ATTACHMENT H

NOTICE OF VIOLATION

Los Angeles County Department of Regional Planning
Please contact the investigating planner **Timothy Stapleton**
Email: tstapleton@planning.lacounty.gov
Phone Number: (213) 974-6453 -- *Monday through Thursday before 10am*

October 25, 2016

Republic Services, Inc.
ATTN: Rob Sherman
14747 San Fernando Road
Sylmar, CA 91342

Code Case No: RPZPE2016002500
Conditional Use Permit: 00-194

Dear Property Owner:

A referral from the Los Angeles County Department of Public Works Environmental Programs Division describing non-compliance with required requests under Condition 45.N of Conditional Use Permit (CUP) 00-194 was provided to the Los Angeles County Department of Regional Planning. Please note Condition 45.N below:

45.N. The Permittee shall submit a quarterly report to the Director of Public Works identifying: (1) all fugitive dust and odor complaints from local residents that the Permittee has received for that quarter regarding the Landfill; (2) all notices of violation issued by the SCAQMD or the County LEA; and (3) all measures undertaken by the Permittee to address these complaints and/or correct the violations. The Director of Public Works and the DPH-SWMP shall each have the authority to require the Permittee to implement additional corrective measures for complaints of this nature when such measures are deemed necessary to protect public health and safety.

Please provide the requested information listed in the July 14, 2016 County of Los Angeles Department of Public Works letter, including attachments, to the satisfaction of Public Works. Should you have any questions regarding this requested information, please contact Bahman Hajialiakbar at (626) 458-3502 or via email at BHAJI@dpw.lacounty.gov for more details.

Failure of the owner or person in charge of the premises to comply with this order within fifteen (15) days after the compliance date specified herein, or any written extension thereof, shall subject the violator to a noncompliance fee in the amount of $732.00, unless an appeal from this order is filed within fifteen (15) days after the compliance date. Such appeal must comply with Section 22.60.390(C) of the Los Angeles County Code.

Department of Regional Planning
Richard J. Bruckner, *Director*

320 W Temple Street
Los Angeles, CA 90012

(213) 974-6456

http://planning.lacounty.gov

Case Number:
RPZPE2016002500

Permit or Project Number:
CUP00-194

Zone:
A-2-2

Investigating Planner:
Timothy Stapleton

Phone Number:
(213) 974-6453
Monday - Thursday before 10am

Fees Due Now:
$00.00

Compliance Date:
Date of Receipt

 VIA Certified Mail

Additionally, under Condition 11, you are subject to a penalty not to exceed $1,000 per day for violating the terms of this grant. Condition 11, in relevant part, states:

11. **Notice is given that any person violating a provision of this grant is guilty of a misdemeanor. Notice is further given that the Commission or a Hearing Officer may, after conducting a public hearing in accordance with Section 22.56.1780, et seq., of the County Code, revoke or modify this grant, if the Commission or Hearing Officer finds that these conditions have been violated or that this grant has been exercised so as to be detrimental to public health or safety, or so as to be a nuisance.**

In addition to, or in lieu of, the provisions just described, the Permittee shall be subject to a penalty for violating any provision of this grant in an amount determined by the Director of the Department not to exceed $1,000 per day per violation.

To avoid being charged the noncompliance fee, you must comply within fifteen (15) days after the compliance date which has been set at **date of receipt**. To avoid being charged daily penalties described under Condition 11, you must abate the aforementioned zoning violations and bring the subject property into compliance with the Los Angeles County Zoning Ordinance within thirty (30) days from the date of this notice which is **October 25, 2016**.

Failure to correct the violations for **CUP 00-194** by the dates specified herein may cause this matter to be referred to the Regional Planning Commission for consideration pursuant to Condition No. 11 and/or referred to the District Attorney with the request that a criminal complaint be filed if compliance is not achieved. Conviction can result in a penalty of up to six months in jail and/or a one thousand dollar fine, each day in violation constituting a separate offense.

Any inquiry regarding this matter may be addressed to the Department of Regional Planning, 320 W. Temple Street, Los Angeles, CA 90012, Attention: Zoning Enforcement. To speak to the investigating planner directly, please note the contact information listed above. Our offices are closed on Fridays.

Sincerely,

DEPARTMENT OF REGIONAL PLANNING
Richard J. Bruckner
Director

Susana Franco-Rogan
Supervising Regional Planner
Zoning Enforcement West

Enclosures

SUNSHINE CANYON LANDFILL

November 1, 2016

Mr. Bahman Hajialiakbar
Los Angeles County
Department of Public Works
Environmental Programs Division

RE: Notice of Violation: Code Case RPZPE2016002500

Dear Mr. Hajialiakbar,

Republic Services (Republic) is in receipt of the Los Angeles County Regional Planning Notice of Violation (NOV) dated October 25, 2016 for alleged non-compliance of Condition 45.N of Conditional Use Permit (CUP) 00-194. The NOV implies that Republic has been non responsive to information requests from the Los Angeles County Department of Public Works (DPW). This is simply not the case.

Republic has provided multiple responses to DPW odor mitigation requests including letters dated April 5, 2016 and April 27, 2016. In addition, responses to DPW comments and substantial documentation were provided to DPW on May 12, 2016 and August 11, 2016. The August 11th letter specifically addressed each item from DPW's July 14, 2016 letter cited in the NOV. Disappointingly, **there has been no response from DPW regarding Republic's August 11th** letter outlining which of the items below are believed by DPW to be insufficient and/or non-responsive. It is therefore unclear to us as to why an NOV has been issued since we are unaware of the items DPW still considers deficient with respect to our August 11th response.

As you recall, two meetings were held in October 2016 to discuss various items related to reports that are either with DPW for review or with Republic Services' for revisions and/or response, and items related to odor mitigation actions. A summary of the items discussed at each of these meetings includes the following:

<u>October 11, 2016:</u>

- Updates on open items including:
  - Revised Exhibit A for the SCE and CC-4 Grading Projects;
  - Public outreach for the Intermediate Cover Enhancement (ICE) Project.
- Discussion of the odor observations reported by County DPW personnel
- Discussion of odor mitigation actions being taken by Republic Services including:
  - Implementation of adverse weather procedure with the City of Los Angeles;
  - Installation of additional odor mitigation equipment
    - Expansion of vapor system
    - Addition of five (5) new odor mitigation units (Buffalo Monsoon)
  - Installation of 20-30 new vertical gas wells;
  - Installation of 4,100 linear feet of slope collectors;
  - Upgrades to the leachate collection system to handle liquids from gas wells;
  - Installation of pumps in gas wells affected by liquids
  - Expedited cell construction

14747 San Fernando Rd., Sylmar, CA 91342 (818) 833-6500 Office (818) 362-5484 Fax

October 19, 2016

The October 19th meeting was held specifically to review the status of certain reports that are either with the County for review or with Republic Services for revisions based on comments from DPW personnel. Specifically, the following reports were discussed:

- West Drainage Design Report
  - The approval for the West Drainage was received from the Los Angeles Regional Water Quality Control Board (LARWQQB) on October 25, 2016. As part of this approval, comments from DPW must be addressed.
  - DPW personnel were informed the CC-4 buttress must be constructed before the West Drainage is completed. A meeting will be scheduled to discuss the project with DPW personnel early in 2017.

- Fill Sequence Plan
  - Comments on the revised Fill Sequence Plan were received on June 15, 2016; there was no due date for addressing the comments and re-submittal to DPW, however it was agreed the revised Fill Sequence Plan will be submitted to DPW by November 17, 2016.

- Revised Draft Annual Report for 2015
  - DPW comments on the Draft Annual Report for 2015 included comments on the annual topographic survey which required a significant amount of work to be done by Republic Services' surveying contractors. The new topographic survey map has been received and the Revised Draft Annual Report for 2015 including the new topographic survey map and responses to DPW's comments will be submitted on November 3, 2016.

- CC-4 Project
  - Republic Services' personnel were informed that DPW has completed its review of the latest submittal for this project and additional comments from the County's Design and Building and Safety Divisions would be forthcoming. In addition, the County would be directing that all construction activity on CC-4 cease as no approval has been given for the project. The discussion included reference to CUP condition 37 which, in part, requires approval from the County "for all grading .....within the Landfill footprint that could impact off-site property". DPW personnel were informed the grading required for Cell CC-4 Part 1 would not impact off-site property as the site drainage remains the same.

- Revised Exhibit A-2, Site Plan and Survey Monument Plan
  - This application relates to the revision of the site grading limits required for the SCE Power Pole Project and the CC-4 Buttress. Although a revised Exhibit A was submitted for just the SCE Power Pole Project, that application was not processed and it was agreed a new application would be submitted that encompassed both projects. DPW was informed the work to compile the information for the application is in progress and the application will be submitted by November 17th. In addition, Republic Services will contact Regional Planning to determine what action needs to be taken to withdraw the Revised Exhibit "A"

that was previously submitted and approved by Regional Planning for just the SCE Power Pole project.

- Intermediate Cover Enhancement (ICE) Project
  - DPW personnel were informed that the ICE Project Plan was communicated to the Sunshine Canyon Community Advisory Committee (CAC) at their July and September meetings. CAC Chairman, Mr. Wayde Hunter, committed to gathering comments and returning them to SCL General Manager, Mr. Rob Sherman. Mr. Sherman also presented the project to the Granada Hills North Neighborhood Council (GHNNC) to satisfy the County's requirement for public comment (CUP condition 79); no comments had been received to date. Although DPW personnel have not conducted their review of the plan, concern was expressed related to erosion control on the slopes that are subject to the project. Republic Services personnel agreed to include erosion monitoring during the course of the project so the potential for erosion could be evaluated.

- Mitigation Measure Requirements
  - DPW personnel expressed an opinion that Republic Services' responses were non-responsive, however there were no specifics provided regarding which items DPW considers inadequate. Republic Services personnel stressed that this was not the intent and asked for specifics. A discussion regarding DPW's requirement that a gas well that is identified as "ineffective or inefficient or impacted for any reason" be retrofitted and/or enhanced within 14 days and that no well that is "ineffective and inefficient" will remain in service for more than 30 days without being decommissioned or replaced. A discussion took place with DPW personnel indicating that they need to know that there is a corrective action plan in place for each well that meets the "ineffective or inefficient" criteria. Mr. Dan Lafferty further stated that after DPW personnel reviewed Republic's submittals and made the determination that the odor problem is not a design issue or a capacity issue, their conclusion is that it must be related to operations and maintenance (O&M) of the gas collection system. He further stated that what DPW is looking for is the data and documentation that demonstrates the facility's O&M program is capable of addressing issues that come up.

  - Republic personnel stated that there is an aggressive operations and maintenance (O&M) program in place with protocols and procedures that specifically address what actions must be taken to bring a well into compliance. Republic personnel also stated that we have an obligation to repair any well that is not functioning, however we do take issue with the County's language that states a well must be decommissioned or replaced within 30 days if it is deemed "ineffective or inefficient". Republic personnel stated that even though a well may be impacted with liquids or another issue arises, if a gas well is still collecting gas, it should remain in service as it adds to the overall gas collection capability and therefore the reduction of emissions that may potentially contribute to odors.

  - Mr. Dan Lafferty indicated DPW is willing to work with Republic Services to revise the language regarding the decommissioning of a well within 30 days.

With respect to Notice of Violation Code Case RPZPE2016002500, mention is specifically made to DPW's July 14, 2016 letter. As stated previously, a response to this letter was submitted to DPW on August 11, 2016 which augmented the information previously submitted on May 12, 2016. A summary of these items as well as the date the information was provided to DPW is provided below.

Item A.1.a, Index Map(s): *Republic responded to this request on May 12, 2016 and August 11, 2016. Republic provided DPW on May 12, 2016 with its maps of future cell development, that show the boundaries of the landfill and of the fill areas, and that also show the location of future planned fill areas.*

Item A.1.b, Phasing Plans: *This is not an odor related issue. However, Republic responded on August 11, 2016 that Republic agreed with DPW that the phasing and excavation plans would be part of a separate submittal. At the meeting held on October 19, 2016, Republic agreed to submit the revised phasing plans by November 17, 2016.*

Item A.1.c, Well ROI: *Republic responded on August 11th with a revised Master Plan Update, which includes revised Sheets 3 – 7 showing the radius of influence (ROIs) for the proposed wells.*

Item A.1.d, LFG Generation: *Republic responded on August 11th with a full explanation from its landfill gas system consultant, Cornerstone Environmental Group, explaining why the data did not (as DPW apparently thought) show a decline in the collection efficiency of the GCCS at the landfill from August 2012 through March 2016. The Cornerstone response also answered each of the sub-questions posed by DPW under Item A.1.d.*

Item A.2, 5-Year GCCS Plan: *Republic responded on May 12th and also on August 11th that the 5-Year GCCS Master Plan submitted to DPW on May 12th met all the requirements agreed upon at a meeting held with DPW on February 10, 2016. Republic explained that the GCCS as-builts for 2016 would not be available until the end of the calendar year and it was agreed the 2016 as-builts would be submitted as part of the 2016 Annual GCCS Report.*

Item A.3, 2015 As-builts: *DPW questioned the value of the submittal of the 2015 GCCS as-built drawings. On August 11th, Republic responded that, at a meeting held on December 10, 2015, it was agreed the GCCS design drawings would be included in the annual report, hence the submittal of the as-built drawings in the 2015 Annual GCCS Report dated May 12, 2016. Republic was simply being responsive to DPW's request for this information.*

Item A.4.a, Map of Areas: *Republic provided the requested map showing the locations Areas 1, 2 and 3 on August 11, 2016.*

Item A.4.b, ROI Information: *On August 11, 2016, Republic responded to DPW's question regarding the ROIs for vertical wells in two different submittals to DPW. The explanation was that one submittal in 2014 showed conceptual ROIs and the other showed actual ROIs measured in 2015 for the wells in question. Republic's response also noted that the actual ROIs showed there was adequate well coverage for Areas 1, 2 and 3.*

Item A.5, Schedule: *On August 11, 2016, Republic responded to DPW's question whether the May 12, 2016 submittal on future well installation was an accurate representation of the work that will be done in 2016, by stating that it was accurate. Republic added that a schedule for 2017 GCCS activities would be submitted by November 20, 2016, as required by the DPW letter dated April 27, 2016, and as discussed during the February 10, 2016 meeting at the DPW.*

Item A.6, LFG Modeling Rpt: *DPW did not have any comments on this item.*

Item A.7, Well Decommissioning *Republic response on August 11, 2016, stated the May 12, 2016 letter which accompanied the 2015 Annual GCCS Report to DPW, that Republic has and will continue to monitor and maintain the landfill gas well field in accordance with site permits and 40 CFR 60.755(a) of the NSPS. These regulations provide for specific timeframes in which any GCCS exceedances are required to be remedied. Republic stated it intends to fully comply with NSPS regulations and feels that the County's proposal to require that wells be taken out of service prematurely (in a shorter time frame than required by NSPS regulations) would be detrimental to the GCCS, and, much like the 9-inch County soil mandate, will cause long- term adverse impacts to the GCCS which may lead to increased odor complaints.*

Item A.8: *This is related to the prior item. Republic responded on August 11, 2016 that implementation of DPW's requested action to remove gas wells from service prematurely would decrease the efficiency of the gas collection and control system and could lead to increased odor complaints.*

Item B.1, Visual Inspections: *Republic responded on August 11, 2016 that Republic has provided information regarding visual inspections of the intermediate cover areas of the landfill identified by SCAQMD Rule 1150.1 instantaneous monitoring where emissions greater than 500 ppm have been measured. These inspection logs are included in the Monthly Activity Report provided to DPW by the 15th of the month for the month prior.*

Item B.1, ICE Project: *With respect to the plan for the Intermediate Cover Enhancement (ICE) Project, this was submitted to DPW on August 11, 2016 (Attachment D). Republic hopes to undergo*

this project in cooperation with the SCL-LEA. Although Republic disagrees that the ICE program represents a "change in operations" at the landfill and requires either environmental review or public outreach, Republic has engaged in the public outreach requested by DPW. DPW's requirement that Republic provide DPW with a written response from the CAC and the GHNNC showing their comments on the ICE program is delaying implementation of this study, as Mr. Wayde Hunter has indicated it may take him some additional weeks to finalize a written response on behalf of the CAC & GHNNC regarding the ICE program.

Item B.2, Surface Emissions: *Republic responded on August 11, 2016 that Republic currently follows, and is in compliance with, all U.S. EPA NSPS and SCAQMD 1150.1 guidelines to manage surface emissions at the landfill.*

Item B.3,Slope Angles: *Republic responded on August 11, 2016 that the information requested in this item by DPW was in Republic's fill sequencing plans that had previously been provided to DPW, and further referred DPW to Republic's response to Item A.1.b. As referenced previously, the revised Fill Sequence Plan will be submitted by November 17, 2016.*

Item C, Odorous Loads: *Republic responded on August 11, 20-16 that Republic would continue to adhere to its Odor Management Plan, as requested by DPW.*

Item D, Monthly Activity Rpt: *On August 11, 2016 Republic acknowledged the Monthly Activity Reports have been submitted to DPW since September 2015. Republic agreed to continue to submit these reports and listed each of the submitted monthly reports provided to DPW to ensure that DPW had received each of them.*

Item E, Engineering Docs: *Republic responded on April 5, 2016 and August 11, 2016, stating that engineering stamps can only be placed on engineering drawings and not monthly status reports.*

Interim Milestones: *Republic provided DPW with its list of Interim Milestones to address the potential for landfill gas odors to leave the site on April 27, 2016 and August 11, 2016. Republic is working in close cooperation with the SCL-LEA on (1) the ADC pilot program which is designed to mitigate the damage done to the landfill and its gas collection system caused by the County's 9 inches of soil cover requirement, (2) the ICE program, and, (3) the transfer station odor reduction study. Republic believes these programs, adopted in cooperation with the SCL-LEA, offer the best solution to improving the landfill's control over trash odors and landfill surface emissions and to address actions that will reduce the potential for landfill gas odors to leave the site. Republic strongly encouraged DPW not to reinstitute the 9 inches of soil*

cover requirement and to expedite DPW's approval of the ICE pilot program.

As evidenced by the content of the meetings Republic has had with DPW personnel and the responses to the requests for information summarized above, Republic has fully cooperated with DPW staff in the past and continues to do so to this day. As we communicated to you and your staff during our meetings on October 11, 2016 and October 19, 2016, we are implementing additional odor mitigation measures to augment the site's existing infrastructure, and implementing processes and procedures to continue our progress in eliminating the potential for off-site odors.

We would be remiss if we did not mention that, in light of the fact that there has not been an NOV issued by the Department of Regional Planning for many, many years, we find it very curious that this NOV was issued the day before DPW staff's testimony at the AQMD hearings. As we stated previously, we feel we have cooperated with DPW staff and have provided the requested information. The fact that we do not know the specifics of what DPW considers non-responsive speaks to the premature issuance of the referenced NOV. We remain committed to working with DPW and Regional Planning staff and respectfully request a meeting at your earliest convenience to discuss this matter.

Sincerely,

Rob Sherman
General Manager
Sunshine Canyon Landfill

cc: Tim Stapleton – Los Angeles County Regional Planning

Sunshine Canyon Landfill
November 28, 2016 Meeting between Public Works and Republic Services
Meeting Summary

Attendees:

Republic Services: Rob Sherman, Patti Costa, Matt Eaton
Tetra Tech BAS (Republic Services' consultant): Ghassan "Gus" Andraos, Sami Ayass
Public Works: Dan Lafferty, Bahman Hajialiakbar, Martins Aiyetiwa, Dave Nguyen, Gabriel Esparza, Vu Truong, Michael Harmon

Meeting Details

Date/Time: Monday, November 28, 2016, 2:00 pm
Location: LADPW HQ Alhambra – Annex Bldg. 3rd Floor – Large Conference Room

Meeting Description

Meeting held between Republic Services and Public Works to discuss outstanding issues pertaining to the October 25, 2016, Notice of Violation issued by Regional Planning and included discussion on Republic's subsequent submittals and responses to Public Works' March 30th DPW letters and subsequent communications related to the mitigation requirements from the March 30th letter and July 14th letters.

Meeting Summary

Item A1. 5-year GCCS Master Plan

- **A1.a)** In addition to the index table provided on the Master Plan, DPW requested that Republic provides a clear "master" index map for the Master Plan Update for the purposes of delineation and clarity. The "master" map will allow the reviewer to know the "operational location" of each planning year in relation to the whole site. Additionally, each planning year should include any planned repairs, and/or upgrades planned in each respective year.
    - Republic agreed to provide a revised master plan with an index map and an overview map to allow DPW to know the operational location of each planning year in relation to the whole site.
- **A.1.b)** DPW requested phasing plans that are consistent with the fill sequencing site plan for the site. Phasing plan should denote locations of all fill activities in the 5-year period, beginning January 2016. Although the fill sequencing plans were submitted on November 17th, based on preliminary review, DPW was unable to discern the ratios for daily and intermediate slopes based on the provided plan contours. DPW asked that the contour elevations be clearly delineated to expedite the reviewing process. DPW is still in the process of reviewing and will provide written comments on the submittal.
    - Republic agreed to revise and resubmit the map to provide better delineation of contour lines. However, it won't be resubmitted until all comments have been received from DPW.
    - DPW also agreed to provide Republic with example of an approved Fill Sequencing plan for Republic's reference.
- **A.1.c)** Republic indicated that ROIs are dynamic due to constant fine tuning process for various reasons and it would be extremely difficult to get the actual ROI for each well. A better way to gauge the effectiveness of the wells is through the information obtained from the integrity test, which is currently underway.

- **A.1.d**) Republic asked what the use of language "comment noted" meant and whether it could be understood that DPW has deemed Republic's provided response as sufficient.
    - DPW clarified that "comment noted" is not a determination of the approval of the comment as sufficient, rather is confirmation that the comment was received. As such, item A1.d. is still outstanding, and is contingent on the submittals for review of items A.1.a, A.1.b, and A.1.c. Nonetheless, DPW stated that future use of the language "Comment Noted" will be clearly supplemented with restated request if necessary. Republic confirmed its understanding of "commented noted" of A.1.d.

Item A2. Annual Resubmission of Master Plan

- Republic wanted clarification if DPW agrees that the 5-Year GCCS Master Plan will begin with the planning year 2016.
    - DPW restated that the Master Plan are for purposes of assessment between the proposed and as-built conditions (2016 As-Built will be compared against the 2016 Master Plan) and that that the 2016 proposed submittal beginning at the planning year 2016 and will be compared to the 2016 as-built to allow for a full analysis.
    - Republic stated they are prepared to submit the 2016 Master plan by December 16, 2016. Republic also stated that the comparison analysis between the proposed and 2016 as-built conditions will be submitted by **January 31, 2017**

Item A3. Submittal of As-built plan by May 1 of each year.

- Republic stated that the 2016 GCCS As-built plans are due in May 2017 and DPW concurred that this item is not currently outstanding at this time. However, DPW restated that the As-Built plans should capture any installation and enhancements in prior calendar year.

Item A4. In-place Density of fill

- **A4.a)** DPW stated the drawing (Area Map showing Areas 1, 2, and 3, Attachment B of Republics August 11th submittal) was unclear to read and the legend was mislabeled.
    - Republic acknowledged that portions of the drawing may be difficult to read. Republic agreed that the drawing will be revised to clearly identify area boundaries, labels, and correct legend and submit by **December 16, 2016.**
    - Republic also requested clarification if this drawing showing Areas 1, 2, and 3 must be prepared, stamped and signed, by a Licensed Civil Engineer. DPW agreed that this drawing does not have to be signed and stamped by a licensed civil engineer however; this drawing as well as other drawings and plans submitted to DPW must be reviewed for basic conformance to standard engineering practice.

Items A4.b, A5, A6, and A7) Radius of Influence and Well Integrity Test

- DPW stated that the gas well data submitted shows deficiencies in certain wells however, the figure, Attachment C – Drawing 1 of Republic's August 11th submittal, shows extensive coverage and did not identify impacted wells. DPW requested that the theoretical and operative values of the ROI be prepared and compared.
    - Republic stated the ROI on the plan is representative of the gas well's typical design and reiterated that there has been excess moisture content at different levels in the fill and this has had impacts on the gas collection abilities of certain wells. Additionally, dynamic site conditions pose too much variability to accurately quantify ROI of each gas well.

- DPW stated that the intent of the request in A4.b is to determine if a change exists between the design ROI and the actual ROI, and explain the reason for the difference. DPW also inquired about the recording of the gas well daily monitoring logs.
- Republic indicated that site operating parameters regulate the flow rate and that the ROI does not determine the gas operations. Therefore, Republic cannot produce the data without completing the well integrity testing, which is currently underway. The well integrity testing will include wells that are accessible for camera testing (approximately 550 vs 660 wells at the site).
- Republic indicated that once Item A.7 integrity test report are complete, required items in A.4, A.5, and A.6 will also be submitted. In the submittal, Republic will provide the data of the well integrity test, table of the designed well operation, the actual operation, and the condition of each well as well as rehabilitation schedule.
- DPW confirmed that satisfactory completion of Item A7 Integrity test report will include the responses of Items A4 through A6 as well.
- Republic indicated that it may take 3 – 4 months to complete and resubmit the information.

Item B1. Public Comment for ICE Demonstration Project.

- Republic stated that the community outreach regarding the Intermediate Cover Enhancement (ICE) Project was completed with comments received from the North Valley Coalition of Concerned Citizens (NVCC) and Sunshine Canyon – Community Advisory Committee (CAC). Republic stated that it had provided responses to comments from the community. However, a member of the Granada Hills North Neighborhood Council (GHNNC) requested Republic attend a Planning and Land Use Management (PLUM) sub-committee meeting to discuss the project. Republic agreed to provide presentation at the PLUM sub-committee meeting. Republic was prepared to provide a presentation at the PLUM meeting scheduled in November, but it was cancelled.
    - DPW stated public outreach is not complete, based on the agreement between Republic and PLUM sub-committee. Republic stated that it will attempt, in good faith, to meet with PLUM to solicit comment regarding the ICE project in the month of December 2016.
- Since B1 also required daily monitoring logs of surface emission at the site, DPW asked that Republic to continue to keep a daily monitoring logs of surface emission as well as for the demonstration project. Republic agreed that it will keep surface emissions monitoring logs for those days when SEM is conducted at the site.

Item B2. Surface emissions

- Republic stated that DPW has been receiving copies of the SCAQMD Rule 1150.1 reports showing the compliance of surface gas emissions.
    - DPW acknowledged receipt of the Rule 1150.1 reports. Nevertheless, DPW stated Republic needs to provide actions or immediate steps to fix gas emissions (i.e. side slopes) once there is emission exceedances. Republic stated that they do have a program in place to mitigate the problem.

Item B3. Grading Plan showing slope angles for daily and intermediate slopes.

- (See discussion under A.1.b)

Item C. Odorous Load Management Program

- Republic and DPW concur that the Odiferous Load Management Program are ongoing and not currently outstanding at this time.

Item D. Monthly Activity Reports

- Republic and DPW concur that the Monthly Activity reports are ongoing and not currently outstanding at this time.

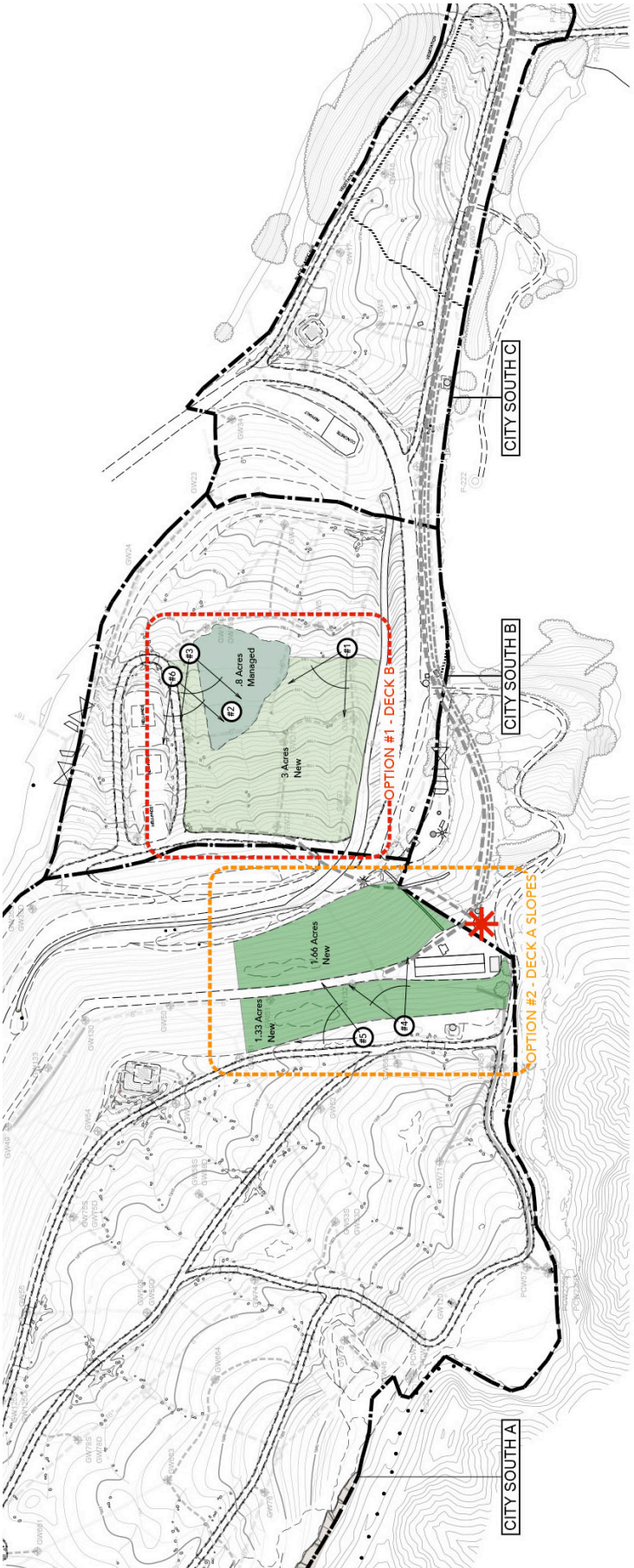
Item E. – Engineering Stamps

- Republic and DPW agree that all engineering documents, plans, and reports will be stamped and signed by a licensed engineer. All other drawings are not subject to the requirement; however quality assurance must be applied to all documents prior to submittal.

Additional Odor Mitigation Measures

- Republic indicated on its November 9, 2016 Letter, additional odor mitigation activities were provided to DPW for consideration.
    - DPW acknowledged the receipt of the letter and requested Republic to add additional odor management data as a supplement to provide a way that could be used to quantify the Republic's effort to reduce the odor (data shows the effect of gas collection in reducing the odors, additional of pumps installed into gas wells, collection of leachate, etc.)
    - DPW stated that the submittal needs to address items required in the March 30th and July 14th letters.
- DPW also requested that Republic make a distinction between on-going routine maintenance vs. planned activities specifically designed to mitigate odor issue. DPW also requested that Republic create a baseline from which its effort in odor reduction could be measured (reduction in surface emission, amount of leachate collected, fewer well impacted, reduction in areas leaking gas or leachate, etc.)
    - Republic agreed that it will provide a supplemental submittal to the November 9th letter by tentative date of December 16, 2016.

ATTACHMENT I



10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730
Phone (909) 484-2800, Fax (909) 484-2802

ATTACHMENT J

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: EP-5

May 4, 2016

Mr. Rob Sherman, General Manager
Republic Services, Inc.
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342-1021

SUNSHINE CANYON CITY/COUNTY LANDFILL
CONDITIONAL USE PERMIT NO. 00-194-(5)
AUTHORIZATION TO IMPORT CLEAN DIRT FROM THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

Dear Mr. Sherman:

We have reviewed your request dated July 28, 2015, and subsequent revision dated October 9, 2015, to import clean dirt from the Los Angeles County Flood Control District (District), beginning on April 2017, and ending on December 2021. Your request for importation of clean dirt for beneficial use at the Sunshine Canyon Landfill is hereby approved pursuant to Conditional Use Permit 00-194-(5), Conditions 1.D and 23.E, which requires Republic Services to obtain prior authorization from the Department of Public Works prior to importation and acceptance of clean dirt material for beneficial use and disposal at the site.

This authorization is being granted in order to allow the landfill to import soil for the site's daily and intermediate soil cover needs and other beneficial uses. Based on your submittal, the volume of on-site soil stockpile will be exhausted by October 2019 and importation of soil is necessary for effective landfilling operations at the site. This approval is subject to the following conditions:

1. The quantity of soil to be imported shall not exceed the following:

    - 2,200 tons per day average or 13,200 tons per week and
    - 2.5 million tons total for a 5-year duration of the project

2. The quantity of soil imported (tonnage) shall be included in the total permitted weekly tonnage capacity of materials (Solid Waste, Inert Debris and Beneficial Use Materials), which is limited to 72,600 tons per week. Pursuant to the CUP, in no event shall the daily tonnage of all materials received by the Landfill exceed 12,100 tons on any given day, six working days per week.

3. Limited only to Clean Dirt and sediments from the District

4. The soil importation schedule shall be from Monday to Friday, between the hours of 7:00 am to 6:00 pm.

5. The imported soil shall only be used for on-site daily and intermediate soil cover needs and other beneficial uses at the site.

6. All incoming and departing truck routes associated with this soil importation project shall be limited to Roxford Street, Sepulveda Boulevard and San Fernando Road.

7. The imported soil shall be placed adjacent to the working face area for immediate usage in a designated location, or, if soil is not needed at the working face, it will be taken to a designated stockpile location as defined in the Joint Technical Document. Additionally, all stockpile areas shall be vegetated if left unused longer than 180 days.

8. The operator shall comply with the currently approved Fugitive Dust Control Program to minimize dust resulting from the importation project

9. The operator shall follow the approved Waste Load Checking Program and the Waste Discharge Requirements issued by the California Regional Water Quality Control Board to ensure the imported soil's quality is acceptable under this program and permit.

10. Republic shall keep records of all materials received from the District including quantities accepted, stockpiled, beneficially used, and disposed of.

11. The operator shall submit a monthly summary of these records on an annual basis, including a stockpile location map, to Public Works' Environmental Programs Division at the end of each calendar year for the duration of this project.

12. The Director of Public Works, at his/her sole discretion may rescind or terminate this approval if the Department determines that any of the conditions of approval has been violated and/or that such termination is necessary to protect public health, safety, welfare, and/or the environment.

If you have any questions, please contact me at (626) 458-3553, Monday to Thursday, 7:00 a.m. to 5:30 p.m.

Very truly yours,

GAIL FARBER
Director of Public Works

MARTIN AIYETIWA
Senior Civil Engineer
Environmental Programs Division

DN:jl
P:\Sec\Sunshine Canyon Landfill Importation of Soil from FCD

cc: Sunshine Canyon Landfill Local Enforcement Agency (Gerry Villalobos, David Thompson)
Department of Regional Planning (Maria Masis, Tim Stapleton)
Department of Public Health (Gerry Villalobos)
City of Los Angeles Department of City Planning (Nicholas Hendricks, Ly Lam)
Sunshine Canyon Landfill Technical Advisory Committee (Lisa Webber, Jon Sanabria)
Sunshine Canyon Landfill Community Advisory Committee (Wayde Hunter, Gale Gunderson, Joe Vitti)
Members of the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force
County of Los Angeles Public Works, Water Resources Division (Chris Stone, Ken Zimmer)

ATTACHMENT K

TETRA TECH BAS GEOSCIENCE

Project No. REP 16-01E
April 26, 2016

Mr. Michael Stewart
Environmental Manager
Republic Services
14747 San Fernando Rd
Sylmar, CA 91342

Subject: **FIELD AND LABORATORY REPORT FOR INTERMEDIATE COVER TESTING SUNSHINE CANYON LANDFILL Sylmar, California**

Dear Mr. Stewart:

INTRODUCTION

Tetra Tech BAS, Inc. (Tetra Tech) is pleased to submit this summary of data obtained from field sampling and laboratory testing of selected intermediate cover locations at the Sunshine Canyon Landfill in Sylmar, Los Angeles County, California. The information presented herein includes:

- Description of field sampling procedures;
- Log of sample locations;
- Laboratory test results.

The work described herein was performed in general accordance with the Work Plan, Intermediate Cover Sampling and Soils Testing by Civil & Environmental Consultants, Inc., dated February, 2016 (CEC Project 151-396) that was provided by Republic Services; and with Tetra Tech Proposal No. pBAS 16-96E, dated March 4, 2016.

FIELD SAMPLING

A Sampling Plan was provided in the referenced Work Plan showing 30 planned sample locations (numbered 101 through 130) with corresponding coordinates. These locations were laid out and staked by a surveyor on March 16 and March 18, 2016 prior to mobilization of the field crew on March 21. Location 103 was in an area that was undergoing active grading for the power generation facility and Location 129 was in an active disposal area. Accordingly these areas were not staked at the time of survey.

Field sampling was performed on March 21-22, 2016. A John Deere 310C backhoe was used to advance the 12-inch long by 3-inch diameter Shelby tubes through the intermediate cover at the sample locations using a customized adapter and in general conformance with ASTM D1587 "Standard Practice for Thin-Walled Tube Sampling of Fine-Grained Soils for Geotechnical Purposes". The samples were advanced via direct-push, using the force of the hydraulically-actuated backhoe boom and retrieved by vertical extraction of the sampling apparatus. Samples were pushed within the sampler's nominal length and the recovery was recorded as the sample's ultimate recovered length, excluding any disturbed soils in the top portion of the sampler.

If a Shelby tube became damaged during the sampling process or if less than 6 inches of viable sample was recovered, the location was resampled using a fresh tube. Resampling was required at 8 locations due to Shelby tubes that became damaged while sampling. All resulting holes at each of the locations were backfilled with hydrated bentonite.

Samples were protected in the field by placing a plastic cap at the tip end and by filling the head space at the top end with sufficient paraffin wax to provide an effective moisture barrier and to provide adequate confinement during transport. A plastic cap was then placed over the paraffin plug and both ends were sealed with tape to preserve in-situ moisture conditions. Each tube was then clearly marked with the project number, sample location, ground surface elevation, recovery (in inches), and with markings indicating the top and bottom of the sample tube. Each sealed tube was then packed in a vertical position with its tip down and kept in climate-controlled conditions until they were delivered to the laboratory.

The attached Table I is the Log of Shelby Tube Samples, indicating the location number, date sampled, site coordinates, monitoring grid designation, elevation, USCS symbol, field description and sample recovery. Samples were obtained as near to the staked locations as field locations would safely allow, or in consideration of other site access constraints including above-ground piping, haul roads, surface remnants of asphalt stockpiles, or designated environmentally sensitive areas. If a sample was obtained at a distance of more than 4 feet from the staked location, its offset and elevation differential with respect to the surveyed location were measured in the field using a tape or laser hypsometer, and the adjusted site coordinates and elevation were recorded in Table I.

Inaccessible sample locations included Location Numbers 103, 123, 124, 127, and 129. The remaining locations 123, 124, 127 and 129 were abandoned and 3 replacement locations 131, 132 and 133 were selected, sampled and surveyed, and are included in Table I. Sample Location 103 was repositioned approximately 250 feet southwest of the originally planned location.

LABORATORY TESTING

Laboratory testing was performed for all samples by AP Engineering and Testing between April 12 and April 16, 2016 and included the following:

- Photo documentation of extruded samples;
- Classification (ASTM D2487);
- Moisture content (ASTM D2216);
- In-situ density (ASTM D2937);
- Particle size analyses (ASTM D422);
- Atterberg limits (ASTM D4318);
- Hydraulic conductivity (ASTM D5084).

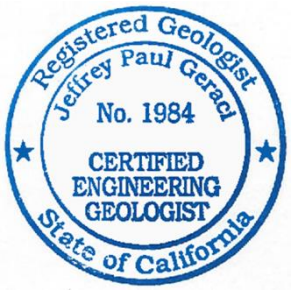
A summary of the laboratory test results is presented in Table II with selected data displayed graphically in Figure I. The laboratory test reports are included in Appendix A.

LIMITATIONS

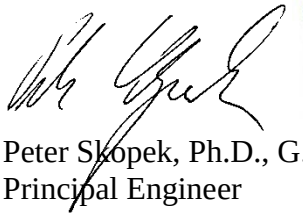
The data presented in this report are based on prescriptive sampling locations and testing parameters as outlined in the referenced Work Plan or as instructed by the client in the field, and are presented for information only. No conclusions or recommendations are presented.

We appreciate the opportunity to provide our professional services on this project. If you have any questions regarding this report or if we can be of further service, please do not hesitate to contact the undersigned.

Respectfully submitted,
Tetra Tech BAS, Inc.



Jeffrey Geraci, C.E.G.
Senior Engineering Geologist



Peter Skopek, Ph.D., G.E.
Principal Engineer

Attachments: Table I – Log of Shelby Tube Samples
Table II – Summary of Laboratory Test Results
Figure I – Graphic Summary of Laboratory Test Results
Appendix A – Laboratory Test Reports

Distribution: Michael Stewart, Republic Services (pdf to mstewart2@republicservices.com)
Matt Eaton, Republic Services (pdf to meaton2@republicservices.com)

Filename: Sunshine Landfill Intermediate Cover Field and Lab Report 2016-04-26.docx

Table I - Log of Shelby Tube Samples

Sample Location Number	Date Sampled	Site Coordinates		Project Grid	Elev. (ft)	USCS Symbol	Sample Field Description	Comments	Recovery (inches)
		N	E						
101	2016-03-21	4233700	4130125	F6	1883	CL	Yellowish brown sandy lean CLAY		8.3
102	2016-03-21	4232100	4130125	F14	1866	CL	Medium brown sandy lean CLAY		10.3
103	2016-03-22	4233927	4130190	F5	1869	CL	Yellowish brown sandy lean CLAY	Active grading - sampled 250' SW	8.4
104	2016-03-21	4233300	4130375	G8	1887	CL	Yellowish brown sandy lean CLAY		7.8
105	2016-03-21	4232500	4130375	G12	1876	CL	Dk. yellowish brown sandy lean CLAY		10.8
106	2016-03-21	4233700	4130625	H6	1869	CL	Olive brown sandy lean CLAY	Asphalt disposal area - sampled 65' S	9.8
107	2016-03-21	4232100	4130625	H14	1720	CL	Yellowish brown silty CLAY w/ fine SAND	Access constraints, sampled 58' SE	7.7
108	2016-03-21	4234100	4130875	I4	1868	SC-SM	Yellowish brown silty, clayey SAND	Bedrock exposure, sampled 40' W-NW in fill	8.7
109	2016-03-21	4233300	4130875	I8	1872	CL	Dk. Yellowish brown sandy lean CLAY		10.3
110	2016-03-21	4232500	4130875	I12	1788	CL	Yellowish brown sandy lean CLAY		9.0
111	2016-03-21	4233700	4131125	J6	1852	CL	Olive brown sandy lean CLAY	Asphalt disposal area - sampled 112' SE	10.0
112	2016-03-21	4232900	4131125	J10	1836	CL	Yellowish brown sandy lean CLAY	Access constraints, sampled 50' W	7.0
113	2016-03-21	4233300	4131375	K8	1851	CL	Dk. Yellowish brown lean CLAY w/ fine SAND		9.3
114	2016-03-22	4232500	4131375	K12	1686	SC-SM	Yellowish brown silty, clayey SAND	Haul road, sampled 50' W	10.0
115	2016-03-21	4233700	4131625	L6	1835	CL	Yellowish brown sandy lean CLAY		10.0
116	2016-03-22	4232900	4131625	L10	1834	CL	Dark brown sandy lean CLAY	Access constraints, sampled 40' NW	7.5
117	2016-03-22	4232100	4131635	L14	1633	SC	Dk. brown clayey SAND		9.0
118	2016-03-21	4233300	4131875	M8	1818	CL	Yellowish brown sandy lean CLAY		10.0
119	2016-03-22	4232500	4131875	M12	1717	CL	Yellowish brown sandy lean CLAY		9.0
120	2016-03-21	4232900	4132125	N10	1799	CL	Dk. Yellowish brown lean CLAY w/ SAND	Access constraints, sampled 25' NW	10.5
121	2016-03-21	4232100	4132125	N14	1752	CL	Dk. Brown silty CLAY		10.0
122	2016-03-22	4229700	4132125	N26	1908	CL	Yellowish brown sandy CLAY	Fenced environmental area - sampled 53' NW	9.5
123	-	-	-	-	-	-	-	Active disposal area - location not sampled	-
124	-	-	-	-	-	-	-	Active disposal area - location not sampled	-
125	2016-03-22	4230100	4132375	O24	1776	SM	Yellowish brown fine silty SAND	Access constraints - sampled 45' N	8.0
126	2016-03-21	4232900	4132625	P10	1719	CL	Dk. Yellowish brown sandy CLAY	Haul road, sampled 70' SW	7.0
127	-	-	-	-	-	-	-	Active disposal area - location not sampled	-
128	2016-03-22	4229700	4132625	P26	1807	SM	Lt. yellowish brown silty SAND	Access constraints - sampled 117' NE	9.0
129	-	-	-	-	-	-	-	Active disposal area - location not sampled	-
130	2016-03-21	4232300	4133125	R13	1713	CL	Dk. Yellowish brown lean CLAY w/ SAND		10.5
131	2016-03-22	4233182	4130050	F9	1874	CL	Dk. yellowish brown sandy CLAY	Additional sample location	8.0
132	2016-03-22	4232796	4129781	F16	1835	SC	Dk. yellowish brown clayey SAND	Additional sample location	9.5
133	2016-03-22	4231750	4130010	E11	1871	CL	Dk. yellowish brown sandy CLAY	Additional sample location	8.5

Notes: 1) "Project Grid" refers to the grid superimposed on the "Soil Sample Location Plan" in the referenced Work Plan.
2) "USCS Symbol" and "Sample Field Description" were updated to reflect reported laboratory results.
3) Distances and directions indicated under "Comments" refer to the original location.

Table II - Laboratory Test Results Summary

Sample Location Number	USCS Classification *ASTM D2487*	Unit Dry Weight *ASTM D2937* (pcf)	Moisture Content *ASTM D2216* (%)	Atterberg Limits *ASTM D4318*			Hydraulic Conductivity *ASTM D5084* (cm/sec)
				Liquid Limit	Plastic Limit	Plasticity Index	
101	CL	109.3	11.2%	31	17	14	7.60E-06
102	CL	102.9	13.9%	33	18	15	3.28E-05
103	CL	93.7	6.4%	29	19	10	3.41E-05
104	CL	109.1	11.2%	31	19	12	7.22E-06
105	CL	110.0	13.2%	26	16	10	8.56E-06
106	CL	103.1	14.7%	28	16	12	1.28E-05
107	CL	115.1	7.1%	28	18	10	1.94E-05
108	SC-SM	100.7	6.1%	24	17	7	5.80E-05
109	CL	108.7	16.2%	29	16	13	3.17E-07
110	CL	101.3	7.8%	25	16	9	6.26E-05
111	CL	106.0	11.4%	28	17	11	1.93E-06
112	CL	96.5	4.4%	26	16	10	6.64E-05
113	CL	103.2	10.7%	32	17	15	5.28E-05
114	SC-SM	104.4	13.0%	24	18	6	1.20E-05
115	CL	105.8	12.5%	29	16	13	1.14E-05
116	CL	105.5	11.5%	33	19	14	6.43E-06
117	SC	115.3	15.2%	32	17	15	3.29E-06
118	CL	109.2	12.3%	29	17	12	2.02E-06
119	CL	99.7	4.5%	29	17	12	5.95E-05
120	CL	102.9	18.3%	30	19	11	9.94E-06
121	CL	99.7	19.5%	25	19	6	1.77E-05
122	CL	111.0	10.0%	27	16	11	5.34E-06
125	SM	97.8	8.7%	NP	NP	NP	1.34E-04
126	CL	108.0	9.1%	31	17	14	2.75E-05
128	SM	105.7	7.4%	NP	NP	NP	4.83E-05
130	CL	101.5	12.3%	31	17	14	5.24E-05
131	CL	105.7	11.7%	30	17	13	2.54E-05
132	SC	107.3	6.7%	28	17	11	1.09E-05
133	CL	108.2	8.1%	29	15	14	2.76E-05

Note: Particle size analyses (ASTM D422) are included in Appendix A

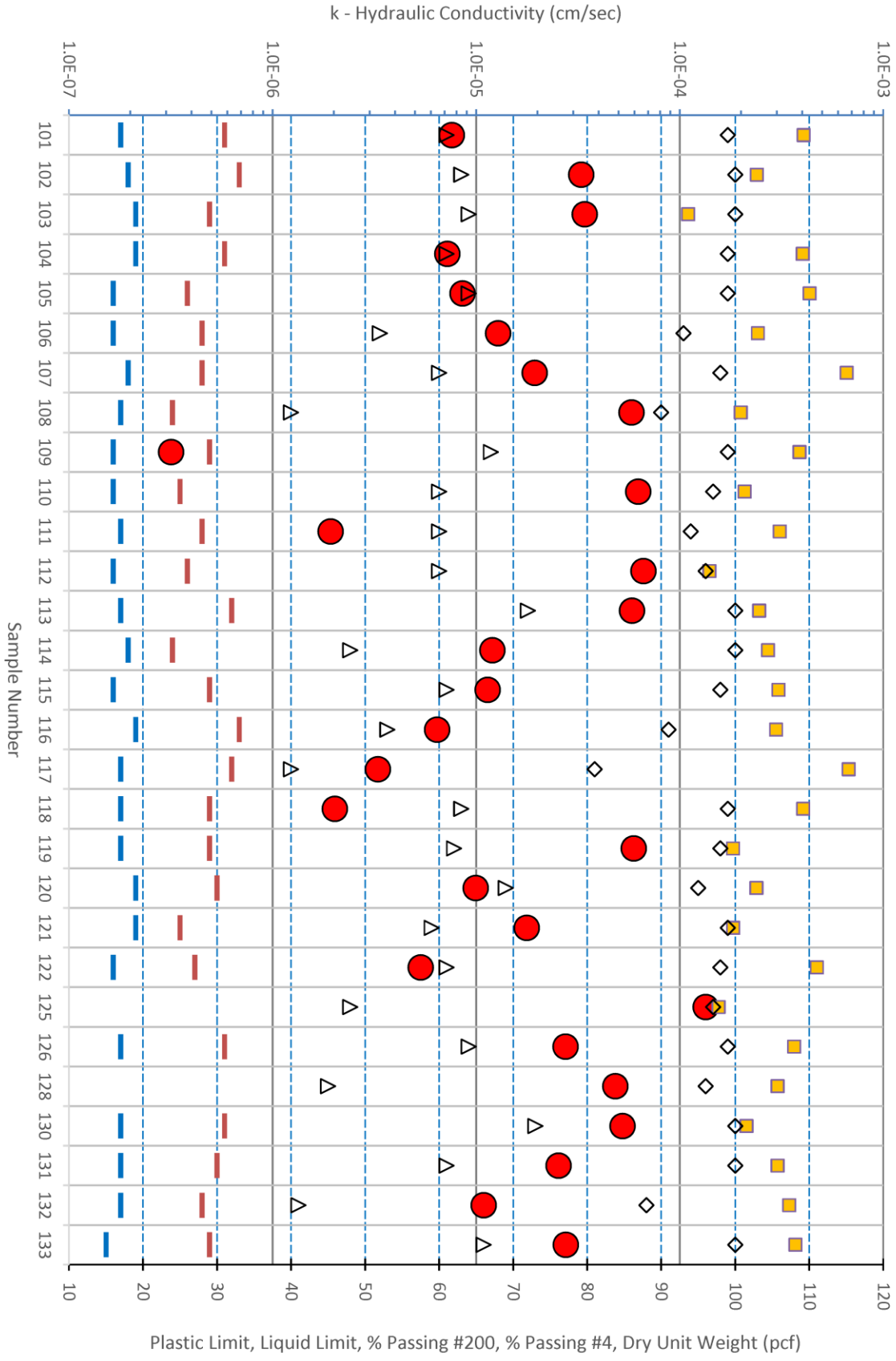


Figure I - Graphic Summary of Laboratory Test Results

APPENDIX A
LABORATORY TEST REPORTS

AP Engineering and Testing, Inc.
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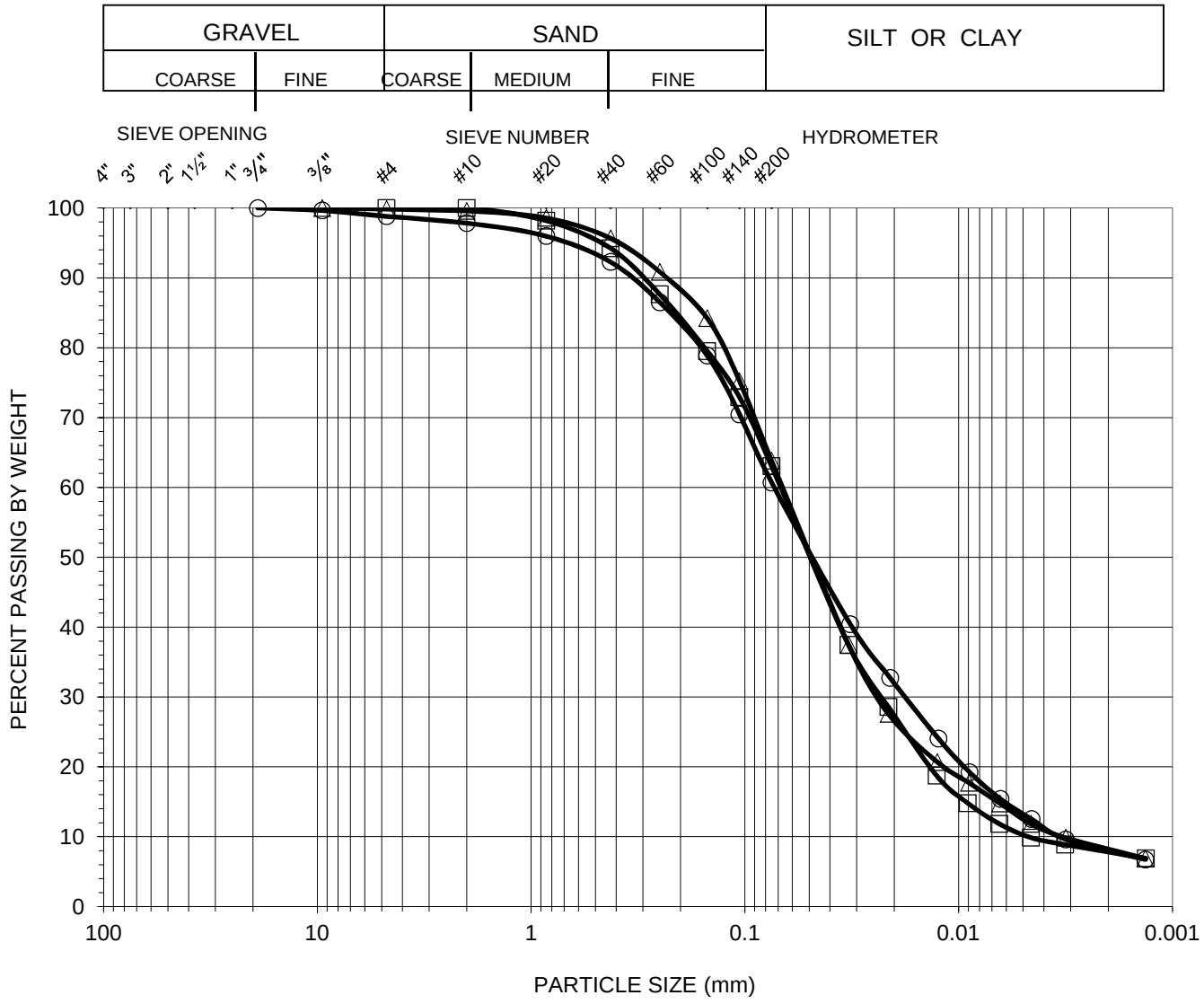
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

GRAIN SIZE DISTRIBUTION CURVE
ASTM D 422

Client Name:	Tetra Tech	Tested by:	ST	Date:	03/24/16
Project Name:	Sunshine Canyon LF Intermediate Cover	Computed by:	NN	Date:	04/01/16
Project No.:	197-4666-0001	Checked by:	AP	Date:	04/01/16



Symbol	Boring No.	Sample No.	Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
○	101	-	1883	1	38	61	31:17:14	CL
□	102	-	1866	0	37	63	33:18:15	CL
△	103	-	1869	0	36	64	29:19:10	CL

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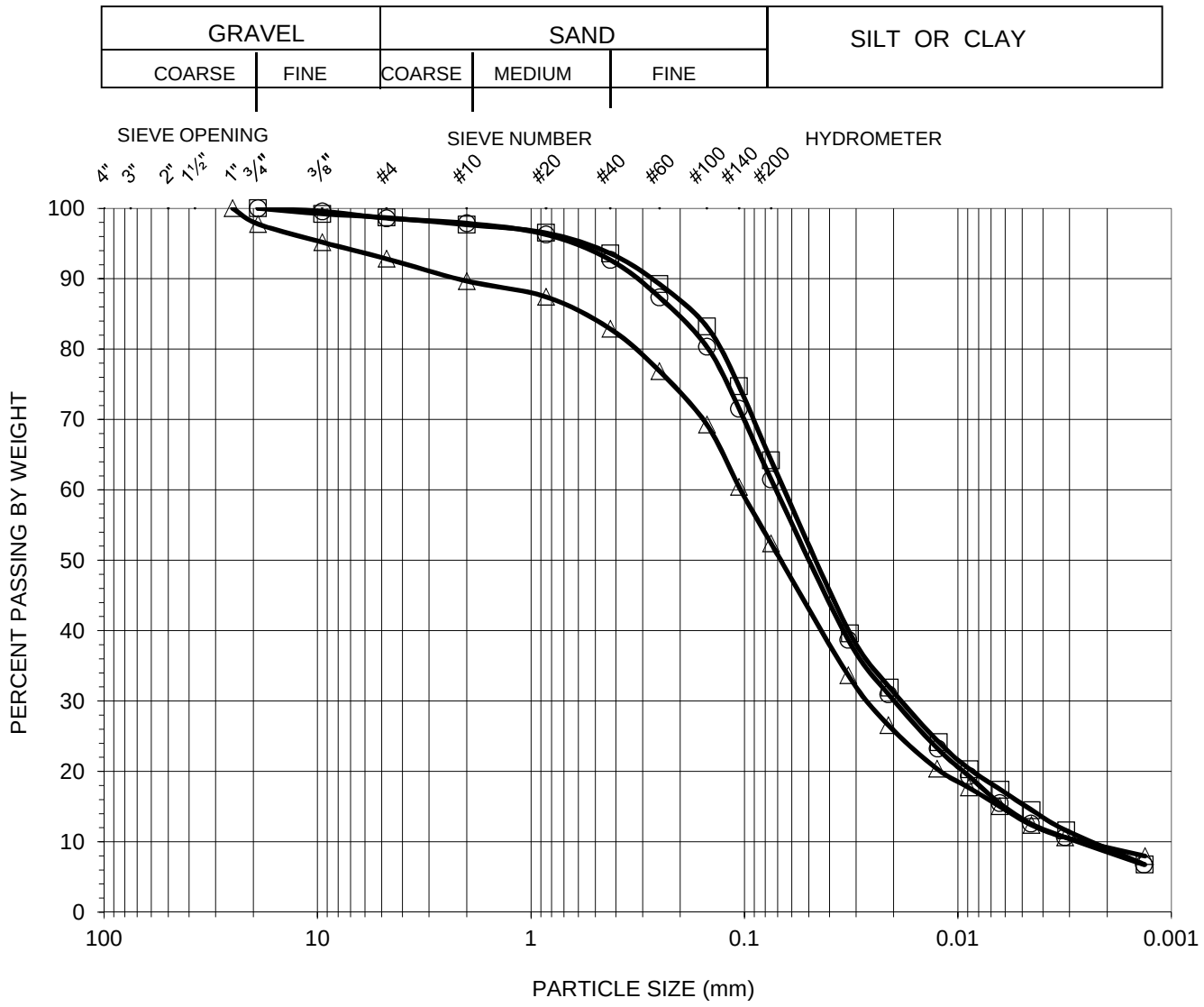

Symbol	Boring No.	Sample No.	Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
○	104	-	1887	1	38	61	31:19:12	CL
□	105	-	1876	1	35	64	26:16:10	CL
△	106	-	1869	7	41	52	28:16:12	CL

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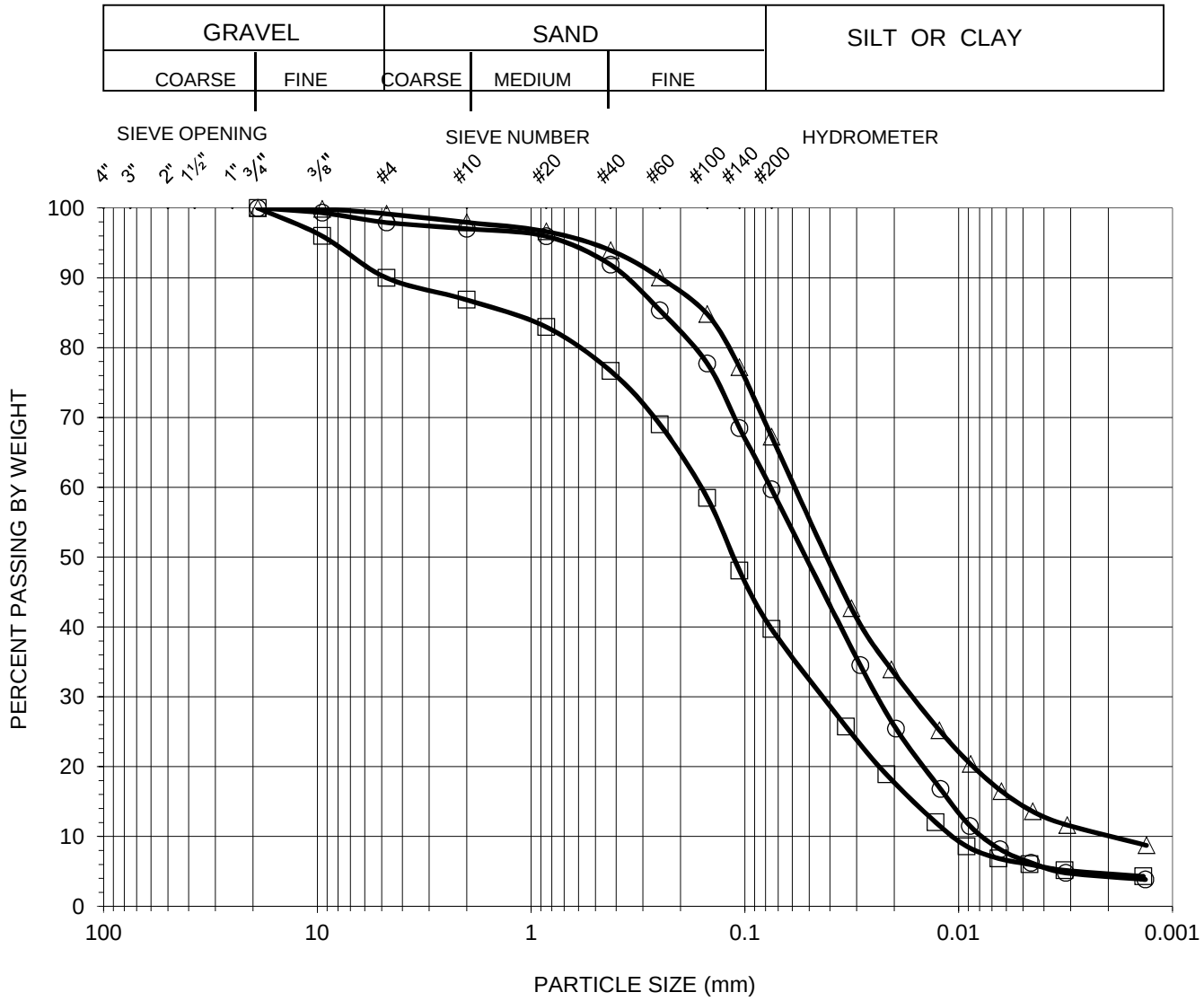

Symbol	Boring No.	Sample No.	Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
○	107	-	1720	2	38	60	28:18:10	CL
□	108	-	1868	10	50	40	24:17:7	SC-SM
△	109	-	1872	1	32	67	29:16:13	CL

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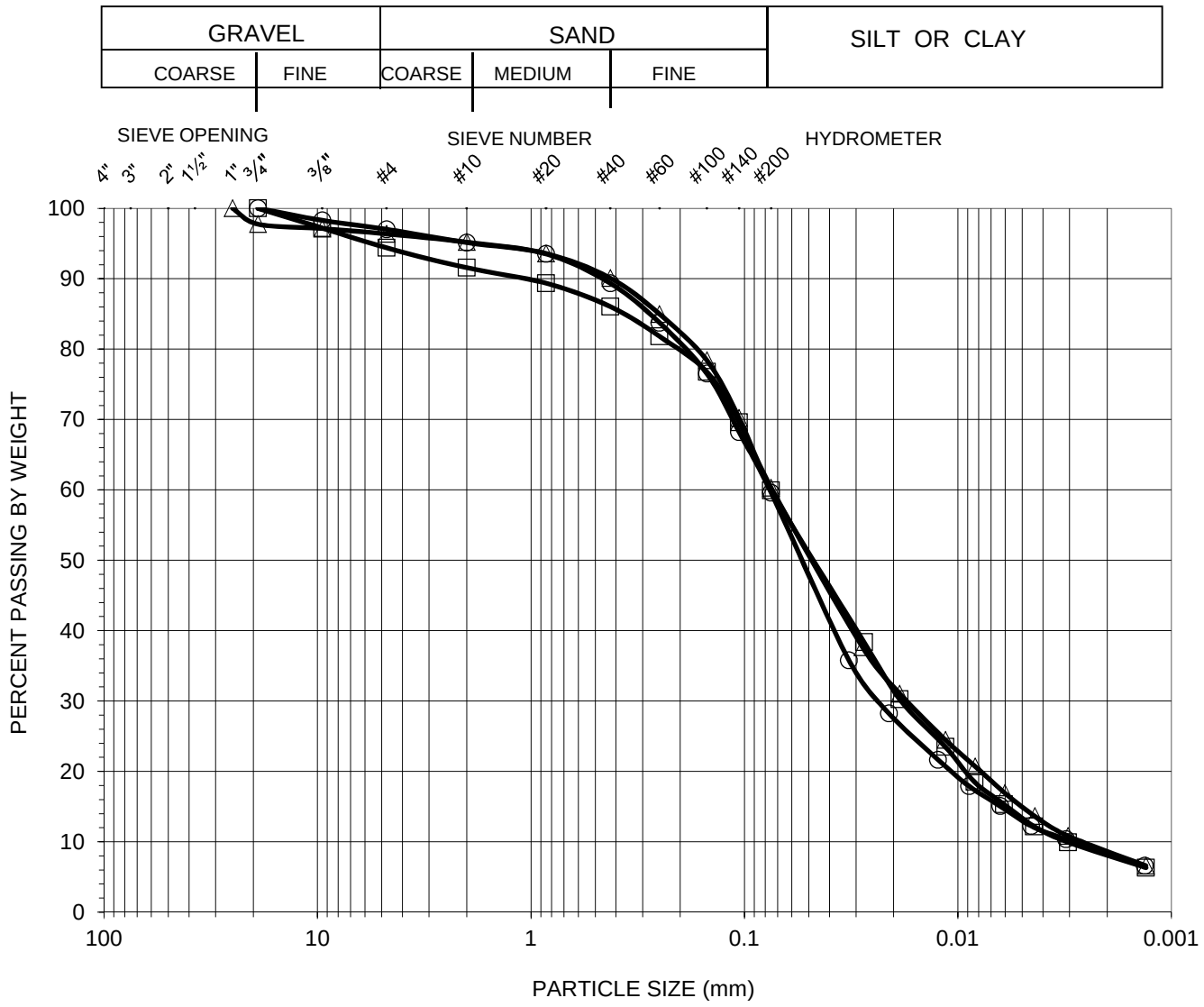

Symbol	Boring No.	Sample No.	Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
○	110	-	1788	3	37	60	25:16:9	CL
□	111	-	1852	6	34	60	28:17:11	CL
△	112	-	1836	4	36	60	26:16:10	CL

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Symbol	Boring No.	Sample No.	Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
○	113	-	1851	0	28	72	32:17:15	CL
□	114	-	1686	0	52	48	24:18:6	SC-SM
△	115	-	1835	2	37	61	29:16:13	CL

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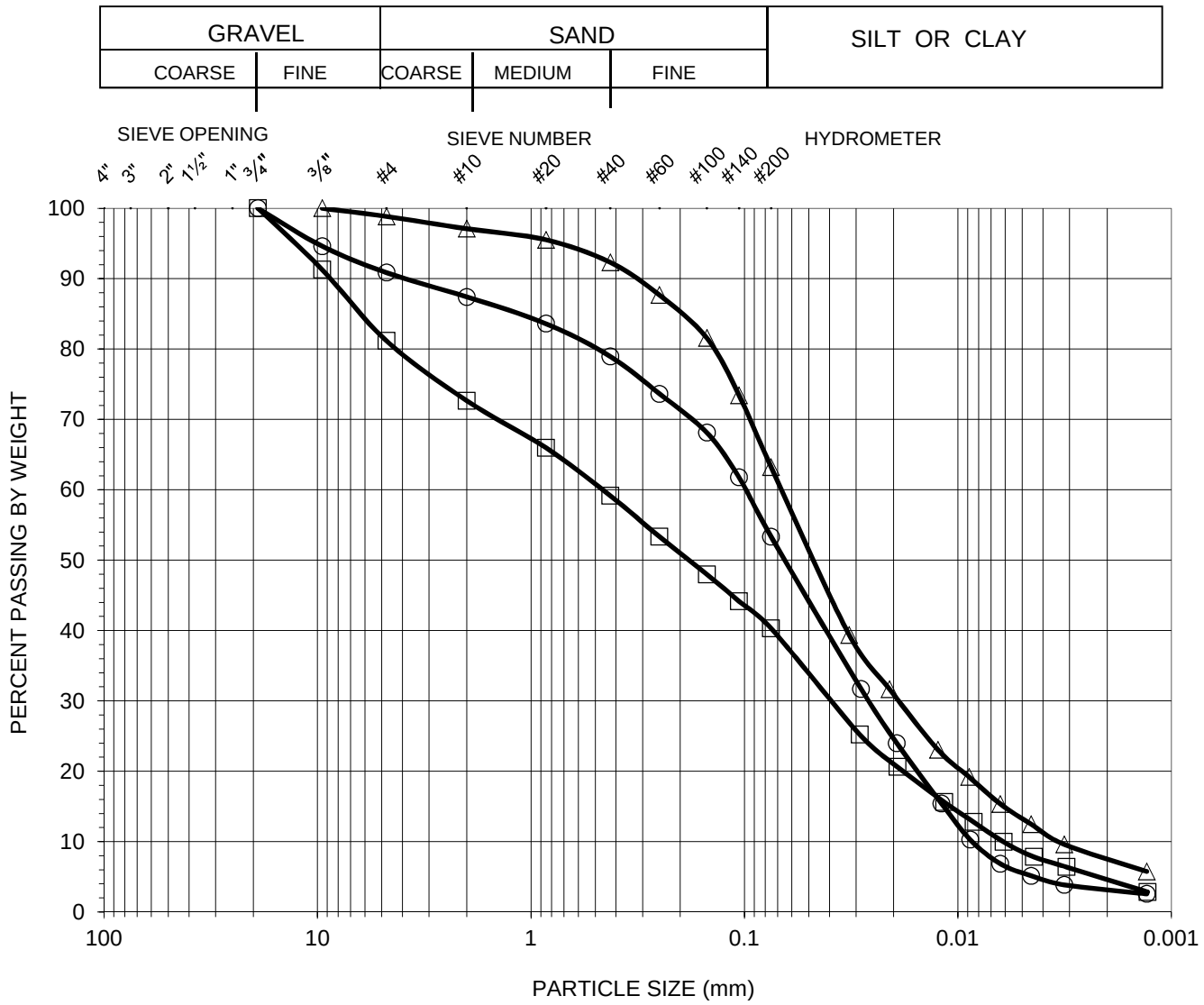

Symbol	Boring No.	Sample No.	Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
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□	117	-	1633	19	41	40	32:17:15	SC
△	118	-	1818	1	36	63	29:17:12	CL

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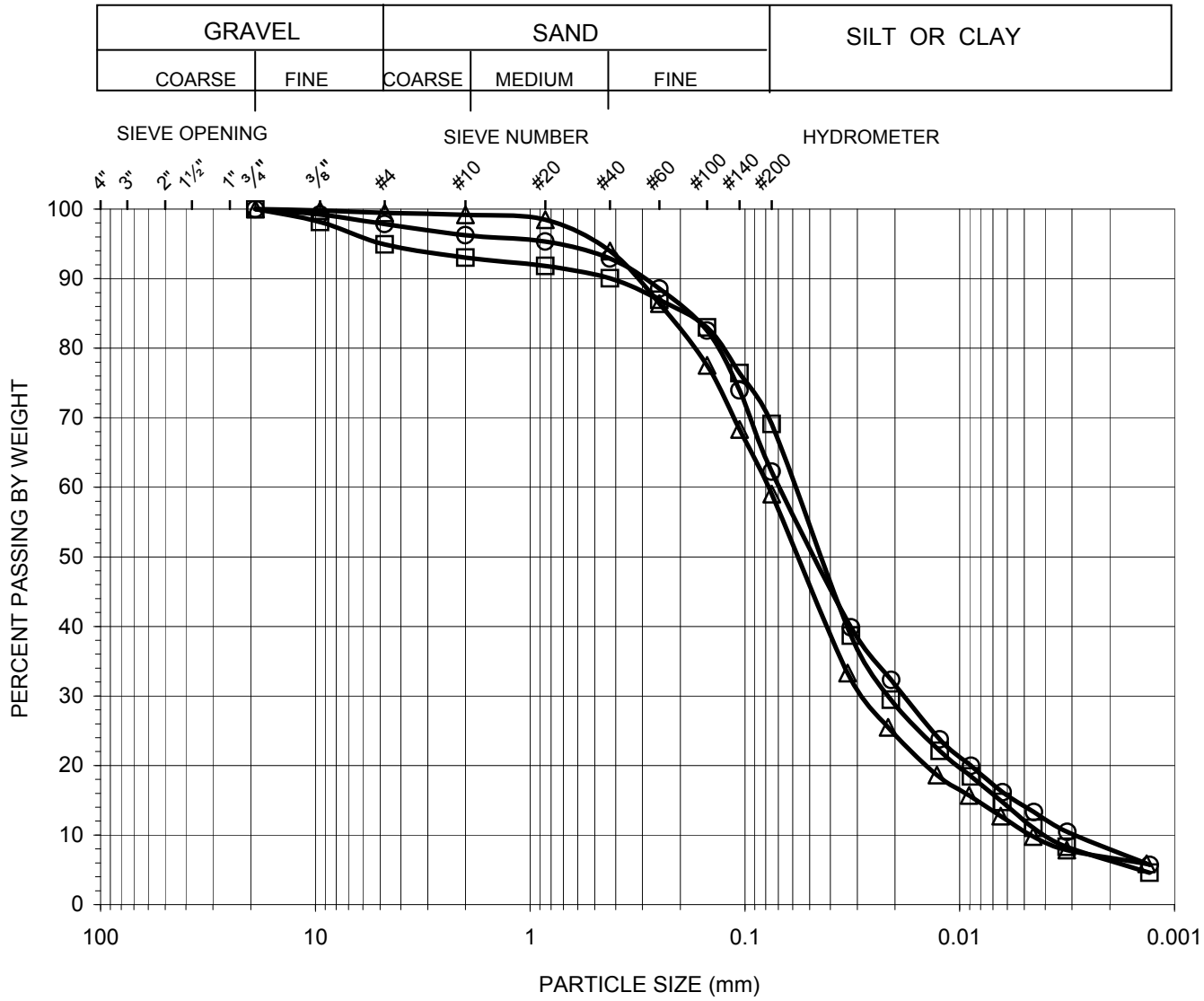

Symbol	Sample No.		Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
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□	120	-	1799	5	26	69	30:19:11	CL
△	121	-	1752	1	40	59	25:19:6	CL-ML

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Project Name:	Sunshine Canyon LF Intermediate Cover	Computed by:	NN	Date:	04/08/16
Project No.:	197-4666-0001	Checked by:	AP	Date:	04/15/16

Symbol	Sample No.		Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
○	122	-	1908	2	37	61	27:16:11	CL
□	125	-	1776	3	49	48	N/P	SM
△	126	-	1719	1	35	64	31:17:14	CL

Note: N/P denotes "Non-Plastic".

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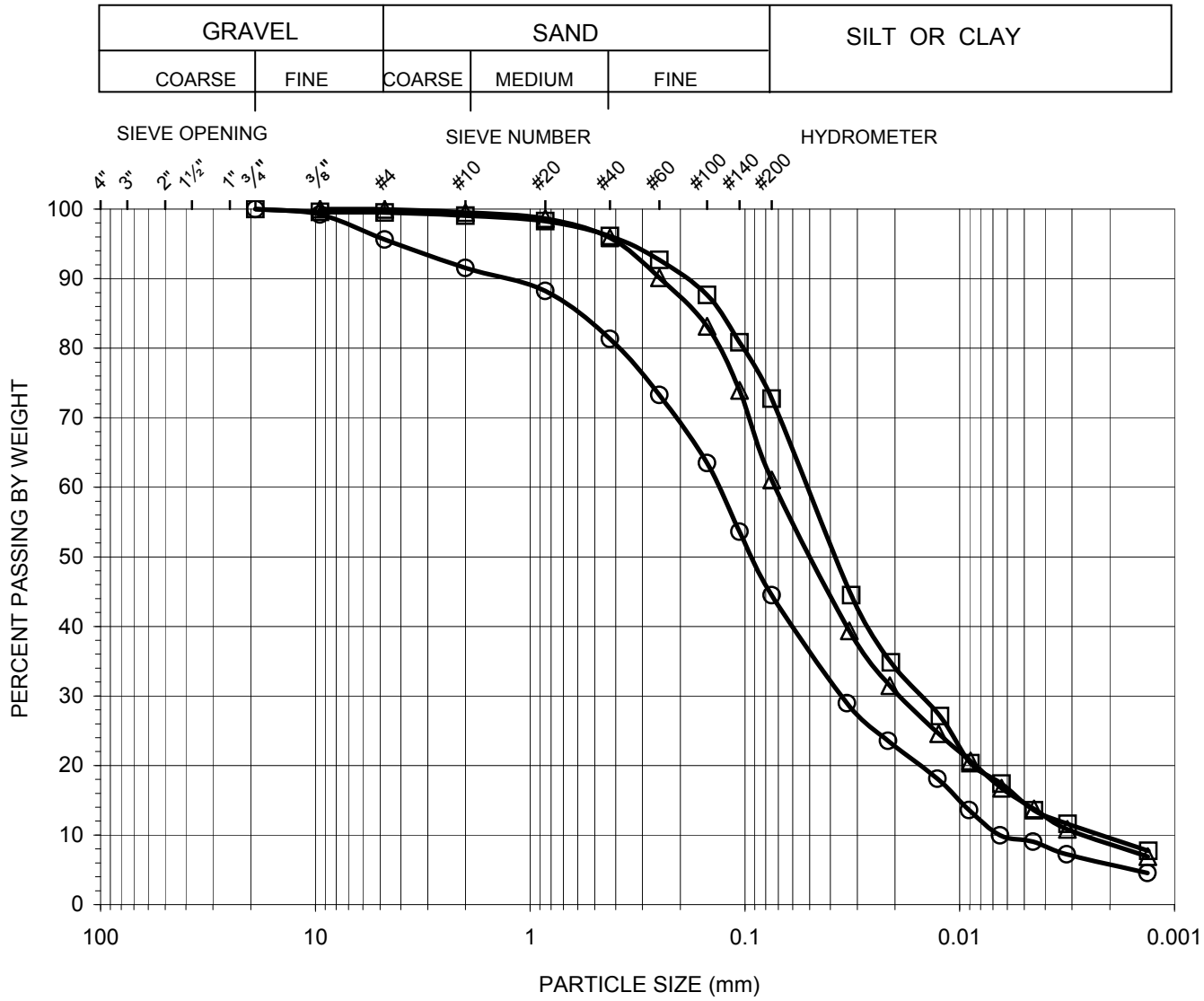
GRAIN SIZE DISTRIBUTION CURVE
ASTM D 422

Client Name:	Tetra Tech	Tested by:	ST	Date:	04/07/16
Project Name:	Sunshine Canyon Landfill Intermediate	Computed by:	NN	Date:	04/13/16
Project No.:	197-4666-0001	Checked by:	AP	Date:	04/16/16



Symbol	Sample No.		Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
○	128	-	1807	4	51	45	N/P	SM
□	130	-	1713	0	27	73	31:17:14	CL
△	131	-	1874	0	39	61	30:17:13	CL

Note: N/P denotes "Non-Plastic".

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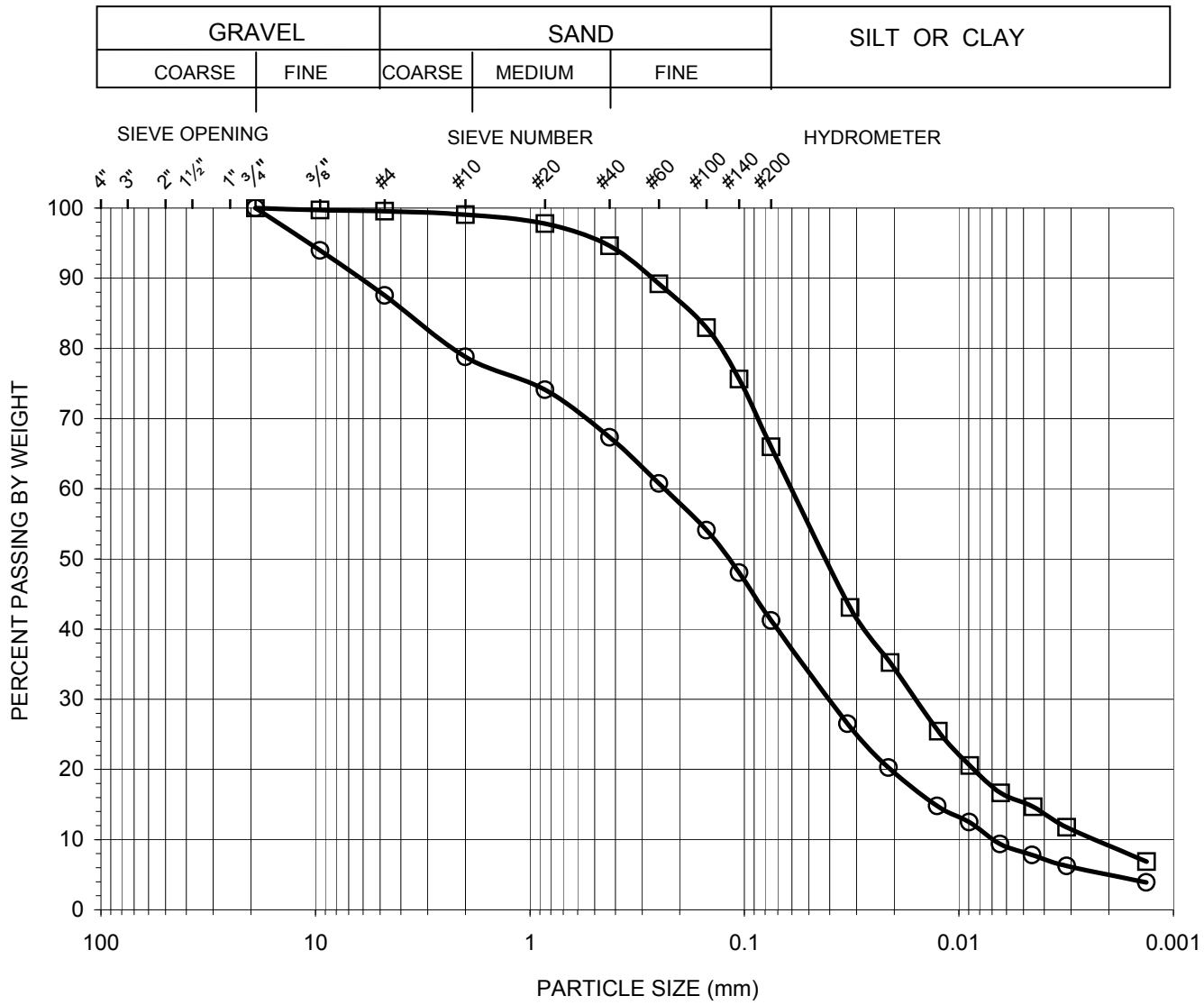
GRAIN SIZE DISTRIBUTION CURVE
ASTM D 422

Client Name:	Tetra Tech	Tested by:	ST	Date:	04/07/16
Project Name:	Sunshine Canyon Landfill Intermediate	Computed by:	NN	Date:	04/13/16
Project No.:	197-4666-0001	Checked by:	AP	Date:	04/16/16



Symbol	Sample No.		Sample Elevation	Percent			Atterberg Limits LL:PL:PI	Soil Symbol ASTM D 2487
				Gravel	Sand	Fines		
○	132	-	1835	12	47	41	28:17:11	SC
□	133	-	1871	0	34	66	29:15:14	CL

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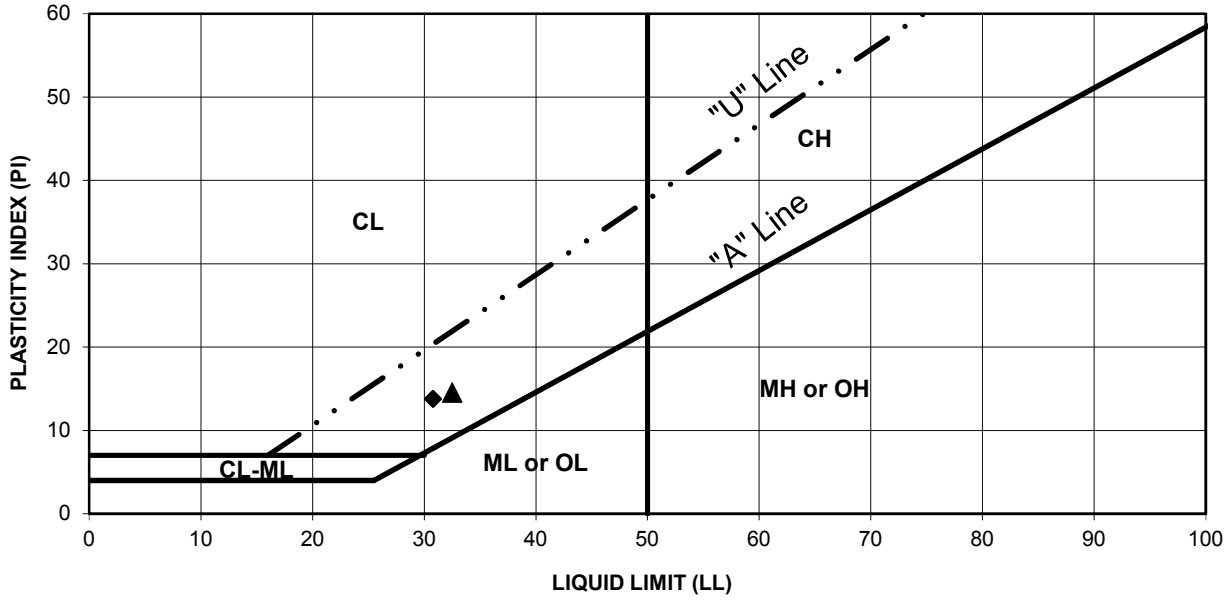
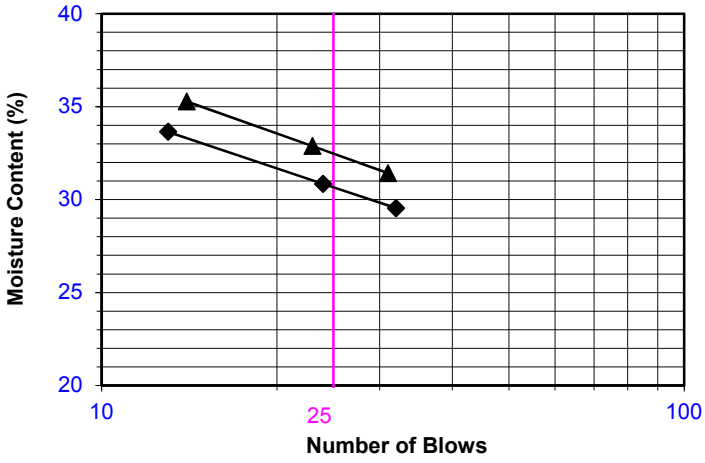
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/08/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	101	-	1883	31	17	14	CL
▲	102	-	1866	33	18	15	CL

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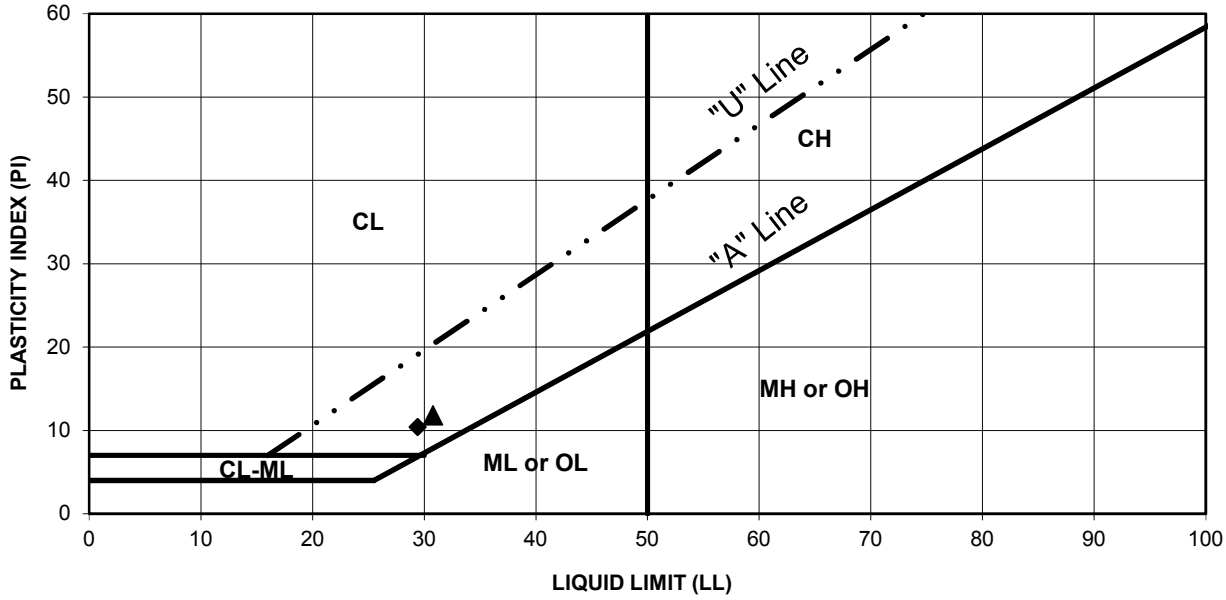
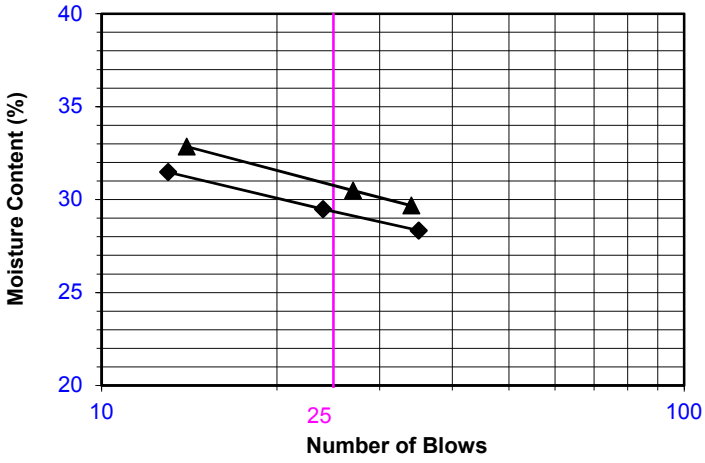
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/08/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	103	-	1869	29	19	10	CL
▲	104	-	1887	31	19	12	CL

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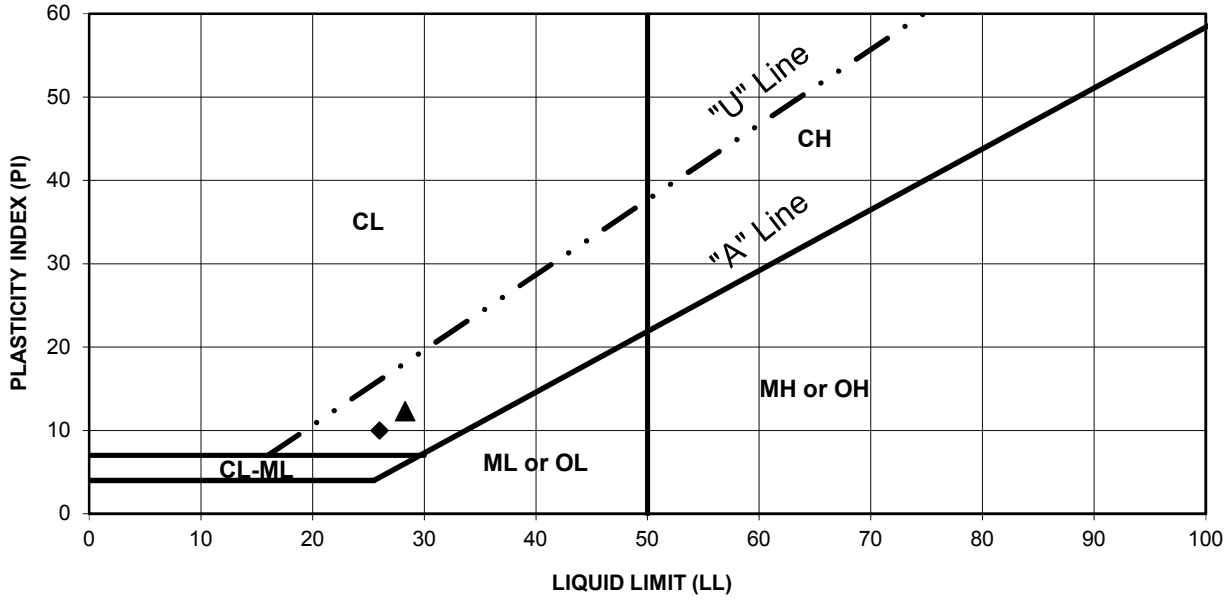
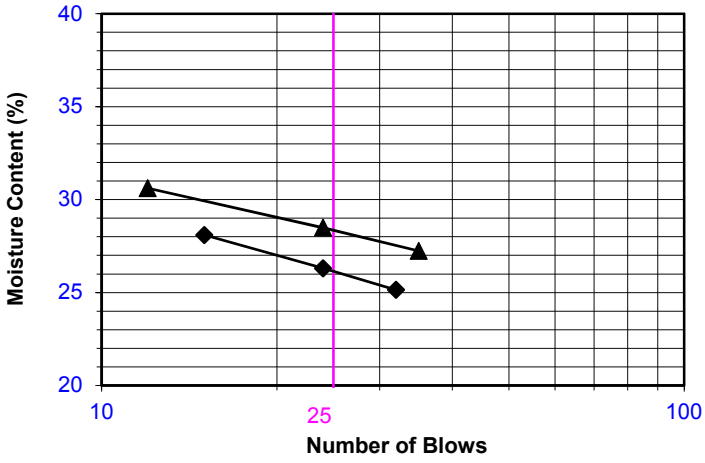
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/08/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	105	-	1876	26	16	10	CL
▲	106	-	1869	28	16	12	CL

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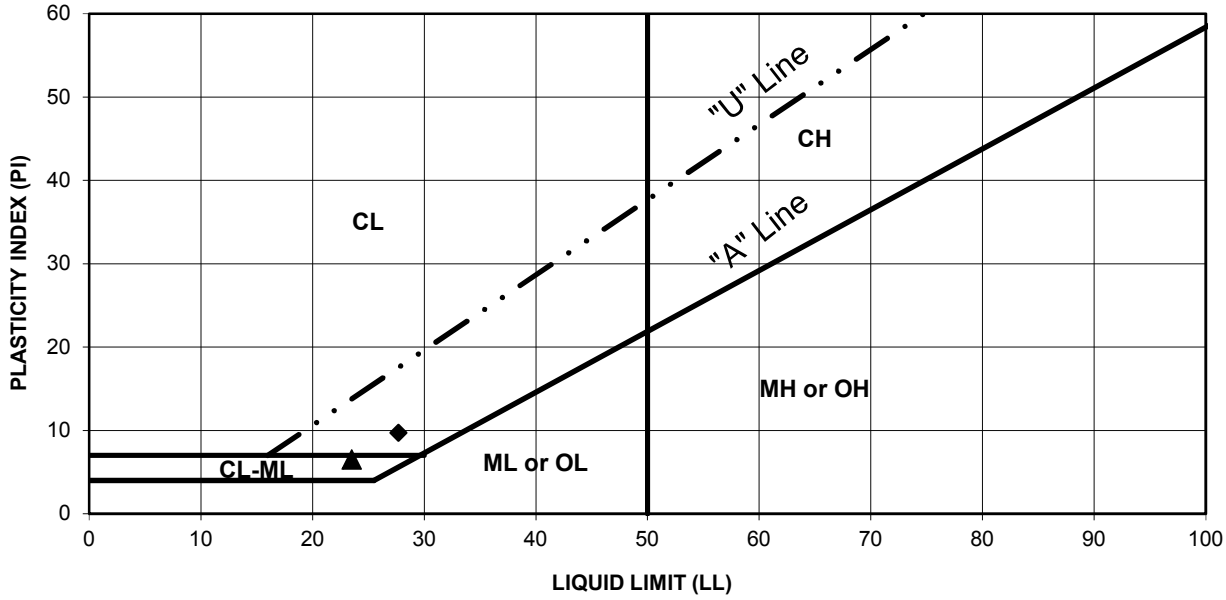
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/08/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test

Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	107	-	1720	28	18	10	CL
▲	108	-	1868	24	17	7	CL-ML

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ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
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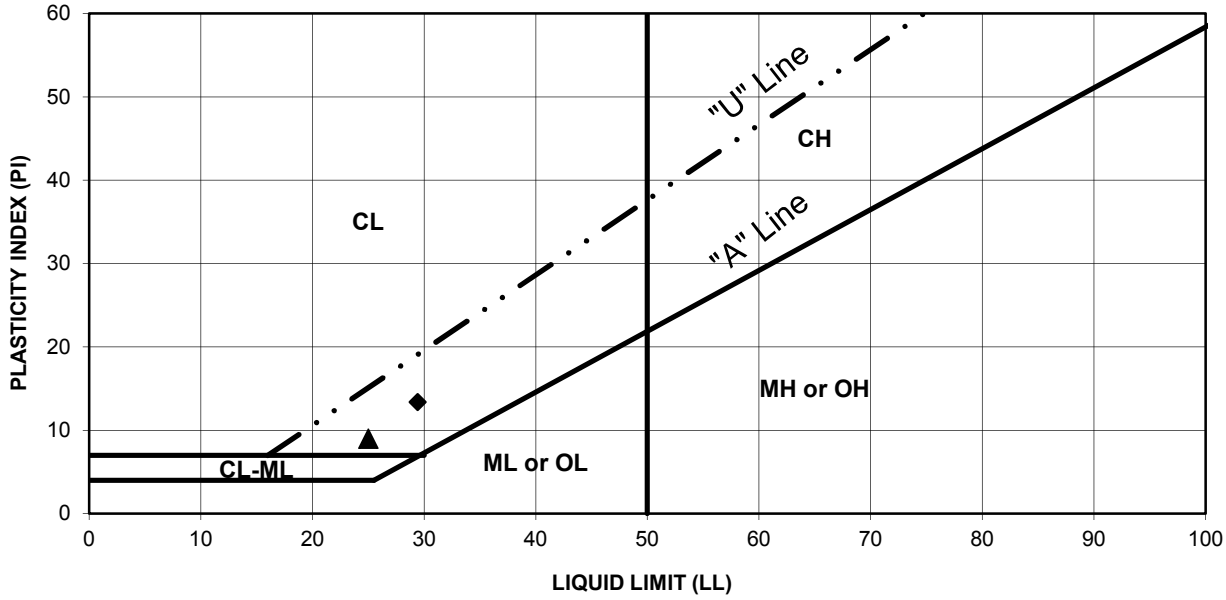

PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test

Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	109	-	1872	29	16	13	CL
▲	110	-	1788	25	16	9	CL

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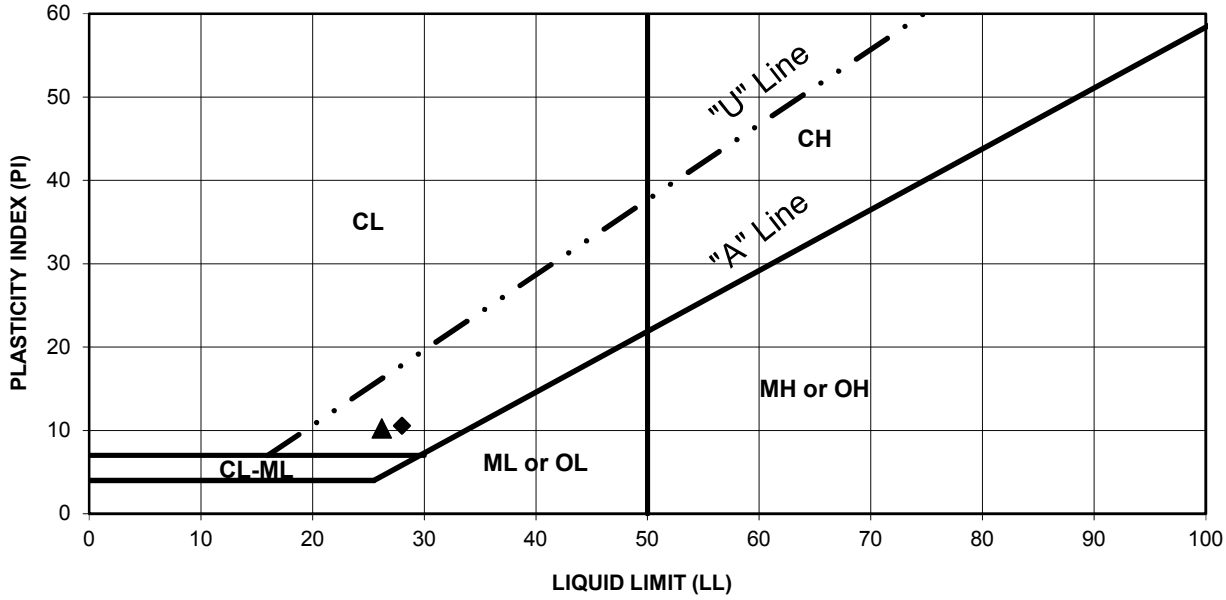
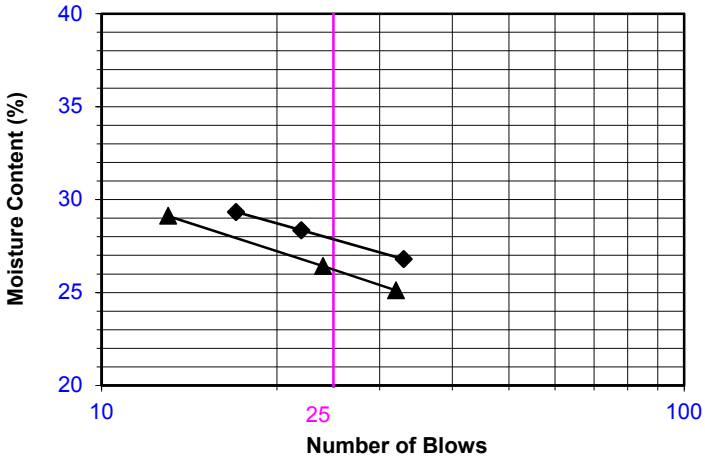
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/08/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	111	-	1852	28	17	11	CL
▲	112	-	1836	26	16	10	CL

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ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
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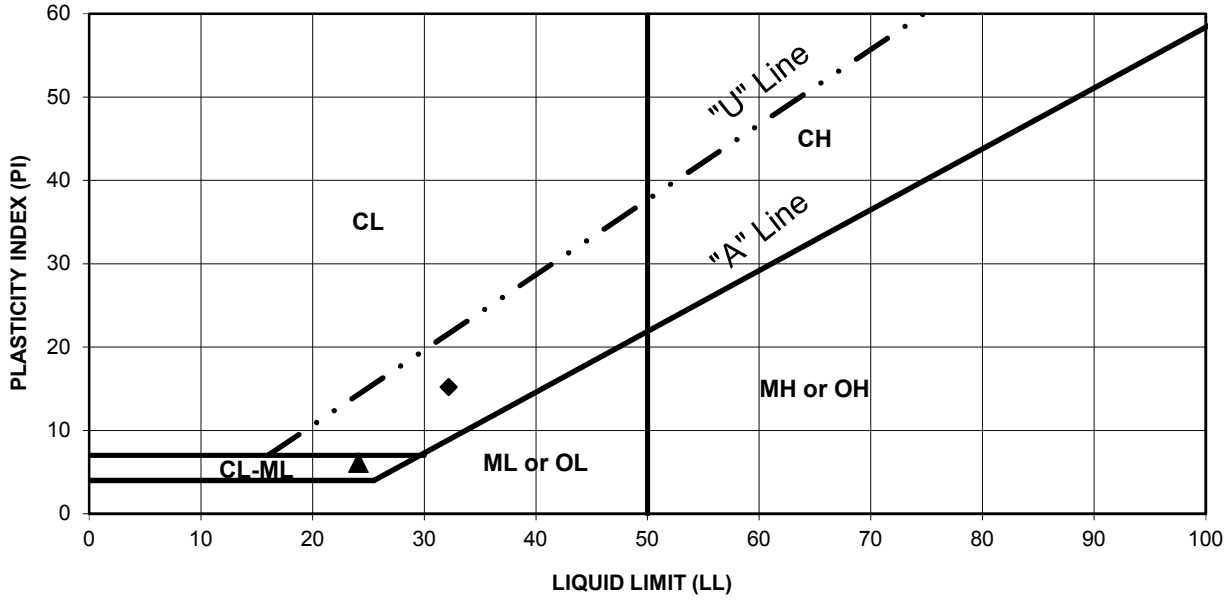
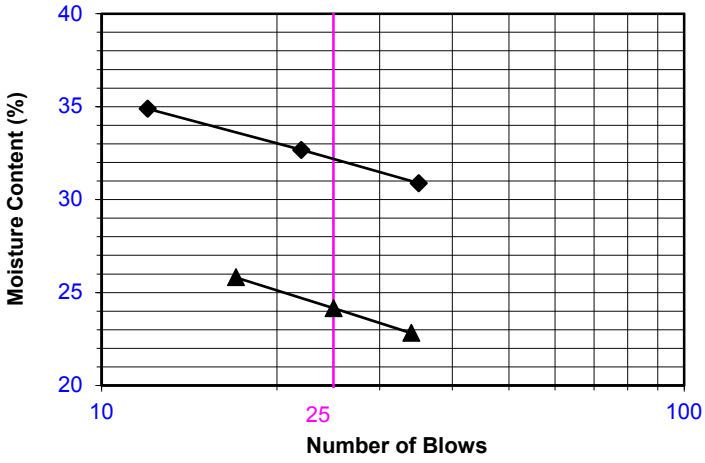


PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	113	-	1851	32	17	15	CL
▲	114	-	1686	24	18	6	CL-ML

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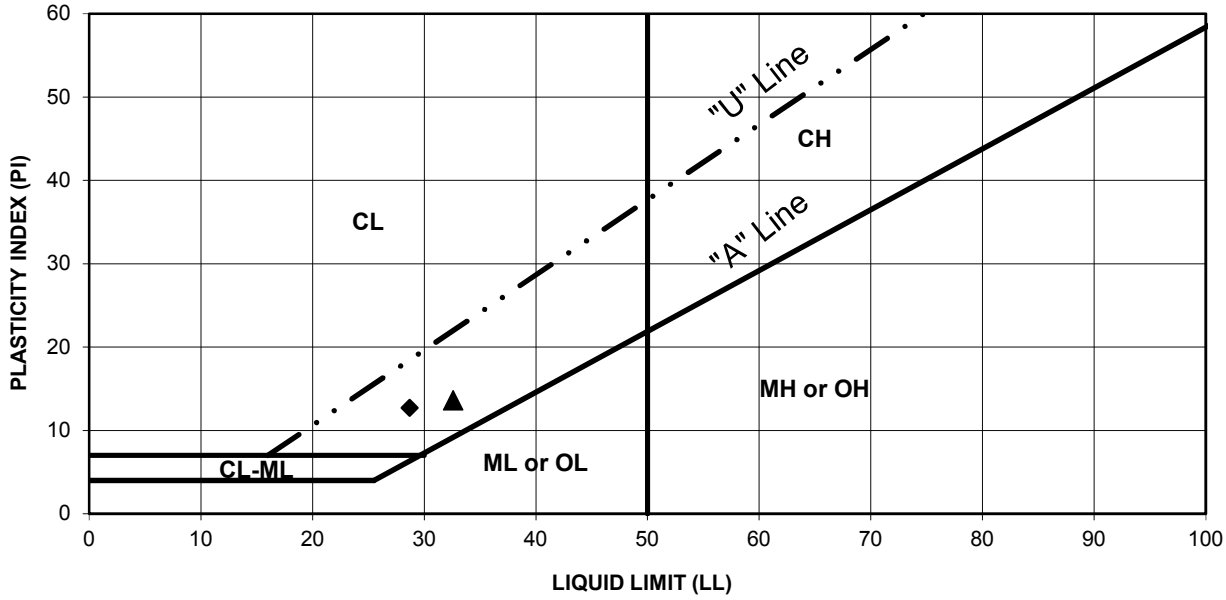
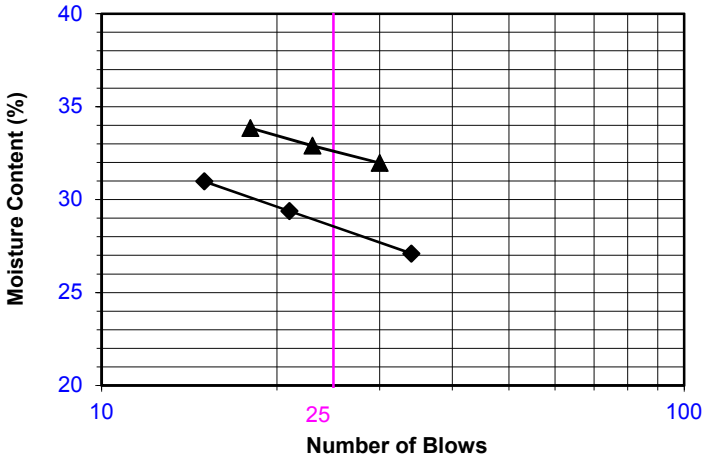
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/08/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	115	-	1835	29	16	13	CL
▲	116	-	1834	33	19	14	CL

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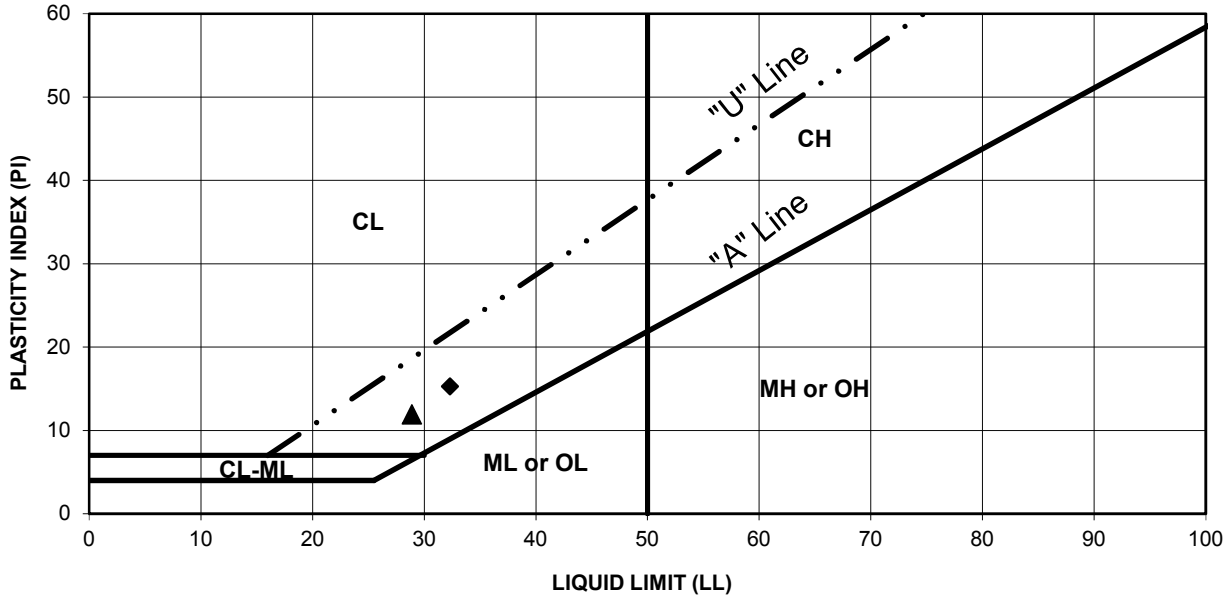
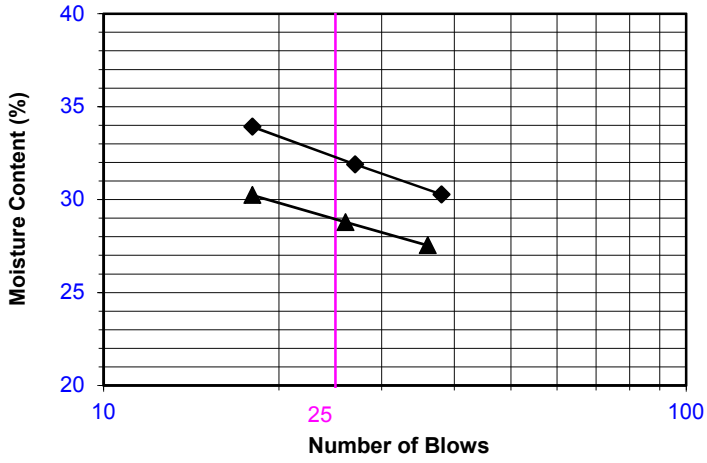
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/08/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	117	-	1633	32	17	15	CL
▲	118	-	1818	29	17	12	CL

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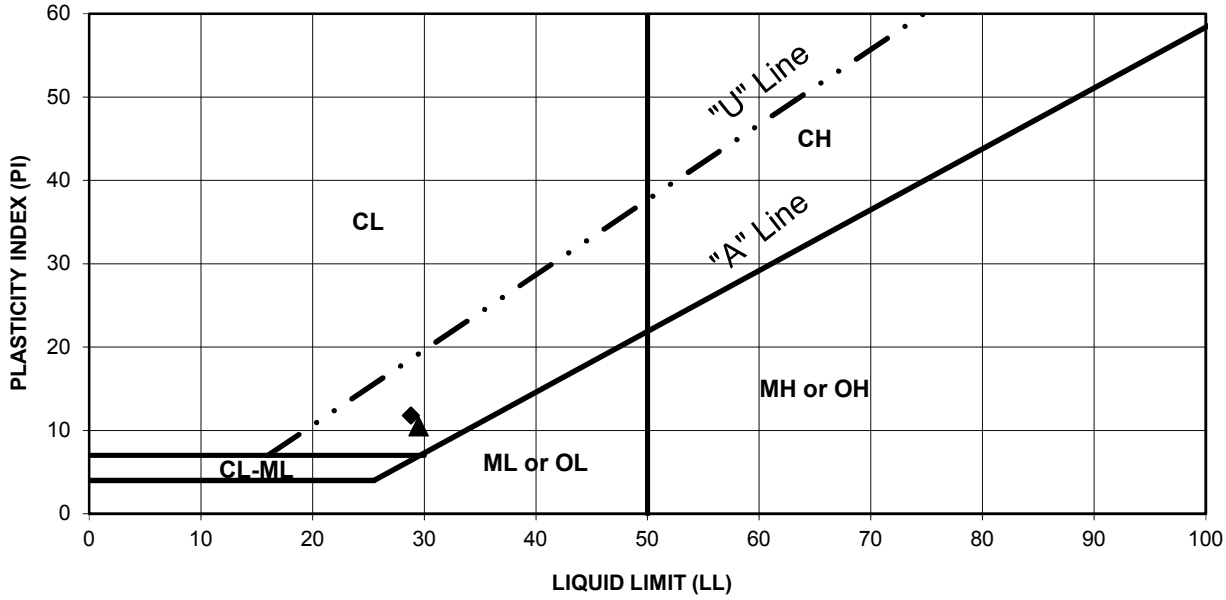
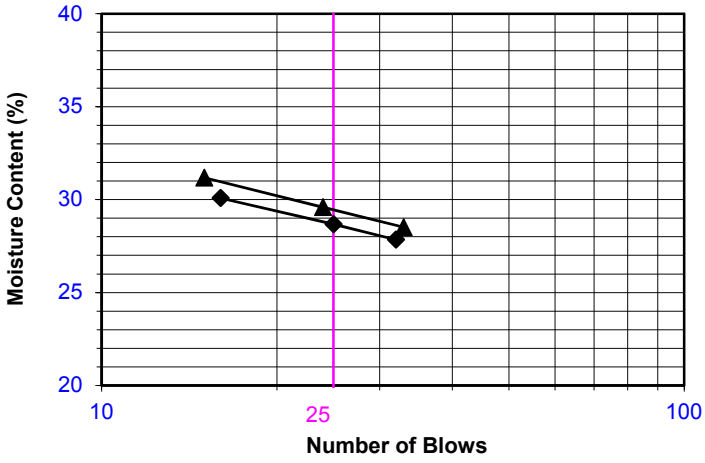
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cover **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/08/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Boring Number	Sample Number	Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	119	-	1717	29	17	12	CL
▲	120	-	1799	30	19	11	CL

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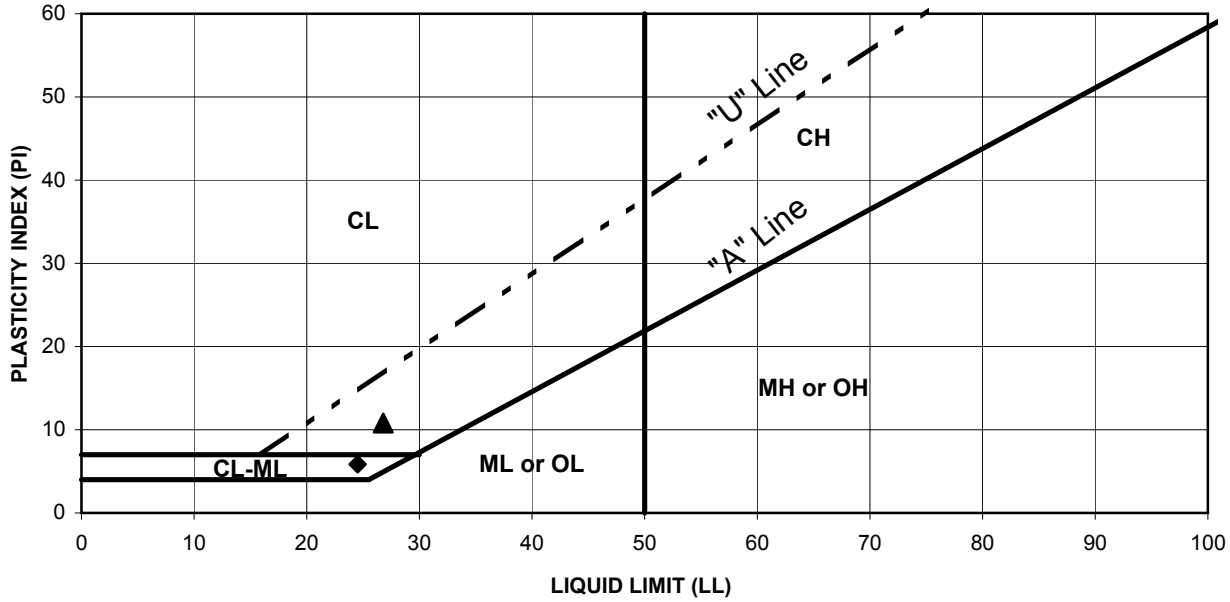
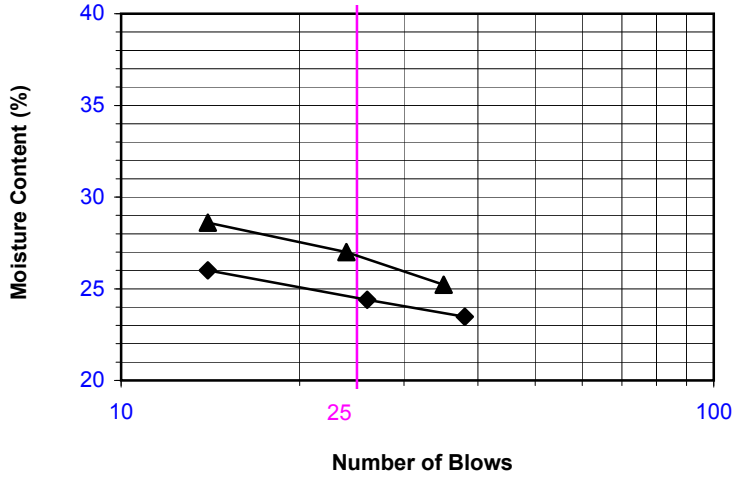
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cove **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/14/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Sample Number		Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	121	-	1752	25	19	6	CL-ML
▲	122	-	1908	27	16	11	CL

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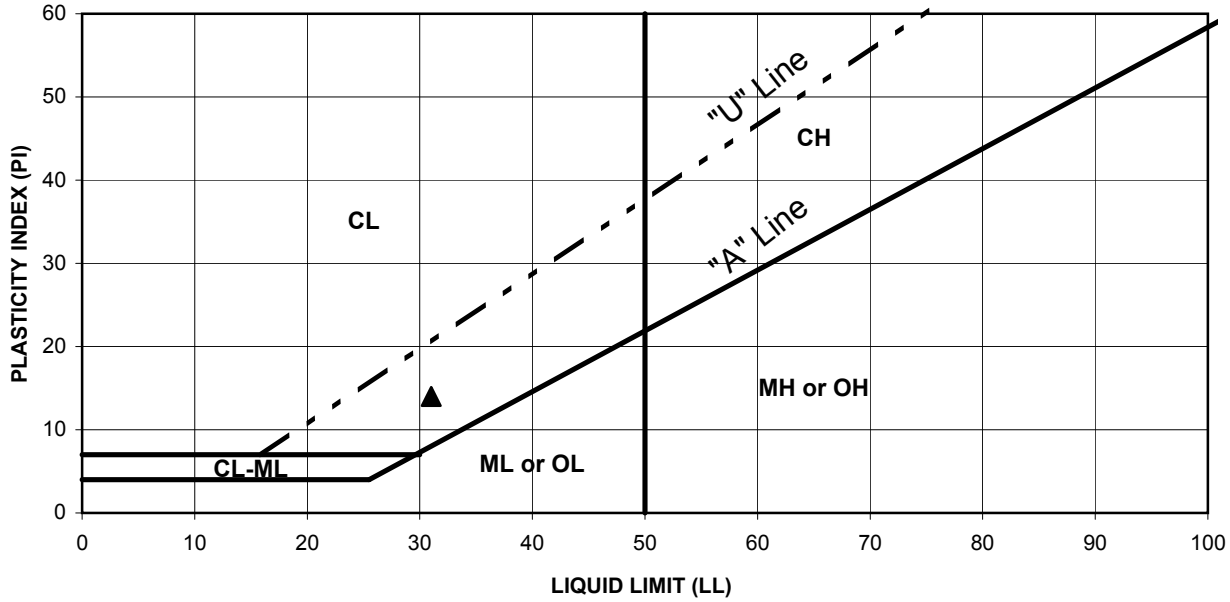
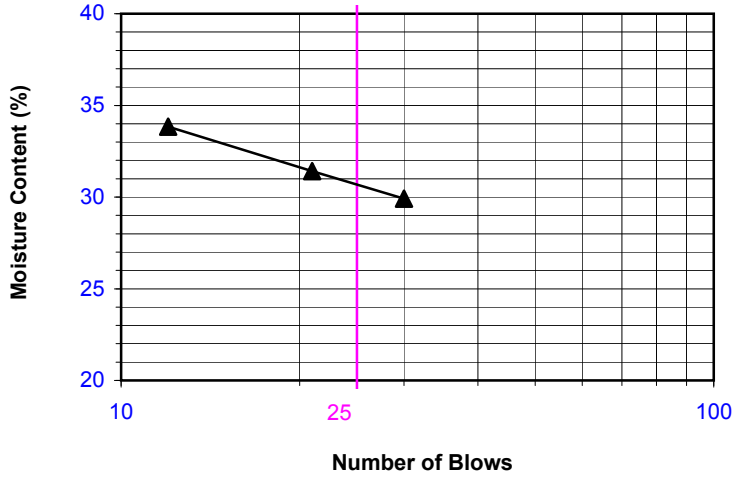
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cove **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/14/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Sample Number		Elevation	LL	PL	PI	Plasticity Chart Symbol
	125	-	1776	NP	NP	NP	
▲	126	-	1719	31	17	14	CL

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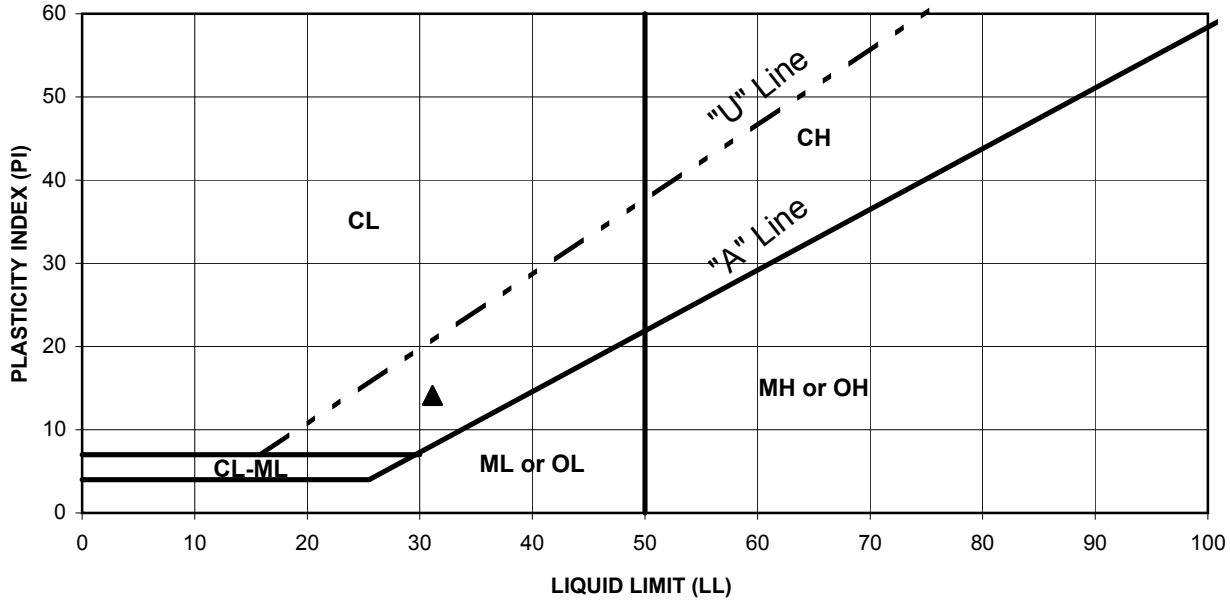
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cove **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/14/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test

Symbol	Sample Number		Elevation	LL	PL	PI	Plasticity Chart Symbol
	128	-	1807	NP	NP	NP	
▲	130	-	1713	31	17	14	CL

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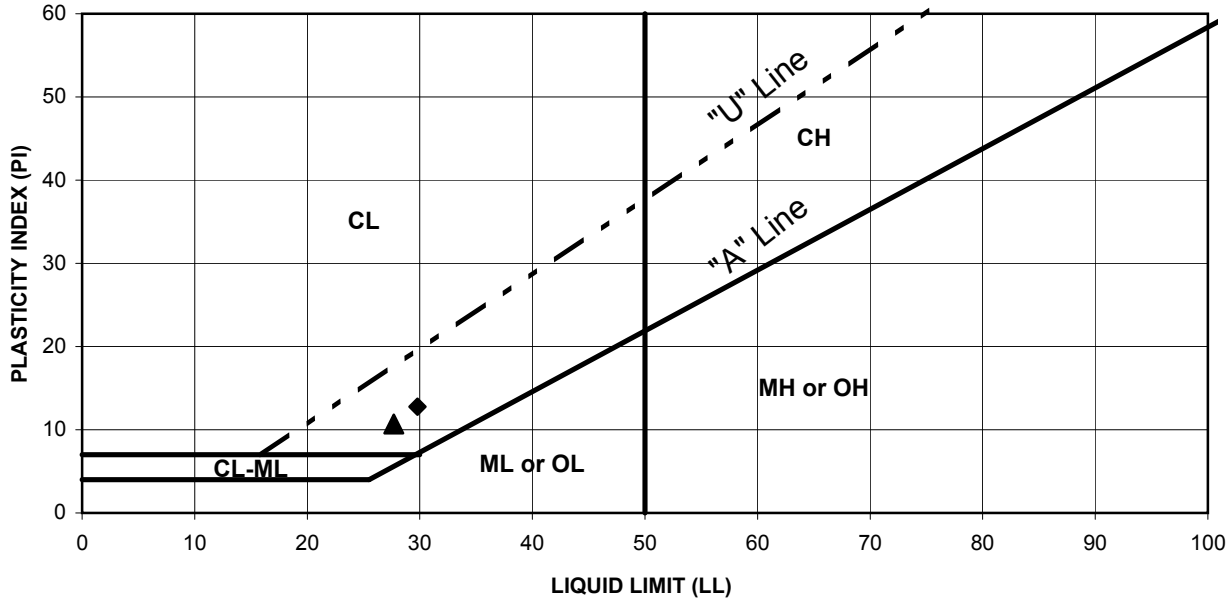
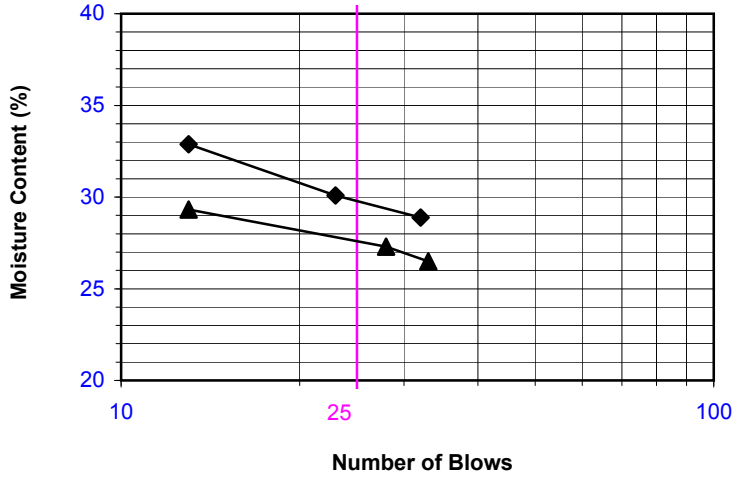
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cove **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/14/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test



Symbol	Sample Number		Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	131	-	1874	30	17	13	CL
▲	132	-	1835	28	17	11	CL

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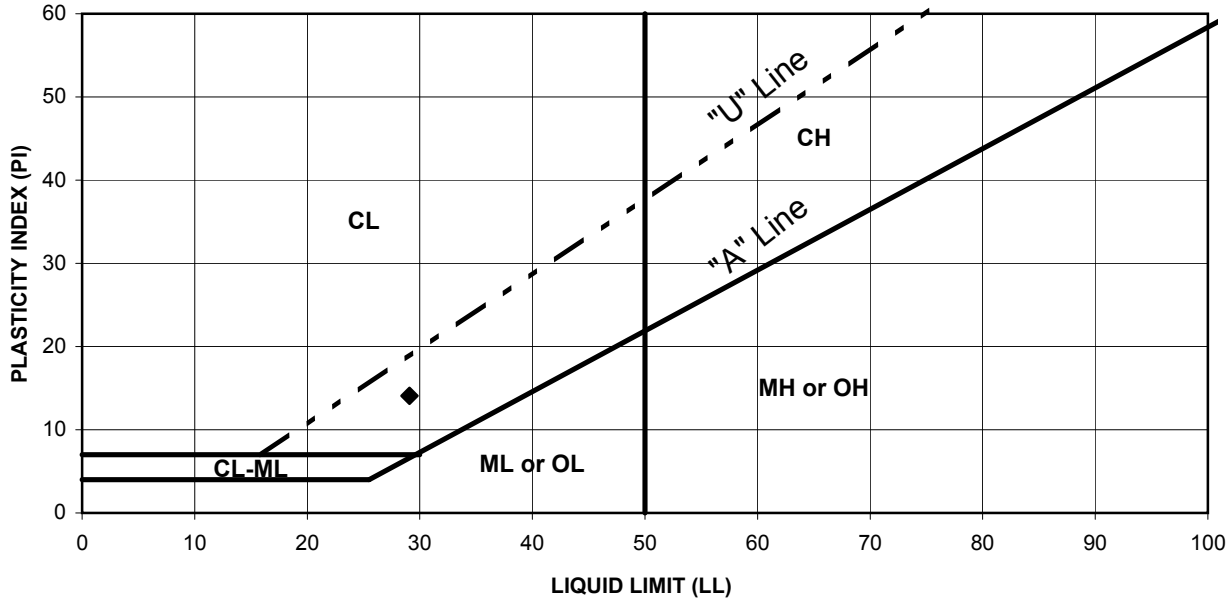
ATTERBERG LIMITS
ASTM D 4318

Project Name: Sunshine Canyon LF Intermediate Cove **Tested By:** LS Date: 03/30/16
Project No.: 197-4666-0001 **Checked By:** AP Date: 04/14/16



PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test

Symbol	Sample Number		Elevation	LL	PL	PI	Plasticity Chart Symbol
♦	133	-	1871	29	15	14	CL

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 03/24/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/01/16
Boring No.:	101		Checked by	AP	Date 04/04/16
Sample No.:	-	Elevation: 1883			
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.87	in			
Sample Area (A)	6.47	in²	Wt. Wet Soil+Container(gms)	831.95	800.97
Length (L)	3.03	in	Wt. Dry Soil+Container(gms)	762.75	698.62
Weight Before	625.96	g	Wt. Container (gms)	142.09	134.97
Wet Density	121.43	pcf	Moisture, (%)	11.15	18.16
Dry Density	109.25	pcf	Degree of Saturation	56	90

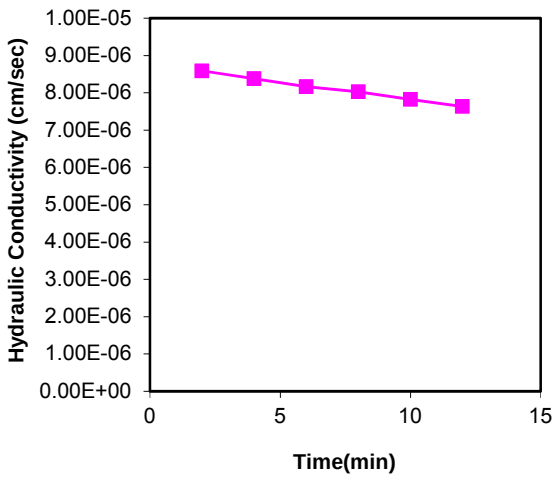
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 22.7 °c T2= 22.7 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	126.857	16.5	0
2.00	2.0	1	0.71	127.567	16.6	8.59E-06
2.00	2.0	1	0.70	128.977	16.7	8.38E-06
2.00	2.0	1	0.69	130.367	16.9	8.17E-06
2.00	2.0	1	0.68	131.742	17.1	8.02E-06
2.00	2.0	1	0.68	133.102	17.3	7.83E-06
2.00	2.0	1	0.66	134.442	17.5	7.63E-06

Hydraulic Conductivity, k_{20} (cm/sec): 7.60E-06

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	03/24/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/01/16
Boring No.:	102	Checked by	AP	Date	04/04/16
Sample No.:	- Elevation: 1866				
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.87	in			
Sample Area (A)	6.47	in²	Wt. Wet Soil+Container(gms)	711.97	772.55
Length (L)	3.00	in	Wt. Dry Soil+Container(gms)	643.10	652.17
Weight Before	596.75	g	Wt. Container (gms)	146.48	135.66
Wet Density	117.19	pcf	Moisture, (%)	13.87	23.31
Dry Density	102.92	pcf	Degree of Saturation	59	99

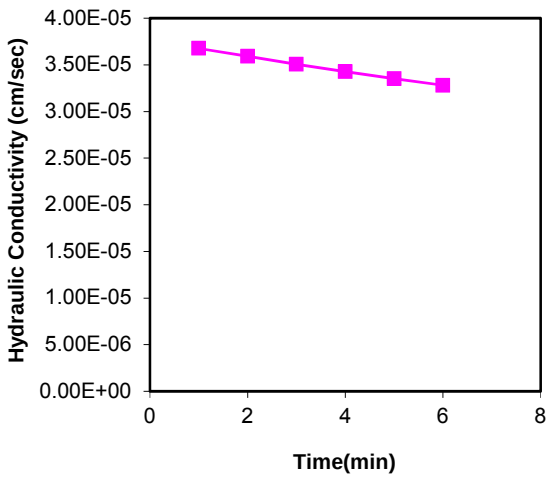
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.1 °c T2= 23.1 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	57.3385	7.5	0
1.00	1.0	1	0.70	58.0385	7.6	3.68E-05
1.00	1.0	1	0.70	59.4385	7.8	3.59E-05
1.00	1.0	1	0.70	60.8385	8.0	3.51E-05
1.00	1.0	1	0.70	62.2385	8.2	3.43E-05
1.00	1.0	1	0.70	63.6385	8.4	3.35E-05
1.00	1.0	1	0.70	65.0385	8.5	3.28E-05

Hydraulic Conductivity, k_{20} (cm/sec): 3.23E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 03/24/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/01/16
Boring No.:	103		Checked by	AP	Date 04/04/16
Sample No.:	-	Elevation: 1869			
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.53	in²	Wt. Wet Soil+Container(gms)	224.48	736.65
Length (L)	3.05	in	Wt. Dry Soil+Container(gms)	214.04	612.59
Weight Before	521.30	g	Wt. Container (gms)	50.33	141.49
Wet Density	99.63	pcf	Moisture, (%)	6.38	26.33
Dry Density	93.66	pcf	Degree of Saturation	22	89

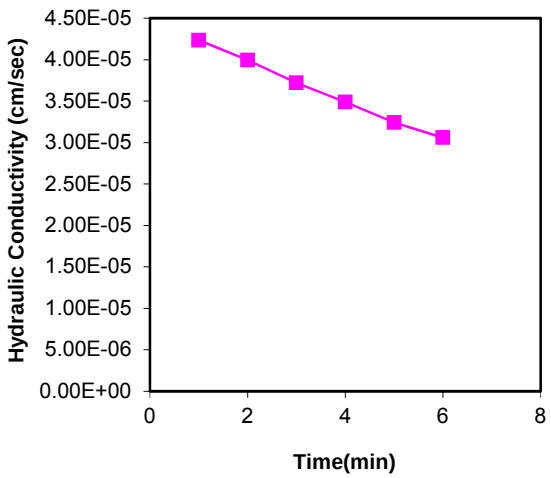
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 22.6 °c T2= 22.6 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	57.3885	7.4	0
1.00	1.0	1	0.80	58.1885	7.5	4.24E-05
1.00	1.0	1	0.77	59.7635	7.7	4.00E-05
1.00	1.0	1	0.74	61.2785	7.9	3.72E-05
1.00	1.0	1	0.71	62.7285	8.1	3.49E-05
1.00	1.0	1	0.68	64.1135	8.3	3.24E-05
1.00	1.0	1	0.65	65.4385	8.4	3.06E-05

Hydraulic Conductivity, k_{20} (cm/sec): 3.41E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	03/24/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/01/16
Boring No.:	104	Checked by	AP	Date	04/04/16
Sample No.:	- Elevation: 1887				
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.89	in			
Sample Area (A)	6.58	in²	Wt. Wet Soil+Container(gms)	228.61	821.88
Length (L)	3.01	in	Wt. Dry Soil+Container(gms)	210.61	717.96
Weight Before	631.02	g	Wt. Container (gms)	50.27	148.91
Wet Density	121.36	pcf	Moisture, (%)	11.23	18.26
Dry Density	109.11	pcf	Degree of Saturation	56	91

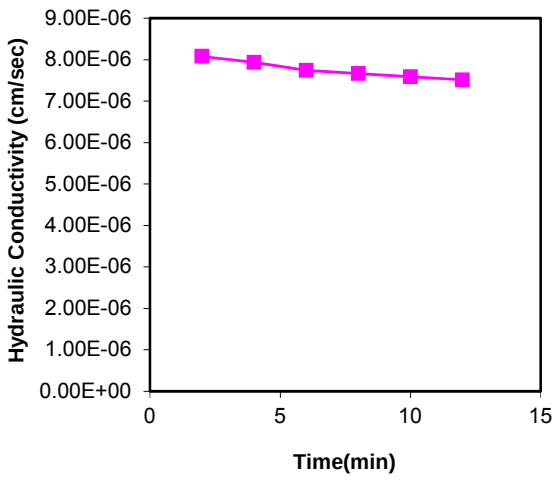
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23 °c T2= 23 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	132.727	17.4	0
2.00	2.0	1	0.71	133.442	17.4	8.08E-06
2.00	2.0	1	0.71	134.867	17.6	7.94E-06
2.00	2.0	1	0.70	136.277	17.8	7.74E-06
2.00	2.0	1	0.70	137.677	18.0	7.67E-06
2.00	2.0	1	0.70	139.077	18.2	7.59E-06
2.00	2.0	1	0.70	140.477	18.4	7.51E-06

Hydraulic Conductivity, k_{20} (cm/sec): 7.22E-06

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	03/28/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/01/16
Boring No.:	105	Checked by	AP	Date	04/04/16
Sample No.:	- Elevation: 1876				
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.87	in			
Sample Area (A)	6.47	in²	Wt. Wet Soil+Container(gms)	261.18	820.49
Length (L)	3.02	in	Wt. Dry Soil+Container(gms)	236.77	719.72
Weight Before	639.26	g	Wt. Container (gms)	51.61	149.89
Wet Density	124.55	pcf	Moisture, (%)	13.18	17.68
Dry Density	110.04	pcf	Degree of Saturation	67	90

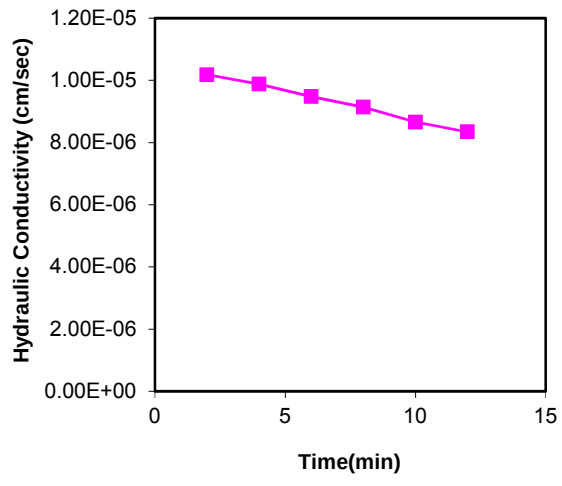
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.4 °c T2= 23.4 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	133.447	17.4	0
2.00	2.0	1	0.89	134.337	17.5	1.02E-05
2.00	2.0	1	0.88	136.102	17.7	9.88E-06
2.00	2.0	1	0.85	137.827	18.0	9.48E-06
2.00	2.0	1	0.83	139.507	18.2	9.14E-06
2.00	2.0	1	0.80	141.132	18.4	8.66E-06
2.00	2.0	1	0.77	142.702	18.6	8.34E-06

Hydraulic Conductivity, k_{20} (cm/sec): 8.56E-06

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 03/28/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/01/16
Boring No.:	106		Checked by	AP	Date 04/04/16
Sample No.:	-	Elevation: 1869			
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.53	in²	Wt. Wet Soil+Container(gms)	214.76	793.41
Length (L)	3.04	in	Wt. Dry Soil+Container(gms)	193.61	675.66
Weight Before	615.89	g	Wt. Container (gms)	49.96	149.17
Wet Density	118.25	pcf	Moisture, (%)	14.72	22.37
Dry Density	103.07	pcf	Degree of Saturation	63	95

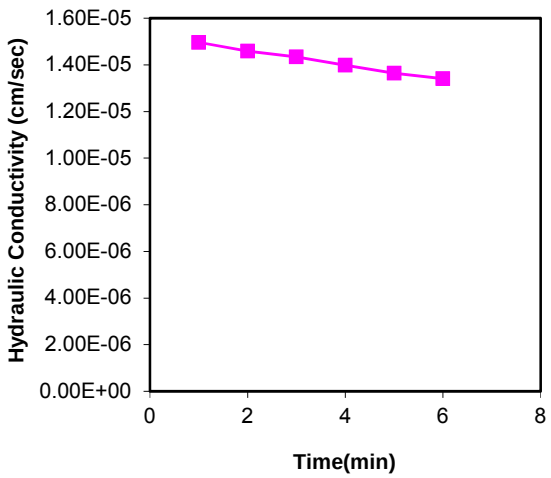
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 24.1 °c T2= 24.1 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	132.397	17.2	0
1.00	2.0	1	0.65	133.047	17.2	1.50E-05
1.00	2.0	1	0.64	134.337	17.4	1.46E-05
1.00	2.0	1	0.63	135.612	17.6	1.43E-05
1.00	2.0	1	0.63	136.872	17.7	1.40E-05
1.00	2.0	1	0.62	138.112	17.9	1.36E-05
1.00	2.0	1	0.61	139.337	18.1	1.34E-05

Hydraulic Conductivity, k_{20} (cm/sec): 1.28E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 03/29/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/01/16
Boring No.:	107		Checked by	AP	Date 04/08/16
Sample No.:	-	Elevation: 1720			
Soil Description:	Sandy Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.86	in			
Sample Area (A)	6.42	in²	Wt. Wet Soil+Container(gms)	384.56	810.63
Length (L)	2.99	in	Wt. Dry Soil+Container(gms)	362.39	714.16
Weight Before	619.95	g	Wt. Container (gms)	51.28	150.64
Wet Density	123.27	pcf	Moisture, (%)	7.13	17.12
Dry Density	115.07	pcf	Degree of Saturation	41	100

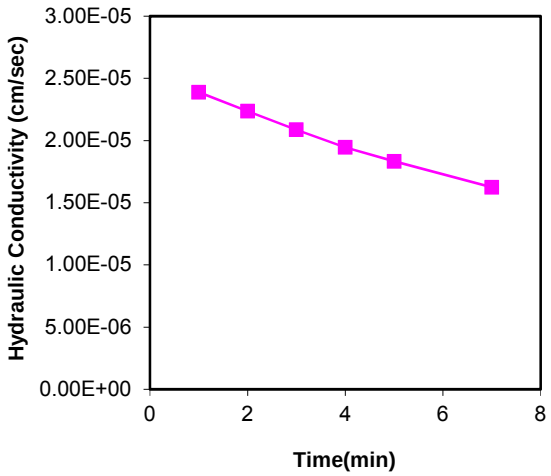
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 21.7 °c T2= 21.7 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	63.6885	8.4	0
1.00	1.0	1	0.50	64.1885	8.5	2.39E-05
1.00	1.0	1	0.47	65.1635	8.6	2.24E-05
1.00	1.0	1	0.45	66.0885	8.7	2.09E-05
1.00	1.0	1	0.43	66.9635	8.8	1.95E-05
1.00	1.0	1	0.40	67.7935	8.9	1.83E-05
2.00	1.0	1	0.73	68.9285	9.1	1.62E-05

Hydraulic Conductivity, k_{20} (cm/sec): 1.94E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	03/29/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/01/16
Boring No.:	108	Checked by	AP	Date	04/04/16
Sample No.:	- Elevation: 1868				
Soil Description:	Silty, Clayey Sand				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.49	in²	Wt. Wet Soil+Container(gms)	273.68	767.04
Length (L)	3.00	in	Wt. Dry Soil+Container(gms)	260.91	653.28
Weight Before	546.34	g	Wt. Container (gms)	50.41	140.41
Wet Density	106.85	pcf	Moisture, (%)	6.07	22.18
Dry Density	100.74	pcf	Degree of Saturation	24	89

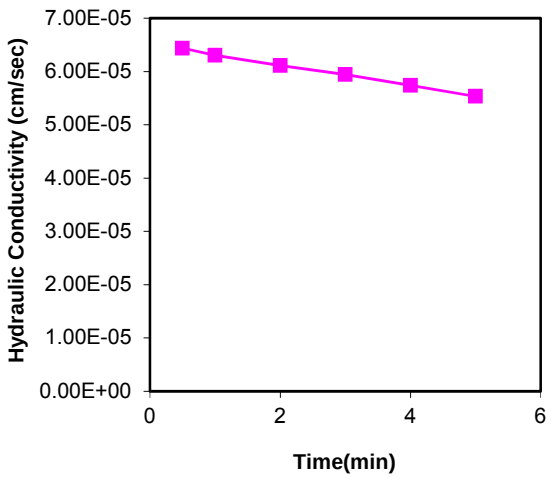
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 21.5 °c T2= 21.5 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	60.8385	8.0	0
0.50	1.0	1	0.65	61.4885	8.1	6.44E-05
0.50	1.0	1	0.65	62.7885	8.2	6.30E-05
1.00	1.0	1	1.30	64.7385	8.5	6.11E-05
1.00	1.0	1	1.32	67.3535	8.8	5.94E-05
1.00	1.0	1	1.32	69.9885	9.2	5.74E-05
1.00	1.0	1	1.32	72.6285	9.5	5.53E-05

Hydraulic Conductivity, k_{20} (cm/sec): 5.80E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	03/29/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/01/16
Boring No.:	109	Checked by	AP	Date	04/04/16
Sample No.:	- Elevation: 1872				
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.89	in			
Sample Area (A)	6.56	in²	Wt. Wet Soil+Container(gms)	354.08	815.64
Length (L)	3.01	in	Wt. Dry Soil+Container(gms)	311.81	706.79
Weight Before	653.04	g	Wt. Container (gms)	50.61	143.01
Wet Density	126.28	pcf	Moisture, (%)	16.18	19.31
Dry Density	108.69	pcf	Degree of Saturation	79	95

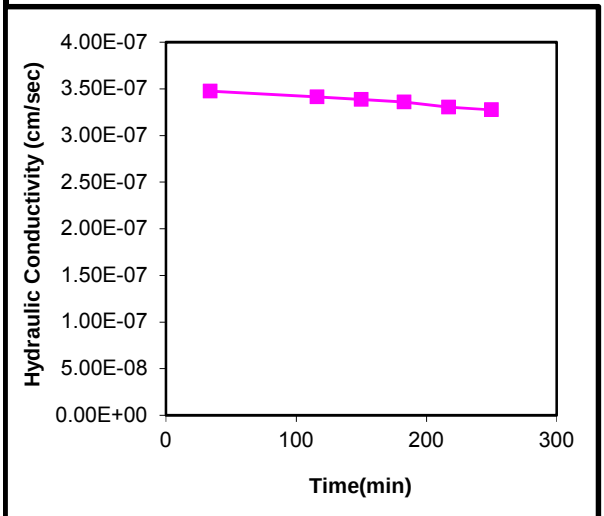
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 22.6 °c T2= 22.6 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	127.277	16.7	0
34.00	2.0	1	0.50	127.777	16.7	3.48E-07
82.00	2.0	1	1.20	129.477	17.0	3.41E-07
34.00	2.0	1	0.50	131.177	17.2	3.39E-07
33.00	2.0	1	0.49	132.162	17.3	3.36E-07
34.00	2.0	1	0.49	133.142	17.4	3.30E-07
33.00	2.0	1	0.48	134.117	17.6	3.28E-07

Hydraulic Conductivity, k_{20} (cm/sec): 3.17E-07

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 03/29/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/01/16
Boring No.:	110		Checked by	AP	Date 04/04/16
Sample No.:	-	Elevation: 1788			
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.49	in²	Wt. Wet Soil+Container(gms)	209.40	757.20
Length (L)	3.00	in	Wt. Dry Soil+Container(gms)	197.88	647.17
Weight Before	558.03	g	Wt. Container (gms)	49.57	152.36
Wet Density	109.14	pcf	Moisture, (%)	7.77	22.24
Dry Density	101.27	pcf	Degree of Saturation	32	90

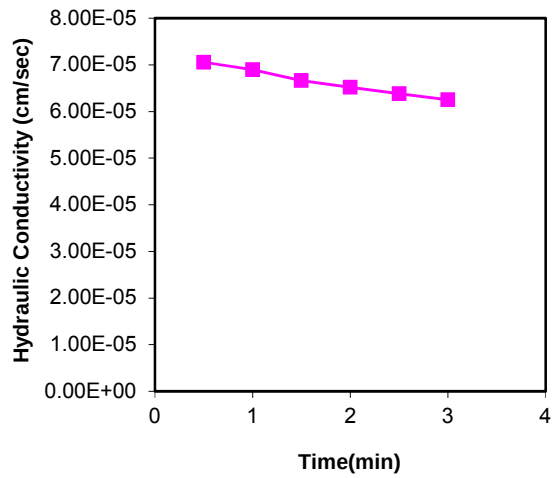
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 22.4 °c T2= 22.4 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	69.0985	9.1	0
0.50	1.0	1	0.81	69.9085	9.2	7.05E-05
0.50	1.0	1	0.81	71.5285	9.4	6.89E-05
0.50	1.0	1	0.80	73.1385	9.6	6.66E-05
0.50	1.0	1	0.80	74.7385	9.8	6.52E-05
0.50	1.0	1	0.80	76.3385	10.0	6.38E-05
0.50	1.0	1	0.80	77.9385	10.2	6.25E-05

Hydraulic Conductivity, k_{20} (cm/sec): 6.26E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	03/30/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/01/16
Boring No.:	111	Checked by	AP	Date	04/08/16
Sample No.:	- Elevation: 1852				
Soil Description:	Sandy Lean Clay				
Sample Type:	Mod Cal				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.86	in			
Sample Area (A)	6.43	in²	Wt. Wet Soil+Container(gms)	217.18	786.09
Length (L)	3.01	in	Wt. Dry Soil+Container(gms)	200.25	676.88
Weight Before	599.44	g	Wt. Container (gms)	51.36	141.95
Wet Density	118.07	pcf	Moisture, (%)	11.37	20.42
Dry Density	106.02	pcf	Degree of Saturation	52	94

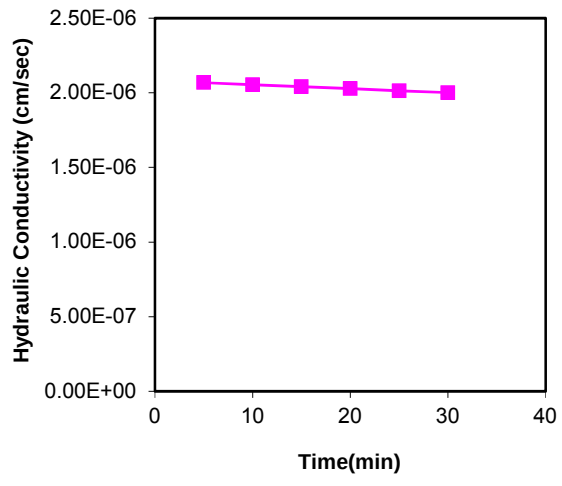
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.1	5.1	0.96
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 22.2 °c T2= 22.2 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	3.0	1	0.0	207.915	27.2	0
5.00	3.0	1	0.70	208.615	27.3	2.07E-06
5.00	3.0	1	0.70	210.015	27.5	2.05E-06
5.00	3.0	1	0.70	211.415	27.7	2.04E-06
5.00	3.0	1	0.70	212.815	27.9	2.03E-06
5.00	3.0	1	0.70	214.215	28.0	2.01E-06
5.00	3.0	1	0.70	215.615	28.2	2.00E-06

Hydraulic Conductivity, k_{20} (cm/sec): 1.93E-06

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

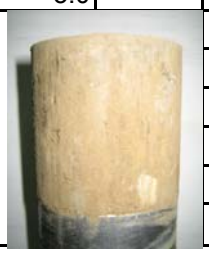
Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/01/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/04/16
Boring No.:	112		Checked by	AP	Date 04/08/16
Sample No.:	-	Elevation: 1836			
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.49	in²	Wt. Wet Soil+Container(gms)	256.64	739.98
Length (L)	3.00	in	Wt. Dry Soil+Container(gms)	248.02	619.54
Weight Before	515.00	g	Wt. Container (gms)	51.25	138.34
Wet Density	100.72	pcf	Moisture, (%)	4.38	25.03
Dry Density	96.50	pcf	Degree of Saturation	16	91

SATURATION AND CONSOLIDATION PHASES

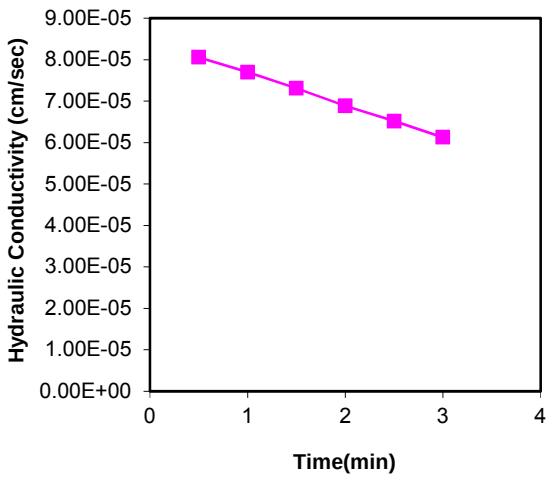
B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.1	5.1	0.98
Back Pressure,psi	25.0	30.0	5.0	



Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 22.8 °c T2= 22.8 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	74.1985	9.7	0
0.50	1.0	1	0.99	75.1935	9.9	8.06E-05
0.50	1.0	1	0.98	77.1635	10.1	7.69E-05
0.50	1.0	1	0.95	79.0885	10.4	7.31E-05
0.50	1.0	1	0.92	80.9535	10.6	6.88E-05
0.50	1.0	1	0.89	82.7535	10.9	6.51E-05
0.50	1.0	1	0.85	84.4885	11.1	6.13E-05

Hydraulic Conductivity, k_{20} (cm/sec): 6.64E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	04/01/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/04/16
Boring No.:	113	Checked by	AP	Date	04/08/16
Sample No.:	- Elevation: 1851				
Soil Description:	Lean Clay w/sand				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.87	in			
Sample Area (A)	6.48	in²	Wt. Wet Soil+Container(gms)	237.83	819.13
Length (L)	3.01	in	Wt. Dry Soil+Container(gms)	219.74	701.4
Weight Before	585.58	g	Wt. Container (gms)	51.35	180.1
Wet Density	114.31	pcf	Moisture, (%)	10.74	22.58
Dry Density	103.22	pcf	Degree of Saturation	46	96

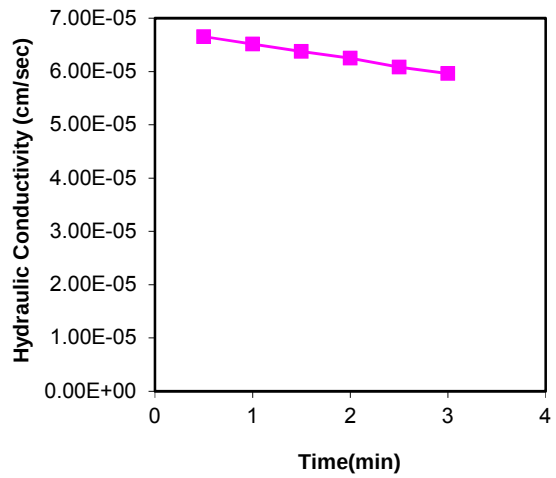
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.4 °c T2= 23.4 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	63.7385	8.3	0
0.50	1.0	1	0.70	64.4385	8.4	6.65E-05
0.50	1.0	1	0.70	65.8385	8.6	6.51E-05
0.50	1.0	1	0.70	67.2385	8.8	6.38E-05
0.50	1.0	1	0.70	68.6385	9.0	6.25E-05
0.50	1.0	1	0.70	70.0335	9.2	6.08E-05
0.50	1.0	1	0.69	71.4235	9.3	5.96E-05

Hydraulic Conductivity, k_{20} (cm/sec): 5.82E-05

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ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	04/01/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/04/16
Boring No.:	114	Checked by	AP	Date	04/08/16
Sample No.:	- Elevation: 1686				
Soil Description:	Silty, Clayey Sand				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.89	in			
Sample Area (A)	6.55	in²	Wt. Wet Soil+Container(gms)	330.02	790.64
Length (L)	3.01	in	Wt. Dry Soil+Container(gms)	297.93	677.06
Weight Before	609.41	g	Wt. Container (gms)	50.04	142.81
Wet Density	117.96	pcf	Moisture, (%)	12.95	21.26
Dry Density	104.44	pcf	Degree of Saturation	57	94

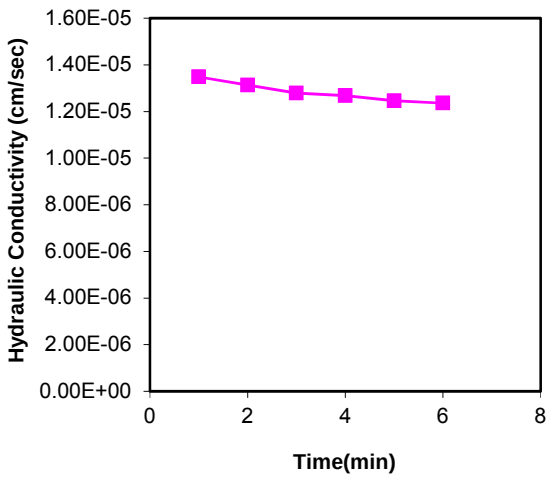
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	1.00
Back Pressure,psi	25.0	30.0	5.0	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 22.7 °c T2= 22.7 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	127.317	16.7	0
1.00	2.0	1	0.57	127.887	16.7	1.35E-05
1.00	2.0	1	0.56	129.017	16.9	1.31E-05
1.00	2.0	1	0.55	130.127	17.0	1.28E-05
1.00	2.0	1	0.55	131.227	17.2	1.27E-05
1.00	2.0	1	0.54	132.322	17.3	1.25E-05
1.00	2.0	1	0.55	133.412	17.5	1.24E-05

Hydraulic Conductivity, k_{20} (cm/sec): 1.20E-05

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Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/01/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/04/16
Boring No.:	115		Checked by	AP	Date 04/08/16
Sample No.:	-	Elevation: 1835			
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.87	in			
Sample Area (A)	6.47	in²	Wt. Wet Soil+Container(gms)	330.96	801.69
Length (L)	3.02	in	Wt. Dry Soil+Container(gms)	299.82	690.11
Weight Before	610.12	g	Wt. Container (gms)	49.83	151.8
Wet Density	119.03	pcf	Moisture, (%)	12.46	20.73
Dry Density	105.84	pcf	Degree of Saturation	57	95

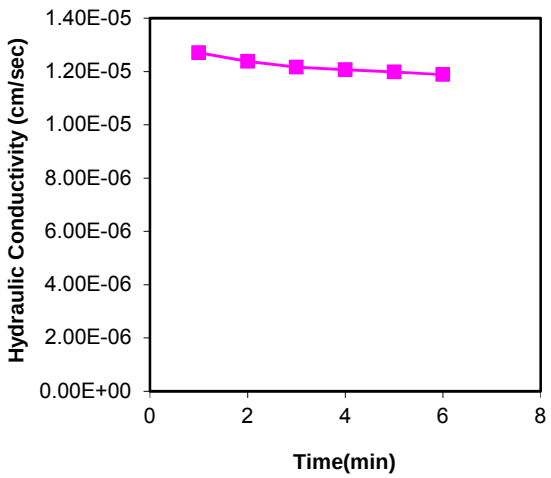
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.1	5.1	0.98
Back Pressure,psi	25.0	30.0	5.0	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23 °c T2= 23 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	135.937	17.7	0
1.00	2.0	1	0.57	136.502	17.8	1.27E-05
1.00	2.0	1	0.56	137.622	18.0	1.24E-05
1.00	2.0	1	0.55	138.727	18.1	1.22E-05
1.00	2.0	1	0.55	139.827	18.3	1.21E-05
1.00	2.0	1	0.55	140.927	18.4	1.20E-05
1.00	2.0	1	0.55	142.027	18.5	1.19E-05

Hydraulic Conductivity, k_{20} (cm/sec): 1.14E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/01/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/04/16
Boring No.:	116		Checked by	AP	Date 04/08/16
Sample No.:	-	Elevation: 1834			
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.49	in²	Wt. Wet Soil+Container(gms)	332.90	791.45
Length (L)	3.02	in	Wt. Dry Soil+Container(gms)	303.85	677.58
Weight Before	605.54	g	Wt. Container (gms)	50.47	150.64
Wet Density	117.61	pcf	Moisture, (%)	11.46	21.61
Dry Density	105.51	pcf	Degree of Saturation	52	98

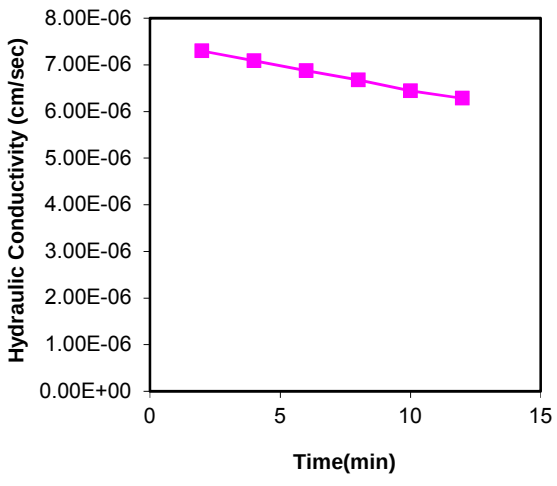
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.1	5.1	0.98
Back Pressure,psi	25.0	30.0	5.0	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 22.2 °c T2= 22.2 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	3.0	1	0.0	209.055	27.2	0
2.00	3.0	1	1.00	210.055	27.4	7.30E-06
2.00	3.0	1	0.98	212.035	27.6	7.08E-06
2.00	3.0	1	0.96	213.975	27.9	6.88E-06
2.00	3.0	1	0.94	215.875	28.1	6.67E-06
2.00	3.0	1	0.92	217.73	28.4	6.44E-06
2.00	3.0	1	0.90	219.545	28.6	6.28E-06

Hydraulic Conductivity, k_{20} (cm/sec): 6.43E-06

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/01/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/04/16
Boring No.:	117		Checked by	AP	Date 04/08/16
Sample No.:	-	Elevation: 1633			
Soil Description:	Clayey Sand				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.49	in²	Wt. Wet Soil+Container(gms)	296.08	844.67
Length (L)	3.01	in	Wt. Dry Soil+Container(gms)	263.84	746.79
Weight Before	680.38	g	Wt. Container (gms)	51.45	154.22
Wet Density	132.85	pcf	Moisture, (%)	15.18	16.52
Dry Density	115.34	pcf	Degree of Saturation	89	97

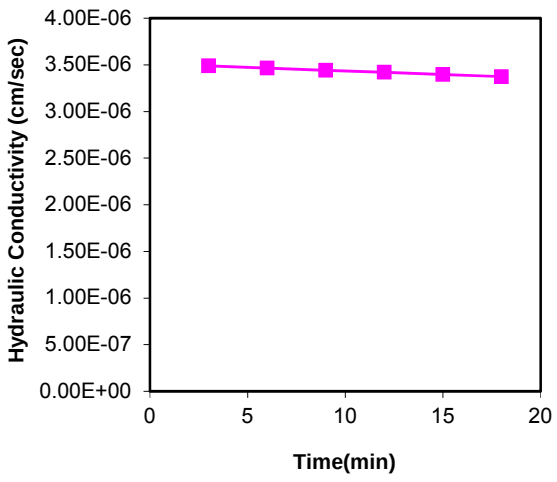
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.98
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 21.7 °c T2= 21.7 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	3.0	1	0.0	203.215	26.6	0
3.00	3.0	1	0.70	203.915	26.7	3.49E-06
3.00	3.0	1	0.70	205.315	26.9	3.47E-06
3.00	3.0	1	0.70	206.715	27.1	3.44E-06
3.00	3.0	1	0.70	208.115	27.3	3.42E-06
3.00	3.0	1	0.70	209.515	27.4	3.40E-06
3.00	3.0	1	0.70	210.915	27.6	3.37E-06

Hydraulic Conductivity, k_{20} (cm/sec): 3.29E-06

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	04/05/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/06/16
Boring No.:	118	Checked by	AP	Date	04/08/16
Sample No.:	- Elevation: 1818				
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.85	in			
Sample Area (A)	6.38	in²	Wt. Wet Soil+Container(gms)	317.64	800.08
Length (L)	3.01	in	Wt. Dry Soil+Container(gms)	288.41	691.62
Weight Before	618.37	g	Wt. Container (gms)	50.84	149.69
Wet Density	122.62	pcf	Moisture, (%)	12.30	20.01
Dry Density	109.18	pcf	Degree of Saturation	61	100

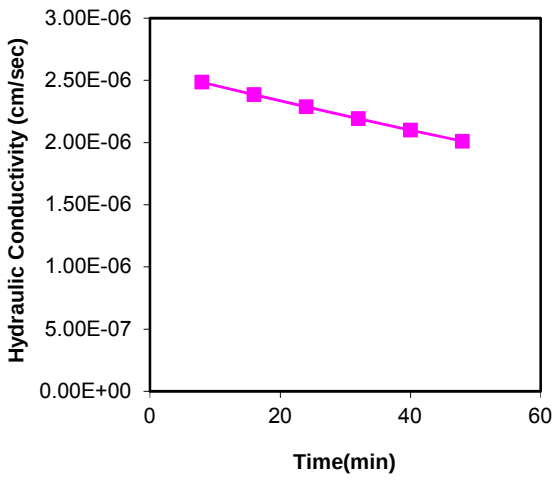
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.1	5.1	0.96
Back Pressure,psi	25.0	29.9	4.9	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 24.5 °c T2= 24.5 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	135.777	17.8	0
8.00	2.0	1	0.88	136.652	17.9	2.49E-06
8.00	2.0	1	0.85	138.377	18.1	2.38E-06
8.00	2.0	1	0.82	140.052	18.3	2.29E-06
8.00	2.0	1	0.80	141.677	18.5	2.19E-06
8.00	2.0	1	0.78	143.252	18.7	2.10E-06
8.00	2.0	1	0.75	144.777	18.9	2.01E-06

Hydraulic Conductivity, k_{20} (cm/sec): 2.02E-06

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/06/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/07/16
Boring No.:	119		Checked by	AP	Date 04/08/16
Sample No.:	-	Elevation: 1717			
Soil Description:	Sandy Lean Clay				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.49	in²	Wt. Wet Soil+Container(gms)	324.85	762.65
Length (L)	3.00	in	Wt. Dry Soil+Container(gms)	313.10	642.06
Weight Before	532.61	g	Wt. Container (gms)	50.10	142.33
Wet Density	104.17	pcf	Moisture, (%)	4.47	24.13
Dry Density	99.71	pcf	Degree of Saturation	17	94

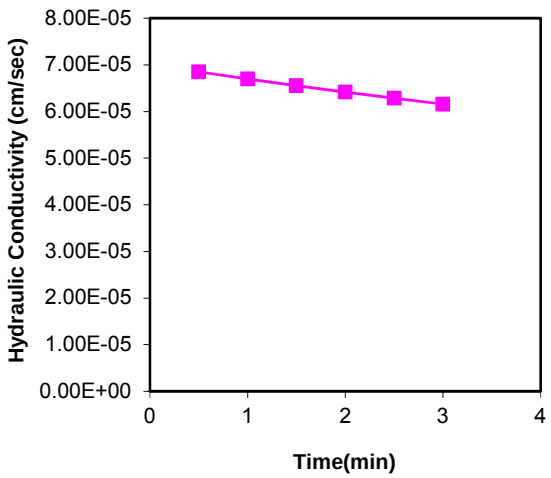
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	1.00
Back Pressure,psi	25.0	30.0	5.0	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.7 °c T2= 23.7 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	57.1385	7.5	0
0.50	1.0	1	0.65	57.7885	7.6	6.85E-05
0.50	1.0	1	0.65	59.0885	7.8	6.70E-05
0.50	1.0	1	0.65	60.3885	7.9	6.55E-05
0.50	1.0	1	0.65	61.6885	8.1	6.42E-05
0.50	1.0	1	0.65	62.9885	8.3	6.28E-05
0.50	1.0	1	0.65	64.2885	8.4	6.16E-05

Hydraulic Conductivity, k_{20} (cm/sec): 5.95E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	04/05/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/06/16
Boring No.:	120	Checked by	AP	Date	04/08/16
Sample No.:	- Elevation: 1799				
Soil Description:	Lean Clay w/sand				
Sample Type:	Shelby				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.51	in²	Wt. Wet Soil+Container(gms)	244.43	795.92
Length (L)	3.00	in	Wt. Dry Soil+Container(gms)	214.29	681.14
Weight Before	625.30	g	Wt. Container (gms)	49.95	143.22
Wet Density	121.71	pcf	Moisture, (%)	18.34	21.34
Dry Density	102.85	pcf	Degree of Saturation	78	90

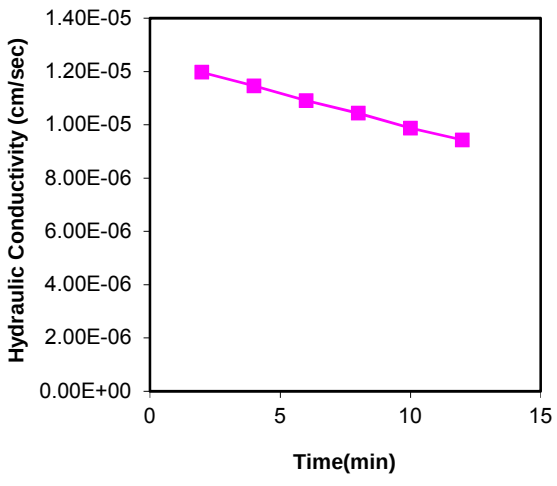
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	30.0	35.0	5.0	0.96
Back Pressure,psi	25.0	29.8	4.8	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23 °c T2= 23 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	134.077	17.6	0
2.00	2.0	1	1.07	135.142	17.7	1.20E-05
2.00	2.0	1	1.04	137.242	18.0	1.15E-05
2.00	2.0	1	1.00	139.277	18.3	1.09E-05
2.00	2.0	1	0.97	141.247	18.5	1.04E-05
2.00	2.0	1	0.93	143.147	18.8	9.87E-06
2.00	2.0	1	0.90	144.977	19.0	9.43E-06

Hydraulic Conductivity, k_{20} (cm/sec): 9.94E-06

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover	Tested by	ST	Date	04/07/16
Project No.:	197-4666-0001	Calculated by	NN	Date	04/11/16
Boring No.:	-	Checked by	AP	Date	04/16/16
Sample No.:	121 Elevation: 1752				
Soil Description:	Silty Clay				
Sample Type:	Shelby Tube				
Test Condition:	Undisturbed				
	Confining Pressure = 5 PSI				

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.53	in²	Wt. Wet Soil+Container(gms)	302.07	763.36
Length (L)	3.02	in	Wt. Dry Soil+Container(gms)	260.91	636.14
Weight Before	616.86	g	Wt. Container (gms)	50.04	126.15
Wet Density	119.18	pcf	Moisture, (%)	19.52	24.95
Dry Density	99.72	pcf	Degree of Saturation	76	100

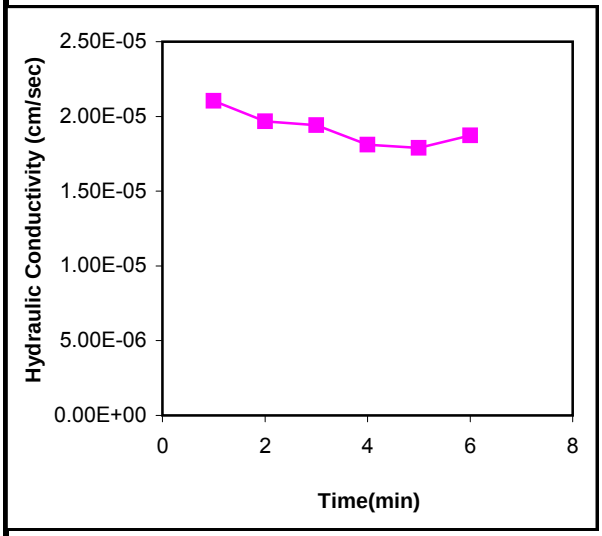
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	35.0	40.0	5.0	0.94
Back Pressure,psi	30.0	34.7	4.7	

Consolidation Data					
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.2 °c T2= 23.2 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	136.677	17.8	0
1.00	2.0	1	0.95	137.627	17.9	2.10E-05
1.00	2.0	1	0.90	139.477	18.2	1.97E-05
1.00	2.0	1	0.90	141.277	18.4	1.94E-05
1.00	2.0	1	0.85	143.027	18.6	1.81E-05
1.00	2.0	1	0.85	144.727	18.9	1.79E-05
1.00	2.0	1	0.90	146.477	19.1	1.87E-05

Hydraulic Conductivity, k_{20} (cm/sec): 1.77E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/07/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/11/16
Boring No.:	-		Checked by	AP	Date 04/16/16
Sample No.:	122	Elevation: 1908			
Soil Description:	Sandy Clay				
Sample Type:	Shelby Tube				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.85	in			
Sample Area (A)	6.37	in²	Wt. Wet Soil+Container(gms)	290.55	803.54
Length (L)	3.00	in	Wt. Dry Soil+Container(gms)	268.65	701.48
Weight Before	613.70	g	Wt. Container (gms)	50.23	149.57
Wet Density	122.15	pcf	Moisture, (%)	10.03	18.49
Dry Density	111.02	pcf	Degree of Saturation	52	100

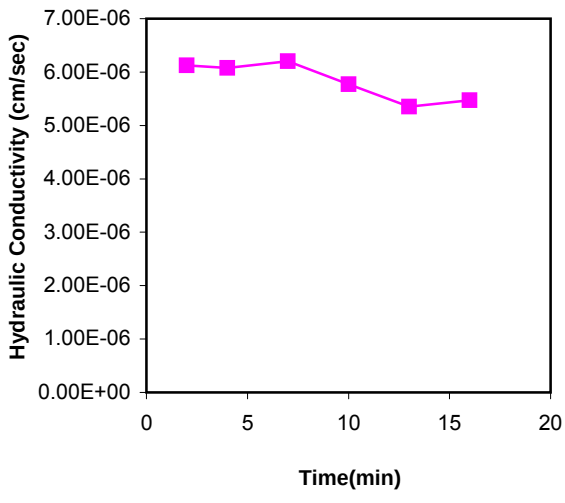
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	35.0	40.0	5.0	0.96
Back Pressure,psi	30.0	34.8	4.8	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.7 °c T2= 23.7 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	138.677	18.2	0
2.00	2.0	1	0.55	139.227	18.3	6.13E-06
2.00	2.0	1	0.55	140.327	18.4	6.08E-06
3.00	2.0	1	0.85	141.727	18.6	6.20E-06
3.00	2.0	1	0.80	143.377	18.8	5.77E-06
3.00	2.0	1	0.75	144.927	19.0	5.35E-06
3.00	2.0	1	0.77	146.452	19.2	5.47E-06

Hydraulic Conductivity, k_{20} (cm/sec): 5.34E-06

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/07/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/11/16
Boring No.:	-		Checked by	AP	Date 04/16/16
Sample No.:	125	Elevation: 1776			
Soil Description:	Silty Sand				
Sample Type:	Shelby Tube				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.90	in			
Sample Area (A)	6.62	in²	Wt. Wet Soil+Container(gms)	157.24	762.12
Length (L)	3.04	in	Wt. Dry Soil+Container(gms)	148.65	630.63
Weight Before	562.07	g	Wt. Container (gms)	50.36	135.03
Wet Density	106.30	pcf	Moisture, (%)	8.74	26.53
Dry Density	97.75	pcf	Degree of Saturation	33	99

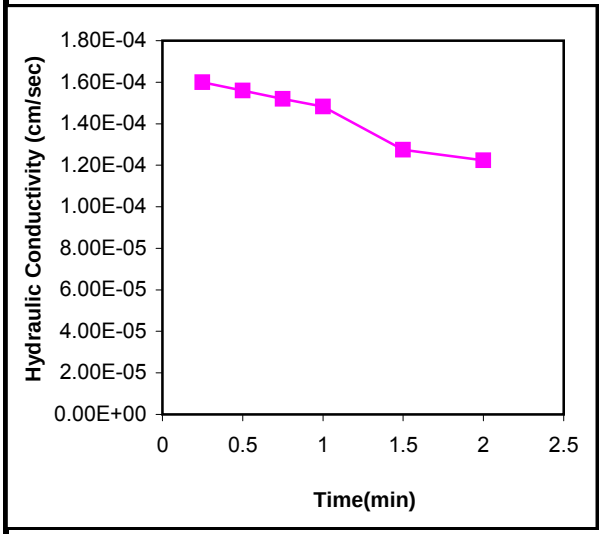
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	35.0	40.0	5.0	0.96
Back Pressure,psi	30.0	34.8	4.8	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.1 °c T2= 23.1 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	67.2385	8.7	0
0.25	1.0	1	0.90	68.1385	8.8	1.60E-04
0.25	1.0	1	0.90	69.9385	9.0	1.56E-04
0.25	1.0	1	0.90	71.7385	9.3	1.52E-04
0.25	1.0	1	0.90	73.5385	9.5	1.48E-04
0.50	1.0	1	1.60	76.0385	9.8	1.27E-04
0.50	1.0	1	1.60	79.2385	10.3	1.22E-04

Hydraulic Conductivity, k_{20} (cm/sec): 1.34E-04

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/07/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/11/16
Boring No.:	-		Checked by	AP	Date 04/16/16
Sample No.:	126	Elevation: 1719			
Soil Description:	Sandy Clay				
Sample Type:	Shelby Tube				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.89	in			
Sample Area (A)	6.56	in²	Wt. Wet Soil+Container(gms)	173.26	806.71
Length (L)	3.05	in	Wt. Dry Soil+Container(gms)	163.00	694.53
Weight Before	618.53	g	Wt. Container (gms)	50.76	149.66
Wet Density	117.83	pcf	Moisture, (%)	9.14	20.59
Dry Density	107.96	pcf	Degree of Saturation	44	99

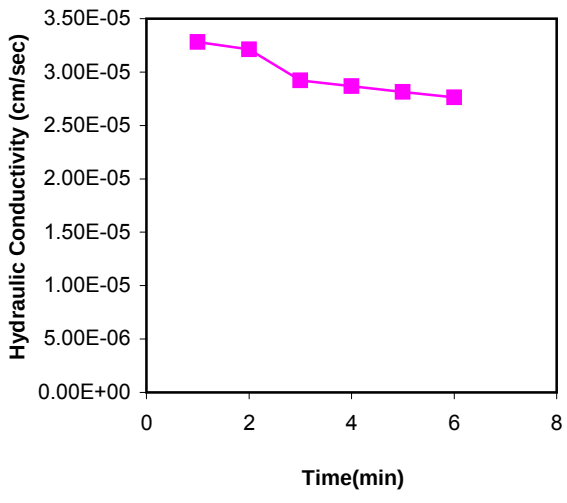
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	35.0	40.0	5.0	0.96
Back Pressure,psi	30.0	34.8	4.8	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.3 °c T2= 23.3 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	64.5385	8.3	0
1.00	1.0	1	0.70	65.2385	8.4	3.28E-05
1.00	1.0	1	0.70	66.6385	8.6	3.21E-05
1.00	1.0	1	0.65	67.9885	8.8	2.92E-05
1.00	1.0	1	0.65	69.2885	9.0	2.87E-05
1.00	1.0	1	0.65	70.5885	9.1	2.81E-05
1.00	1.0	1	0.65	71.8885	9.3	2.76E-05

Hydraulic Conductivity, k_{20} (cm/sec): 2.75E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/07/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/11/16
Boring No.:	-		Checked by	AP	Date 04/16/16
Sample No.:	128	Elevation: 1807			
Soil Description:	Silty Sand				
Sample Type:	Shelby Tube				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.88	in			
Sample Area (A)	6.50	in²	Wt. Wet Soil+Container(gms)	224.41	824.96
Length (L)	3.03	in	Wt. Dry Soil+Container(gms)	212.36	710.63
Weight Before	586.45	g	Wt. Container (gms)	50.28	180.01
Wet Density	113.59	pcf	Moisture, (%)	7.43	21.55
Dry Density	105.73	pcf	Degree of Saturation	34	98

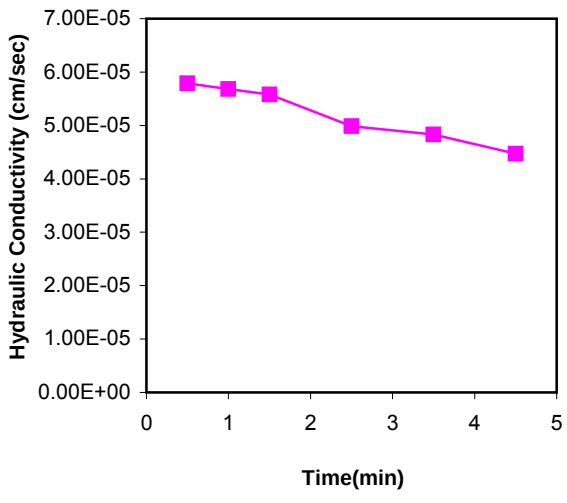
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	35.0	40.0	5.0	0.98
Back Pressure,psi	30.0	34.9	4.9	

Consolidation Data					
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.3 °c T2= 23.3 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	62.9385	8.2	0
0.50	1.0	1	0.60	63.5385	8.3	5.79E-05
0.50	1.0	1	0.60	64.7385	8.4	5.68E-05
0.50	1.0	1	0.60	65.9385	8.6	5.58E-05
1.00	1.0	1	1.10	67.6385	8.8	4.99E-05
1.00	1.0	1	1.10	69.8385	9.1	4.83E-05
1.00	1.0	1	1.05	71.9885	9.4	4.47E-05

Hydraulic Conductivity, k_{20} (cm/sec): 4.83E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/07/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/11/16
Boring No.:	-		Checked by	AP	Date 04/16/16
Sample No.:	130	Elevation: 1713			
Soil Description:	Lean Clay with sand				
Sample Type:	Shelby Tube				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.89	in			
Sample Area (A)	6.54	in²	Wt. Wet Soil+Container(gms)	233.83	782.05
Length (L)	3.03	in	Wt. Dry Soil+Container(gms)	213.80	661.71
Weight Before	592.14	g	Wt. Container (gms)	51.51	143.4
Wet Density	114.02	pcf	Moisture, (%)	12.34	23.22
Dry Density	101.50	pcf	Degree of Saturation	50	95

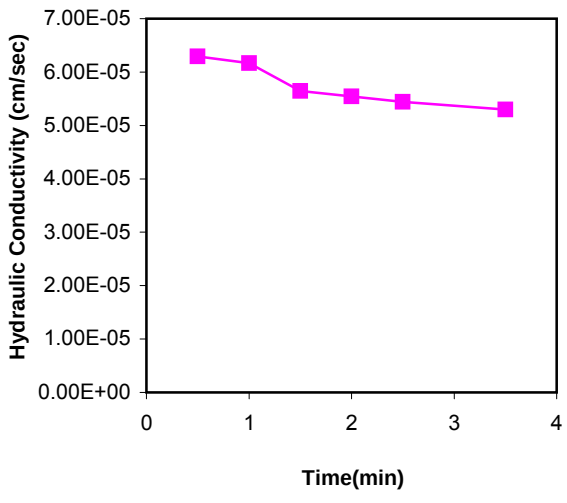
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	35.0	40.0	5.0	0.96
Back Pressure,psi	30.0	34.8	4.8	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.8 °c T2= 23.8 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	71.9385	9.4	0
0.50	1.0	1	0.75	72.6885	9.5	6.29E-05
0.50	1.0	1	0.75	74.1885	9.7	6.17E-05
0.50	1.0	1	0.70	75.6385	9.8	5.64E-05
0.50	1.0	1	0.70	77.0385	10.0	5.54E-05
0.50	1.0	1	0.70	78.4385	10.2	5.44E-05
1.00	1.0	1	1.40	80.5385	10.5	5.30E-05

Hydraulic Conductivity, k_{20} (cm/sec): 5.24E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/12/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/14/16
Boring No.:	-		Checked by	AP	Date 04/16/16
Sample No.:	131	Elevation: 1874			
Soil Description:	Sandy Clay				
Sample Type:	Shelby Tube				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.87	in			
Sample Area (A)	6.47	in²	Wt. Wet Soil+Container(gms)	240.37	798.46
Length (L)	3.02	in	Wt. Dry Soil+Container(gms)	220.56	684.44
Weight Before	605.49	g	Wt. Container (gms)	51.75	146.9
Wet Density	118.13	pcf	Moisture, (%)	11.74	21.21
Dry Density	105.72	pcf	Degree of Saturation	53	96

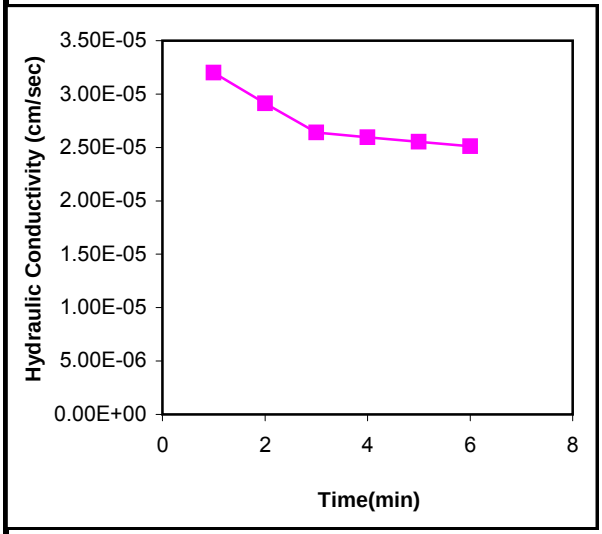
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	35.0	40.0	5.0	0.96
Back Pressure,psi	30.0	34.8	4.8	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.2 °c T2= 23.2 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	66.5385	8.7	0
1.00	1.0	1	0.70	67.2385	8.8	3.20E-05
1.00	1.0	1	0.65	68.5885	8.9	2.91E-05
1.00	1.0	1	0.60	69.8385	9.1	2.64E-05
1.00	1.0	1	0.60	71.0385	9.3	2.60E-05
1.00	1.0	1	0.60	72.2385	9.4	2.55E-05
1.00	1.0	1	0.60	73.4385	9.6	2.51E-05

Hydraulic Conductivity, k_{20} (cm/sec): 2.54E-05

AP Engineering and Testing, Inc.
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/12/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/14/16
Boring No.:	-		Checked by	AP	Date 04/16/16
Sample No.:	132	Elevation: 1835			
Soil Description:	Clayey Sand				
Sample Type:	Shelby Tube				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.89	in			
Sample Area (A)	6.56	in²	Wt. Wet Soil+Container(gms)	503.66	797.95
Length (L)	3.02	in	Wt. Dry Soil+Container(gms)	480.94	685.24
Weight Before	595.38	g	Wt. Container (gms)	140.97	148.93
Wet Density	114.48	pcf	Moisture, (%)	6.68	21.02
Dry Density	107.31	pcf	Degree of Saturation	32	100

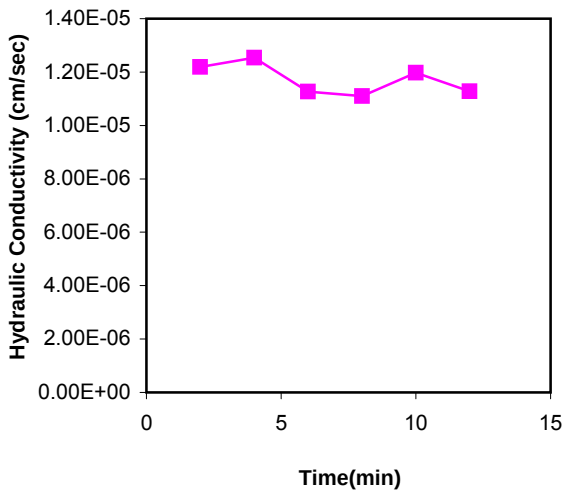
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	35.0	40.0	5.0	0.96
Back Pressure,psi	30.0	34.8	4.8	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 23.2 °c T2= 23.2 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	2.0	1	0.0	135.977	17.7	0
2.00	2.0	1	1.10	137.077	17.9	1.22E-05
2.00	2.0	1	1.15	139.327	18.2	1.25E-05
2.00	2.0	1	1.05	141.527	18.4	1.13E-05
2.00	2.0	1	1.05	143.627	18.7	1.11E-05
2.00	2.0	1	1.15	145.827	19.0	1.20E-05
2.00	2.0	1	1.10	148.077	19.3	1.13E-05

Hydraulic Conductivity, k_{20} (cm/sec): 1.09E-05

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FLEXIBLE WALL HYDRAULIC CONDUCTIVITY TEST
ASTM D5084

Project Name:	Sunshine Canyon LF Intermediate Cover		Tested by	ST	Date 04/12/16
Project No.:	197-4666-0001		Calculated by	NN	Date 04/14/16
Boring No.:	-		Checked by	AP	Date 04/19/16
Sample No.:	133	Elevation: 1871			
Soil Description:	Sandy Clay				
Sample Type:	Shelby Tube				
Test Condition:	Undisturbed				
	Confining Pressure =	5 PSI			

INITIAL CONDITION OF SPECIMEN

				Before	After
Diameter (d)	2.87	in			
Sample Area (A)	6.48	in²	Wt. Wet Soil+Container(gms)	280.82	792.29
Length (L)	3.02	in	Wt. Dry Soil+Container(gms)	263.72	682.05
Weight Before	601.09	g	Wt. Container (gms)	51.50	142.12
Wet Density	116.87	pcf	Moisture, (%)	8.06	20.42
Dry Density	108.15	pcf	Degree of Saturation	39	99

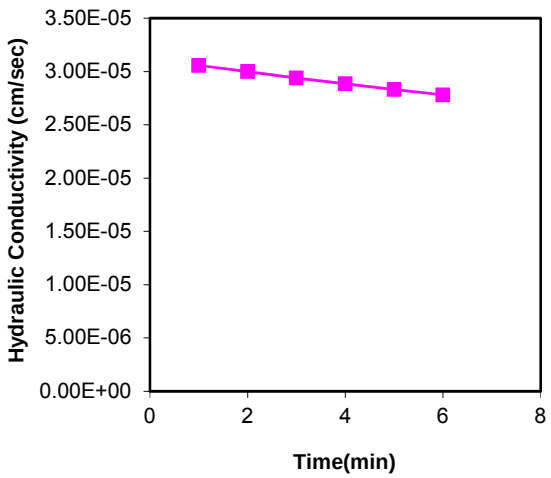
SATURATION AND CONSOLIDATION PHASES

B-value Check	Initial	Final	Diff	B-value
Cell Pressure,psi	35.0	40.0	5.0	0.96
Back Pressure,psi	30.0	34.8	4.8	

Consolidation Data						
		Volume Reading (cc)			
Date	Time	Top	Bot.	Total	ΔV

FLOW DATA

T1= 22.3 °c T2= 22.3 °c



Δt (min)	Head (psi)	Burette Factor	ΔQ (cc)	Δh (cm)	Δh/L	k (cm/s)
0	1.0	1	0.0	64.6385	8.4	0
1.00	1.0	1	0.65	65.2885	8.5	3.06E-05
1.00	1.0	1	0.65	66.5885	8.7	3.00E-05
1.00	1.0	1	0.65	67.8885	8.8	2.94E-05
1.00	1.0	1	0.65	69.1885	9.0	2.88E-05
1.00	1.0	1	0.65	70.4885	9.2	2.83E-05
1.00	1.0	1	0.65	71.7885	9.4	2.78E-05

Hydraulic Conductivity, k_{20} (cm/sec): 2.76E-05

ATTACHMENT L

OFF-SITE DAILY NEIGHBORHOOD SURVEY PLAN

SUNSHINE CANYON LANDFILL

REVISED: APRIL 2013

Sunshine Canyon Landfill personnel will survey specific areas around the landfill every day the site is open for business for purposes of collecting any litter encountered. Litter will be collected in plastic bags and brought back to the site for disposal. All off-site areas survey areas are no more than 1.5 miles from the property boundary of the landfill as required by CUP Condition No. 48. The off-site survey areas are shown on Figure 1. Please note that all the routes include the landfill entrance up to the scalehouse area. This portion of the routes is shown in white on Figure 1.

SURVEY ROUTES AND PROCEDURES

The following describes the survey routes to be addressed. It should be noted that due to the high speeds that vehicles travel on San Fernando Road and the lack of sidewalks or a shoulder, only the west side of San Fernando Road will be monitored by site personnel. It is considered un-safe for personnel to walk along the eastern side of San Fernando Road. For all other streets listed below, both sides of the street will be monitored.

1. Monday – O'Melveny Route (Yellow Route on Figure 1)

   Two (2) temporary laborers will be dropped off at the entrance to O'Melveny Park on Sesnon Blvd. One laborer will walk on one side of the road and one on the other side of the road along the following route:

   - Walk east on Sesnon Blvd. to Balboa Blvd
   - Turn left on Balboa Blvd
   - Turn left on Balboa Rd
   - Turn left (north) on San Fernando Road past the landfill entrance to the Balboa Blvd off-ramp of the I-5 Freeway
   - Turn around and walk south on San Fernando Road back to the landfill entrance
   - Continue up haul road to scalehouse

   This route will be driven by a Sunshine Canyon Landfill spotter and temporary laborer to collect all plastic bags filled during the survey and any bulky items. The plastic bags and bulky items will be taken back to the landfill for disposal.

2. Tuesday – Woodley Route (Red Route on Figure 1)

Two (2) temporary laborers will be dropped off at the intersection of Woodley Ave and Balboa Blvd. One laborer will walk on one side of the road and one on the other side of the road along the following route:

- Walk north on Balboa Blvd.
- Turn left on Balboa Rd
- Turn left (north) on San Fernando Road past the landfill entrance to the Balboa Blvd off-ramp of the I-5 Freeway
- Turn around and walk south on San Fernando Road back to the landfill entrance
- Continue up haul road to scalehouse

This route will be driven by a Sunshine Canyon Landfill spotter and temporary laborer to collect all plastic bags filled during the survey and any bulky items. The plastic bags and bulky items will be taken back to the landfill for disposal.

3. Wednesday – Old Sepulveda Route (Blue Route on Figure 1)

Two (2) temporary laborers will be dropped off at the southernmost end of Old Sepulveda Blvd (Old Sepulveda and Roxford St). One laborer will walk on one side of the road and one on the other side of the road along the following route:

- Walk north on Old Sepulveda Blvd
- Turn left (north) on San Fernando Road past the landfill entrance to the Balboa Blvd off-ramp of the I-5 Freeway
- Turn around and walk south on San Fernando Road back to the landfill entrance
- Continue up haul road to scalehouse

This route will be driven by a Sunshine Canyon Landfill spotter and temporary laborer to collect all plastic bags filled during the survey and any bulky items. The plastic bags and bulky items will be taken back to the landfill for disposal.

4. Thursday – Yarnell Route (Green Route on Figure 1)

Two (2) temporary laborers will be dropped off at the intersection of Yarnell St and Foothill Blvd. One laborer will walk on one side of the road and one on the other side of the road along the following route:

- Walk north on Foothill Blvd

- Turn left on Balboa Blvd and walk south to Balboa Road
- Turn right on Balboa Road to San Fernando Road
- San Fernando Road past the landfill entrance to the Balboa Blvd off-ramp of the I-5 Freeway
- Turn around and walk south on San Fernando Road back to the landfill entrance
- Continue up haul road to scalehouse

This route will be driven by a Sunshine Canyon Landfill spotter and temporary laborer to collect all plastic bags filled during the survey and any bulky items. The plastic bags and bulky items will be taken back to the landfill for disposal.

5. Friday –Old Road/Sierra Highway up to Highway 14 Overpass Route (Orange Route on Figure 1)

Two (2) temporary laborers will be dropped off where Highway 14 crosses over Sierra Highway. The following route will be monitored:

- Walk west then south along Sierra Highway to San Fernando Road
- Turn left (south) on San Fernando Road to the landfill entrance
- Continue up haul road to scalehouse

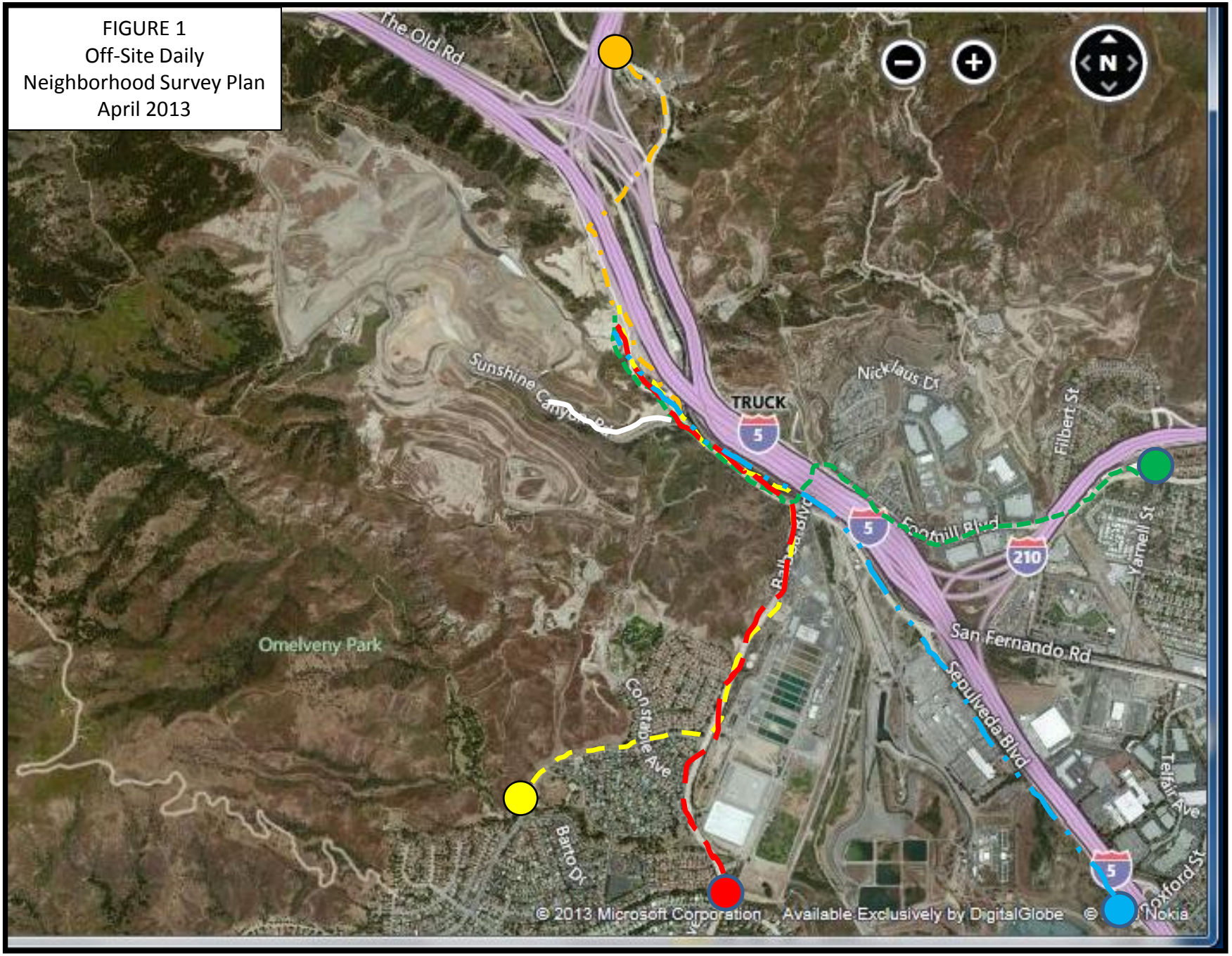
This route will be driven by a Sunshine Canyon Landfill spotter and temporary laborer to collect all plastic bags filled during the survey and any bulky items. The plastic bags and bulky items will be taken back to the landfill for disposal.

DOCUMENTATION

The Off-Site Survey Form (see attached) will be completed each day a survey is performed. The completed form will be turned in to a Site Operations Supervisor at the completion of each survey. The forms will be kept in the Operations Supervisor's office in a separate binder labeled "Daily Neighborhood Survey".

Each day a survey is conducted, a Sunshine Canyon Landfill employee will drive each of the survey routes to assess whether any additional litter pick-up is required. This additional patrol will be documented on the Daily Neighborhood Survey form as well as any actions taken as a result of the additional patrol.

FIGURE 1
Off-Site Daily
Neighborhood Survey Plan
April 2013



DAILY NEIGHBORHOOD SURVEY PLAN FORM A

DAY OF THE WEEK _____ DATE _____

SURVEYORS: _____

TIME OF SURVEY:
(START TO END) _____

ROUTE PICKED: _____

DUST WHEN & WHERE _____ N/A _____

ODOR WHEN & WHERE _____ N/A _____

WHERE OTHER DAILY ROUTE PATROLLED YES _____ NO _____

DESCRIPTION & AMOUNT OF ITEMS COLLECTED: _____

_____

MAPS OF AREAS PATROLLED (ON REVERSE) _____

COMMENTS: _____

_____

SUPERVISOR SIGN-OFF: _____