using a truck-mounted drill rig equipped with 8-inch-outside diameter hollow-stem augers

We maintained a log of the soil conditions encountered during drilling and collected relatively undisturbed and bulk samples from the borings at select intervals.

The samples collected from the borings were transported to our office for further review and for assignment of geotechnical laboratory testing.

Upon completion of the borings, we backfilled the boreholes per with the drill cuttings and restored the ground surface to the pre-existing condition, with the exception of borings LB-11, LB-18, LB-31, LB-33, and LB-42 which where backfilled with per bentonite grout per the California Well Standards.

Logs of our exploration borings are presented in Appendix A.

Please note in addition to the explorations summarized herein, we completed six field percolation tests on 9 April 2021 and will summarize the results of the field percolation testing in an addendum.

3.2 Geotechnical Laboratory Testing

The samples collected from the borings were transported to our office for further review and for subsequent- assignment of geotechnical laboratory testing that included the following:



- Direct Shear ASTM D3080
- Consolidation Test ASTM D2435
- R-value ASTM D2844
- Percent Passing #200 Sieve ASTM D1140
- Moisture Content and Density ASTM D2937
- Atterberg Limits ASTM D4318
- Sulfate Content CTM417
- Chloride Content CTM 422
- Soil pH ASTM D1293
- Electrical Resistivity CTM 643

Laboratory test results are presented in Appendix A.

4.0 SUBSURFACE CONDITIONS

4.1 General

Fill materials consisting of loose to medium dense silty sand was encountered intermittently across the site on our borings. The fill ranged from approximately 1 to 4½ feet in thickness and is most likely associated with the past airport and parking lot usage of the property.

Native soils encountered at the ground surface level or below the fill consisted of medium dense to very dense sandy soils with varying amounts of silt, clay, and gravel and intermittent hard silt and sandy silt with varying amounts of caliche.

Logs of our borings are presented in Appendix A.

Generalized depictions of the subsurface conditions at the site are presented on Figures 4 through 7, Cross Sections A-A' through D-D', respectively.

4.2 Groundwater

Groundwater was encountered in boring LB-33 at an approximate depth of 77 feet BGS.

This depth is consistent with data available from the California State Water Resources Control Board, that include a groundwater well approximately one mile southwest of the site that showed depth to groundwater of approximately 75 feet bgs in 2018.

5.0 GEOLOGIC AND SEISMIC HAZARDS EVALUATION

5.1 General

We evaluated the geologic and seismic hazards at the site in general accordance with California Geological Survey (CGS) Special Publication 117A, "*Guidelines for Evaluating and Mitigating Seismic Hazards in California.*" The results of our evaluation as summarized below.

5.2 Regional and Local Geologic Setting

The site is located along the western edge of the Western Mojave Desert. The western Mojave is a 7,000 square mile wedge-shaped area, bordered on the southwest and northwest by the Sierra Nevada, San Gabriel, San Bernardino, and San Jacinto mountain ranges. The desert has relatively low relief and is essentially an alluviated plain containing irregularly trending bedrock hills and low mountains (Dibblee, 1967).

According to CGS Note 36 the Mojave Desert geomorphic province is a broad interior region of isolated mountain ranges separated by expanses of desert plains. It has an interior enclosed



drainage and many playas (dry lakes). The Garlock fault forms the northern boundary of the province, beyond which transitions to the Basin and Range province of eastern California and Nevada. The southwestern side of the Mojave province is bordered by the Transverse Ranges and Colorado Desert geomorphic provinces, the boundary of which is roughly controlled by the San Andreas fault.

The site is located on a geologically young, Holocene- to late Pleistocene-age alluvial fan deposit sourced from the mountains located to the south. This geologic deposit is described as 'alluvial silt, sand, and gravel of valley areas derived from adjacent higher ground' (Dibblee, 2008).

The data from our exploration borings is generally consistent with the geologic conditions summarized by Dibblee.

Figure 8 presents a regional geologic map utilizing mapping provided by Dibblee (2008).

5.3 Regional Faulting

The site is located within a seismically active region of southern California. According to the 2010 California Geological Survey Fault Activity Map (FAM) of California, the Mirage Valley fault zone is located approximately 7³/₄ miles northwest of the site and the Helendale-South Lockhart fault zone is located approximately 12 miles northeast of the site.

The location of the site with respect to nearby mapped faults is presented in Figures 9A and 9B.

5.4 Regional Seismicity

The site is located in an active seismic area that has historically been affected by generally moderate to occasionally high levels of ground motion. Therefore, the proposed development will probably experience moderate to occasionally high levels of ground motion from nearby faults as well as ground motions from other active seismic areas of the southern California region.

A search of the USGS ANSS Comprehensive Earthquake Catalog (ComCat) using a web-based Earthquake Archive Search and URL builder tool, found that as of March 23, 2021, 57 earthquakes with magnitudes of 5.0 or greater have occurred within a 100-km radius of the site since 1800 as shown on Figure 9A.

5.5 Ground Surface Rupture Potential

The site is not located within an Alquist-Priolo Earthquake Fault Zone (APEFZ) based on a review of the CGS Earthquake Zones of Required Investigation map. There are no mapped, active faults within 1 mile of the site.

Thus, the potential for ground surface rupture is considered very low.

5.6 Liquefaction Potential

Liquefaction generally occurs in saturated, loose to medium dense, granular soil and in saturated, soft to moderately firm silt as a result of strong ground shaking. As the density and/or particle size of the soil increases and as the confinement (overburden pressure) increases, the potential for liquefaction decreases. Typically, saturated soil within the upper 50 feet of the ground surface or lowest adjacent grade is considered subject to liquefaction.

The County of San Bernardino does not indicate that the site vicinity is subject to liquefaction as shown on Figure 10.

Groundwater was not encountered to the maximum depth explored (approximately 21½ feet).



Based on a review of the California Department of Water Resources Water Data Library web tool several wells in the vicinity of the site indicate that groundwater is in excess of 75 feet below ground surface (bgs).

Thus, the potential for liquefaction is considered very low.

5.7 Lateral Spreading Potential

Lateral spreading is seismically-induced slope instability phenomenon wherein slope failure can occur as a result of liquefaction.

The potential for liquefaction at the site is considered to be very low and significant (in height) open-slope face conditions are neither existing nor planned.

Thus, the potential for lateral spreading is considered negligible.

5.8 Seismic (aka 'Dry') Settlement

Seismic (dry) settlement can occur in loose to medium dense, granular soil as a result of strong ground shaking. Relatively dense, old alluvial fan deposits were observed in our subsurface investigation.

These geologically older soils are generally not susceptible to seismically-induced settlement in the event of strong ground shaking.

5.9 Earthquake-Induced Landslides

The site is not located in a zone of landslide susceptibility per the San Bernardino County Land Use Plan Geologic Hazard Overlays map. Additionally, no landslides have been mapped near the site on regional geologic maps of the area. Evidence of deep-seated landsliding was not observed during our field exploration and no significant sloped boundary conditions exist. Therefore, the probability of earthquake-induced landsliding at the site is nil.

5.10 Flood Mapping

FEMA's flood maps, known as Flood Insurance Rate Maps (FIRMS), identify areas of flood hazard, which are labeled on the flood maps starting with the letters A and V for high-hazard areas and Zone X for moderate- or low-hazard flood-risk areas. In some cases, where there is a potential for moderate to high risk of flooding, but the probability has not been determined, these areas are labeled as Zone D on the flood maps.

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Number 06071C5785H, the site is located within an area identified as Zone D, or an area with undetermined flood hazard. However, based on flood mapping immediately adjacent to the site to the west it is anticipated that the site is located in an area that has a 0.2% annual chance flood hazard.

5.11 Tsunamis, Seiche, and Dam Inundation

Based on information and maps available from the CGS, the site is not located within a Tsunami inundation hazard zone. Based on review of adjacent water bodies, the site is not subject to inundation from seiche. A review of the California Dam Breach Inundation Maps hosted by the California Division of Safety of Dams shows that the site is not located within an inundation boundary in the case of dam breach.



5.12 Subsidence

Land subsidence may be induced from withdrawal of oil, gas, or water from wells. Based on a search of the CalGEM (formerly known as Division of Oil, Gas, and Geothermal Resources [DOGGR]) GIS Well Finder online tool, there are no wells within a mile of the site. Thus, the likelihood of land subsidence caused by oil or gas withdrawal from oil wells is very low.

5.13 Expansive Soils

Expansive soils swell and shrink when the moisture content in the soil changes as a result of cyclic wet/dry weather cycles, installation of irrigation systems, change in landscape plantings, or changes in grading. Swelling and shrinking soils can result in differential movement of structures including floor slabs and foundations, and site work including hardscape, utilities, and sidewalks.

Expansion index testing is underway and results will be provided in an addendum or revision to this report. Based on the field exploration near-surface soils are generally granular and the expansion potential is anticipated to be in the very low to low categories (EI = 0.50).

Expansion Index testing should be performed during grading to confirm these anticipated conditions.

6.0 GEOTECHNICAL EVALUATION AND DESIGN RECOMMENDATIONS

6.1 Seismic Design

Seismic design of structures can be designed following the provisions of ASCE 7-16 and 2019 CBC. Based on the available subsurface information and the seismic provisions of the aforementioned codes, the following seismic design parameters are recommended for the proposed development at the site:

Based on the data from our investigation, the site may be classified as Site Class C in accordance with Chapter 20 of ASCE-7-16. Justification for site class C can be found in Appendix B and the CBC-prescribed seismic design parameters are presented in Table 1.

Criteria	Value
MCE_{R} Ground Motion at Short Periods, S _s	1.064
MCE _R Ground Motion at 1Second Period, S ₁	0.416
Site Class	С
Site-Modified Spectral Acceleration Value at Short Periods, S_{MS}	1.277
Site-Modified Spectral Acceleration Value at 1 Second Period, $S_{\rm M1}$	0.624
Design Spectral Response Acceleration at short periods, $S_{\mbox{\tiny DS}}$	0.852
Design Spectral Response Acceleration at 1 second period, S_{D1}	0.416
MCE_{G} Peak Ground Acceleration, PGA _M	0.550

Table 1 – Seismic Design Parameters

6.2 Foundation Design

6.2.1 General Considerations

The planned grading will result in up to nine feet of compacted fill at the northerly end of the fulfillment center building. Assuming the bottom of foundations will be established three to five



feet below the lowest finish floor level, several feet of compacted fill will reside beneath the building foundations at the north end of the site.

The required thickness of fill across the building footprint decreases to the south and at the southerly building limit, cuts on the order of one foot in thickness are required.

The upper soils within the proposed building footprint generally consist of dense to very dense granular soils. These soils will be used in the required fills and when compacted as recommended herein, will be generally similar to the dense native soils from a foundation support perspective.

As a result, the proposed building may be supported on spread and continuous footings established in either dense native soils and/or properly compacted fill soils provided the recommendations presented herein are followed.

Existing fill soils and/or localized deposits of looser otherwise soft soils should be removed prior to placement of new fill and/or at the bottom of foundation excavations for footings established in dense native soils.

6.2.2 <u>Shallow Foundation Design Recommendations</u>

The proposed building may be supported on spread and continuous footings established in the native medium dense to very dense native soils and/or properly compacted fill.

Spread and continuous footings a minimum of two feet wide and established at least two feet below the lowest finish floor level and/or adjacent grade may be designed using an allowable bearing pressure of 5,500 pounds per square foot (psf) when established in the native soils.

Spread and continuous footings a minimum of two feet wide and established at least two feet below the lowest finish floor level and/or adjacent grade may be designed using an allowable bearing pressure of 4,500 pounds per square foot (psf) when established in properly compacted fill material

The recommended bearing pressure may be increased by one-third when considering short term wind and seismic loading conditions.

Static settlement due to the dead-plus-live column loading will be on the order of 1 inch or less. Differential settlement between adjacent footings is expected to be on the order of 1/4 inch or less.

Dynamic settlement due to strong ground shaking is not anticipated at the site and the total foundation settlement will result from gravity (dead-plus-live) loading.

Lateral loading may be resisted by passive pressure of the soils acting against the sides of the footings and friction along the bottom of the footing.

When considering ultimate stress design, to resist lateral loading an ultimate passive resistance equal to 600 psf per foot of embedment up to a maximum value of 6,000 psf and an ultimate coefficient of friction equal to 0.6 may be used.

The ultimate passive pressure and the ultimate coefficient of friction may be combined noting that the ultimate passive resistance should be reduced in this case by 50 percent in consideration of the deformation required to mobilize the full passive resistance.



When considering allowable stress design, to resist lateral loading an allowable passive resistance equal to 400 psf per foot of embedment up to a maximum value of 4,000 psf and an allowable coefficient of friction equal to 0.4 may be used.

The passive pressure and frictional resistance may be combined without reduction for allowable stress design considerations.

6.3 Floor Slabs

The planned grading will result in compacted fill beneath a majority of the building footprint and as a result, we recommend the building floor slab be supported on at least 12 inches of properly compacted fill materials.

A subgrade modulus, *k*, equal to 125 pci may be used in floor slab deformation analysis noting that we recommend a minimum PCC floor slab thickness of five inches.

Where moisture sensitive flooring is planned, a capillary break section should be installed. The capillary break should consist of a 15-mil HDPE membrane placed on six inches of crushed rock. The building floor slab may be placed directly on the 15-mil barrier. However, care should be taken during construction not to puncture the membrane.

Floor slab reinforcing steel may be designed for non-expansive to low expansive soil potential conditions.

6.4 Corrosion Considerations

The results of the corrosion testing are summarized in Table 2.

Boring (Depth)	Soil Type	Resistivity (ohm-cm)	рН	Sulfate (%)	Chloride (%)
LB-16 (7.5 feet)	Silty Sand (SM)	2,400	7.1	0.0528	0.0353
LB-32 (5 feet)	Silty Sand (SM)	1,500	7.2	0.0061	0.0235

Table 2 - Corrosion Test Results

The results of sulfate testing indicate that the on-site soils are classified as exposure category S_1 in accordance with American Concrete Institute (ACI) Table 4.2.1.

The results of the chloride testing indicate that the on-site soils are classified as exposure category C_1 in accordance with ACI Table 4.2.1.

6.5 Pavement Design Recommendations

The required pavement and base thicknesses will depend on the expected wheel loads, Traffic Index (TI), R-Values, subgrade resilient modulus, and California Bearing Ratio (CBR) of the subgrade materials. All pavement sections should be established on at least one foot of properly compacted fill materials. Based on the results of the laboratory testing, an average R-value of 58 was used to correlate the subgrade resilient modulus and CBR values in our analysis.

Three typical pavement sections where utilized for the pavement recommendations.

Standard Duty Pavement is primarily for the use of passenger car and van drive aisles, parking stalls, and car pickup/drop off areas.

Heavy Duty Pavement is primarily for the use of access drives, truck courts, bus pickup/drop off areas, loading dock aprons, dolly pads, and trailer parking stalls.



Extra Heavy Duty Pavement is given as a price alternate in areas that will be subject to repeated impacts from trailer landing gear (i.e. dolly pads and dock loading/unloading aprons).

Our pavement design recommendations for asphalt concrete (AC) and Portland cement concrete (PCC) are provided below.

6.5.1 <u>On-Site Asphalt-Concrete Pavement Design</u>

AC pavements designs for the on-site development are based on the American Association of State Highway and Transportation Officials (AASHTO) flexible pavement design method and the following site-specific traffic parameters:

- 20-year service life
- Average daily trips:
 - o 1,366 passenger cars per day
 - o 262 non-PCE trucks per day
- AASHTO Vehicle Factors:
 - Tractor trailer vehicle factor = 1.97
 - Passenger car vehicle factor = 0.00209
- Design ESALs = 3,903,387
- Resilient modulus = 16,000 psi
- Initial serviceability = 4.2
- terminal serviceability = 2.5
- Reliability = 90%
- Standard deviation = 0.45
- Design Serviceability Loss = 1.7

Our recommended minimum thicknesses for new pavement based on the above design parameters are shown in Table 3.

Table 3. AC Pavement Design Recommendations

Traffic Use	AC (inches)	AB (inches)
Standard Duty Pavement	4	6
Heavy Duty Pavement	7	5

We can determine the alternative recommended pavement and aggregate base thickness if required. Careful inspection is recommended to confirm that the recommended thickness or greater is achieved and there proper construction procedures are followed.

The aggregate base (AB) should conform to requirements of Section 26 of State of California Standard Specifications for Public Works Construction (Green Book). The aggregate base should be compacted to at least 95 percent relative compaction.

6.5.2 On-site Portland Cement Concrete Pavement Design

PCC pavements designs for the on-site development are based on the American Concrete Institute (ACI) 330R and ACI 330.2R Guidelines and the following site-specific traffic parameters:

• 30-year service life



- Traffic spectrum A for standard duty pavement
- Traffic Spectrum D for heavy duty pavement
- 262 non-PCE trucks per day
- Global reliability of 95%
- 5% of slabs cracked at end of design life
- CBR value = 20
- 3,000 psi compressive strength PCC

Our recommended minimum thicknesses for new pavement based on the above design parameters are shown in Table 4.

Traffic Use	Minimum Joint Spacing (feet)	AC (inches)	AB (inches)
Standard Duty Pavement	8	6	4
Heavy Duty Pavement	9	8	6
Extra Heavy Duty Pavement	9	8	6

Dowels are recommended at joints to reduce any possible offsets. Concrete pavement should be continuously reinforced using either No. 3 bars spaced every 22-inches on-centers for Standard Duty Pavement and No. 3 bars spaced 16-inches on-centers for heavy duty pavement.

Extra Heavy Duty Pavement should be enhanced with a minimum of 7.5-lbs/cy of synthetic macrofibers in conjunction with continuous reinforcement.

Careful inspection is recommended to check that the recommended PCC thickness or greater is achieved and that proper construction procedures are followed.

State of California Department of Transportation Type II base, or equivalent, should be used in the required sections. The base should be compacted to at least 95 percent relative compaction.

6.5.3 Off-site Asphalt-Concrete Pavement Design

AC pavement for the off-site development shall be designed in accordance with the CATRANS method. Table 5 summarizes our AC pavement recommendations for an assumed TI of 10.

Traffic Use	TI	AC (inches)	AB (inches)
Gateway Drive Expansion ¹	10	6	8

Table 5. AC Pavement Design Recommendations

¹Assumed TI for Gateway Drive Expansion – Actual TI to be obtained from City of Victorville

We can determine the recommended pavement and aggregate base thickness for other TIs if required. Careful inspection is recommended to confirm that the recommended thickness or greater is achieved and there proper construction procedures are followed.

The aggregate base should conform to requirements of Section 26 of State of California Standard Specifications for Public Works Construction (Green Book). The aggregate base should be compacted to at least 95 percent relative compaction.



6.6 Free-Standing Retaining Walls

6.6.1 <u>Foundation Design</u>

Free-standing retaining walls may be supported on continuous footings in dense native soils and/or a minimum of 2 feet of properly compacted fill.

Free-standing walls may be supported on continuous footings a minimum of two feet wide and established at least two feet below the lowest finish floor level and/or adjacent grade may be designed using an allowable bearing pressure of 4,000 pounds per square foot (psf) when established in the native and/or properly compacted fill soils.

The recommended allowable bearing pressure for total loads (wind/seismic) has been increased by one-third. No further increase is permitted.

Foundation settlement for free-standing walls supported on continuous footings established in dense native soils and/or properly compacted fill soils will be on the order of 34 inch or less.

Differential settlement for free-standing wall foundations is anticipated to be on the order of ¹/₄ inch or less.

To resist lateral loading, an ultimate coefficient of friction equal to 0.6 may be used in conjunction with an ultimate passive pressure of 800 psf per foot of embedment provided the passive pressure is reduced by 0.5 to account for the deformation necessary to mobilize the full passive resistance.

6.6.2 <u>Design Lateral Earth Pressures</u>

Drained, free-standing retaining walls should be designed to resist an equivalent fluid pressure equal to 35H psf. Free standing walls in excess of 6 feet (retained height) should also be design to resist a triangular-shaped seismic lateral earth pressure distribution equal to 15H psf.

Additionally, if the surface at the top of the wall is sloped, the recommended lateral earth pressures should be increased as indicated in Table 6.

Slope Inclination at Top of Wall (H:V)	Top of Wall Increase in Lateral Earth Pressure (percent)	
1:1	200	
1.5:1	165	
2:1	150	

 Table 6 - Permanent Below-Grade Walls – Lateral Earth Pressures

6.6.3 <u>Wall Backdrainage</u>

Permanent retaining walls should be constructed with adequate back-drainage to prevent the buildup of hydrostatic pressure behind the walls. We recommend the use of drainage boards on the back of the walls, in conjunction with conventional weep holes at the base of the walls, would provide adequate drainage.

For shored walls, we recommend the use of a pre-fabricated geo-composite drainage board that is fixed to the shoring wall, and the free standing wall is constructed by the placement of shotcrete directly against the drainage board.



In cases where temporary construction slopes are utilized and retaining walls a perimeter collector pipe could be installed at the base of the walls noting a suitable discharge outlet for the collector pipe will be required.

6.7 Site Flatwork / Sidewalks

To assure uniform support for site flatwork, we recommend that each section be supported on at least 12 inches of properly compacted fill soils.

The design section for site flatwork, including sidewalks, should consist of four inches of reinforced PCC pavement placed on two inches of crushed miscellaneous base (CMB), or Class II aggregate base (AB). The PCC thickness should be increased to six inches for the outer six horizontal inches of the flatwork or sidewalk.

Steel reinforcement should consist of #3 bars placed at 24-inch center-to-center spacing in each direction.

6.8 Stormwater Infiltration

Based on the geologic and subsurface conditions encountered during the field investigation storm water infiltration is geologically feasible at the site.

As noted in Section 3.1, we performed field percolation testing at the site on 9 April 2021 and will summarize the results in an addendum to this report.

7.0 CONSTRUCTION CONSIDERATIONS

7.1 Excavation and Site Preparation

Prior to work on the site, all vegetation and deleterious debris should be removed and disposed of in accordance with state and local regulations. Undocumented fill should be removed and replaced as properly compacted fill as recommended in Section 7.2

The planned excavations are feasible using conventional equipment in good working condition.

Excavation bottoms exposed as part of the mass grading should be scarified for a depth of at least six inches, moisture-conditioned and compacted as recommended in Section 7.2.

Foundation excavations will expose native soils or properly compacted fill. Additional subgrade preparation provisions for foundation excavation bottoms are not required unless the exposed bottom is loose, soft or subsequently disturbed prior to placement of foundation concrete. In these cases, the soft, loose or disturbed soils should be removed and replaced with ³/₄-inch minus crushed rock, sand-cement slurry or foundation concrete for footings established in native soils and properly compacted fill for footings established in properly compacted fill.

7.2 Engineered Fill Material and Compaction Criteria

On-site soils are considered suitable for re-use as engineered fill provided the soils are absent of environmentally unsuitable materials, construction debris, and roots. Imported fill should be free of organic and other deleterious materials and have a maximum particle size no greater than 3 inches.

Imported fill should be non-corrosive to concrete and ferrous metals and contain no more than 12 percent passing the No. 200 sieve by dry weight and have a plasticity index less than 7. Prior to import to the site, we should evaluate proposed imported fill materials and perform testing if needed, to confirm the proposed import materials are suitable for the intended on-site usage.



All granular fill material should be compacted to at least 95 percent of the maximum dry density at or near the optimum moisture content, as determined by ASTM D1557. Cohesive fill, though not anticipated for this project, should be compacted to at least 90 percent of the maximum dry density, as determined by ASTM D1557, and moisture conditioned 2 to 4 percent over the optimum moisture content.

Fill material should be placed in loose lifts not exceeding 8 inches in thickness, properly moisture conditioned, and mechanically compacted to the minimum required density. For granular fills, compaction may be achieved using heavy equipment and vibration.

7.3 Confirmatory Testing

Table 5 summarizes minimum sampling and testing required during rough and precise grading.

Construction Phase	Confirmatory Test	Minimum Frequency of Sampling
Rough Grading: Building Footing and Pavement Areas	ASTM D1557 - Modified Proctor ASTM D4829 – Expansion Index Corrosion Series – CTM417, 422, 643	Every 50,000-cubic-yards of engineered fill
Precise Grading: Building Footprint	R-Value – CTM 301 or ASTM D2844 ASTM D4829 – Expansion Index	Within the upper 5 feet for every 100,000 ft ² of designated building footprint
Precise Grading: Pavement Areas	R-Value – CTM 301 or ASTM D2844	Within the upper 5 feet for every 150,000 ft ² of designated pavement area

 Table 5 – Schedule of Confirmatory Geotechnical Testing

7.4 Site Drainage

Proper drainage should be maintained at all times. Ponding or trapping of water in localized areas can cause differing moisture levels in the subsurface soil. Drainage should be directed away from the tops of excavations. Erosion protection and drainage control measures should be implemented during periods of inclement weather. During rainfall events, backfill operations may need to be restricted to allow for proper moisture control during engineered fill placement.

Groundwater was not encountered at the site based on our field investigation and a review of available information; however, shallow perched water may be encountered depending on seasonal rainfall. The site should be graded to ensure positive drainage away from the locations of the proposed development.

7.5 Utility Support

Utilities can be supported on compacted engineered fill or on approved native soils. The bedding material should extend at least 12 inches over the top of the utility unless otherwise required by the utility owner. Utility subgrade should be confirmed to be free of standing water, firm, and unyielding prior to placement of bedding material.

Utility trenches should be backfilled in accordance with the recommendations provided in Section 7.2 using either previously excavated soil, approved imported material, or approved material set forth by the utility owner/manufacturer. The gradation of the approved imported fill should be



compared with the gradation of the native soils to determine if a separation fabric, such as Mirafi 140N or equivalent, is required between the two materials.

7.6 Temporary Vertical Cuts and Construction Slopes

Temporary un-surcharged slopes should not exceed a 1H:1V gradient and should not exceed 15 feet in height. Temporary vertical cuts that will be beneficial for foundation construction may be made into properly compacted fill and/or native materials, however, vertical cuts should not exceed 4 feet in height.

Temporary cut slopes should be protected from erosion by directing surface water away by placing sand bags at the top of the slopes and during wet weather, covering the slopes with plastic sheeting.

8.0 SERVICES DURING DESIGN, CONSTRUCTION DOCUMENTS, AND CONSTRUCTION QUALITY ASSURANCE

During final design we should be retained to consult with the design team as geotechnical questions arise. Technical specifications and design drawings should incorporate LANGAN's recommendations. When authorized, LANGAN will assist the design team in preparing specification sections related to geotechnical issues such as earthwork, ground improvement, shallow foundations, backfill and excavation support. LANGAN should also, when authorized, review the project plans, as well as Contractor submittals relating to materials and construction procedures for geotechnical work, to confirm the designs incorporate the intent of our recommendations.

LANGAN has investigated and interpreted the subsurface conditions and developed the foundation design recommendations contained herein, and is therefore best suited to perform quality assurance observation and testing of geotechnical-related work during construction. The work requiring quality assurance confirmation and/or special inspections per the Building Code includes, but is not limited to, earthwork, backfill, ground improvement, shallow and deep foundations, and excavation support.

Recognizing that construction observation is the final stage of geotechnical design, quality assurance observation during construction by LANGAN is necessary to confirm the design assumptions and design elements, to maintain our continuity of responsibility on this project, and allow us to make changes to our recommendations, as necessary. The foundation system and general geotechnical construction methods recommended herein are predicated upon LANGAN assisting with the final design and providing construction observation services for the Owner. Should LANGAN not be retained for these services, we cannot assume the role of geotechnical engineer of record, and the entity providing the final design and construction observation services must serve as the engineer of record.

9.0 OWNER AND CONTRACTOR RESPONSIBILITIES

The contractor is responsible for construction quality control, which includes satisfactorily constructing the foundation system and any associated temporary works to achieve the design intent while not adversely impacting or causing loss of support to neighboring property, structures, utilities, roadways, etc. Construction activities that can alter the existing ground conditions such as excavation, engineered fill placement, foundation construction, ground improvement, pile driving/drilling, dewatering, etc. can also induce stresses, vibrations, and



movements in nearby structures and utilities, and disturb occupants. Contractors are solely responsible to ensure that their activities will not adversely affect the structures and utilities, and will not disturb occupants. Contractors must also take all necessary measures to protect the existing structures, utilities, etc. during construction. By using this report, the owner agrees that LANGAN will not be held responsible for any damage to adjacent structures, utilities, etc.

The preparation and use of this report is based on the condition that the project construction contract between the owner and their contractor(s) will include: 1) LANGAN being added to the Project Wrap and/or Contractor's General Liability insurance as an additional insured, and 2) language specifically stating the foundation contractor will defend, indemnify, and hold harmless the owner and LANGAN against all claims related to disturbance or damage to adjacent structures, utilities, etc. or properties.

10.0 LIMITATIONS

The conclusions and recommendations provided in this report result from our interpretation of the geotechnical conditions existing at the site inferred from a limited number of borings, test pits and other exploration, as well as architectural and structural information provided by HSA & Associates, Inc. Actual subsurface conditions may vary. Recommendations provided are dependent upon one another and no recommendation should be followed independent of the others.

Any proposed changes in the proposed development or their locations should be brought to LANGAN's attention as soon as possible so that we can determine whether such changes affect our recommendations. Information on subsurface strata and groundwater levels shown on the logs represents conditions encountered only at the locations indicated and at the time of investigation. If different conditions are encountered during construction, they should immediately be brought to LANGAN's attention for evaluation, as they may affect our recommendations.

This report has been prepared to assist the owner, structural engineer, and civil engineer, in the design of the Project and is only applicable to the design of the specific project identified. The information in this report cannot be utilized or depended on by engineers or contractors who are involved in evaluations or designs of facilities on adjacent properties which are beyond the limits of that which is the specific subject of this report.

Environmental issues (such as permitting or potentially contaminated soil and groundwater) are outside the scope of this study and should be addressed in a separate evaluation.



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FIGURES





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Site Location

Fault Age

The age classifications are based on geologic evidence to determine the youngest faulted unit and the oldest unfaulted unit along each fault of fault seciton

Historic

Holocene

Late Quaternary

- Quaternary
- 🔲 100 km

Earthquake Epicenter

- Magnitude 5 to 5.9
- Magnitude 6 to 6.9
- Magnitude 7 to 7.4
- Magnitude 7.5 to 8

Pre Quaternary Faults

- fault, certain
- --- fault, approx. located
- ······ fault, concealed
- thrust fault, certain
- - thrust fault, approx. located
- thrust fault, approx. located, queried
- ---- fault, certain, barball
- ---t-- fault, concealed, barball
- --- fault, approx. located, barball

Quaternary Faults

- fault, certain
- —— fault, approx. located
- ---- fault, approx. located, queried
- - fault, inferred, queried
- ······ fault, concealed
- --?-- fault, concealed, queried

- thrust fault, concealed
- dextral fault, certain
- ---- dextral fault, approx. located
- dextral fault, concealed
- sinistral fault, certain
- ---- sinistral fault, approx. located
- sinistral fault, concealed
- thrust fault, certain (2)
- —— thrust fault, approx. located (2)
- thrust fault, concealed (2)
- ---- fault, solid, barball
- ---- fault, dashed, barball
- fault, dotted, barball
- ---- dextral fault, solid, barball
- fault, dotted, queried, ballbar
- fault, dotted, queried, ballbar (2)
- ---- fault, solid, dip
- --- fault, dashed, dip
- ····· fault, dotted, dip
- --- reverse fault, solid
- ---- reverse fault, dashed
- reverse fault, dotted

	Project	Figure Title	Project No.	Figure
LANGAN	ARS FULFILLMENT		700089101	
Langan Engineering & Environmental Services	CENTER	QUATERNARY FAULT	Date	
	PROJECT LOKI / SBD4 /	AND EARTHQUAKE		7B
	LOT 44W	EPICENTER MAP		
18575 Jamboree Road, Suite 150, Irvine, CA 92612	VICTORVILLE			
T: 949.561.9200 F: 949.561.9201 www.langan.com	SAN BERNARDINO COUNTY CALIFORNIA			



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APPENDIX A

Field Explorations and Laboratory Testing



APPENDIX A

SUBSURFACE EXPLORATIONS

Forty-eight borings (LB-1 through LB-48) were drilled for the proposed on-site development. Twenty-two borings (RB-1through RB-22) were drilled for the proposed off-site street improvements. 2R Drilling Inc. drilled 52 borings (42 'on-site and nine 'off-site) on 4 March 2021 and 5 March 2021, and 19 borings (six 'on-site and 13 'off-site) on 29 March 2021 and 30 March 2021 under the full-time engineering observation of a LANGAN field engineer. Truck-mounted drill rigs with 8-inch-outer-diameter hollow-stem augers were used to advance the borings to depths of approximately 6½ to 101½ feet using conventional soil drilling techniques.

The locations of the explorations were determined in the field by representatives of Cal Vada Surveying, Inc. This information should be considered accurate only to the degree implied by the methods used.

A member of our geotechnical staff observed and logged the explorations and collected representative samples of the various soil compositions encountered in the explorations. Upon completion of the borings, the boreholes were backfilled with soil cuttings. Descriptions of the conditions encountered and sampling intervals are presented in the boring logs included within this appendix.

SOIL SAMPLING

Samples were collected from the borings using modified California split-spoon samplers in general accordance with ASTM D3550 and we performed Standard Penetration Tests (SPTs) in general accordance with ASTM D1586.

The modified California samplers and SPTs were driven using a 140-pound hammer free falling 30 inches. The samplers were driven a total distance of 18 inches or to refusal. The number of blow counts required to drive the sampler for each 6 inch segment (or less if refusal is met) was recorded in the field.

Sampling methods and intervals are shown on the exploration logs. The number of blow counts required to drive the sampler for each 6 inch segment shown on the exploration logs have been corrected to a normalized value based on a hammer efficiency of 60%.

The samples collected from the borings were transported to our office for assignment of geotechnical laboratory testing.

SOIL CLASSIFICATION

The soils samples were classified in accordance with the United Soil Classification System (USCS). The boring logs indicate the soil conditions encountered during drilling and indicate the depths at which the soil or their characteristics change; however, the change between soil types or their characteristics may occur more gradually than depicted on the boing logs. If the change occurred between sampling intervals, the depth was interpreted. Changes between geologic units or soil types on the boring logs are represented with a solid line if observed directly in the samples, and with a dashed line if inferred between sample depths. Classifications are shown on the exploration logs. Classification are presented in the boring logs.



LABORATORY TESTING

Moisture Content

The natural moisture content of select soil samples was performed in general accordance with ASTM D2216. The natural moisture content is a ratio of the weight of the water to soil in a test sample and is expressed as a percentage. The test results are presented in this appendix.

Dry Density

Select soil samples were tested to determine the in situ dry density. The tests were performed in general accordance with ASTM D2937. The dry density is defined as the ratio of the dry weight of the soil sample to the volume of that sample. The dry density typically is expressed in units of pounds per cubic foot (pcf). The test results are presented in this appendix.

Percent Passing No. 200 Sieve

Select soil samples were tested to determine the percentage of fine-grained material, defined as the amount of material finer than 75- μ m (No. 200) sieve in the soil. The tests were performed in general accordance with ASTM D6913.

The test results are presented in this appendix.

Atterberg Limits

Atterberg Limits tests were completed on select samples obtained from the explorations. The tests were performed in general accordance with ASTM D4318. The test measures the liquid limit and plastic limit of the sample.

The test results are presented in this appendix.

Consolidation Testing

One-dimensional consolidation testing was performed in general accordance with ASTM D2435 on relatively undisturbed soil samples. The tests measure the volume change of a soil sample under predetermined loads. The test results are presented in this appendix.

Direct Shear Testing

Direct shear tests were completed on select samples obtained from the explorations. The tests were conducted in general accordance with ASTM D3080. The test determines the effects upon shear resistance and displacement, and strength properties such as Mohr strength envelopes. The test results are presented in this appendix.

Corrosion Testing

Corrosion testing was performed on one selected sample. The testing was completed in general accordance with California Test Methods 643 and 417 for resistivity, pH value, and sulfate content. The test results are presented in this appendix.

R-Value Testing

R-value tests were completed on select bulk samples obtained from the explorations. The tests were conducted in general accordance with ASTM D 2844. The test is used to measure the potential strength of subgrade, subbase, and base course materials for use in road and airfield pavements.

The test results are presented in this appendix.



Major Divisions Symbo			Typical Names	
rger ze)	Gravels	GW	Well-graded GRAVELS with less than 5% fines or gravel-sand mixtu	ures
Soil is lar /e siz	(more than half of coarse fraction is	GP	Poorly-graded GRAVELS with less than 5% fines or gravel-sand mix	xtures
soil siev	retained/> no. 4 sieve	GM	Silty gravels, gravel-sand-silt mixtures;GRAVELS with greater than 1	2% ML or MH fines
lf of 200	3126/	GC	Clayey gravels, gravel-sand-clay mixtures; GRAVELS with greater th	an 12% CL or CH
n ha no.	Sands	SW	Well-graded sands with less than 5% fines or gravelly sands, little c	or no fines
the the	(more than half of coarse fraction	SP	Poorly-graded sands with less than 5% fines or gravelly sands, little	or no fines
nore thar	passes/< no. 4 sieve	SM	Silty sands, sand-silt mixtures; SANDS with greater than 12% ML o	r MH fines
÷	SIZE)	SC	Clayey sands, sand-clay mixtures; SANDS with greater than 12% C	L or CH fines
li 200	Silts and Clays	ML	Inorganic silts and clayey silts of low plasticity, sandy non-plastic SII	LT, gravelly SILT
of sc of sc ∍) no.	LL = < 50	CL	Inorganic clays of low to medium plasticity, silty CLAY, trace fines, s	sand
half half the size		OL	Organic silts and organic silt-clays of non-plastic to medium plasticit	Ŷ
Grai han thar sieve	Silts and Clavs	мн	Inorganic medium plastic silts, medium plastic to very plastic clayey	^r silts.
ine- ore the aller	LL = > 50	СН	Inorganic plastic to very plastic CLAYS, sandy plastic CLAY	
(mc sm;		ОН	Organic medium plastic to plastic silty CLAYS, and very plastic CLA	YS
Highly C	Organic Soils	PT	Peat and other highly organic soils	
	GRAIN SIZE CHAR	г	SOIL DESCRIPTIONS/	SYMBOLS
	Range of Gr	ain Sizes	Well-graded GRAVEL (GW)	Low-Plasticity SILT (ML)
Classification	U.S. Standard Sieve Size	Grain Size Millimete		High-Plasticity SILT (MH)
Boulders	Above 12"	Above 3		High Hasticity SIET (WHI)
Cobbles	12" to 3"	305 to 76	2 Silty GRAVEL (GM)	Low-Plasticity CLAY (CL)
Gravel coarse	3" to No. 4 3" to ¾"	76.2 to 4. 76.2 to 1		
fine	3⁄4" to No.4	19.1 to 4.	5 Clayey GRAVEL (GC)	- High-Plasticity CLAY (CH)
Sand	No. 4 to No. 200	4.76 to 0.0		
medium	No. 10 to No. 40	2.00 to 0.4	20 ••• Well-graded SAND (SW)	
fine	No. 40 to No. 200	0.240 to 0.		
Silt and Clay	Below No. 200	Below 0.0	⁷⁵ Poorly-graded SAND (SP)	
GROUNDWAT	ER READING		Silty SAND (SM)	SILTSTONE
∑_ Groundwa	ter encountered dur	ing drilling		
Groundwa	ter at completion		Clayey SAND (SC)	FILL
𝖳 Groundwa	iter at 24 hours		AGGREGATE BASE	- ASPHALT
SAMPLER TYP	ΡE			
CR	Modified Californ and a 2.5-inch ins	nia (CR) split-b side diameter	rrel ring sampler with 3.0-inch outside diameter BAG -	Bulk Sample
SPT - Standard Penetration Test (SPT) split-barrel sampler with a 2.00-inch outside C - Core Barrel				
ST	Shelby Tube (3 hydraulic pressur	.0-inch outsi	e diameter, thin-walled tube) advanced with	
ΙΔΝ	GANT	Figure Title		Figure No.
949.561.9200 F: 949.	561.9201 www.langan.com			
NEW JERSEY NEW YORK	CONNECTICUT PENNSYLVANIA WEST VIRGINIA OHIO FLORIDA		DURINU LUU LEUENU	
ASHINGTON DC VIRGINIA	-			

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Project	ARS Fulfillment Center - Project Loki				Project No. 700089101												
Location					Elevation and Datum												
Drilling Company					Date	Date Started Date Finished											
2R Drilling Drilling Equipment					3/4/21 3/4/21 Completion Depth Rock Depth												
	CME 75 Truck-mour	nted Drill Rig								11.3 ft		1					
Size and Type of Bit 8-inch O.D. Hollow Stem Auger					Number of Samples			Disturbed 3		Und	disturbed	2	Core	-			
Casing Diameter (in) Casing Depth (ft)				Water Level (ft.)			First C		Cor	mpletion	-	24 HR.	-				
Casing Hamme	er_	Weight (lbs)	-	Drop (in)	Drillin	ng Forei	man						•				
Sampler	Bulk, 2-inch O.D. Sp	lit-Barrel SPT,	2.5-inch I.	.D. Cal Mod	Field	Engine	er										
Sampler Hamm	^{her} Automatic	vveight (ibs)	140	Drop (In) 30				Α.	Atry	/ mnle Da	ta						
.terial MATERIAL (t) +5862 0	Sample Description					Depth Scale Depth Scale Depth Scale Depth Scale						Ren g Fluid, I s, Drillin	Remarks Fluid, Depth of Casing, , Drilling Resistance, etc.)				
	Fill Silty SAND (SM), dark brown, medium dense, moist, fine to medium sand. Alluvium (Qa) SAND with Clay (SP-SC), pale yellow brown, medium dense, moist, fine sand, trace fine gravel. SAND (SP), pale brown, medium dense, fine to coarse sand, micaceous. With gravel, friable. Red brown, very dense, no gravel.					- 0 - - 1 -							Bulk sample collected fro 0-5 feet bgs. R Value. Dry Density = 117.3 pcf WC = 6.8%				
<u>+</u> 2864.0						2	1	~	<i>"</i>	8							
						4	Ϋ́	5	32	12 15							
						$\begin{bmatrix} 5 \\ -6 \\ -6 \\ -7 \\ -7 \\ -7 \\ -7 \\ -7 \\ -7$											
							S-3	CR	18	8 16 17			Dry Densit WC = 0.9%		y = 109.4 pcf %		
						$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$											
	Total Depth = 11.3 Groundwater not e Borehole backfilled	a rect encountered. d with soil cuttir	ngs.			12 - 13 - 13 - 14 - 15 - 15 - 16 - 17 - 18 - 19 - 120 - 12											
LA	NGAN	Log c	of B	oring			LB	8-2			Sheet	1	of	1			
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Project			Pro	ject No.													
Location	ARS Fulfillment Center - Project Loki		Ele	vation an	d Da	tum	700	08910 ⁻	1								
	Victorville, California						286	4 (Fee	et, NG	VD 29	9)						
Drilling Company			Dat	te Starteo	1					Date F	inished						
Drilling Equipme	2R Drilling		Cor	mpletion	Dept	h		3/4/21		Rock [Depth		3/4/21				
5 1 1	CME 75 Truck-mounted Drill Rig			•				11 ft									
Size and Type o	f Bit		Nui	mber of S	Samp	les	Distu	urbed		Uno	disturbed	0	Core				
Casing Diamete	r (in)	Casing Depth (ft)	Wa	ater Level	(ft.)		First			Сог	mpletion	-	24 HR.	-			
Casing Hammer	Weight (lbs)	Drop (in)	Dril	lling Fore	man		<u> </u>				-		<u>-</u>				
Sampler	2-inch O.D. Split-Barrel SPT 2.5-inch I.D. C	al Mod				A	drian	1									
Sampler Hamme	Weight (lbs)	Drop (in)	Fie	ld Engine	er	5.4	<u> </u>	hian									
	Automatic 140	30	<u> </u>		1	IVI	. Ga Sa	nple Da	ata		1						
Elev.	Sample Description			Depth	ber	e		etr. ist Sin	Wa	ter	(Drilling F		arks				
Ψ ⁵ (π) +2864.0				Scale	Num	Ţ	(ir	Pen res BL/	Con	tent	Fluid Loss,	Drilling I	Resistance, e	ic.)			
	Alluvium (Qa)			- 0 -													
	Clayey SAND (SC), red brown, medium de sand.	ense, dry, fine		- 1 -	-												
			ŀ		-												
			ļ	- 2 -													
///// #2861.0_	Silty SAND (SM) brown medium dense o	Inv. fine to coarse		- 3 -	-	FE	8	8									
	sand.	iry, line to coarse	, 		Ś	ls E		8									
±2859.5			[- 4 -													
	SAND with SILT (SP-SM), light brown, der	ise, dry, medium	ŀ	- 5 -				11			Dry Den	sitv =	118 3 pcf				
	to obaloo balla, tabo into gravol.		ŀ		2	К	18	19			WC = 1.	6%	_				
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+2853.0	Total Depth = 11.0 feet			- 11 -	5		· ·	50/6"									
	Groundwater not encountered.		ŀ		1												
	Borehole backfilled with soil cuttings.		ļ	- 12 	1												
			ŀ	- 13 -	-												
			ŀ		1												
			ļ	- 14	1												
			ŀ	- 15 -	-												
			ŀ		1												
			ļ	- 16 -	1												
			ŀ	- 17 -	-												
			ŀ		1												
			ļ	- 10 -													
			ŀ	- 19 -	{												
					1												
			ļ		-												
			-	- 21 -	1												
					1												
			-														
			ŀ	- 23 -	1												
					1												

LA	NLAA	A N	Log	of E	Boring			LE	8-3			Sheet 1	of	1
Project			-	Pr	oject No.									
Location	ARS Fulfillment Cer	nter - Project Loki			avotion on			700	08910	1				
Location	Vieten ille California	-		Ele	evation an	id Da	itum	206	1 (Гос))		
Drilling Compa	ny	d		Da	ate Starteo	ł		200	I (Fee	I, NG	Date F	inished		
	2R Drilling							:	3/4/21				3/4/21	
Drilling Equipn	nent			Co	ompletion	Dept	h				Rock I	Depth		
Size and Type	CME 75 Truck-mou	nted Drill Rig						Dist	<u>11.5 ft</u>		1.100	diaturbad	Cara	
Size and Type	8-inch O.D. Hollow \$	Stem Auger		Nu	umber of S	Samp	les	Dist	libed	2		aisturbea 2	Core	-
Casing Diame	er (in) -		Casing Depth (ft)	W	ater Level	(ft.)		First ∑		-	Co	mpletion	24 HR. 	-
Casing Hamm	er	Weight (lbs)	Drop (in)	Dr	illing Fore	man								
Sampler	2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D.	Cal Mod	Fie	eld Engine	er	A	driar						
Sampler Hamr	^{ner} Automatic	Weight (lbs) 140	Drop (in) 30	1			м	. Ga	lvan					
		1		-				Sa	mple Da	ata		- Do	marka	
Elev.		Sample Description	ı		Depth Scale	nber	/be	cov.	netr. sist /6in	Wa	ter	(Drilling Fluid,	Depth of Casir	ng,
i ≦ 6 (10) +2861.0					00010	Nur	L_	(i	Per BL	Con	ent	Fluid Loss, Drilli	ng Resistance,	etc.)
	Alluvium (Qa)		which a warring to firm a tax		- 0 -									
	coarse sand trace	ر), red brown, loose, sli e fine gravel.	gnuy moist, fine to		- 1 -	-								
		e mie graten												
					- 2 -									
					_ 3 _				7			Dry Density	e = 114.9 pc	f
						γ.	R	18	8			VVC = 5.9%		
					- 4 -		10		8					
2 2 2 2 2 856.5	Silty SAND (SM)	tan to light brown med	lium dense slightly	;-	+ -									
	moist, fine to med	lium sand, some calich	e.		- 5 -		İΕ		5			Interbeddeo	l layers of	
						8-7	SPT	18	5			cemented s	silt.	
							ĽΕ		5					
					- 7 -	-								
±2853.5	SAND (SP) brow	n medium dense drv	fine to coarse				╞		7			Dry Density	= 108.8 pc	f
	sand, trace fine gr	ravel.			- 8 -	Ϋ́.	К	18	. 9			WĆ = 1.8%	•	
						0			13					
+2850.8					- 10 -				10					
	Silty SAND (SM),	light brown, very dense	e, dry, fine to			4	F	8	33					
(<u>······</u> <u>·</u> +2850.0	coarse sand, trace	e fine gravel.	d fine cond		- 11 -	S	S		35					
5	Total Depth = $11 $	5 feet	a, line sand.		L 12 _									
	Groundwater not e	encountered.			- '2 -	-								
	Borehole backfille	ed with soil cuttings.			- 13 -	$\left \right $								
						1								
ā l					- 14 -	1								
					_ 15 _	1								
						-								
					- 16 -	$\left \right $								
						1								
					- 17 -	1								
					L 18 -]								
						-								
					- 19 -	$\left \right $								
						1								
					20 -	1								
					21 -]								
						-								
					- 22 -	-								
						1								
					23 -	1								
					L 24 _									

L	4	NLAA		Log	of E	Boring			LE	8-4			Sheet	1	of	1
Project					Pr	oject No.										
Location		ARS Fulfillment Cen	nter - Project Loki		Ele	evation ar	nd Da	atum	700	08910 ⁻	1					
	,	Victorville, California	a						285	6 (Fee	et, NG	VD 2	9)			
Drilling Co	mpany	/			Da	ate Starte	d					Date	Finished			
	. :	2R Drilling					<u> </u>			3/5/21		<u> </u>	<u> </u>		3/5/21	
Drilling Eq	uipme					ompletion	Dept	n				ROCK	Depth			
Size and T	Type of	CME /5 Truck-mour	nted Drill Rig		+				Dist	11.5 ft urbed		Ir	disturbed		Core	
	i ype o	8-inch O.D. Hollow S	Stem Auger		Nu	umber of S	Samp	les	Dist	libeu	2		laistaibea	2		-
Casing Dia	ametei	r (in) -	0	Casing Depth (ft) -	W	ater Leve	l (ft.)		First 		-	Co	mpletion	-	24 HR. 	-
Casing Ha	ammer	-	Weight (lbs)	Drop (in)	Dr	illing Fore	eman									
Sampler		2-inch O.D. Split-Ba	rrel SPT 25-inch I D	Cal Mod	╘											
z Sampler H	lamme		Weight (lbs)	Drop (in)	1-16	ela Engine	eer									
		Automatic	140	30				A	. Atr	/ mple Da	ota					
	Elev.					Depth	er		5	Hiple Da	<u></u>		-	Rem	narks	
SYME	(ft)		Sample Description	1		Scale	qun	Type	(in)	enet resis 3L/6i	Wa Cont	ter tent	(Drilli Fluid Lo	ng Fluid, E oss. Drilling	Depth of Casing a Resistance. e	l, tc.)
+28	856.0					<u> </u>	z	<u> </u>	Ľ.	с - п				, D	g 1 100/01/11/00, 0	,
		<u>Alluvium (Qa)</u> Clavev SAND (SC) red brown dense m	oist medium to												
		coarse sand, trace	e fine gravel.			- 1 -										
						2 -										
						_ 3 -				22			Dry D	ensity =	= 113.1 pcf	
							ò	R.	18	33			VVC -	0.0%		
						- 4 -				33						
4/2/2/428	851.5		P-SM) pale brown me			+ .										
5		moist, medium to	coarse sand, trace fine	e gravel,		- 5 -		İΕ		17						
3		micaceous.		-			5	μ	18	16						
						- 6 -	0	l" E		16						
₹ <u></u>	849.0					[
5		SAND with Gravel	l (SP), red brown, medi	ium dense, moist,		L ' .								onoity -	- 107 1 nof	
200		medium to coarse	sand, line gravel, mica	aceous.		- 8 -	ς.	~		11			WC =	= 2.0%	- 107.4 pci	
3							ν	ō	-	14						
§	946 5					- 9 -										
	540.5	Clayey SAND (SC), olive brown, dense,	moist, fine sand.												
						_ 10 -	-	LE		8						
						- 11 -	S N	LdS III	18	13						
z / / / / / / / / / / / / / / / / / / /	844.5	Total Dopth - 11 6	E faat			+		E	_	17						
		Groundwater not e	encountered.			- 12 -	-									
		Borehole backfille	d with soil cuttings.													
						- 13 -	1									
						L 14 -										
						- 15 -	-									
						- ·	1									
5						- 16 -	1									
						_ 17 _	1									
Ľ						[1/]										
						- 18 -	4									
						- ·	-									
						- 19 -	1									
							1									
						[²⁰ -]	1								
						- 21 -										
						⊢ <u>-</u> ' .	-									
5						- 22 -	-									
						- ·	1									
						- 23 -	1									
						L 24 -	1									

LA	NL	A / A	Log	of E	Boring			LB	-5			Sheet	1	of	1
Project				Pr	oject No.										
Location	ARS Fulfillment Cer	nter - Project Loki		Ele	evation ar	id Da	itum	7000	089101	1					
	Victorville, California	a						285	4 (Fee	et, NG	/D 29	9)			
Drilling Compa	iny			Da	ate Starteo	ł					Date I	Finished			
Drilling Equipr	2R Drilling			C	ompletion	Dept	h		3/5/21		Rock	Depth		3/5/21	
	CME 75 Truck-mou	nted Drill Rig			subjecter.	Dopt			11.5.ft			Dopui			
Size and Type	of Bit			NI	umber of 9	Samn		Distu	irbed		Un	disturbed		Core	
Casing Diame	8-inch O.D. Hollow ter (in)	Stem Auger	Casing Depth (ft)	W	ater Level	(ft.)		First		2	Co	mpletion	2	24 HR.	-
Casing Hamm	- er	Weight (lbs)	Drop (in)	Dr	illing Fore	man		<u> </u>		-		<u></u>	-	<u> </u>	-
Sampler	-	-		-	Ū		A	drian							
- O	2-inch O.D. Split-Ba	Irrel SPT, 2.5-inch I.D. C	Cal Mod	Fie	eld Engine	er									
Sampler Hami	^{ner} Automatic	140 veigne (ibs)	30		-	1	Μ	. Ga	lvan			1			
					Depth	Ъ.		Sa	npie Da	ata		-	Rem	arks	
- 60- (ft)		Sample Description			Scale	nmbe	Type	(in)	enet resist 3L/6ii	Wat Cont	er ent	(Drillin Fluid Los	ig Fluid, D ss. Drilling	epth of Casing, Resistance, etc	c.)
+2854.0					<u> </u>	z		œ	<u>с</u> – ш					1 100101011100, 01	.,
den en	Silty SAND (SM),	brown, medium dense,	dry, fine to coarse	Э											
∑	sand, some fine to	o medium gravel, some	caliche.		<u> </u> 1 -										
25 P					- 2 -										
2:57:									15			Dry De	ensitv =	115.7 pcf	
21					- 3 -	7	к	2	18			WC =	2.9%	. ion poi	
5/20						0	Ŭ	Ì	21						
4															
G	Tan fine to mediu	im sand increased fines	content		- 5 -				Q						
GGS			s content.			2	PT E	8	11						
					6 -		<i>"</i>		10						
B · · · · ·					- 7 -										
5	SAND with Silt (S	P-SM) light brown med	lium dense dry		+ -		-m		15			Poor s	ample	recovery.	
	fine to medium sa	ind, some coarse sand,	trace fine to		- 8 -	ς Υ	К	9	21			Dry De	ensity =	102.8 pcf	
0/20	medium gravel.				[g _	Ľ			28			vvc =	0.8%		
Ö															
					- 10 -		F		11						
	Silty SAND (SM),	light brown, dense, dry,	fine to medium		+ · ·	S-4	SPT	9	18						
U Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	Total Depth = 11.	e sand, trace fine gravel 5 feet	•		+		E		25						
DIEC	Groundwater not	encountered.			- 12 -										
VGE0	Borehole backfille	d with soil cuttings.			- 13 -										
						-									
SCIP SCIP					- 14 -										
					- 15 -										
DATA						-									
CT					- 16 -										
E COE					- 17 -	1									
17PR					- '' -										
3910					- 18 -	-									
2000						1									
VDA					- 20 -	1									
						1									
DAT					[21 -										
MO					- 22 -	-									
AN.C						1									
ANG					23 -	1									
					L ₂₄ _										

LA	NGAN	Log	of E	Boring			LB	-6		Sheet	1	of	1
Project			Pro	oject No.									
Location	ARS Fulfillment Center - Project Loki		Ele	evation an	d Da	tum	7000	89101					
	Victorville, California						2866	6 (Feet, N	IGVD	29)			
Drilling Compa	ny		Da	ite Starteo	1		0	14/04	Dat	e Finished		0/4/04	
Drilling Equipm	2R Drilling ent		Co	mpletion	Dept	h	3	/4/21	Roo	k Depth		3/4/21	
	CME 75 Truck-mounted Drill Rig			•	•		2	1.5 ft		·			
Size and Type	of Bit 8-inch O.D. Hollow Stem Auger		Nu	Imber of S	Samp	les	Distur	bed	3	Undisturbed	3	Core	_
Casing Diamet	er (in)	Casing Depth (ft)	Wa	ater Level	(ft.)		First 		- (Completion	-	24 HR. 	-
Casing Hamme	erWeight (lbs)	Drop (in) -	Dri	illing Fore	man								
Sampler	2-inch O.D. Split-Barrel SPT, 2.5-inch I.D.	Cal Mod	Fie	eld Engine	er								
Z Sampler Hamn	ner Automatic Weight (lbs) 140	Drop (in) 30		1		Α.	Atry						
Elev. SXMBOL (ft) +2866.0	Sample Description			Depth Scale	Number	Type	San (in) C	BL/6in Teneri BL/6in Teneri BL/6in Teneri	Water Content	(Drilli Fluid Lo	Rem ing Fluid, E oss, Drilling	Darks Depth of Casing Bresistance, e	l, tc.)
MICALIGINIT. OGS/700089101 - GINT LOGS. GPJ 4/5/2021 12:57:27 PM Report 12:57:27 PM	Fill Silty SAND (SM), dark brown, loose, fine micaceous. Alluvium (Qa) SAND with Silt (SP-SM), pale brown, me moist, fine to coarse sand. SILT (ML), light gray, hard, moist, trace fi plastic, micaceous. Sandy SILT (ML), light gray, hard, moist, sand, micaceous.	to medium sand, dium dense, ne sand, non		- 0	S-4 S-3 S-2 S-1	CR SPT CR SPT	17 18 18 18	4 5 5 10 14 20 14 28 26 36 50/5"		Dry D WC = Cons LL = : %Pas Dry D WC =	Pensity = = 1.3% olidation 31, PL = ss #200 Pensity = = 7.2%	= 108.4 pcf n test. = 25, PI = 6 = 61 = 106.7 pcf	
	SAND (SP), pale brown, very dense, moi sand, micaceous, friable. Yellow brown, fine to coarse sand, with fi gravel. Total Depth = 21.5 feet Groundwater not encountered. Borehole backfilled with soil cuttings.	st, fine to medium		-12 - 12 - 13 - 13 - 13 - 13 - 14 - 15 - 15 - 15 - 16 - 17 - 16 - 17 - 17 - 17 - 17 - 17	S-6	CR SPT	18 18	18 26 30 20 43 50					

LA	NG	4/V	Log	of E	Boring			LB	8-7			Sheet	1	of	1
Project				Pro	oject No.										
Location	ARS Fulfillment Ce	nter - Project Loki		Ele	evation ar	nd Da	tum	700	08910 ⁻	1					
Drilling Comp	Victorville, Californi	а		Da	ato Startor	4		286	3 (Fee	et, NG	/D 29) Finished			
	2R Drilling			Da					3/4/21		Dater	Inisheu		3/4/21	
Drilling Equipr	nent			Co	ompletion	Dept	h		<i></i>		Rock I	Depth		0/ 1/21	
	CME 75 Truck-mou	Inted Drill Rig							21.5 ft						
Size and Type	e of Bit 8-inch O.D. Hollow	Stem Auger		Nu	umber of S	Samp	les	Distu	irbed	3	Un	disturbed	3	Core	_
Casing Diame	ter (in) -		Casing Depth (ft)	Wa	ater Leve	(ft.)		First 		-	Co	mpletion	-	24 HR. 	-
Casing Hamm	er_	Weight (lbs)	Drop (in) -	Dri	illing Fore	man									
Sampler	2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D. (Cal Mod	Fie	eld Engine	er	Ac	drian							
Sampler Hami	^{ner} Automatic	Weight (lbs) 140	Drop (in) 30				M	. Ga	lvan						
- F								Sa	mple Da	ata			Dom	orko	
		Sample Description			Depth Scale	mber	ype	in) č	netr. sist /6in	Wa	er	(Drilling	Fluid, D	epth of Casing,	
≧ ⁰ +2863.0					L	Nu	ΓĒ,	, Re	Pe BL	Cont	ent	Fluid Loss	, Drilling	Resistance, et	c.)
	Alluvium (Qa) Silty SAND (SM)	red brown medium der	nse slightly moist												
	fine to coarse sar	nd, trace clay, trace calio	che, cemented.		- 1 -	1									
					- 2 -	-									
									11			Dry Der	nsity =	117.3 pcf	
					- 3 -	<u>-</u>	К	18	15			WC = 1	2.3%		
					- 4 -				15						
_ <u> </u> _ , <u>_ +</u> 2858.5	SAND with Silt (S	SP-SM), tan to brown, m	edium dense,		- ·										
	slightly moist, fine	e to coarse sand, trace f	ine gravel, trace		- 5 -		LE		4						
	caliche.				- 6 -	ပ်	I S E	18	9 10						
					- ·				10						
					_ / _								aaitu —	107 E nof	
	fine to coarse sar	, tan and brown, very de nd. lavers of cemented s	nse, slightly moist ilt.	,	- 8 -	ς.	К	15	10 44			WC = 4	.4%	107.5 pci	
					- ·				50/3"						
	Tan fine cond n	a lavora of comontod ail													
	Tan, inte sanu, no	o layers of cemented sin			- 10 -				24			LL = 18	, PL =	NP	
					- 11 -	S-4	SPI I SPI	18	34			%Pass	#200 :	= 23	
	Increase sand.						╞╡		50						
					- 12 -	1									
					- 13 -										
						$\left\{ \right\}$									
					14 -	1									
	Decreased cand				- 15 -	10			45			Consoli	dation	test	
						ပိ	б	10	43 50/4"				22001		
					- 16 -	1									
					- 17 -	-									
						1									
					- 01 -	4									
					- 19 -	-									
					- 20 -	1						N-			
					- 20 -	ې	FE		13			No sam	ipie re	covery.	
	5				- 21 -	ن ن	lig 🛛		22 25						
	Total Depth = 21.	5 feet			- 22 -										
	Borehole backfille	encountered. ed with soil cuttings.				-									
					23 -										
					L 24 _										

		A		4/V		Log	of E	Boring			LB	8-8			Sheet	1	С	of	1
F	Project			unten Dreiset Leki			Pro	oject No.			700/	00040	4						
ī	ocation	1	ARS Fulliment Ce	enter - Project Loki			Ele	evation an	d Da	tum	7000	08910	1						
	Drilling (ompar	Victorville, Californ	ia			Da	to Startor	4		285	68 (Fee	et, NG	VD 29	9) Finished				
ľ	Jinnig C	Joinpai	2R Drilling						4		:	3/4/21		Date I	moneu		3/4/2	1	
ſ	Drilling E	quipm	ent				Co	mpletion	Deptl	n				Rock	Depth				
	Size and	Type	CME 75 Truck-mou of Bit	unted Drill Rig			+			.	Distu	21.5 ft urbed		Un	disturbed		Core		
	Casing [Diametr	8-inch O.D. Hollow	Stem Auger	Ca	sing Depth (ft)	Nu	mber of S	samp	les	First		4		moletion	3	24 HR	,	-
Ľ	Jashig L	Jamea	-			- (1)	Wa	ater Level	(ft.)		$\underline{\nabla}$		-		L	-	Ţ		-
(Casing H	lamme	r	vveight (ibs)	-	Drop (In) -		liling ⊢ore	man	Ac	driar	n							
_		Homm	Bulk, 2-inch O.D. S	Split-Barrel SPT, 2.5-i	inch I.E	Drop (in)	Fie	eld Engine	er			-							
NGAN			Automatic		40	30			<u> </u>	Μ	. Ga Sa	lvan mple Da	ata		1				
g - LA	MBOL	Elev.		Sample Descript	ion			Depth	ber	be		ietr. iist 6in	Wa	ter	(Drillir		narks	Casing.	
Log	_A^A +	-2858.0							Nun	Ту	Rec (ir	Pen res BL/	Con	ent	Fluid Lo	ss, Drillin	g Resista	ince, etc	c.)
Repo			<u>Alluvium (Qa)</u> Sandy SILT (ML)), tan, very stiff, dry, f	ine sar	nd.									Bulk s	ample et bgs.	collect	ted fro	om
ΡM								- 1 -							Dry Do	ensity 9.0%	= 122.8	3 pcf	
57:31								- 2 -	-						Remo	Ided D	irect S	hear t	est.
1 12:5								- 3 -		т ШП	8	7			test.		onsolic	Jalion	
5/202		2854.5	Silty SAND (SM)	, light brown, medium	n dense	e, dry, fine to			۰.	SF	-	8							
J 4	ļļ ļ	2853.5	coarse sand. SAND (SP)_brow	wn medium dense d	rv fine	to coarse	·												
S.GP			sand, trace fine g	gravel, some caliche.	,			- 5 -	N	~	_	7			Dry Do	ensity	= 105.6	6 pcf	
Log								- 6 -	Ϋ́	5	18	11 11			100 -	5.170			
GIN								- 7 -											
9101		-2850.0							~	I.E		13							
70008			Silty SAND (SM)	, tan, very dense, dry	, fine s	and.			ŝ	LTTT	17	24 50/5"							
DGS/	ولأنبأ	2848.5		_,				- 9 -				00,0							
LIN			Clayey SAND (S moist, fine to me	C), orange brown, ve diums and.	ry den	se, slightly		- 10 -	4	<u>د</u>	0	34			Dry D	ensity	= 109.0) pcf	
CALIG								- 11 -	Ś	υ	-	50/4"			WC =	12.5%)		
CHN									-										
EOTE								- 12 -											
NE/G	<u></u>	2845.0	SAND (SP), light	t brown, dense, dry, f	ine to c	coarse sand,		- 13 -											
CIPLI			trace fine gravel.					- 14 -											
DIS								- 15				10							
DATA									Ϋ́	SPT IIII	18	12 19							
ECT			Increased fines of	contont				- 16 -		Ë		19							
PRO			increased lines of	Jontent.				- 17 -											
39101								- 18 -											
/7000								 - 19	1										
ATA1																			
RVD			Very dense, sligh	ntly moist, fine to mee	dium sa	and.		- 20 -	Ģ	2	8	21							
NATA/		2836.5						- 21 -	ن ن	υ	-	50							
SOMIC			Total Depth = 21 Groundwater not	.5 feet encountered.				- 22 -	_										
BAN.C			Borehole backfill	ed with soil cuttings.				- 23 -											
LANC									-										

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Project		Project No.		
	ARS Fulfillment Center - Project Loki	j	700089101	
ocation		Elevation and Datur	n	
)rilling Compa	Victorville, California	Date Started	2855 (Feet, NC	GVD 29)
onning compo	2R Drilling		3/5/21	3/5/21
Drilling Equipm	ent	Completion Depth	0,0,2	Rock Depth
	CME 75 Truck-mounted Drill Rig		20.9 ft	
Size and Type	er Bit 8-inch O.D. Hollow Stem Auger	Number of Samples	Disturbed	Undisturbed Core
Casing Diame	er (in) Casing Depth (ft)	Water Level (ft.)	First	Completion 24 HR.
Casing Hamm		Drilling Foreman		
Sampler		-	Adrian	
Complex Hemr	2-inch O.D. Split-Barrel SPT, 2.5-inch I.D. Cal Mod	Field Engineer		
	Automatic 140 2100 30		M. Galvan	
Elev.	Commiss Description	Depth 🛓		Remarks
In the second se	Sample Description	Scale E	Contraction - C	ntent (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
+2000.0	Alluvium (Qa)			
	Silty SAND (SM), light brown to tan, dense, dry, fine sand, some medium to coarse sand trace caliche			
				I link finge sentent
		- 3	12 00 15	High fines content.
		- 4		
	Fine to coarse sand trace fine gravel no caliche	- 5	15	Dry Density = 116.9 pcf
	decreased fines content.	C S S	<u>∞</u> 27	WC = 2.3%
			28	
		- 7 -		
	Fine to medium sand, increased fines content, no gravel.		8	
		- <u>'</u>		
+2845 5		- 9		
	SAND with Silt (SP-SM), tan, hard, slightly moist, fine sand	d , – – – – – – – – – – – – – – – – – – –		Dry Donsity = 113.8 pcf
	neavy callene.		$\frac{28}{29}$	WC = 1.7%
			42	%Pass #200 = 11
		- 12 -		
		- 14 -		
1.1.1+2 839.5	Cemented, trace clay. Silty SAND (SM) light brown very dense slightly moist		15 0 27	
	fine to coarse sand, trace fine gravel.		33	
		- 17 -		
		- 19 -		
	Fine to medium sand, increased silt, no gravel.	20 - 0 HO		
<u>1+</u> 2834.1	Total Depth = 20.9 feet		50/5	
	Groundwater not encountered. Borehole backfilled with soil cuttings			
	Selencio Suominou mui con outungo.			
		- 23 -		
		Γ1		

LA		4/V	Log	of E	Boring			LB-	-10			Sheet	1	of	1
Project				Pro	oject No.										
Location	ARS Fulfillment Cer	nter - Project Loki		Ele	evation ar	nd Da	tum	7000	089101	1					
	Victorville, California	а						286	6.5 (Fe	eet, N	GVD	29)			
Drilling Com	oany			Da	ite Starte	d			14/04		Date	Finished		0/4/04	
Drilling Equi	oment			Co	mpletion	Dept	h		0/4/2 I		Rock	Depth		3/4/21	
	CME 75 Truck-mou	inted Drill Rig						1	11.4 ft						
Size and Ty	e of Bit 8-inch O.D. Hollow	Stem Auger		Nu	Imber of S	Samp	les	Distu	irbed	2	Un	disturbed	2	Core	_
Casing Dian	eter (in)		Casing Depth (ft)	Wa	ater Leve	l (ft.)		First		-	Co	mpletion	-	24 HR.	-
Casing Ham	mer	Weight (lbs)	Drop (in)	Dri	illing Fore	man						_			
Sampler	2-inch O D Split-Ba	arrel SPT 2.5-inch I.D. (Cal Mod		d Engine	or									
z Sampler Ha	nmer Automatic	Weight (lbs)	Drop (in) 30	1	an Eudiue	er	Δ	Δtru	,						
	Automatic	140						Sar	nple Da	ita					
	v.	Sample Description			Depth Scale	nber	be	2 2 2	letr. sist /6in	Wat	er	(Drilli	ng Fluid, D	epth of Casing	,
ຊ 1. ¥ິດ (1) +286	5.5					Nur	ŕ	Ē	Per Bra	Cont	ent	Fluid Lo	ss, Drilling	Resistance, et	tc.)
Zepo	Alluvium (Qa)	vellow brown medium	lense moist fine			-									
5	to coarse sand, fr	iable.			- 1 -	1									
32 LI					- 2 -										
2:57						-			11			Drv D	ensitv =	: 111.0 pcf	
51 1					- 3 -	7	К	9	10			WC =	1.2%	p	
15/20					- <u> </u>				10						
4						-									
6	Fine to medium s	and.			- 5 -		E		4						
ől · · · · ·					- 6 -	S-2	SPT	18	7						
							E		8						
	SAND with Silt (S	P-SM), light brown, den	se, moist, fine to		- 7 -	1									
	medium sand, mi	caceous.			- 8 -		~	_	12			Dry D	ensity =	111.5 pcf	
0001						γ	۳ ا	₩	20 29				2.070		
	z.o				- 9 -				20						
	SILT with Sand (N	ML), pale olive brown, h	ard, moist, fine		- 10 -	_			24						
	sand, non plastic.					4	F	17	24 27						
		4.6			- 11 -	Ľ	μ		50/5"						
Б Ш	Groundwater not	encountered.			- 12 -	-									
LO BIO	Borehole backfille	ed with soil cuttings.				1									
					- 13 -]									
CIPL					- 14 -	+									
DIS					- 15 -	1									
ATA						-									
CT D					- 16 -	1									
SOJE					- 17 -	1									
01/PF					⊦ ′′ ·	-									
891(- 18 -	1									
/200(- 19 -	1									
						1									
(JVD)					20 -	1									
TANF					- 21 -	4									
MDA						1									
I.CO					- 22 -	1									
IGAN					- 23 -	-									
						1									

Project Project No. ARS Fulfillment Center - Project Loki 700089101 Location Elevation and Datum Victorville, California 2865 (Feet 1)	
ARS Fulfillment Center - Project Loki 700089101 Location Elevation and Datum Victorville, California 2865 (Feet 1)	
Victorville, California 2865 (Feet 1	
	NGVD 29)
Drilling Company Date Started	Date Finished
2R Drilling 3/29/21 Drilling Equipment Completion Depth	3/29/21 Rock Depth
CME 75 Truck-mounted Drill Rig 51.5 ft	
Size and Type of Bit Disturbed	Undisturbed Core
S-inch O.D. Hollow Stem Auger Casing Depth (ft) Water Level (ft.) First	Completion 24 HR.
Casing Hammer_ Weight (lbs) Drop (in) Drilling Foreman	<u>· ½ · ½ · </u>
Sampler	
z Sampler Hammer Automatic Weight (lbs) 140 Drop (in) 20	
z Automatic 140 30 A. Atry	
Sample Description	Water (Drilling Fluid, Depth of Casing,
	Content Fluid Loss, Drilling Resistance, etc.)
$\alpha \sim 1^{-1} + \frac{1}{2}$ Silty SAND (SM), dark brown, moist, fine to medium sand.	
SAND with Gravel (SP), pale brown, medium dense, moist,	
fine to medium sand, fine to coarse gravel.	
SIN SAND with Silt (SP-SM), pale brown, very dense, moist,	
Clayey SAND (SC), brown, very dense, moist, fine to	
a coarse sand, trace pinhole pores.	
SAND with Gravel (SP), pale vellow brown, dense, moist.	
fine to medium sand, fine to coarse gravel.	

oject		Project No.			700	00046	4				
cation	ARS Fulfillment Center - Project Loki	Elevation ar	nd Da	atum	700	08910	1				
	Victorville, California				286	65 (Fee	et, NGVD 2	9)			
.		I			Sa	mple Da	ata				
Elev.	Sample Description	Depth	nber	be		netr. sist 6in	Water	(Drilling	Remai Fluid, Dep	r KS th of Casing	
≨ິດ (10) +2841.0	· ·	- 24 -	Nur	Ļ	Ee	Per BL	Content	Fluid Loss	s, Drilling R	esistance, el	ic.)
			_								
.0.*]	SAND with Gravel (SP), red brown, very dense, moist,	- 25 -				28					
0	medium to coarse sand, fine to coarse gravel.	- 26 -	Ч. С	К	18	29					
				- 111		50					
.O.°		- 21 -									
0		- 28 -									
		- 29 -									
0		- 20									
	Dense.	- 30 -	ę	т ШП	8	15					
~ ~		- 31 -	÷،	SF	-	17					
.0		- 32 -	-								
\sim		- 33 -									
<u>с</u>		- 34 -									
0. 0. d	Von donso, fino gravel	- 35 -		 		26					
	very dense, nne gravel.		S-7	К	16	20 31					
0		- 30 -		╎║		50/4"					
0.0		- 37 -									
\sim		- 38 -									
.0		- 20									
0.0		- 39									
£2825.0	SAND (SP), red brown, very dense, moist, fine to medium			t. e		19					
	sand.	- 41 -	ч М	Lds	9	30					
+2823.5	Sandy SILT (ML), olive brown, hard, moist, fine to medium	- 42 -			1	59					
	sand, some caliche, plastic.	- 42 -	-								
		- 43 -									
		- 44 -	-								
		- 45 -	1	<u>.</u>							
+2819.5	SAND with Silt (SP-SM) nale brown very dense moist	+5	8-9	СR	10	19 50/4"					
	fine to medium sand.	- 46 -	ſ								
		- 47 -	-								
±2817.0		- 48 -	1								
	SAND (SP), pale yellow brown, very dense, moist, fine to coarse sand.		-								
		- 49 -	1								
		- 50 -	-	E	-	18					
		- 51 -	5-10	SPT	18	28					
+2813.5	Total Depth = 51.5 feet			<u> E</u>	1	32					
	Groundwater not encountered.	- 52 -	1								
	Dorenole packilled with peritonile grout.	- 53 -	-								
			1								

			Log	of B	oring			LB	-12			Sheet	1	of	1
Project	APS Fulfillmont Con	ator Brajaat Laki		Pro	oject No.			700	00010-	1					
Location	ARS Fulliment Cen			Ele	vation ar	nd Da	itum	100	00910	1					
Drilling Comp	Victorville, California	à		Det	to Storto	4		286	61 (Fee	et, NG	VD 2	29) Finished			
Drilling Comp	2R Drilling			Da		1			3/4/21		Dale	Fillisheu		3/4/21	
Drilling Equip	ment			Co	mpletion	Dept	h				Rock	Depth			
Size and Typ	CME 75 Truck-mour e of Bit	nted Drill Rig						Dist	21 ft urbed		U	ndisturbed		Core	
Casing Diam	8-inch O.D. Hollow S	Stem Auger	Casing Dopth (#)	Nu	mber of S	Samp	les	Firef		3		amplation	3		-
	-			Wa	ater Leve	l (ft.)		$ \underline{\nabla}$		-			-	<u>1</u> 24 ⊓к. <u>⊥</u>	-
Casing Hamn	ner	Weight (lbs)	- Drop (in) -	Dril	lling Fore	man	Δ.	driar							
Sampler Sampler Harr	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D. Weight (lbs)	Cal Mod	Fie	ld Engine	er			<u>.</u>						
	Automatic	140) 30				IVI	. Ga Sa	Ivan mple Da	ata					
	<i>.</i>	Sample Description	n		Depth Scale	nber	,pe	cov.	netr. sist /6in	Wa	ter	(Drillin	Ren g Fluid, [1arks Depth of Casing	۱,
≨ິດ +2861	0				— 0 —	Nur	ŕ	B.	Per BL	Con	ent	Fluid Los	s, Drilling	g Resistance, e	tc.)
	Alluvium (Qa) Silty SAND (SM),	brown, medium dense	, dry, fine sand,			-									
	trace clay.				1 - ·	1									
					- 2 -	1									
					- 3 -	- -	Ч	8	5						
					- ·	S	IS		9						
+++++2856	5 Clavey SAND (SC) red brown very den	se slightly moist			-									
	fine to coarse sand	d, trace fine to mediun	n gravel, trace		- 5 -	2	н	12	16			Dry De	ensity =	= 120.1 pcf	
	calicite.				- 6 -	0		<u>`</u>	50/6"			Direct	Shear	test.	
12854					- 7 -										
	to coarse sand, fir	n to light brown, mediu ne to medium gravel, ti	race silt.						13						
					- 8 -	°.3	SPT	18	12						
	5				- 9 -				11						
	Silty SAND (SM), to coarse sand, tra	red brown, very dense ace fine gravel.	, slightly moist, fine	Э	- 10 -	S-4	CB	6	50/6"			Drv De	ensitv =	= 109.7 pcf	
					 11				30/0			WC =	2.3%		
					- 12 -										
<u>+</u> 2848	.0	prown, dense, dry, fine	to coarse sand,		- 13 -										
	trace fine to mediu	um gravel.			- 14 -										
					- ·										
						μ		8	16 19						
					- 16 -	S	S		25						
					- 17 -	-									
					- · ·										
						1									
					- 19 -										
	Very dense, increa	ased coarse sand.			- 20 -	φ	<u>к</u>	~	47						
+2840	0 Total Depth = 21 f	eet			- 21 -	S		Ļ_	50/6"						
	Groundwater not e	encountered.				1									
	DOI ENDIE DACKIIIIE	a with son cullings.				-									
					- 23 -	1									
					_ 24 _										

LA	ΝΔΑ	A/V	Log	of E	Boring			LB·	-13			Sheet	1	of	1
Project				Pr	oject No.										
Location	ARS Fulfillment Cen	iter - Project Loki		Ele	evation ar	nd Da	tum	7000	089101						
Loodiion	Victorville, California	à			, and the second second			285	6.5 (Fe	eet, N	GVD	29)			
Drilling Comp	any			Da	ite Starte	b					Date	Finished			
Drilling Equip	2R Drilling ment			Cc	mpletion	Dept	<u>ו</u>	3	3/5/21		Rock	Depth		3/5/21	
0 1 1	CME 75 Truck-mour	nted Drill Rig			•			2	21.5 ft			•			
Size and Type	e of Bit 8-inch O D Hollow S	Stem Auger		Nu	Imber of S	Samp	les	Distu	irbed	4	Un	disturbed	3	Core	_
Casing Diame	eter (in)		Casing Depth (ft)	W	ater Leve	l (ft.)		First		-	Co	mpletion	-	24 HR. 	-
Casing Hamn	ner_	Weight (lbs)	Drop (in)	Dr	illing Fore	man									
Sampler	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D.	Cal Mod	Fie	eld Engine	er									
z Sampler Ham	^{mer} Automatic	Weight (lbs) 140	Drop (in) 30		1	_	Α.	Atry	<i>,</i>						
					Depth	Ē		Sar	nple Da היה כ	ita		-	Rema	arks	
(ft)	_	Sample Description	1		Scale	Jumbe	Type	(in)	⁵ enet resist BL/6in	Wa Con	ater tent	(Drilling Fluid Los	J Fluid, De s, Drilling I	pth of Casing, Resistance, et	c.)
+2856.	Alluvium (Qa)				- 0 -	2		-	-						
₩ 	SAND with Silt and dense moist fine	d Gravel (SP-SM), pale to coarse sand_fine g	e brown, medium		- 1 -]									
4 PM						1									
2:57:4					- 2 -]			10						
21 12					- 3 -	7	F H	18	10						
1/5/20					- 4 -	1	Ĩ		10						
					- ·	1									
					- 5 -	2	~	~	10			Dry De	nsity =	110.3 pcf	
					- 6 -	မှ	ö	₩	11 17				5.070		
	5				- 7 -										
- [moist, fine to coar	se sand, fine gravel, m	iedium dense, licaceous.						7						
88 +2848.		-	<u> </u>		- 8 -	S-3A	SPT	18	8						
	plastic, micaceous	olive brown, very stiff,	fine sand, non		- 9 -	5-50	E		12						
	Clayey SAND (SC), strong brown, very d	lense, moist, fine		- 10 -	1							noity -	117 1 pof	
	sand, some calich	le.				4	ж	18	27 36			WC =	11.7%	117.4 pci	
Į					- 11 -		Ŭ	·	50						
					- 12 -	-									
	SAND with Gravel	(SP), pale yellow brow	vn, dense, moist,		- 13 -	1									
	medium to coarse	sand, line gravel.				-									
ISCIE					- 14 -	1									
					- 15 -				12						
					- 16 -	S-5	SPT	18	14						
DIEC-						-			20						
PRO					- 17 -	1									
39101					- 18 -	-									
2000					- 19 -	1									
						-									
					- 20 -	6		_	19						
					- 21 -	۰. ۲	۳ <u>و</u>	16	27 44						
2	Total Depth = 21.5	5 feet			- 22 -	1									
N.CC	Borehole backfille	encountered. d with soil cuttings.				-									
ANG		-			- 23 -	1									
					L ₂₄ –										

LA	NGAN	Log c	of B	oring			LB	-14			Sheet	1	of	1
Project		-	Pro	oject No.						-				
	ARS Fulfillment Center - Project Loki						700	08910	1					
Location			Ele	vation a	nd Da	tum								
Drilling Compa	Victorville, California		Da	to Starto	4		285	5 (Fee	et, NG	VD 2	29) Finished			
Drining Compar	2R Drilling			le olaile	u			3/5/21		Date	1 IIIISHEU		3/5/21	
Drilling Equipm	ent		Co	mpletion	Dept	h		5/5/21		Rock	Depth	•	5/5/21	
	CME 75 Truck-mounted Drill Rig							11.5 ft						
Size and Type			Nu	mber of \$	Samp	les	Distu	urbed	•	U	ndisturbed		Core	
Casing Diamet	8-Inch O.D. Hollow Stem Auger er (in) Casing Der	oth (ft)	+				First		2	C	ompletion	2	24 HR.	-
	-	-	Wa	ater Leve	l (ft.)		$\overline{\Delta}$		-		<u> </u>	-	Ţ	-
Casing Hamme	rWeight (lbs)Drop (i	n) -	Dri	lling Fore	eman									
Sampler	2-inch O.D. Split-Barrel SPT. 2.5-inch I.D. Cal Mod		Fie	ld Engin	or	A	drian							
Z Sampler Hamm	ler Automatic Weight (lbs) 140 Drop (i	ⁿ⁾ 30	1''		501	м	Ga	lvan						
		00	-			IVI	Sa	mple Da	ata					
Elev.	Sample Description			Depth	ber	эе	ov.	etr. ist ôin	Wa	ater	(Drilling)	Rema	arks	
CO V V V V V V V V V V V V V	Campio Docomption			Scale	Num	Ţ	(ir	Pen res BL/	Con	itent	Fluid Loss,	Drilling F	Resistance, el	c.)
	Alluvium (Qa)			_ 0 -										
Ř	Silty SAND (SM), light brown, medium dense, dry, t	fine to		- 1 -										
M	medium sand, trace nine gravel.													
57.46				- 2 -										
12:1				_ 3 _		LE		10						
2021					ò	RP.	18	12						
4/5/				- 4 -				10						
0.0	Dense, increased fines content, cemented fragmen	its.		- 5 -	2	~	_	18			Dry Den	sity =	117.5 pcf	
9 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				- 6 -	ц.	Ъ	18	22			WC = 3.	. 1 70		
								14						
5				- 7 -										
8910	Medium dense, trace coarse sand, decreased fines	5		- 8 -	- m	I⊢ E	_	6						
000	content.				က်	R	12	9 21						
GGS				- 9 -				2.						
				- 10 -										
≝ <u></u> 2844.5	Very dense, some coarse sand. ∑ Increased fines content, cemented chunks		_	- 10	S-4	CR	6	50/6"						
	Total Depth = 10.5 feet			- 11 -										
GH	Groundwater not encountered.			- 10 -										
OTE	Borenole backfilled with soil cuttings.			- 12										
El CE				- 13 -	-									
					1									
SCIE				- 14 -]									
				- 15 -	-									
TAT/					1									
I I I I I I I I I I I I I I I I I I I				- 16 -										
SOUE				- 17 -										
01/PF					-									
1891				- 18 -	1									
2000				- 19 -]									
					-									
				- 20 -	1									
				21	1									
				- 21	4									
WO				- 22 -	+									
AN.C														
ANG														
ž I				<u> </u>							1			

	L	A	NBA	4/V	Log o	of B	Boring			LB	-15			Sheet	1	of	1
[Project					Pro	oject No.										
	Location	<u>ר</u>	ARS Fulfillment Cen	nter - Project Loki		Fle	vation ar	nd Da	tum	700	08910	1					
	Loodio		Victorville California	9			valoria		lum	286	6 (Fee	et NG	VD 29	9)			
	Drilling	Compar	iy	~		Da	te Starte	d				,	Date I	Finished			
	Drilling		2R Drilling			0.00	malation	Dent			3/4/21		Deal	Donth	3	8/4/21	
	Drining	Equipme	CME 75 Truck-mour	nted Drill Rig			mpieuon	Depu			21 5 ft		RUCK	Depth			
	Size and	d Type o	of Bit			Nu	mber of 9	Samn	les	Dist	urbed		Un	disturbed	0	Core	
	Casing	Diamete	8-inch O.D. Hollow Ser (in)	Stem Auger	Casing Depth (ft)			bamp	.00	First		3	Co	mpletion	3 2	4 HR.	-
	- 5		-		-	Wa	ater Leve	l (ft.)		$\overline{\Delta}$		-		<u>Ľ</u>	-	Ţ	-
	Casing	Hamme	r		Drop (In)	Dri	lling Fore	man									
	Sample	r	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D. (Cal Mod	Fie	ld Engine	er									
GAN	Sample	r Hamm	^{er} Automatic	Weight (lbs) 140	Drop (in) 30				A	Atr	/			i			
LAN	RIAL	Elev.					Depth	er		Sa	mple Da	ata		-	Rema	rks	
- Log	MATE SYME	(ft)		Sample Description			Scale	dumb.	Type	Reco: (in)	Penet resis BL/6ii	Wa Con	ter tent	(Drilling F Fluid Loss,	luid, Dep Drilling F	oth of Casing, Resistance, et	c.)
sport:		+2866.0	Fill				- 0 -	2		-					-		
۳ ۳			Silty SAND (SM),	dark brown, medium de	ense, moist, fine		- 1 -										
8 PM			Sana.				- ·	1									
:57:4							- 2 -	1	 						sity – ·	110 1 nof	
21 12		+2863.0	Alluvium (Qa)				- 3 -	7	ж	8	14 15			WC = 4.	4%	119.1 pci	
/5/20			SAND with Clay (S	SP-SC), pale brown, me	edium dense,		- 4 -		Ŭ	Ľ	27			Direct SI	near te	est.	
ل 14		£2861.5	SAND (SP), vellov	w brown, medium dense	e. fine to medium	_		-									
S.GP			sand, trace fine to	coarse gravel, micace	ous.		- 5 -				5						
LOG							- 6 -	Ч.	RP	18	8						
GINT		+2859.0					 . 7 .				0						
- 10			Sandy SILT (ML), some caliche vein	olive brown, hard, fine	sand, non plastic,				 		15			Dry Den	sitv = ²	108 0 pcf	
00891				io, micacocuo.			- 8 -	с. К	К	18	28			WC = 17	.3%		
S\70							- 9 -	—			40			Consolid	ation t	est.	
0 L	┥┥┥	±2856.5	SAND (SP), very p	pale brown, very dense	, moist, fine to			1									
/GIN			coarse sand, mica	aceous.			- 10 -	4	F	~	15						
IICAL							- 11 -	γ	R E	7	23 32						
ECH>							- 12 -										
EOT								-									
NE/G							- 13 - -	1									
CIPLI							- 14 -	-									
DIS							- 15 -										
ATA			With fine to coarse	e gravel, trace silt.				S-5	CR	5	50/5"						
ECT L							- 16 -	1									
ROJE							- 17 -	-									
101/P							 _ 10	1									
0089							- 01	-									
A1/70							- 19 -	1									
DAT/			Very polo grou de				- 20 -		┝┍		0F						
NIRV			very pale gray, de	5110C.			L .	9.0	SPT TITT	18	∠5 20						
DAT/		+2844.5	Total Death - 24 (E foot			- 21 -	1"	μ		28						
WOC			Groundwater not e	encountered.			- 22 -	1									
GAN.			Borehole backfille	d with soil cuttings.			- 23 -]									
ILAN								1									

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LA			Log	of E	Boring			LB	-16			Sheet	1	of	1
Project				Pr	oject No.										
Location	ARS Fulfillment Cen	ter - Project Loki		FI	wation ar	d Da	tum	700	08910	1					
Location	Victorville California	1			svalion ai		lum	286	1 (Fee	at NG	VD 2	9)			
Drilling Compa	ny	4		Da	ite Starteo	ł		200	/1 (1 00	<u>, 110</u>	Date	Finished			
	2R Drilling								3/4/21					3/4/21	
Drilling Equipm	ient			Co	mpletion	Dept	h				Rock	Depth			
Size and Type	OME 75 Truck-mour	nted Drill Rig		-				Dist	21.5 ft urbed		Ur	disturbed	(Core	
	8-inch O.D. Hollow S	Stem Auger		Nu	imber of S	Samp	les	2.00		3	0.		3		-
Casing Diamet	er (in) -		Casing Depth (ft)	W	ater Leve	(ft.)		First $\underline{\nabla}$		-	Co	ompletion	-	24 HR. 	-
Casing Hamm	er	Weight (lbs)	Drop (in)	Dr	Illing Fore	man	•	ما سا م							
Sampler	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D	. Cal Mod	Fie	eld Engine	er	A	ariar	1						
Sampler Hamn	^{ner} Automatic	Weight (lbs) 14	0 Drop (in) 30		0		М	. Ga	lvan						
ZZ _								Sa	mple Da	ata			Rema	arks	
Elev. P ↓↓↓ (ft)		Sample Description	on		Depth Scale	mbei	ype	jn) č	enetr. esist _/6in	Wa	ter	(Drilling F	-luid, De	pth of Casin	g,
^{≥ 0} +2861.0					- o -	Ĩ	-	<u>ه</u> _	a a B	COII	leni	Fluid Loss,	Drilling F	Resistance, e	etc.)
	<u>Alluvium (Qa)</u> Clavev SAND (SC	;), brown, medium de	nse. moist. fine to									(i.e.: oil)	orless	artificial	oinder
	coarse sand, trace	e silt.	, ,		- 1 -							()			
					- 2 -										
								-	4						
					- 3 -	۲.	SPT	18	. 6						
					- 4 -		Ë		6						
22/2/±2856.5	Silty SAND (SM).	brown, moist, dense.	fine to medium			-									
	sand, trace clay.	,,			- 5 -				12			Dry Den	sity =	117.2 pc1	f
					- 6 -	ŝ	R	18	30			WC = 7.	3%		
									43						
					- 7 -										
	Increased fines sa	and, trace organics, n	o clay.		- 8 -	3	L	~	12			Minor pe	troleu	m odor. Shemical	tests
	No organics.					ပု	R E	₩	26 22			Contoon	ity of c	Jilennioar	10010.
+2851.5					- 9 -										
	SAND (SP), tan, d	lense, slightly moist, i	medium to coarse		- 10 -		 		10			Dry Den	sitv =	111 9 nct	F
	Sand, trace fine gr					4	к	<u>∞</u>	34			WC = 1.	7%	111.0 poi	
					- 11 -	S			37						
					- 12 -	-									
					- 13 -	1									
					- 14 -	-									
						-									
	Brown, very dense	e, trace fine to mediur	n gravel, trace clay	-	- 15 -	Ŷ	ЧE	2	26						
					- 16 -	S	S		50/6"						
					- 17 -	1									
					- 18 -	-									
±2842.5	Silty SAND (SM), I	light brown, dense, sl	ightly moist, fine to			1									
	medium sand.				- 19 -]									
					- 20 -				15						
					21	S-6	К	18	31						
	Total Darth - 01 5	foot			- 21 -	ļ.			38						
	Groundwater not e	encountered.			- 22 -	1									
	Borehole backfilled	d with soil cuttings.			- 22 -	1									
					- 23	-									
					└ 24 -	1									

			Log	of E	Boring			LB-	17			Sheet	1 of	1
Project				Pr	oject No.									
Location	ARS Fulfillment Cer	nter - Project Loki		Ele	evation ar	id Da	tum	7000	89101					
	Victorville, Californi	a						285	8 (Fee	t, NG	/D 29	9)		
Drilling Compa	any			Da	ite Starteo	ł					Date F	inished		
Drilling Fauir	2R Drilling			0	mpletion	Denti	n	3	8/4/21		Rock I	Depth	3/4/21	
	CMF 75 Truck-mou	inted Drill Rig			Inpletion	Depu			21 ft		NOOK I	Deptil		
Size and Type	of Bit			N	Imber of S	Samn	les	Distu	rbed		Uno	disturbed	Core	
Casing Diame	8-inch O.D. Hollow ter (in)	Stem Auger	Casing Depth (ft)	W	ater Level	(ft.)	.00	First		2	Сог	mpletion	24 HR.	-
Casing Hamm	er_	Weight (lbs)	Drop (in)	Dr	illing Fore	man		<u> </u>					<u>+</u>	
Sampler	- 2 inch O.D. Split Pr						A	drian						
Sampler Ham	2-Inch O.D. Spiit-Ba	Weight (lbs)	Drop (in)	Fie	eld Engine	er		0.1						
	Automatic	140	30				IVI	. Gal Sar	van nple Da	ita				
		Sample Description			Depth	ber	эе		etr. ist 8in	Wat	er	(Drilling Fluid	marks	חת
ter (π) +2858.0		campie Docomption			Scale	Num	Ţ	(in (in	Pen res BL/(Cont	ent	Fluid Loss, Drill	ling Resistance,	etc.)
	Alluvium (Qa)		aliabete as sist of											
	to coarse sand, tr	red brown, very dense, ace fine gravel, trace ca	siignuy moist, fine iliche.	;	- 1 -									
		C												
					- 2 -							Dr. Densit	(= 100 0 mg	£
					- 3 -	-	с	ω	15			WC = 5.4%	/ – 123.2 pc	1
						Ś		-	40					
±2853.					- 4 -									
	SAND (SP), brow	n, medium dense, slight	tly moist, fine to		- 5 -				7					
		glavel, trace clay, some				N	ЬĒ	8	/ 9					
					- 6 -	S	S		12					
					- 7 -									
					- ' -							Dry Density	i = 106.5 pc	f
					- 8 -							WC = 3.9%) 100.0 pc	,
 +2848.9					9 -									
	SIILY SAIND (SIVI),	orange brown, very der	ise, dry, line sand	•	- 10 -	S-3	CR	5	50/5"					
					 - 11 _									
	Increased sand.				↓ '' -									
					- 12 -									
+2845]								
	SAND (SP), light	brown, dense, dry, fine	to coarse sand,	-										
					- 14 -									
					- 15									
					- 61 -	4	FE	_	12					
					- 16 -	γ	RP 1	12	20 21					
							╞╘		21					
					- 17 -	1								
					- 18 -									
					- 19 -]								
		fine to an effective	in an a state		- 20 -		m							
	Very dense, trace sand.	e fine to medium gravel,	increased coarse			S-5	ଞ	12	27 50/6"					
<u></u> +₽837.(Total Depth = 21	feet			- 21 -			\vdash	30/0					
	Groundwater not	encountered.			- 22 -]								
		eu with soll cuttings.				-								
					- 23 -	1								
					- +	1								

LÆ		4/V	Log	of E	Boring			LB	-18			Sheet	1	of	2
Project				Pr	oject No.			700							
Location	ARS Fulfillment Ce	nter - Project Loki		Ele	evation ar	nd Da	tum	700	J8910	1					
	Victorville, Californi	а			<u> </u>			285	68 (Fee	et, NG	VD 2	29)			
Drilling Com	2R Drilling			Da	ate Starteo	t l		3	120/21		Date	Finished		8/20/21	
Drilling Equip	oment			Co	mpletion	Depth	n	0	23/21		Rock	Depth		0/20/21	
Cine and Tra	CME 75 Truck-mou	inted Drill Rig						Dist	51.5 ft					-	
Size and Typ	8-inch O.D. Hollow	Stem Auger		Nu	Imber of S	Samp	les	Disti	Irbea	5	U	naisturbea	5	Core	-
Casing Diam	eter (in) -		Casing Depth (ft) -	w	ater Level	(ft.)		First		-	C	ompletion	-	24 HR. <u> </u>	-
Casing Ham	mer_	Weight (lbs)	Drop (in) -	Dr	illing Fore	man									
Sampler	2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D. (Cal Mod	Fie	eld Engine	er									
Z Sampler Har	^{nmer} Automatic	140	Drop (in) 30		1		Α.	Atr	/	-4-					
- LAN BOL	v.	Sample Description			Depth	er	a	sa ≥	inipie Da ≓∵ ;; :=				Rem	arks	
)	Sample Description			Scale	Numb	Typ	Reco (in)	Pene resis BL/6i	Con	tent	(Drilli Fluid Lo	ng Fluid, D oss, Drilling	epth of Casing Resistance, e	, tc.)
	Fill	alanda hanasana ara a Barra d	and the first		<u> </u>										
	sand.	dark brown, medium de	ense, moist, fine		- 1 -										
	Alluvium (Qa)		doneo moiot		2 -	1									
0.0	medium to coarse	e sand, fine to coarse gr	avel, slightly												
0.00	cemented.				- 3 -										
41512					- 4 -										
					- 5 -										
s o o						-	щ	8	24 36						
					6 -	S		<u> </u>	42						
≣ © ©					- 7 -										
0.00															
	.5SIITY_SAND (SM)	oilve brown very dense	moist fine to												
Ngg Ngg Ngg Ngg Ngg Ngg Ngg Ngg Ngg Ngg	medium sand, so	me caliche, slightly cem	ented.		9 -										
					- 10 -				15						
ALIG					 - 11 -	S-2	SPT	18	24						
					- '' -				44						
					12 -	1									
					- 13 -	-									
	SAND with Grave	el (SP), pale brown, very	dense, miost, fine	e —		1									
Sel • · · · •	to coarse sand, fi	ne to coarse gravel, mic	aceous.		- '-	-									
					- 15 -	~			19						
					- 16 -	М	Ю	18	35 47						
					 - 17 -										
D D					- '' -	-									
					- 18 -										
					- 19 -	-									
					- 20 -										
	Dense.					4	ЬЩ	80	13 16						
	Silty SAND (SM),	red brown, dense, mois	t, fine to medium		21 -	s S	s	-	22						
MO	sand, micaceous				- 22 -				_						
					- 22 -	1									
					- 23 -	-									
≥∟					L 24 _	1						_			

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LANGAN

		of Boring	L	.B-18		Sheet	2	of	2
Project	ARS Fulfillment Center - Project Loki	Project No.	7	00089101					
Location	Victorville, California	Elevation and	I Datum 2	2858 (Fee	t, NGVD 29	9)			
HILLERIAL Elev. (ft) +2834.0	Sample Description	Depth Scale	Number Type Recov	(in) Penetr. resist BL/6in	ta Water Content	(Drilling Fluid Loss,	Remar Fluid, Dept Drilling Re	ks h of Casing, esistance, etc	:.)
	Silty SAND (SM), red brown, dense, moist, fine to medium sand, micaceous.	- 25 - - 25 - - 26 - 	S-5	హె. 38 <u>50/3"</u>					
Pport Log-LaNGAN	SAND with Silt (SP-SM), very pale brown, very dense, moist, very fine sand, micaceous.	- 28 29	9 1 4	30					
₽	SAND with Gravel (SP) vellow brown very dense moist	- 31 - - 32 - - 32 - - 33 -	<u>v</u> ₽ <u></u>	50/6"					
OGS/700089101 - GINT LOGS. GPJ 4/5/202 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	medium to coarse sand, fine to coarse gravel.	- 34 - - 35 - - 36 - - 37 - - 37 - - 38 - - 39 - 	S-7	Ω 23 28 50/5"					
	SAND (SP), yellow brown, very dense, moist, fine to coarse sand.	- 40	SPT SPT	17 22 31					
AN. COMIDATAIIRVIDATAIIRVIDATAIIRVIDATAIIROUECT DATA_DISCIPLINEIG	Silty SAND (SM), red brown, very dense, moist, fine sand, micaceous. Total Depth = 51.5 feet Groundwater not encountered. Borehole backfilled with bentonite grout.	- 43 - - 44 - - 45 - - 46 - - 47 - - 48 - - 48 - - 50 - - 51 - - 52 - 	S-10	5 50/5" 24 22 34 39					
//TANG		-53							

LA		of Boring	LB-19	Sheet 1 of 1
Project		Project No.		
Leasting	ARS Fulfillment Center - Project Loki		700089101	
Location	Vietor illo Colifornia	Elevation and Daturn	DREE (Fast NC	
Drilling Compar		Date Started	2805 (Feel, NG	Date Finished
	2R Drilling		3/4/21	3/4/21
Drilling Equipme	ent	Completion Depth		Rock Depth
Size and Type	CME 75 Truck-mounted Drill Rig		21.5 ft	Lindisturbed
Size and Type	8-inch O.D. Hollow Stem Auger	Number of Samples	3	3 -
Casing Diamete	er (in) Casing Depth (ft)	Water Level (ft.)	First	Completion 24 HR.
Casing Hamme	er Weight (lbs) Drop (in)	Drilling Foreman	<u> </u>	
Sampler			Adrian	
Somplor Homm	2-inch O.D. Split-Barrel SPT, 2.5-inch I.D. Cal Mod	Field Engineer		
	Automatic 140 30		<u>M. Galvan</u>	
Elev.		Depth 👳 🔐		Remarks
	Sample Description	Scale		tent (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
+ <u>2865.0</u>	Alluvium (Qa)	0 - 2		
	Silty SAND (SM), orange brown, medium dense, slightly			
		- 2 -		
		- 3 ~	13	Dry Density = 114.8 pcf
		- <u>'</u>	$\stackrel{\infty}{\leftarrow}$ 17	WC - 5.176
		- 4	21	
	Dense.		5	
<u> </u>	Sandy SII T (MI) tan hard dry fine sand	— 6 – ი, ო	\approx 14 19	
	—			$D_{\rm R}$ (Density = 102.2 pcf
	Trace medium sand.	CH CH 8 -	$\frac{1}{50/5"}$	WC = 7.4%
	Increased fines content, no medium sand.		00/0	
±2855.5				
	Silty SAND (SM), light brown, dense, slightly moist, fine sand with caliche	- 10		
			© 20 22	2 inches of Sandy Clay (SC)
			26	layer.
		- 12 -		
	SAND (SP), light brown, very dense, slightly moist, fine to			
	coarse sand.	- 14 -		
		<u>⊦</u>		
		- 15 <u>-</u> <u>-</u> <u>-</u> <u>-</u> <u>-</u>	N 33	
			50/6"	
		- 17 -		
±2847.0				
	אוט (טוט), tan, very dense, slightly moist, fine to medium sand, trace caliche.			
		- 19 -		
			24 ∞ 30	
408/13 5	Fine sand, decreased silt.	ا ^م 21 - 20	35	
	Total Depth = 21.5 feet	- 22 -		
	Groundwater not encountered. Borehole backfilled with soil cuttings.			
		- 23 -		

LF	1/VC			Log	of B	oring			LB	-20			Sheet	1	of	1
Project					Pro	ject No.										
Location	ARS Fulfillment C	enter - Project Loki			Elev	vation ar	nd Da	tum	700	08910	1					
	Victorville, Califor	nia							286	60 (Fee	et, NG	VD 2	29)			
Drilling Com	2P Drilling				Dat	e Starte	d			2/1/21		Date	Finished	21	1/21	
Drilling Equi	pment				Cor	npletion	Dept	h		5/4/21		Rock	Depth	3/2	4/21	
	CME 75 Truck-mo	ounted Drill Rig								21.5 ft						
Size and Ty	pe of Bit 8-inch O.D. Hollov	w Stem Auger			Nur	mber of S	Samp	les	Dist	urbed	4		ndisturbed	Co	ore	-
Casing Dian	neter (in)		Ca	asing Depth (ft)	Wa	ter Leve	(ft.)		First	ţ	_	C	ompletion	24	HR. V	_
Casing Ham	imer_	Weight (lbs)	-	Drop (in)	Dril	ling Fore	man		<u> </u>				<u>+</u>		<u>+</u> -	
Sampler	Bulk, 2-inch O.D.	Split-Barrel SPT, 2	.5-inch I.	D. Cal Mod	Fiel	d Engine	er	Ad	driar	1						
Sampler Ha	^{mmer} Automatic	Weight (lbs)	140	Drop (in) 30	1			М	. Ga	Ivan						
] J						D //			Sa	mple Da	ata		R	emarl	(5	
the second secon	t)	Sample Descr	iption			Scale	umbe	Type	ecov.	enetr. esist tL/6in	Wa Con	ter tent	(Drilling Flu	id, Depth	n of Casing	, tc)
≥°, +286 	0.0 Alluvium (Qa)					- 0 -	ž	<u> </u>	2	<u> </u>			Bulk sam		lected fr	om
	Clayey SAND (S	SC), dark brown, ve	ery dense	e, slightly moist,		 - 1 -	1						0-5 feet b	gs.		
	tine to coarse sa	and, some fine grav	/el.		-	. ' .	-									
						- 2 -										
					-	- 3 -	<u>.</u>	К	12	21 50/6"			Dry Densi WC = 9.2	ty = 12 %	25.6 pcf	
						 _ 1 _				30/0						
//// +285		l) tan medium den	se sliah	tly moist fine to			-									
	medium sand, s	Drilling E 75 Truck-mounted Drill Rig ch O.D. Hollow Stem Auger Q Weight (lbs) 4 Weight (lbs) 4 Automatic Weight (lbs) 140 Sample Description Illuvium (Qa) layey SAND (SC), dark brown, very dense to coarse sand, some fine gravel. Ity SAND (SM), tan, medium dense, slight edium sand, some caliche. ery dense. ne sand, increased silt.	ay molot, mo to		- 5 -		I.E		12			%Pass #2	200 = 2	26		
				-	- 6 -	Ś	SPI	18	13							
					E	 . 7 .				12						
	Vory donso									20			6-inches of Dry Densi	of Sand ty = 1^{2}	d (SP) la 17 0 pcf	ayer.
	very dense.				ŀ	- 8 -	S-3	СR	16	48			WC = 3.2	%		
					-	- 9 -				50/4"						
						 _ 10 _										
					-		S-4	SPT	12	27 50/6"						
	Fine sand, incre	eased silt.				- 11 -				00/0						
					-	- 12 -										
					E	 - 12 -	1									
					F		-									
<u> +</u> 284	SAND (SP), ligh	nt brown, very dens	e, slightl	y moist, medium	;-+	- 14 -	1									
	to coarse sand,	some fine sand, tra	ace calic	he.		- 15 -	10			27						
					Ē	 - 16 -	ပိ	К	12	50/6"						
					-											
						- 17 -										
					F	- 18 -	-									
<u>+2</u> 84	1.0					 - 10 -	1									
	Clayey SAND (S sand, trace calid	SC), light brown, de che.	ense, slig	htly moist, fine	╞		-									
	,				ŀ	- 20 -	·~	LE		12			LL = 31, F	L = 21	1, PI = 1	0
					-	- 21 -	မှ	SP	18	13 32			70rass #2	.00 = 4	Ð	
<u>/ / / / / / +</u> 283	Total Depth = 2	1.5 feet				 - 22 -	_									
	Groundwater no Borehole backfi	ot encountered. lled with soil cutting	js.		F		-									
			•		ŀ	- 23 -	1									
						- 24 -										

LA		of Boring	LB-21	_ She	et 1 of 1
Project		Project No.			
Location	ARS Fulfillment Center - Project Loki	Elevation and Datum	700089101		
	Victorville, California		2856.5 (Feet,	NGVD 29)	
Drilling Compa	ny	Date Started	Y	Date Finishe	ed
Drilling Equipp	2R Drilling	Completion Depth	3/5/21	Rock Depth	3/5/21
	CMF 75 Truck-mounted Drill Rig	Completion Depth	21.5 ft		
Size and Type	of Bit	Number of Samples	Disturbed	Undistur	oed Core
Casing Diame	er (in) Casing Depth (ft)	Water Level (ft.)	First	Completi	on 24 HR.
Casing Hamm	erWeight (lbs) Drop (in)	Drilling Foreman		<u>+</u>	_
Sampler	2-inch O.D. Split-Barrel SPT 2.5-inch I.D. Cal Mod				
Sampler Hamr	her Automatic Weight (lbs) 140 Drop (in) 30	Field Engineer	A Atry		
	Automatic 140 30		Sample Data		
Elev.	Sample Description	Depth ag ag Scale L	(in) (in) Penetr. BL/6in	Vater (ontent Flu	Remarks Drilling Fluid, Depth of Casing, id Loss, Drilling Resistance, etc.)
+2856.5	Fill	0 2			
	Silty SAND (SM), pale brown, medium dense, moist, fine				
	Sanu.				
		- 2 -			
+2853.5	Alluvium (Op)		10 ∞ 12	Dr	y Density = 113.4 pcf C = 4.1%
	Silty SAND (SM), pale brown, medium dense, moist,		10		
	medium to coarse sand, trace fine gravel.	- 4			
		- 5	6		
		SPT 8	∞ 7		
			10		
		- 7 -			
	Dense.	- 8 - ņ "		Dr	y Density = 115.0 pcf C = 2 7%
		v, o	28	%	Pass #200 = 15
	Sandy CLAY (CL), olive brown, hard, moist, fine sand, low				
	plasticity, micaceous, lew calicite deposits.	- 10	12		. = 41, PL = 24, PI = 17
			₽ 15		
			22		
		- 12 -			
		- 13 -			
//////////#2843.0	SAND with Silt (SP-SM), red brown, dense, moist, fine to				
	coarse sand, trace fine to coarse gravel, micaceous.				
		- 15	28		
			∞ 37		
			32		
		- 18 -			
	Very dense.	20	15		
			♥ 27 27		
	Total Depth = 21.5 feet	- 22 -			
	Borehole backfilled with soil cuttings.				

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			Log	of E	Boring			LB	-22			Sheet	1 of	1
Project				Pro	oject No.			700						
Location	ARS Fulfillment Cen	iter - Project Loki		Ele	evation ar	nd Da	tum	7000	08910 ⁻	1				
	Victorville, California	1						286	6.5 (F	eet, N	GVD	29)		
Drilling Compar	у			Da	ite Starte	ł					Date	Finished		
Drilling Equipm	2R Drilling			Co	mnletion	Dentl	n	;	3/4/21		Rock	Denth	3/4/21	
	CMF 75 Truck-mour	nted Drill Rig			mpiction	Dopu			21 3 ft		I LOOK	Dopti		
Size and Type	of Bit			Nu	mber of S	Samp	les	Dist	urbed		Ur	ndisturbed	Core	
Casing Diamet	8-inch O.D. Hollow S	Stem Auger	Casing Depth (ft)					First		3	Co	3 ompletion	24 HR.	-
- 5	-		-	Wa	ater Leve	(ft.)		$\overline{\Delta}$		-		<u>▼</u> ′ -	<u> </u>	-
Casing Hamme	er	- vveight (ibs)	Drop (In)		Illing Fore	man								
Sampler	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D. (Cal Mod	Fie	eld Engine	er								
Sampler Hamm	^{her} Automatic	Weight (lbs) 140	Drop (in) 30				A.	Atry	/					
					Dopth	-		Sa	mple Da	ata		Re	emarks	
(ft)		Sample Description	I		Scale	admu	Fype	ecov.	enetr esist L/6in	Wa Con	ater itent	(Drilling Fluid	J, Depth of C	asing,
^{≥°°} +2866.5	Fill				— o —	ž	<u>'</u>	£ ₽	<u> </u>					
	Silty SAND (SM),	dark brown, medium de	ense, moist, fine to)										
	medium sand.				- 1 -									
<u>+</u> 2864.5					- 2 -									
	SAND (SP), pale b	prown, medium dense,	moist, fine to				E		5					
	coarse sand, mica	aceous.			- 3 -	<u></u>	SPT	18	7					
					- 4 -		E		6					
	Dry, with fine to co	oarse sand, very friable			- 5 -	~	~	_	9			Sample dis	sturbed.	ncf
					- 6 -	Ϋ́	ЪШ	18	15 26			WC = 1.2%	y = 120.2	μοι
+2859 5					 _				20					
	SILT with Sand (M	IL), very pale olive gray	/, hard, dry, fine		_ / _									
	sand, non plastic,	micaceous.			- 8 -	S-3	SPT	10	26 50/4"					
<u>+</u> 2857.0					- 9 -									
	sand, micaceous.	P-Sivi), pale brown, ver	y dense, dry, line		- 10 -	S-4	CR	12	50/6"			Dry Densit	y = 95.4 r	ocf
					- ·		- 10		00/0			WC = 5.6%	0	
					- ' .									
± 2854.5	SAND (SP), yellov	v brown, very dense, m	oist, fine to coarse	<u>-</u>	- 12 -									
	sand, friable, mica	aceous.			- 13 -									
					- 14 -									
					- 15 -									
						ŝ	РТ	8	15 26					
					- 16 -	S	s	-	30					
					- 17 -									
					- ·	1								
					- 18 -	1								
					- 19 -	-								
						1								
	Fine to medium sa	and.			- 20 -	Ģ	_ ۲		25					
					- 21 -	က်	ō	7	27 50/4"					
<u></u> +2845.0	\neg Total Depth = 21.3	B feet		Γ										
	Borehole backfille	d with soil cuttings.			- 22 -]								
		<u> </u>			- 23 -	-								
						1								

			Log	of E	Boring			LB	-23			Sheet	1	of	1
Project	ARS Fulfillment Cer	nter - Proiect Loki		Pr	oject No.			700	08910 [,]	1					
Location				Ele	evation ar	id Da	itum			-					
Drilling Compa	Victorville, California	а		Da	te Starte	4		286	64.5 (F	eet, NO	GVD Date F	29) Finished			
	2R Drilling					-			3/4/21					3/4/21	
Drilling Equipm	nent			Co	mpletion	Dept	h				Rock	Depth			
Size and Type	CME 75 Truck-mou of Bit	nted Drill Rig		+			.	Dist	21.5 ft urbed		Un	disturbed		Core	
Casing Diamo	8-inch O.D. Hollow	Stem Auger	Casing Dopth (ft)	NL	imber of S	Samp	les	Fire	+	4		mplotion	3		-
Casing Diame	-	- 1	-	W	ater Leve	(ft.)		$\overline{\nabla}$		-			-	<u> </u>	-
Casing Hamm	er_	Weight (lbs)	Drop (in)	Dr	illing Fore	man									
Sampler	2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D.	Cal Mod	Fie	eld Engine	er									
Sampler Hamr	^{ner} Automatic	Weight (lbs) 140	Drop (in) 30		1		Α.	Atr	<u>y</u>			.			
SYMBOL SYMBOL (ft)		Sample Description	ı		Depth Scale	Jumber	Type	Gecov.	⁵ enetr. resist BL/6in	wat Wat Conte	er ent	(Drillin Fluid Los	Ren ng Fluid, I ss, Drilling	1arks Depth of Casing g Resistance, e	g, etc.)
+2864.5	Fill				- 0 -	2		-	-						
	Silty SAND (SM),	dark brown, medium d	ense, moist, fine		- 1 -	-									
 _ <u>+</u> _2863.0	Alluvium (Qa)			-											
	SAND with Grave to coarse sand, fir	l (SP), dark brown, den ne gravel, micaceous,	ise, moist, medium	I					24			Dry De	ensity :	= 116.5 pcf	
		giaren, inicaceedaei			- 3 -	۲.	К	18	30			WC =	2.5% Shear	teet	
					- 4 -				31			Direct	onear	1631.	
					- 5 -	9									
	Very dense.					/S-2	F	8	15 18						
+2858.5	Clayey SAND (SC	C), very light gray, very	dense, dry, fine		6 -	3-2a	S		34						
<u>////</u> #2857.5	sand, some callcr	pale brown very dense	e moist fine sand		- 7 -	Ű									
신하네	micaceous.		,,	,	- 8 -	ကို	ж	2	34			Dry De	ensity :	= 97.3 pcf	
						0		`	50/6"			100-	5.470		
					- 9 -										
					- 10 -	4	FE	- -	30						
					- 11 -	نە ا	RE	-	50/5"						
					- 12 -										
	coarse sand, trace	e fine gravel, micaceou	is.		- 13 -										
					- 14 -										
						S-5	К	7	34 50/5"						
					- 16 -				23,0						
					- 17 -	-									
+ <u>+</u> 2847.0	SAND with Silt (S	P-SM), pale brown, ver	y dense, moist,		- 18 -										
	tine sand, micace	OUS.				-									
					- 19 - -	1									
					- 20 -	-	╞		24						
					- 21 -	S-6	SPT	18	40						
	Total Depth = 21.	5 feet			+	-	<u>⊢ E</u>		50						
	Groundwater not	encountered.			- 22 -	1									
		a with soli cutilitys.			- 23 -	{									
					t '	1									

LA		V	Log	of B	oring			LB	-24			Sheet	1	of	1
Project	ARS Eulfillment Center - Proj	act Loki		Pro	oject No.			7000	180101						
Location				Ele	vation ar	nd Da	itum	1000	009101						
Drilling Comp	Victorville, California			Da	to Startor	4		286	2 (Fee	t, NG	VD 29	9) Finished			
Drilling Compa	2R Drilling							3	3/4/21		Date	IIIISIICU		3/4/21	
Drilling Equipr	nent			Co	mpletion	Dept	h				Rock	Depth			
Size and Type	CME 75 Truck-mounted Drill	Rig						2 Disti	20.9 ft irbed		Un	disturbed		Core	
	8-inch O.D. Hollow Stem Aug	er		Nu	mber of S	Samp	les		libou	5	0.1		2		-
Casing Diame	-	C	asing Depth (ft)	Wa	ater Leve	l (ft.)		First		-	Co	mpletion	-	24 HR. <u> </u>	-
Casing Hamm	erWeight (I	bs) -	Drop (in) -	Dri	lling Fore	eman									
Sampler	2-inch O.D. Split-Barrel SPT,	2.5-inch I.D. Ca	al Mod	Fie	ld Engine	er									
Sampler Ham	^{ner} Automatic ^{Weight (I}	^{bs)} 140	Drop (in) 30				A.	Atry	/						
Elev. Elev. (ft) 2862 (Sample	Description			Depth Scale	Number	Type	Recov. (in)	Penetr. resist BL/6in	t <u>a</u> Wa Con	ter tent	(Drillin Fluid Los	Rem g Fluid, D s, Drilling	arks epth of Casing Resistance, e	J, etc.)
	Fill Silty SAND (SM), dark brow sand.	<i>ı</i> n, medium den	se, moist, fine		— 0 — -	-									
	Alluvium (Qa) Clavey SAND (SC) brown	verv dense mo			- 2 -										
	some caliche.	,	inet, into carra,			-			20						
						ò	SP	18	26 28						
42857.5					- 4 -				20						
	sand, micaceous, some cal	own, very dense iche.	e, moist, fine		- 5 -	Ņ	<u>د</u>	0	40			Dry De	ensity =	108.9 pcf	
					- 6 -	ن ن	0	-	50/4"			WC =	3.9%		
	SAND with Silt (SP-SM), ve fine to medium sand, micac	ry pale brown, v eous.	very dense, dry,						33						
					- 8 -	S-3	SPT	18	43						
					- 9 -				42						
	SAND (SP), pale yellow bro	wn, dense, moi	st, medium to	:	- 10 -				25			Dry De	nsitv =	: 112 0 ncf	
		i, micaceous.			 - 11 -	84	К	18	25 28			WC =	1.2%	112.0 poi	
						<u> </u>			32						
					- 12 -										
					- 13 -										
					- 14 -										
<u>€</u>	Silty SAND (SM) pale olive	brown verv de	nse moist fine			S-5A	PT BT	12	20 50/6"						
	sand, micaceous.	,,			- 16 - -	5-58			00/0						
					- 17 -										
					- 18 -	1									
					_ 10 _	1									
						-									
					- 20 -	9	μ	7	35						
<u> + -</u> 2841.2	Total Depth = 20.9 feet				- 21 -		0		50/5"						
	Groundwater not encounter Borehole backfilled with soi	ed. I cuttings.			- 22 -	1									
		-				1									
						-									
>	1				_ 24 _	1	1					1			

 _

LA		4/V	Log	of E	Boring			LB	-25			Sheet	1	of	1
Project				Pr	oject No.										
Location	ARS Fulfillment Ce	enter - Project Loki			ovation or	d Da	tum	700	089101						
	Victorville Californ	nia			svauori di	u Dd	ann	286	15 (F	aet N	G\/D	29)			
Drilling Comp	any			Da	ate Starteo	ł		200	1.5 (1 (<u></u>	Date	Finished			
	2R Drilling							;	3/5/21				3	/5/21	
Drilling Equip	ment			Co	ompletion	Dept	h				Rock	Depth			
Size and Tyr	CME 75 Truck-mo	unted Drill Rig		_				Dieti	21.5 ft		Lin	disturbed		ore	
OIZE and Typ	8-inch O.D. Hollow	v Stem Auger		Nu	Imber of S	Samp	les	Dist	libeu	3		uistui beu	3	016	-
Casing Diam	eter (in) -		Casing Depth (ft)	W	ater Level	(ft.)		First ∑		-	Co	mpletion	- 24	4 HR. <u>¥</u>	-
Casing Ham	ner	Weight (lbs)	Drop (in)	Dr	illing Fore	man	Δ.								
Sampler	2-inch O.D. Split-B	Barrel SPT, 2.5-inch I.D.	Cal Mod	Fie	eld Enaine	er	A	ariar	1						
Sampler Han	^{nmer} Automatic	Weight (lbs) 140	Drop (in) 30		5		М	. Ga	lvan						
								Sa	mple Da	ita			Domo	rke	
Ele BULLE BULE	1.	Sample Descriptior	า		Depth Scale	nber	/pe	in) co	netr. sist /6in	Wa	ter	(Drilling F	uid, Dep	th of Casing	,
ຊ_ິດ +2861	.5					Nur	Ύ	e	Pel BL	Con	tent	Fluid Loss, I	Drilling Re	esistance, e	tc.)
	Alluvium (Qa)) red brown dense alig	htly moist find to												
	coarse sand, tra	ce fine gravel.			- 1 -										
		-				1									
					_ 2 _									11 1	
					- 3 -		κ		19			WC = 3.6	31ty = 1 3%	11.1 pct	
						ν	ō	-	23 33						
					- 4 -										
					- 5 -										
	Increased sand of	content.				2	Г	8	7						
<u>+</u> 2855	.5 SAND with Silt (S	SP-SM), light brown, me	dium dense.		- 6 -	۰ ن	SF	-	9 11						
	slightly moist, fin	e to coarse sand, trace	fine gravel.												
					- ' -									11 1 pof	
					- 8 -	Ϋ́	К	15	17 38			WC = 3.1	10y – 1 1%	11.4 pci	
<u>····</u> + <u>+</u> 2853	.0 Silty SAND (SM)), tan, very dense, dry, fi	ne to medium		+ -		Ŭ		50/3"						
	sand, trace fine g	gravel, trace caliche.			- 9 -										
	Fina ta madium	and with caliaba com	antad na graval		- 10 -				40						
	Fine to meaium	sand, with calicne, ceme	ented, no gravel.			4	FI	8	18 34						
					- 11 -	S	S	-	47						
					- 12 -	_									
						-									
) 1	SAND (SP), brow	wn, very dense, dry, coa	rse sand, some		- 13 -	1									
	fine to medium s	and, trace fine gravel.	2			1									
					- '-	-									
					- 15 -	5	~	-	41						
					L 16	ပ်	Ö	-	50/5"						
					- 01 -	4									
					- 17 -	-									
						1									
					- 18 -	1									
		SD SM) light heating	v done olichtly		- 19 -	-									
	moist, fine to me	edium sand, trace coarse	sand, some			1									
	caliche.				20 -	1			17						
					- 21 -	S S	LdS	18	25						
{ <mark> ···· : · +</mark> 2840	.0 Total Depth = 21	5 feet			+		FE		28						
	Groundwater not	t encountered.			- 22 -	1									
	Borehole backfill	led with soil cuttings.			- 23 -]									
						-									
					└─ 24 ─	1						1			

LA	NLAA	A/V		Log	of B	oring			LB	-26			Sheet	1	of	1
Project					Pro	ject No.										
	ARS Fulfillment Cer	nter - Project Loki	i						700	08910	1					
Location					Ele	vation a	nd Da	atum				~ ~				
Drilling Compan	Victorville, California	a			Dat	te Starte	d		285	9.5 (F	eet, N	GVL	29) Finished			
Drining Company	2R Drilling						u			3/5/21		Date	, moneu		3/5/21	
Drilling Equipme	ent				Coi	mpletion	Dept	h		5/5/21		Rocl	k Depth		5/5/21	
	CME 75 Truck-mou	nted Drill Ria								21.5 ft						
Size and Type o	of Bit				Nu	mber of	Samn		Dist	urbed		U	Indisturbed		Core	
Casing Diamate	8-inch O.D. Hollow S	Stem Auger		acing Donth (ft)	- Nul		oamp	103	Firet		3	_	Completion	3		-
Casing Diamete	- (IN)			asing Depth (it)	Wa	ter Leve	el (ft.)		$ \nabla$		-			-	24 ⊓K. ▼	-
Casing Hamme	r	Weight (lbs)	I	Drop (in)	Dril	lling Fore	eman		_	•			<u> </u>			
Sampler			-					A	driar	า						
Complex Lloner	2-inch O.D. Split-Ba	Weight (lbs)	h I.D. Ca	I Mod	Fie	ld Engin	eer									
	^{er} Automatic	Weight (ibs)	140	30	<u> </u>			Μ	. Ga	Ivan						
						Denth	-		Sa	mple Da	ata		_	Ren	narks	
, Tev. (ft)		Sample Descr	ription			Scale	mbe	ype	ecov	enetr esist L/6ir	Wa	ter tent	(Drillin	ng Fluid, I	Depth of Casir	ng,
≥ 00 +2859.5						- 0 -	ź	-	۳ ۳	<u>ه ۽ م</u>	001	tont	Fluid Lo	ss, Dhiin	g Resistance,	elc.)
	Silty SAND (SM), moist_fine to coar	tan to brown, me se sand, some fi	edium de ne to me	nse, dry, slightly dium gravel	'	-	-									
				alam gravel.	ŀ	- 1 -	-									
					ľ	-	1									
					Į											
					-	- 3 -		LE	_	6						
					-	-	- v	IS II	Ĩ	7 7						
					ŀ	- 4 -	-			1						
					Ì	- 5 -	-									
2854.0	04115 (05) 1					- 5	- ~	~	_	16			Dry D	ensity :	= 105.0 pc	f
	SAND (SP), browi	n, medium dense 5 medium sand s	e, slightly	moist, coarse		- 6 -	ပ်	Ь	₽	22			- VVC -	2.070		
	gravel.	5 medium sand, s	some im		ŀ	-	+	_ Ⅲ		22						
	-				ŀ	- 7 -	-									
	Trace fine gravel.				[- - 8 -		LE		5						
2851.0		ten medium den	a a aliada	the maniat fina to		- 0	- v	PP E	9	6						
	medium sand.	tan, medium den	ise, siign	itty moist, inte to	' -	- 9 -	+	E		6						
					ŀ	-	1									
	Brown, very dense	e, fine to coarse s	sand, tra	ce fine gravel.	Ī	- 10 - -				17			Dry D	ensity	= 110.9 pc	f
2848.5						- 11 -	۵,	Ч С Ц	1	39			vvc =	8.4%		
	sandy SILT (ML),	light brown, hard	i, slightly	moist, fine	ŀ	-		11		50/5"						
					ŀ	- 12 -	-									
+2846.5						- 10										
	Silty SAND (SM),	tan to brown, ver	y dense	, slightly moist,		- 13]									
	line sand, trace ci	ay, trace caliche.			ŀ	- 14 -	-									
					ŀ	-	-									
					Ì	- 15 -	1.0	I.E		10						
						- 16 -	- S	SPI	9	24						
	Some medium to	coarse sand, inci	reased s	and content, no	-	-		<u> </u> E		32						
	oldy.				ŀ	- 17 -	-									
2 +2841 5					ľ	- 10	1									
	SAND (SP), red b	rown, very dense	e, slightly	moist, medium		- 18 -]									
	to coarse sand, so	ome ine sana, tra	ace fine	graver.	ŀ	- 19 -	-									
					ŀ	-	-									
					ŀ	- 20 -				17						
					Į	- 21 -		К	18	44						
**** ********************************	Total Danth - 01 /	5 foot				-	+		 	50						
	Groundwater not e	encountered.			ŀ	- 22 -	-									
	Borehole backfille	d with soil cutting	js.		ŀ	-	1									
					Į	- 23 -]									
						- 24 -										

LA		4/V	Log	of B	Boring			LB	-27			Sheet	1	of	1
Project				Pro	oject No.										
Leastion	ARS Fulfillment Ce	enter - Project Loki			votion on		t	7000	08910	1					
Location	Mister ille Celiferni	1-		Ele	evation an	d Da	tum	005	о <i>с (</i> с			20)			
Drilling Compa	victorville, Californi	la		Da	ite Starteo	ł		285	8.5 (F	eet, N	GVD Date	29) Finished			
	2R Drilling					-		:	3/4/21					3/4/21	
Drilling Equipm	nent			Co	mpletion	Dept	h				Rock	Depth		0, 1/2 .	
	CME 75 Truck-mou	unted Drill Rig							21.5 ft						
Size and Type	of Bit	Stom Augor		Nu	Imber of S	Samp	les	Distu	urbed	3	Un	disturbed	3	Core	
Casing Diamet	er (in)	Stelli Augel	Casing Depth (ft)			(6)		First		5	Co	mpletion	5	24 HR.	-
	-		-	VVa	ater Level	(π.)		$\overline{\Delta}$		-		Ľ	-	Ţ	-
Casing Hamm	er	Weight (lbs)	- Drop (in) -	Dri	Illing Fore	man									
Sampler	2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D.	Cal Mod	Fie	eld Engine	er	A	arian							
Sampler Hamn	^{ner} Automatic	Weight (lbs)	Drop (in) 30	1			м	Ga	lvan						
	Automatio	1-1		-			101	Sa	mple Da	ata			_		
Elev.		Sample Descriptio	n		Depth	ber	эс	۲	etr. ist ôin	Wa	iter	(Drilling		arks	
1 ₹ (IL)					Scale	Num	Ę	, Eeo	Pen res BL/	Con	tent	Fluid Loss	s, Drilling	Resistance, et	c.)
	Alluvium (Qa)				- 0 -										
	Clayey SAND (SC	C), brown, medium der nd	nse, slightly moist,		- 1 -										
		nu.													
					- 2 -										
42855.5							I. E		4						
	Silty SAND (SM),	, brown, medium dense	e, slightly moist, fine	е		Ŷ	LdS	18	5						
	to coarse sand, ti	race line gravel, liace (lay, liace calicite.		- 4 -		E		6						
<u>1 1 1 1 12854.0</u>	SAND with Silt (S	SP-SM), red brown, me	dium dense, slightly	y — 1											
	moist, fine to coa	rse sand, some fine to	medium gravel,		- 5 -	~			10			Dry De	nsity =	111.9 pcf	
	trace caliche, trac	ce clay.			- 6 -	Ч.	К	18	11			VVC = 3	3.1%		
									15						
					- 7 -	1									
	Light brown, trace	e fine gravel, no clay.					I.E		7						
						ŝ	Lds	18	10						
					- 9 -		μE		11						
	Silty SAND (SM),	, light brown, very dens	e, slightly moist,	•	+ -										
	fine to medium sa	and.			- 10 -	S-4	CR	6	50/6"			Dry De	nsity =	96.2 pcf	
					- 11 -	-							5.0%		
					- 12 -	1									
					- 13 -]									
						-									
					- 14 -	-									
						-									
	Dense, increased	d fines content, trace ca	aliche.		- 15 -	5	LE	~	11						
	Decreased fines	content			- 16 -	Ϋ́	RP E	100	15 25						
	Decreased miles	content.							25						
					- 17 -	1									
		un von danas - Rubu	maint first		- 18 -	-									
	Coarse sand, trac	vn, very dense, slightly ce fine gravel.	moist, fine to			-									
		J			- 19 -	1									
					_ 20 _	1									
						9 9	_ ∭	[_]	25						
					- 21 -	γ	Ö	~	42 50						
+2837.0	Total Depth = 21.	.5 feet							55						
	Groundwater not	encountered.			- 22 -]									
		ea with son cuttings.			- 23 -	ł									
						1									
	1				<u> </u>	I	1					1			

LA		of Boring	LB-28	_ Sheet 1 of 1
Project		Project No.		
Location	ARS Fulfillment Center - Project Loki	Elevation and Datum	700089101	
LUCATION	Victorvillo, California	Elevation and Datum	2854 5 (East N	
Drilling Compar	visionile, Gamorna ny	Date Started		Date Finished
	2R Drilling		3/5/21	3/5/21
Drilling Equipm	ent	Completion Depth		Rock Depth
Size and Type	CME 75 Truck-mounted Drill Rig		21.5 ft Disturbed	Undisturbed Core
	8-inch O.D. Hollow Stem Auger	Number of Samples	4	3 -
Casing Diamete	er (in) Casing Depth (ft)	Water Level (ft.)	First ∑ -	Completion 24 HR.
Casing Hamme	er Weight (lbs) Drop (in)	Drilling Foreman		
Sampler	2-inch O.D. Split-Barrel SPT, 2.5-inch I.D. Cal Mod	Field Engineer		
Sampler Hamm	her Automatic Weight (lbs) 140 Drop (in) 30		Δ Δτηγ	
			Sample Data	
	Sample Description	Depth be	M (Qin tetr.	ater (Drilling Fluid, Depth of Casing,
≨໌ທ໌ (¹¹) +2854.5				htent Fluid Loss, Drilling Resistance, etc.)
	Alluvium (Qa) Silty SAND (SM) strong brown, medium dense, moiet, fina			
	to medium sand, micaceous.	- 1 -		
				Dry Density = 115 7 pcf
		- 3 - 7 8	₩ 2 14	WC = 3.6%
		4	19	
	Heavy caliche, cemented.	- 5	13	
			₩ ₩ 12	
			10	
<u>1</u> <u>+</u> 2847.5	SAND with Gravel (SP), red brown, medium dense, moist,			
	medium to coarse sand, fine to coarse gravel, trace silt.	- 8 - 0 ~	12	Dry Density = 115.1 pcf
		v ¹ 2	$\begin{array}{c} \Psi \\ 22 \end{array}$	VVO - 2.470
		9		
		- 10		
10942 5		S-4A		
	Silty SAND (SM), olive brown, medium dense, moist, fine	0	14	
	sand, trace caliche.	- 12 -		
		- 14 -		
	Very dense, heavy iron oxide stains, some caliche.			
		- 16	50/6"	
±2837.5				
	SAND with Gravel (SP), pale brown, dense, moist, medium to coarse sand fine to coarse gravel micaceous			
	,	- 18 -		
		- 19 -		
			14	
		- 21 - 0 b	₽ [∞] ₂ ²²	
<u>+</u> 2833.0	Total Depth = 21.5 feet	+ $+$		
	Groundwater not encountered.			
	Dorenole Dacknilled With Soll Cuturigs.	- 23 -		

L	_ /	4	NG/	4/V		Log	of Bo	ring			LB	-29			Sheet	1	of	1
Proje	ect						Proje	ct No.										
Loca	ation		ARS Fulfillment Cer	nter - Project Lok	i		Eleva	ation ar	nd Da	tum	700	08910	1					
Durilli			Victorville, California	a			Data	011			286	69 (Fee	et, NG	VD 29	9) Fisialaad			
Driii	ing C	Jompar	2R Drilling				Date	Starte	u			3/4/21		Date	Finished		3/4/21	
Drilli	ing E	quipme	ent				Com	oletion	Dept	h		5/4/21		Rock	Depth		5/4/21	
			CME 75 Truck-mou	nted Drill Rig								10.8 ft						
Size	e and	Туре	of Bit 8-inch O.D. Hollow 9	Stem Auger			Num	per of S	Samp	les	Distu	urbed	з	Un	disturbed	2	Core	_
Casi	ing D	Diamete	er (in) -		C	Casing Depth (ft)	Wate	r Leve	l (ft.)		First		-	Co	mpletion	-	24 HR.	_
Casi	ing ⊦	lamme	er	Weight (lbs)		Drop (in)	Drillir	ng Fore	eman		-				_			
Sam	npler		Bulk 2-inch O.D. Sr	olit-Barrel SPT_2	5-inch l	D. Cal Mod	Field	Enging	or									
z Sam	npler	Hamm	her Automatic	Weight (lbs)	1/0	Drop (in) 30	Field	Engine	eer	Δ	Δtr	,						
NG 1			Automatic		140	50				А.	Sa	y mple Da	ata					
9 - LA	MBOL	Elev.		Sample Desci	ription			Depth	her	pe	ov. (۱	etr. ist 6in	Wa	ter	(Drillin		arks epth of Casing	
t: Log	, ₹	(IL) 2869.0						Scale	Num	Tyl	Rec (ir	Pen res BL/	Con	tent	Fluid Los	ss, Drilling	Resistance, e	tc.)
epor			Fill		P	and the first	_	0 -							Bulk s	ample	collected fr	om
<u> </u>			SIITY SAND (SM), sand.	dark brown, med	aium der	ise, moist, fine	-	1 -							R Valu	et bgs. Je.		
	j	2867.5	Alluvium (Qa)				-+											
:58:2			SILT (ML), pale of	live brown, hard,	dry, non	plastic, trace	F	2 -										
21 12			line sand.				-	3 -		PT	8	8 11						
5/202							-		S	IS II	-	9						
4	L.	2864.5						4 -										
G · · ·			SAND with Silt (Si sand micaceous	P-SM), pale brow trace caliche no	vn, medi dules	um dense, fine	-	5 -				5			Dry De	ensitv =	108.1 pcf	
So			,				-	· ·	27	К	18	11			WĆ =	3.3%		
							F	6 -				13						
ē	╎╷└┤ォ	2862.0				medium dense		7 -										
101			fine to coarse sar	nd, fine to coarse	e gravel,	micaceous.	-			E		8						
800	+	2860.5						8 -	S-3	SPT	18	10						
3S/70			Silty SAND (SM), medium sand. mid	olive brown, meo	dium der	nse, moist, fine to	° ⊢	9 -		E		18						
ĕ⊢†	╽┤╧	2859.5	SILT with Sand (M	/L), olive brown,	hard, m	oist, fine sand,	-+	10										
.ND		0050.0	micaceous.				_	10 -	4	CR	10	32						
UT I	+	2858.2	Total Depth = 10.8	8 feet				11 -		- 111		50/4						
CHN			Groundwater not e	encountered.	ns		-	10										
OTE			Dorchole Backfille		ys.		_	12 -										
E\GE							-	13 -	-									
							-											
ISCI							-	14										
A							-	15 -	-									
DAT							Ľ	16 -										
ECT							_	10										
ROJ							-	17 -	-									
101/F							-	10										
089							F	10 -	4									
1/70(┝	19 -	-									
DATA							F	20	1									
RMC							F	20 -										
ATAN							┝	21 -	-									
M/D/							F	วา	1									
4.CO							F	<u> </u>										
IGAN							┝	23 -	-									
//LAr							-	. 24 -	1									

 _

LF		of Boring	LB-30	Sheet 1 of 1
Project		Project No.		
Location	ARS Fulfillment Center - Project Loki	Elevation and Datu	700089101	
Loodion	Victorville, California	Elevation and Bata	2865 5 (Feet	NGVD 29)
Drilling Com	any	Date Started		Date Finished
Drilling Equi	2R Drilling	Completion Depth	3/4/21	3/4/21
	CME 75 Truck-mounted Drill Rig	Completion Depth	21 ft	
Size and Ty	e of Bit	Number of Samples	Disturbed	Undisturbed Core
Casing Dian	8-inch O.D. Hollow Stem Auger eter (in) Casing Depth (ft)	Water Level (ft.)	First	3 3 - Completion 24 HR.
Casing Harr	ner Weight (lbs) Drop (in)	Drilling Foreman	<u>~</u>	<u>- ± - ± - </u>
Sampler	2 inch O.D. Split.Barrel SPT 2.5 inch I.D. Cal Mod			
z Sampler Ha	mer Automatic Weight (lbs) 140 Drop (in) 30	_ Field Engineer	A Atry	
	Automatic 140 30		Sample Data	
	^{/.} Sample Description	Depth b	/be sist /6in	Water (Drilling Fluid, Depth of Casing,
P ₩ +286				Content Fluid Loss, Drilling Resistance, etc.)
Repo	Alluvium (Qa) Clavey SAND (SC) very pale brown, very dense, moist			
≥	fine to medium sand, micaceous.	- 1 -		
54 P		- 2 -		
12:28			16	
50			₩ 24	
41512		- 4	26	
	SAND (SP), red brown, very dense, moist, medium to			
<u>0</u>	coarse sand, trace fine to coarse gravel, micaceous.	S-2 c	6 0 32 50/4"	Dry Density = 115.9 pcf WC = 4.2%
Š		- 6 -		Consolidation test.
	5			
5	Silty SAND (SM), yellow brown, very dense, moist. fine to medium sand, micaceous.		24	
		- 8 - 6	5 □ ² □ ² □ 50/6"	
S/70		- 9 -		
S S				
EN OF			R 4 50/4"	Dry Density = 102.5 pcf
CAL		- 11 -		WC - 0.7 %
NH I I I I I I I I I I I I I I I I I I I				
ö ≝	5 SAND (SP), pale yellow brown, dense, moist, medium to			
	coarse sand, trace fine gravel, micaceous.	- 14 -		
			12	
PDF		- 16 - v		
DIEC			21	
284/1				
3910		- 18 -		
3000Z				
TA1/				
∀ D∧		20 - 20 - 0 ~	25	No sample recovery.
	5 Table Durth Official	21 一 づめ じ	50/6"	
IDA	Groundwater not encountered.	-		
CO .	Borehole backfilled with soil cuttings.	22 -		
IGAN		- 23 -		
ILAN				

LA		4/V	Log	of B	oring			LB	31			Sheet	1	of	2
Project				Proj	ect No.										
Location	ARS Fulfillment Cer	nter - Project Loki		Elev	/ation ar	nd Da	tum	7000	8910	1					
	Victorville, California	а						286	3 (Fee	et, NG	VD 2	29)			
Drilling Com	bany			Dat	e Starteo	ł			•		Date	Finished			
Drilling Equir	2R Drilling			Con	npletion	Dept	n	3/	29/21		Rock	k Depth	3	8/29/21	
2	CME 75 Truck-mou	nted Drill Rig				Dob:		3	31.5 ft			. Dopti.			
Size and Typ	e of Bit	Chama Auran		Nun	nber of S	Samp	les	Distu	rbed	<u> </u>	U	Indisturbed	2	Core	
Casing Diam	eter (in)	Stem Auger	Casing Depth (ft)	Wat	ter Level	(ft.)		First		3	c		3	24 HR.	-
Casing Ham	mer_	Weight (lbs)	Drop (in)	Drill	ing Fore	man		<u> </u>		-		<u>+</u>	-	<u> </u>	-
Sampler	2 inch O.D. Split Ba	prol SPT 2.5 inch I.D. (
z Sampler Har	nmer Automatic	Weight (lbs)	Drop (in) 30		a Engine	er	^	۸tm	,						
ANG ANG	Automatic	140	50					Sar	nple Da	ata					
- LL Ele	v.	Sample Description			Depth Scale	nber	be	NO: C	netr. sist /6in	Wa	iter	(Drillin	Rema g Fluid, De	arKS epth of Casing	3
P ¥ 6 (10 1:1: +2863	3.0				_ 0 _	Nur	Ļ	Ee	Per BL	Con	tent	Fluid Los	s, Drilling	Resistance, et	tc.)
Repo	Fill Silty SAND (SM)	dark brown medium de	ense moist fine to	,											
E 1 1 1 1 2862	<u></u>			†	- 1 -										
26 P	Alluvium (Qa) SAND with Silt (S	P-SM) pale brown ver	v dense moist	F	- 2 -										
12:58	fine sand, micace	ous.	<i>,</i> ,	-											
021				Ľ	- 3 -										
4/5/2				-	- 4 -										
La contra					- 5 -										
0 				F	- 5 -	<u>.</u>	Τ	8	19						
Ŭ.				F	- 6 -	Ϋ́	I'S E	₩	34 45						
UD CIN				Ľ	- 7				-						
5				+											
800 · · · · · · · · · · · · · · · · · ·	SAND with Grave	I (SP), red brown, dens	e, moist, medium		- 8 -										
0	to coarse sand, fi	ne to coarse gravel.		-	- 9 -										
				F											
O. QIN				F	- 10 -	2	~	~	21						
o O o				-	- 11 -	γ	Ö	₩	29 36						
HOLE O					- 12 -										
				+											
					- 13 -										
				F	- 14 -										
	3.0			-											
	SAND (SP), red b	prown, dense, moist, me	edium to coarse		- 15		LE	~	11						
	sanu.			+	- 16 -	γ	R I	₩	15 21						
ы П					- 17										
RUL				-											
8910				F	- 18 -										
		otropa bassa		[- 19 -										
ATA1	medium sand, mi	suong prown, very den caceous.	se, moist, fine to	╞											
				þ	- 20 -	4			17						
ITAN				┝	- 21 -	က်	Ö	-	32 50/5"						
				F	 										
				F		-									
NGA				┝	- 23 -	1									
					- 24 -										

LANGAN

Policit ARS Fulfilment Center - Project Loki Policit No. Location Victorville, Calfornia 2863 (Foel, NSVD 29)				of Boring			LB-	31		Sheet	2	of	2
Lotter Elevent and Data Victorville, California 28/3 (Feet, NGVD 29) Victorville, California Sample Description Image: Sample Description Sample Description <	Project		ARS Fulfillment Center - Project Loki	Project No.		-	7000	89101	1				
Bit Bit Sample Description Sample Description Site Site Site Site Site Site Site Percentation Site Sit	Location	I	Victorville, California	Elevation and	l Dat	um	2863	3 (Fee	t, NGVD 2	9)			
Silly SAND (SM), olive brown, dense, most, fine to medium and, micaceous, increased sill content.	MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Number	Type	San (in) .	resist BL/6in BQ	ta Water Content	(Drilling Fluid Loss	Rema Fluid, Dep , Drilling R	rks oth of Casing desistance, e	, tc.)
Wary dense. 20 SAMU (SP), pale brown, very dense, moist, fine to coarse 30 Total Depth = 31.0 feet 31 Groundwater not encountered. 32 Borehole backfilled with bentonite grout. 33 38 39 44 35 38 39 40 41 42 43 43 44 44 41 43 44 44 41 43 44 44 41 43 44 44 41 43 44 44 45 43 44 44 45 45 46 46 41 47 42 48 49 49 50 50 50 51 50 52 50 53 50 53 50 50 50 51 50 <			Silty SAND (SM), olive brown, dense, moist, fine to medium sand, micaceous, increased silt content.	24	S-5	SPT	18	12 14 22					
Junct 25 Very dense. SAMD (SP), pale brown, very dense, moist, fine to coarse and. 34 Sand Statu (SP), pale brown, very dense, moist, fine to coarse and. 34 Sand Statu (SP), pale brown, very dense, moist, fine to coarse and. 34 Sand Statu (SP), pale brown, very dense, moist, fine to coarse and. 34 Sand Statu (SP), pale brown, very dense, moist, fine to coarse and. 34 Sand Statu (SP), pale brown, very dense, moist, fine to coarse and. 34 Sand Statu (SP), pale brown, very dense, moist, fine to coarse and. 34 Sand Sand Sand Sand Sand Sand </td <td>NYEONYA - F</td> <td></td> <td></td> <td>- 27 - - 28 - - 28 - - 29 -</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	NYEONYA - F			- 27 - - 28 - - 28 - - 29 -									
Groundwater not encountered. 32 Borehole backfilled with bentonite grout. 33 34		2832.5 2832.0	Very dense. SAND (SP), pale brown, very dense, moist, fine to coarse sand. Total Depth = 31.0 feet	- 30 - - 31 - 	S-6	К	12	20 50/6"					
	2.00.21 1 202/014 .		Groundwater not encountered. Borehole backfilled with bentonite grout.	- 32 - - 33 - - 34 -									
				- 35									
	- 101600007000			- 37 - - 38 - - 39 -									
				- 40 - - 40 - - 41 - 									
				- 42 - 43 - - 44 -									
				- 45 - - 46 -									
				- 47 - - 48 - - 48 -									
				- 49 - - 50 - - 51 -									
				- 52 - - 52 - - 53 -									

LA		- 	Log	of E	Boring			LB	-32			Sheet	1	of	1
Project				Pr	oject No.										
Location	ARS Fulfillment Cer	iter - Project Loki		Ele	evation ar	nd Da	tum	700	089101						
	Victorville, California	а						286	62.5 (Fe	et, N	GVD	29)			
Drilling Compa	ny			Da	ate Starte	b					Date	Finished			
Drilling Equipm	2R Drilling			Cc	mpletion	Dept	h		3/5/21		Rock	Depth		3/5/21	
Drining Equipri	CME 75 Truck-mou	nted Drill Ria			mpiotion	Dopt		:	21.5 ft		rtoon	Dopui			
Size and Type	of Bit	<u> </u>		NL	Imber of S	Samp	les	Dist	urbed		Un	ndisturbed		Core	
Casing Diame	er (in)	Stem Auger	Casing Depth (ft)	- /	ator Lovo			First		3	Cc	mpletion	3	24 HR.	-
Casing Hamm		Weight (lbs)	Drop (in)	Dr	illing Fore	man		<u> </u>		-		<u> </u>	-	<u> </u>	-
Sampler					0		Ac	driar	ı						
Sampler Hamr	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D. Weight (lbs)	Cal Mod	Fie	eld Engine	eer		_							
	Automatic	140	30			1	Μ	. Ga Sa	lvan mole Da	ta					
Elev.		Sample Descriptio	n		Depth	ber	e	х Х	st str	Wa	ter	- (Drilli	Ren	narks	20
H S (ft) +2862.5					Scale	Num	Typ	Rec (in	Pene resi BL/6	Con	ent	Fluid Lo	oss, Drillin	g Resistance	, etc.)
	Alluvium (Qa)				- 0 -										
	fine to coarse san), red brown, very der d, trace fine gravel, tra	ace caliche,		- 1 -	-									
	cemented.	-			- ·										
						_			20			Dry D)ensitv	= 122 3 p	cf
					- 3 -	ò	S	11	50/5"			WC =	- 7.2%	p	
					- 4 -										
////±2858.0	Silty SAND (SM),	tan, medium dense, s	lightly moist, fine to	, –	- ·	1									
	coarse sand, som	e fine to medium grav	el.		- 5 -	2	T	~	12			Corro	sivity &	Chemica	l tests.
					- 6 -	γ	RP III	18	13 14						
					- 7 -										
	Very dense with (cemented fragments	caliche		- ' ·	5-3	CR	6	50/6"			Drv D	ensitv	= 117.0 p	cf
		somenied nagmenie, v			8 -			-	00/0			WC =	: 2.6%	toot	
					- 9 -	-						Direc	l Shear	iesi.	
	Fine to medium sa	and, no cemented frag	ments, no gravel.		- 10 -	4	T T	8	39						
	Increased fines co	ontent.			- 11 -	γ	I SF	7	22 39						
					- 12 -										
						-									
<u> </u>	SAND (SP), brow	n, very dense, dry, coa	arse sand, some		- 13 -										
	fine to medium sa	ind, trace fine gravel.			- 14 -	-									
					- 15 -										
						S-5	СR	1	30 50/5"						
++++++++++++++++++++++++++++++++++++++		D SM top bord dry			- 16 -				30/0						
		^{,,} - 3101, tan, naru, dry,	IIIE Sallu.		- 17 -	1									
	SAND (SP), brow	n, dense, dry, fine to c	oarse sand, some		+ .	1									
	fine gravel.	· · ·	-		- 18 -	1									
					- 19 -	$\left\{ \right.$									
					20 -	1									
						φ	ЬЩ	80	17 22						
+2841.5	Silty SAND (SM),	tan, dense, dry, fine to	medium sand.		21 -	S	S	-	26						
	Total Depth = 21.	5 feet			- 22 -										
	Borehole backfille	d with soil cuttings.				1									
					- 23 -]									
					└ 24 _										

LA	A/V La/	4 /V	Log	of E	Boring			LB	-33			Sheet	1	of	4
Project	ARS Fulfillment Ce	nter - Proiect Loki		Pro	oject No.			7000)89101						
Location		,		Ele	evation ar	id Da	tum								
Drilling Cor	Victorville, Californi	a		Da	ite Starteo	ł		286	1 (Fee	t, NGV	D 29 Date F)) Finished			
Drillin n Fra	2R Drilling					Dent		3/	29/21		2	D 41-	:	3/29/21	
Drilling Equ	CME 75 Truck-mou	unted Drill Rig			mpieuon	Deptr	1	1()1.5 ft	ľ	KOCK L	Jepin			
Size and T	ype of Bit	Stem Auger		Nu	Imber of S	Samp	les	Dist	irbed	0	Und	disturbed	11	Core	
Casing Dia	meter (in)		Casing Depth (ft)	w	ater Leve	(ft.)		First		9	Cor	mpletion	70	24 HR.	-
Casing Har	nmer_	Weight (lbs)	Drop (in)	Dr	illing Fore	man		<u> </u>		_		-	10	<u> </u>	
Sampler z Sampler Ha	2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D. Weight (lbs)	Cal Mod	_ Fie	eld Engine	er		A 4							
- ANGA	Automatic	140	50				A.	Sa	nple Da	a			D		
T: Log - L/ SYMBOI 85+	lev. ft) 61.0	Sample Descriptior	ı		Depth Scale	Number	Type	Recov. (in)	Penetr. resist BL/6in	Wate Conte	er ent	(Drillin Fluid Los	Rem g Fluid, D ss, Drilling	IAIKS Depth of Casir Resistance,	ng, etc.)
A Repor	Fill Silty SAND (SM), sand.	, dark brown, medium d	ense, moist, fine		- 1 -										
28:33 P	Alluvium (Qa) SAND (SP), stror	– – – – – – – – – – – – ng brown, medium dens	———————— se, moist, fine to		- 2 -										
/2021 12		e lille gravel.			- 3 -	-									
					- 4 -										
GS.GF					- 5 -	7	ж	18	23 33						
					- 6 -			-	32						
101-0					- / -										
700089					- 8 -										
OGSI					- 9 -										
Veint	Yellow brown, ver	ry dense, trace fine to c	oarse gravel.		- 10 -	Ņ	~	<u>س</u>	38						
INICAL					- 11 -	ٺ.	Ö	÷	33 45						
DTEC					- 12 -										
IE/GE(- 13 -										
CIPLIN					- 14 -										
	Very pale brown				- 15 -	 			17						
T DAT/	very pale brown.				 - 16 -	s S	SPT	18	27						
OPEC					- 17 -				44						
101\PR															
000891					- 18 -										
TA1/7					- 19 - 	1									
RVDA	Medium to coarse	e sand, no gravel, friabl	e.		- 20 -	4	ਲ ਇ	12	25						
DATAI					- 21 -				50/6"						
COMI					- 22 -	-									
IGAN.					- 23 -]									
ILAN															

LANGAN

			of Boring			LB	-33		Sheet	2	of	4
Project		APS Fulfillment Center - Project Leki	Project No.			7000	18010-	1				
Location	1		Elevation an	id Da	tum	1000	00910	1				
		Victorville, California				286	51 (Fee	et, NGVD 29	9)			
MATERIAL SYMBOL	Elev. (ft) -2837.0	Sample Description	Depth Scale	Number	Type	Recov. (in) S	Penetr. resist BL/6in	ata Water Content	(Drilling Fluid Loss	Remar Fluid, Dept , Drilling Re	ks h of Casing sistance, e	, tc.)
		SAND (SP), strong brown, very dense, moist, fine sand, not friable	24 -									
	•		- 25 - 26 - 	S-5	SPT	18	20 33 35					
LANGAN	•		- 27 -	-								
port: Log -	•	Friable.	- 30 -	S-6	CR	6	50/6"		Sample	disturbe	ed.	
s PM Re			- 31 -									
12:58:33			- 32 -									
5/2021			- 33 -									
PJ 4/			- 35 -									
0.00%			- 36 -	S-7	SPT	18	16 28					
- GINT I			- 37 -				30					
089101			- 38 -									
)GS/700			- 39 -									
IL/GINTLO	•	Fine to coarse sand, some fine to coarse gravel.	- 40 -	8-S	К	12	31 50/6"					
CHNICA	•		- 41 -									
GEOTE	2818.0		42 -									
IPLINE		Silty SAND (SM), brown, very dense, moist, medium to coarse sand, slightly cemented, micaceous.	- 44 -									
			- 45 -				21					
CT DAT			- 46 -	6-S	SPT	18	26 29					
PROJE			- 47 -									
0089101	2813.0	SAND (SP), very pale brown, very dense, moist, very fine										
TA1\700	•	sand, micaceous, mable.	- 49 -									
JIRVIDA			- 50 -	S-10	CR	6	50/6"					
			- 51 -									
AN COM	2808.5	Clayey SAND (SC), dark brown, dense, moist, fine to	- 52 -	-								
		medium sand, sightly cemented.	- 53 -									
LANGAN

		of Boring			LB	-33		Sheet	3	of	4
Project		Project No.									
Location	ARS Fulfillment Center - Project Loki	Elevation and	d Da	tum	700	08910					
	Victorville, California				286	61 (Fee	t, NGVD 29	9)			
					Sa	mple Da	ita	_	Remar	ke	
Elev.	Sample Description	Depth Scale	umber	Type	ecov. (in)	enetr. esist L/6in	Water Content	(Drilling	Fluid, Dept	h of Casing,	c)
≥ ⁰⁰ +2807.0	Clavey SAND (SC) dark brown dense moist fine to		ź		Ω.	<u> </u>			Drining i ve		.)
	medium sand, sightly cemented.	- 55 -									
			÷	Ы	8	18 22					
		- 56 -	Ś	s		25					
////// ///////////////////////////////		- 57 -									
NG	SAND with Silt (SP-SM), very pale brown, very dense,	- 58 -									
LAN											
- Log		- 59 -									
tion		- 60 -	-12	К	10	39					
R N	Silty SAND (SM), dark brown, very dense, moist, fine sand, micaceous.	- 61 -	S			50/4"					
33 PN		62 -									
12:58:											
2021		- 63 -									
4/5/		- 64 -									
GPJ		- 65 -				0					
80		- 66 -	9-13	SPT	18	17					
L L	SAND (SP), very pale brown, dense, moist, fine sand, micaceous.		0,			31					
- FC		- 67 -									
008910		- 68 -									
S/700		- 69 -									
NIGIN	Very dense, very moist, medium to coarse sand.	- 70 -	S-14	CR	6	50/6"					
NICA		- 71 -									
ЪЩ		- 72 -									
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		- 73 -									
	trace manganese oxide strains, micaceous, plastic.										
JSCI											
TAL		- 75 -	5	LE		13					
		- 76 -	Ϋ́	SP ⁻	18	10 8					
Щ <u>////////</u> /84.5	Silty SAND (SM), dark brown, medium dense, wet, fine										
01/PF	Sanu.										
0089											
A1\70		₹ 79 -						Ground	water er	countere	ed at
VDAT	Verv dense.	- 80 -	16	 	_	35		No reco	ogs duri very.	ng arilling].
AUR	,	- 81 -	Ŷ	Ö		50/4"			,		
ANDAT											
6 											
NGA	Sandy SILI (ML), yellow brown, very dense, wet, fine to medium sand, micaceous.	- 83 -									
		₈₄ _]									

LANGAN

					f Boring			LB	-33		Sheet	4	of	4
	Projec	ct		ARS Fulfillment Center - Project Loki	Project No.			700	08910	1				
	_ocati	ion		Victorville, California	Elevation an	ıd Da	itum	286	61 (Fee	et, NGVD 2	9)			
	MATERIAL SYMBOL	+2	Elev. (ft) 2777.0	Sample Description	Depth Scale	Number	Type	Recov. (in)	Penetr. resist BL/6in	ata Water Content	(Drilling Fluid Loss	Remai Fluid, Dep , Drilling R	'ks th of Casing esistance, et	.)
				Sandy SILT (ML), yellow brown, very dense, wet, fine to medium sand, micaceous.	- 85 - - 85 - - 86 -	S-17	SPT	18	27 38					
GAN			2773.0	SAND (SP) brown very dense wet fine to medium sand	- 87 - - 87 - - 88 -	-			38					
Report: Log - LAN				micaceous.	- 89 - 89 - 90 - 90	18	ж	8	21					
12:58:34 PM			2768.0		- 91 - - 92 - - 93 -	Ϋ́	U	-	50					
S.GPJ 4/5/2021				Silty SAND (SM), olive brown, medium dense, wet, fine to medium sand.	- 94 - - 94 - - 95 -	6			7					
00089101 - GINT LOG		- 42	2764.0	SAND (SP), pale brown, dense, wet, fine to coarse sand.	- 96 - - 97 - - 97 - - 98 -	ν. Υ	S I		11 13					
NICAL/GINTLOGS/7			2760.0 2759.5	Sandy CLAY (CL), olive brown, hard, wet, fine to medium	- 99 - 100 - 101	S-20	CR	18	12 28 35					
IPLINE/GEOTECH				Sand, plastic. Total Depth = 101.5 feet Groundwater encountered at 79 feet bgs. Borehole backfilled with bentonite grout.	- 102 - - 103 - - 103 - - 104 -	-								
ECT DATA_DISC					- 105 - - 105 - - 106 -	-								
00089101/PROJI					- 107 -	-								
					109 - 110 - 110 - 111	-								
\\LANGAN.COM\D/					- 112 - - 112 - - 113 -	-								

LA	NL	A/V	Log	of E	Boring			LB	-34			Sheet	1	of	1
Project				Pr	oject No.										
	ARS Fulfillment Cer	nter - Project Loki		_				700	08910 ⁻	1					
Location				Ele	evation an	d Da	tum	005				0 0)			
Drilling Compa	Victorville, California	а		Da	ate Starter	1		285	9.5 (F	eet, N	GVD Date	29) Finished			
	2R Drilling								3/5/21		Duto	i inicitod		3/5/21	
Drilling Equipn	nent			Co	ompletion l	Deptl	h		5/0/21		Rock	Depth		0/0/21	
	CME 75 Truck-mou	nted Drill Rig						:	21.5 ft						
Size and Type	of Bit	0		Nu	umber of S	amp	les	Dist	urbed		Un	disturbed	•	Core	
Casing Diame	er (in)	Stem Auger	Casing Depth (ft)	W	ater Level	(ft.)		First		4	Co	mpletion	3	24 HR.	-
Casing Hamm	er_	Weight (lbs)	Drop (in)	Dr	illing Fore	man		_ <u></u>		-		<u>.</u>	-	<u> </u>	
Sampler	Bulk. 2-inch O.D. Si	plit-Barrel SPT. 2.5-inc	h I.D. Cal Mod	Fie	eld Engine	er	A	driar							
z Sampler Ham	ner Automatic	Weight (lbs)	Drop (in) 30	1''			Ν.	Ga	lvon						
NNG/	Automatic	140	50				IVI	Sa	mple Da	ata					
		Sample Description	h		Depth	ber	e		etr. İst	Wa	iter	(Drilling	Rem	arks	
(π) Ψ ²⁸⁵⁰			•		Scale	Num	Ţ	Rec (in	Pen res BL/(Cor	tent	Fluid Los	s, Drilling	Resistance, e	, tc.)
	Alluvium (Qa)				- 0 -	_						Bulk sa	mple	collected fr	om
	Clayey SAND (SC	C), red brown, medium	dense, slightly		L 1 -							0-5 fee	t bgs.	447.0	
Ma /////	moist, line to coar	rse sand, trace line gra	vel, trace caliche.		- ' -								nsity = 11 0%	= 117.3 pcf	
40					- 2 -							Remole	ded Di	rect Shear	test.
15:20									8			Remole	ded Co	onsolidatior	ו
122					- 3 -	<u>5</u>	К	18	13			Drv De	nsitv =	= 111.7 pcf	
12120					4 -	•,			22			WC =	11.8%		
* 2855.0					+ · -										
GB	slightly moist. fine	e to coarse sand, some	fine to coarse		- 5 -		E		10						
89	gravel, trace calic	he.				2	μ	18	15						
					6 -	0)	S =	·	16						
NO 22852.5					- 7 -										
5	SAND with Silt (S	P-SM), red brown, den	se, moist, fine to				 		10				nsitv =	= 109 8 ncf	
88	gravel, trace clay.				- 8 -	က္	щ	8	26			WC = 2	2.6%	100.0 por	
02						S			27						
Sec					_ <u>9</u> _										
j					- 10 -				07			%Pass	#200	- 33	
5 4142849.0	Sandy SILT (ML)	/. tan hard dry fine sar	nd		+ -	4	ĿЕ	8	27			/01 233	#200	- 55	
		tan, nara, ary, inte sar	ia.		- 11 -	S	S	-	23						
동					L 12 -										
<u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>					- '-										
₩ +±2846.5	Silty SAND (SM)	red brown dense moi	st fine to medium		- 13 -										
	sand, trace clay, \	with limonite covering.			F										
		C C			_ 14 -										
					- 15 -		_ m		16						
VII VII VII VII VII VII VII VII VII VII					- · ·	ю	~		12						
티 : : : : : : : : : : : : : : : : : : :					- 16 -	ν	°∥	-	∠ŏ 30						
빙사사															
Here and the second second second second second second second second second second second second second second					['' -										
9101					- 18 -										
800															
XIII III					- 19 -										
Í Á					- 20 -		<u> </u>								
	Sandy SILT (ML),	tan to brown, hard, slig	ghtly moist, fine			Ģ	FE	~	8						
	Sanu.				- 21 -	ပု	Is E	1 ₩	10 23						
₽ ₽ 	Total Depth = 21.	5 feet			+		┢╘		20						
CO	Groundwater not	encountered.			22 -										
SAN	Borehole backfille	a with soil cuttings.			- 23 -										
AN															
≱∟					L 24 _							1			

LA	NLAA	A/V	Log	of E	Boring			LB	-35			Sheet	1	of	1
Project				Pro	oject No.										
Location	ARS Fulfillment Cer	nter - Project Loki		Ele	evation an	id Da	tum	700	08910	1					
	Victorville, California	а						285	7 (Fee	et, NG	/D 2	9)			
Drilling Compa				Da	ite Starteo	ł			0/5/04		Date	Finished		2/5/24	
Drilling Equipm	ent			Co	mpletion	Dept	h		3/5/21		Rock	Depth		3/5/21	
0. 17	CME 75 Truck-mou	nted Drill Rig							21.5 ft						
Size and Type	8-inch O.D. Hollow S	Stem Auger		Nu	Imber of S	Samp	les	Disti	urbed	4	Un	disturbed	3	Core	-
Casing Diamet	er (in) -		Casing Depth (ft)	Wa	ater Level	(ft.)		First ∑		-	Co	mpletion	-	24 HR. <u> </u>	-
Casing Hamme	er	Weight (lbs)	- Drop (in) -	Dri	illing Fore	man									
Sampler	Bulk, 2-inch O.D. Sp	olit-Barrel SPT, 2.5-inc	h I.D. Cal Mod	Fie	eld Engine	er									
Z Sampler Hamn	^{her} Automatic	140	Drop (in) 30		1	-	Α.	Atr	/			1			
H- LAN Elevi		Sample Descriptio	n		Depth	ber	e		in start	Wa	er	(Drillir	Rem	arks	ing
00 ¥¥ (ft) ₩ ¥2857.0					Scale	Num	Typ	Rec (in	Pene resi BL/6	Cont	ent	Fluid Lo	ss, Drilling	Resistance	, etc.)
Gepor	Fill Silty SAND (SM)	nale brown medium (lense moist fine		- 0 -							Bulk s	ample	collected	from
≥	sand.	pale brown, medium e			- 1 -							0-016	et bys.		
₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽				(- 2 -										
12:56	SAND with Silt an	d Gravel (SP-SM), yel	low brown, dense,						10						
/2021	moist, meaium to	coarse sand, line grav	/ei.			ώ	RP	18	18 25						
4/5					- 4 -				20						
GD · · · · · · · · · · · · · · · · · · ·	Red brown dense	2			- 5 -				32			Dry D	ensity =	= 114.4 p	cf
OGS		<i>.</i> .				S-2	К	18	28			WC =	2.0%		
									35						
					- 7 -										
8910					- 8 -	ę	Υ	8	14						
//2000						Ś	р В П	-	29						
°6		olivo brown bard mo	ist non plastic fin		- 9 -										
	sand, some calich	10. 10. 10. 10. 10. 10. 10. 10. 10. 10.	ist, non plastic, line	5	- 10 -	4	щ	0	29			Dry D	ensity =	= 101.3 p	cf
CAL/C					- 11 -	S		-	50/4"			WC =	13.8%		
ਁ <u></u> <u>+</u> ±2844.0 ≝	Silty SAND (SM),	pale brown, very dens	e, moist, fine sand	·	- 13 -										
					- 14 -										
ATA						Ϋ́	ЪШ	7	20						
					- 16 -	S	S	-	50/5"						
					- 17 -										
00080															
A1/70					- 19 -										
	Dense increased	silt			- 20 -				10						
ANR					- 21 -	S-6	ଞ	18	15						
LY 12835.5	Total Depth = 21 4	5 feet			- ` -	-	╞╹╢		26						
CON	Groundwater not e	encountered.			- 22 -	1									
IGAN	Borenole Dackfille	a with soil cuttings.			- 23 -	-									
					L 21 _	1									

LA	4	NL	4 / V	Log	g of E	Boring			LB	-36		ę	Sheet	1	of		1
Project					Pr	roject No.											
Location		ARS Fulfillment Cer	nter - Project Loki		FI	levation a	nd Da	atum	700	08910	1						
Location		Victorville, California	а			evaliona		aturn	285	53 (Fee	et. NGVI	229))				
Drilling Co	mpan	у			Da	ate Starte	d				D	ate Fi	inished				
Drilling Eq	uinme	2R Drilling			C	ompletion	Dent	'n		3/5/21	R	ock D)enth		3/5/21		
Drining Eq.	aipine	CME 75 Truck-mou	inted Drill Rig			ompiction	Dept			11.5 ft			optii				
Size and T	уре с	of Bit	Charma Assessment		N	lumber of	Samp	les	Dist	urbed	2	Undi	listurbed	0	Core		
Casing Dia	amete	r (in)	Stem Auger	Casing Depth (ft)	w	/ater Leve	el (ft.)		First	:	-	Com	npletion	-	24 HR.		- -
Casing Ha	mme	r	Weight (lbs)	Drop (in)	Di	rilling For	eman										
Sampler		Bulk. 2-inch O.D. Si	plit-Barrel SPT. 2.5-inc	h I.D. Cal Mod		ield Engin	eer	A	driar	ו							
Z Sampler H	lamm	^{er} Automatic	Weight (lbs) 140) Drop (in) 30	-		CCI	М	l. Ga	lvan							
ANG									Sa	mple Da	ata			Rem	narks		
ATER SYMBC	tev. (ft)		Sample Description	n		Depth Scale	Imbei	ype	ecov.	esist L/6in	Water	.	(Drillin	g Fluid, [Depth of Ca	asing,	`
	353.0	Allunium (Oa)				+ o -	ź		۳ ۳	9° 2 8	Conter					d fro	.)
Rep		Silty SAND (SM),	light brown, medium d	ense, moist, fine	to	+	-						0-5 fee	ampie et bgs.	collecte		m
¥.		medium sand, tra	ice fine gravel, some c	aliche.		- 1 -							R Valu	le.			
8:44						- 2 -	-										
12:5						L 3 -	1_			9			Dry De	ensity =	= 115.9	pcf	
2021							ပ္	К	18	10			VVC =	7.0%			
4/5/						- 4 -				9							
- Г.						- 5 -				-							
S.		Fine to coarse sa	nd, increased fines cor	ntent, no caliche.		-	- 2	F	8	5 6							
						6 -		s		6							
S .						- 7 -	_										
5		Increased mediun	n to coarse sand, som	e fine to medium		F _	-			13			Poor s	ample	recover	у.	
8000		gravel.				- 8 -	- S	Ю	18	19			Dry De WC =	ensity = 1.9%	= 103.7	pcf	
GS/7						- 9 -	-		<u> </u>	23							
						- 10 -	1										
L/GIN		Fine to medium s	and, increased fines co	ontent, no gravel.		-	4	L	8	13 27							
VOIN +28	341.5					- 11 -		s		28							
EGH		Total Depth = 11. Groundwater not	5 feet encountered			- 12 -	-										
EO1		Borehole backfille	ed with soil cuttings.			-	-										
IN E/O						- 13 -]										
CIPL						- 14 -	-										
DIS						- 15 -	1										
DATA						-	-										
CT						- 16 -											
SOLE						- 17 -]										
01/P						+	-										
00891						- 18 -]	1									
11/200						- 19 -	-										
DATA						20 -	1	1									
IRVI						- 20	-	1									
DATA						21 -	1										
OM/E						- 22 -	-	1									
AN.C							-	1									
ANG						- 23 -]	1									
Ž						⊥_24 -		1									

LA		4/V	Log	of E	Boring			LB	-37			Sheet	1	of	1
Project				Pro	oject No.										
Location	ARS Fulfillment Ce	enter - Project Loki		Fle	vation an	nd Da	tum	7000	08910	1					
Location	Victorville Californi	ia			svation a		um	286	6 (Fee	et NG\	/D 29	9)			
Drilling Comp	any			Da	te Starteo	ł			• (. • •		Date I	Finished			
Deillie e Faurie	2R Drilling					Devel		;	3/5/21		Deele	Dauth		3/5/21	
	CME 75 Truck-mou	inted Drill Rig			mpieuon	Depu	1		21 5 ft		ROCK	Depth			
Size and Type	e of Bit			Nu	mber of 9	Samn	امد	Dist	urbed		Un	disturbed		Core	
Casing Diame	8-inch O.D. Hollow	Stem Auger	Casing Depth (ft)			bamp		First		3		moletion	3	24 HR	-
	-			Wa	ater Leve	(ft.)		$\underline{\nabla}$		-	Ĭ	L	-	<u> </u>	-
Casing Hamn	ler_	Weight (lbs)	Drop (in)	Dri	illing Fore	man									
Sampler	2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D. (Cal Mod	Fie	eld Engine	er									
z Sampler Ham	^{mer} Automatic	Weight (lbs) 140	Drop (in) 30		-		A.	Atry	/						
					Dopth	-		Sa	mple Da	ata			Rem	arks	
- BO LEW (ft)		Sample Description			Scale	nmbe	Type	(in)	enetr esist tL/6in	Wat Cont	er ent	(Drillin	g Fluid, De	epth of Casing, Resistance et	c)
+2866.	o Fill				- 0 -	z		Υ Υ	<u>с - п</u>				o, Driing		.,
P +2865.	Silty SAND (SM),	, dark brown, medium de	ense, moist, fine												
≥ L	Alluvium (Qa)				- ' -										
98:46	SAND (SP), dark	brown, dense, moist, m	edium to coarse		- 2 -										
	sand, micaceous	s, trace calicne.			- 3 -	—	~	~	34			Dry De	ensity = 2 0%	114.9 pcf	
707						γ	Ъ III	#	30 35			***	2.070		
0/4					- 4 -										
	Pale brown				- 5 -				12						
2	Tale brown.					27	SPT	18	12						
					- 0 -	 ″	ΪE		17						
	Poorly graded GF	RAVEL with Sand (GP),	brown, very		- 7 -										
	dense, moist, me	edium to coarse sand, fin	e gravel,		- 8 -	S-3	CR	6	50/6"			Dry De	ensity =	104.4 pcf	
	micaceous.											VVC -	2.4 /0		
$\frac{1}{2}$ 0 1 1 1 1 1 1 1 1 1 1	5				- 9 -										
	SILT (ML), olive t	brown, hard, moist, non j che deposits	plastic, trace fine		- 10 -				26						
						4	SPT	18	20 29						
					- 11 -		ΪE		50						
	5				- 12 -	1									
	SAND with Silt (S	SP-SM), pale brown, very	/ dense, moist,		- 13 -	1									
	line sand, micace	eous.				-									
					- 14 -	1									
					- 15 -	2			42						
						ပ်	5	10	+∠ 50/4"						
					- 16 -										
2	SAND (SP). pale	vellow brown, dense, m	oist, medium to		- 17 -	-									
	coarse sand, mic	cáceous.	,		- 18 -	1									
						-									
					- 19 -	1									
					- 20 -	-			17						
					 	9.0	SPT	18	' <i>1</i> 9						
+2844	5 Total Donth - 21	5 foot			- 12 -	Ľ	ΪĒ		25						
NO.	Groundwater not	encountered.			- 22 -	1									
- NAS	Borehole backfille	ed with soil cuttings.			- 23 -	1									
TAN						{									
2	1				<u> </u>	1	1					1			

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LÆ		of Boring	LB-38	Sheet 1 of 1
Project		Project No.		
Location	ARS Fulfillment Center - Project Loki	Elevation and Datum	700089101	
	Victorville, California		2864.5 (Feet, N	IGVD 29)
Drilling Com	pany	Date Started		Date Finished
Drilling Equip	2R Drilling oment	Completion Depth	3/4/21	3/4/21 Rock Depth
	CME 75 Truck-mounted Drill Rig		21.5 ft	
Size and Typ	e of Bit 8-inch O.D. Hollow Stem Auger	Number of Samples	Disturbed 4	Undisturbed Core
Casing Diam	eter (in) Casing Depth (ft)	Water Level (ft.)	First ∑ -	Completion 24 HR.
Casing Ham	mer Weight (lbs) Drop (in)	Drilling Foreman		
Sampler	2-inch O.D. Split-Barrel SPT, 2.5-inch I.D. Cal Mod	Field Engineer		
Sampler Har	Automatic (Weight (ibs) 140 Drop (in) 30	<i>/</i>	A. Atry	
Ele BOL LAN	v. Sampla Description	Depth ອັ 👦		Remarks
			BL/0 BL/0 Con	itent (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
Seport	Alluvium (Qa)			
Σ	sand.	- 1 -		
148 PI		- 2 -		
12:58			19	Dry Density = 112.5 pcf
100 + + + 286	.0		∞ 34	WC = 3.8%
. 4/5/.	trace caliche.	- 4	40	
. Ldg		- 5		
DGS.(SPT	≈ 30 ≈ 32	
			30	
	Silty SAND (SM), pale brown, very dense, moist, fine to			
8910	medium sand, micaceous.	CR 3		Dry Density = 108.6 pcf WC = 3.5%
/1000			30/3	
	Grades to yellow brown, few caliche deposits.			
INS	micaceous.		0 38	LL = 31, PL = 22, PI = 9
CAL			50/4"	%Pass #200 = 56
CHN				
HULL #2852	SAND with Gravel (SP) red brown very dense moist fine			
	to coarse sand, fine to coarse gravel, friable.			
		- 14 -		
				Boor comple receiver
DATA		CR 51	원 ²⁵ 50/6"	Poor sample recovery.
PRO		- 17 -		
91011				
0008				
TA1/7				
ADY		20	17	
	5 Clavey SAND (SC) alive brown your dance maint fine		₩ 34 25	
Ч <u>/:///</u> #284: М	sand, micaceous.		30	
N.CO	Total Depth = 21.5 feet Groundwater not encountered.			
NGA	Borehole backfilled with soil cuttings.	- 23 -		
		24		

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LA		H/V	Log	of E	Boring			LB-	39			Sheet	1	of	1
Project				Pr	oject No.										
Location	ARS Fulfillment Cen	nter - Project Loki		Ele	evation ar	d Da	tum	7000	89101						
2000.011	Victorville, California	a			oranon a			2863	3 (Fee	t, NG	/D 29	9)			
Drilling Compa	ny			Da	ate Starteo	1					Date	Finished			
Drilling Equipm	2R Drilling				molotion	Dopti	2	3	/5/21		Pock	Dopth		3/5/21	
	CME 75 Truck-mour	nted Drill Rig			Inpletion	Depu			21 ft		NUCK	Deptil			
Size and Type	of Bit			NI	imber of S	Samn		Distu	rbed		Un	disturbed		Core	
Casing Diamet	<u>8-inch O.D. Hollow §</u> er (in)	Stem Auger	Casing Depth (ft)	w	ater Level	(ft)	100	First		4	Co	mpletion	3	24 HR.	-
Casing Hamme		Weight (lbs)	Drop (in)	Dr	illing Fore	man		<u> </u>		-		<u>_</u>	-	<u> </u>	-
Sampler	-						Ac	drian							
Sampler Hamn	Bulk, 2-inch O.D. Sp	Weight (lbs)	Drop (in)	Fie	eld Engine	er									
	Automatic	14	0 30			1	M.	. Gal San	van nole Da	ta		1			
Elev.		Sample Descriptio	'n		Depth	ber	e	2	st . Sin	Wat	er	(Drillin	Rem	arks	
P E E E E E E E E E E E E E E E E E E E		Cample Descriptio	11		Scale	Num	Typ	Eec	Pene resi BL/6	Cont	ent	Fluid Lo	ss, Drilling	Resistance,	etc.)
	Alluvium (Qa)				- 0 -							Bulk s	ample	collected	from
	medium sand.), red brown, dense, i	moist, fine to		- 1 -							0-5 fe	et bgs.		
						 									
/////#2860.0	Silty SAND (SM).	light brown, dense, dr	v. fine to medium		- 3 -	1	ЬĒ	8	14 19			Mode	rate Pe	troleum o	dor.
	sand, trace fine gr	ravel, cemented fragm	nents, some caliche			S S	S	~	20						
	Very dense, fine to	o coarse sand.			- 5 -	Ņ	<u>د</u>	-	25			Dry D	ensity =	= 108.5 pc	f
					- 6 -	ပ်	ō	,	50/5"			WC =	4.8% Shear	toet	
												Direct	onear	1631.	
					- 7 -	1									
	Trace clay.				- 8 -	ς.	μĒ	Ξ	21						
						0	ωE	`	50/5"						
					- 9 -	1									
	Vendense finst	- use allows a small America			- 10 -				50/01				oneity -	- 107 3 pc	f
	increased fines co	o medium sand, trace ontent.	coarse sand,			5-4	CR	6	50/6"			WC =	4.5%	- 107.5 pc	1
					- 11 -	1									
					- 12 -	-									
1. 1. 12850.5	SAND (SP), tan, v	very dense, slightly mo	oist, coarse sand,			1									
	some fine to medi	um sand, trace fine g	ravel.		- 13 -	1									
					- 14 -										
+2847.5		ton your dance day	fine cond trace			ю	F	<u>_</u>	16						
	medium to coarse	e sand.	line sand, trace		- 16 -	ν	I'S E	7	24 41						
					- 17 -										
					- '' -										
					- 18 -	1									
					- 19 -										
						-									
					20 -	ဖု	<u>بر</u>	0	32			No sa	mple re	ecovery.	
+2 842.0	Total Denth = 21 f	feet			- 21 -	S S			50/6"						
	Groundwater not e	encountered.													
	Borehole backfille	d with soil cuttings.			- 22 -										
					- 23 -	-									
						1									

LA		A/V	Lo	g of l	Boring			LB-	40			Sheet	1	of	1
Project				Pi	roject No.										
Location	ARS Fulfillment Cen	nter - Project Loki		F	levation an		tum	7000	89101						
Location	Victorville California	2			ievalion ai	u Da	um	286	3 (Fee		2 ח/	0)			
Drilling Compa	ny	a		D	ate Started	1		200	5 (1 66	1, 110	Date	Finished			
	2R Drilling							3	8/5/21					3/5/21	
Drilling Equipm	nent			С	ompletion	Depth	۱				Rock	Depth			
Size and Turne	CME 75 Truck-mour	nted Drill Rig						2 Distu	20.5 ft		1 Im	diaturkad		Cara	
Size and Type	8-inch O.D. Hollow S	Stem Auger		N	umber of S	Samp	les	Distu	ibeu	3		Iuistui Deu	3	Core	-
Casing Diame	er (in) -		Casing Depth (ft)	. W	/ater Level	(ft.)		First ∑		-	Co	mpletion	-	24 HR. <u> </u>	-
Casing Hamm	er_	Weight (lbs)	Drop (in)	. D	rilling Fore	man									
Sampler	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D.	Cal Mod	Fi	ield Engine	er									
z Sampler Hamr	ner Automatic	Weight (lbs) 140	Drop (in) 30	<u> </u>			Α	Atrv	,						
		110		ing			7	Sar	nple Da	ta			D		
	Sa	ample Description		Read ppm)	Depth Scale	nber	be	у́с	ietr. sist 6in	Wa	ter	(Drilling	Fluid, D	epth of Casing,	
P ¥6 (11) +2863.0				OI CI	ocodic	Nur	ŕ	e E	BL re	Con	ent	Fluid Loss	, Drilling	Resistance, etc	c.)
	Fill	deals busines as sink as a													
	fine sand.	dark brown, moist, me	alum dense,		- 1 -										
<u>}</u> +±2861.5	Alluvium (Qa)			1											
	Silty SAND (SM),	pale brown, dense, mo	oist, fine	0.2											
	sand, micaceous,	neavy caliche lenses.		0.2	- 3 -	<u>.</u>	FE		12						
						۰ ن	S I	~	23						
f					- 4 -										
5	SAND (SP), pale t	brown, dense, moist, fi	ne to coarse	0.1	- 5 -				00				nsitv =	: 117 9 ncf	
2	sand, trace line gr	lavel, micaceous.				Ņ	ж	ω	23 35			WC = 1	.7%	· 117.9 pci	
					- 6 -	S			40						
					- 7 -										
5	Modium donso, fir	ao to coarso gravol		0.2	ļ ·				0						
		le lo coarse graver.			- 8 -	e S	F E	8	11						
						<i>"</i>	<i>"</i>		14						
	Dense.			0.7	- 10 -				25			Dry Der	nsity =	: 108.8 pcf	
						8 4	К	18	38			WC = 1	.2%		
	No gravel.				- '' -				37						
					- 12 -										
2 					- 12 -										
	Silty SAND (SM),	olive brown, very dens	e, moist, fine												
	Sand, micaceous,	some calicite.			- 14 -										
				0.5	- 15 -										
				0.5	- 13 -	5	μ	12	32						
					- 16 -	0,	~ E		50/6"						
]									
<u>-</u> +2845.5				ļ											
	moist, fine to med	r-sivi), red brown, very lium sand, micaceous	/ uense,		- 18 -	-									
	,	,				1									
					- 19 -										
				0.1	- 20 -	S-6	CR	6	50/6"						
2 - · · · · · · · · 1 +2842.5	Total Depth = 20.5	5 feet		1				-	30,0						
	Groundwater not e	encountered.			- 21 -	-									
		a mar con outings.			- 22 -	1									
						1									
					- 23 -										
					⊥ 24 -										

LA		4/V	Lo	g of	Boring			LB-	41			Sheet 1	of	1
Project				F	Project No.									
Location	ARS Fulfillment Cer	nter - Project Loki		F	levation ar	d Da	tum.	7000	89101					
Location	Victorville California	9			levation a	u Da	um	2860) (Feet		/D 29	a)		
Drilling Compa	ny	a		C	Date Started	ł		2000	, (1 001	.,	Date F	Finished		
Deillie e Fauriere	2R Drilling				De men le tiere	Dent		3	/5/21		Deale	Denth	3/5/21	
Drilling Equipn	CME ZE Truck mou	ntod Drill Dia			completion	Depti	n	0	1 5 4		ROCK	Depth		
Size and Type	of Bit				lumber of (Z Distu	rbed		Un	disturbed	Core	
Casing Diame	8-inch O.D. Hollow S	Stem Auger	Casing Depth (ft)			bamp	les	Firet		3		3	- 24 HR	
	-	-		V	Vater Leve	(ft.)		$\underline{\nabla}$		-		<u> </u>	<u> </u>	
Casing Hamm	er	Weight (lbs)	Drop (in)		Drilling Fore	man								
Sampler	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D.	Cal Mod	F	ield Engine	er								
Sampler Hamr	^{ner} Automatic	Weight (lbs) 140	Drop (in) 30		Ū		A.	Atry						
				iding	Depth	-		San	nple Dat	ta		Ren	narks	
	Sa	ample Description		D Rea (ppm	Scale	admu	[ype	ecov.	eneur esist L/6in	Wat Cont	ter ent	(Drilling Fluid, I	Depth of Casing,	
+ <u>2860.0</u> 2	Fill			Ы	— o —	ź		<u>د</u> ر	<u> </u>				g resistance, etc.)	
2 +2859 (Silty SAND (SM),	dark brown, medium de	ense, fine		- ·	1								
	Alluvium (Oa)		/		.	-								
	SAND with Clay (S	SP-SC), dark red browr	n, very		- 2 -									
	dense, moist, fine	to coarse sand.		0.3	- 3 -	<i>~</i>	~	~	11			Dry Density	= 122.9 pcf	
						Ϋ́	ö	1	25 50/5"			VVC - 11.070)	
					4 -									
	Dense some cali	che		0.0	- 5 -				11					
	Dense, some can					25	F E	18	14					
									17					
■	SAND with Gravel	I (SP), yellow brown, de			- 7 -									
	medium to coarse	sand, fine to coarse g	ravel,	0.0	- 8 -	~			26			Dry Density	= 115.8 pcf	
	micaceous.					မှ	Ю	18	29 37			VVC - 2.4%		
					- 9 -				0/					
	Madium danaa fir	as to modium cond. no	arovol	0.1	- 10 -									
	Medium dense, in	le to medium sand, no	gravei.			4	Ĕ	8	8 10					
					- 11 -		"E		18					
					- 12 -	1								
	Silty SAND (SM),	pale brown, very dense	e, moist, fine		- 13 -	1								
	sand, micaceous.					-								
					- 14 -	1								
5				0.0	- 15 -				20					
						ŝ	Ю	12	20 50/6"					
					- 01 -	1								
j i i i i i i i i i i i i i i i i i i i 	SAND with Silt (SI	P-SM), pale brown, der	nse, moist.		- 17 -	-								
	fine to medium sa	nd, micaceous			- 18 -	1								
						1								
					- 19 -	1								
				0.0	- 20 -			_	14					
					- 21 -	S-6	EPT SPT	18	16					
5	Total Denth - 21 /	5 feet				<u> </u>	日		20					
	Groundwater not e	encountered.			- 22 -									
	Borehole backfille	d with soil cuttings.			- 23 -	-								
						1								

LA	NL	4 /V	Log	of E	Boring			LB	-42			Sheet	1	of	2
Project				Pr	oject No.										
	ARS Fulfillment Cer	nter - Project Loki		_				700	08910	1					
Location				E	evation ar	nd Da	tum	005				20)			
Drilling Com	Victorville, California	а		Da	te Starte	H		285	9 (Fee	et, NG	VD 2	29) - Finished			
Drining Com	2R Drilling							3	/29/21		Duit	o i mionou		3/29/21	
Drilling Equip	ment			C	mpletion	Dept	n	- 0,	20/21		Roc	k Depth		5/25/21	
	CME 75 Truck-mou	inted Drill Rig						:	31.5 ft						
Size and Typ	e of Bit	Oto		Nu	Imber of S	Samp	les	Dist	urbed	0	U	Indisturbed	•	Core	
Casing Diam	eter (in)	Stem Auger	Casing Depth (ft)	w	ater Leve	I (ft.)		First		3	C		3	24 HR.	-
Casing Ham	mer	Weight (lbs)	Drop (in)	Dr	illing Fore	man		<u> </u>				<u>-</u>		<u> </u>	-
Sampler	-														
Sampler Han	2-inch O.D. Split-Ba	Weight (lbs)	Cal Mod	- Fie	eld Engine	eer									
	Automatic	140	30		1	<u> </u>	Α.	Atr	/ mplo D	oto					
	v.				Depth	Ē		-Sa -Sa	Hiple D			_	Rem	arks	
f and the second)	Sample Descriptio	n		Scale	qun	Type	(in)	enet resis 3L/6i	Wa Cor	ater itent	(Drilli Fluid Lo	ng Fluid, D ss. Drilling	epth of Casing Resistance, e	l, tc.)
+2859					— o —	z		Ľ.	п – п					,,.	,
der viewer in the second second second second second second second second second second second second second se	SAND with Grave	el (SP), pale brown, me	dium dense, moist			1									
Σ	medium to coarse	e sand, fine to coarse g	gravel.		- 1 -	1									
					- 2 -										
8					- <u>-</u> .	-									
					- 3 -	-									
						-									
4					_ 4 -										
<u>-</u>					- 5 -]									
					- ·		~	æ	11						
					- 6 -	ν	ō	7	20						
z.					- ·				20						
_]									
					- 8 -	4									
ğ						-									
	Silty SAND (SM).	pale olive brown, med	lium dense, moist.		- 9 -	1									
	fine sand.	· · · · · · · · · · · · · · · · · · ·				1									
					_ 10 -	~	LE	_	10						
Į.					- 11 -	Ъ,	RP I	18	12						
						-	E		14						
					- 12 -										
					- 12										
Ž	.5				$\begin{bmatrix} -13 \\ -13 \end{bmatrix}$]									
	Sandy SILT (ML),	, olive brown, hard, mo	ist, fine sand,		- 14 -	-									
	non-plastic.					-									
					- 15 -	Ϋ́	щ	0	19						
					_ 16 _	Ś	0	-	50/4"						
						-									
5 Y					- 17 -	-									
						-									
					<u> </u>	1									
					- 19 -	4									
 ∎	SAND (SP), very	pale brown, dense, mo	Dist, fine to coarse		- · ·	-									
					- 20 -	+	╞		12						
						4	비	18	21						
					<u> </u>	Ľ	ľΕ		21						
					- 22 -	-									
	Sandy SILT (MI)	pale brown dense m	oist_fine_sand		+ .	1									
52	micaceous.	, paio 810111, donoo, 11	.e.e., into ouria,		- 23 -	1									
					L 21 -	1									
					24									-	

LANGAN

4				of Boring			LB	-42		Sheet	2	of	2
	Project			Project No.									
	Locatio	n	ARS Fulfillment Center - Project Loki	Elevation a	nd Da	atum	700	08910	1				
			Victorville, California				285	59 (Fee	et, NGVD 2	9)			
	ЧЧ					1	Sa	ample Da	ata		Roma	ke	
	ATERI	Elev. (ft)	Sample Description	Depth Scale	umber	Type	ecov.	enetr. esist L/6in	Water Content	(Drilling	Fluid, Dep	th of Casing	, tc)
	 	+2835.0	Sandy SILT (ML) nale brown dense moist fine sand	24 –	ž		r c	<u> </u>			, Drilling To		
			micaceous.	- 25 -									
				- 20	Ω.	ж	8	22 34					
		±2833.0	Silty SAND (SM), pale brown, dense, moist, fine sand,	26 -	0			45					
			micaceous.	- 27 -									
GAN		÷]		- 28 -									
LAN	╾┊╴╸┝╴	±2830.5	SAND (SP), pale yellow brown, very dense, moist, medium										
- Log			to coarse sand, trace fine gravel.	- 23									
Report				- 30 -	6	LE	_	18					
۲. ۲		+0827 5		- 31 -	γ	RP I	1	25 27					
:58 PI		12027.0	Total Depth = 31.5 feet Groundwater not encountered	- 32 -									
12:58			Borehole backfilled with bentonite grout.	- 33 -									
/2021				- 55	-								
4/5				- 34 -	1								
S.GPJ				- 35 -	{								
LOGS				- 36 -									
GINT				- 37 -									
- 101				-	+								
00085				- 38 -	1								
JGS/7				- 39 -									
INTL0				- 40 -	+								
CAL/G				- 41 -	1								
CHN				- 42	1								
EOTE				- 42 -	-								
NE/G				- 43 -	1								
CIPLI				- 44 -	-								
N_DIS				- 45 -	1								
DATA				- 40	1								
JECT				- 40 -	-								
PRO				- 47 -	1								
39101				- 48 -	-								
17000				- 49 -	1								
ATA1													
IRVD				- 50 -	-								
JATA				- 51 -	1								
SOMIC				- 52 -	-								
GAN.C				- 53 -	1								
//LANC													

			Log	of B	oring			LB	-43			Sheet	1	of	1
Project		nten Desis et Lati		Pro	oject No.			700/	20040	4					
Location	ARS Fulfillment Ce	nter - Project Loki		Ele	vation ar	nd Da	tum	7000	J8910	1					
	Victorville, Californi	а						285	7 (Fee	et, NG\	/D 29	9)			
Drilling Compa				Da	te Starte	d	_	_			Date F	inished		015104	_
Drilling Equipr	2K Drilling ment			Со	mpletion	Dept	h	;	5/5/21		Rock I	Depth		3/5/21	
	CME 75 Truck-mou	unted Drill Rig			-	-		2	21.5 ft			-			
Size and Type	e of Bit 8-inch O.D. Hollow	Stem Auger		Nu	mber of S	Samp	les	Dist	urbed	3	Un	disturbed	3	Core	-
Casing Diame	eter (in)		Casing Depth (ft)	Wa	ater Leve	l (ft.)		First		-	Co	mpletion	-	24 HR.	-
Casing Hamm	ner_	Weight (lbs)	Drop (in)	Dri	lling Fore	man						-		. –	
Sampler	2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D. (Cal Mod	Fie	ld Engine	er									
Sampler Ham	^{mer} Automatic	Weight (lbs) 140	Drop (in) 30	1.			A.	Atr	/						
¥-, -,				-	Б			Sa	mple Da	ata			Rem	arks	
Elev		Sample Description			Depth Scale	Imber	ype	ecov.	enetr. esist L/6in	Wat	er >nt	(Drillin	ng Fluid, D	Depth of Casing	(a)
± [∞] +2857.					— 0 —	N		ж́	ᇍᇎᇳ	Conte		Fluid Lo	iss, Drilling	, resistance, el	.c.)
	SAND with Grave	el (SP), pale brown, den	se, moist, medium	ı		1									
	to coarse sand, fi	ine to coarse gravel.			- 1 -	1									
					- 2 -	-									
					- · ·				14			Dry D	ensity =	= 113.7 pcf	
					- 3 - - ·	۲. ۲	ଞ	18	24			WC =	3.4%		
					- 4 -	-	╞╴┉╿		30						
					- 5 -	1									
	Medium dense, tr	race fine gravel.				Ņ	╞┫		6						
					- 6 -	γ	I'S	₩	7 9						
					- · ·		7		-						
	Von donce with	fine to occrea gravel							07				ensity -	= 110 1 nof	
	very dense, with	ime to coarse gravel.			- 8 -	S-3	ଞ	12	27 50/6"			WC =	2.7%	110.1 pcl	
					- · ·	1									
77772847						-									
	plasticity, fine sar	nd, few caliche deposits			- 10 -				16			LL = 3	31, PL =	= 18, PI = 1	3
					- 11 -	S-4	SPT	18	24			%Pas	s #200	= 26	
						-	╞╴╡		26						
////AD844	5 				- 12 -	1									
	SAND (SP), pale	brown, very dense, moi	st, fine to medium		- 13 -	4									
						1									
					- 14 -	1									
					- 15 -	5			30			Conso	olidatior	n test.	
+2841.	Silty SAND (SM),	, yellow brown, very den	se, moist, fine			ပိ	Ь	1	50/5"			%Pas	s #200	= 47	
	sand, micaceous				- 01 -]								
					- 17 -	-									
+2839.	o 				- ·	1									
	SAND with Grave	el (SP), pale brown, very	v dense, moist,	-	- 01	-									
		o sana, into to coarse gi			- 19 -	1									
					- 20 -	1	$\left \right $								
						φ	F	ω	16 25						
+0835	5				- 21 -	ف	Is II	~	29 29						
	Total Depth = 21.	5 feet			- - 22 -	1									
	Borehole backfille	encounterea. ed with soil cuttings.				-									
		5			- 23 -	1									
						1									

LA	NDA		Log	of B	oring			LB	-44			Sheet	1	of	1
Project				Pro	ject No.										
Location	ARS Fulfillment Center	- Project Loki		Ele	vation a	nd Da	tum	7000	08910	1					
Drilling Comm	Victorville, California			Det	ta Otarta	4		285	4 (Fee	et, NG\	/D 29) Jiniahad			
Drilling Compa	2P Drilling			Da	te Starte	a			3/5/21		Date F	Inisnea		3/5/21	
Drilling Equipn	nent			Со	mpletion	Dept	n		5/5/21		Rock [Depth		0/0/21	
	CME 75 Truck-mounted	d Drill Rig							21 ft		_				
Size and Type	of Bit 8-inch O D Hollow Ster	m Auger		Nu	mber of \$	Samp	les	Distu	irbed	3	Uno	disturbed	3	Core	-
Casing Diame	ter (in) -		Casing Depth (ft) -	Wa	ater Leve	l (ft.)		First		-	Cor	mpletion	-	24 HR. 	-
Casing Hamm	er_ W	/eight (lbs)	Drop (in) -	Dri	lling Fore	eman									
Sampler	2-inch O.D. Split-Barrel	SPT, 2.5-inch I.D. C	al Mod	Fie	ld Engine	er									
Sampler Hamr	^{mer} Automatic	/eight (lbs) 140	Drop (in) 30	1			A.	Atr	,						
-F								Sa	mple Da	ata		1	Dom	orko	
Elev.	Sa	ample Description			Depth Scale	mber	ype	20 Li	netr. sist /6in	Wat	er	(Drillin	g Fluid, D	epth of Casing	,
≧ ^{io} +2854.0)				_ 0 _	N	É.	"Re	Pe BL	Conte	ent	Fluid Los	s, Drilling	Resistance, e	tc.)
	Alluvium (Qa) SAND (SP) pale brov	wn medium dense r	moist fine to		-	-									
	coarse sand, trace fin	ne to coarse gravel.			- 1 -	1									
					- 2 -	1									
									7						
					- 3 -	۲.	SPT	18	, 6						
					- 4 -		Ë		6						
						_									
	Dense, with gravel.				- 5 -				11			Dry De	ensity =	122.5 pcf	
					- 6 -	- S	Ю	18	15			vvc =	1.4%		
									26						
<u>+2</u> 846.{					- 7 -										
	SAND with Silt (SP-S	M), pale brown, very	dense, moist,		- 8 -	- ņ	F		24						
	cemented.	trace fine graver, tra	de calierte,		-	ٺ _	ы П	÷	24 26						
					_ 9 -	_									
	caliche deposits.	e gray, hard, moist,	fine sand, heavy		- 10 -				16			Dry De	ensity =	95.5 pcf	
					_ 11 _	4	К	18	21			WĆ =	18.0%	י. ד – ום דרי	
					- 11 -				32			Conso	4, PL =	27, PI = 7 test.	
					- 12 -	-									
	Silty SAND (SM), stro	ong brown, very dens	se, moist, fine		- 13 -	1									
	sand, some caliche.				- 13	-									
					- 14 -										
					- 15 -										
						- 42	ĿШ	ω	16 30						
					- 16 -	S	S E	-	50						
					- 17 -										
						+									
					- 18 -	1									
					- 19 -	-									
					-	-									
					- 20 -	φ	<u>بر</u>	0	30			No sa	nple re	covery.	
<u></u>	Total Denth - 21 foot				- 21 -	S		_	50/6"						
	Groundwater not enco	ountered.				1									
	Borehole backfilled w	ith soil cuttings.			- 22 -]									
					- 23 -	-									
						1									

		g of	Boring			LB-45		-	Sheet	1 of	1
Project		P	Project No.				~ 4				
Location	ARS Fulfillment Center - Project Loki	E	Elevation ar	nd Da	itum	7000891	01				
	Victorville, California					2866 (F	eet, NG	VD 2	9)		
Drilling Compa	any	C	Date Starte	ł				Date	Finished		
Drilling Equip	2R Drilling		Completion	Dent	h	3/4/2	1	Rock	Denth	3/4/21	
	CME 75 Truck-mounted Drill Rig		Joinpiction	Dopt		20.4	ft	TOOK	Deptil		
Size and Type	e of Bit		Jumber of S	Samo	les	Disturbed		Un	ndisturbed	Core	
Casing Diame	8-inch O.D. Hollow Stem Auger ter (in) Casing Depth (ft)					First	3	Co	3 moletion	24 HR.	-
- 5	-		Vater Leve	(ft.)		$\overline{\Delta}$	-		⊈ ′ -	Ī	-
Casing Hamm	erVeight (lbs) Drop (in)		Drilling Fore	man							
Sampler	2-inch O.D. Split-Barrel SPT, 2.5-inch I.D. Cal Mod	F	ield Engine	er							
Sampler Ham	^{mer} Automatic Weight (lbs) 140 Drop (in) 30)	Ū		A.	Atry					
			Dauth			Sample	Data		R	emarks	
(ft)	Sample Description		Scale	admu	[ype	ecov. (in) enetr esist		ater	(Drilling Flu	id, Depth of Cas	sing,
^{≥ 07} +2866.			— o —	ź		8 <u>6</u> 6		nom	Fluid Loss, Di	IIIII y Resistance	e, etc.)
	Silty SAND (SM), dark brown, medium dense, moist, find	Э									
			- +- 1 -								
	Silty SAND (SM), pale brown, medium dense, moist,		- 2 -								
	medium to coarse sand, micaceous.					6	_				
				۲.	SPT	99	,				
			- 4 -		E	8	_				
											_
	Very pale brown, very dense, fine sand, increased silt.			2	~	25			Dry Densi	ty = 93.1 pc %	f
			- 6 -	ပ္	ö	₩ 37 50/4			10 4.4		
<u>+</u> 2859.											
	Sandy SILT (ML), olive brown, hard, non plastic, fine sar	ıd,	- ' ·			10	_				
			- 8 -	r r r	SPT IIII	<u>∞</u> 18	3				
			- 9 -		ΪE	25					
			- 10 -	4	ж	, 25	_		Dry Densi	ty = 108.8 p	cf
			- 11 -	S		50/5	•		VVC = 10.4	1%	
<u>+</u> 2853.			- 12 -	1							
	SAND with Gravel (SP), yellow brown, very dense, mois fine to coarse sand, fine to coarse dravel, micaceous	.,	- 13 -	$\left \right $							
	,			1							
			- 14 -								
			- 15 -			18	_				
			- 16 -	S-5	SPT	€ 25	5				
						30	_				
			- 17 -	1							
			- 18 -]							
				-							
			- 19 -	1							
	Fine to medium sand, no gravel		- 20 -	S.F	CRIII	5 50/5					
<u></u> +2845.	Total Depth = 20.4 feet	l	\uparrow	10-0		0 30/3	1				
	Groundwater not encountered.		- 21 -	1							
]	- 22 -	-							
			- 23 -]							
			L 24 _								

Project Location			0		U				+0		3	neel		U 1	
Location	APS Eulfillmont Con		Pro	oject No.											
V		iter - Project Loki		Fle	vation ar	nd Da	tum	7000	89101						
	∕ictorville, California	1			valoria		um	2862	2 (Feet	, NGVI	D 29)				
Drilling Company	· · · · · · · · · · · · · · · · · · ·			Da	te Starte	d				D	ate Fin	nished			
2 Drilling Equipmer	2R Drilling nt			Co	mpletion	Dept	n	3	/4/21	R	ock De	epth		3/4/21	
(CME 75 Truck-mour	nted Drill Rig			· · ·	-		1	1.5 ft						
Size and Type of 8	[:] Bit 3-inch O.D. Hollow S	Stem Auger		Nu	mber of S	Samp	les	Distur	bed	2	Undis	sturbed	2	Core	-
Casing Diameter	(in)	0	Casing Depth (ft)	Wa	ater Leve	l (ft.)		First \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		_	Com	pletion	_	24 HR.	_
Casing Hammer	·	Weight (lbs)	Drop (in)	Dri	illing Fore	eman		<u> </u>		-	<u> </u>		-	<u> </u>	-
Sampler 2 Sampler Hamme	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D. (Weight (lbs)	Cal Mod	Fie	eld Engine	eer									
	Automatic	140	30				Α.	Atry Sam	ple Dat	a					
Elev. WBOL WBOL (ft) +2862 0		Sample Description	I		Depth Scale	Number	Type	Recov. (in)	resist BL/6in	Water Conter	nt	(Drilling Fluid Loss	Rem Fluid, D s, Drilling	arks epth of Casing Resistance, e	l, tc.)
	Alluvium (Qa) SAND with Silt (Sf moist, fine to coard SAND (SP), pale to coarse sand, mice SAND (SP), pale to medium sand, mice SAND (SP), pale to sand, micaceous. Total Depth = 11.5 Groundwater not et Borehole backfilled	P-SM), yellow brown, m se sand, micaceous, fr brown, medium dense, aceous, friable. strong brown, very den caceous, trace caliche. brown, very dense, moi 5 feet encountered. d with soil cuttings.	nedium dense, iable.		- 1 $-$ 1 $-$ 1 $-$ 2 $-$ 1 $-$ 2 $-$ 1 $-$ 2 $-$ 1 $-$ 2	S-4 5-2 S-1	SPT D SPT CR	18 9 18 18 18	10 16 14 5 6 50/6"			Dry De WC = 2 Dry De WC = 6	nsity = 2.2%	: 116.7 pcf	

LA	ΝЬΑ	A / A	Log	of E	Boring			LB	-47			Sheet	1	of	1
Project				Pr	oject No.										
Location	ARS Fulfillment Cer	nter - Project Loki		Ele	evation ar	nd Da	atum	700	08910	1					
	Victorville, California	a		-	t- 0tt-			286	61 (Fee	et, NG	VD 2	9) Finish sal			
Drilling Compa	2R Drilling			Da	ile Starle	u			3/4/21		Date	Finished		3/4/21	
Drilling Equipr	nent			Co	mpletion	Dept	h		5/4/21		Rock	Depth		5/4/21	
	CME 75 Truck-mou	nted Drill Rig							11.5 ft						
Size and Type	e of Bit 8-inch O.D. Hollow 9	Stem Auger		Nu	Imber of S	Samp	les	Distu	urbed	3	Ur	ndisturbed	2	Core	_
Casing Diame	ter (in)		Casing Depth (ft)	w	ater Leve	l (ft.)		First		-	Co		-	24 HR.	-
Casing Hamm	ner	Weight (lbs)	Drop (in)	Dr	illing Fore	eman									
Sampler	Bulk 2-inch O D St	plit-Barrel SPT_2 5-inc	h I D. Cal Mod			or	A	driar	۱						
z Sampler Ham	mer Automatic	Weight (lbs) 140	Drop (in) 30	-1''			м	Ga	lvan						
		140	, 00					Sa	mple Da	ata			D		
		Sample Description	า		Depth Scale	nber	be	УС (-	netr. sist 6in	Wa	ter	(Drillin	Rem Ig Fluid, D	IAIKS Depth of Casin	q,
(۱۲) کے (۱۲) +2861.1	D				Ocale	Nun	Ţ	(i	Per res BL	Con	ent	Fluid Los	ss, Drilling	, Resistance,	etc.)
	Alluvium (Qa)	light brown doneo dr	, fine cond trace		- 0 -	_						Bulk s	ample	collected f	from
	caliche.	light brown, dense, dry	y, line sand, trace		- 1 -	-						R Valu	ar bgs. Je.		
2															
								8	13 16						
707/07							S		22						
*															
	Modium donco, fir	no to coorso sand incr	assod grapular		- 5 -		_ m		10			Dry De	ensitv =	= 115 2 nc	f
	material.	ne to coarse sand, incr	easeu granulai			2	ж	8	19 22			WC =	2.5%	110.2 po	•
2					- 6 -	0			21						
z 5 ±2854.0					- 7 -										
5	SAND (SP), tan, r	medium dense, dry, me and_trace silt	edium to coarse				╞		6						
					- 8 -	en en	PT I	6	6						
					_ q _		l"E		6						
Ő.															
	Dense, increased	coarse sand.			- 10 -				19			Dry De	ensity =	= 112.9 pc	f
					- - 11 -	8-4-8	Ю	18	23			WC =	2.6%		
z +2849.	5	5 foot			- ''				32						
	Groundwater not	encountered.			- 12 -	-									
	Borehole backfille	ed with soil cuttings.			- 13 -	1									
						-									
					- 14 -	-									
AIA															
					- 16 -	-									
					['' -										
.010					- 18 -	-									
A1/					- 19 -	-									
					- 20 -	-									
					- 21 -]									
					- 22 -	-									
AN.C						1									
ANG					- 23 -]									
					L 24 -	1									

LA		of Boring	LB-48	Sheet 1 of 1
Project		Project No.		
Location	ARS Fulfillment Center - Project Loki	Elevation and Datur	700089101 n	
	Victorville, California		2854 (Feet, NG	SVD 29)
Drilling Compa	ny	Date Started		Date Finished
Drillina Equipr	2R Drilling	Completion Depth	3/5/21	3/5/21 Rock Depth
29 = quipi.	CME 75 Truck-mounted Drill Rig	Completion Doput	21.5 ft	
Size and Type	of Bit	Number of Samples	Disturbed	Undisturbed Core
Casing Diame	er (in) Casing Depth (ft)	Water Level (ft.)	First ∑ -	S - Completion 24 HR. ▼ - ▼
Casing Hamm	er Weight (lbs) Drop (in)	Drilling Foreman	· =	
Sampler	2-inch O.D. Split-Barrel SPT, 2.5-inch I.D. Cal Mod	Field Engineer		
Sampler Hamr	ner Automatic Weight (lbs) 140 Drop (in) 30		A. Atrv	
<u>4</u>			Sample Data	Remarks
Elev.	Sample Description	Depth b	ype eretr. Sist	ater (Drilling Fluid, Depth of Casing,
≥°° +2854.0		0 ₹ ⊦		Fluid Loss, Drilling Resistance, etc.)
	Alluvium (Qa) SAND with Gravel (SP), yellow brown, medium dense,			
	moist, medium to coarse sand, fine gravel.			
		- 2 -		
			7	Dry Density = 111.0 pcf
		<u> </u>	∞ 13	WC = 1.6%
		- 4	10	
	Dense.		9	
		- 6 - 0 - 0	₩ 13	
+2847.5	Silty SAND (SM), olive brown, very dense, moist, fine sand	I,	24	
	some caliche déposits.			
		- 8 - m 🖉	∞ 24 ∞ 20	WC = 7.3%
		0 0	50	%Pass #200 = 31
		- 9		
		- 10	□ 24	
			25 25	
			29	
		- 12 -		
가지	Elne to medium sand, decreased sitt	- 15 -		
		C S S	24 50/6"	
		- 17 -		
±2 836.5	SAND with Gravel (SP), pale brown, very dense, moist, find			
	to coarse sand, fine to coarse gravel, micaceous.			
		- 19 -		
		- ²⁰ - 9 -		
10000 5		ר 21 – הי הי הי	$\begin{vmatrix} -24 \\ 34 \end{vmatrix}$	
	Total Depth = 21.5 feet	- 22 -		
	Borehole backfilled with soil cuttings.			
	, č	23 -		

L	A	NL /	4 /V		Log	of Boi	ring _			RB-1		_	Sheet	1	of	1
Project						Proje	ct No.									
Location	1	ARS Fulfillment Cer	nter - Project Loki			Eleva	tion and	l Dat	tum	7000891	01					
Looution		Victorville, California	а			2.010				(Feet, N	IGVD 2	29)				
Drilling (Compar	ny				Date	Started				-	Dat	e Finished			
Drilling F	quipm	2R Drilling				Comr	Jetion D	onth	<u> </u>	3/30/2	1	Roc	rk Denth	3	8/30/21	
	_quipin	CMF 75 Truck-mou	inted Drill Rig			Comp		epu		11.5	ft		к Беріп			
Size and	Туре	of Bit				Numb	per of Sa	ampl	es	Disturbed		Γ	Undisturbed		Core	
Casing [Diamete	er (in)	Stem Auger	Ca	asing Depth (ft)					First	3	-	Completion	2	24 HR.	-
		-	Maight (lba)		-	vvate	r Level (π.)		$\overline{\Delta}$	-		Ţ	-	$\bar{\mathbf{\Lambda}}$	-
Casing H	lamme	er		-	- Drop (III)		y roren	lan								
Sampler		Bulk, 2-inch O.D. S	plit-Barrel SPT, 2.5	inch I.I	D. Cal Mod	Field	Enginee	er								
Sampler	Hamm	^{her} Automatic	vveight (ibs)	140	Drop (in) 30				В.	Watkins						
BOL	Elev.						Depth	er	0	Sample	Jata		_	Rem	arks	
NATE SYME	(ft)		Sample Descrip	otion		5	Scale	dumb	Type	Penet	Wa Cor	ater ntent	(Drillin Fluid Los	g Fluid, De s, Drilling	epth of Casing Resistance, e	g, etc.)
		<u>_Fill</u>					0 +	2					Bulk s	ample o	collected f	rom
		Silty SAND (SM),	pale brown, moist,	fine sa	nd, trace fine	Ē	1 -						0-5 fee	et bgs.		
7////		Alluvium (Qa)				+	_									
		Clayey SAND (SC	C), brown, very den	se, moi	st, fine to	F	2 7									
		caliche.			gravel, trace	-	3 —	7	н	22 12 33						
						Ŀ	4	0)		50/5						
						-										
							5	~		14	-					
						-	6 —	ŝ	L S I	₩ 10						
		Silty SAND (SM),	light yellow brown,	very de	ense, moist, fin	e	-			10	-					
5		sand, trace calich	ie.			-	<i>′</i>			20	_					
						-	8 —	s. S	Ю.	₽ ²⁹ 50/6						
						F	9 -									
<u>i</u> liii ilii		Sandy SILT (ML),	, brown, hard, mois	t, fine s	and, some		10									
		caliche.				F		4	F	16						
						-	11 -	လှ	R III	₩ 33 46	·					
		Total Depth = 11.	5 feet				12 -				1					
		Borehole backfille	encountered. ed with soil cuttings			-	-									
							13 –									
						-	14 -									
						Ŀ	15 -									
						-										
						E	16 –									
						-	17 -									
						Ŀ	10									
6000						F	-									
						┢	19 -									
						F	20 -									
						F	<u> </u>									
						F	21 -									
						┝	22 -									
						F	23 –									
						F	- +									
- ـ							24									

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L	A	NG	4 <i>N</i>	Log	of E	Boring			RE	3-2			Sheet	1		of	1
Project				5	Pr	oject No.											
		ARS Fulfillment Cer	nter - Project Loki		_				700	089101							
Location		Victorville Californi	2		Ele	evation ar	nd Da	atum		oot NG	20 חע	`					
Drilling (Compar	ny	a		Da	ate Starte	d		(1 0		0 23) Date F	inished				
Drillin e [2R Drilling					Devel	-	3	/30/21			Denth		3/30/	/21	
Drilling	quipm	CME 75 Truck-mou	inted Drill Rig			mpietion	Dept	n		10 4 ft	ľ	KOCK I	Depth				
Size and	Туре	of Bit			N	umber of s	Samr	oles	Dist	urbed		Uno	disturbed		Core	e	
Casing [Diamete	er (in)	Stem Auger	Casing Depth (ft)	W	ater Leve	l (ft.)		First		2	Сог	mpletion	2	24 H	HR.	-
Casing I	lamme	 er	Weight (lbs)	Drop (in)	Dr	illing Fore	eman		<u> </u>		-			-	<u> </u>		-
Sampler		2-inch O D Split-Ba	arrel SPT 2 5-inch I D C	Cal Mod			or										
z Sampler	Hamm	^{her} Automatic	Weight (lbs) 140	Drop (in) 30	"		501	В	. Wa	tkins							
PIANG PIANG								1	Sa	mple Da	ta			Rem	hark	<u>د</u>	
MATER SYMBC	ft)		Sample Description			Scale	Jumbei	Type	Recov.	^{>} enetr. resist BL/6in	Wate Conte	er ent	(Drilling Fluid Los	g Fluid, [s, Drilling	Depth o g Resi	of Casing, istance, et	c.)
		Alluvium (Qa)				- 0 -	2		-						-		·
ž //////		Clayey SAND (SC medium sand, tra	C), pale brown, very dens ace fine to coarse gravel.	se, moist, fine to		- 1 -											
		····,,,,,,,															
								┝┍		10							
						- 3 -	۲.	SPT	18	30							
						- 4 -		ΪĒ	<u> </u>	25							
		Some coarse san	nd, no gravel.			- 5 -	S-2	CR	12	20							
						- 6 -				50/6							
z////				maiat fina ta		- 7 -											
		medium sand, fin	e gravel.	, moist, line to		-	e e	F		31							
						- 8 -	ပ္	R E	12	50/6"							
L/SB/						- 9 -											
		No graval				- 10 -	Q 1	rall	15	50/4 5 "							
		Total Depth = 10.	4 feet						4.5	50/4.5							
		Groundwater not Borehole backfille	encountered. ed with soil cuttings			- 11 -											
			a mar con catango.			- 12 -	-										
-JGEC						- 13 -											
						- 14 -											
						- 15 -											
						- 16 -											
Ϋ́Υ																	
01.68(- 18 -											
1000						- 19 -											
						- 20											
						- 20 -]										
						- 21 -											
						- 22 -]										
AN.C						-	1										
ANG						- 23 -	1										
<u> </u>						⊥_ 24 –											

L	4	NG/	4 N	Log	of E	Boring			RE	3-3			Sheet	1	0	f	1
Project					Pr	oject No.											
Location		ARS Fulfillment Ce	enter - Project Loki		Ele	evation ar	nd Da	atum	700	08910	1						
Drilling Co		Victorville, Californi	ia			to Ctarta	4		(Fe	eet, NC	GVD 2	9) Data	Finished				
	ompar	2R Drilling			Da		1		3	/30/21		Date	FINISNEG	:	3/30/21	1	
Drilling Ec	quipm	ent			Co	ompletion	Dept	h				Rock	Depth				
Size and	Туре	CME 75 Truck-mou	unted Drill Rig		NI	umbor of 9	Somr		Dist	6.5 ft urbed		Ur	ndisturbed		Core		
Casing Di	amete	8-inch O.D. Hollow er (in)	Stem Auger	Casing Depth (ft)				165	First		2	Co	ompletion	1	24 HR		-
Casing Ha	amme	- 97	Weight (lbs)	– Drop (in)	Dr	illing Fore	i (π.) eman		$ \underline{\nabla}$		-		Ţ	-	Ţ		-
Sampler		"-			L												
z Sampler H	lamm	Bulk, 2-Inch O.D. S	Weight (lbs)	Drop (in)	_ Fie	eld Engine	eer	В	\ M /~	tkine							
L'A ANG		Automatic	140	50					Sa	mple Da	ata			Por	orke		
rt: Log - L MATERI SYMBC	Elev. (ft)		Sample Description	1		Depth Scale	Number	Type	Recov. (in)	Penetr. resist BL/6in	Wa Cont	ter tent	(Drilling Fluid Loss	Fluid, E s, Drilling	Depth of C g Resista	Casing, nce, etc	c.)
Kepo		Alluvium (Qa) Silty SAND (SM).	, light yellow brown, me	dium dense,			-						Bulk sa 0-5 fee	imple t bas.	collect	ed fro	om
M		slightly moist, find	e to medium sand.			- 1 -	1							0			
29:59						- 2 -	-										
21 12:						- 3 -	7	ж	8	14 19							
4/5/20		Condy CILT (ML)	had arou hard maint	fine cond trace		- 4 -	0	Ŭ	Ù	23							
ананананананананананананананананананан		caliche.	, pale gray, hard, moist,	, line sand, trace		- 5 -											
CS.C							2	E E	18	14 18							
		Total Donth = 6 5	- foot			- 6 -	0	s		18							
- 1		Groundwater not	encountered.			- 7 -											
08910		Borehole backfille	ed with soil cuttings.			- 8 -											
S/700						- 9 -	1										
						- 10 -											
VILIGIN							-										
HNIC						- 11 - -	1										
OIEC						- 12 -											
IE/GE						- 13 -	-										
						- 14 -	-										
						- 15 -	1										
DAIA						- 10											
GECT						- 10 -											
2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2						- 17 -	1										
0101						- 18 -											
1//00(- 19 -	-										
						- 20 -	1										
AIRV						- 21 -											
							-										
						- 22 -	1										
NGA						- 23 -											
						L ₂₄ –											

LA	۱/۷/۵ /	4 / V	Log	of Boring		R	B-4			Sheet	1	of	1
Project				Project No.									
Location	ARS Fulfillment Ce	enter - Project Loki		Elevation and	Datu	70 m	008910	1					
	Victorville, Californ	iia				 (F	eet, N	GVD 2	9)				
Drilling Com	pany			Date Started					Date I	inished			
Drilling Equi	2R Drilling			Completion D	epth		3/30/21		Rock	Depth	3/3	30/21	
5 1	CME 75 Truck-mo	unted Drill Rig			•		11.5 f	t		·			
Size and Ty	pe of Bit 8-inch O.D. Hollow	/ Stem Auger		Number of Sa	mple	s Dis	turbed	2	Un	disturbed	2	Core	_
Casing Dian	neter (in)	Stelli Augei	Casing Depth (ft)	Water Level (ft.)	Fir	st Z	-	Co	mpletion	2 2	4 HR. V	-
Casing Ham	imer_	Weight (lbs)	Drop (in)	Drilling Forem	nan		-			-	I	-	
Sampler	2-inch O.D. Split-B	arrel SPT, 2.5-inch I.D.	Cal Mod	Field Enginee	r								
Sampler Ha	^{mmer} Automatic	Weight (lbs) 140	Drop (in) 30			B. W	atkins						
	N/	· ·	·	Dopth	<u> </u>	S	ample D	ata			Rema	rks	
	t)	Sample Descriptior	า	Scale	nmbe	Ecov.	enetr esist t/6in	Wa Con	ater tent	(Drilling	Fluid, Dep	oth of Casing,	, ,
S ≥	Alluvium (Qa)			——————————————————————————————————————	ź '		<u> </u>				s, Drilling IV		
Repo	Silty SAND (SM)), light brown, medium d	ense, slightly										
Σ	moist, fine to me	dium sand.											
80				- 2 -									
				- 3 -			14						
2021					ې لې	9目 8	10						
4/5				- 4 -									
- Res	Danaa maiat			- 5 -				-					
los contraction de la contract	Dense, moist.				2 g	<u>ه</u> ال	14						
				- 6 -	0, 0		29						
5 				- 7 -									
9101	Pale brown, with	fine to coarse gravel.				E	14						
8000					S S	÷≣≈	21						
GS/7				- 9 -		4	23						
	SAND with Silt a	nd Gravel (SP-SM), pal	e brown, dense,					-					
	moist, line to coa	arse sand, line to coarse	e graver.		7 9	;∭∞	24						
N N N				- 11 -	S C	́Ш`	33						
H H H H H H H H H H H H H H H H H H H	Total Depth = 11 Groundwater not	.5 feet t encountered.		- 12 -									
GEO1	Borehole backfill	ed with soil cuttings.		12									
SCIPL SCIPL				- 14 -									
				- 15 -									
DATA													
L.				- 16 -									
ROJE				- 17 -									
01/P													
00891													
1/1/20				- 19 -									
DAT/													
DATA				- 21 -									
OM/E				- 22 -									
AN.C													
ANG				- 23 -									
≱ LL				24			1						

L	A	NGA	4 <i>N</i>	Log	of E	Boring			RE	8-5			Sheet	1	C	of	1
Project					Pr	oject No.											
Location		ARS Fulfillment Cer	nter - Project Loki		FI	evation a	nd Da	atum	700	089101							
Location		Victorville, California	а			evalion ai		atum	(Fe	eet. NG	iVD 29)					
Drilling C	Compar	лу	-		Da	ate Starte	d			,		, Date F	inished				
Drilling F	auinm	2R Drilling			C	moletion	Dent	'n	3	/30/21	F	Rock [Denth		3/30/2	1	
	-quipiri	CME 75 Truck-mou	inted Drill Rig			mpiotion	Dopt			11.5 ft			Dopti				
Size and	І Туре (of Bit 8-inch O.D. Hollow 9	Stem Auger		NL	umber of s	Samp	oles	Dist	urbed	2	Und	disturbed	2	Core		_
Casing [Diamete	er (in)	Stelli Augei	Casing Depth (ft)	w	ater Leve	(ft.)		First	:	2	Cor	mpletion	2	24 HR	ξ.	-
Casing H	lamme	 er	Weight (lbs)	Drop (in)	Dr	illing Fore	eman		ΙŸ		-			-	<u> </u>		-
Sampler		- 2 inch O.D. Split Pa		Cal Mad													
Sampler	Hamm	<u>2-IIICII O.D. Spiit-Ba</u> ier Automatic	Weight (lbs)	Drop (in)	_ Fie	eld Engine	eer	B	\M/~	tkine							
		Automatic	140	50	-			<u> </u>	Sa	mple Da	ta			D			
MATERI SYMBO	Elev. (ft)		Sample Description	I		Depth Scale	Number	Type	Recov. (in)	Penetr. resist BL/6in	Wate Conte	er nt	(Drilling Fluid Loss	Fluid, D s, Drilling	Depth of (g Resista	Casing, ance, etc	:.)
		Alluvium (Qa)	2) palo brown donso n	noist fino to		- 0 -											
ž /////		medium sand, sor	me coarse sand.	noist, nne to		- 1 -											
						- 2 -											
						-	_			9							
						- 3 -	<u>-</u>	R	18	25							
412						- 4 -				25							
		Medium dense, fir	ne sand, some medium	sand some		- 5 -		┝┍	<u> </u>	0							
		caliche, increased	d fines.	sand, some		- 6 -	S-2	SPT	12	9 11							
										17							
		Clayey SAND (SC	C), brown, very dense, n	noist, fine to		- 7 -											
		medium sand, sor	me coarse sand, some	caliche.		- 8 -	_S-3		3.5	50/3.5"			Rock Ir	ı sam	ple tip.		
						- a -											
		SAND (SP) pale	brown verv dense slid	htly moist fine to		-											
		medium sand, sor	me coarse sand, trace s	silt.		- 10 -		LE		21							
						- 11 -	ပိ	SP	18	24 30							
		Total Depth = 11.	5 feet			- 12 -											
		Borehole backfille	encountered. ed with soil cuttings.				-										
						- 13 -	1										
SCIPL						- 14 -	-										
						- 15 -	1										
DAIP						- 10	-										
						- 16 -											
10X1						- 17 -	-										
101						- 18 -											
BOOOL						- 10											
						- 19 -											
						- 20 -											
ALAIF						- 21 -	-										
						- 22 -											
N.CC						-	-										
ANG						- 23 -											
]						⊥ ₂₄ –											

L	4	NLAA	A/V	Log	of E	Borin	g_			RE	3-6			Sheet	1	(of	1
Project					Pr	oject I	No.											
Location		ARS Fulfillment Cer	nter - Project Loki		Ele	evatio	n and	Dat	tum	700	08910	1						
-		Victorville, California	a							(Fe	eet, NO	GVD 2	9)					
Drilling Co	ompai	ay 2P Drilling			Da	ate Sta	arted			3	/20/21		Date	Finished		3/30/3	01	
Drilling Ec	quipm	ent			Co	mplet	ion D	epth	ı	5	130/21		Rock	Depth		3/30/2	- 1	
		CME 75 Truck-mou	nted Drill Rig								11.5 ft					1		
Size and	Гуре	of Bit 8-inch O.D. Hollow \$	Stem Auger		Nu	ımber	of Sa	mpl	es	Disti	urbed	3	Un	idisturbed	2	Core		-
Casing Di	iamet	er (in) -		Casing Depth (ft)	W	ater L	evel (†	ft.)		First ∑		-	Co	mpletion	-	24 HI	٦.	-
Casing Ha	amme	۲	Weight (lbs)	- Drop (in) -	Dr	illing F	orem	nan										
Sampler		Bulk, 2-inch O.D. Sp	olit-Barrel SPT, 2.5-inc	h I.D. Cal Mod	Fie	eld En	ginee	r										
Sampler H	Hamm	^{her} Automatic	Weight (lbs) 140) Drop (in) 30					В.	Wa	itkins			_				
-ANG 30L	Flev					Der	oth	ъ		Sa	mple D	ata		-	Ren	narks		
og - L SYME	(ft)		Sample Description	n		Sca	ale	lumbe	Type	(in)	Peneti resist 3L/6ir	Wa Con	ater tent	(Drillin Fluid Los	g Fluid, [ss, Drilling	Depth of g Resist	Casing, ance, et	c.)
- ti <i>////////////////////////////////////</i>		Alluvium (Qa)				+ 0	• +	z		ш.				Bulk s	ample		ted fro	, om
		Clayey SAND (SC	C), brown, medium der	ise, moist, fine to		- - 1	_							0-5 fee	et bgs.			
₽/////		medium sand.				- '	-											
0:04						- 2	! -											
						- 3		-	ЧШ	8	5							
						-	- 1'	Ś	III SF	-	8							
*///A			aiot fine cond		F 4	· _												
GD		SILLY SAIND (SIVI),	bist, line sand.		- 5	; +				14			Increa	sed cla	ay at t	he bot	tom	
S00						- 6		S-2	R	18	21			of sam	ple.			
L L						-	+				28							
5 		SAND (SP), yellow	w brown, medium den	se, slightly moist,		- 7	′ <u> </u>											
38910		fine to medium sa coarse gravel.	ind, trace coarse sand	, trace fine to		- 8		-3	PT	8	9							
/200		C C				L o		S	IS I	-	14							
8						- 3	′ _											
F		Medium to coarse	sand, trace fine sand	, increased gravel.		- 10	о —				10			Poor s	ample	recov	very.	
CAL						- 1'	1	S-4	R	18	21							
N N N N N N N N N N N N N N N N N N N		Total Depth = 11.5	5 feet			+ ,,	, †				24							
OTE		Groundwater not e Borehole backfille	encountered. d with soil cuttings			- 14	2]											
IE/GE			a mar oon oatango.			- 13	3 –											
						- 14	4 -											
DISO																		
TA						- 1t	5 -											
						- 16	3 -											
ONEC						L 13	7 _											
AVPR						- ''	′ -											
08910						- 18	3 –											
1/200						- 19	9 –											
DATA						È a												
IRVI						- 20	1											
ATA						- 2 [,]	1 –											
OM/E						- 22	2 –											
AN.C						+	_ +											
ANG						F 23	5 ↓											
J.						L ₂₄	₄⊥											

L	A	NL	4/V		Log	of E	Boring			RB	-7			Sheet	1	of	1
Project						Pr	oject No.										
Location	1	ARS Fulfillment Cer	nter - Project Loki	i		El	evation ar	nd Da	tum	7000	89101	1					
		Victorville, California	а							(Fe	et, NG	SVD 2	9)				
Drilling C	Compai	ny				Da	ate Starteo	Ł					Date F	inished			
Drilling E	Eauipm	2R Drilling ent				C	mpletion	Dept	n	3/:	30/21		Rock	Depth	3	/30/21	
	- 1 - 1 - 1 - 1 - 1	CME 75 Truck-mou	inted Drill Rig							1	1.5 ft						
Size and	d Type	of Bit	Champ August			Nu	umber of S	Samp	les	Distu	rbed		Un	disturbed	0	Core	
Casing [Diamet	er (in)	Stern Auger	C	Casing Depth (ft)	w	ater Leve	(ft.)		First ∇		3	Co	mpletion	2	24 HR.	-
Casing H	lamme	er_	Weight (lbs)		Drop (in)	Dr	illing Fore	man		<u> </u>		-		<u></u>	-	<u> </u>	-
Sampler		2-inch O D. Split-Ba			al Mod	╘											
Sampler	Hamm	1er Automatic	Weight (lbs)	140	Drop (in) 30	1+1	eia Engine	er	B	Wat	kine						
AGA		Automatic		140	30				D.	San	nple Da	ata			_		
- LAN TERIA MBOL	Elev.		Sample Descr	ription			Depth	her	be	کار (letr. sist 6in	Wa	ter) (Drillir	Rema na Fluid. De	arks epth of Casing.	
SYA.	(11)		I	•			Scale	Nun	Ţ	Be Be	Per BL	Cont	ent	Fluid Lo	ss, Drilling	Resistance, et	c.)
about		Alluvium (Qa)) brown mediur	n donce	moist fine to			_									
₫ <i>/////</i>		medium sand.	<i>)</i> , brown, mealun	ii uense	, moist, nne to		- 1 -										
Md 9							- 2 -										
0.00											10						
511							- 3 -	<u>.</u>	К	18	12						
415120							- 4 -				15						
		Sandy CLAY (CL)), brown, stiff, mo	ist, fine	to medium sand												
S.G.			,, , , ,				- 5 -		LE		6			High s	sand cor	ntent.	
⁹							- 6 -	Ъ	SP	18	6						
INS											0						
5							_ / _										
0891		fine to medium sa	SP-SC), brown, n and.	nedium	dense, moist,		- 8 -	Ϋ́	ж	8	16 16						
		SILT with Sand (N	MI) olive and ligh	nt orang	e mottled hard		- ·	^o		~	24						
80		moist, fine sand.	ne), onvo ana ngn	it of ang	o motioa, nara,												
							- 10 -	4 8	E		23						
JAN SAL					damage regist		- 11 -	IA/S	SPT	18	28						
	-	\uparrow fine to medium sa	and, trace fine gra	avel.	dense, moist,	Γ	+ .	0 0			33						
OTEC		Total Depth = 11.	5 feet			_	- 12 -	1									
Ш Ю		Borehole backfille	encountered.	js.			- 13 -	-									
PLIN							- ·										
ISCI							- 14										
							- 15 -	-									
DAT							- 16 -	1									
JECI								-									
PRO							- 17 -	1									
9101							- 18 -										
0008								1									
[A1/7							- 19 -	1									
1DA1							- 20 -	-									
AIIR																	
DAT.								-									
NOC							- 22 -	1									
SAN.(- 23 -	1									
LANC								-									
3			·				└─ 24 ─	I	I					1			

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LA	4/V <i>L</i> a/	AN	Log	of Boring			RB	8-8			Sheet	1	of	1
Project				Project No.										
Location	ARS Fulfillment C	enter - Project Loki		Elevation ar	id Da	tum	7000	08910	1					
	Victorville, Californ	nia					(Fe	et, NO	GVD 2	9)				
Drilling Cor	mpany			Date Started	ł		2	20/04		Date	Finished	2	120/04	
Drilling Equ	uipment			Completion	Deptl	h	3/	30/21		Rock	Depth	3/	/30/21	
	CME 75 Truck-mc	ounted Drill Rig						10.5 ft					-	
Size and T	ype of Bit 8-inch O.D. Hollov	v Stem Auger		Number of S	Samp	les	Distu	irbed	3	Ur	ndisturbed	2	Core	-
Casing Dia	ameter (in) -		Casing Depth (ft)	Water Leve	(ft.)		First		-	Co	ompletion	-	24 HR.	-
Casing Har	mmer_	Weight (lbs)	Drop (in)	Drilling Fore	man						-			
Sampler	Bulk, 2-inch O.D.	Split-Barrel SPT, 2.5-incl	h I.D. Cal Mod	Field Engine	er									
	ammer Automatic	Weight (lbs) 140	Drop (in) 30			В.	Wa	tkins						
	lev.			Depth	er		Sar 、	nple Da	ata			Rema	arks	
-og - I SYME ((ft)	Sample Description	1	Scale	dmb	Typ∈	Reco (in)	Penet resis BL/6i	Wa Con	ater itent	(Drillin Fluid Los	g Fluid, De s, Drilling I	pth of Casing Resistance, e	g, etc.)
	Alluvium (Qa)			0 -	2						Bulk s	ample c	ollected f	rom
B	Clayey SAND (S sand, trace fine	SC), brown, dense, moist aravel.	, fine to medium	- 1 -							0-5 fee	et bgs.		
M	,	5												
								15						
				- 3 -	۲. ۲	SPT	18	18						
415120				- 4 -		ΪĒ		21						
9.99	CLAY (CL), olive	e, hard, moist, some cali	che veins.		S-2	К	12	20 50/6"						
				- 6 -				30/0						
S /////			v dense moist											
9101	fine sand, trace	caliche.	y dense, molet,					27						
20008					М	IS II	18	29 29						
Jeso				9 -				20						
Ĕ	SAND with Silt (moist, fine to me	SP-SM), light orange bro edium sand.	wn, very dense,	- 10 -	S-4	CR	5	50/6"						
SAL/G	Total Depth = 10	0.5 feet		- 11 -	-		-	00/0						
NN NN NN NN NN NN NN NN NN NN NN NN NN	Borehole backfil	led with soil cuttings.			-									
OTEC				- 12 -	1									
E\GE				- 13 -										
				- 14 -	1									
DISC					-									
ATA				- 15 -										
CT CT				- 16 -										
SOJE				- 17 -										
01/10														
6800				- 10 -										
A1/70				- 19 -										
DAT				- 20 -	-									
ANRV					1									
INDAT					-									
CON				- 22 -	1									
IGAN				- 23 -	-									
//TAP					1									

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			Log	of E	Boring			RE	3-9		She	eet 1	1	of	
roject	ARS Fulfillment Center - Proj	ect Loki		Pro	oject No.			700	08910 [.]	1					
ocation	,			Ele	evation a	nd Da	itum								
rilling Comp	Victorville, California			Da	te Starte	d		(Fe	eet, NC	GVD 29)	ate Finish	ed			
	2R Drilling							3	/30/21				3/30/	/21	
rilling Equipr	nent CME 75 Truck-mounted Drill	Ria		Co	mpletion	Dept	h		11 5 ft	R	ock Depth	1			
ze and Type	e of Bit			Nu	mber of	Samp	les	Dist	urbed		Undistur	bed	Core	e	
asing Diame	ter (in)	ler C	Casing Depth (ft)	W	ater Leve	I (ft)		First	t	3	Complet	ion	24 H	HR.	-
asing Hamm	- Ner Weight (lbs)	– Drop (in)	Dri	illing Fore	eman		<u> </u>		-	⊥ Ţ	-	<u> </u>	-	-
ampler	- Bulk 2-inch O.D. Split-Barrel	- SPT 25-inch I													
ampler Ham	mer Automatic Weight (^{Ibs)} 140	Drop (in) 30	_ +ı∈	eld Engin	eer	в	Wa	atkins						
		140						Sa	mple Da	ata		Ro	marke	<u> </u>	
Elev SAMBCRI (ft)	Sample	Description			Depth Scale	Number	Type	Recov. (in)	Penetr. resist BL/6in	Water Conter	nt Flu	(Drilling Fluid id Loss, Drill	I, Depth o	of Casing stance, e	ic.)
	Alluvium (Qa) Sandy SILT (ML), light yello	ow brown, hard,	slightly moist,		-	-					Bu 0-	ulk sampl 5 feet bg:	e colle s.	ected fr	on
	fine sand, trace clay, trace	caliche.			- 1 - -										
					- 2 -										
					- 3 -	<u>8-</u> 1	СR	12	23		Hi	gh sand o	conten	nt.	
					- 4 -				30/0						
	Silty SAND (SM), pale grav	dense. slightly	/ moist. fine		-	-									
	sand.	,,,	,,		- 5 -	~~~	FE	~	13		Hi	gh sand o	conten	nt.	
					- 6 -	Ϋ́	RP I	1	17 20						
444		hord moint			- 7 -										
		vii, naiu, moisi,	nne sanu.		- _ g _	m m	к	5	24						
					-	- 00			50/4"						
					- 9 -										
	very dense, slightly moist, f	ine to medium	e red brown, sand.		- 10 -		I.E	-	22						
					- 11 -	\$ 77	SPT	18	28						
-1-1-1-1	Total Depth = 11.5 feet				- 12 -				22						
	Borehole backfilled with soi	ed. I cuttings.			- 12	-									
					- 13 - -										
					- 14 -										
					- 15 -										
					- - 16 -	1									
						-									
					- 17 - -										
					- 18 -										
					- 19 -										
					- - 20 -	1									
						-									
					- 21 - -										
					- 22 -										
					- 23 -										
					+	1									

L	A	NGA	4 <i>N</i>	Log	of B	oring			RB-10			Sheet	1	of	1
Project			nten Dusis et Laki		Pro	oject No.			7000040	4					
Locatio	n	ARS Fulliliment Cer	iler - Project Loki		Ele	vation a	nd Da	atum	70008910						
Drilling	Compo	Victorville, California	a		Do	to Starto	4		(Feet, N	GVD 29) Doto E	iniched			
Drining	Compa	2R Drilling			Da		u		3/30/21		Jale I	Inisneu	3	/30/21	
Drilling	Equipm	ent			Co	mpletion	Dept	h		1	Rock [Depth			
Size an	nd Type	CME 75 Truck-mount of Bit	nted Drill Rig		NILL	mbor of (4 fl Disturbed	t	Und	disturbed		Core	
Casing	Diamet	8-inch O.D. Hollow S	Stem Auger	Casing Depth (ft)	INU		samp	nes	First	1	Cor	mpletion	1	24 HR.	-
Castin a		-	Weight (lbs)		Wa	ater Leve	l (ft.)		$\overline{\Delta}$	-		<u>Ľ</u>	-	Ţ	-
Sample	Hamme					iing i ore	i nan								
Sample	r Hamn	2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D. Weight (lbs)	Cal Mod	Fie	ld Engine	eer	_							
Cample		Automatic	140	30			1	B	. Watkins Sample D	ata					
MATERIA	Elev. (ft)		Sample Description	1		Depth Scale	Number	Type	Recov. (in) Penetr. resist BL/6in	Wate Conte	er ent	(Drilling F Fluid Loss,	Rema Fluid, De Drilling I	erks of Casin Resistance, o	g, etc.)
		<u>Fill</u> Silty SAND (SM),	pale brown, dense, mo	oist, fine sand.		0									
		<u>Alluvium (Qa)</u> Sandy SILT (ML), sand, trace fine gr	pale brown, hard, sligh ravel, trace clay.	ntly moist, fine		- 2 -	ې ۲	SPT	 ₩ ₩ 10 13 20 						
		No gravel, no clay	Ι.			- 3 -	S-2	CR	€ 31 50/4"						
		Total Depth = 4 fe	et			- 4 -									
		Groundwater not e Borehole backfille	encountered. d with soil cuttings.			- 5 -	{								
						- 6 -	1								
						_ 7 _									
							-								
						- 8 -	1								
						- 9 -									
						- 10 -	+								
						- 11 -	1								
						- 12 -									
						- 10	-								
						- 13 -	-								
						- 14 -	1								
						- 15 -	-								
						- 16 -	-								
						- 17 -									
						- 10	-								
						- 18 -	-								
						- 19 - -	1								
						- 20 -	-								
						- 21 -]								
						- 22 -	1								
							-								
						- 23 -	-								
						_ 24 _		1				1			

L	A	NGA	4 <i>N</i>	Log	of E	Boring			RB-11			Sheet	1	of	1
Project					Pr	oject No.			70000040						
Location	1	ARS Fulfiliment Cen			El	evation ar	nd Da	itum	70008910)1					
Drilling (Compai	Victorville, California	1			ate Starte	Ч		(Feet, N	GVD 29	9) Date I	Finished			
Driming (Jompai	2R Drilling					u		3/30/21		Date	Inioneu	3	3/30/21	
Drilling E	Equipm	ent			Co	ompletion	Dept	h	4 5 6		Rock	Depth			
Size and	d Type	of Bit			Nu	umber of \$	Samp	les	4.5 I Disturbed	[]	Un	disturbed		Core	
Casing I	Diamet	er (in)	Stem Auger	Casing Depth (ft)	w	ater Leve	(ft.)		First	1	Co	mpletion		24 HR.	-
Casing I	Hamme	- er_	Weight (lbs)	Drop (in)	Dr	illing Fore	man		<u> </u>	-		<u>L</u>	-	<u> </u>	-
Sampler		2-inch O.D. Split-Ba	rrel SPT, 2.5-inch I.D.	Cal Mod	Fie	eld Engine	eer								
Sampler	Hamm	^{her} Automatic	Weight (lbs) 140	Drop (in) 30		1		В	. Watkins	-4-		1			
Log - LANC MATERIAL SYMBOL	Elev. (ft)		Sample Description	1		Depth Scale	Number	Type	Recov. (in) Penetr. BL/6in	Wata Wat Cont	ter ent	(Drilling Fluid Loss	Rem Fluid, D s, Drilling	arks epth of Casir Resistance,	ig, etc.)
PM Keport		Alluvium (Qa) Silty SAND (SM), fine to medium sa	pale brown, very dense nd.	e, slightly moist,		- 0 -		CR	14 © 34	-					
1:00:11									43	-					
4/5/2021		fine to medium sa	nd, trace coarse sand.	ise, siigitty moist,		- 4 -	S-2	SPT	≈ 18 ≈ 18 20						
 ⊋	-	Total Depth = 4.5	feet			- 5 -			20	-					
-068.6		Groundwater not e Borehole backfilled	encountered. d with soil cuttings.			- 6 -									
- GINT I						- 7 -									
89101						- 8 -	1								
2000						- 9 -	1								
						- 10 -									
CAL/G						- 11 -	1								
ECHN						- 12 -	1								
E/GEOT						- 13 -									
						- 14 -	1								
						- 15 -									
DATA						- 16 -									
OJECI						- 17 -									
101/PR						- 10 -									
00089							-								
ATA1/7						- 19 -	-								
NIRVID.						- 20 -	1								
NDATA						- 21 -	1								
N.COM						- 22 -	1								
ANGA						- 23 -	1								
<u> </u>						⊥_ ₂₄ –									

L		4	NLA	V		Log	of E	Boring			RB	-12			Sheet	1	of		1
Proje	ct						Pr	oject No.											
Locat	ion		ARS Fulfillment Cer	nter - Project Loki	i		Ele	evation ar	id Da	tum	7000)8910 ⁻	1						
			Victorville, California	a							(Fe	et, NC	GVD 2	9)					
Drillin	g Coi	mpany	y 2R Drilling				Da	ate Starteo	1			8/4/21		Date	Finished		3/4/21		
Drillin	g Equ	lipme	nt				Co	mpletion	Dept	h				Rock	Depth		5/4/21		
Size	and T	vne o	CME 75 Truck-mou	nted Drill Rig							, Disti	11.5 ft			ndisturhed		Core		
0.20		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	8-inch O.D. Hollow	Stem Auger		nin a Druth (ft)	Nu	Imber of S	Samp	les	First	indea	3			2			-
Casin	ig Dia	Imete			Ca		W	ater Leve	(ft.)				-			-	24 HR. <u> </u>		-
Casin	g Ha	mmer	-	Weight (lbs)	-	Drop (in)	Dr	illing Fore	man										
Samp	ler		Bulk, 2-inch O.D. Sp	olit-Barrel SPT, 2	.5-inch I.I	D. Cal Mod	Fie	eld Engine	er										
Namp Samp	ler H	amme	er Automatic	weight (ibs)	140	30 Drop (in)		<u> </u>		Α.	Atry	nnle Da	ata						
Log - LAN MATERIAL SYMBOL	E	ilev. (ft)		Sample Descr	ription			Depth Scale	Number	Type	Recov.	Penetr. resist BL/6in	Wa Con	ter tent	(Drillir Fluid Lo	Ren ng Fluid, I ss, Drilling	1arks Depth of Ca g Resistan	asing, ce, etc	.)
Report			Fill Silty SAND (SM), sand.	dark brown, med	lium dens	se, moist, fine		- 0 - - 1 -							Bulk s 0-5 fe R Valu	ample et bgs. ue.	collecte	d fro	m
00:12 PM			Alluvium (Qa) Silty SAND (SM), medium to coarse	dark brown, med sand. micaceou	— — — — lium dens s.	—————— se, moist,		- 2 -	-										
/5/2021 1:								- 3 -	ې ۲	SPT	18	6 5 7							
: GPJ 4			With gravel, fine t	o coarse sand.				- 5 -				14			Dry D	ensity :	= 108.0	pcf	
INT LOGS			Sandy SILT (ML), sand, heavy calich	olive brown, hard he deposits.	d, moist, i	non plastic, fine	Э	- 6 -	S-2	Я	18	27 31			WC =	12.9%			
89101 - G			Increased sand.					- 7 -	е С	L L		17							
0CS/7000								- 9 -	γ	R III	7	23 17							
AL/GINTL0								- 10 -	4	CR	17	14 27			Dry Do WC =	ensity : 3.9%	= 131.6	pcf	
ÚNIC			SAND with Grave	I (SP), brown, ver	ry dense, micaceo	moist, fine to		- 11 -	ļ			50/5"							
EOTEC			Total Depth = 11.5 Groundwater not	5 feet encountered.				- 12 -											
-INE/G			Borehole backfille	d with soil cutting	gs.			- 13 -											
SCIPL								- 14 -											
								- 15 -											
T DA1								- 16 -	1										
OJEC																			
01\PR																			
00891								- 18 -											
FA1/70								- 19 -	1										
VIDAT								- 20 -	{										
TAUR								- 21 -]										
AD/MC								- 22 -	1										
AN.CC																			
LANG								- 23 -	-										
~L								<u> </u>	1	1					1				

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L	A	NG/	4 /V	Log	of B	Boring			RB	-13		_	Sheet	1	of	1
Project					Pro	oject No										
Location		ARS Fulfillment Cer	nter - Project Loki		Ele	evation a	and Da	atum	700	08910	1					
		Victorville, California	а						(Fe	et, N	GVD 2	9)				
Drilling C	Compar	iy			Da	te Start	ed		~	100104		Date	e Finished			
Drilling E	quipm	2R Drilling ent			Co	mpletio	n Dept	h	3	/30/21		Roc	k Depth	3	3/30/21	
		CME 75 Truck-mou	inted Drill Rig							11.5 ft			-			
Size and	Туре	of Bit 8-inch O.D. Hollow \$	Stem Auger		Nu	mber of	Samp	oles	Distu	urbed	2	l	Indisturbed	2	Core	-
Casing D	Diamete	er (in) -		Casing Depth (ft)	Wa	ater Lev	el (ft.)		First 		-	C	Completion	-	24 HR. 	-
Casing H	lamme	er	Weight (lbs)	Drop (in)	Dri	lling Fo	reman									
Sampler		2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D.	Cal Mod	Fie	eld Engii	neer									
Sampler	Hamm	^{er} Automatic	Weight (lbs) 140	Drop (in) 30				В	. Wa	tkins						
	Flev					Denth	-		Sa	mple Da	ata		_	Rem	arks	
og - L NATEF SYMB	(ft)		Sample Descriptior	ו		Scale	Iumbe	Type	(in)	⁵ eneti resist 3L/6ir	Wa Con	ater ntent	(Drilling Fluid Los	g Fluid, De s, Drilling	epth of Casing, Resistance, et	, tc.)
		Alluvium (Qa)				- 0 -	Z									,
		Clayey SAND (SC	C), light brown, medium	i dense, moist, fine	e	- 1	_									
		to medium sand.				-	-									
						- 2	1									
						- 3		E E	18	7 8						
						- 4		S	Ù	9						
		SAND with Clay (SP-SC), brown, dense.	moist, medium to			-									
		coarse sand, trace	e fine sand.	······································		- 5	-~~			20						
						- 6		ъ	18	28 32						
						- 7	_			02						
		Clayey SAND (SC medium sand, sor	C), pale brown, very dei me caliche.	nse, moist, fine to		- '	+	LE		29						
		,				- 8	ြက္ပိ	SP.	12	50/6"						
						- 9	-									
5 4.7.4.4.4 .4 =		SAND (SP), light	yellow brown, medium	dense, moist,		- 10	1									
		medium to coarse	e sand, some fine sand	, trace clay.		- 10	4	щ	8	13 15						
						- 11		0	1	21						
E E		Total Depth = 11. Groundwater not	5 feet encountered.			- 12	-									
CLC CLC		Borehole backfille	ed with soil cuttings.			- 13										
						- 13	-									
						- 14										
						- 15	-									
DAL						- 16	_									
						- 10	-									
						- 17	-									
1.01.6						- 18	-									
8000						- 10	-									
IAT						- 19	-									
MUN						- 20	-									
TAUR						- 21	_									
MUDA							-									
						- 22	-									
NGA						- 23	-									
						Ĺ ₂₄ .]									

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L	A	NGA	4 N		Lo	g of I	Boring			RB-14		Shee	t 1	of	1
Project						Pr	roject No.								
Location		ARS Fulfillment Cer	nter - Project Loki			El	evation a	nd Da	tum	70008910	1				
		Victorville, California	a							(Feet, N	GVD 29)				
Drilling (Compai	iy 2P Drilling				Da	ate Starte	d		2/5/01	Da	ate Finished		2/5/21	
Drilling E	quipm	ent				C	ompletion	Dept	٦	3/3/21	Ro	ock Depth		3/3/21	
0:	T	CME 75 Truck-mou	nted Drill Rig							11.5 ft		1 1		0	
Size and	Туре	8-inch O.D. Hollow	Stem Auger			N	umber of S	Samp	les	Disturbed	2	Unaisturbe	a2	Core	-
Casing [Diamet	er (in) -		Casing D	Depth (ft) -	w	ater Leve	l (ft.)		First	-	Completion	۱ _	24 HR.	-
Casing I	lamme	۲ <u> </u>	Weight (lbs)	- Drop	o (in) _	Di	rilling Fore	eman		_					
Sampler		2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.I	D. Cal Mod		Fi	eld Engine	eer							
Sampler	Hamm	^{ner} Automatic	Weight (lbs) 1	40 Drop	o (in) 30		0		Α.	Atry					
8 3 0 L	Flev					ading n)	Depth	لم ا		Sample D	ata		Ren	narks	
SYME	(ft)	S	ample Description			ID Re (ppr	Scale	Jumbe	Type	Recov (in) Peneti resist BL/6ir	Water Content	t (Dr Fluid	illing Fluid, [Loss, Drillin	Depth of Casing g Resistance, e	g, etc.)
		Alluvium (Qa)				۵.	- 0 -	2						-	-
	•	SAND with Grave fine to coarse san	l (SP), pale brown, d d. fine gravel.	ense, mois	st,		- 1 -								
			, g				-	-							
							- 2			13		Nos	sample r	ecoverv.	
	•						- 3 -	<u>.</u>	К	€ 27			, an ip io		
							- 4 -			38					
	•					0.4									
	•	Very dense, heav	y caliche deposits.			0.1	- 5	S-2	SPT	28 50/6"					
	•						- 6 -			30/0					
							- 7 -								
		moist, medium to	coarse sand, trace f	ine gravel.	,	0.4		ς.	ж	on 43		Dry	Density :	= 109.3 pcf	f
								<u></u>		50/3"		WC	= 2.4%		
							- 9 -								
		Silty SAND (SM), sand_micaceous	olive brown, very de	nse, moist,	fine	0.1	- 10 -			15					
		,					- 11 -	S-4	SPT	₩ 32					
		Total Depth = 11	5 feet				- '	-		50/5"					
		Groundwater not	encountered.				- 12 -								
		Borenole backline	a with son cuttings.				- 13 -	-							
							- 14 -								
							-	-							
							- 15 -	1							
							- 16 -	-							
							- 17 -	1							
							-	-							
]							
							- 19 -								
							- 20 -	-							
							- 21 -								
								-							
							22 -	1							
							- 23 -	-							
							L 24 -								

	L	A	NL.	AN		Lo	g of	Boring			RB	-15			Sheet	1	of	1
[Project						P	Project No.										
	Location		ARS Fulfillment C	enter - Project Loki						tum	700	089101	1					
	Location		Victorvillo Californ	nia				levation a	iu Da	lum	(5	oot NG	י חעב	0)				
ł	Drilling C	compar	iy	llia			C	Date Starte	d		(16	et, NC		Date I	Finished			
			2R Drilling								:	3/5/21				3	/5/21	
	Drilling E	quipm	ent				C	Completion	Dept	h				Rock	Depth			
	Size and	Type	CME 75 Truck-mo	ounted Drill Rig							Dieti	11 ft		Un	disturbed		ore	
		туре	8-inch O.D. Hollov	w Stem Auger			N	lumber of \$	Samp	les	Dist	libed	3			2	ore	-
	Casing E	Diamete	er (in) -		Ca	asing Depth (ft)	v	Vater Leve	l (ft.)		First		-	Co	mpletion	- 24	4 HR. V	-
ł	Casing H	lamme	r_	Weight (lbs)	_	Drop (in)	- [Drilling Fore	eman						<u>+</u>			
ľ	Sampler		Bulk, 2-inch O.D.	Split-Barrel SPT, 2.5	-inch I.I	D. Cal Mod		ield Engin	or									
_	Sampler	Hamm	ler Automatic	Weight (lbs)	140	Drop (in)	, '			Δ	Δtr							
NGA	7,7		, atomato		110		, bui			, , ,	Sa	, mple Da	ata					
-LA	MBO	Elev.	:	Sample Descriptio	n		Read	Depth	nber	be	УС С	netr. sist /6in	Wa	iter	Drilling Fl	kemar uid, Depi	`KS th of Casing,	
: Log	SYS	(14)					OId		Nur	Ļ	(i	Per re: BL	Con	tent	Fluid Loss, D	Drilling Re	esistance, et	c.)
eport			Alluvium (Qa)	(SP-SC) red brown	donso	moiet		- 0	_						Bulk sam	ple co	llected fro	om
Ř			medium to coars	se sand, micaceous.	, uense	, moist,		- 1 -							R Value.	ys.		
8 PM								- 2 -										
00:1							0.2					10						
21 1:								- 3 -	7	^{p1}	18	10						
/5/20								- 4 -	<i>"</i>	<i>"</i>		16						
4	/_/_				mediur	<u> </u>	-											
GP.			fine to coarse sa	and, fine to coarse gr	ravel, m	nicaceous.	0.2	- 5 -				14			Dry Dens	ity = 1	14.5 pcf	
000								6 -	8-2	R	18	16			WC = 2.6	6%		
L										╷║		24						
0								- 7 -										
3910							0.2	- 8 -		LΕ	_	8						
2000									γ	R R	₩	8 9						
.\S90			Silty SAND (SM), pale olive brown, v	ery der	nse,	1	- 9 -										
Ę			moist, fine sand	, micaceous.			0.0	- 10 -				47			Dry Dens	itv = 1	13.6 ncf	
T/GII									8 4	К	12	17 50/6"			WC = 8.4	.%	10.0 pci	
NICA	· · · · · · · ·		Total Depth = 1	1 feet			1	- 11 -				00/0						
ECH			Groundwater no Borehole backfil	ot encountered. lled with soil cuttings				- 12 -	-									
EOT			20101010 2001		•			-	-									
NE/O								- 13 -	1									
CIPLI								- 14 -	-									
DISC								-	1									
ATA/								- 15 -]									
D D								- 16 -	-									
OJEC								- 17 -										
1/PR								- 17										
8910								- 18 -	-									
7000								- 10 -	1									
TA1/								- '''	-									
VDA								- 20 -	1									
TAUR								- 21 -										
1DA								-	-									
SON.								22 -	1									
GAN								- 23 -	4									
//LAN								- 04										
_		-						- 24 -							-			

LA		4/V	Log	of E	Boring			RB-	16			Sheet	1	of	1
Project				Pro	oject No.										
Location	ARS Fulfillment Ce	nter - Project Loki		Ele	evation an	d Da	tum	7000	8910	1					
	Victorville, Californi	а						(Fe	et, NG	SVD 29	9)				
Drilling Comp	oany			Da	te Starteo	1					Date	Finished		0/5/04	
Drilling Equip	ment			Co	mpletion	Deptl	n	3	5/21		Rock	Depth		3/5/21	
	CME 75 Truck-mou	inted Drill Rig							6.5 ft					1	
Size and Typ	e of Bit 8-inch O.D. Hollow	Stem Auger		Nu	mber of S	Samp	les	Distu	rbed	1	Un	ndisturbed	1	Core	-
Casing Diam	eter (in) -		Casing Depth (ft)	Wa	ater Level	(ft.)		First 		-	Co	mpletion	-	24 HR. 	-
Casing Ham	mer	Weight (lbs)	Drop (in) -	Dri	lling Fore	man	^	drion							
Sampler Sampler Han	2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D. Weight (lbs)	Cal Mod Drop (in) 30	Fie	eld Engine	er	 M	Gal	van						
NGA L'A		140	00					San	nple Da	ata			Dom	orko	
AATERI SYMBO BI BI	<i>1.</i>	Sample Description	1		Depth Scale	Number	Type	Recov.	Penetr. resist BL/6in	Wat Cont	er ent	(Drillin Fluid Los	ng Fluid, E ss, Drilling	epth of Casing Resistance, e	, tc.)
tion in the second seco		ton modium dance du	. fine to come		- 0 -										
ž.	sand, trace fine g	ravel, trace caliche.	y line to coarse		- 1 -										
M 6					- 2 -										
2001									7			Dry De	ensity =	= 111.8 pcf	
2021	Came alay				- 3 -	Υ.	К	18	12			WC =	2.9%		
4/5//	Some clay.				- 4 -				13						
SS.GPJ	Increased coarse	sand.			- 5 -	Ņ	T T	ω	6						
					- 6 -	ν	SF	÷	9 17						
- GIN	Total Depth = 6.5 Groundwater not	encountered			- 7 -										
1010	Borehole backfille	ed with soil cuttings.													
20002						-									
OGS					- 9 -	1									
					- 10 -										
ICAL					- 11 -	-									
CHN															
EOIE															
					- 13 -										
ISCIP					- 14 - 	1									
					- 15 -										
CT DA					- 16 -	1									
SOJEC					 - 17	1									
101/PF															
00089					- 18 -]									
[A1/70					- 19 - 	1									
MDA					- 20 -										
TANR					- 21 -]									
ØD/M0						1									
N.CC															
ANG					- 23 -	1									
<u></u>					L 24 —										

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	L	4	NGAN	Log	of E	Boring			RB	-17			Sheet	1	of	1
[Project				Pr	oject No.										
-	Location		ARS Fulfillment Center - Project Loki		FI	evation an	d Da	itum	700	08910	1					
	Location		Victorville California			evalion a		lum	(Fe	et N	SVD 2	9)				
	Drilling C	Compar	ly		Da	ate Starteo	ł		(, ,	, , , , , , , , , , , , , , , , , , , ,		Date	Finished			
	Drilling		2R Drilling			malation	Dent	h		3/5/21		Deals	Donth	3/5/	21	
		quipm	CME 75 Truck-mounted Drill Rig			mpieuon	Dept	n		115ft		ROCK	Depth			
	Size and	Туре	of Bit		NI	imber of S	Samn	les	Dist	urbed		Ur	ndisturbed	Core	;	
	Casing D	Diamete	8-inch O.D. Hollow Stem Auger er (in)	Casing Depth (ft)			Jamp		First		2	Cc	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	24 H	IR.	-
	5		-	-	W	ater Level	(ft.)		$ $ ∇		-		<u> </u>	Ţ		-
	Casing F	lamme	r	Drop (In)		illing Fore	man	Δ	driar	,						
	Sampler		2-inch O.D. Split-Barrel SPT, 2.5-inch I.D. C	al Mod	Fie	eld Engine	er		unai	1						
AN.	Sampler	Hamm	er Automatic ^{Weight (lbs)} 140	Drop (in) 30		1		Μ	l. Ga	lvan			1			
ANG	RIAL 30L	Elev.				Depth	Ē		Sa	mple Da جين	ata		Re	emarks	\$	
l - go.	MATE SYME	(ft)	Sample Description			Scale	dmu	Type	Recov	^{>} enet resis BL/6i	Wa Con	ater tent	(Drilling Flui Fluid Loss, Dr	d, Depth o illing Resis	of Casing, stance, etc.	.)
ort: L			Alluvium (Qa)			- 0 -	2		-	<u> </u>						
Rep			Silty SAND (SM), light brown, medium de	nse, slightly		- 1 -										
Μd				edidili gravei.												
0:21						- 2 -										
21 1:0						- 3 -	-	FE	8	8			WC = 3.39	y = 111 6	. <i>1</i> pcr	
5/202							S	S		6						
J 4/																
GP.			Brown, dense, fine to medium sand, incre	ased fines		- 5 -				24						
log			content, no gravel.			6 -	53	Ю	18	32						
INT										37						
0 - 10			O and a last			_ / _										
0891			Some clay.			- 8 -	ς.	E E	18	25 24						
s/700						_ 9 _		<i>"</i>	Ù	15						
LOG																
GINT			Fine to coarse sand, trace fine to medium	gravel, increased	ł	- 10 -	.			16			Dry Densit	y = 128	.0 pcf	
ICAL			sand content.			- 11 -	ပှ	Ь	18	32 44			VVC - 2.5	0		
CHN			Total Depth = 11.5 feet			+ - - 12 -										
EOTE			Groundwater not encountered. Borehole backfilled with soil cuttings.				-									
NE/G			Ŭ			- 13 -										
CIPLIN						- 14 -										
DISC																
ATA)						- 15 -										
CTD						- 16 -	1									
SOJE						- 17 -	1									
01/PF																
0891						- 18 -	1									
1/700						- 19 -	{									
DATA						20 -	1									
\IRV\							-									
DATA						21 -	1									
NMO						- 22 -	-									
AN.C						- 22 -	1									
-ANG							-									
7						⊥ 24 —	I	<u> </u>								

LA	4/V <i>L</i> a/	4/V	Log	of Bo	ring _			RB-1	8		S	heet	1	of	1
Project				Proje	ct No.										
Location	ARS Fulfillment Ce	enter - Project Loki		Eleva	ation and	l Dat	um	70008	9101						
	Victorville, Californi	ia						(Feet	, NG\	/D 29)					
Drilling Corr	npany			Date	Started			0.15	104	Da	ate Fini	shed		0/5/04	
Drilling Equ	ipment			Com	oletion D)epth	1	3/5	/21	R	ock Dep	oth		3/5/21	
	CME 75 Truck-mou	unted Drill Rig						6	5 ft					_	
Size and Ty	/pe of Bit 8-inch O D Hollow	Stem Auger		Num	per of Sa	ample	es	Disturb	ed	2	Undist	turbed	1	Core	-
Casing Diar	meter (in)		Casing Depth (ft)	Wate	r Level ((ft.)		First √			Comp	letion		24 HR.	
Casing Han	nmer_	Weight (lbs)	Drop (in)	Drillir	ng Foren	nan		<u> </u>		-	<u> </u>		-	<u> </u>	-
Sampler	Bulk 2-inch O.D. S	Solit-Barrel SPT 2 5-inct	LD Cal Mod	- Field	Facinos										
z Sampler Ha	ammer Automatic	Weight (lbs) 140	Drop (in) 30		Enginee	31	Δ	Atrv							
			00	<u> </u>			,	Samp	le Data	1			Pom	arke	
g - LA SYMBC	ev. ft)	Sample Description	I		Depth Scale	Imber	ype	ecov.	esist L/6in	Water		(Drilling	g Fluid, D	epth of Casing	g,
ti Σ∞ Σ∞	Alluvium (Oa)				0 -	Ž	-	<u> </u>	28	Conten					etc.)
Repo	Silty SAND (SM),	, pale brown, dense, mo	ist, fine to coarse	-	-							0-5 fee	et bgs.	collected l	IOIII
Z	sand.			F	' -							R Valu	ie.		
0.22 F				-	2 -										
				F	3 -	÷	~	14 ص	1			Dry De WC =	ensity = 3.6%	= 114.7 pcf	•
5/202				F	_	ώ	0	30)						
4				F	4 -										
GD.	Increased silt, so	me caliche.		-	5 —			14	L I			Dry De	ensity =	= 117.4 pcf	F
őj i i i i				F	6 -	S-2	SPI	9	25			WC =	1.2%		
LN I I I I I I I I I I I I I I I I I I I	Total Depth = 6.5	5 feet			_ +		- 4		<u>,</u>						
01 - 0	Groundwater not Borehole backfille	encountered. ed with soil cuttings		F	1										
00891		ea mar een eaange.		-	8 -										
S/700				Ē	9 -										
				F	10										
NID/				F											
AICAL				-	11 -										
ECH				F	12 -										
3EOT				-	12										
				F											
SCIPL				E	14 -										
				F	15 -										
DAT				Ŀ	16										
TECT				F	-										
QAG				E	17 -										
9101				-	18 -										
20005				E	10 -										
VTA1/				-	-										
SVD/					20 -										
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L	A	NGA	4 <i>N</i>		Log	of E	Boring			RB	-19			Sheet	1	C	of	1
Project						Pro	oject No.											
Location		ARS Fulfillment Cer	nter - Project Lok	(i		Ele	evation ar	nd Da	tum	7000	089101							
		Victorville, California	a							(Fe	et, NG	VD 29)					
Drilling C	Compar					Da	ite Starte	d			0/5/04		Date F	inished		2/5/2	1	
Drilling E	quipme	ent				Co	mpletion	Dept	h	•	5/5/21	F	Rock [Depth		3/5/2	1	
Size and	Turne	CME 75 Truck-mou	nted Drill Rig			_				Dieti	11.5 ft		Line	diaturbad		Cara		
Size and	Туре	8-inch O.D. Hollow	Stem Auger			Nu	Imber of S	Samp	les	Disti	Irbed	2	Und	aisturbed	2	Core		-
Casing [Diamete	er (in) -		C	asing Depth (ft) -	Wa	ater Leve	l (ft.)		First		_	Cor	mpletion	-	24 HR	R.	-
Casing H	lamme	r	Weight (lbs)	_	Drop (in)	Dri	illing Fore	eman					_	-				
Sampler		2-inch O.D. Split-Ba	urrel SPT, 2.5-inc	h I.D. Ca	l Mod	Fie	eld Engine	er										
Sampler	Hamm	er Automatic	Weight (lbs)	140	Drop (in) 30		5		A.	Atry	/							
<u>MATERIAL</u> SYMBOL	Elev. (ft)		Sample Desc	ription			Depth Scale	umber	Type	Sa (in) (in)	enetr. resist 3L/6in	ta Wate Conte	er ent	(Drilling Fluid Los	Rem g Fluid, D s, Drilling	arks Depth of (Resista	Casing, ance, etc	.)
		Alluvium (Qa) SAND (SP), pale medium sand, mid Fine to coarse san Medium dense. Trace fine to coars Total Depth = 11.3 Groundwater not e Borehole backfille	brown, medium caceous. nd. se gravel, friable 5 feet encountered. d with soil cuttin	dense, m	oist, fine to		- 1 $-$ 1	S-4 S-3 S-1	CR SPT CR SPT	18 18 18 18 18	8 7 6 8 14 19 6 7 7 12 15 14			Dry De WC =	ensity = 1.2% ensity = 0.8%	= 117.4	4 pcf 9 pcf	
ILAINGAN.COMIDALAIRVIDA							- 20 - - 21 - - 22 - - 23 - - 23 - - 24 -	-										

L	A	NGA	A N	Log	of E	Boring			RB	-20			Sheet	1	of	1
Project		ABS Eulfillmont Con	ntor Brojaat Laki		Pr	oject No.			700	00010-	1					
Location		ARS Fulliment Cer			El	evation ar	nd Da	itum	700	00910	1					
Drilling (Compar	Victorville, California	3		Da	ate Starte	d		(Fe	eet, NC	GVD 29) Date F	inished			
		2R Drilling								3/5/21				3	/5/21	
Drilling E	Equipme	ent CME 75 Truck-mour	nted Drill Rig		Co	ompletion	Dept	h		65ft	F	Rock I	Depth			
Size and	І Туре о	of Bit			Nu	umber of \$	Samp	les	Dist	urbed	1	Un	disturbed		Core	
Casing [Diamete	er (in)		Casing Depth (ft)	w	ater Leve	l (ft.)		Firs	t	I	Co	mpletion	2	4 HR.	-
Casing H	lamme		Weight (lbs)	Drop (in)	Dr	illing Fore	man		<u> </u>		-		<u>_</u>	-	<u> </u>	-
Sampler		2-inch O.D. Split-Ba	Irrel SPT. 2.5-inch I.D. 0	Cal Mod	- Fi	eld Engine	or	A	driar	۱						
Sampler	Hamm	er Automatic	Weight (lbs) 140	Drop (in) 30				М	. Ga	Ivan						
RIAL	Elev.					Depth	er		Sa	mple Da	ata		F	Remai	rks	
MATE	(ft)		Sample Description			Scale	qmnN	Type	Reco (in)	Penet resis BL/6i	Wate Conte	er ent	(Drilling F Fluid Loss, I	luid, Dep Drilling R	oth of Casing esistance, e	, tc.)
		Alluvium (Qa)	red brown medium der	se slightly moist		- 0 -										
		fine to coarse san	d, trace fine gravel, trac	e clay.		- 1 -										
						- 2 -										
						- 3 -		Ы	8	7						
		No clay, some cal	iche.			- 4 -	S	S		14						
		Increased sand.				- 5 -	2	к	0	8 7			No samp	le reco	overy.	
		Total Donth = 6.5	fact			- 6 -	<i>"</i>			9						
5		Groundwater not e	encountered.			- 7 -										
		Borenole backfille	d with soil cuttings.			- 8 -	-									
						- 9 -										
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Project Ar35 Fulfilment Center - Project Loki Project No. Toxinin Victorville, California (Feet, NCVD 29) Drilling Company Date Stand 300/21 Drilling Company Date Stand 300/21 Starten Hommer Completion Depth 1 Completion Depth 0 1 Drilling Company Date Stand 0 Completion Depth 0 1 Difference 0 1 Stander Hommer Automatic Named Barrier Stander Hommer Automatic 1 Stander Hommer Automatic 1 Stander Hommer Stander Hommer Stander Hommer	L	A	NL /	4 /V		Log	of Boring			RB-	21			Sheet	1	of	1
Location Victorville, California (2008910) Drilling Company Graviton and Datum (Fast, NGVD 28) Drilling Company 0alob Startiod 330/21 Drilling Company 0alob Startiod 10 ft Size and Type of Bit 10 ft ft Size and Type of Bit Nether Startion 10 ft Size and Type of Bit Immediation and Startion 10 ft Size and Type of Bit Work (The Difference) 24 HK Comp Hammer Work (Rb) Comp Hammer Size Starting Company 10 ft First Start 164, Depticion Size Starting Company 10 ft First Start 164, Depticion Size Starting Company 10 ft First Start 164, Depticion Size Starting Company Size Starting Company 10 ft Size Startin Size Company Size Star	Project						Project No.										
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Dring Equipment Constant Deef Pock Open Dote 1 13ba and Dips of Bit	Drilling	Compai	2R Drilling				Date Starte	ed		3/3	80/21		Date	Finished		3/30/21	
CME 75 Truck-mounded Dell Rig Data of type 6 Data of type 6 Automate Carge Dennekton Desing Depth (h) Water Level (h.) First Denne Tomate Water Level (h.) Sample Detains Water Level (h.) Barrette Hammer Water Level (h.) Barrette Hammer Automate Barrette Hammer Sample Description Barrette Hammer Sample Description Barrette Hammer Sample Description Barrette Hammer Barrette Hammer Barrette Hammer Sample Description Barrette Hammer Sample Description Barrette Hammer Barrette Hammer Barret	Drilling	Equipm	lent				Completion	Dept	h	0/0	0/21		Rock	c Depth		5/00/21	
Barnet OL Hollow Stem Auger Number of Samples Num	Size an	d Type	CME 75 Truck-mou	inted Drill Rig						Distur	10 ft			ndisturbed		Core	
Basing Lamone (II) Caling Lamone (II) Water Level (II) Pice Competion Attract Casing Lamone (III) Weight (IIIs) Dop (III) Diffing Foreman Field Engineer Image: Engineer Image: Engineer Sampler Hammer Automatic Weight (IIIs) 140 Toro (III) Diffing Foreman Sampler Hammer Automatic Weight (IIIs) 140 Toro (III) B Sampler Hammer Automatic Weight (IIIs) 140 Toro (III) B Sample Thammer Automatic Sample Description Sample Easts Toro (III) B Sample Thammer Sample Internation Sample Easts Toro (III) B B Sample Thammer Sample Internation Sample Easts Toro (III) B B Sample Thammer Sample Internation Sample Easts Toro (III) B B Sample Thammer Sample Internation Sample Internation B B B B B Sample Thammer Sample Internation Sample Internation B B B B B B College B Sample Thammer Sample Internation Sample Internatinternatinternation Sample Internation S	0.20 0.1	<u></u>	8-inch O.D. Hollow	Stem Auger			Number of	Samp	oles	Elotai	bou	3			1		-
Cating farmer Weight (this) Drop (in) Dilling farmer Barryier Bulk, 2-Inch O.D. Spit-Barriel SPT, 2-5-Inch I.D. Call Med Read Engineer Barryier Bulk, 2-Inch O.D. Spit-Barriel SPT, 2-5-Inch I.D. Call Med B. Watkins Barryier Harrier Automatic World (bit) 140 Barryier Harrier Sample Description Barryier Harrier B. Watkins Barryier Harrier Sample Description Sample Sample collected from Sample Jack Sample Interview Automatic Dill Rig farmer Barryier Harrier Sample Description Barryier Harrier Sample Jack Sample Description Dill Rig farmer Barryier Harrier Sample Description Dill Rig farmer Barryier Sample Description Dill Rig farmer <td>Casing</td> <td>Diamet</td> <td>er (in) -</td> <td></td> <td>Ca</td> <td>sing Deptn (ft) -</td> <td>Water Leve</td> <td>el (ft.)</td> <td></td> <td>First</td> <td></td> <td>-</td> <td></td> <td></td> <td>-</td> <td>24 HR. </td> <td>-</td>	Casing	Diamet	er (in) -		Ca	sing Deptn (ft) -	Water Leve	el (ft.)		First		-			-	24 HR. 	-
Restrict Built, Zench O.D. Split-Barrel SPT, 2.5-inch I.D. Cal Mod Sampler Hammer Automatic Weight (Ibin) 140 Drop (m) Simpler Hammer Automatic Weight (Ibin) 140 Drop (m) Simpler Hammer Automatic Weight (Ibin) 140 Drop (m) Simpler Hammer Automatic Weight (Ibin) B. Watkins Simpler Hammer Automatic Sample Description B. Watkins Simpler Hammer Altodum (Da) Sample Description 0 B. Watkins Simpler Hammer Altodum (Da) Sample Description 0 0 B. Watkins Simple Theorem Simple Theorem Sample Description 0 0 B. Watkins Simple Theorem Sample Description 0 0 0 B. Watkins Simple Theorem Simple Theorem Sample Description 0 0 0 Simple Theorem Simple Theorem Simple Theorem B. Watkins 0 0 Simple Theorem Simple Theorem Simple Theorem Dill Simple Theorem 0 Simple Theorem Simple Theorem Simple Theorem Dill Simple Theorem 0 Simple Theorem Simple Theorem Simple Theorem Simple Theor	Casing	Hamme	er	Weight (lbs)	-	Drop (in) -	Drilling For	eman									
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Bigg Damping Depty fill Depty fill <t< td=""><td>Sample</td><td>r Hamm</td><td>^{her} Automatic</td><td>14</td><td>0</td><td>Drop (In) 30</td><td></td><td></td><td>B</td><td>. Watl</td><td>kins</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Sample	r Hamm	^{her} Automatic	14	0	Drop (In) 30			B	. Watl	kins						
control Control Scale E K E </td <td>LANG BOL</td> <td>Elev.</td> <td></td> <td>Sampla Doscriptio</td> <td>n</td> <td></td> <td>Depth</td> <td>Der</td> <td>e</td> <td>Sam</td> <td>ipie Dai</td> <td>awa</td> <td>tor</td> <td>(D)</td> <td>Rem</td> <td>arks</td> <td>_</td>	LANG BOL	Elev.		Sampla Doscriptio	n		Depth	Der	e	Sam	ipie Dai	awa	tor	(D)	Rem	arks	_
Alluvium (Ca). Buik sample collected from Sity SAND (SN), pale brown, medium dense, slightly moist, fine to medium sand, trace coarse gravel. 1 3 1 4 1 5 1 6 1 6 1 7 1 6 1 7 1 6 1 7 1 8 1 9 1 7 1 8 1 9 1 10 1 11 1 10 1 11 1 10 1 11 1 12 1 13 1 14 15 16 17 18 19 19 19 20 21 21 22 22 23	Log - SYN	(ft)		Sample Descriptio	11		Scale	Num	Typ	Reco	BL/6	Con	tent	Fluid Los	s, Drilling	Resistance, e	, etc.)
Total Depth = 10 feet 10 Groundwater not encountered. 11 Borehole backfilled with soil cuttings. 11 14 15 16 11 17 14 18 11 19 12 10 11 11 11 12 11 13 14 14 15 16 17 18 19 20 21 21 22 22 23	eport:		Alluvium (Qa) Silty SAND (SM)	nale brown medium	dens	e slightly	- 0 -	-						Bulk s	ample	collected fr	rom
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	R N		moist, fine to med	lium sand, trace coars	e gra	avel.	- 1 -	-							r bys.		
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Groundwater not encountered. Borehole backfilled with soil cuttings.	FI	-	Total Depth = 10	feet				-						Drill ric	a hamn	ner malfun	ction.
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Loodion Victorville, California Coupling Drifting Correport Date Finishend 3/5/21 Date Finishend 3/5/21 Bate Finishend 2000 20000000 Date Finishend 2000000000000000000000000000000000000	Project					Pr	roject No.										
Understand Utdomline Create Statust Choice France 2R Drilling 2R Drilling 3/5/21 3/5/21 CME 75 Truck-mounted Drill Rig Completion Defm 15.0 ft Sam Of Type of Line And the Drilling Expension Derstand 15.0 ft Sam Of Type of Line And the Drilling Expension Derstand 15.0 ft Sam Of Type of Line And Type of L	Location		ARS Fulfillment Cer	nter - Project Loki		EI	evation a	nd Da	atum	700	08910	1					
Drilling Calculation Data State Dat			Victorville, California	a						(Fe	eet, NO	GVD 2	9)				
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Same Diameter (Single Particle) Number of Sample Number of Sample Construct (N) Constru	Size and	Tuno	CME 75 Truck-mou	nted Drill Rig						Diet	11.5 ft			Indiaturhad		Coro	
Clearing Learning (m) Craining Depth (h) Water Level (h.) First Completion 24 R. Casing Hammer Weight (bx) Dorp (m) Dilling Foreman Head Engineer Head Engineer Sampler Learning Automatic Weight (bx) Date (m) Dilling Foreman Sampler Learning Automatic Weight (bx) Date (m) Dilling Foreman Sampler Learning Automatic Weight (bx) Date (m) Automatic Automatic Sing SAND (SN), pale brown, medium dense, moist, fine sand, micaceous, friable. Sang Sing Sing Sing Sing Sing Sing Sing Si	Size and	турет	8-inch O.D. Hollow	Stem Auger		N	umber of S	Samp	oles	Dist	uibeu	2		mulsiulbeu	2	Cole	-
Casing Jammer Weight (bit) Drop (in) Sampler 2-inch O. D. Split-Barrel SPT, 2-5-inch I.D. Call Mod Bampfer Hammer Automatic Weight (bit) 140 Description Sample Description Set in Sample Description Sample Jain Coll Sample Description Sample Jain Coll Sample Description Sample Description Sample Description	Casing E	Diamete	er (in) -		Casing Depth (ft)	w	ater Leve	l (ft.)		First 	t	-	C	Completion	-	24 HR.	-
Sample Zunch O.D. Split-Barrel SPT 2.5-inch I.D. Cal Med Fad Engineer Barryber Hammar Automatic Wright (lbb) 140 Drop (m) 30 Barryber Hammar Automatic Wright (lbb) 140 Drop (m) 30 Barryber Hammar Automatic Wright (lbb) 140 Drop (m) 30 Barryber Hammar Automatic Sample Description Desch Barrybe Hammar Remarks Barryber Hammar Sample Description Desch Barrybe Hammar No sample recovery. Barryber Hammar Sample Description Desch Barryber Hammar No sample recovery. Barryber Hammar Sample Description Desch Barryber Hammar No sample recovery. Barryber Hammar Sample Description Desch Barryber Hammar No sample recovery. Barryber Hammar Sample Description Desch Barryber Hammar No sample recovery. Barryber Hammar Sample Description Sample Description Sample Description No sample recovery. Barryber Hammar Sample Description Sample Description No sample recovery. Barryber Hammar Barryber Hammar Barryber Hammar Barryber Hammar Barryber Hammar Barryber Hammar	Casing H	lamme	er_	Weight (lbs)	Drop (in)	Di	rilling Fore	eman		. –				_			
sampler Hummer Automatic Weight (fks) 140 Drop (m) 30 A Atry ^{deg}	Sampler		2-inch O.D. Split-Ba	arrel SPT, 2.5-inch I.D.	Cal Mod	Fi	eld Engine	eer									
Bit Bit Sample Description Begin Sample Description Begin Material Constraints Present Constraints Sity SAND (SM), pale brown, medium dense, moist, fine 1 1 1 1 1 1 Sity SAND (SM), pale brown, medium dense, moist, fine 1 1 1 1 1 1 Sity SAND (SM), pale brown, medium dense, moist, fine 1 1 1 1 1 1 Sample Description 1 1 1 1 1 1 1 Sample Description 1 1 1 1 1 1 Sity SAND (SM), pale brown, medium dense, moist, fine 1 1 1 1 1 Sample Description 5 5 5 6 6 6 1 Sample Description 5 5 6 6 6 1 1 Dense. 5 5 6 1 1 1 1 Dense. 5 5 6 1 1 1 1 Total Depth = 11.5 feet 1 1 1 1 1 1 Total Depth = 11.5 feet 1 1 1 1 1 1 </td <td>Sampler</td> <td>Hamm</td> <td>^{ner} Automatic</td> <td>Weight (lbs) 140</td> <td>Drop (in) 30</td> <td></td> <td></td> <td></td> <td>А</td> <td>. Atr</td> <td>у</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Sampler	Hamm	^{ner} Automatic	Weight (lbs) 140	Drop (in) 30				А	. Atr	у						
State Image: State State State State State State Content Content <th< td=""><td>Sol Sol</td><td>Flev</td><td></td><td></td><td></td><td></td><td>Depth</td><td>5</td><td></td><td>Sa</td><td>mple Da</td><td>ata</td><td></td><td>-</td><td>Ren</td><td>narks</td><td></td></th<>	Sol Sol	Flev					Depth	5		Sa	mple Da	ata		-	Ren	narks	
Allevium (Ga) Sity SAND (SN), pale brown, medium dense, moist, fine sand. 0 2 2 2 3 0 1 2 3 0 0 1 2 3 0 0 3 0 0 1 3 0 0 1 3 0 0 1 3 0 0 1 3 0 0 1 3 0 0 1 3 0 0 1 3 0 0 1 4 1 1 5 0 0 6 0 1 6 0 1 7 1 1 11 0 1 12 1 1 13 1 1 14 15 1 15 16 1 14 1 15 1 16 1 17 1 18 1 19 1 20 1 21 1 22 1 23 1 <td>.09 - L MATER SYME</td> <td>(ft)</td> <td></td> <td>Sample Descriptior</td> <td>ו</td> <td></td> <td>Scale</td> <td>Jumbe</td> <td>Type</td> <td>(in)</td> <td>^{>}eneti resist BL/6ir</td> <td>Wa Con</td> <td>ater ntent</td> <td>(Drilli Fluid Lo</td> <td>ng Fluid, [oss, Drilling</td> <td>Depth of Casing, g Resistance, et</td> <td>, tc.)</td>	.09 - L MATER SYME	(ft)		Sample Descriptior	ו		Scale	Jumbe	Type	(in)	^{>} eneti resist BL/6ir	Wa Con	ater ntent	(Drilli Fluid Lo	ng Fluid, [oss, Drilling	Depth of Casing, g Resistance, et	, tc.)
Sity SAND (SM), pale brown, medium dense, moist, fine sand. Image: Comparison of the second seco			Alluvium (Qa)				- 0 -	2		-	-						
SAND (SP), yellow brown, Toose, moist, fine to medium			Silty SAND (SM), sand.	pale brown, medium d	ense, moist, fine		- 1 -										
SAND (SP), yellow brown, loose, moist, fine to medium																	
SAND (SP), yellow brown, toose, moist, fine to medium 3 $\overline{0}$							- 2	_			8			Drv D	ensitv :	= 115.3 pcf	
SAND [SP], yellow brown, loose, moist, fine to medium 4 9 sand, micaceous, friable. 6 0 10 Dense. 8 0 10 1 8 0 10 1 1 1 1 1							- 3 -	<u>-</u>	К	18	11			WĆ =	3.3%	1	
SAND (SP), yellow brown, toose, moist, fine to medium 5 6 0 10 Sand, micaceous, friable. 6 0 10 10 Dense. 6 0 10 10 Sifty SAND (SM), light grayish-brown, very dense, moist, fine sand, micaceous, micaceous, friable. 10 10 10 Total Depth = 11.5 feet 12 11 -5 18 29 Total Depth = 11.5 feet 12 -13 -14 -14 14 -15 -14 -14 -14 15 -14 -14 -14 -14 16 -17 -14 -14 -14 16 -17 -14 -14 -14 19 -20 -22 -22 -22 23 -22 -23 -23 -23 23 -22 -23 -23 -23 -23	71014						- 4 -	-		<u> </u>	9						
sand, micaceous, friable. Dense. $3 = \frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{29}$ $\frac{1}{29}$ $\frac{1}{16}$ $\frac{1}{29}$ $\frac{1}{16}$ $\frac{1}{29}$ $\frac{1}{30}$ $\frac{1}{10}$ $\frac{1}{$	┊┝╾┊┷╺┷╸┙ ᡗ		SAND (SP), yellov	w brown, loose, moist,	fine to medium		- 5 -										
Dense. $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	9 9		sand, micaceous,	friable.			-	2		8	4						
Dense. 7 - - 7 - <td< td=""><td>]</td><td></td><td></td><td></td><td></td><td></td><td>6 -</td><td>S</td><td>S</td><td></td><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>]						6 -	S	S		5						
Dense. 8 9 0 10 <t< td=""><td>5</td><td></td><td></td><td></td><td></td><td></td><td>- 7 -</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	5						- 7 -										
Sifty SAND (SM), light grayish-brown, very dense, moist, fine sand, micaceous. 10 9 10 Total Depth = 11.5 feet 11 5 18 29 Total Depth = 11.5 feet 12 13 14 14 11 15 15 16 12 12 13 14 14 15 14 14 14 14 14 18 18 18 19 19 20 20 20 20 20 20 20 20 20 21 22 20 20 20 22 23 20 20 20 22 23 20 20 20 22 23 20 20 20 23 23 20 20 20 23 23 20 20 20 20 23 23 20 20 20 20 23 23 20 20 20 20 23 24			Dense.				_ 8 _				10			No sa	ample re	ecovery.	
Siliy SAND (SM), light grayish-brown, very dense, moist, 9 10 10 fine sand, micaceous. 10 11 10 18 Total Depth = 11.5 feet 12 13 13 14 Groundwater not encountered. 11 14 14 14 14 15 16 17 18 19 12 12 12 12 14 14 14 14 14 19 19 19 19 19 20 12 12 13 14 14 12 12 12 12 13 14 14							-	မိ	К	0	15 29						
Silty SAND (SM), light grayish-brown, very dense, moist, fine sand, micaceous. Total Depth = 11.5 feet Groundwater not encountered. Borehole backfilled with soil cuttings. 10 11 10 10 10 10 10 10 11 10 10 11 10 10 11 10 11 10 12 13 14 14 15 16 17 18 18 19 19 20 20 21 21 22 20 21 21 22 22 23 24 23 24 23 24 24 24 23 24 24 23 24 24 23 36 24 23 36 24 23 36 24							9 -				25						
Total Depth = 11.5 feet Groundwater not encountered. Borehole backfilled with soil cuttings. $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			Silty SAND (SM), fine sand, micace	light grayish-brown, ve ous.	ery dense, moist,		- 10 -		ΗE		18						
Total Depth = 11.5 feet 30 Groundwater not encountered. - Borehole backfilled with soil cuttings. - - 13 - - - 14 - - - 15 - - - 18 - 19 - - - 20 - - - 21 - - - 22 - - - 23 - -	ALIG						- 11 -	S-4	SPT	4	29						
Groundwater not encountered. Borehole backfilled with soil cuttings.			Total Depth = 11.	5 feet			+		E		30						
Exercise backlined with soll outlings. - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20 - 21 - 22 - 23 - 23 - 24			Groundwater not	encountered.			- 12 -	1									
			Dorenole backline	a with son cuttings.			- 13 -	-									
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PROJECT	Langan # 7000891	01	JOB NO.	2012-0057	BY	LD	DATE	04/03/21
Sample No.	LB-1 / S-1	LB-1 / S-3	LB-2 / S-2	LB-3 / S-1	LB-3 / S-3	LB-4 / S-1	LB-4 / S-4	LB-5 / S-1
Depth (ft)	2.5	7.5	5.0	2.5	7.5	2.5	7.5	2.5
P.P.			-200					
Soil Type	Brown, Clayey Sand	Brown, M.C. Sand	Brown, M.C. Sand	Brown, Silty Sand	Brown, M.C. Sand	Brown, Clayey Sand w. F. Gravel	Brown, M.C. Sand	Brown, F.M. Silty Sand
Wet+Tare	976.9	888.1	757.4	1146.9	712.5	962.7	882.9	939.7
No. Ring	5	5	4	6	4	5	5	5
Wet Weight	137.1	170.6	143.7	166.0	190.3	111.1	103.7	124.2
Dry Weight	128.4	169.1	141.5	156.8	186.9	102.3	101.7	120.7
Wet density	125.2	110.4	120.2	121.7	110.8	122.9	109.5	119.0
% Water	6.8	0.9	1.6	5.9	1.8	8.6	2.0	2.9
Dry Density	117.3	109.4	118.3	114.9	108.8	113.1	107.4	115.7
O.B.Press(psf)								
Sample No.	LB-5 / S-3	LB-6 / S-2	LB-6 / S-4	LB-7 / S-1	LB-7 / S-3	LB-8 / S-2	LB-8 / S-3	
Depth (ft)	7.5	5.0	10.0	2.5	7.5	5.0	10.0	
P.P.								
Soil Type	Brown, M.C. Sand	Brown, F.C. Silty Sand	Brown, F.M. Silty Sand	Brown, Clayey Sand	Brown, F.M. Silty Sand	Brown, F.M. Silty Sand w. Gravel	Brown, Clayey Sand	
Wet+Tare	508.7	707.4	1094.1	1015.5	899.2	879.4	961.4	
No. Ring	3	4	6	5	5	5	5	
Wet Weight	168.0	137.0	131.2	104.1	117.1	115.7	90.1	
Dry Weight	166.6	135.3	122.4	92.7	112.2	112.2	80.1	
Wet density	103.7	109.7	114.3	131.7	112.2	108.9	122.6	
% Water	0.8	1.3	7.2	12.3	4.4	3.1	12.5	
Dry Density	102.8	108.4	106.7	117.3	107.5	105.6	109.0	
O.B.Press(psf)								-

PROJECT	Langan # 7000891	01	JOB NO.	2012-0057	BY	LD	DATE	04/03/21
Sample No.	LB-9 / S-2	LB-9 / S-4	LB-10 / S-1	LB-10 / S-3	LB-12 / S-2	LB-12 / S-4	LB-13 / S-2	LB-13 / S-4
Depth (ft)	5.0	10.0	2.5	7.5	5.0	10.0	5.0	10.0
P.P.								
Soil Type	Brown, M.C. Sand	Brown, F.C. Sand w. Gravel	Brown, M.C. Sand	Brown, Silty Sand	Brown, Sandy Clay	Brown, M.C. Sand	Brown, Silty Sand	Brown, Sandy Clay
Wet+Tare	754.5	736.1	899.3	913.8	1025.9	539.3	1110.5	1214.8
No. Ring	4	4	5	5	5	3	6	6
Wet Weight	178.8	140.8	104.0	129.6	136.7	125.3	126.7	165.6
Dry Weight	174.8	138.5	102.8	126.0	123.1	122.5	119.8	148.2
Wet density	119.6	115.7	112.3	114.7	133.4	112.2	116.6	131.1
% Water	2.3	1.7	1.2	2.9	11.0	2.3	5.8	11.7
Dry Density	116.9	113.8	111.0	111.5	120.1	109.7	110.3	117.4
O.B.Press(psf)								
Sample No.	LB-14 / S-2	LB-15 / S-1	LB-15 / S-3	LB-16 / S-2	LB-16 / S-3	LB-17 / S-1	LB-17 / S-2	
Depth (ft)	5.0	2.5	7.5	5.0	10.0	2.5	7.5	
P.P.		S	С					
Soil Type	Brown, F.C. Silty Sand	Brown, F.M. Silty Sand	Brown, Sandy Silt	Brown, F.M. Silty Sand	Brown, M.C. Sand	Brown, F.C. Silty Sand w. Gravel	Brown, F.M. Silty Sand	
Wet+Tare	952.7	776.9	985.3	1176.2	908.9	1205.6	889.5	
No. Ring	5	4	5	6	5	6	5	
Wet Weight	108.8	167.3	168.2	168.9	130.9	136.3	61.6	
Dry Weight	105.5	160.3	143.4	157.4	128.7	129.3	59.3	
Wet density	121.2	124.3	126.6	125.8	113.9	129.9	110.6	
% Water	3.1	4.4	17.3	7.3	1.7	5.4	3.9	
Dry Density	117.5	119.1	108.0	117.2	111.9	123.2	106.5	
O.B.Press(psf)								

PROJECT	Langan # 7000891	01	JOB NO.	2012-0057	BY	LD	DATE	04/03/21
Sample No.	LB-19 / S-1	LB-19 / S-3	LB-20 / S-1	LB-20 / S-3	LB-21 / S-1	LB-21 / S-3	LB-22 / S-2	LB-22 / S-4
Depth (ft)	2.5	7.5	2.5	7.5	2.5	7.5	5.0	10.0
P.P.								
Soil Type	Brown, Silty Sand	Brown, Silty Sand	Brown, F.C. Clayey Sand	Brown, F.C. Silty Sand	Brown, Silty Sand	Brown, M.C. Sand w. Gravel	Brown, M.C. Sand	Brown, Silty Sand
Wet+Tare	935.3	885.0	1048.4	759.9	934.3	747.8	955.3	830.3
No. Ring	5	5	5	4	5	4	5	5
Wet Weight	138.3	102.7	108.8	162.7	125.6	158.4	193.9	112.8
Dry Weight	134.2	95.6	99.6	157.7	120.6	154.2	191.6	106.8
Wet density	118.3	109.9	137.2	120.7	118.1	118.2	121.6	100.7
% Water	3.1	7.4	9.2	3.2	4.1	2.7	1.2	5.6
Dry Density	114.8	102.3	125.6	117.0	113.4	115.0	120.2	95.4
O.B.Press(psf)								
Sample No.	LB-23 / S-1	LB-23 / S-3	LB-24 / S-2	LB-24 / S-4	LB-25 / S-1	LB-25 / S-2	LB-26 / S-2	LB-26 / S-4
Depth (ft)	2.5	7.5	5.0	2.5	7.5	5.0	10.0	
P.P.								
Soil Type	Brown, M.C. Sand	Brown, Silty Sand	Brown, Silty Sand	Brown, M.C. Sand	Brown, Silty Sand	Brown, M.C. Sand	Brown, M.C. Sand	L. Brown, F. Sandy Silt
Wet+Tare	941.8	841.4	904.1	906.0	916.6	914.9	669.0	757.7
No. Ring	5	5	5	5	5	5	4	4
Wet Weight	152.8	104.5	115.7	110.9	131.3	118.7	131.8	117.6
Dry Weight	149.1	99.1	111.4	109.6	126.7	115.1	128.2	108.5
Wet density	119.4	102.6	113.1	113.4	115.1	114.9	108.0	120.2
% Water	2.5	5.4	3.9	1.2	3.6	3.1	2.8	8.4
Dry Density	116.5	97.3	108.9	112.0	111.1	111.4	105.0	110.9
O.B.Press(psf)								

PROJECT	Langan # 7000891	01	JOB NO.	2012-0057	BY	LD	DATE	04/03/21
Sample No.	LB-27 / S-2	LB-27 / S-4	LB-28 / S-1	LB-28 / S-3	LB-29 / S-2	LB-30 / S-2	LB-30 / S-4	LB-32 / S-1
Depth (ft)	5.0	10.0	2.5	7.5	5.0	5.0	10.0	2.5
P.P.								
Soil Type	Brown, Clayey Sand	Brown, Clayey Sand	Brown, Clayey Sand	Brown, M.C. Sand	Brown, Silty Sand	Brown, F.C. Silty Sand	Brown, Clayey Sand	Brown, Clayey Sand
Wet+Tare	917.5	852.4	1133.2	932.9	895.7	950.4	881.9	1214.5
No. Ring	5	5	6	5	5	5	5	6
Wet Weight	104.7	89.9	136.5	125.7	132.7	103.6	138.6	168.4
Dry Weight	101.6	82.8	131.8	122.7	128.5	99.4	129.9	157.1
Wet density	115.3	104.4	119.8	117.9	111.7	120.8	109.4	131.1
% Water	3.1	8.6	3.6	2.4	3.3	4.2	6.7	7.2
Dry Density	111.9	96.2	115.7	115.1	108.1	115.9	102.5	122.3
O.B.Press(psf)								
Sample No.	LB-32 / S-3	LB-34 / S-1	LB-34 / S-3	LB-35 / S-2	LB-35 / S-4	LB-36 / S-1	LB-36 / S-3	
Depth (ft)	7.5	2.5	7.5	5.0	10.0	2.5	7.5	
P.P.								
Soil Type	Brown, M.C. Silty Sand	Brown, Clayey Sand	Brown, M.C. Silty Sand	Brown, M.C. Sand	Brown, Sandy Clay	Brown, Clayey Sand	Brown, M.C. Sand w. Gravel	
Wet+Tare	946.0	937.1	901.7	925.9	1101.1	1168.6	859.8	
No. Ring	5	5	5	5	6	6	5	
Wet Weight	168.1	131.9	128.1	122.3	142.6	159.0	116.2	
Dry Weight	163.8	118.0	124.9	119.9	125.3	147.8	114.0	
Wet density	120.1	124.8	112.7	116.7	115.3	124.7	105.7	
% Water	2.6	11.8	2.6	2.0	13.8	7.6	1.9	
Dry Density	117.0	111.7	109.8	114.4	101.3	115.9	103.7	
O.B.Press(psf)								

PROJECT	Langan # 7000891	01	JOB NO.	2012-0057	BY	LD	DATE	04/03/21
Sample No.	LB-37 / S-1	LB-37 / S-3	LB-38 / S-1	LB-38 / S-3	LB-39 / S-2	LB-39 / S-4	LB-40 / S-2	LB-40 / S-4
Depth (ft)	2.5	7.5	2.5	7.5	5.0	10.0	5.0	10.0
P.P.		PI			S			
Soil Type	Brown, M.C. Sand	Brown, M.C. Sand	Brown, Silty Sand	Brown, Silty Sand	Brown, Silty Sand w. F. Gravel	Brown, Silty Sand	Brown, M.C. Sand	Brown, M.C. Sand
Wet+Tare	929.0	693.8	926.1	900.3	908.0	898.8	945.4	886.2
No. Ring	5	4	5	5	5	5	5	5
Wet Weight	115.0	228.0	118.6	114.5	134.0	86	118.8	110.4
Dry Weight	112.7	222.6	114.3	110.6	127.9	81.8	116.8	109.1
Wet density	117.2	106.9	116.7	112.4	113.7	112.2	120.0	110.1
% Water	2.0	2.4	3.8	3.5	4.8	4.5	1.7	1.2
Dry Density	114.9	104.4	112.5	108.6	108.5	107.3	117.9	108.8
O.B.Press(psf)								
Sample No.	LB-41 / S-1	LB-41 / S-3	LB-43 / S-1	LB-43 / S-3	LB-44 / S-2	LB-44 / S-4	LB-45 / S-2	LB-45 / S-4
Depth (ft)	2.5	7.5	2.5	7.5	5.0	10.0	5.0	10.0
P.P.								
Soil Type	Brown, Clayey Sand	Brown, M.C. Sand	Brown, F.C. Silty Sand	Brown, F.C. Silty Sand	Brown, F.C. Sand	Brown, F. Sandy Silt	Brown, F. Sandy Silt	Brown, Silty Sand
Wet+Tare	1044.1	937.1	931.0	904.7	970.5	721.5	971.1	1136.2
No. Ring	5	5	5	5	5	4	6	6
Wet Weight	147.2	96.6	123.6	108.4	124.3	144.5	113.0	146.1
Dry Weight	132.6	94.3	119.5	105.5	122.6	122.5	108.2	132.3
Wet density	136.5	118.6	117.6	113.2	124.2	112.7	97.2	120.2
% Water	11.0	2.4	3.4	2.7	1.4	18.0	4.4	10.4
Dry Density	122.9	115.8	113.7	110.1	122.5	95.5	93.1	108.8
O.B.Press(psf)								

PROJECT	Langan # 7000891	01	JOB NO.	2012-0057	BY	LD	DATE	04/03/21
Sample No.	LB-46 / S-1	LB-46 / S-3	LB-47 / S-2	LB-47 / S-4	LB-48 / S-1	LB-48 / S-3		
Depth (ft)	2.5	7.5	5.0	10.0	2.5	7.5		
P.P.								
Soil Type	Brown, F.C. Silty Sand	Brown, Silty Sand	Brown, F.C. Silty Sand	Brown, M.C. Sand	Brown, M.C. Sand	Brown, F. Silty Sand		
Wet+Tare	941.3	928.8	1121.1	1104.6	722.2	1171.1		
No. Ring	5	5	6	6	4	6		
Wet Weight	130.5	103.5	125.8	135.2	241.3	101		
Dry Weight	127.7	97.2	122.7	131.8	237.4	94.1		
Wet density	119.3	117.2	118.1	115.8	112.8	125.1		
% Water	2.2	6.5	2.5	2.6	1.6	7.3		
Dry Density	116.7	110.1	115.2	112.9	111.0	116.5		
O.B.Press(psf)								
Sample No.								
Depth (ft)								
P.P.								
Soil Type								
Wet+Tare								
No. Ring								
Wet Weight								
Dry Weight								
Wet density								
% Water								
Dry Density								
O.B.Press(psf)								

Geo-Logic

PROJECT	Langan # 7000891	01	JOB NO.	2012-0057	BY	LD	DATE	04/03/21
Sample No.	RB-12 / S-2	RB-12 / S-4	RB-14 / S-1	RB-14 / S-3	RB-15 / S-2	RB-15 / S-4	RB-16 / S-1	RB-17 / S-1
Depth (ft)	5.0	10.0	2.5	7.5	5.0	10.0	2.5	2.5
P.P.								
Soil Type	Brown, Sandy Silt	Brown, F.C. Silty Sand	No Sample	Brown, F.C. Silty Sand w. Gravel	Brown, F.C. Silty Sand w. Gravel	Brown, Silty Sand w. trace Gravel	Brown, F.C. Silty Sand	Brown, F.C. Silty Sand
Wet+Tare	1148.3	1045.7		717.5	744.1	1157.8	1099.5	1101.6
No. Ring	6	5		4	4	6	6	6
Wet Weight	148.4	125.7		216.2	250.7	117.0	126.9	142.0
Dry Weight	131.5	121.0		211.2	244.4	107.9	123.3	137.5
Wet density	121.9	136.7		111.9	117.4	123.2	115.1	115.4
% Water	12.9	3.9		2.4	2.6	8.4	2.9	3.3
Dry Density	108.0	131.6		109.3	114.5	113.6	111.8	111.7
O.B.Press(psf)								
Sample No.	RB-17 / S-4	RB-18 / S-1	RB-19 / S-2	RB-19 / S-4	RB-20 / S-2	RB-22 / S-1	RB-22 / S-3	
Depth (ft)	10.0	2.5	5.0	5.0	5.0	2.5	7.5	
P.P.								
Soil Type	Brown, Silty Sand w. trace Gravel	Brown, F.C. Silty Sand	Brown, F.C. Sand	Brown, F.C. Sand	No Sample	Brown, Silty Sand	No Sample	
Wet+Tare	1011.4	938.8	750.9	712.0		1128.7		
No. Ring	5	5	4	4		6		
Wet Weight	150.7	115.2	214.4	144.7		132.8		
Dry Weight	147.3	111.2	211.9	143.6		128.5		
Wet density	131.0	118.9	118.8	110.7		119.2		
% Water	2.3	3.6	1.2	0.8		3.3		
Dry Density	128.0	114.7	117.4	109.9		115.3		
O.B.Press(psf)								























WASH #200 SIEVE - ASTM D 1140-92

Job Name Langan # 700089101

Job No. 2012-0057

Date 3-30-21

By LD

Sample	LB-2 / S-2	Sample	LB-2 / S-3	Sample	LB-6 / S-3
Depth		Soil Type		Soil Type	
% water	1.6	% water		% water	
Wet weight	338.4	Wet weight		Wet weight	
Dry weight	333.1	Dry weight	219.2	Dry weight	160.6
+ 200 sieve	309.7	+ 200 sieve	102.9	+ 200 sieve	63.2
% Retained	93.0	% Retained	46.9	% Retained	39.4
%Pass. #200	7	%Pass. #200	53	%Pass. #200	61
Sample	LB-7 / S-4	Sample	LB-9 / S-4	Sample	LB-20 / S-2
Depth		Soil Type		Soil Type	
% water		% water	1.7	% water	_
Wet weight		Wet weight	295.0	Wet weight	
Dry weight	166.7	Dry weight	290.07	Dry weight	301.8
+ 200 sieve	128.2	+ 200 sieve	257.2	+ 200 sieve	222.8
% Retained	76.9	% Retained	88.7	% Retained	73.8
%Pass. #200	23	%Pass. #200	11	%Pass. #200	26
		-	1		
Sample	LB-20 / S-6	Sample	LB-21 / S-3	Sample	LB-34 / S-4
Sample Soil Type	LB-20 / S-6	Sample Soil Type	LB-21 / S-3	Sample Soil Type	LB-34 / S-4
Sample Soil Type % water	LB-20 / S-6	Sample Soil Type % water	LB-21 / S-3 2.7	Sample Soil Type % water	LB-34 / S-4
Sample Soil Type % water Wet weight	LB-20 / S-6	Sample Soil Type % water Wet weight	LB-21 / S-3 2.7 253.0	Sample Soil Type % water Wet weight	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight	LB-20 / S-6	Soil Type Soil Type % water Wet weight Dry weight	LB-21 / S-3 2.7 253.0 246.3	Sample Soil Type % water Wet weight Dry weight	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve	LB-20 / S-6	SampleSoil Type% waterWet weightDry weight+ 200 sieve	LB-21 / S-3 2.7 253.0 246.3 210.5	Sample Soil Type % water Wet weight Dry weight + 200 sieve	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained	LB-20 / S-6	Soil Type Soil Type % water Wet weight Dry weight + 200 sieve % Retained	LB-21 / S-3 2.7 253.0 246.3 210.5 85.4	SampleSoil Type% waterWet weightDry weight+ 200 sieve% Retained	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200	LB-20 / S-6	SampleSoil Type% waterWet weightDry weight+ 200 sieve% Retained%Pass. #200	LB-21 / S-3 2.7 253.0 246.3 210.5 85.4 15	SampleSoil Type% waterWet weightDry weight+ 200 sieve% Retained%Pass. #200	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200	LB-20 / S-6	Sample Soil Type Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200	LB-21 / S-3 2.7 253.0 246.3 210.5 85.4 15	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample	LB-20 / S-6	Sample Soil Type Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample Soil Type	LB-21 / S-3 2.7 253.0 246.3 210.5 85.4 15	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample Soil Type	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample Soil Type	LB-20 / S-6	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Soil Type % water	LB-21 / S-3 2.7 253.0 246.3 210.5 85.4 15	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Soil Type % water	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample Soil Type % water	LB-20 / S-6	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample Soil Type % water Wot weight	LB-21 / S-3 2.7 253.0 246.3 210.5 85.4 15	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Soil Type % water	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample Soil Type % water Wet weight	LB-20 / S-6	SampleSoil Type% waterWet weightDry weight+ 200 sieve% Retained%Pass. #200SampleSoil Type% waterWet weightSprumeight	LB-21 / S-3 2.7 253.0 246.3 210.5 85.4 15	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Soil Type % water Wet weight	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample Soil Type % water Wet weight Dry weight	LB-20 / S-6	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Soil Type % water Wet weight Dry weight Operation Dry weight Dry weight Operation Wet weight Dry weight Non since	LB-21 / S-3 2.7 253.0 246.3 210.5 85.4 15	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Soil Type % water Wet weight Dry weight	LB-34 / S-4
Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained	LB-20 / S-6	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Sample Soil Type % water Wet weight Juit Dry weight Dry weight % Dry weight % Dry weight % Dry weight % Dry weight % Dry weight	LB-21 / S-3 2.7 253.0 246.3 210.5 85.4 15	Sample Soil Type % water Wet weight Dry weight + 200 sieve % Retained %Pass. #200 Soil Type % water Wet weight Dry weight Wet weight Dry weight Pass. #200	LB-34 / S-4

WASH #200 SIEVE - ASTM D 1140-92

Job Name Langan # 700089101

Job No. 2012-0057

Date

By LD

Sample	LB-38 / S-4	Sample	LB-43 / S-4	Sample	LB-43 / S-5
Depth		Soil Type		Soil Type	
% water		% water		% water	
Wet weight		Wet weight		Wet weight	
Dry weight	118.7	Dry weight	197.4	Dry weight	147.2
+ 200 sieve	52.3	+ 200 sieve	145.4	+ 200 sieve	77.7
% Retained	44.1	% Retained	73.7	% Retained	52.8
%Pass. #200	56	%Pass. #200	26	%Pass. #200	47
Comple		Comple		Comple	
	LD-40 / 3-3	Sample			
Depth	7.0	Soil Type		Soil Type	
% water	7.3	% water		% water	
Wet weight	191.5	Wet weight		Wet weight	
Dry weight	178.5	Dry weight		Dry weight	
+ 200 sieve	123.1	+ 200 sieve		+ 200 sieve	
% Retained	69.0 21	% Retained		% Retained	
%Pass. #200	31	/01 433. # 200		%Pass. #200	
Sample		Sample		Sample	
Soil Type		Soil Type		Soil Type	
% water		% water		% water	
Wet weight		Wet weight		Wet weight	
Dry weight		Dry weight		Dry weight	
+ 200 sieve		+ 200 sieve		+ 200 sieve	
% Retained		% Retained		% Retained	
%Pass. #200		%Pass. #200		%Pass. #200	
Comple		Comula		Comple	
Soil Type		Soil Type		Soil Type	
% water		% water		% water	
Wet weight		Wet weight		Wet weight	
Dry weight		Dry weight		Dry weight	
+ 200 sieve		+ 200 sieve		+ 200 sieve	
% Retained		% Retained		% Retained	
%Pass. #200		/orass. #200		%Pass. #200	



CONSOLIDATION TEST - ASTM D2435



CONSOLIDATION TEST - ASTM D2435



CONSOLIDATION TEST - ASTM D2435



CONSOLIDATION TEST - ASTM D2435



CONSOLIDATION TEST - ASTM D2435



CONSOLIDATION TEST - ASTM D2435



CONSOLIDATION TEST - ASTM D2435



CONSOLIDATION TEST - ASTM D2435



Client: Langan

Date: 3/30/21

LD

By:

Client's Job No.: 700089101

Sample No.: RB-12

GLA Reference: 2012-0057

Soil Type: Brown, Clayey Sand

TEST SPECIMEN		А	В	С	D
Compactor Air Pressure	psi	300	110	200	
Initial Moisture Content	%	5.4	5.4	5.4	
Water Added	ml	40	60	50	
Moisture at Compaction	%	9.2	11.1	10.2	
Sample & Mold Weight	gms	3253	3252	3249	
Mold Weight	gms	2114	2085	2099	
Net Sample Weight	gms	1139	1167	1150	
Sample Height	in.	2.534	2.545	2.528	
Dry Density	pcf	124.7	125.0	125.1	
Pressure	lbs	9415	2225	3980	
Exudation Pressure	psi	750	177	317	
Expansion Dial	x 0.0001	26	0	10	
Expansion Pressure	psf	113	0	43	
Ph at 1000lbs	psi	18	32	25	
Ph at 2000lbs	psi	31	64	48	
Displacement	turns	3.95	4.57	4.19	
R' Value		72	45	58	
Corrected 'R' Value		72	45	58	

FINAL 'R' VAL	UE	
By Exudation Pressure (@ 300 p	si):	57
By Epansion Pressure	:	61
TI = 5		

Client: Langan

Date: 3/30/21

LD

By:

Client's Job No.: 700089101

Sample No.: RB-15

GLA Reference: 2012-0057

Soil Type: Brown, Sandy Clay

TEST SPECIMEN		А	В	С	D
Compactor Air Pressure	psi	80	60	120	
Initial Moisture Content	%	4.8	4.8	4.8	
Water Added	ml	60	70	50	
Moisture at Compaction	%	10.5	11.5	9.6	
Sample & Mold Weight	gms	3269	3291	3279	
Mold Weight	gms	2097	2104	2102	
Net Sample Weight	gms	1172	1187	1177	
Sample Height	in.	2.519	2.578	2.533	
Dry Density	pcf	127.6	125.2	128.5	
Pressure	lbs	4440	2090	8060	
Exudation Pressure	psi	354	166	642	
Expansion Dial	x 0.0001	13	4	23	
Expansion Pressure	psf	56	17	100	
Ph at 1000lbs	psi	28	32	20	
Ph at 2000lbs	psi	58	72	44	
Displacement	turns	4.01	4.44	3.73	
R' Value		52	41	64	
Corrected 'R' Value		52	41	64	

FINAL 'R' VA	LUE	
By Exudation Pressure (@ 300	0 psi):	49
By Epansion Pressure	:	54
TI = 5		

Client: Langan

GLA Reference:

Date: 3/30/21 By: LD

Client's Job No.: 700089101

2012-0057

Sample No.: RB-18

Soil Type: Brown, Sandy Clay w. trace Gravel

TEST SPECIMEN		А	В	С	D
Compactor Air Pressure	psi	100	60	150	
Initial Moisture Content	%	5.2	5.2	5.2	
Water Added	ml	90	100	80	
Moisture at Compaction	%	13.8	14.8	12.9	
Sample & Mold Weight	gms	3219	3229	3224	
Mold Weight	gms	2098	2107	2096	
Net Sample Weight	gms	1121	1122	1128	
Sample Height	in.	2.501	2.557	2.482	
Dry Density	pcf	119.3	115.9	122.0	
Pressure	lbs	4780	2760	8630	
Exudation Pressure	psi	381	220	687	
Expansion Dial	x 0.0001	23	10	44	
Expansion Pressure	psf	100	43	191	
Ph at 1000lbs	psi	29	31	24	
Ph at 2000lbs	psi	62	75	48	
Displacement	turns	4.55	4.78	4.22	
R' Value		46	37	58	
Corrected 'R' Value		46	37	58	

FINAL 'R' VALUE						
By Exudation Pressure (@ 30	00 psi):	42				
By Epansion Pressure	:	44				
TI = 5						

Client: Langan

Date: 3/26/21 By:

LD

Client's Job No.: 700089101

Sample No.: LB-36 / Bulk

GLA Reference: 2012-0057

Soil Type: Brown, Clayey Sand w. Gravel

TEST SPECIMEN		А	В	С	D
Compactor Air Pressure	psi	150	350	350	
Initial Moisture Content	%	6.2	6.2	6.2	
Water Added	ml	60	50	43	
Moisture at Compaction	%	12.0	11.0	10.4	
Sample & Mold Weight	gms	3218	3211	3199	
Mold Weight	gms	2107	2098	2096	
Net Sample Weight	gms	1111	1113	1103	
Sample Height	in.	2.494	2.483	2.448	
Dry Density	pcf	120.5	122.3	123.7	
Pressure	lbs	1760	4320	7630	
Exudation Pressure	psi	140	344	607	
Expansion Dial	x 0.0001	0	0	6	
Expansion Pressure	psf	0	0	26	
Ph at 1000lbs	psi	28	20	15	
Ph at 2000lbs	psi	50	35	23	
Displacement	turns	4.75	3.9	3.48	
R' Value		54	70	81	
Corrected 'R' Value		54	74	81	

FINAL 'R' VALUE						
By Exudation Pressure (@ 300 psi)	:: 71					
By Epansion Pressure	N/A					
TI = 5						

Client: Langan

Date: 3/26/21

LD

By:

Client's Job No.: 700089101

Sample No.: LB-47 / Bulk

GLA Reference: 2012-0057

Soil Type: Brown, Clayey Sand

TEST SPECIMEN		А	В	С	D
Compactor Air Pressure	psi	350	200	300	
Initial Moisture Content	%	3.3	3.3	3.3	
Water Added	ml	80	88	84	
Moisture at Compaction	%	10.8	11.6	11.2	
Sample & Mold Weight	gms	3226	3231	3238	
Mold Weight	gms	2095	2102	2104	
Net Sample Weight	gms	1131	1129	1134	
Sample Height	in.	2.47	2.479	2.483	
Dry Density	pcf	125.2	123.7	124.5	
Pressure	lbs	5265	1790	3200	
Exudation Pressure	psi	419	143	255	
Expansion Dial	x 0.0001	15	0	6	
Expansion Pressure	psf	65	0	26	
Ph at 1000lbs	psi	19	34	25	
Ph at 2000lbs	psi	36	60	45	
Displacement	turns	3.97	4.79	4.11	
R' Value		68	47	61	
Corrected 'R' Value		68	47	61	

FINAL 'R' V	ALUE	
By Exudation Pressure (@ 30	00 psi):	65
By Epansion Pressure	:	N/A
TI = 5		

Client: Langan

Date: 3/26/21 By:

LD

Client's Job No.: 700089101

Sample No.: LB-29 / Bulk

GLA Reference: 2012-0057

Soil Type: Brown, Clayey Sand

TEST SPECIMEN		А	В	С	D
Compactor Air Pressure	psi	350	200	350	
Initial Moisture Content	%	5.4	5.4	5.4	
Water Added	ml	60	70	54	
Moisture at Compaction	%	11.1	12.1	10.6	
Sample & Mold Weight	gms	3219	3206	3218	
Mold Weight	gms	2103	2075	2099	
Net Sample Weight	gms	1116	1131	1119	
Sample Height	in.	2.481	2.51	2.466	
Dry Density	pcf	122.6	121.8	124.3	
Pressure	lbs	4970	2635	8300	
Exudation Pressure	psi	396	210	661	
Expansion Dial	x 0.0001	8	0	17	
Expansion Pressure	psf	35	0	74	
Ph at 1000lbs	psi	17	26	15	
Ph at 2000lbs	psi	30	46	24	
Displacement	turns	4.11	4.46	3.79	
R' Value		72	58	79	
Corrected 'R' Value		72	58	79	

FINAL 'R' VALUE		
By Exudation Pressure (@ 300 psi):		66
By Epansion Pressure	:	N/A
TI = 5		
'R' VALUE CA 301

Client: Langan

Date: 3/26/21 By:

LD

Client's Job No.: 700089101

Sample No.: LB-1 / Bulk

GLA Reference: 2012-0057

Soil Type: Brown, Clayey Sand w. Gravel

TEST SPECIMEN		А	В	С	D
Compactor Air Pressure	psi	135	250	200	
Initial Moisture Content	%	7.2	7.2	7.2	
Water Added	ml	50	35	43	
Moisture at Compaction	%	12.1	10.6	11.4	
Sample & Mold Weight	gms	3232	3201	3220	
Mold Weight	gms	2097	2104	2096	
Net Sample Weight	gms	1135	1097	1124	
Sample Height	in.	2.566	2.45	2.543	
Dry Density	pcf	119.6	122.7	120.2	
Pressure	lbs	2485	5645	3960	
Exudation Pressure	psi	198	449	315	
Expansion Dial	x 0.0001	15	41	28	
Expansion Pressure	psf	65	178	121	
Ph at 1000lbs	psi	29	21	24	
Ph at 2000lbs	psi	60	40	48	
Displacement	turns	4.12	3.75	3.89	
R' Value		50	67	60	
Corrected 'R' Value		50	67	60	

FINAL 'R' VALUE							
By Exudation Pressure (@ 30	00 psi):	59					
By Epansion Pressure	:	N/A					
TI = 5							

Langan Engineering # 700089101

SAMPLE NO.:	LB-16 / S-3	LB-32 / S-2		
Depth:	7.5'	5'		
DIRECT SHEAR TEST (type)				
Initial Moisture Content %				
Dry Density (pcf)				
Normal Stress (psf)				
Peak Shear Stress (psf)				
Ultimate Shear Stress (psf)				
Cohesion (psf)				
Internal Friction Angle (degrees)				
EXPANSION TEST UBC STD 18-2				
Initial Dry Density (pcf)				
Initial Moisture Content %				
Final Moisture Content %				
Pressure (psf)				
Expansion Index Swell %				
CORROSIVITY TEST				
Resistivity (CTM 643) (ohm-cm)	2400	1500		
pH (ASTM D1293)	7.1	7.2		
CHEMICAL TESTS				
Soluble Sulfate (CTM 417) (%)	0.0526	0.0353		
Chloride Content (CTM 422) (%)	0.0061	0.0235		
Wash #200 Sieve (ASTM-1140) %				
Sand Equivalent (ASTM D2419)				

APPENDIX B SEISMIC SITE CLASS CALCULATIONS



LANGAN

SEISMIC SITE CLASSIFICATION - SPT N-METHOD

Project Number: 700089101 Project Name: ARS Fullfillment Center SBD4 Created By: J. Goff Edited By: J. Goff Reviewed By: CJZ Date: 3/30/2021

BORING ID:	LB-11
GROUNDWATER DEPTH (FT)	79
SAMPLER HAMMER EFFICIENCY (%)	83.9

Layer No.	Top Depth (ft)	Bot. Depth (ft)	Mid-Depth (ft)	Thickness, d _i (ft)	N _{FIELD}	Sampler Type	Soil Type	Cs	CE	N ₆₀	d _i /N ₆₀
1	0	8	4	8	25	Ring	SP	0.65	1.40	23	0.352
2	8	14	11	6	50	SPT	SM	1.00	1.40	70	0.086
3	14	18	16	4	100	Ring	SC	0.65	1.40	91	0.044
4	18	23	20.5	5	43	SPT	SP	1.00	1.40	60	0.083
5	23	28	25.5	5	89	Ring	SP	0.65	1.40	81	0.062
6	28	33	30.5	5	34	SPT	SP	1.00	1.40	48	0.105
7	33	38	35.5	5	97	Ring	SP	0.65	1.40	88	0.057
8	38	41	39.5	3	69	SPT	SP	1.00	1.40	96	0.031
9	41	45.5	43.25	4.5	69	SPT	ML	1.00	1.40	96	0.047
10	45.5	48	46.75	2.5	100	Ring	SM	0.65	1.40	91	0.028
11	48	51.5	49.75	3.5	60	SPT	SP	1.00	1.40	84	0.042
12 (LB-33)	51.5	58	54.75	6.5	47	SPT	SC	1.00	1.40	66	0.099
13 (LB-33)	58	66	62	8	100	Ring	SM	0.65	1.40	91	0.088
14 (LB-33)	66	68	67	2	48	SPT	SP	1.00	1.40	67	0.030
15 (LB-33)	68	73	70.5	5	100	Ring	SP	0.65	1.40	91	0.055
16 (LB-33)	73	76.5	74.75	3.5	18	SPT	CL	1.00	1.40	25	0.139
17 (LB-33)	76.5	83	79.75	6.5	100	Ring	SM	0.65	1.40	91	0.072
18 (LB-33)	83	88	85.5	5	76	SPT	SM	1.00	1.40	100	0.050
19 (LB-33)	88	93	90.5	5	86	Ring	SP	0.65	1.40	78	0.064
20 (LB-33)	93	98	95.5	5	24	SPT	SM	1.00	1.40	34	0.149
21 (LB-33)	98	100	99	2	63	Ring	SP	0.65	1.40	57	0.035

Σd _i	100.0
Σd _i /N ₆₀	1.72
Avg. N ₆₀	58
Seismic Site Class	С