7.4.2 Applicators will always avoid applications of pesticides that directly contact water, unless the pesticide is registered under Federal and California law for aquatic use.

7.4.3 Pesticides that are not approved for aquatic use will not be applied to areas immediately adjacent to water bodies where through drift, drainage, or erosion, there is a reasonable possibility of a pesticide being transported into surface water.

7.4.4 Discharges of pollutants from the use of aquatic pesticides to the waters of the United States require coverage under a NPDES permit. Those City employees or appropriately licensed contractors employed by the City who apply pesticides directly to waters of the United States will obtain a NPDES permit from the California State Water Quality Resources Control Board Region 2, prior to making any pesticide applications.

7.5 Best Management Practices (BMPs)

7.5.1 This section includes additional BMPs and control measures not discussed above to protect water quality. These BMPs were previously incorporated into the City of Alameda's Best Management Practices for Pesticides, Herbicides and Fertilizers Usage, utilized by Public Works, Recreation & Parks, Housing Authority and the Golf Complex. An IPM process assists in the determination of whether or not a pesticide application is necessary.

1. Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of pesticides and training of pest control advisors and applicators.
2. Use the most effective, least toxic pesticides that will do the job, provided there is a choice. The agency will take into consideration the LD_{50}, overall risk to the applicator, and impact to the environment (chronic and acute effects).
3. Apply pesticides at the appropriate time to maximize their effectiveness and minimize the likelihood of discharging pesticides in stormwater runoff. Avoid application of pesticides if rain is expected (this does not apply to the use of pre- emergent herbicide applications when required by the label for optimal results.)
4. Employ techniques to minimize off-target application (i.e. spray drift) of pesticides, including consideration of alternative application techniques. For example, when spraying is required, increase drop size, lower application pressure, use surfactants and adjuvants, use wick application, etc.
5. Apply pesticides only when wind speeds are low.
6. Mix and apply only as much material as is necessary for treatment. Calibrate application equipment prior to and during use to ensure desired application rate.
7. Do not mix or load pesticides in application equipment adjacent to a storm drain inlet, culvert, or watercourse.
8. Properly inspect applicator equipment to prevent accidental pesticide leaks, spills and hazards to applicators and the environment.
9. Meet local fire department and Alameda County Agricultural Commissioner storage requirements for pesticide products. Provide secondary containment for liquids if required.
10. Prepare spill kits, store the kits near pesticides, and train employees to use them.
11. Store pesticides and other chemicals indoors in a locked and posted storage unit, as per California Code of Regulations.
12. Store pesticides in labeled containers, as per California Code of Regulations.
13. Rinse empty pesticide/herbicide containers, and empty in the spray, as per California Code of Regulations.
14. Dispose of triple-rinsed empty pesticide containers according to recommendations of the Alameda County Agricultural Commissioner and the manufacturer.
15. Try to find a qualified user for any unwanted pesticides, or return to the manufacturer if unopened. If disposal is required, contact Alameda County's Household Hazard Waste Collection Program at (510) 670-6460 between 8:30 AM and 5:00 PM., Monday through Friday, to make appropriate disposal

arrangements, or to recycle the material.
16. If changing pesticides or cleaning spray tanks, use tank rinse water as the product, over a targeted area within the application site.
17. Irrigate slowly to prevent runoff, and do not over-water.

City of Alameda Contractor Verification Form
Implementation of City of Alameda Integrated Pest Management Policy

The City of Alameda (City) is mandated to:

(a) Minimize its reliance on pesticides that threaten water quality, and
(b) Require the effective use of Integrated Pest Management (IPM) in all municipal operations and on all municipal property.

To ensure compliance with this mandate, all City operations need to verifiably implement the practices and policies described in the City's IPM Policy adopted June 15, 2010. A copy of this IPM Policy is included with this form. The implementation of the IPM Policy is applicable to all municipal contractors that provide landscaping, structural pest control, or other pest management services in support of City operations and/or on municipal property.

The undersigning parties acknowledge that all elements of the City's IPM Policy will be implemented throughout the period of contractual services provided to City operations and on municipal property. Specific actions to document this performance shall include:

- ❑ Pest Management Contractor shall provide to City project manager for pre-approval the Pest Management Considerations Checklist.
- ❑ Pest Management Contractor shall avoid the use of the following pesticides that threaten water quality, human health and the environment:
  - Acute Toxicity Category I chemicals as identified by the Environmental Protection Agency (EPA)
  - Organophosphate pesticides (e.g., those containing Diazinon, chlorpyrifos or malathion)
  - Pyrethroids (bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin), carbamates (e.g., carbaryl), and fipronil
  - Copper-based pesticides unless their use is judicious, other approaches and techniques have been considered and the threat of impact to water quality is prevented.
- ❑ Pest Management Contractor shall provide to the City's project manager an annual Report of all pesticide usage in support of City operations including product name and manufacturer, active ingredient(s), target pest(s), the total amounts used and reasons for any increase in use of any pesticide.
- ❑ If the Contractor's on-site personnel are currently IPM certified through either the EcoWise or GreenPro programs, or through another program, the contractor shall provide written evidence of any certifications to the City's project manager.

______________________________	______________________________
City Departmental Representative	Contractor Representative
______________________________	______________________________
Print Name	Print Name
______________________________	______________________________
Date	Date
______________________________	______________________________
City Department	City Contractor

City of Alameda Pest Management Contractor Checklist:
Pest Management Options Considerations

Contractor will consider the City IPM Policy's hierarchy of options or alternatives listed below, in the following order before recommending the use of or applying any pesticide on City property. Please provide a written explanation in each section below of why the specific pest management option is not appropriate:

(1) No controls (e.g. tolerating the pest infestation, use of resistant plant varieties or allowing normal life cycle of weeds)

Comment: ____

____

____

(2) Physical or mechanical controls (e.g. hand labor, mowing, exclusion)

Comment: ____

____

____

(3) Cultural controls (e.g. mulching, disking, alternative vegetation), good housekeeping (e.g. cleaning desk area)

Comment: ____

____

____

(4) Biological controls (e.g., natural enemies or predators)

Comment: ____

____

____

(5) Reduced-risk chemical controls (e.g., soaps or oils)

Comment: ____

____

____

(6) Other chemical controls

Comment: ____

____

____

Contractor Representative

____
Print Name

____
Date

____
City Contractor

ATTACHMENT J – PROJECT STABILIZATION AGREEMENT

PROJECT STABILIZATION AGREEMENT

FOR THE

CITY OF ALAMEDA

PREAMBLE

This Agreement is made and entered into on this date, January 19, 2017, by and between the city of Alameda ("City" or "Owner") together with contractors and/or subcontractors who shall become signatory to this Agreement by signing the "Agreement To Be Bound" (Addendum "A"), ("Contractor/Employer(s)"), and the Building and Construction Trades Council of Alameda County, AFL-CIO ("Council") and its affiliated Local Unions signatory hereto ("Union(s)").

The purpose of this Agreement is to promote efficiency of construction operations during construction of the Project (as defined in Section 1.11 below) by providing for the orderly and peaceful settlement of labor disputes and grievances without strikes, work stoppages or lockouts, thereby promoting the public interest in assuring the timely and economical completion of the Project.

RECITALS

WHEREAS, the timely and successful completion of the Project is of the utmost importance to the city of Alameda; and

WHEREAS, large numbers of workers of various skills will be required in the performance of the construction work, including those to be represented by the Union(s) signatory to this Agreement employed by Contractor/Employer(s) and subcontractors who are also signatories to this Agreement; and

WHEREAS, it is recognized that on a project of this magnitude with multiple contractors and bargaining units on the job site at the same time over an extended period of time, the potential for work disruption is substantial without an overriding commitment to maintain continuity of work; and

WHEREAS, the interests of the general public, the city of Alameda, the Union(s) and Contractor/Employer(s) would be best served if the construction work proceeded in an orderly manner without disruption because of strikes, sympathy strikes, work stoppages, picketing, lockouts, slowdowns or other interferences with work; and

WHEREAS, the Contractor/Employer(s) and the Union(s) desire to mutually establish and stabilize wages, hours and working conditions for the workers employed on the Project by the Contractor/Employer(s), and further, to encourage close cooperation among the

Contractor/Employer(s) and the Union(s) so that a satisfactory, continuous and harmonious relationship will exist among the parties to this Agreement; and

WHEREAS, the parties agree that one of the primary purposes of this Agreement is to avoid the tensions that might arise on the Project if union and non-union workers of different employers were to work side by side on the Project thereby leading to labor disputes that could delay completion of the Project; and

WHEREAS, this Agreement is not intended to replace, interfere with, abrogate, diminish or modify existing local or national collective bargaining agreements in effect during the duration of the Project, insofar as a legally binding agreement exists between the Contractor/Employer(s) and the affected Union(s), except to the extent that the provisions of this Agreement are inconsistent with said collective bargaining agreements, in which event, the provisions of this Agreement shall prevail; and

WHEREAS, the contract(s) for construction work on the Project will be awarded in accordance with the applicable provisions of the California Public Contract Code; and

WHEREAS, the city of Alameda desires to provide construction training and employment opportunities for residents of the city of Alameda and Alameda County through apprentice and pre-apprentice programs; and

WHEREAS, the parties to this Agreement pledge their full good faith and trust to work towards a mutually satisfactory completion of the Project;

NOW, THEREFORE, IT IS AGREED BETWEEN AND AMONG THE PARTIES HERETO, AS FOLLOWS:

ARTICLE 1

DEFINITIONS

1.1 "City" means the city of Alameda.

1.2 "Agreement" means this Project Stabilization Agreement and all attached hereto Addenda.

1.3 "Agreement To Be Bound" means the document, as set forth in Addendum A hereto, that formally binds the Contractor/Employer(s) to comply with all the terms and conditions of this Agreement and that operates as a pre-condition to performing work on the Project.

1.4 "Apprentice" means an individual registered and participating as an apprentice in a Joint Labor/Management Apprenticeship Program approved by the State of California, Department of Industrial Relations, Division of Apprenticeship Standards.

1.5 “Completion” shall mean the date upon which the written notice of completion has been issued for a specific building, phase or project constructed under this Agreement.

1.6 “Construction Contract” means the public works or improvement contract(s) which will be awarded by the City and which are necessary to complete the Project, including subcontracts at any tier.

1.7 "Contractor/Employer(s)" means any individual, firm, partnership or corporation, or combination thereof, including joint ventures, and their successors and assigns that is an independent business enterprise and enters into a contract with the City or its Project Manager or any of its contractors or subcontractors at any tier, with respect to the construction of any part of the Project under contract terms and conditions approved by the City and which incorporate this Agreement.

1.8 “Coordinator” means that individual or entity designated and authorized by the City to provide those administrative services required by this Agreement.

1.9 “Council” means the Building and Construction Trades Council of Alameda County, AFL-CIO.

1.10 “Master Labor Agreement” (“MLA” or “Schedule A”) means the Master Collective Bargaining Agreement of each craft Union(s) signatory to this Agreement listed in Exhibit A to this Agreement and incorporated herein by reference, a copy of which shall be made available to the City upon request.

1.11 "Project" means those Construction Contracts for individual public works, within the City of Alameda with a total value (as estimated by the City) of one million dollars ($1,000,000.00) or more. Specifically excluded from this definition of Project and, therefore, the scope of this Agreement are multi-year contracts that have already been let by the City. The City and the Council may mutually agree in writing to add additional components to the Project Scope of Work to be covered under this Agreement.

1.12 “Project Manager” means the person or persons or business entity designated by City or private developer having control over a public works project to oversee all phases of construction on the Project.

1.13 “Trust Fund(s)” means an agreement for an established vacation, pension or other form of deferred compensation plan, apprenticeship and health benefit funds established by an applicable Master Labor Agreement as set forth in Section 17.1.

1.14 “Union(s)” means the Building and Construction Trades Council of Alameda County, AFL-CIO and any affiliated Labor Organization signatory to this Agreement, acting on their own behalf and on behalf of their respective affiliates and member organizations whose names are subscribed hereto and who have through their officers executed this Agreement.

ARTICLE 2

SCOPE OF AGREEMENT

2.1 The City will apply this Agreement as a contract specification to the award of all public works construction contracts on the Project for Covered Work as specifically defined under Article 2 of this Agreement. This Agreement does not apply to any private development projects. In the event that the City is made aware that this Agreement or portions thereof are inconsistent with the terms and conditions of any grant, loan, or contract with any Federal or State agency or with the instructions or directions of an authorized representative of a Federal or State agency regarding the requirements of any such grant, loan, or contract, the City shall notify the Council. Within seven (7) days of notification, the parties shall meet and confer to attempt to modify the Agreement to avoid forfeiture of any funding or otherwise resolve the issue. Should the parties be unable to come to agreement, the Agreement or any inconsistent provision shall be subject to resolution by the grievance arbitration procedures set forth in Article 11. The foregoing notwithstanding, if the granting agency determines that the resolution of such grievance procedure will result in the forfeiture of material grant funds (meaning an amount that would threaten viability of the project), then the Agreement may be modified or terminated in order to avoid the forfeiture.

2.2 Parties: The Agreement shall apply and is limited to all Contractor/Employer(s) performing work for the Project (including subcontractors at any tier), the City, the Council and the Union(s) signatory to this Agreement, acting on their own behalf and on behalf of their respective affiliates and member organizations whose names are subscribed hereto and who have through their officers executed this Agreement.

2.3 Covered Work: This Agreement covers, without limitation, all site preparation, surveying, construction, alteration, demolition, installation, improvement painting or repair of buildings, structures and other works, and related activities for the Project, including geotechnical and exploratory drilling, temporary HVAC, and landscaping and temporary fencing that is within the craft jurisdiction of one of the Union(s) and which is directly or indirectly part of the Project, including, without limitation to the following examples, pipelines (including those in linear corridors built to serve the project), pumps, pump stations, start-up, and modular furniture installation. On-site work includes work done for the Project in temporary yards or areas adjacent to the Project, and at any on-site or off-site batch plant constructed solely to supply materials to the Project. This scope of work includes all on-site soils and materials testing and inspection where such testing and inspection is a classification in which a prevailing wage determination has been published.

2.4.1 This Agreement shall apply to any start-up, calibration, commissioning, performance testing, repair, operational revisions to systems and/or subsystems performed after Completion if it is within the scope of the contract for public work unless it is performed by City employees.

2.4.2 This Agreement covers all on-site fabrication work over which the City, Contractor/Employer(s) or subcontractor(s) possess the right of control (including work done for the Project in any temporary yard or area established for the Project). Additionally, it is agreed hereby that this Agreement covers any off-site work, including fabrication work necessary for the Project defined herein, that is covered by a current MLA or local addenda to a National Agreement of the applicable Union(s) that is in effect as of the execution date of this Agreement.

2.4.3 The furnishing of supplies, equipment or materials which are stockpiled for later use shall not be covered by this Agreement. However, construction trucking work, such as the delivery of ready-mix, asphalt, aggregate, sand or other fill material which are incorporated into the construction process as well as the off-hauling of debris and excess fill, material and/or mud, shall be covered by the terms and conditions of this Agreement, to the fullest extent provided by law and by prevailing wage determinations of the California Department of Industrial Relations. Contractor/Employer(s), including brokers, of persons providing construction trucking work shall provide certified payroll records to the City within ten (10) days of written request or as required by bid specifications.

2.4.4 It is agreed that the Contractor shall require all contractors of whatever tier who have been awarded contracts for work covered by this Agreement, to accept and be bound by the terms and conditions of this Project Agreement by executing the Agreement to be Bound (Attachment A) prior to commencing work. The Project Manager and/or Coordinator shall assure compliance with this Agreement by the Contractors. It is further agreed that, where there is a conflict, the terms and conditions of this Project Agreement shall supersede and override terms and conditions of any and all other national, area, or local collective bargaining agreements, except work covered by the Agreement within the following craft jurisdictions shall be performed under the terms of their National Agreements as follows: National Agreement of Elevator Constructors, National Transient Lodge (NTL) Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, and all instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, except that Articles 5, 6, and 11 of this Agreement shall prevail and be applied to such work. It is understood that this is a self-contained, stand alone, Agreement and that by virtue of having become bound to this Project Agreement, neither the Project Contractor/Manager nor the Contractors will be obligated to sign any other local, area, or national agreement.

2.5 The on-site installation or application of all items shall be performed by the craft having jurisdiction over such work as set forth under the provisions of this Agreement; provided, however, it is recognized that installation of specialty items which may be furnished by the owner of the Project or a contractor shall be performed by construction persons employed under this Agreement who may be directed by other personnel in a supervisory role.

2.6 After installation by the Contractor/Employer(s) and upon Completion, it is understood, the City reserves the right to perform start-up, operation, repair, maintenance or revision of equipment or systems with employees of the City. If required, the service representative may make a final check and may direct workmen on site to make any necessary repairs to protect the terms of a manufacturer's guarantee or warranty prior to start-up of a piece of equipment.

2.7 It is expressly agreed and understood by the parties hereto that the City shall have the right to purchase material and equipment from any source, except where limited by this Agreement, and the craftspersons will handle and install such material and equipment.

2.8 Exclusions. The following shall be excluded from the scope of this Agreement:

2.8.1 The Agreement is not intended to, and shall not affect or govern the award of public works contracts by the City which are not included in the Project.

2.8.2 The Agreement shall not apply to a Contractor/Employer(s)' non-construction craft employees, including, but not limited to, executives, managerial employees, engineering employees and supervisors above the level of General Foreman or Senior General Foreman (except those covered by existing MLAs), staff engineers or other professional engineers, administrative and management.

2.8.3 This Agreement shall not apply to any work performed on or near or leading to the site of work covered by this Agreement that is undertaken by state, county, city or other governmental bodies or their contractors; or by public or private utilities or their contractors.

2.8.4 Off-site maintenance of leased equipment and on-site supervision of such work;

2.8.5 The City shall not be required to comply with this Agreement for any work performed with its own forces as permitted by the City Charter, City Codes or Ordinances, the California Uniform Construction Cost Accounting Act, Public Contract Code and Education Code, as applicable.

2.9 Award of Contracts: It is understood and agreed that the City shall, for the award of contracts for public works, have the absolute right to select the bidder with the lowest responsive, responsible bid for the award of contracts under this Agreement. The bidder need only be willing, ready and able to execute and comply with this Agreement.

ARTICLE 3

EFFECT OF AGREEMENT

3.1 By executing the Agreement, the Union(s) and the City agree to be bound by each and all of the provisions of the Agreement.

3.2 By accepting the award of a construction contract for the Project, whether as contractor or subcontractor, the Contractor/Employer(s) agrees to be bound by each and every provision of the Agreement and agrees that it will evidence its acceptance prior to the commencement of work by executing the Agreement To Be Bound in the form attached hereto as Addendum A.

3.3 At the time that any Contractor/Employer(s) enters into a subcontract with any subcontractor providing for the performance of a construction contract, the Contractor/Employer(s) shall provide a copy of this Agreement to said subcontractor and shall require the subcontractor as a part of accepting an award of a construction subcontract to agree in writing to be bound by each and every provision of this Agreement prior to the commencement of work. The obligations of a Contractor/Employer(s) may not be evaded by subcontracting.

3.4 Each Contractor/Employer(s) shall give written notice to the Union(s) of any subcontract involving the performance of work covered by this Agreement within either seven (7) days of entering such subcontract or before such Contractor/Employer(s) commences work on the Project, whichever occurs first. Such notice shall specify the name, address, phone number, and the California Contractor State License Board (CSLB) license number and motor carrier permit number, and DIR registration number, of the Contractor/Employer(s). Written notice at a Pre-Job Conference shall be deemed written notice under this provision for those Contractor/Employer(s) listed at the Pre-Job only.

3.5 This Agreement shall only be binding on the signatory parties hereto and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any such party. Each Contractor/Employer(s) shall alone be liable and responsible for its own individual acts and conduct and for any breach or alleged breach of this Agreement. Any dispute between the Union(s) and the Contractor/Employer(s) respecting compliance with the terms of the Agreement shall not affect the rights, liabilities, obligations and duties between the signatory Union(s) and other Contractor/Employer(s) party to this Agreement.

3.6 The provisions of this Agreement, including MLA's, shall apply to the work covered by this Agreement, notwithstanding the provisions of any other local, area and/or national agreements which may conflict with or differ from the terms of this Agreement. Where a subject covered by the provisions of this Agreement is also covered by a MLA, the provisions of this Agreement shall prevail. Where a subject is covered by the provisions of a MLA and is not covered by this Agreement, the provisions of the MLA shall prevail.

3.7 (a) With regard to any Contractor/Employer(s) that is independently signed to any MLA, this Project Stabilization Agreement shall in no way supersede or prevent the enforcement of any subcontracting clause contained in such MLA, except as specifically set forth in subsection (b) of this Section 3.7. Any such subcontracting clause in an MLA shall remain and be fully enforceable between each craft union and its signatory employers, and no provision of this Project Stabilization Agreement shall be interpreted and/or applied in any manner that would give this Project Stabilization Agreement precedence over subcontracting obligations and restrictions that exist between craft unions and their respective signatory employers under an MLA, except as specifically set forth in subsection (b) of this Section 3.7.

(b) If a craft union (hereafter "Aggrieved Union") believes that an assignment of work on this Project has been made improperly by a contractor or subcontractor, even if that assignment was as a result of another craft union's successful enforcement of the subcontracting clause in its MLA, as permitted by subsection (a) of this Section 3.7, the Aggrieved Union may submit a claim under the jurisdictional resolution process contained in Article 6 of this PLA, and the decision rendered as part of that process shall be enforceable to require the contractor or subcontractor that made the work assignment to assign that work prospectively to the Aggrieved Union. An award made to a craft union under the subcontracting clause of its MLA, as permitted pursuant to Section 3.7 (a) of this Article, shall be valid and fully enforceable by that craft union unless it conflicts with a jurisdictional award made pursuant to this Agreement. If the award made under the MLA conflicts with the jurisdictional award, the award of any damages under the former shall be null and void ab initio.

ARTICLE 4

RELATIONSHIP BETWEEN PARTIES

4.1 This Agreement shall only be binding on the signatory parties hereto, and shall not apply to parents, affiliates, subsidiaries, or other ventures of any such party.

4.2 Each Contractor/Employer(s) shall alone be liable and responsible for its own individual acts and conduct and for any breach or alleged breach of this Agreement. Any alleged breach of this Agreement by a Contractor/Employer(s) or any dispute between the Union(s) and the Contractor/Employer(s) respecting compliance with the terms of this Agreement, shall not affect the rights, liabilities, obligations and duties between the signatory Union(s) and each of the other Contractor/Employer(s), party to this Agreement.

4.3 It is mutually agreed by the parties that any liability of a Union(s) shall be several and not joint. Any alleged breach of this Agreement by a signatory Union(s) shall not affect the rights, liabilities, obligations and duties between the Contractor/Employer(s) and the other Union(s) party to this Agreement.

4.4 It is recognized by the parties to this Agreement that the Contractor/Employer(s) are acting only on behalf of said Contractor/Employer(s), and said Contractor/Employer(s) have no authority, either expressed, implied, actual, apparent or ostensible, to speak for or bind the City.

ARTICLE 5

NO STRIKES - NO LOCKOUTS

5.1 The Union(s), the City and Contractor/Employer(s) covered by the Agreement agree that for the duration of the Project:

5.1.1 There shall be no strikes, sympathy strikes, work stoppages, picketing, hand billing or otherwise advising the public that a labor dispute exists, or slowdowns of any kind, for any reason, by the Union(s) or employees employed on the Project, at the job site of the Project or at any other facility of the City because of a dispute on the Project. Disputes arising between the Union(s) and Contractor/Employer(s) on other City projects are not governed by the terms of the Agreement or this Article.

5.1.2 As to employees employed on the Project, there shall be no lockout of any kind by a Contractor/Employer(s) covered by the Agreement.

5.1.3 If a master collective bargaining agreement expires before the Contractor/Employer(s) completes the performance of the Construction Contract and the Union(s) or Contractor/Employer(s) gives notice of demands for a new or modified master collective bargaining agreement, the Union(s) agrees that it will not strike on work covered under this Agreement and the Union(s) and the Contractor/Employer(s) agree that the expired master collective bargaining agreement shall continue in full force and effect for work covered under this Agreement until a new or modified master collective bargaining agreement is reached. If the new or modified master collective bargaining agreement provides that any terms of the master collective bargaining agreement shall be retroactive, the Contractor/Employer(s) agrees to comply with any retroactive terms of the new or modified master collective bargaining agreement which are applicable to employees who were employed on the projects during the interim with retroactive payment due within seven (7) days of the effective date of the modified Master Agreement.

5.1.4 Withholding employees for failure of a Contractor/Employer(s) to tender timely Trust Fund(s) contributions as required in accordance with Article 16 and/or for failure to timely meet its weekly payroll is not a violation of this Article 5; however, the Union(s) shall give the affected Contractor/Employer(s), the Coordinator and the City written notice seventy-two (72) hours prior to the withholding of employees when failure to tender Trust Fund(s) contributions has occurred. There shall be twenty-four (24) hours notice when failure to meet weekly payroll has occurred or when paychecks are determined to be nonnegotiable by a financial institution normally recognized to honor such paychecks.

Should a Contractor/Employer(s) performing work on this Project be delinquent in the payment of Trust Fund(s) contributions required under this Agreement, the

Union(s) may request that the general Contractor/Employer(s) issue joint checks payable to the Contractor/Employer(s) and the appropriate employee benefit Trust Fund(s), on behalf of the employee(s) until such delinquencies are satisfied. Any Trust Fund(s) claiming that a Contractor/Employer(s) is delinquent in its fringe benefit contributions to the Trust Fund(s) will provide written notice of the alleged delinquency to the affected Contractor/Employer(s), with copies to the General Contractor/Employer(s), the Coordinator and the City. The notice will indicate the amount of delinquency asserted and the period that the delinquency covers. It is agreed, however, with respect to Contractor/Employer(s) delinquent in trust or benefit contribution payments, that nothing in this Agreement shall affect normal contract remedies available under the MLAs. If the General Contractor/Employer(s) is delinquent in the payment of Trust Fund(s) contributions for covered work performed on this project, the General Contractor/Employer(s) agrees that the affected Trust Fund(s) may place the City on notice of such delinquencies and the General Contractor/Employer(s) further agrees that the City may issue joint checks to the General Contractor/Employer(s) and the Trust Fund(s), on behalf of the employee(s) until the delinquency is satisfied.

5.2 Expedited Arbitration: Any party to this Agreement shall institute the following procedure, prior to initiating any other action at law or equity, when a breach of this Article is alleged to have occurred:

5.2.1 A party invoking this procedure shall notify Bob Hirsch, as the permanent Arbitrator, or, Barry Winograd, as the alternate Arbitrator under this procedure. In the event that the permanent Arbitrator is unavailable at any time, the alternate will be contacted. If neither is available, then a selection shall be made from the list of Arbitrators in Article 11.2.2, Step 5. Should either the permanent or the alternate arbitrator listed above no longer work as a labor arbitrator, the City and the Council shall mutually agree to a replacement. Notice to the Arbitrator shall be by the most expeditious means available, with notices by facsimile, email or telephone to the Coordinator, the City and the party alleged to be in violation, and to the Council and involved local Union(s) if a Union(s) is alleged to be in violation.

5.2.2 Upon receipt of said notice, the Coordinator will contact the designated Arbitrator named above or his alternate who will attempt to convene a hearing within twenty-four (24) hours if it is contended that the violation still exists.

5.2.3 The Arbitrator shall notify the parties by facsimile, email or telephone of the place and time for the hearing. Said hearing shall be completed in one session, which, with appropriate recesses at the Arbitrator's discretion, shall not exceed twenty-four (24) hours unless otherwise agreed upon by all parties. A failure of any party to attend said hearings shall not delay the hearing of evidence or the issuance of an award by the Arbitrator.

5.2.4 The sole issue at the hearing shall be whether or not a violation of Article 5, Section 5.1.1 of the Agreement has occurred. The Arbitrator shall have no authority to consider any matter of justification, explanation or mitigation of such violation or to award damages, which issue is reserved for court proceedings, if any. The award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with or enforcement of the award. The Arbitrator may order cessation of the violation of this Article and other appropriate relief and such award shall be served on all parties by hand or certified mail upon issuance.

5.2.5 Such award may be enforced by any Court of competent jurisdiction upon the filing of this Agreement and all other relevant documents referred to above in the following manner. Written notice of the filing of such enforcement proceedings shall be given to the other party. In the proceeding to obtain a temporary order enforcing the Arbitrator's award as issued under Section 5.2.4 of this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order or enforcement. The Court's order or orders enforcing the Arbitrator's award shall be served on all parties by hand or delivered by certified mail.

5.2.6 Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure, or which interfere with compliance, are waived by the parties.

5.2.7 The fees and expenses of the Arbitrator shall be divided equally between the party instituting the arbitration proceedings provided in this article and the party alleged to be in breach of its obligation under this article.

ARTICLE 6

WORK ASSIGNMENTS AND JURISDICTIONAL DISPUTES

6.1 The assignment of Covered Work will be solely the responsibility of the Contractor/Employer(s) performing the work involved and such work assignments will be in accordance with the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor Plan.

6.2 All jurisdictional disputes on this Project between or among the Union(s) and the Contractor/Employer(s), parties to this Agreement, shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department, or any other plan or method of procedure that may be adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the Contractor/Employer(s) and Union(s) parties to this Agreement.

6.2.1 If a dispute arising under this Article involves the Northern California Carpenters Regional Council or any of its subordinate bodies, an Arbitrator shall be chosen by the procedures specified in Article V, Section 5, of the Plan from a list composed of John Kagel, Thomas Angelo, Robert Hirsch and Thomas Pagan and the Arbitrator's hearing on the dispute shall be held at the offices of the California State Building and Construction Trades Council in Sacramento, California, within fourteen (14) days of the selection of the Arbitrator. All other procedures shall be as specified in the Plan.

6.3 All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, or slow-down of any nature, and the Contractor/Employer(s)' assignment shall be adhered to until the dispute is resolved. Individuals violating this Section shall be subject to immediate discharge.

6.4 Each Contractor/Employer(s) shall conduct a Pre-Job Conference with the Council prior to commencing Covered Work. The Primary Employer, the Coordinator and the City will be advised in advance of all such conferences and may participate if they wish. Pre-job conferences for different Contractor/Employer(s) may be held together.

ARTICLE 7

COORDINATOR

7.1 The City will designate a Coordinator, who will be responsible for the administration and application of this Agreement.

7.2 The Coordinator shall endeavor to facilitate harmonious relations between the Contractors and Unions signatory hereto and will represent the City at the Pre-Job Conference(s) called for in Article 8 and the A Joint Administrative Committee called for in Article 20. The Coordinator shall not be responsible for the acts of the Contractor/Employer(s) or Unions signatory hereto, and will not be a party to any arbitration or litigation arising out of this Agreement.

ARTICLE 8

PRE-JOB CONFERENCES

8.1 Pre-Job Conference Timing and Attendees:

8.1.1 The Contractor shall hold and conduct a mandatory pre-job conference with representatives of all involved sub-contractors and the Unions at a location mutually agreeable to the Council at least twenty-one (21) calendar days prior to:

(a) The commencement of any Covered Work, as defined in section 2.3 above; and

(b) The commencement of Covered Work on each subsequently awarded Construction Contract.

8.1.2 The conference shall be attended by a representative of each participating Contractor, each affected Union, and the Council. The Owner may attend at its discretion.

8.2 Pre-Job Conference Information.

8.2.1 The information to be presented at the pre-job conference will consist of:

(a) A listing of each Contractor's scope of work;

(b) The Contractor's craft assignments;

(c) The estimated number of craft workers required to perform the work;

(d) Transportation and parking arrangements, if any;

(e) The estimated start and completion dates of the work;

(f) Identification of any pre-fabricated materials;

(g) All workforce projection information required under Article 14 of this Agreement; and

(h) A listing of all specialty work to be performed by the employees of an equipment vendor or manufacturer to protect the warranty on such equipment, and a demonstration by enumeration of specific tasks why such work cannot be performed by Covered Employees.

8.3 Work will not commence for any Contractor until an **Agreement to be Bound** has been signed and submitted by a duly authorized representative of the Contractor to the applicable Union(s) and the Council.

ARTICLE 9

MANAGEMENT RIGHTS

9.1 Consistent with the Schedule A Agreements, the Contractor/Employer(s) shall retain full and exclusive authority for the management of their operations, including the right to direct their work force in their sole discretion. No rules, customs or practices shall be permitted or observed which limit or restrict production, or limit or restrict the working efforts of employees except that lawful manning provisions in the MLA shall be recognized.

ARTICLE 10

WORK RULES

10.1 Work rules shall apply as set forth in the applicable MLA.

ARTICLE 11

GRIEVANCE PROCEDURE

11.1 All disputes concerning the interpretation and/or application of this Agreement which do not fall within the Article 5, No Strikes-No Lockouts procedure or Article 6, Work Assignments and Jurisdictional Disputes, shall be governed by the following grievance and arbitration procedure.

Employee Grievances: All disputes involving discipline and/or discharge of employees working on the Project shall be resolved through the grievance and arbitration provision contained in the MLA for the craft of the affected employee. No employee working on the Project shall be disciplined or dismissed without just cause.

11.2 Grievances between one or more Union(s) and one or more Contractor/Employer(s); or between the City and one or more Contractor/Employer(s) regarding interpretation and/or application of this Agreement shall be pursued according to the following provisions:

11.2.1 A grievance shall be considered null and void if not brought to the attention of the Contractor/Employer(s) or the Union(s) within fourteen (14) calendar days after the grievance is alleged to have occurred but in no event more than thirty (30) calendar days after the charging party became aware of the event giving rise to the dispute. The Coordinator shall be delivered a copy of all grievances.

11.2.2 Grievances between one or more Union(s) and one or more Contractor/Employer(s), or between the City and one or more Contractor/Employer(s) regarding provisions of this Agreement shall be settled or otherwise resolved according to the following Steps and provisions:

Step 1: A representative of the grievant and the party against whom the grievance is filed shall meet and attempt to resolve the grievance.

Step 2: In the event the matter remains unresolved in Step 1 above, within seven (7) calendar days, the grievance shall be reduced to writing and may then be referred by the Union(s), the City, or the Contractor/Employer(s) to the other party for discussion and resolution.

Step 3: In the event that the representatives are unable to resolve the dispute within the seven (7) calendar days after its referral to Step 2, either involved party may submit the dispute within seven (7) calendar days to the Joint Administrative Subcommittee established in Section 20.2. The Joint Administrative Subcommittee shall meet within seven (7) calendar days after such referral (or such longer time as is mutually agreed upon by the representatives on the Joint Administrative Subcommittee) to confer in an attempt to resolve the grievance. If a Union(s) is party to the grievance, regardless of which party has initiated the grievance proceeding, prior to the meeting of the Joint Administrative Subcommittee, the Union(s) shall notify its International Union Representative(s), which shall advise both parties if it intends on participating in the meeting. The participation by the International Union Representative in this Step 3 meeting shall not delay the time set herein for the meeting, unless otherwise mutually agreed by the parties. If the dispute is not resolved by the Joint Administrative Subcommittee, it may be referred within seven (7) calendar days by either party to Step 4.

At the time a grievance is submitted under this Agreement or any MLA, the Union(s) may request that the City withhold and retain an amount from what is due and owing to the Contractor/Employer(s) against whom the grievance is filed, sufficient to cover the damages alleged in the grievance, should the Union(s) prevail.

The amount shall be retained by the City until such time as the underlying grievance giving rise to the retention is withdrawn, settled, or otherwise resolved, and the retained amount shall be paid to whomever the parties to the grievance shall decide, or to whomever an Arbitrator shall so order.

Step 4: In the event the matter remains unresolved in Step 3, either Party may request, within seven (7) calendar days, that the dispute be submitted to arbitration. The time limits set out in this procedure may, upon mutual agreement, be extended. Any request for arbitration, request for extension of time limits, and agreement to extend such time limits shall be in writing with a copy delivered to the Coordinator.

Step 5: The Parties agree that the Arbitrator who will hear the grievance shall be selected from the following: Barry Winograd, William Riker, and Robert Hirsch. The parties shall flip a coin to determine who shall strike the first name and shall then alternately strike names from the list and the last remaining name shall be the neutral third party Arbitrator who shall have the power to resolve the dispute in a final and binding manner. Should a Party to the procedure fail or refuse to participate in the hearing, if the Arbitrator determines that proper notice of the hearing has been given, said hearing shall proceed to a default award. The Arbitrator's award shall be final and binding on all Parties to the arbitration. The costs of the arbitration, excluding attorney fees, including the Arbitrator's fee and expenses, shall be borne by the losing party. The Arbitrator's decision shall be confined to the question(s) posed by the grievance and the Arbitrator shall not have authority to modify amend, alter, add to, or subtract from, any provisions of this Agreement.

11.3 Grievances raised by the City against one or more Union(s) and/or the Council, or against the City by one or more Union(s) and/or the Council, regarding provisions of this Agreement shall be settled or otherwise resolved according to the following Steps and provisions:

Step 1: The Joint Administrative Subcommittee shall attempt to resolve the grievance. The Joint Administrative Subcommittee shall meet within five (5) working days after receipt of the grievance (or such longer time as is mutually agreed upon by the representatives on this Joint Administrative Subcommittee) to confer with regard to the grievance. If the dispute is not resolved by the Joint Administrative Subcommittee, it may be referred within five (5) working days by either party to the Joint Administrative Committee.

Step 2: The Joint Administrative Committee shall attempt to resolve the grievance. The Joint Administrative Committee shall meet within five (5) working days after receipt of the grievance (or such longer time as is mutually agreed upon by the representatives on the Joint Administrative Committee) to confer with regard to the grievance. In the event that the Joint Administrative Committee is unable to resolve the dispute within the five (5) working days after receipt of the grievance, either involved party may proceed to Step 3.

Step 3: In the event the matter remains unresolved pursuant to Step 2, either Party may request that the dispute be submitted to arbitration in accordance with the process set forth in Paragraph 11.2.2. Step 5.

Step 4: Should a Party to the procedure fail or refuse to participate in the hearing, if the Arbitrator determines that proper notice of the hearing has been given, said hearing shall proceed to a default award. The Arbitrator's award shall be final and binding on all Parties to the arbitration. The costs of the arbitration, including the Arbitrator's fee and expenses, shall be borne by the losing Party. The Arbitrator's decision shall be confined to the question(s) posed by the grievance and the Arbitrator shall not have authority to modify amend, alter, add to, or subtract from, any provisions of this Agreement.

11.4 Grievances between a Union(s) and a Union(s)' signatory Contractor/Employer(s) involving interpretation or application of the MLA shall be governed by the grievance procedures contained in the MLA.

ARTICLE 12

UNION RECOGNITION AND REPRESENTATION

12.1 The Contractor/Employer(s) recognize the Union(s) signatory hereto as the sole and exclusive collective bargaining representatives for all craft employees on the Project.

12.2 The Contractor/Employer(s) shall require all employees who work on a Construction Contract on or before eight (8) days of consecutive or cumulative employment on the Project to comply with the applicable Union(s)' security provisions, and to maintain compliance for the period of time they are performing work on the Project, which requirement shall be satisfied by the tendering of periodic dues and fees uniformly required to the extent allowed by law. Further, there is nothing in this Agreement that would prevent non-union employees from joining the Union(s).

12.3 Authorized representatives of the Union(s) shall have access to the site at all times. Such representatives shall comply with reasonable visitor safety and security rules established for the Project at the pre-job meeting. Access for Union(s) representatives will not be unduly restricted.

ARTICLE 13

REFERRAL

13.1 Contractor/Employer(s) performing construction work on the Project described in the Agreement shall, in filling craft job requirements, utilize and be bound by the registration facilities and referral systems established or authorized by the Union(s) signatory hereto when such procedures are not in violation of Federal law. The Contractor/Employer(s) shall have the right to reject any applicant referred by the Union(s), in accordance with the applicable Master Agreement.

13.2 The Contractor/Employer(s) shall have the unqualified right to select and hire directly all supervisors above the level of general foreman or senior general foreman it considers necessary and desirable, without such persons being referred by the Union(s).

13.3 In the event that referral facilities maintained by the Union(s) are unable to fill the requisition of a Contractor/Employer(s) for employees within a forty-eight (48) hour period (Saturdays, Sundays and Holidays excluded) after such requisition is made by the Contractor/Employer(s), the Contractor/Employer(s) shall be free to obtain workers from any source. A Contractor/Employer(s) who hires any personnel to perform covered work on the Project pursuant to this Section shall immediately provide the appropriate Union(s) with the name and address of such employee(s) and shall immediately refer such employee(s) to the appropriate Union(s) to satisfy the requirements of Article 12 of this Agreement.

ARTICLE 14

LOCAL WORKFORCE DEVELOPMENT

14.1 The parties agree to a goal that residents of the city of Alameda, and Alameda County ("Local Residents"), in order of priority as here listed, will perform up to twenty-five percent (25%) percent of all hours worked on the Project, on a craft-by-craft basis, if such workers are available, capable and willing to work. Contractors will first be required to request residents from the City of Alameda, and if those are not available, will then request residents from Alameda County. If the Local Resident is also a high school graduate of a high school located in Alameda or has received a General Educational Development diploma ("GED") while living in Alameda, those hours will count double. In addition, the parties agree that participants in the Alameda Point Collaborative Program will be referred to the apprentice programs of the Union(s) and establish a goal that such participants will perform fifteen percent (15%) of all apprentice hours worked on the Project. All participants that will be referred to the contractors to meet this requirement will have gone through a pre-apprenticeship program that meets the Multi-Craft Core Curriculum as established by the National Building Trades, or other union pre-apprenticeship programs.

14.2 The Contractor/Employer(s) shall make good faith efforts to reach these goals working through the hiring hall procedures of the applicable Schedule A Agreement and, when applicable, utilize their "rehire" and "name call" rights to employ such Local Residents. The Union(s) shall utilize their utmost efforts to recruit sufficient numbers of apprentice and journeymen craftspersons who are Local Residents to fulfill the requirements of the Contractor/Employer(s). The parties to this Agreement support the development and placement of increased numbers of skilled construction workers from Local Residents to meet the needs of the Project and the requirements of the industry generally.

14.3 To evaluate the performance of the Contractor/Employer(s) and Union(s) in achieving the employment of Local Residents goal on this Project, the Contractor/Employer(s) shall submit copies of their monthly certified payroll reporting forms to the Coordinator. The Contractor shall also submit a monthly report tabulating the ratio of Local Residents to total employees for each craft Union to the Coordinator. The performance of the Contractor/Employer(s) and Union(s) will be reviewed at the periodic Joint Administrative Committee meetings called for in Section 20 of this Agreement.

ARTICLE 15

NON-DISCRIMINATION

15.1 The Contractor/Employer(s) and Union(s) agree to comply with all anti-discrimination provisions of federal, state and local law, to protect employees and applicants for employment on the Project.

ARTICLE 16

APPRENTICES

16.1 Recognizing the need to maintain continuing support of programs designed to develop adequate numbers of competent workers in the construction industry, the Contractor/Employer(s) will employ apprentices in the respective Union(s) to perform such work as is within their capabilities and which is customarily performed by the Union(s) in which they are indentured. The apprentice ratios will be in compliance with the applicable provisions of the California Labor Code and Prevailing Wage Rate Determinations.

16.2 The parties only recognize the State-approved Apprenticeship training programs administered by Joint Labor/Management Apprenticeship Training Committees for the purposes of meeting the goals of this Article 16.

ARTICLE 17

WAGE SCALES AND FRINGE BENEFITS

17.1 All Contractor/Employer(s) agree to pay contributions to the established vacation, pension and other form of deferred compensation plan, apprenticeship, health benefit funds, and all other contributions established by the applicable MLA for each hour worked on the Project in the amounts designated in the MLAs of the appropriate Union(s) that are recognized by a prevailing wage determination and paid in accordance with the MLA. The Contractor/Employer(s) shall not be required to pay contributions to any other trust funds or other contributions that are not contained in the published prevailing wage determination to satisfy their obligation under this Article, except that those Contractor/Employer(s) who are signatory to the MLAs with the respective trades shall continue to pay all trust fund or other contributions as outlined in such MLAs.

17.2 By signing this Agreement, the Contractors/Employers adopt and agree to be bound by the written terms of the legally established Trust Agreements, as described in Section 17.1, which may from time to time be amended, specifying the detailed basis on which payments are to be made into, and benefits paid out of, such Trust Funds. The Contractors/Employers authorize the parties to such local trust agreements to appoint trustees and successor trustees to administer the Trust Funds and hereby ratify and accept the trustees so appointed as if made by the Contractors/Employers. The Contractors/Employers agree to execute a separate Subscription Agreement(s) for Trust Funds when such Trust Fund(s) requires such document(s).

17.3 Wages, Hours, Terms and Conditions of Employment: The wages, hours and other terms and conditions of employment on the Project shall be governed by the MLAs of the respective Union(s), copies of which shall be made available to the City upon request, to the extent such MLA is not inconsistent with this Agreement.

17.4 Holidays: Holidays shall be established as set forth in the applicable MLA.

ARTICLE 18

HEALTH AND SAFETY

18.1 The employees covered by the terms of this Agreement shall at all times, while in the employ of the Contractor/Employer(s), be bound by the reasonable safety rules and regulations as established by the City and Contractor/Employer(s) and in accordance with OSHA/Cal-OSHA. These rules and regulations will be published and posted at conspicuous places throughout the Project.

18.2 In accordance with the requirements of OSHA/Cal-OSHA, it shall be the exclusive responsibility of each Contractor/Employer(s) on the Project to assure safe working conditions for its employees and compliance by them with any safety rules contained herein or established by the Contractor/Employer(s).

18.3 A convenient supply of cold and potable drinking water shall be provided by the Contractor/Employer(s).

18.4 The Contractor/Employer(s) and Union(s) agree that the work site shall be a drug free workplace. Parties agree to recognize and use the Substance Abuse Prevention Program contained in each applicable Union(s)' MLA.

ARTICLE 19

HELMETS TO HARDHATS

19.1 The parties recognize a desire to facilitate the entry into the Building and Construction Trade Union(s) of veterans who are interested in careers in the building and construction industry. The parties agree to utilize the services of the Center for Military Recruitment, Assessment and Veteran's Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the parties.

19.2 The Union(s) and Contractor/Employer(s) agree to coordinate with the Center to assist in the creation and maintenance an integrated database of Veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Union(s) will give credit to such Veterans for bona fide, provable past experience.

19.3 To evaluate the performance of the Contractor/Employer(s) and Union(s) in achieving the employment of veterans on this Project, the Contractor/Employer(s) shall submit to the Coordinator information regarding veterans it has employed on a Project. The Contractor/Employer(s) shall submit a monthly report tabulating the number of veterans employed to the Coordinator. The performance of the Contractor/Employer(s) and Union(s) will be reviewed at the periodic Joint Administrative Committee meetings called for in Section 20 of this Agreement.

ARTICLE 20

JOINT ADMINISTRATIVE COMMITTEE

20.1 The Council and the City to this Agreement shall establish a six (6) person Joint Administrative Committee. This Committee shall be comprised of three (3) representatives selected by the City and three (3) representatives selected by the Council. The City and the Council shall designate alternates who shall serve in the absence of designated representatives for any purpose contemplated by this Agreement. The Joint Administrative Committee shall meet as required to review the implementation of the Agreement, the progress of the Projects and the employment of Local Residents and veterans on Projects covered by this Agreement.

20.2 The Joint Administrative Committee shall appoint a Joint Administrative Subcommittee consisting of one City representative and one Union(s) representative for the purpose of convening to confer in an attempt to resolve a grievance that has been filed consistent with Article 11. Any question regarding the meaning, interpretation, or application of the provisions of this Agreement shall be referred directly to the Joint Administrative Subcommittee for resolution. The Joint Administrative Subcommittee shall meet as required to resolve grievances by majority vote with such resolutions to be final and binding on all signatories of the Agreement. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an award by the Joint Administrative Subcommittee, if such award is made by a majority vote, and the hearing shall proceed ex parte. If the subcommittee is unable to resolve the grievance, the grievance may be referred in accordance with Step 3 of Article 11.

ARTICLE 21

MISCELLANEOUS PROVISIONS

21.1 Counterparts. This Agreement may be executed in counterparts, such that original signatures may appear on separate pages, and when bound together all necessary signatures shall constitute an original. Faxed or e-mailed pdf signature pages transmitted separately to other parties to this Agreement shall be deemed equivalent to original signatures.

21.2 Warranty of Authority. Each of the persons signing this Agreement represents and warrants that such person has been duly authorized to sign this Agreement on behalf of the party indicated, and each of the parties by signing this Agreement warrants and represents that such party is legally authorized and entitled to enter into this Agreement.

ARTICLE 22

GENERAL SAVINGS CLAUSE

22.1 It is not the intention of either the City, Contractor/Employer(s) or the Union(s) parties to violate any laws governing the subject matter of this Agreement. If any Article or provision of this Agreement shall be declared invalid, inoperative, or unenforceable by any competent authority of the executive, legislative, judicial or administrative branch of the federal, state or local government, the parties shall suspend the operation of each such Article or provision during the period of invalidity. Such suspension shall not affect the operation of any other provision covered in this Agreement to which the law or regulation is not applicable. Further, the Contractor/Employer(s) and Union(s) agree that if and when any or all provisions of this Agreement are finally held or determined to be illegal or void by a Court of competent jurisdiction, the City and the Council will promptly enter into negotiations concerning the substance affected by such decision for the purpose of achieving conformity with the requirements of an applicable law and the intent of the parties hereto.

ARTICLE 23

DURATION OF AGREEMENT

23.1 This Agreement shall become effective on the day the city of Alameda ratifies this Agreement and shall continue in full force and effect for a period of three (3) years, at which time this Agreement will be reviewed and considered for extension or renewal with modifications if appropriate. Individual projects within the scope of this Agreement may be completed in phases and this Agreement shall be applied to such individual projects until Completion of such phase. After the expiration of this Agreement, the provisions of the Agreement shall continue to apply to those Projects subject to this Agreement until construction is completed. The parties may mutually agree in writing to amend, extend or terminate this Agreement at any time.

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ADDENDUM "A"

PROJECT STABILIZATION AGREEMENT FOR THE CITY OF ALAMEDA

AGREEMENT TO BE BOUND

The undersigned party confirms that it agrees and assents to comply with and to be bound by the City of Alameda Project Stabilization Agreement as such Agreement may, from time to time, be amended by the parties or interpreted pursuant to its terms.

By executing this Agreement To Be Bound, the undersigned party subscribes to, adopts and agrees to be bound by the written terms of the legally established trust agreements, as set forth in section 17, specifying the detailed basis upon which contributions are to be made into, and benefits made out of, such Trust Fund(s) and ratifies and accepts the trustees appointed by the parties to such Trust Fund(s) and agrees to execute a separate Subscription Agreement(s) for Trust Funds when such Trust Fund(s) require(s) such document(s).

Such assent and obligation to comply with and to be bound by this Agreement shall extend to all work covered by said Agreement undertaken by the undersigned party. The undersigned party shall require all of its subcontractors, of whatever tier, to become similarly bound for all their work within the scope of this Agreement by signing an identical Agreement To Be Bound.

This letter shall constitute a subscription agreement, to the extent of the terms of the letter.

Dated: ____________________ Project: ____________________________________

______________________________	______________________________
Signature of Authorized Officer	Authorized Officer & Title
______________________________	______________________________
Name of Contractor/Employer(s)	Contractor/Employer(s) Address
______________________________	______________________________
CSLB #	Area Code Phone
______________________________	______________________________
E-mail and/or Fax	Motor Carrier (CA) Permit Number
______________________________	
DIR Prevailing Wage Registration #	

EXHIBIT A
MASTER LABOR AGREEMENTS OF SIGNATORY AFFILIATED LOCAL UNIONS:

SIGNATURES

City of Alameda

Jill Keimach, City Manager

Approved as to Form:
Janet Kern, City Attorney

Building and Construction Trades Council
Of Alameda County, AFL-CIO

Andreas Cluver, Secretary-Treasurer

SIGNATORY UNION(S)

Asbestos Workers, Local 16	By:
Boilermakers, Local 549	By:
Bricklayers & Allied Craftsmen, Local 3	By:
Cement Masons, Local 300	By:
Electrical Workers, Local 595	By:
Elevator Constructors, Local 8	By:
Laborers, Local 886	By:

Iron Workers, Local 378	By: ______________
Laborers, Local 67	By: ______________
Laborers, Local 304	By: Fernando Estrada
Operating Engineers, Local 3	By: ______________
Plasterers, Local 66	By: ______________
Roofers, Local 81	By: Francisco Garcia
Sheet Metal Workers, Local 104	By: ______________
Sign Display, Local 510	By: Joseph B Toback
Sprinkler Fitters, Local 483	By: Stanley M. Smith
Teamsters, Local 853	By: ______________

United Association of Journeymen and Apprentices Fitting Industry, Underground Utility & Landscape, Local 355

By: ______________________________

United Association of Steamfitters, Pipefitters, Plumbers, & Gas Fitters, Local 342

By: ______________________________

Northern California Carpenters Regional Council (on behalf of Carpenters, Local 713, Carpenters, Local 2236, Lathers, Local 68L, Millwrights, Local 102, Pile Drivers, Local 34)

By: ______________________________

District Council No. 16 Northern California International Union of Painters & Allied Trades (on behalf of Auto & Marine Painters, Local 1176, Carpet & Linoleum Layers, Local 12, Glaziers, Architectural Metal & Glassworkers, Local 169, Painters & Tapers, Local 3)

By: ______________________________

District Council of Iron Workers of the State of California & Vicinity Trades

By: ______________________________

ATTACHMENT K – GEOTECHNICAL INVESTIGATION REPORT

Geotechnical ■
Environmental ■
Materials Testing ■
Construction Inspection ■

MEMORANDUM

To: **BKF Engineers**
1646 North California Boulevard, Suite 400
Walnut Creek, CA 94596

March 30, 2018
Job No.: 2014-143-PAV

Attn: Mr. Eric Swanson

From: Peter Wei, P.E., G.E. 2922
Y. David Wang, Ph.D., P.E. 52911 Y. David Wang

REGISTERED PROFESSIONAL ENGINEER
Y. DAVID WANG
PE 52911
EXP. 12/31/18
CIVIL
STATE OF CALIFORNIA

Subject: Geotechnical Engineering Recommendations
Structural Pavement Sections
Cross Alameda Trail
Alameda, California

This memorandum presents our geotechnical engineering recommendations for design and construction of structural pavement sections for the proposed bicycle path of the Cross Alameda Trail. The construction is in the City of Alameda, California. The approximate project location is shown on the Project Location Map, Plate No. 1.

Project Description

According to the information provided by BKF Engineers (Designer), the proposed improvement includes a 0.8 mile segment of the Cross Alameda Trail. The trail will run parallel to and south of Ralph Appezzato Memorial Parkway (RAMP) / Atlantic Avenue between Webster Street (east end) and Main Street (west end) in the abandoned former Alameda Belt Line Railroad right-of-way. The proposed segment will separate bicyclists and pedestrians from the five lanes of vehicle traffic on RAMP. The planned trail will be about 38 feet in total width, in which a Class I bikeway of 12-foot-wide needs geotechnical engineering design. Currently, the improvement area is vacant and relatively flat. There is a temporary unpaved path; gravel or ballast/subballast are observed along the prior railroad tracks. Since the site is close to the bay, soft marine clay (Bay Mud) may underlies the improvement area.

Soil Sampling and Laboratory Testing

Three borings (R-1, R-2 and R-3) were drilled to about 8 feet deep below existing grades with a truck mounted drill rig on January 8, 2015. The borings were placed in the dirt area beyond the prior railroad tracks. The approximate boring locations are shown on the Site Plan, Plate No. 2. Bulk soil samples were obtained from the borings. The soil samples were examined and screened in the laboratory. Two R-value tests (California Test Method 301) and one Atterberg limits (California Test Method 204) test were performed on representative soil samples. The general subgrade information is summarized below in a table.

SUMMARY OF SUBGRADE INFORMATION

Boring No.	Approx. Depth (ft)	Description	R-value	Plasticity
R-1	0-4	Sandy Lean Clay, brown	14	-
	4-8	Sandy Organic Soil, dark gray	-	-
R-2	0-1	Landscaping Soils	-	-
	1-2	Clayey Sand, brown gray	-	-
	2-8	Sandy Organic Soil, dark gray	-	LL=27, PI=9
R-3	0-1	Landscaping Soils	-	-
	1-2	Clayey Sand, brown gray	-	-
	2-8	Sandy Organic Soil, dark gray	50	-

The top about four feet of soils at R-1 location seems to have mixed with some gravels or railroad ballasts. At the time of drilling, the sandy organic soils were saturated or wet. The groundwater appeared to be at about 2 to 4 feet below grade during drilling. The tests on two subgrade samples produced R-values of 14 and 50. The Atterberg limits test on the soil sample produced a liquid limit (LL) of 27 and plastic index (PI) of 9, suggesting low to moderate plasticity. The R-value test results are presented on Plates No. 3 and No. 4. The Atterberg limits test result is attached as Plate No. 5.

Structural Pavement Sections

Pavement design for flexible pavement sections using hot mix asphalt (HMA) is based on the current Caltrans Highway Design Manual (HDM, 2012). Chapter 1000 of the Caltrans HDM discusses bicycle transportation design, in which the AASHTO's Guide for the Development of Bicycle Facilities is referred to for more information. Neither the Caltrans manual nor the AASHTO reference provides detail design procedures for structure pavement sections for bikeways. However, the Caltrans HDM indicates that the pavement materials and structure of a bike path should be designed in the same manner as a roadway. Principal loads on bikeways are expected mostly from maintenance and emergency vehicles (assuming H10 vehicles). It is indicated in the Caltrans manual that if the paved paths are less than 12 feet wide, the edge of the paved paths can break up as a result of loads from maintenance vehicles.

It is our understanding that the City does not have a specific Traffic Index (TI) for the bikeways due to very light vehicle loads. Based on the subgrade conditions encountered in the borings, the subgrade in the planned improvement area was generally composed of brown sandy clay and black gray sandy organic soils. The R-values of the subgrade were tested to be 14 to 50. The soil expansion potential appears to be low to moderate. In consideration of subgrade variation and constructability, it is recommended to construct the bike path pavement sections on properly prepared subgrade as follows:

Hot Mix Asphalt (Type A): 0.25 feet (3 inches)
Aggregate Base (Class 2): 0.65 feet (8 inches)

The pavement surface should have a minimum cross slope of one percent to reduce water ponding and maximum of two percent. The unpaved shoulders should slope away from the path at two percent. The Caltrans Standard Specifications (2010) should be referred to for materials, and their placement and compaction.

Grading

All grading and compaction operations should be performed in accordance with the project specifications and Section 19 "Earthwork" of the Caltrans Standard Specifications (2010). A representative from this office or regulating agency should observe all excavated areas during grading and perform moisture and density tests on prepared subgrade and compacted fill material.

The subgrade should be graded with positive gradient to direct water away from the pavement area to prevent water perching underneath the pavement sections.

We do not anticipate import fill for grading. If needed, any fill materials imported to the project site should be non-expansive, relatively granular material having a Plasticity Index (PI) of less than 15 and a minimum Sand Equivalent (SE) of 10. The maximum particle size of fill material should not be greater than 4 inches in largest dimension. It should also be non-corrosive, free of deleterious material and should be reviewed by the Geotechnical Engineer. The minimum R-value of the import fill should be 15.

Subsurface conditions encountered at the boring locations suggest that the on-site earth materials can generally be excavated to planned grades using conventional earth moving equipment. However, it is possible that zones of hard or dense materials may be encountered when excavating into or close to the prior railroad track alignment with gravels and/or railroad ballasts.

Mitigation of Weak Subgrade

Due to presence of loose, soft saturated soils, and high groundwater level, subgrade pumping and yielding should be anticipated during construction in some areas. This may pose a constructability challenge depending upon the time of the year. To provide a working platform and stable support for structural pavement sections, the loose, soft subgrade should be treated as follows: 1) over excavating a minimum of one foot below the planned subgrade; 2) placing a layer of stabilizing Subgrade Enhancement Geotextile (SEG) Class B2 conforming to Section 88-1.02 of the Caltrans Standard Specifications (2010) on the native soils; 3) backfilling with compacted AB. The treatment should extend to a minimum of one foot beyond the edge of the bike path. The design HMA and AB sections should then be constructed on top of the properly treated subgrade. If necessary, dewatering measures should be considered to facilitate construction.

An alternative method for the contractor to mitigate the weak subgrade is to perform soil modification. Since the soils encountered in our borings are mostly silty and sandy materials, cement is selected over lime for the soil modification. Portland cement generally works better with soils having more granular particles. A major advantage with cement modification is that a mellowing period is generally not required. Soil-cement mixing and soil compaction can generally be completed on the same day. The primary purpose of cement soil modification is to reduce the plasticity and moisture content of treated soils to facilitate grading operation and to form a work platform. Generally, soils treated with 2 to 5 percent of cement by dry weight would improve the compaction and strength. Actual cement percentage to be added should be determined in the field. A small trial area may be considered. Compaction tests should be conducted in the field to verify that the cement treated subgrade underneath the design pavement sections is properly compacted.

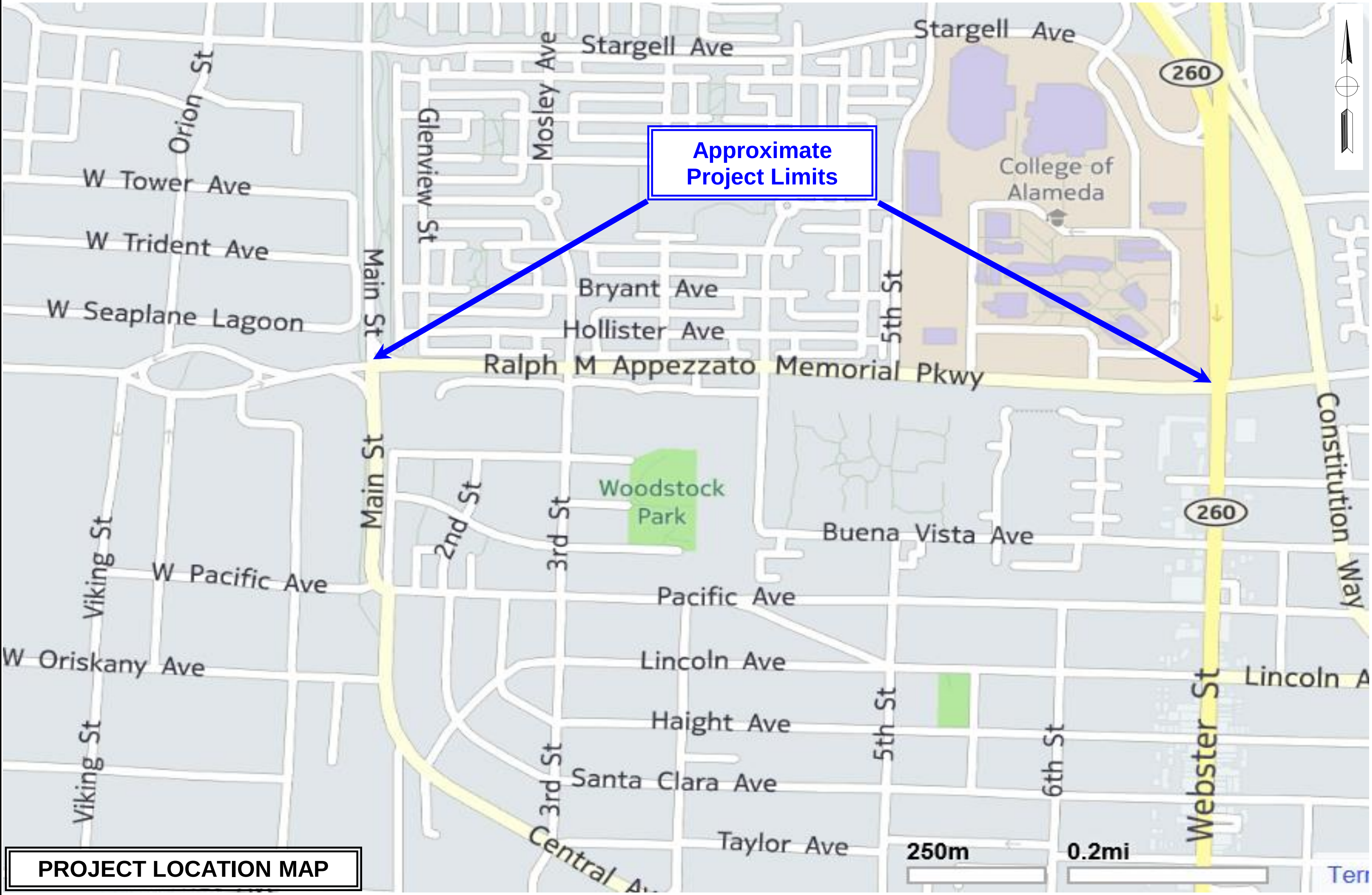
Please note, the cement-modified soil is not a part of design pavement sections. Soil modification is not a design but construction issue. Other soil mitigation options can also be considered during construction such as using lime instead of cement for soil modification if the exposed soils contain more clayey materials, or to scarify and aerate the soils in place to reach compactable condition if the construction schedule allows. Most time, a mellowing period from one to seven days is required for lime soil modification.

Limitation

Please be advised that we are performing a professional service and that our conclusions are professional opinion only. All work done and all recommendations made are in accordance with generally accepted geotechnical engineering principal and practices. No warranty, expressed or implied, of merchantability or fitness, is made or intended in connection with our work.

Attachments:

Plate No. 1	Project Location Map
Plate No. 2	Site Plan
Plate No. 3	R-value Test Results of R-1
Plate No. 4	R-value Test Results of R-3
Plate No. 5	Atterberg Limits Test Result of R-2



PARIKH
Practicing in the Geosciences

CROSS ALAMEDA TRAIL
ALAMEDA, CALIFORNIA

JOB NO.: 2014-143-PAV	PLATE NO.: 1

LEGEND :

Approx. Boring Location

SITE PLAN

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Practicing in the Geosciences

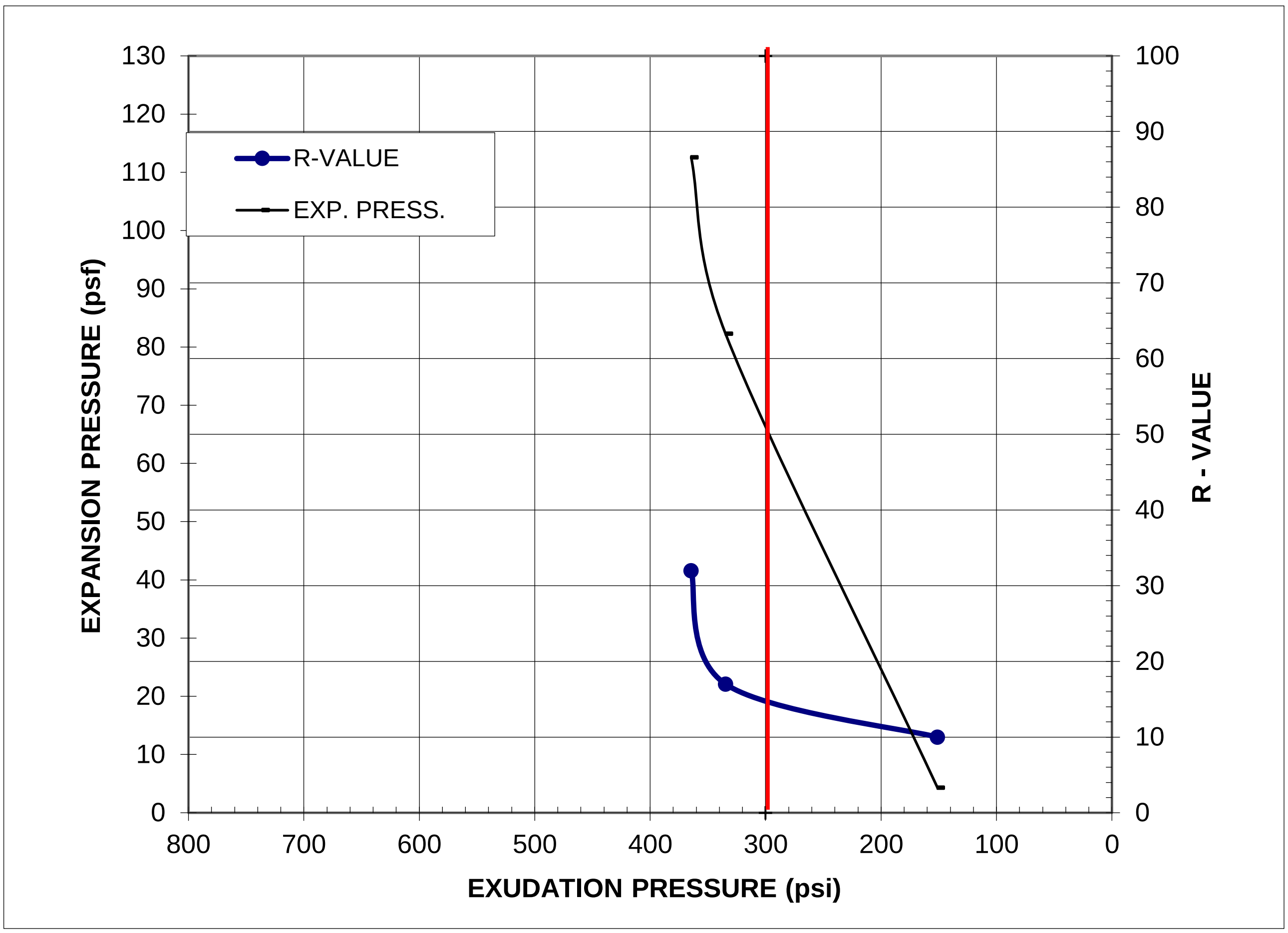
CROSS ALAMEDA TRAIL
ALAMEDA, CALIFORNIA

JOB NO.: 2014-143-PAV	PLATE NO.: 2

R-VALUE REPORT

Parikh Consultants, Inc. | **ASTM D2844 or CTM 301** | (408) 452-9000

Project Name:	Cross Alameda Trail	Date:	1/13/15
Client:	BKF	Project #:	2014-143-PAV
Sample #:	R-1 Depth: 0-4'	Lab #:	
Location / Source:	Onsite / Native	Sample Date:	
Material :	Sandy Lean Clay with gravel, brown	Sampled By:	



Specimen No.	A	B	C
Exudation Pressure, psi	151.15	334.7	364.5
Expansion Pressure, psf	4.33	82.27	112.58
R-Value	10	17	32
Moisture Content at Test, %	17.6	15.6	14.7
Dry Density at Test, pcf	110.8	115.1	117.6

R-Value @ 300 psi Exudation Pressure = 14

Expansion Pressure @300 psi Exudation, psf = **65**

Minimum R-Value Requirement:

Comments:

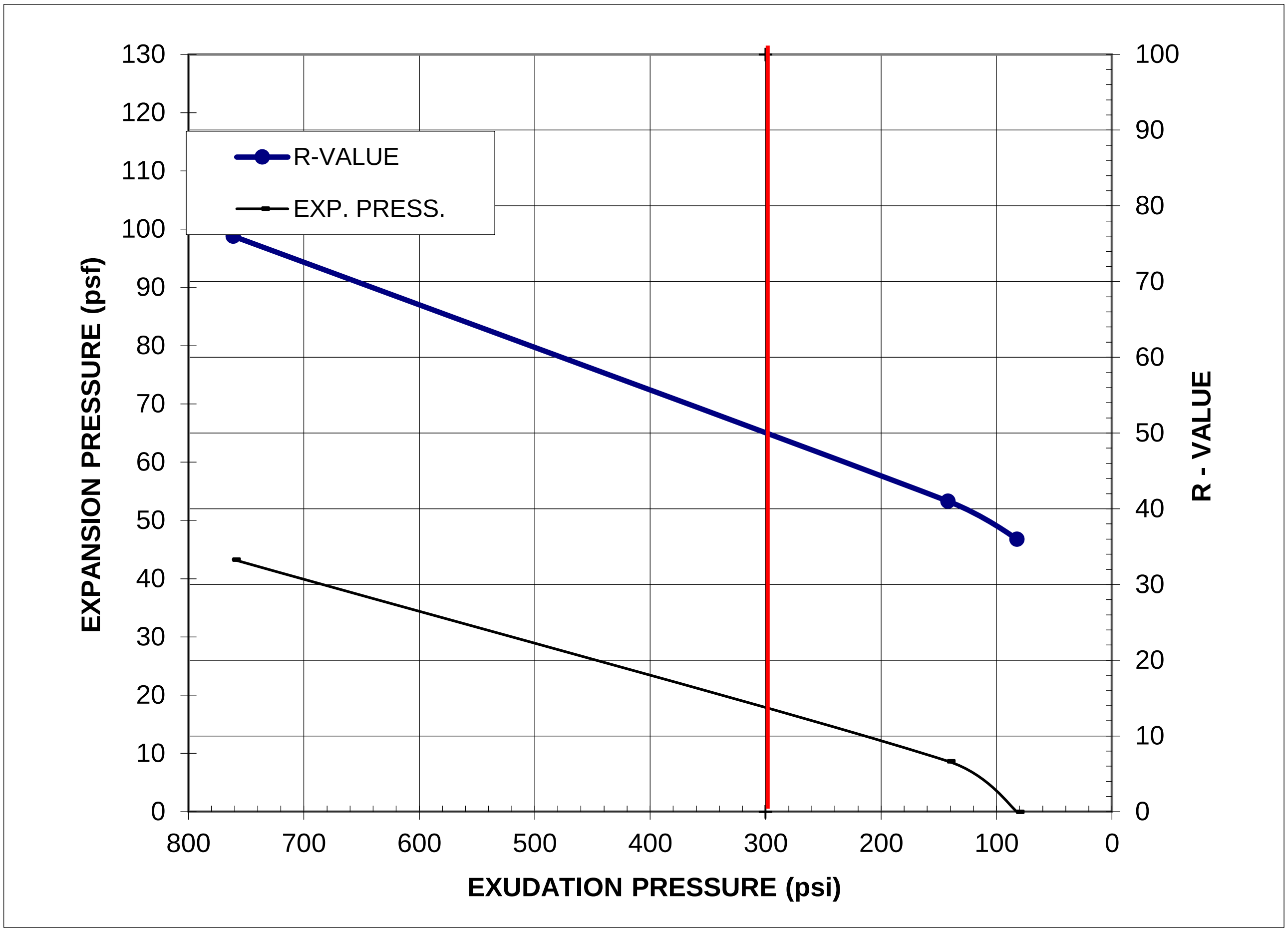
Report By: Nasir Ahmad

PLATE NO. 3

R-VALUE REPORT

Parikh Consultants, Inc. | **ASTM D2844 or CTM 301** | (408) 452-9000

Project Name:	Cross Alameda Trail	Date:	1/13/15
Client:	BKF	Project #:	2014-143-PAV
Sample #:	R-3 Depth: 2-4'	Lab #:	
Location / Source:	Onsite / Native	Sample Date:	
Material :	Silty Sand, black gray	Sampled By:	



Specimen No.	A	B	C
Exudation Pressure, psi	82.3	142	761.3
Expansion Pressure, psf	0	8.66	43.3
R-Value	36	41	76
Moisture Content at Test, %	13.8	11.9	11.0
Dry Density at Test, pcf	115.0	117.1	120.7

R-Value @ 300 psi Exudation Pressure = 50

Expansion Pressure @300 psi Exudation, psf = **18**

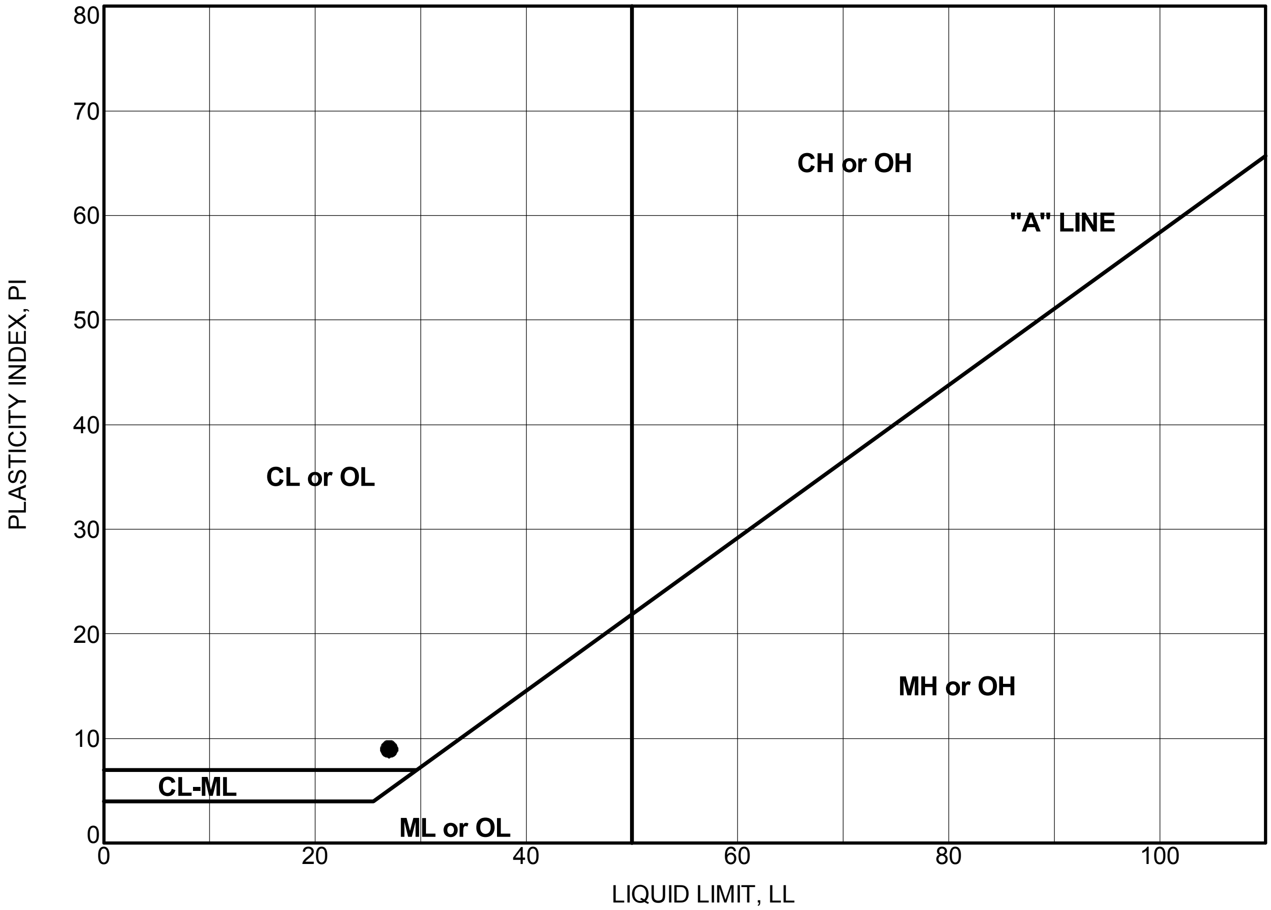
Minimum R-Value Requirement:

Comments:

Report By: Nasir Ahmad

PLATE NO. 4

RVALUE with calcs pdp



PLASTICITY CHART

Boring Number	Sample Number	Depth (feet)	Test Symbol	Moisture Content (%)	LL	PL	PI	Description
R-2		3.0	●		27	18	9	SANDY ORGANIC SOIL

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CROSS ALAMEDA TRAIL
CITY OF ALAMEDA, CALIFORNIA

JOB NO: 2014-143-PAV

PLATE NO: 5

ATTACHMENT L – PRE-DEMOLITION HAZARDOUS MATERIALS SURVEY REPORT

TETRA TECH INC.

November 10, 2015

Ms. Gail Payne
Transportation Coordinator
City of Alameda,
Community Development Department
2263 Santa Clara Ave #190,
Alameda, CA 94501

Subject: **Pre-Demolition Hazardous Materials Survey Report**
Cross Alameda Trail Shed
1900 Third Street
Alameda, California 94501

Dear Ms. Payne:

Tetra Tech, Inc. is pleased to submit the enclosed pre-demolition hazardous materials survey report of the shed structure adjacent to Woodstock School at Third Street and Ralph Appezzato Parkway in Alameda, California.

The shed structure (Shed) was evaluated for presence, locations, and quantity of suspected asbestos-containing materials (ACM) that may require pre-renovation abatement in accordance with the National Emissions Standards for Hazardous Air Pollutants (NESHAP) as adopted by the U.S. Environmental Protection Agency (EPA). The intent of the asbestos NESHAP regulation is to protect the public (and workers) by minimizing release of asbestos fibers during activities that involve processing, handling, and disposing of ACMs.

Tetra Tech's survey included a similar evaluation of the Shed for presence, locations, and quantity of damaged or intact lead-based paint (LBP) that contain lead at levels that exceed hazard thresholds and that would require Occupational Safety and Health Administration (OSHA) worker safety precautions during demolition. Bulk samples of representative materials were collected during the survey.

A hazardous materials inventory was also conducted during the asbestos and LBP survey. The inventory was limited to materials easily observed during the walk-through inspection of the structure. Other hazardous materials typically include; thermostats and fluorescent light bulbs possibly containing mercury, fluorescent light ballasts potentially containing polychlorinated biphenyls (PCB), emergency lighting and exit signs that house batteries containing heavy metals, appliances containing Freon, containers holding hazardous materials (such as cleaning supplies, paint, etc.), and any other household hazardous waste items that may need to be removed before the facility is demolished.

2969 Prospect Park Drive, Suite 100, Rancho Cordova, CA 95670
Tel 916.852.8300 Fax 916.852.0307
www.Tetratech.com

This letter summarizes the survey findings. Detailed findings are provided in the enclosed survey report.

Asbestos-Containing Materials

Thirteen samples of suspected ACM were collected from the Shed. Of the thirteen samples, five samples tested positive or were assumed positive based on positive stop. Asbestos was not detected in the other samples analyzed. ACM identified includes interior drywall joint compound and skim coat, roof paper mastic, and silver roof flashing.

- Approximately 900 square feet of ACM skim coat and joint compound is on interior drywall walls of the shed. The skim coat and joint compound contain 2 percent chrysotile asbestos and is represented by samples SHED-DWJC-01, SHED-DWJC-02, and SHED-DWJC-03. The drywall should be removed by a licensed abatement contractor before demolition disturbs the material. The removed waste must be transported to a disposal site able to accept friable (regulated) ACM (RACM).

- Approximately 600 square feet of roofing paper with ACM mastic is located under two layers of roof shingles on the roof of the Shed. The roofing paper mastic contains 10 percent chrysotile asbestos and is represented by samples SHED-RP-01 and SHED-RP-02. The roofing paper and mastic should be removed by a licensed abatement contractor before demolition work disturbs the material. The waste removed must be transported to a disposal site able to accept non-friable (Category I) ACM.

- One square foot of silver roof flashing (sealant) is located on the utility support on the roof of the Shed. The flashing contains 10 percent chrysotile asbestos and is represented by sample SHED-RF-1. The flashing should be removed by licensed abatement contractor before demolition work disturbs the material. The waste removed must be transported to a disposal site able to accept non-friable (Category I) ACM

Lead-Based Paint

Nine bulk paint chip samples were collected from damaged and intact, painted coatings from the Shed suspected to contain lead. Eight of the nine paint chip samples contain lead at concentrations ranging from 680 to 60,000 parts per million (ppm) (reported in percent weight). Of the eight samples six exceeded OSHA hazard threshold of 600 ppm and two exceeded 5,000 ppm the regulatory definition of LBP. The remaining one paint sample collected from a parking bollard adjacent to the Shed did not contain detectable amounts of lead.

In California, damaged (peeling and chipping paint) LBP and lead-containing paint above 600 ppm should be properly removed and disposed of prior to demolition.

Cal-OSHA regulations (Title 8 *California Code of Regulations* [CCR] Section 1532.1) specify that paint containing lead at greater than 0.06 percent (600 ppm) must undergo an initial determination for lead exposure. Removal or disturbance of any amount of lead paint requires adherence to the Cal-OSHA and California Department of Public Health (CDPH) regulations, including proper training and certification for workers and supervisors.

Soil analysis was not conducted under this scope of work. However, based on the poor condition of the exterior eave LBP, a soil assessment for lead is recommended.

Other Hazardous Materials

No hazardous materials were observed. However, one spent (empty) fire extinguisher was observed discarded on the ground near the Shed. The fire extinguisher should be collected and recycled or disposed as appropriate.

We appreciate the opportunity to serve to you. Please contact me at 916-853-4557 or Mr. Victor Early at 510-708-0675 if you have any questions or if we can be of further service.

Sincerely,

Tetra Tech, Inc.

Lona Pearson

Lona Pearson

Certified Asbestos Consultant, Number 13-5051
Certified Lead-Related Construction Inspector/Risk Assessor, Number 21287
lona.pearson@tetratech.com

Enclosure

PRE-DEMOLITION HAZARDOUS MATERIALS SURVEY REPORT

For

Cross Alameda Trail Shed
1900 Third Street
Alameda, California

Prepared for:

Ms. Gail Payne
Transportation Coordinator
City of Alameda,
Community Development Department

Prepared by:
Tetra Tech, Inc.
2969 Prospect Park Drive, Suite 100
Rancho Cordova, CA 95670

Tetra Tech Project No.
103S4024.04

November 2015

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1.0 INTRODUCTION

The City of Alameda retained Tetra Tech, Inc., (Tetra Tech) for a pre-demolition hazardous materials survey of a vacant shed structure adjacent to Woodstock School, 1900 Third Street – southeast corner of Third Street and Ralf Appezzato Parkway, in Alameda, California. The survey was a prerequisite to demolition of structure in preparation for construction of a pedestrian and bicycle pathway. The survey involved collecting and analyzing suspected asbestos-containing material (ACM), collecting and analyzing damaged and intact suspect lead-based paint (LBP) and coatings, and inventorying other hazardous materials observed during the walk-through inspection of each structure.

Tetra Tech's Ms. Lona Pearson, California Certified Asbestos Consultant (CAC) and California Department of Public Health (CDPH) certified lead-related construction (LRC) inspector and risk assessor (LRCIA) and Ms. Michelle Kolb, Asbestos Hazard Emergency Response Act (AHERA) building inspector, conducted the survey on September 2, 2015. Ms. Pearson's and Ms. Kolb's certifications are provided in Appendix A.

The survey evaluated interior and exterior of the structure for presence, locations, quantity, and characterization of ACM that may require pre-demolition abatement in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations, as adopted by the U.S. Environmental Protection Agency (EPA). The intent of the asbestos NESHAP regulations is to protect the public (and workers) by minimizing release of asbestos fibers during activities that involve processing, handling, and disposing of ACM.

Tetra Tech's survey included a similar evaluation of interior and exterior of the structure for presence, locations, and quantity of LBP or coatings with lead at concentrations that exceed hazard levels, which would necessitate Occupational Safety and Health Administration (OSHA) worker safety precautions during renovation. Therefore, Tetra Tech also collected paint samples from damaged and intact painted surfaces for lead analysis.

A hazardous materials inventory was also conducted during the asbestos and LBP survey. The inventory was limited to materials easily observed during the walk-through inspection.

Tetra Tech provided these services consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions. This statement is in lieu of other statements either expressed or implied. The scope of services performed in executing this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document, the findings, conclusions, or recommendations is at the risk of said user. Although a reasonable attempt has been made to identify suspect ACM and LBP in all parts of the buildings, the inspection techniques used are inherently limited in the sense that only full demolition procedures can reveal all building materials of a structure and therefore all areas of potential ACM or LBP. This survey report does not warrant against future operations or conditions that may not be consistent with its recommendations. Moreover, completion of the survey does not guarantee identification of all hazardous materials, ACM, or LBP because of some limitations on destructive sampling during the survey. Hazardous materials may be present in voids of walls or ceilings.

This survey report presents the survey findings regarding ACM, LBP, and hazardous materials inventory. Section 2.0 of the report describes the site structures. Section 3.0 discusses field survey and analytical protocols. Section 4.0 presents findings. Section 5.0 offers recommendations based on the survey findings. Section 6.0 presents abatement cost estimates.

2.0 SITE STRUCTURE

The shed structure (Shed) is located adjacent to the southeast corner or the Third Street and Raif Appezzato Memorial Parkway. The Shed is current vacant and enclosed by a chain link fence. The Shed is constructed of a wood frame, with wood siding and floor, asphalt composite roofing on concrete pier foundation. Interior finishes include painted drywall walls (non-textured), painted wood doors and jambs, unfinished wood floor, and open ceiling with painted roof joists. Exterior siding consists of painted plywood panels over gypsum board. The asphalt composite roofing has two layers of shingles with tar paper underlayment.

3.0 FIELD SURVEY AND ANALYTICAL PROTOCOLS

The field survey and analytical protocols for the ACM and LBP surveys are discussed below.

3.1 ACM Field Survey and Analytical Protocols

Tetra Tech made every effort to inspect all areas of the structure. Minor demolition of materials was required during the survey effort. The inspector took care to ensure that the areas remained unoccupied during sample collection. A total of thirteen samples of suspected ACM were collected from the Shed. Bulk samples were collected of suspected ACM identified during the visual inspection. Suspected ACMs were grouped as homogeneous areas if the material was similar in appearance and texture. However, if the inspector decided that a material (for example, wall texturing) was not similar in appearance and texture to other materials in the building, the inspector would distinguish the material as unique and collect samples of each unique material. The classifications of suspected ACMs were assigned in accordance with the protocol recommended in 40 *Code of Federal Regulations* (CFR) Part 763, "Asbestos-Containing Materials in Schools; Final Rule and Notice." Representative bulk samples were collected from each homogeneous and unique material identified.

Bulk samples of suspected ACM were sampled to ensure that each distinct layer of material would be collected. Tetra Tech attempted to obtain material from each individual layer. A wetting agent was applied to friable surfaces before the sample was collected to reduce potential for fiber release. All samples collected were placed in plastic bags, labeled, and sealed immediately after they had been collected. After each sample was collected, the sampling instruments were wiped clean by use of a wet, lint-free cloth to prevent cross-contamination between samples. A unique identification number was assigned to each sample.

Sample identification numbers identify each sample collected. The sample numbers nomenclature is indicated by the following example:

Sample SHED-DWJC-01:

SHED = Structure name

DWJC = homogenous area – drywall and joint compound layered sample

01 = sample number 1 in material group.

The samples remained in the inspector's custody until sent to the laboratory. When sampling was complete, the bulk samples were hand delivered with chain-of-custody documentation, to EMSL Analytical in San Leandro, California. EMSL is accredited by the National Institute of Standards and Technology (NIST) and participates in the National Voluntary Laboratory Accreditation Program (NVLAP). Bulk asbestos samples were analyzed via polarized light microscopy (PLM) in accordance with the EPA-recommended test method described in 40 CFR 763, Subpart F, Appendix A.

Appendix B of this report provides the ACM analytical results and chain-of-custody forms for the bulk samples.

3.2 LBP Field Survey and Analytical Protocols

Tetra Tech made every effort to inspect all areas of the structure for damaged paint. The inspector took care to ensure that the immediate areas in the Shed remained unoccupied when samples were collected. Bulk paint chip samples of suspected LBP were collected during the visual inspection. Before samples were collected, a wetting agent was applied to painted surfaces to reduce potential for release of dust. All paint samples were placed in clean sample containers, labeled, and sealed. The samples remained in the inspector's custody until sent to the laboratory. After each sample had been collected, the sampling instruments were wiped clean by use of a wet, lint-free cloth to prevent cross-contamination between samples. A unique sample identification number was assigned to each sample. After sampling had been completed, the samples were hand delivered along with Tetra Tech's chain-of-custody documentation, to EMSL Analytical in San Leandro, California. Samples were analyzed via flame atomic absorption spectrometry (AAS).

Appendix C of this report provides LBP analytical results and chain-of-custody forms for the paint chip and ceramic tile samples.

4.0 FINDINGS

Survey and analytical findings from the ACM and the LBP samples are summarized below. Sample collection locations are provided on Figure 1. Appendix B and Appendix C present the ACM and LBP laboratory results. A photograph log showing selected photographs of materials sampled is provided in Appendix D

4.1 ACM Findings

PLM results from the ACM samples are summarized in Table 1 below; the complete results are provided in the laboratory reports included as Appendix B. Trace asbestos sample results (less than 1 percent PLM) were further analyzed by 400-point count method. A **Bold** result in Table 1 indicates that asbestos was detected.

TABLE 1
PLM RESULTS FOR ACM SAMPLES

Figure ID	Sample ID	Material Description	Material Locations	Analytical Result %
1	**SHED-DWJC-01**	**Drywall and joint compound**	**Interior Walls**	**Skim coat, 0.25 - 2 % Chrys** Tape, ND **Joint compound, 2 % Chrys** Drywall, ND
2	**SHED-DWJC-02**			
3	**SHED-DWJC-03**			
4	SHED-DWEXT-01	Drywall Exterior	Exterior walls under siding	ND
5	SHED-DWEXT-02			
6	SHED-DWEXT-03			
7	SHED-RS-01	Asphalt Roof Shingle Brown (top)	Exterior Roof	ND
8	SHED-RS-02			
9	SHED-RS2-01	Asphalt Roof Shingle Red (bottom)	Exterior Roof	ND
10	SHED-RS2-02			
11	**SHED-RP-01**	**Roof Paper**	**Exterior Roof**	Roofing Paper, ND **Mastic, 10 % Chrys**
12	**SHED-RP-02**			
13	**SHED-RF-1**	**Silver Roof Flashing**	**Exterior Roof Penetration**	**10 % Chrys**

Notes:

1	400 point count result	Chrys.	Chrysotile asbestos
”	Inches	ND	Asbestos not detected
ACM	Asbestos-containing material	PLM	Polarized light microscopy

4.2 LBP Findings

AAS results from painted surfaces is summarized in Table 2; the laboratory report is provided in Appendix C.

TABLE 2
AAS RESULTS FOR LEAD IN PAINT SAMPLES

Figure ID	Sample No.	Material Description	Material Locations	Reporting limit (%)	Analytical Result (%)	Analytical Result (ppm)
P1	**SHED -P1**	**Paint, grey over wood**	**Exterior – siding and windows**	**0.20**	**2.1**	**21,000**
P2	**SHED -P2**	**Paint, brown over wood**	**Exterior – roof eaves**	**0.30**	**6.0**	**60,000**

TABLE 2 AAS RESULTS FOR LEAD IN PAINT SAMPLES						
Figure ID	**Sample No.**	**Material Description**	**Material Locations**	**Reporting limit (%)**	**Analytical Result (%)**	**Analytical Result (ppm)**
P3	SHED -P3	Paint, yellow over metal	Exterior parking bollard	0.015	<0.015	ND
P4	**SHED -P4**	**Paint, green over drywall**	**Interior - wall**	**0.10**	**0.35**	**3,500**
P5	**SHED -P5**	**Paint, mint green over wood**	**Interior - door**	**0.10**	**0.49**	**4,900**
P6	**SHED -P6**	**Paint, brown over wood**	**Interior – door and frame**	**0.010**	**0.27**	**2,700**
P7	**SHED –P7**	**Paint, white over wood**	**Interior – ceiling joists and ceiling**	**0.010**	**0.068**	**680**
P8	**SHED –P8**	**Paint, beige over drywall**	**Interior – wall**	**0.10**	**0.34**	**3,400**
P9	**SHED –P9**	**Paint, blue over fiber board**	**Interior – tack board**	**0.010**	**0.11**	**1,100**

Notes:

Bolded value exceeds the OSHA-defined lead hazard level of 600 ppm.

%	Percent by weight	ND	Not detected equivalent
AAS	Flame atomic absorption spectrometry	OSHA	Occupational Safety and Health Administration
NA	Not applicable	ppm	Parts per million

4.3 Hazardous Building Components

Tetra Tech searched for other hazardous building components such as fluorescent light fixtures with mercury-containing light tubes, and light ballasts possibly containing polychlorinated biphenyls (PCB), mercury-containing thermostats, hazardous and household chemicals, transformers, air conditioners and refrigeration units, and emergency exit lighting.

No hazardous materials were observed. However, one spent (empty) fire extinguisher was observed discarded on the ground near the Shed. The fire extinguisher should be collected and recycled or disposed as appropriate.

5.0 RECOMMENDATIONS

Recommendations are offered below regarding ACM, LBP and LCP.

5.1 ACM

Of the thirteen samples of suspected ACM collected from the site structures, five contained more than 1 percent asbestos. Asbestos was not detected in the other samples analyzed. ACM identified includes interior drywall joint compound and skim coat, roof paper mastic, and silver roof flashing.

- Approximately 900 square feet of ACM skim coat and joint compound is on interior drywall walls of the shed. The skim coat and joint compound contain 2 percent chrysotile asbestos and is represented by samples SHED-DWJC-01, SHED-DWJC-02, and SHED-DWJC-03. The drywall should be removed by a licensed abatement contractor before demolition disturbs the material. The removed waste must be transported to a disposal site able to accept friable (regulated) ACM (RACM).

- Approximately 600 square feet of roofing paper with ACM mastic is located under two layers of roof shingles on the roof of the Shed. The roofing paper mastic contains 10 percent chrysotile asbestos and is represented by samples SHED-RP-01 and SHED-RP-02. The roofing paper and mastic should be removed by a licensed abatement contractor before demolition work disturbs the material. The waste removed must be transported to a disposal site able to accept non-friable (Category I) ACM.

- One square foot of silver roof flashing (sealant) is located on the utility support on the roof of the Shed. The flashing contains 10 percent chrysotile asbestos and is represented by sample SHED-RF-1. The flashing should be removed by licensed abatement contractor before demolition work disturbs the material. The waste removed must be transported to a disposal site able to accept non-friable (Category I) ACM

Only minor demolition of materials (destructive sampling) was employed during the asbestos survey, which limited the inspection for suspect materials. Thus, additional suspect materials could be present in walls, voids, attics, crawl spaces, equipment chases, and other concealed areas.

If any suspected ACM are identified during the demolition processes that are not listed in the ACM summary table (Table 1), the owner or contractor should employ an asbestos consultant (California Asbestos Consultant or Site Surveillance Technician) to obtain representative analytical results, or as an alternative, should handle and dispose of these materials as assumed ACM and follow all OSHA requirements for protecting workers and building occupants.

5.3 LBP

Nine samples were collected during the survey; eight from the structure and one from a parking bollard adjacent to the Shed. All eight samples collected from the structure contained reportable lead concentrations above the OSHA-defined lead hazard level of 600 ppm and two samples exceeded the LBP-regulatory definition of 0.5 percent lead by weight or 5,000 ppm The remaining one paint sample collected from a parking bollard adjacent to the Shed did not contain detectable amounts of lead.

Table 3 below, identifies samples collected with reportable lead concentrations.

TABLE 3
PAINT CHIP SAMPLES WITH REPORTABLE LEAD CONCENTRATIONS

Sample No.	Material Description	Material Locations	Analytical Result (%)	Analytical Result (ppm)	Estimated Damaged Amount
SHED-P01	Paint, grey over wood	Exterior – siding and windows	2.1	21,000	5 sf
SHED-P02	Paint, brown over wood	Exterior – roof eaves	6.0	60,000	180 sf
SHED-P04	Paint, green over drywall	Interior - wall	0.35	3,500	1 sf
SHED-P05	Paint, mint green over wood	Interior - door	0.49	4,900	2 sf
SHED-P06	Paint, brown over wood	Interior – door and frame	0.27	2,700	6 sf
SHED-P07	Paint, white over wood	Interior – ceiling joists and ceiling	0.068	680	560 sf
SHED-P08	Paint, beige over drywall	Interior – wall	0.34	3,400	1 sf
SHED-P09	Paint, blue over fiber board	Interior – tack board	0.11	1,100	6 sf

Notes:

% Percent
ppm Parts per million
sf Square feet

Based on these findings, the demolition contractor must follow the appropriate OSHA regulations during all demolition. In addition, all peeling and chipping paint must be removed and stabilized prior disturbance. Wastes generated should undergo waste characterization testing to determine appropriate disposal.

OSHA defines lead-based paint at the CPSC level of 600 ppm for non-trigger tasks (OSHA Lead in Construction Standard, Title 40 Code of Federal Regulations [CFR], Part 1926.62; Cal/OSHA Lead in Construction Standard Title 8 Code of California Regulations [CCR] Section 1532.1). Therefore, the Cal/OSHA Title 8 CCR Section 1532.1 regulation must be followed when paint exceeding 600 ppm is disturbed or when trigger tasks are conducted on paint containing any detectable lead.

6.0 REGULATORY OVERVIEW

Regulatory oversight of management, removal, and disposal of ACM and LBP is provided by a variety of federal, state, and local agencies. Section 6.1 overviews regulations regarding ACM, and Section 6.2 overviews regulations regarding LBP.

6.1 Regulatory Overview for Asbestos

Regulatory agencies enforce the following three primary regulations pertaining to various activities (inspection, assessment, and abatement) relating to ACM: AHERA, NESHAP, and the Asbestos Construction Safety Standard (as codified in federal OSHA and California OSHA regulations). EPA regulations regarding identification, handling, management, and abatement of ACM (as specified in AHERA and NESHAP) are implemented by the Bay Area Air Quality Management District (BAAQMD). Both California OSHA and federal OSHA regulate asbestos as a worker health and safety issue. Transportation and disposal of asbestos-containing wastes are overseen by the California EPA Department of Toxic Substances Control (DTSC). The federal OSHA, EPA, DTSC, and BAAQMD define ACM as materials containing greater than 1 percent asbestos.

The following are brief descriptions of the three major regulations relating to ACM:

Asbestos Hazard Emergency Response Act (AHERA)

AHERA (40 CFR Part 763), as implemented by EPA, primarily pertains to assessment and management of ACM in kindergarten through 12, public, private, and nonprofit schools. However, many of the procedures, training requirements, and certifications specified by AHERA have become the industry standard for all other facilities. During this survey, AHERA protocols were generally used in efforts to identify, assess, and sample building materials suspected to contain asbestos.

National Emission Standard for Hazardous Air Pollutants (NESHAP)

NESHAP (40 CFR Part 61) is an asbestos standard that protects the public from asbestos exposure that would result from renovation or demolition. NESHAP requires surveying for suspect materials (as defined above), notifying of intent to renovate or demolish, removing regulated ACM (RACM) before renovation or demolition, and properly managing asbestos-containing wastes.

A RACM is defined by NESHAP as follows:

- Any friable ACM
- A Category I non-friable ACM (such as floor tiles and asphalt roofing products) that has become friable or will be subject to sanding, grinding, cutting, or abrading during renovation or demolition
- A Category II non-friable ACM (all other non-friable ACMs) that has a high probability of becoming friable during demolition or renovation.

NESHAP requires use of wet methods to help ensure that demolition activities occur with no visible emissions. Note that while NESHAP regulates renovation and demolition, it does not protect individual workers conducting asbestos abatement or provide instructions for how asbestos abatement projects should proceed.

Asbestos Standard for the Construction Industry

The Asbestos Standard for the Construction Industry (federal OSHA, 29 CFR 1926.1101, and California OSHA Title 8 CCR 1529) regulates asbestos exposure in the work place. This includes both persons working in a building containing ACMs and asbestos abatement workers and contractors. For abatement workers and contractors, the Asbestos Standard for Construction (Construction Standard) regulates the following:

- Protection of workers and the public during the removal
- Medical surveillance requirements for workers
- Detailed requirements for how asbestos is to be removed
- Training requirements for abatement personnel.

California OSHA defines Asbestos Containing Construction Material (ACCM) as any building material that contains more than 0.1 percent (one-tenth of 1 percent) asbestos by weight. In addition, building materials presumed or known to contain at least trace amounts (not greater than 1 percent) of asbestos should be considered ACCM and should be managed according to California OSHA regulations (as presented in Title 8 CCR 1529).

6.2 Regulatory Overview for Lead-based Paint

EPA, Department of Housing and Urban Development (HUD), and CDPH define LBPs as paints containing greater than 0.5% lead by weight or 5,000 ppm or 1 milligram per square centimeter

(mg/cm^2) total lead. Federal OSHA and Cal-OSHA regulations (Lead Construction Standard) do define "lead-based paint," but defer to the EPA, HUD, and CDPH numbers cited above.

Cal-OSHA is primarily concerned with worker protection, and regulates procedures that disturb any amount of lead contained within painted building components. According to Cal-OSHA (Title 8 CCR Section 1532.1), employers may assume that disturbance of coatings or materials shown to contain less than 0.06 percent lead by weight (or 600 ppm lead) will not result in exposures above the applicable Action Level of 30 milligrams per cubic centimeter (mg/cm^3) of air, as long as workers are not performing any of the designated trigger tasks (such as building demolition, manual sanding or scraping, abrasive blasting, etc.). In addition, Cal-OSHA specifies a Permissible Exposure Limit (PEL) for worker exposure to airborne lead particles of 50 mg/cm^3 of air for an 8-hour, time-weighted average. The Federal OSHA Lead Construction Standard also lists an Action Level of 30 mg/cm^3 for an 8-hour, time-weighted average. Therefore, demolition activities that include materials with lead at any concentration could, under certain circumstances, trigger Federal OSHA and Cal-OSHA regulations.

7.0 ABATEMENT COST ESTIMATES

Estimated costs for ACM abatement are summarized in Table 4 below.

TABLE 4
ACM ABATEMENT COST ESTIMATE

Material	Location	Unit Rate Per sf	Quantity[1]	Abatement Cost Estimate
Drywall wall system	Interior Walls	$5.00 to $10.00	900 sf	$4,500 to $9,000
Roof Paper	Exterior Roof	$3.00 to $5.00	600 sf	$1,800 to $3,000
Silver Roof Flashing	Exterior Roof Penetration		1 sf	

Notes

1 Estimated quantity requires field verification
ACM Asbestos-containing material
sf Square feet

Estimated costs for LBP/LCP stabilization are summarized in Table 5 below.

TABLE 5
LBP/LCP STABILIZATION COST ESTIMATE

Material	Location	Unit Rate	Quantity Damaged[1]	Stabilization Cost Estimate
Paint, grey over wood	Exterior – roll-up door frames	$3.00	5 sf	$555
Paint, brown over wood	Exterior – roof eaves	$3.00	180 sf	
Paint, green over drywall	Interior - wall	$3.00	1 sf	$1,728
Paint, mint green over wood	Interior - door	$3.00	2 sf	
Paint, brown over wood	Interior – door and frame	$3.00	6 sf	
Paint, white over wood	Interior – ceiling joists and ceiling	$3.00	560 sf	
Paint, beige over drywall	Interior – wall	$3.00	1 sf	
Paint, blue over fiber board	Interior – tack board	$3.00	6 sf	

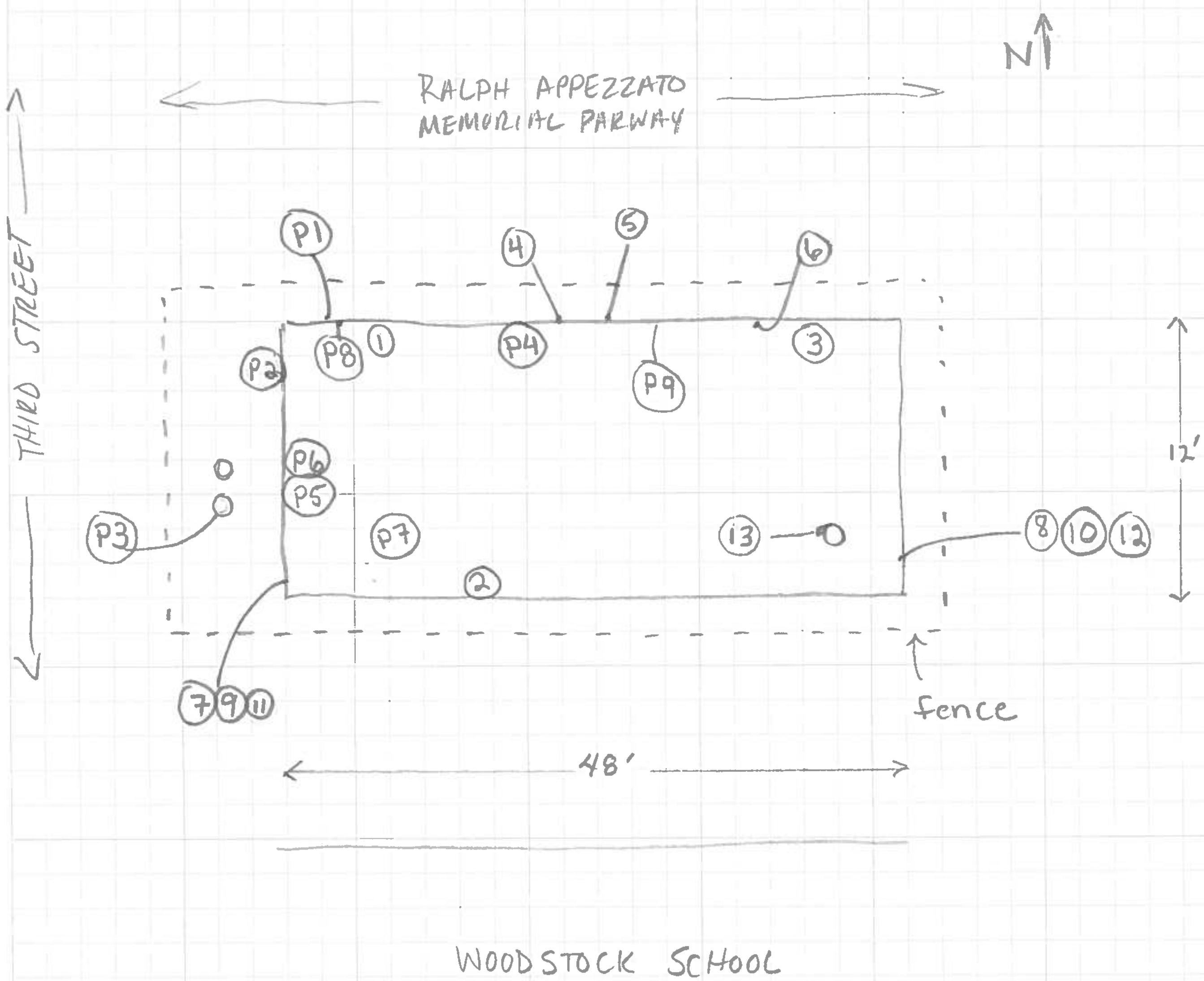
Notes:

1 Estimated quantity requires field verification
sf Square feet
LBP Lead-based paint
LCP Lead-containing paint

Figure 1.
Sampling Locations

TETRA TECH, INC.

CLIENT	City of Alameda	JOB NO.	103S4024, 04	PAGE	1 of 1
PROJECT	Alameda SHed	COMPUTED BY	LP	DATE	9/2/15
DETAIL	ACM/LBP Sampling locations	CHECKED BY		DATE	



Appendix A.
Survey Team Certificates

Ms. Lona S. Pearson
Tetra Tech EM Inc
2969 Prospect Park Drive, Suite 100
Rancho Cordova, California 95670

Certificate of Training

This Certifies that

Michelle Kolb

has successfully completed 24 hours training entitled

Asbestos Building Inspector Initial

Toxic Substances Control Act, Title II (AHERA)

This is an annual certification. It must be renewed.

Environmental
Safety
Training
Professionals Ltd.

3035 Prospect Park Drive #110
Rancho Cordova, CA 95670
Phone 916 638-5550
Fax 916 638-5551
Division Approval #CA-006-05

I.D. #:	2331
Certification #:	16400
Course Date:	04/10/15
Exam Date:	04/10/15
Expiration Date:	04/10/16

By Neta Snider

Authorized Signature: Neta Snider

Appendix B.
Laboratory Reports and Chain-of-Custody Forms for ACM Samples

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091514766
CustomerID:	TETE77
CustomerPO:	10354024.04
ProjectID:	

Attn: **Lona Pearson**
Tetra Tech (Rancho Cordova)
2969 Prospect Park Drive
Suite 100
Rancho Cordova, CA 95670

Phone:	(916) 853-4500
Fax:	(916) 853-4550
Received:	09/02/15 1:00 PM
Analysis Date:	9/6/2015
Collected:	9/2/2015

Project: **10354024.04**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy. Quantitation using 400 Point Count Procedure

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
SHED-DWJC-01-Skim Coat *091514766-0001*	INTERIOR WALL N - DRYWALL WITH JOINT COMPOUND AND TAPE	White Non-Fibrous Homogeneous			100.00%	Non-fibrous (other)	**<0.25% Chrysotile**

Analyst(s)
Christie Villanueva (1)

Chris Dojlidko, Laboratory Manager
or other approved signatory

Disclaimer:Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. The limit of detection as stated in the method is 0.25%. EMSL Analytical Inc suggests that samples reported as <0.25% or none detected undergo additional analysis via TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval of EMSL Analytical Inc. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government. EMSL Analytical Inc., bears no responsibility for sample collection activities, analytical method limitations, or the accuracy of results when requested to separate layered samples. EMSL Analytical Inc., liability is limited to the cost of sample analysis.The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884

Initial report from 09/06/2015 14:47:21

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091514766
CustomerID:	TETE77
CustomerPO:	10354024.04
ProjectID:	

Attn: **Lona Pearson**
Tetra Tech (Rancho Cordova)
2969 Prospect Park Drive
Suite 100
Rancho Cordova, CA 95670

Phone:	(916) 853-4500
Fax:	(916) 853-4550
Received:	09/02/15 1:00 PM
Analysis Date:	9/6/2015
Collected:	9/2/2015

Project: **10354024.04**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
SHED-DWJC-01-Tape *091514766-0001A*	INTERIOR WALL N - DRYWALL WITH JOINT COMPOUND AND TAPE	White Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (other)	**None Detected**
Result includes a small amount of inseparable attached material					
SHED-DWJC-01-Joint Compound *091514766-0001B*	INTERIOR WALL N - DRYWALL WITH JOINT COMPOUND AND TAPE	White Non-Fibrous Homogeneous		80% Ca Carbonate 18% Non-fibrous (other)	**2% Chrysotile**
SHED-DWJC-01-Drywall *091514766-0001C*	INTERIOR WALL N - DRYWALL WITH JOINT COMPOUND AND TAPE	White Non-Fibrous Homogeneous		80% Gypsum 20% Non-fibrous (other)	**None Detected**
SHED-DWJC-02-Skim Coat *091514766-0002*	INTERIOR WALL S - DRYWALL WITH JOINT COMPOUND AND TAPE	White Non-Fibrous Homogeneous		80% Ca Carbonate 18% Non-fibrous (other)	**2% Chrysotile**
SHED-DWJC-02-Tape *091514766-0002A*	INTERIOR WALL S - DRYWALL WITH JOINT COMPOUND AND TAPE	White Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (other)	**None Detected**
Result includes a small amount of inseparable attached material					

Analyst(s)
Christie Villanueva (19)

Chris Dojlidko

Chris Dojlidko, Laboratory Manager
or other approved signatory

Initial report from 09/06/2015 14:47:21

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
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http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091514766
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CustomerPO:	10354024.04
ProjectID:	

Attn: **Lona Pearson**
Tetra Tech (Rancho Cordova)
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Suite 100
Rancho Cordova, CA 95670

Phone:	(916) 853-4500
Fax:	(916) 853-4550
Received:	09/02/15 1:00 PM
Analysis Date:	9/6/2015
Collected:	9/2/2015

Project: **10354024.04**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
SHED-DWJC-02-Joint Compound *091514766-0002B*	INTERIOR WALL S - DRYWALL WITH JOINT COMPOUND AND TAPE				**Stop Positive (Not Analyzed)**
SHED-DWJC-02-Drywall *091514766-0002C*	INTERIOR WALL S - DRYWALL WITH JOINT COMPOUND AND TAPE	White Fibrous Homogeneous	<1% Glass	80% Gypsum 20% Non-fibrous (other)	**None Detected**
SHED-DWJC-03-Skim Coat *091514766-0003*	INTERIOR WALL E - DRYWALL WITH JOINT COMPOUND AND TAPE				**Stop Positive (Not Analyzed)**
SHED-DWJC-03-Tape *091514766-0003A*	INTERIOR WALL E - DRYWALL WITH JOINT COMPOUND AND TAPE	White Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (other)	**None Detected**
		Result includes a small amount of inseparable attached material			
SHED-DWJC-03-Joint Compound *091514766-0003B*	INTERIOR WALL E - DRYWALL WITH JOINT COMPOUND AND TAPE				**Stop Positive (Not Analyzed)**
SHED-DWJC-03-Drywall *091514766-0003C*	INTERIOR WALL E - DRYWALL WITH JOINT COMPOUND AND TAPE	White Non-Fibrous Homogeneous		80% Gypsum 20% Non-fibrous (other)	**None Detected**

Analyst(s)
Christie Villanueva (19)

Chris Dojlidko

Chris Dojlidko, Laboratory Manager
or other approved signatory

Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884

Initial report from 09/06/2015 14:47:21

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091514766
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Attn: **Lona Pearson**
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2969 Prospect Park Drive
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Rancho Cordova, CA 95670

Project: **10354024.04**

Phone:	(916) 853-4500
Fax:	(916) 853-4550
Received:	09/02/15 1:00 PM
Analysis Date:	9/6/2015
Collected:	9/2/2015

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
SHED-DWEXT-01 *091514766-0004*	EXTERIOR WALL N - DRYWALL	White Fibrous Homogeneous	<1% Glass	80% Gypsum 20% Non-fibrous (other)	**None Detected**
SHED-DWEXT-02 *091514766-0005*	EXTERIOR WALL NE - DRYWALL	White Non-Fibrous Homogeneous		80% Gypsum 20% Non-fibrous (other)	**None Detected**
SHED-DWEXT-03 *091514766-0006*	EXTERIOR WALL NW - DRYWALL	White Fibrous Homogeneous	<1% Glass	80% Gypsum 20% Non-fibrous (other)	**None Detected**
SHED-RS-01 *091514766-0007*	EXTERIOR W - ROOF SHINGLE BROWN	Brown/Black Fibrous Homogeneous	5% Glass	70% Matrix 25% Non-fibrous (other)	**None Detected**
SHED-RS-02 *091514766-0008*	EXTERIOR E - ROOF SHINGLE BROWN	Brown/Black Fibrous Homogeneous	2% Glass	70% Matrix 28% Non-fibrous (other)	**None Detected**
SHED-RS2-01 *091514766-0009*	EXTERIOR W - ROOF SHINGLE RED	Red/Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (other)	**None Detected**
SHED-RS2-02 *091514766-0010*	EXTERIOR E - ROOF SHINGLE RED	Red/Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (other)	**None Detected**
SHED-RP-01-Roofing Paper *091514766-0011*	EXTERIOR W - ROOFING PAPER	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (other)	**None Detected**

Analyst(s)
Christie Villanueva (19)

Chris Dojlidko, Laboratory Manager
or other approved signatory

Initial report from 09/06/2015 14:47:21

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
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Suite 100
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Phone:	(916) 853-4500
Fax:	(916) 853-4550
Received:	09/02/15 1:00 PM
Analysis Date:	9/6/2015
Collected:	9/2/2015

Project: **10354024.04**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos	
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**%**	**Type**
SHED-RP-01-Mastic *091514766-0011A*	EXTERIOR W - ROOFING PAPER	Black Non-Fibrous Homogeneous			80% 10%	Matrix Non-fibrous (other)	**10%**	**Chrysotile**
SHED-RP-02 *091514766-0012*	EXTERIOR E - ROOFING PAPER	Black Fibrous Homogeneous	70% 2%	Cellulose Synthetic	28%	Non-fibrous (other)		**None Detected**
SHED-RF-1 *091514766-0013*	EXTERIOR E - ROOFING FLASHING SILVER	Black/Silver Fibrous Homogeneous			75% 15%	Matrix Non-fibrous (other)	**10%**	**Chrysotile**

Analyst(s)

Christie Villanueva (19)

Chris Dojlidko, Laboratory Manager
or other approved signatory

Initial report from 09/06/2015 14:47:21

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 091514766

EMSL ANALYTICAL, INC
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Company: Tetra Tech Inc	**EMSL-Bill to:** ☐ Same ☑ Different If Bill to is Different note instructions in Comments**
Street: 2969 Prospect Park Dr, STE 100	*Third Party Billing requires written authorization from third party*
City: Rancho Cordova **State/Province:** CA	**Zip/Postal Code:** 95670 **Country:** USA
Report To (Name): Lona Pearson	**Telephone #:**
Email Address: Lona.Pearson@tetratech.com	**Fax #:** 916 852-0307 **Purchase Order:**
Project Name/Number: 10354024.04	**Please Provide Results:** ☐ Fax ☑ Email
U.S. State Samples Taken: CA	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☑ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PLM - Bulk (reporting limit)	**TEM – Bulk**
☐ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

☑ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 9/2/15

Samplers Name: Lona Pearson **Samplers Signature:** Lona Pearson

Sample #	HA #	Sample Location	Material Description
	Shed	-DWJC-01 Interior Wall N	Drywall with Joint Compound and tape
	↓	↓ 02 ↓ S	
	↓	↓ 03 ↓ E	↓
	↓	DWEXT-01 Exterior Wall N	Drywall
	↓	↓ 02 ↓ NE	↓
	↓	↓ 03 ↓ NW	↓
	↓	RS-01 Exterior W	Roof Shingle Brown
	↓	↓ 02 ↓ E	↓
	↓	RS2-01 Exterior W	Roof Shingle Red
	↓	↓ 02 ↓ E	↓

Client Sample # (s): - **Total # of Samples:** 13

Relinquished (Client): Lona Pearson **Date:** 9/2/15 **Time:** 1300

Received (Lab): Z.A **Date:** 9/2/15 **Time:** 1pm (w.i)

Comments/Special Instructions:

Controlled Document – Asbestos COC – R6 – 11/29/2012

Page 1 of 2 pages

EMSL ANALYTICAL, INC
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 091514766

EMSL ANALYTICAL, INC
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
	Shed-RP-01	Exterior W	Roofing Paper
	↓ 02	↓ E	↓
	↓ RF-1	Exterior E	Roofing flashing silver

***Comments/Special Instructions:**

Page 2 of 2 pages

Controlled Document – Asbestos COC – R6 – 11/29/2012

Appendix C.
Laboratory Reports and Chain-of-Custody Forms
for LBP Samples

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091514765
CustomerID:	TETE77
CustomerPO:	10354024.04
ProjectID:	

Attn: **Lona Pearson**
Tetra Tech (Rancho Cordova)
2969 Prospect Park Drive
Suite 100
Rancho Cordova, CA 95670

Phone: (916) 853-4500
Fax: (916) 853-4550
Received: 09/02/15 1:00 PM
Collected: 9/2/2015

Project: **10354024.04/ALAMEDA SHED**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client SampleDescription	*Collected*	*Analyzed*	*RDL*	*Lead Concentration*
SHED-P01 *091514765-0001*	9/2/2015	9/4/2015 Site: EXTERIOR SIDING WOOD Desc: GREY	0.20 % wt	2.1 % wt
SHED-P02 *091514765-0002*	9/2/2015	9/4/2015 Site: EXTERIOR EAVE WOOD Desc: BROWN	0.30 % wt	6.0 % wt
SHED-P03 *091514765-0003*	9/2/2015	9/4/2015 Site: EXTERIOR BOLLARD METAL Desc: YELLOW	0.015 % wt	<0.015 % wt
SHED-P04 *091514765-0004*	9/2/2015	9/4/2015 Site: INTERIOR WALL DRYWALL Desc: GREEN	0.10 % wt	0.35 % wt
SHED-P05 *091514765-0005*	9/2/2015	9/4/2015 Site: INTERIOR DOOR WOOD Desc: MINT GREEN	0.10 % wt	0.49 % wt
SHED-P06 *091514765-0006*	9/2/2015	9/4/2015 Site: INTERIOR DOOR WOOD Desc: BROWN	0.010 % wt	0.27 % wt
SHED-P07 *091514765-0007*	9/2/2015	9/4/2015 Site: INTERIOR CELING WOOD Desc: WHITE	0.010 % wt	0.068 % wt
SHED-P08 *091514765-0008*	9/2/2015	9/4/2015 Site: INTERIOR WALL DRYWALL Desc: BEIGE	0.10 % wt	0.34 % wt
SHED-P09 *091514765-0009*	9/2/2015	9/4/2015 Site: INTERIOR TACK BOARD FIBERBOARD Desc: BLUE	0.010 % wt	0.11 % wt

Chris Dojlidko, Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA A2LA Accredited Environmental Testing Cert #2845.09

Initial report from 09/04/2015 13:04:11

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091514765
CustomerID:	TETE77
CustomerPO:	10354024.04
ProjectID:	

Attn: **Lona Pearson**
Tetra Tech (Rancho Cordova)
2969 Prospect Park Drive
Suite 100
Rancho Cordova, CA 95670

Phone:	(916) 853-4500
Fax:	(916) 853-4550
Received:	09/02/15 1:00 PM
Collected:	9/2/2015

Project: **10354024.04/ALAMEDA SHED**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client SampleDescription	*Collected*	*Analyzed*	*RDL*	*Lead Concentration*

Chris Dojlidko, Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA A2LA Accredited Environmental Testing Cert #2845.09

Initial report from 09/04/2015 13:04:11

OrderID: 091514765

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only)*:

091514765

PHONE:
FAX:

Company: Tetra Tech Inc	**EMSL-Bill to:** ☐ Different ☑ Same If Bill to is Different note instructions in Comments**
Street: 2969 Prospect Park Dr, Suite 100	*Third Party Billing requires written authorization from third party*
City: Rancho Cordova **State/Province:** CA	**Zip/Postal Code:** 95670 **Country:** USA
Report To (Name): Lona Pearson	**Telephone #:** 916-853-4557 or 916-997-8085
Email Address: lona.pearson@tetratech.com	**Fax #:** 916-852-0307 **Purchase Order:**
Project Name/Number: Alameda Shed 10354024.04	**Please Provide Results:** ☐ FAX ☑ E-mail ☐ Mail
U.S. State Samples Taken: California	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☑ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☑ % by wt. ☐ mg/cm² ☐ ppm	SW846-7000B	Flame Atomic Absorption	0.01%	☑
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter	☐
Wipe* ASTM ☐ non ASTM ☐ *If no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	☐
	SW846-6010B or C	ICP-AES	1.0 µg/wipe	☐
	SW846-7000B/7010	Graphite Furnace AA	0.075 µg/wipe	☐
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-1131/SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	☐
	SW846-7010	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)	☐
Wastewater Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)	☐
Drinking Water Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-AES	12 µg/filter	☐
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter	☐
Other:				☐

Name of Sampler: Lona Pearson **Signature of Sampler:** Lona Pearson

Sample #	Location	Volume/Area	Date/Time Sampled
SHED-P01	GREY EXTERIOR SIDING WOOD	4 square inches	9/2/15
SHED-P02	BROWN EXTERIOR EAVE WOOD	4 SQUARE INCHES	9/2/15
SHED-P03	YELLOW EXTERIOR BOLLARD METAL	4 SQUARE INCHES	9/2/15
SHED-P04	GREEN INTERIOR WALL DRYWALL	4 SQUARE INCHES	9/2/15
SHED-P05	MINT GREEN INTERIOR DOOR WOOD	4 SQUARE INCHES	9/2/15

Client Sample #'s - **Total # of Samples:** 9

Relinquished (Client):	Lona Pearson	**Date:**	9/2/15	**Time:**	1300
Received (Lab):	ZA	**Date:**	9/2/15	**Time:**	1pm (w.l)

Comments:

Page 1 of 2 pages

LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID *(Lab Use Only):*

091514765

PHONE:
FAX:

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Location	Volume/Area	Date/Time Sampled
SHED-P06	BROWN INTERIOR DOOR WOOD	4 SQUARE INCHES	9/2/15
SHED-P07	WHITE INTERIOR CEILING WOOD	4 SQUARE INCHES	9/2/15
SHED-P08	BEIGE INTERIOR WALL DRYWALL	4 SQUARE INCHES	9/2/15
SHED-P09	BLUE INTERIOR TACK BOARD FIBERBOARD	4 SQUARE INCHES	9/2/15

Comments/Special Instructions:

Page 2 of 2 pages

Appendix D.
Photographic Log of Selected Photographs

City of Alameda Shed ACM/LBP Survey
Photographic Log

Photo: 1

Direction: East

Description:

View of the west side of Shed structure adjacent and north of the Woodstock School building. A chain link fence surrounds the structure.

Date: 09/02/2015

Photo: 2

Direction: Southeast

Description:

View showing the north side of the shed structure**.** Grey siding paint and brown eave paint contains lead above 5,000 parts per million (ppm) the regulatory definition of lead-based paint (LBP).

Date: 09/02/2015

Photo: 3	
Direction: East	
Description: View of Shed interior. Shown is drywall wall system with asbestos-containing skim coat and joint compound. All painted surfaces contain lead above OSHA hazard level of 600 ppm.	
Date: 09/02/2015	

Photo: 4	
Direction: N/A	
Description: Close up view of interior drywall with ACM skim coat and joint compound and lead-containing paint (LCP).	
Date: 09/02/2015	

City of Alameda Shed ACM/LBP Survey
Photographic Log

Photo: 5	
Direction: East	
Description: View of exterior grey LBP; paint is mostly intact.	
Date: 09/02/2015	

Photo: 6	
Direction: N/A	
Description: View of brown LBP on roof eave and grey LBP on siding. Brown LBP is in poor condition.	
Date: 09/02/2015	

Photo: 7	
Direction: West	
Description: View of parking bollard on the west of and adjacent to Shed. Lead was not detected in bollard paint coating.	
Date: 09/02/2015	

Photo: 8	
Direction: N/A	
Description: View of Shed interior and green and line green LCP on ACM drywall wall system.	
Date: 09/02/2015	

Photo: 9	
Direction: North	
Description: View of LCP mint green paint on wood door.	
Date: 09/02/2015	

Photo: 10	
Direction: South	
Description: View of brown LCP on door jamb and trim.	
Date: 09/02/2015	

City of Alameda Shed ACM/LBP Survey
Photographic Log

Photo: 11

Direction: N/A

Description:

View of white LCP on interior ceiling and roof joists.

Date: 09/02/2015

Photo: 13

Direction: N/A

Description:

View of blue LCP on tack board.

Date: 09/02/2015

City of Alameda Shed ACM/LBP Survey
Photographic Log

Photo: 14	
Direction: East	
Description: View of asphalt roof – brown top layer.	
Date: 09/02/2015	

Photo: 15	
Direction: N/A	
Description: View of roofing – brown shingle top layer over red shingle, over roof paper with ACM mastic – bottom layer.	
Date: 09/02/2015	

Photo: 16	
Direction: West	
Description:	
Date: 09/02/2015	

Photo: 17	
Direction: N/A	
Description: A close up view of ACM skim coat, over tape, over ACM joint compound and drywall with LCP.	
Date: 09/02/2015	

Photo: 18	
Direction: North	
Description: View of exterior drywall (non ACM) visible on interior door with LCP.	
Date: 09/02/2015	

Photo: 19	
Direction: East	
Description: Another view of exterior drywall (non ACM) under wood siding on left. Drywall on right is on interior.	
Date: 09/02/2015	

Photo: 19	
Direction: West	
Description: View of ACM silver flashing on utility support on roof.	
Date: 09/02/2015	

Attachment – CDPH Form 8552

LEAD HAZARD EVALUATION REPORT

Section 1 — Date of Lead Hazard Evaluation September 2, 2015

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

☐ Lead Inspection ☐ Risk assessment ☐ Clearance Inspection ☑ Other (specify) Non-HUD Lead demolition inspection

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]	City	County	Zip Code
1900 Third Street	Alameda	Alameda	94105

Construction date (year) of structure	Type of structure	Children living in structure?
unknown	☐ Multi-unit building ☐ School or daycare ☐ Single family dwelling ☑ Other Shed on School Grounds	☐ Yes ☑ No ☐ Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
City of Alameda Community Development Dept. - Gail Payne	510-747-6892

Address [number, street, apartment (if applicable)]	City	State	Zip Code
2263 Santa Clara Ave #190	Alameda	CA	94501

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

☐ No lead-based paint detected ☑ Intact lead-based paint detected ☑ Deteriorated lead-based paint detected

☐ No lead hazards detected ☐ Lead-contaminated dust found ☐ Lead-contaminated soil found ☐ Other__________

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Lona Pearson	916-853-4557

Address [number, street, apartment (if applicable)]	City	State	Zip Code
2969 Prospect Park Drive, Suite 100	Rancho Cordova	CA	95670

CDPH certification number	Signature	Date
21287	Lona Pearson	9/8/15

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

NA

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

Transmission Report

Date/Time	09–08–2015	01:10:57 p.m.	Transmit Header Text	
Local ID 1	916–852–0307		Local Name 1	Tetra Tech

This document : Confirmed
(reduced sample and details below)
Document size : 8.5"x11"

State of California—Health and Human Services Agency   California Department of Public Health

LEAD HAZARD EVALUATION REPORT

Section 1 — Date of Lead Hazard Evaluation September 2, 2015

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

☐ Lead inspection ☐ Risk assessment ☐ Clearance inspection ☑ Other (specify) Non-HUD Lead demolition inspection

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address (number, street, apartment (if applicable))	City	County	Zip Code
1900 Third Street	Alameda	Alameda	94105

Construction date (year) of structure	Type of structure	Children living in structure?
unknown	☐ Multi-unit building ☐ School or daycare ☐ Single family dwelling ☑ Other Shed on School Grounds	☐ Yes ☑ No ☐ Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
City of Alameda Community Development Dept. - Gail Payne	510-747-6892

Address (number, street, apartment (if applicable))	City	State	Zip Code
2263 Santa Clara Ave #190	Alameda	CA	94501

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

☐ No lead-based paint detected ☑ Intact lead-based paint detected ☑ Deteriorated lead-based paint detected

☐ No lead hazards detected ☐ Lead-contaminated dust found ☐ Lead-contaminated soil found ☐ Other________

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Lona Pearson	916-853-4557

Address (number, street, apartment (if applicable))	City	State	Zip Code
2969 Prospect Park Drive, Suite 100	Rancho Cordova	CA	95670

CDPH certification number	Signature	Date
21287	Lona Pearson	9/8/15

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

NA

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specific locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

CDPH 8552 (8/07)

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Abbreviations:

HS: Host send	PL: Polled local	MP: Mailbox print	CP: Completed	TS: Terminated by system
HR: Host receive	PR: Polled remote	RP: Report	FA: Fail	G3: Group 3
WS: Waiting send	MS: Mailbox save	FF: Fax Forward	TU: Terminated by user	EC: Error Correct

ATTACHMENT M – SOIL REMEDIATION DOCUMENTS

The following documents will be made available as part of the Bid Package and can be found at the following location under ***"Site Maps/Documents"***:

http://geotracker.waterboards.ca.gov/profile_report?global_id=T10000006774

- "Draft Soil Remediation Workplan for the Cross Alameda Trail", April 14, 2017
- "Investigation Report and RAP for the Cross Alameda Trail", September 2016
- "Investigation and Risk Assessment Report for the Cross Alameda Trail", October 2015

ATTACHMENT N - PHASE II ENVIRONMENTAL ASSESSMENT REPORT FOR THE CROSS ALAMEDA TRAIL, FEBRUARY 3, 2015

February 3, 2015

Ms. Gail Payne
Transportation Coordinator
City of Alameda
Public Works Department
950 West Mall Square, Room 110
Alameda, CA 94501

Subject: Phase II Environmental Site Assessment Report for the Cross Alameda Trail, Alameda, California

Dear Ms. Payne:

As requested by the City of Alameda Public Works Department, Tetra Tech is pleased to provide this letter report describing a Phase II Environmental Site Assessment (ESA) for property owned by the City of Alameda (Assessor's Parcel Numbers [APN] 74-905-20-3 and 74-905-20-2). The work consisted of a subsurface soil investigation conducted at a former railroad corridor between Webster Street and Main Street, along the south side of Ralph Appezzato Memorial Parkway (hereinafter referred to as the site), in Alameda, California (Figure 1). The objective of this Phase II ESA was to establish whether elevated concentrations of certain chemicals of potential concern (COPC) relating to past uses are present at the site.

BACKGROUND

The Phase II ESA investigation addressed recognized environmental conditions (RECs) identified at the site in a Phase I ESA conducted by Belinda P. Blackie, dated March 8, 2010. The Phase I ESA was done for the Alameda Belt Line Parcels (nine non-contiguous parcels comprising 38.81 acres of land including the site), which at the time of the ESA were mostly undeveloped. The site includes approximately 13 acres of former railroad right-of-way and is approximately 4,200 feet in length (Figure 2) (Blackie, 2010).

The Phase I ESA identified the following RECs for the site:

- Historical railroad tracks;
- Fill, imported soil, and;
- Marsh crust (Blackie, 2010).

Evidence of railroad tracks are visible in a 1939 aerial photograph but the railroad was also likely present as early as the mid- to late-1910s. The railroad tracks were removed from the parcels in the mid- to late-1950s (Blackie, 2010). The Phase I ESA also noted that the site has been filled and is located adjacent to the marsh crust area. Based on observations made on December 29 and 30, 2014 during the Tetra Tech's Phase II ESA field work, the site is primarily undeveloped and covered with low vegetation, mulch, and some pavement. The westernmost portion of the site is partially covered by a parking lot for an adjacent business.

OBJECTIVES AND SCOPE OF WORK

The objective of the Phase II ESA subsurface investigation was to determine whether elevated concentrations of selected COPC are present at the site. The areas where the focused Phase II ESA investigation occurred are shown on Figure 2. The activities described in this report were conducted according to the scope of work presented in Tetra Tech's *Work Plan, Cost Estimate, and Schedule for Phase II Environmental Site Assessment on the Cross Alameda Trail Project, Alameda, California* (Tetra Tech 2014).

Tetra Tech, Inc.
1999 Harrison St, Suite 500, Oakland, CA 94607
Tel 626.351.4664 Fax 626.351.5291 www.tetratech.com

Tetra Tech based the selection of COPCs for the Phase II ESA on the RECs identified for the site in the Phase I ESA (Blackie, 2010). Chlorinated herbicides were selected because products containing these chemicals are known to have been used for weed control along railroad tracks; arsenic and lead were selected because fill material and imported fill is likely present at the site and similar materials in Alameda are known to contain these chemicals (Blackie, 2010); and petroleum hydrocarbons and polycyclic aromatic hydrocarbons (PAH) were selected because the material known as the Marsh Crust is known to contain these chemicals. The site is possibly within the limit of filling where marsh crust material was disposed, and the original shoreline was approximately within the site or near the southern border of the site with the upland occurring to the south. The marsh crust material was disposed on tidal marshland between 1900 and 1940 to extend dry land from the existing shoreline (City of Alameda, 2015).

INVESTIGATION FIELD METHODOLOGY

Tetra Tech conducted the Phase II ESA field investigation on December 29 and 30, 2014. The boring locations were selected to be in approximate alignment with the former railroad tracks, as identified on a USGS topographic map from 1959 (Blackie, 2010). The investigation activities are described below.

Pre-Field Investigation Activities

Tetra Tech obtained Drilling Permit No. W2014-1180 from the Alameda County Public Works Agency on December 22, 2014. Mr. Steve Miller with the Alameda County Public Works Agency conducted grout inspections on December 29 and 30, 2014.

Tetra Tech prepared a site-specific health and safety plan specifying safe work practices and emergency protocol to mitigate the hazards associated with the field work part of the investigation. Health and safety tailgate meetings attended by all Tetra Tech and drilling subcontractor staff were conducted at the beginning of each work day.

Utility Location and Clearance

On December 23, 2014 Tetra Tech marked the boring locations with white paint and notified Underground Service Alert (USA) of the drilling investigation. USA members cleared underground utilities under USA Ticket No. 0533298. As an additional precaution, underground utility clearance was done at each borehole on December 29, 2014 by the private subcontractor Subtronic Corporation.

Drilling and Sampling Methodology

Under the supervision of a Tetra Tech field geologist, Tetra Tech's subcontractor Vironex advanced boreholes CAT-B-1 through CAT-B-10 using direct-push drilling technology on December 29 and 30, 2014. The subsurface soil was continuously sampled during drilling and the soil cores were logged by a Tetra Tech geologist using the Unified Soil Classification System. Copies of the soil boring logs are provided as Attachment A.

Drilling equipment was decontaminated using clean water and Liquinox soap after each soil borehole was completed to avoid cross contamination between drilling locations.

Soil Sampling

Soil samples were collected from boreholes CAT-B-1 through CAT-B-10 (Figure 2). The soil boreholes were advanced to depths ranging from 8 to 9 feet below ground surface (bgs). Soil samples were collected at two depth intervals from each of the 10 soil boreholes. Shallow soil samples were collected at depths ranging from 0 to 2 feet bgs. Deeper soil samples were collected at depths ranging from 4 to 8 feet bgs. The last numeral of the soil identification nomenclature (e.g., CAT-B-1-4) indicates the approximate depth at which the soil sample was collected.

Soil cores were collected in driller-supplied acetate liners at approximately 4-foot depth intervals for lithologic description and retention for possible laboratory analysis. Soil cores were logged for lithology, including the preparation of borehole logs under the supervision of a professional geologist licensed in the State of California.

Soil samples were collected using laboratory-provided glass jars; labeled with date, sample identification, and time, entered into a chain-of-custody form, and placed on ice in a cooler for shipment to the laboratory. Samples were delivered via FedEx to Accutest Laboratories (Accutest) in San Jose, California under chain-of-custody.

LABORATORY ANALYSIS

A total of 20 primary soil samples were collected from boreholes CAT-B-1 through CAT-B-10 (two soil samples were collected from each borehole). One duplicate sample (CAT-B) was collected with primary soil sample CAT-B-10-2. The soil samples were analyzed by Accutest in San Jose, California. Accutest is a certified State of California, Environmental Laboratory Accreditation Program (ELAP) laboratory. The soil samples were analyzed using the following United States Environmental Protection Agency (USEPA) methods:

- Total Extractable Petroleum Hydrocarbons (TEPH) by USEPA Method 8015M;
- Polycyclic Aromatic Hydrocarbons (PAH) by USEPA Method 8270C;
- Chlorinated herbicides by USEPA Method 8151; and
- Lead and arsenic by USEPA Method 6020.

INVESTIGATION RESULTS

Tetra Tech compared the analytical results for the soil samples to the California Environmental Protection Agency (Cal/EPA), California Human Health Screening Levels (CHHSLs) (OEHHA, 2010), and the San Francisco Bay Regional Water Quality Control Board, Environmental Screening Levels (RWQCB, 2013). Although the future land use for the site is to be recreational, screening levels were selected based on residential criteria as a first step in identifying whether contamination exists at the site. The analytical data is summarized and compared with regulatory screening levels in Tables 1 and 2. The data presented in Tables 1 and 2 has in some cases been converted from micrograms per kilogram (µg/kg) to milligrams per kilogram (mg/kg) to allow for a direct comparison to applicable regulatory screening levels. The laboratory analytical reports are provided in Attachment B.

Petroleum Hydrocarbons

TEPH as diesel was detected in 15 of 21 soil samples analyzed for the compound. The concentrations detected range from 5.74 mg/kg to 188 mg/kg. TEPH as motor oil was detected in 18 of 21 soil samples analyzed for the compound. The concentrations detected range from 5.74 mg/kg to 1,160 mg/kg (Table 1).

Polycyclic Aromatic Hydrocarbons

Soil sample results indicate that PAH compounds were detected above the laboratory method detection limit in soil samples from 19 of 21 boreholes. The PAH compounds detected at the site include the following: acenapthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(ah)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene.

PAH compounds were not detected above the laboratory method detection limit in soil samples collected from boreholes CAT-B-1-2 and CAT-B-10-5. Benzo(a)pyrene was the only PAH compound that was detected above one or more of the human health screening levels presented in Table 1. As shown on Figure 2, benzo(a)pyrene was detected above at least one human health screening level in soil samples collected from boreholes CAT-B-1, and CAT-B-4 through CAT-B-10.

Lead

Lead was detected in all 21 soil samples analyzed for the compound. The concentrations detected range from 2.6 mg/kg to 185 mg/kg (Table 2). Lead concentrations in soil exceeded one or more of the human health screening levels presented in Table 2 for boreholes CAT-B-6, CAT-B-7, and CAT-B-10, as shown on Figure 2.

Arsenic

Arsenic was detected in all 21 soil samples analyzed for the compound. The concentrations detected range from 1.4 mg/kg to 29.7 mg/kg (Table 2). Arsenic concentrations in soil exceeded one or more of the human health screening levels presented in Table 2 for all 21 boreholes, as shown on Figure 2.

Regional estimates of background arsenic concentrations in urbanized parts of the San Francisco Bay Area have recently been published with SF RWQCB endorsement (Duverge, 2011). The study proposes an upper estimate of 11.00 mg/kg for background arsenic (99th percentile) within the undifferentiated flatland soils of the study area. The findings of the study are significant because the estimate for background arsenic is considerably lower than other estimates commonly cited as sources in the literature (Duverge, 2011).

Chlorinated Herbicides

Pentachlorophenol was detected in 7 of 21 soil samples analyzed for the compound, and was the only chlorinated herbicide detected above the laboratory method detection limit. The concentrations of pentachlorophenol detected range from 0.00094 mg/kg to 0.0052 mg/kg (Table 2). Pentachlorophenol was not detected in soil from the site above any of the human health screening levels presented in Table 2.

CONCLUSIONS AND RECCOMENDATIONS

As stated earlier, the objective of this investigation was to determine whether elevated concentrations of selected COPCs are present at the site. Based on the results of the soil sampling, elevated concentrations of COPCs do exist in the soil at the site. Even though the concentrations of the COPCs exceed residential screening criteria, the results are not extremely high considering the urban setting and site history. In order to assess potential environmental risks, some additional sampling and analysis will be necessary.

Although TEPH as diesel and motor oil were not detected above human health screening levels (Table 1), it is important to recognize that the results do not define the extent of the contamination. The TEPH concentrations detected in soil samples from boreholes CAT-B-1 and CAT-B-10 may be indicative of nearby petroleum release that requires further delineation in both soil and groundwater.

PAH compounds were detected in soil samples from 19 of 21 boreholes. Benzo(a)pyrene was the only PAH compound that was detected above one or more of the human health screening levels. As shown on Table 1, benzo(a)pyrene was detected at concentrations above at least one human health screening level in soil samples collected from boreholes CAT-B-1, and CAT-B-4 through CAT-B-10. The presence of PAH compounds from most of the borings is consistent with impacts from the marsh crust. The elevated PAH compounds were present in soil samples from near the surface (at 1 feet below ground) to a depth of 5 feet. The City of Alameda has developed requirements for excavation within the marsh crust area, which should be applied to this site (City of Alameda, 2015).

Detections of arsenic in soil at the site indicate that the some of the concentrations are high enough to warrant further evaluation. In particular, concentrations above 10 mg/kg were detected in soil samples from boreholes CAT-B-1 and CAT-B-2 at both the shallow and deeper sample intervals. The concentrations of arsenic detected in boreholes CAT-B-1 and CAT-B-2 are higher than typical background concentrations (11.00 mg/kg) for the undifferentiated flatlands in urbanized parts of the San Francisco Bay Area (Duverge, 2011). The arsenic concentrations in boreholes CAT-B-1 and CAT-B-2 also correlate with elevated detections of TEPH as motor oil and/or TEPH as diesel in those boreholes. This correlation is important because TEPH concentrations in soil can mobilize arsenic making it more likely that arsenic in soil migrates to groundwater and dissolves (Brown et al, 2010).

Lead concentrations in soil exceed human health screening levels at boreholes CAT-B-6, CAT-B-7, and CAT-B-10, and concentrations detected in soil from borehole CAT-B-2 are just below the lowest human health screening level (80 mg/kg) presented in Table 2. Even though lead is common in fill material in the Bay Area, Tetra Tech recommends that lead concentrations in soil at the site be further evaluated to better understand the magnitude and extent of lead in soil at the site.

Pentachlorophenol was detected in 7 of 21 soil samples analyzed for the compound, and was the only chlorinated herbicide detected above the laboratory method detection limit. The concentrations of pentachlorophenol detected range from 0.00094 mg/kg to 0.0052 mg/kg (Table 2). The maximum concentration of pentachlorophenol is many orders of magnitude below the residential direct exposure screening level for the protection of human health (Table K-1; RWQCB 2013). For this reason, and the lack of other chlorinated herbicides at the site, Tetra Tech does not recommend further investigation for this COPC at the site.

If you have any questions or require additional information, please feel free to contact Victor Early at 510-302-6332.

Sincerely,

Tetra Tech, Inc.

REGISTERED GEOLOGIST
VICTOR EARLY
No. 2204
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Victor Early, P.G, C.E.G
Project Manager

Mark Duffy, REPA
Project Geologist

List of Attachments:

- Figure 1 – Site Location
- Figure 2 – Site Plan Showing Soil Borehole Locations
- Table 1 – Summary of Chemical Analyses of Soil Samples for TEPH and PAH
- Table 2 – Summary of Chemical Analyses of Soil Samples for Metals and Chlorinated Herbicides
- Attachment A –Soil Borehole Logs
- Attachment B – Lab Reports and COC Records
- Attachment C – Permits

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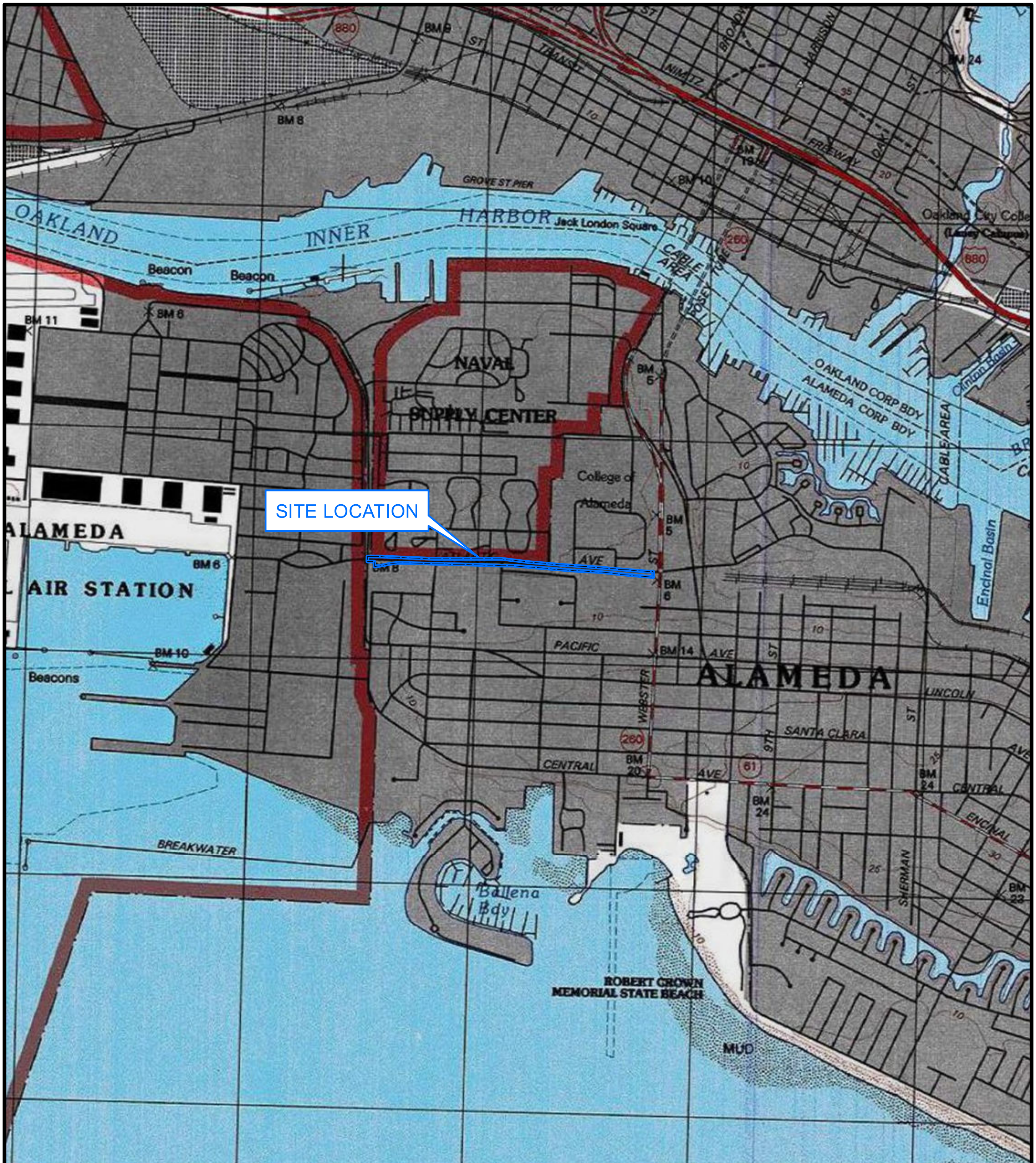
Figures



Property Boundary

TETRA TECH

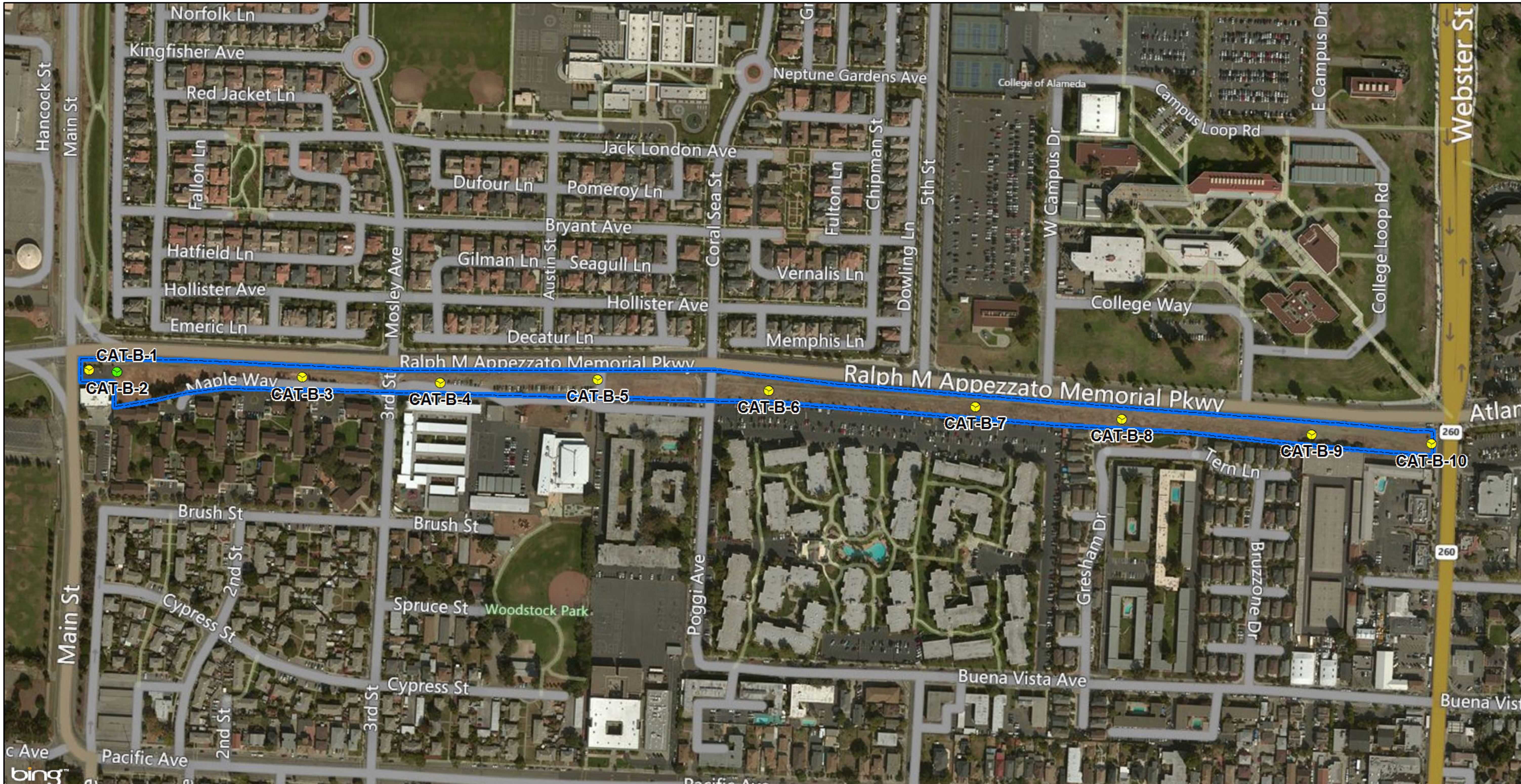
Cross Alameda Trail, Phase II ESA
Alameda, California

FIGURE 1
SITE LOCATION

N W E S

0 1,000 2,000
Feet

SOURCE: MODIFIED 2013 FROM NATIONAL GEOGRAPHIC SOCIETY, I-CUBED QUADRANGLES INCLUDE: OAKLAND, WEST



Property Boundary

Soil Borings (Sampled for Lead, Arsenic, PAH, TPH, & Herbicides)

- No detection at or above one or more of the RWQCB ESL values (soil)
- Detection at or above one or more of the RWQCB ESL values (soil)

N W E S

300 150 0 300

Feet

TETRA TECH

Cross Alameda Trail, Phase II ESA
Alameda, California

FIGURE 2
BORING LOCATIONS

1/30/2015 V:\Alameda\Projects\CrossTrail\GIS\Layouts\APPROXIMATE BORING LOCATIONS.mxd yashekia.evans

Tables

TABLE 1
SUMMARY OF CHEMICAL ANALYSES OF SOIL SAMPLES FOR TPPH AND PAH
City of Alameda, Cross Alameda Trail Pase II Environmental Site Assessment
Alameda, California

Soil Borehole/SampleID	Sample Date	TEPH (mg/kg)	TEPH (mg/kg)	PAH (mg/kg)															
		Diesel	Motor Oil	Acenapthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(ah)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene
CAT-B-1-2	12/29/2014	132	1,160	< 0.35	< 0.35	< 0.35	< 0.17	< 0.12	< 0.14	< 0.15	< 0.16	< 0.14	< 0.19	< 0.35	< 0.35	< 0.17	< 0.35	< 0.35
CAT-B-1-4	12/29/2014	14.5	106	< 0.0089	< 0.0089	< 0.0089	0.0364	0.0459	0.033	0.0378	0.0285	0.0403	0.0079	0.078	< 0.0089	0.0373	0.0272	0.0792
CAT-B-2-2	12/29/2014	< 9.1	236	< 0.0091	< 0.0091	< 0.0091	0.0095	0.0144	0.019	0.0188	0.0065	0.0129	< 0.0051	0.0176	< 0.0091	0.0166	< 0.0091	0.0231
CAT-B-2-5	12/29/2014	< 10	178	< 0.010	< 0.010	< 0.010	0.0188	0.0306	0.0333	0.0429	0.0217	0.0296	0.0066	0.0465	< 0.010	0.0422	0.0184	0.049
CAT-B-3-1	12/29/2014	42.7	78.2	< 0.0024	< 0.0024	0.0034	0.0235	0.0354	0.0367	0.0431	0.0193	0.0362	< 0.0014	0.0625	< 0.0024	0.0402	0.0211	0.0601
CAT-B-3-4	12/29/2014	< 4.1	15.3	< 0.0042	< 0.0042	< 0.0042	< 0.0021	< 0.0014	< 0.0017	< 0.0019	< 0.0019	< 0.0017	< 0.0024	< 0.0042	< 0.0042	< 0.0021	< 0.0042	< 0.0042
CAT-B-4-2	12/29/2014	8.76	28.2	< 0.0021	0.0076	0.0076	0.0996	0.219	0.22	0.293	0.114	0.163	0.0284	0.285	< 0.0021	0.320	0.060	0.295
CAT-B-4-5	12/29/2014	11.7	26.6	0.0068	0.0159	0.0325	0.156	0.264	0.239	0.286	0.118	0.204	0.0302	0.515	0.0126	0.300	0.242	0.495
CAT-B-5-1	12/29/2014	6.17	22.7	< 0.0021	0.0047	0.0052	0.0619	0.123	0.110	0.176	0.062	0.084	0.0141	0.162	< 0.0021	0.179	0.0286	0.191
CAT-B-5-5	12/29/2014	< 1.8	< 3.6	< 0.0018	< 0.0018	< 0.0018	0.0078	0.0147	0.0142	0.0185	0.0074	0.0102	0.0019	0.0177	< 0.0018	0.0188	< 0.0018	0.0212
CAT-B-6-1	12/29/2014	8.22	36.5	< 0.0021	0.0044	0.00029	0.0226	0.0476	0.0493	0.0576	0.0304	0.0415	0.0084	0.0576	< 0.0021	0.0630	0.0261	0.0693
CAT-B-6-4	12/29/2014	5.74	9.43	< 0.0024	< 0.0024	< 0.0024	0.0056	0.0074	0.0083	0.0086	0.0043	0.0078	< 0.0014	0.0108	< 0.0024	0.0087	0.0031	0.010
CAT-B-7-1	12/30/2014	6.52	16.0	< 0.0021	0.0024	0.0027	0.0492	0.119	0.105	0.146	0.0558	0.0694	0.0116	0.133	< 0.0021	0.123	0.025	0.192
CAT-B-7-4	12/30/2014	8.49	19.9	< 0.0019	< 0.0019	< 0.0019	0.0059	0.0098	0.0091	0.0115	0.0058	0.0085	0.0017	0.0129	< 0.0019	0.0097	0.0049	0.0189
CAT-B-8-2	12/30/2014	7.35	31.8	< 0.010	< 0.010	< 0.010	0.0364	0.0816	0.0794	0.105	0.0426	0.0549	0.0123	0.0896	< 0.010	0.100	0.0203	0.113
CAT-B-8-8	12/30/2014	< 2.2	< 4.3	< 0.0022	< 0.0022	< 0.0022	0.0020	0.0020	0.0050	0.0050	0.0049	0.0028	< 0.0012	< 0.0022	< 0.0022	0.0037	< 0.0022	0.0023
CAT-B-9-1	12/30/2014	6.39	30.3	< 0.0086	< 0.0086	< 0.0086	0.0593	0.121	0.123	0.145	0.0543	0.0862	0.0160	0.163	< 0.0086	0.153	0.0399	0.181
CAT-B-9-6	12/30/2014	< 2.1	< 4.1	< 0.0020	< 0.0020	< 0.0020	0.0014	0.0013	0.0012	0.00095	< 0.00094	0.0012	< 0.0011	< 0.0020	< 0.0020	0.0013	< 0.0020	< 0.0020
CAT-B-10-2	12/30/2014	129	609	< 0.055	< 0.055	< 0.055	0.0526	0.0657	0.0571	0.0977	0.0459	0.0618	< 0.031	0.0887	< 0.055	0.0668	0.0843	0.0858
CAT-B (Duplicate)	12/30/2014	188	922	< 0.020	< 0.020	< 0.020	< 0.010	0.0104	0.0105	0.0148	< 0.0094	0.0107	< 0.011	< 0.020	< 0.020	0.012	< 0.020	< 0.020
CAT-B-10-5	12/30/2014	88.2	164	< 0.0021	< 0.0021	< 0.0021	< 0.0010	< 0.00070	< 0.00083	< 0.00091	< 0.00095	< 0.00083	< 0.0012	< 0.0021	< 0.0021	< 0.0010	< 0.0021	< 0.0021
RWQCB ESL (Table K-1) [1]		*240*	*10,000*	*3,400*	*NE*	*23,000*	*0.38*	*0.038*	*0.38*	*NE*	*0.38*	*3.8*	*0.11*	*2,300*	*3,100*	*0.38*	*NE*	*3,400*
RWQCB ESL (Table K-3) [2]		*900*	*28,000*	*8,600*	*NE*	*43,000*	*3.8*	*0.38*	*3.8*	*NE*	*8.3*	*83*	*2.4*	*5,700*	*5,700*	*8.3*	*NE*	*8,600*
Cal/EPA CHHSL (Table 1) [3]		*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*0.038*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*

Notes:

Light grey shading indicates a detection at or above one or more of the RWQCB ESL values presented
TEPH Total extractable petroleum hydrocarbons as diesel analyzed using EPA Method 8015M.
PAH Polyaromatic hydrocarbons analyzed using EPA Method 8260B.
NE Not established
-- Not analyzed.
mg/kg Milligrams per kilogram
< detection is less than the laboratory method detection limit
1 California Regional Water Quality Control Board, Environmental Screening Levels for Soil (RWQCB ESL), residenital direct exposure to soil scenario (Table K-1; RWQCB 2013).
2 California Regional Water Quality Control Board, Environmental Screening Levels for Soil (RWQCB ESL), construction/trench worker direct exposure to soil scenario (Table K-3; RWQCB 2013).
3 California Human Health Screening Levels (CHHSL), Soil Screening Numbers for Nonvolatile Chemicals, Residential Scenario (Table 1; Updated 2010)

TABLE 2
SUMMARY OF CHEMICAL ANALYSES OF SOIL SAMPLES FOR METALS AND CHLORINATED

City of Alameda, Cross Alameda Trail Pase II Environmental Site Assessment
Alameda, California

Well/Sample ID	Sample Date	Metals (mg/kg)		Chlorinated Herbicides (mg/kg)
		Arsenic	Lead	Pentachlorophenol
CAT-B-1-2	12/29/2014	15.4	40.4	0.00094
CAT-B-1-4	12/29/2014	27.2	35.7	0.0025
CAT-B-2-2	12/29/2014	29.7	61.3	< 0.0027
CAT-B-2-5	12/29/2014	12.3	79.7	< 0.00061
CAT-B-3-1	12/29/2014	8.0	24.0	< 0.00075
CAT-B-3-4	12/29/2014	7.2	2.6	< 0.00066
CAT-B-4-2	12/29/2014	6.8	37	0.0026
CAT-B-4-5	12/29/2014	6.3	36.6	< 0.00069
CAT-B-5-1	12/29/2014	6.2	68.4	< 0.00065
CAT-B-5-5	12/29/2014	1.7	3	0.0026
CAT-B-6-1	12/29/2014	5.3	26.2	< 0.00063
CAT-B-6-4	12/29/2014	3.9	185	0.0014
CAT-B-7-1	12/30/2014	4.3	22	< 0.00062
CAT-B-7-4	12/30/2014	5.1	92.9	< 0.00058
CAT-B-8-2	12/30/2014	6.5	40.5	< 0.00062
CAT-B-8-8	12/30/2014	2.7	16.9	0.0052
CAT-B-9-1	12/30/2014	7.8	54.6	< 0.00065
CAT-B-9-6	12/30/2014	4.9	6.9	< 0.00062
CAT-B-10-2	12/30/2014	6.2	126	< 0.00057
CAT-B (Duplicate)	12/30/2014	4.9	170	0.0011
CAT-B-10-5	12/30/2014	1.4	26	< 0.0032
RWQCB ESL (Table K-1) [1]		*0.39*	*80*	*3.0*
RWQCB ESL (Table K-3) [2]		*10*	*320*	*56*
Cal/EPA CHHSL (Table 1) [3]		*0.070*	*80*	*4.4*

Notes:

(grey shading)	Light grey shading indicates a detection at or above one or more of the RWQCB ESL values presented
NE	Not established
<	detection is less than the laboratory method detection limit
mg/kg	Milligrams per kilogram
<	detection is less than the laboratory reporting limit.
1	California Regional Water Quality Control Board, Environmental Screening Levels for Soil (RWQCB ESL), residenital direct exposure to soil scenario (Table K-1; RWQCB 2013).
2	California Regional Water Quality Control Board, Environmental Screening Levels for Soil (RWQCB ESL), construction/trench worker direct exposure to soil scenario (Table K-3; RWQCB 2013).
3	California Environmental Protection Agency (Cal/EPA), California Human Health Screening Levels (CHHSL), Soil Screening Numbers for Nonvolatile Chemicals, Residential Scenario (Table 1; Updated 2010)

ATTACHMENT A

Soil Boring Logs

TETRA TECH

BORING LOG
CAT-B-1

Project: Cross-Alameda Trail Phase II	Borehole Depth: 8 feet	Sampling Method: Macro-Core	
Location: Alameda, CA	Borehole Diameter: 2.25 inches		
Project No.: 103S3536	Reviewed By: Victor Early	Latitude:	
Logged By: Mark Duffy		Longitude:	
Date Boring Started: 12/29/2014	Drilling Contractor: Vironex	Ground Surface Elevation (feet NGVD of 1929):	
Date Boring Completed: 12/29/2014	Drilling Method: Direct Push Technology	Depth to groundwater (feet bgs): NA	

Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing PID (ppm)
0	48"					Asphalt/fill	
1				SM		Silty sand, light olive brown (2.5Y 5/4), approximatley 3 inch black (2.5Y 2.5/1), loose, mostly fine sand, trace gravel, slighlty moist.	
2		1115	CAT-B-1-2				0.0
3		1130	CAT-B-1-4				
4	48"			SM		Silty sand, black (2.5Y 2.5/1), soft, loose to very low plasticity, mostly fine sand, very moist to wet.	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

TETRA TECH

BORING LOG
CAT-B-2

Project:	Cross-Alameda Trail Phase II	Borehole Depth:	8 feet	Sampling Method: Macro-Core	
Location:	Alameda, CA	Borehole Diameter:	2.25 inches		
Project No.:	103S3536	Reviewed By: Victor Early		Latitude:	
Logged By:	Mark Duffy			Longitude:	
Date Boring Started:	12/29/2014	Drilling Contractor: Vironex		Ground Surface Elevation (feet NGVD of 1929):	
Date Boring Completed:	12/29/2014	Drilling Method: Direct Push Technology		Depth to groundwater (feet bgs): NA	

Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing Zone PID (ppm)
0	48"					Mulch	
1				Ml		Sandy silt, light olive brown (2.5Y 5/4), low plasticity, soft, some fine sand, trace gravel, moist.	
2		1215	CAT-B-2-2				0.0
3							
4	48"			CL		Silty clay, very dark grey (2.5Y 3/1), medium stiffness, medium plasticity, moist.	
5		1230	CAT-B-2-5				
6				NA	NA	No recovery from 5 to 8 feet bgs.	
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

TETRA TECH

BORING LOG
CAT-B-3

Project:	Cross-Alameda Trail Phase II	Borehole Depth:	8 feet	Sampling Method: Macro-Core	
Location:	Alameda, CA	Borehole Diameter:	2.25 inches		
Project No.:	103S3536	Reviewed By: Victor Early		Latitude:	
Logged By:	Mark Duffy			Longitude:	
Date Boring Started:	12/29/2014	Drilling Contractor: Vironex		Ground Surface Elevation (feet NGVD of 1929):	
Date Boring Completed:	12/29/2014	Drilling Method: Direct Push Technology		Depth to groundwater (feet bgs): NA	

Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing Zone PID (ppm)
0						Mulch	
						Silty clay, light olive brown (2.5Y 5/4, medium stiffness, medium plasticity, trace gravel, moist.	
1		1305	CAT-B-3-1				
2	48"			CL			0.0
3							
						Silty sand, very dark grey (2.5Y 3/1), poorly graded, mostly fine sand, soft, wet.	
4		1315	CAT-B-3-4				
5							
6	48"			SM			
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

TETRA TECH

BORING LOG
CAT-B-4

Project:	Cross-Alameda Trail Phase II	Borehole Depth: 8 feet	Sampling Method: Macro-Core
Location:	Alameda, CA	Borehole Diameter: 2.25 inches	
Project No.:	103S3536	Reviewed By: Victor Early	Latitude:
Logged By:	Mark Duffy		Longitude:
Date Boring Started:	12/29/2014	Drilling Contractor: Vironex	Ground Surface Elevation (feet NGVD of 1929):
Date Boring Completed:	12/29/2014	Drilling Method: Direct Push Technology	Depth to groundwater (feet bgs): NA

Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing Zone PID (ppm)
---- 0 ----						Silty clay, olive brown (2.5Y 4/4), medium stiffness, medium plasticity, moist.	
---- 1 ----							
---- 2 ----	48"	1415	CAT-B-4-2	CL			0.0
---- 3 ----							
---- 4 ----							
---- 5 ----		1425	CAT-B-4-5			Silty sand, very dark grey (2.5Y 3/1), loose, soft, mostly fine sand, wet.	
---- 6 ----	48"			SM			
---- 7 ----							
---- 8 ----							
---- 9 ----							
---- 10 ----							
---- 11 ----							
---- 12 ----							
---- 13 ----							
---- 14 ----							
---- 15 ----							
---- 16 ----							
---- 17 ----							
---- 18 ----							
---- 19 ----							
---- 20 ----							

TETRA TECH

BORING LOG
CAT-B-5

Project: Cross-Alameda Trail Phase II	Borehole Depth: 8 feet	Sampling Method: Macro-Core	
Location: Alameda, CA	Borehole Diameter: 2.25 inches		
Project No.: 103S3536	Reviewed By: Victor Early	Latitude:	
Logged By: Mark Duffy		Longitude:	
Date Boring Started: 12/29/2014	Drilling Contractor: Vironex	Ground Surface Elevation (feet NGVD of 1929):	
Date Boring Completed: 12/29/2014	Drilling Method: Direct Push Technology	Depth to groundwater (feet bgs): NA	

Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing Zone PID (ppm)
0						Silty sand, light olive brown (2.5Y 5/4) and black (2.5Y 2.5/1), loose, trace gravel, brick fragment at 1-foot bgs, moist	
		1450	CAT-B-5-1				
1				SM			0.0
2	48"					Silty sand, dark brown (10YR 3/3), dark grey (2.5Y 4/1) starting at 5 feet bgs, loose to very low plasticity, soft, very moist to wet.	
3							
4							
		1500	CAT-B-5-5				
5				SM			
6	48"						
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

TETRA TECH

BORING LOG
CAT-B-6

Project: Cross-Alameda Trail Phase II	Borehole Depth: 8 feet	Sampling Method: Macro-Core	
Location: Alameda, CA	Borehole Diameter: 2.25 inches		
Project No.: 103S3536	Reviewed By: Victor Early	Latitude:	
Logged By: Mark Duffy		Longitude:	
Date Boring Started: 12/29/2014	Drilling Contractor: Vironex	Ground Surface Elevation (feet NGVD of 1929):	
Date Boring Completed: 12/29/2014	Drilling Method: Direct Push Technology	Depth to groundwater (feet bgs): NA	

Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing Zone PID (ppm)
0	48"			CL		Silty clay, dark grey (2.5Y 4/1), medium stiffness, medium plasticity, moist.	
		1535	CAT-B-6-1				
1							0.0
2							
3				NA	NA	Marsh crust/unknown material, white (2.5Y 8/1) with yellowish red (5YR 5/6)staining, chalky, very moist	
		1530	CAT-B-6-4				
4	48"						
5				SM		Silty sand, very dark grey (2.5Y 3/1), soft, loose to very low plasticity, very moist.	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

TETRA TECH

BORING LOG
CAT-B-7

Project: Cross-Alameda Trail Phase II	Borehole Depth: 8 feet	Sampling Method: Macro-Core	
Location: Alameda, CA	Borehole Diameter: 2.25 inches		
Project No.: 103S3536	Reviewed By: Victor Early	Latitude:	
Logged By: Mark Duffy		Longitude:	
Date Boring Started: 12/30/2014	Drilling Contractor: Vironex	Ground Surface Elevation (feet NGVD of 1929):	
Date Boring Completed: 12/30/2014	Drilling Method: Direct Push Technology	Depth to groundwater (feet bgs): NA	

Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing Zone PID (ppm)
0	48"			CL		Silty clay, olive brown (2.5Y 4/4). Medoium stiffness, medium plasticity, moist.	
1		835	CAT-B-7-1				0.0
2							
3		840	CAT-B-7-4	NA	NA	Marsh crust/unknown material, black (2.5Y 2.5/1), olive brown (2.5Y 4/4), white (2.5Y 8/1), loose to slightly stiff, moist.	
4	48"						
5				SM		Silty sand, very dark grey (2.5Y 3/1), soft, loose to very low plasticity, very moist.	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

TETRA TECH

BORING LOG
CAT-B-8

Project: Cross-Alameda Trail Phase II	Borehole Depth: 9 feet	Sampling Method: Macro-Core	
Location: Alameda, CA	Borehole Diameter: 2.25 inches		
Project No.: 103S3536	Reviewed By: Victor Early	Latitude:	
Logged By: Mark Duffy		Longitude:	
Date Boring Started: 12/30/2014	Drilling Contractor: Vironex	Ground Surface Elevation (feet NGVD of 1929):	
Date Boring Completed: 12/30/2014	Drilling Method: Direct Push Technology	Depth to groundwater (feet bgs): NA	

Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing Zone PID (ppm)
0	60"			NA		Mulch	
1				CL		Silty clay, olive brown (2.5Y 4/4), medium stiffness, high plasticity, moist.	0.0
2		1125	CAT-B-8-2				
3							
4							
5	48"			ML		Sandy silt, very dark grey (2.5Y 3/1) to black (2.5Y 2.5/1) at 8 feet bgs, sticky, soft, low plasticity, very moist, glass fragment at 8 feet bgs,	
6							
7							
8		1120	CAT-B-8-8				
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

TETRA TECH

BORING LOG
CAT-B-9

Project: Cross-Alameda Trail Phase II	Borehole Depth: 9 feet	Sampling Method: Macro-Core	
Location: Alameda, CA	Borehole Diameter: 2.25 inches		
Project No.: 103S3536	Reviewed By: Victor Early	Latitude:	
Logged By: Mark Duffy		Longitude:	
Date Boring Started: 12/30/2014	Drilling Contractor: Vironex	Ground Surface Elevation (feet NGVD of 1929):	
Date Boring Completed: 12/30/2014	Drilling Method: Direct Push Technology	Depth to groundwater (feet bgs): NA	

Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing Zone PID (ppm)
0	60"			NA		Mulch	
1			CAT-B-9-1	CL		Silty clay, olive brown (2.5Y 4/4), medium stiffness, medium plasticity, moist.	0.0
2							
3							
4							
5	48"						
6			CAT-B-9-6	ML		Sandy silt, black (2.5Y 2.5/1), sticky, soft, low plasticity, very moist	
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

TETRA TECH

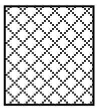
BORING LOG
CAT-B-10

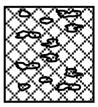
Project: Cross-Alameda Trail Phase II	Borehole Depth: 9 feet	Sampling Method: Macro-Core	
Location: Alameda, CA	Borehole Diameter: 2.25 inches		
Project No.: 103S3536	Reviewed By: Victor Early	Latitude:	
Logged By: Mark Duffy		Longitude:	
Date Boring Started: 12/30/2014	Drilling Contractor: Vironex	Ground Surface Elevation (feet NGVD of 1929):	
Date Boring Completed: 12/30/2014	Drilling Method: Direct Push Technology	Depth to groundwater (feet bgs): NA	

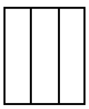
Depth (feet bgs)	Recovered Interval	Time	Soil Sample ID	USCS	Graphic Log	Interval and Lithologic Description	Breathing Zone PID (ppm)
0				NA		Gravel fill	
1						Silty clay, olive brown (2.5Y 4/4), medium stiffness, medium plasticity, moist.	0.0
		1310	CAT-B-10-2				
2		1320	CAT-B (duplicate)	CL			
	60"						
3							
4				ML		Sandy silt, black (2.5Y 2.5/1), sticky, soft, low plasticity, very moist.	
		1305	CAT-B-10-5				
5						Silty sand, grey (2.5Y 5/1), soft, loose, very moist.	
6							
7	48"			SM			
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

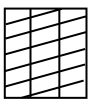
Geologic Borehole Log Legend

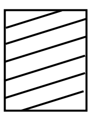
bgs	below ground surface
ppm	parts per million
PID	photoionization detector
USCS	Unified Soil Classification System
NGVD	National Geodetic Vertical Datum
NA	not applicable

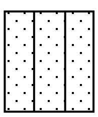

Asphalt

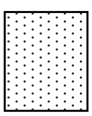

Gravel Fill

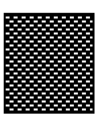

Sandy Silt (ML)


Clayey Silt (ML)


Silty Clay (CL)


Silty Sand (SM)


Sand (SP)


Mulch


approximate depth to groundwater

ATTACHMENT B

Lab Reports and COC Records

Northern California
ACCUTEST
LABORATORIES

01/13/15

Technical Report for

Tetra Tech EMI

Alameda Cross Trail Phase II

ALAMEDA CROSS TRAIL PHASE II

Accutest Job Number: C37833

Sampling Date: 12/29/14

Report to:

Tetra Tech
1999 Harrison St. Suite 500
Oakland, CA 94612
mark.duffy@tetratech.com; victor.early@tetratech.com

ATTN: Mark Duffy

Total number of pages in report: **99**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

James J. Rhudy
Lab Director

Client Service contact: Nutan Kabir 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

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Accutest Laboratories

Sample Summary

Tetra Tech EMI

Job No: C37833

Alameda Cross Trail Phase II
Project No: ALAMEDA CROSS TRAIL PHASE II

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C37833-1	12/29/14	11:15	MD	12/31/14	SO	Soil	CAT-B-1-2
C37833-2	12/29/14	11:30	MD	12/31/14	SO	Soil	CAT-B-1-4
C37833-3	12/29/14	12:15	MD	12/31/14	SO	Soil	CAT-B-2-2
C37833-4	12/29/14	12:30	MD	12/31/14	SO	Soil	CAT-B-2-5
C37833-5	12/29/14	13:15	MD	12/31/14	SO	Soil	CAT-B-3-4
C37833-6	12/29/14	13:05	MD	12/31/14	SO	Soil	CAT-B-3-1
C37833-7	12/29/14	14:50	MD	12/31/14	SO	Soil	CAT-B-5-1
C37833-8	12/29/14	14:25	MD	12/31/14	SO	Soil	CAT-B-4-5
C37833-9	12/29/14	14:15	MD	12/31/14	SO	Soil	CAT-B-4-2
C37833-10	12/29/14	15:00	MD	12/31/14	SO	Soil	CAT-B-5-5
C37833-11	12/29/14	15:30	MD	12/31/14	SO	Soil	CAT-B-6-4
C37833-12	12/29/14	15:35	MD	12/31/14	SO	Soil	CAT-B-6-1

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: C37833
Account: Tetra Tech EMI
Project: Alameda Cross Trail Phase II
Collected: 12/29/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C37833-1	**CAT-B-1-2**					
TPH (Diesel) [a]		132	110	53	mg/kg	SW846 8015B M
TPH (Motor Oil)		1160	210	110	mg/kg	SW846 8015B M
Pentachlorophenol [b]		0.94 J	3.5	0.53	ug/kg	SW846 8151A
Arsenic		15.4	0.22		mg/kg	SW846 6020
Lead		40.4	0.22		mg/kg	SW846 6020
C37833-2	**CAT-B-1-4**					
Benzo(a)anthracene [c]		36.4	18	4.5	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene [c]		45.9	18	3.0	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [c]		33.0	18	3.6	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [c]		37.8	18	3.9	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene [c]		28.5	18	4.1	ug/kg	SW846 8270C BY SIM
Chrysene [c]		40.3	18	3.6	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene [c]		7.9 J	18	5.0	ug/kg	SW846 8270C BY SIM
Fluoranthene [c]		78.0 J	89	8.9	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [c]		37.3	18	4.5	ug/kg	SW846 8270C BY SIM
Phenanthrene [c]		27.2 J	89	8.9	ug/kg	SW846 8270C BY SIM
Pyrene [c]		79.2 J	89	8.9	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [a]		14.5	11	5.4	mg/kg	SW846 8015B M
TPH (Motor Oil)		106	21	11	mg/kg	SW846 8015B M
Pentachlorophenol [b]		2.5 J	3.6	0.55	ug/kg	SW846 8151A
Arsenic		27.2	0.23		mg/kg	SW846 6020
Lead		35.7	0.23		mg/kg	SW846 6020
C37833-3	**CAT-B-2-2**					
Benzo(a)anthracene [c]		9.5 J	18	4.5	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene [c]		14.4 J	18	3.1	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [c]		19.0	18	3.6	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [c]		18.8	18	4.0	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene [c]		6.5 J	18	4.2	ug/kg	SW846 8270C BY SIM
Chrysene [c]		12.9 J	18	3.6	ug/kg	SW846 8270C BY SIM
Fluoranthene [c]		17.6 J	91	9.1	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [c]		16.6 J	18	4.5	ug/kg	SW846 8270C BY SIM
Pyrene [c]		23.1 J	91	9.1	ug/kg	SW846 8270C BY SIM
TPH (Motor Oil)		236	37	18	mg/kg	SW846 8015B M
Arsenic		29.7	0.24		mg/kg	SW846 6020
Lead		61.3	0.24		mg/kg	SW846 6020
C37833-4	**CAT-B-2-5**					
Benzo(a)anthracene [c]		18.8 J	20	5.1	ug/kg	SW846 8270C BY SIM

Summary of Hits

Job Number: C37833
Account: Tetra Tech EMI
Project: Alameda Cross Trail Phase II
Collected: 12/29/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(a)pyrene [c]		30.6	20	3.4	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [c]		33.3	20	4.0	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [c]		42.9	20	4.4	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene [c]		21.7	20	4.7	ug/kg	SW846 8270C BY SIM
Chrysene [c]		29.6	20	4.0	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene [c]		6.6 J	20	5.7	ug/kg	SW846 8270C BY SIM
Fluoranthene [c]		46.5 J	100	10	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [c]		42.2	20	5.1	ug/kg	SW846 8270C BY SIM
Phenanthrene [c]		18.4 J	100	10	ug/kg	SW846 8270C BY SIM
Pyrene [c]		49.0 J	100	10	ug/kg	SW846 8270C BY SIM
TPH (Motor Oil)		178	41	20	mg/kg	SW846 8015B M
Arsenic		12.3	0.26		mg/kg	SW846 6020
Lead		79.7	0.26		mg/kg	SW846 6020
C37833-5	**CAT-B-3-4**					
TPH (Motor Oil)		15.3 J	17	8.3	mg/kg	SW846 8015B M
Arsenic [d]		7.2	0.56		mg/kg	SW846 6020
Lead		2.6	0.28		mg/kg	SW846 6020
C37833-6	**CAT-B-3-1**					
Anthracene		3.4 J	24	2.4	ug/kg	SW846 8270C BY SIM
Benzo(a)anthracene		23.5	4.9	1.2	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene		35.4	4.9	0.83	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene		36.7	4.9	0.97	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene		43.1	4.9	1.1	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene		19.3	4.9	1.1	ug/kg	SW846 8270C BY SIM
Chrysene		36.2	4.9	0.97	ug/kg	SW846 8270C BY SIM
Fluoranthene		62.5	24	2.4	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene		40.2	4.9	1.2	ug/kg	SW846 8270C BY SIM
Phenanthrene		21.1 J	24	2.4	ug/kg	SW846 8270C BY SIM
Pyrene		60.1	24	2.4	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [e]		42.7	4.9	2.5	mg/kg	SW846 8015B M
TPH (Motor Oil) [f]		78.2	9.8	4.9	mg/kg	SW846 8015B M
Arsenic		8.0	0.31		mg/kg	SW846 6020
Lead		24.0	0.31		mg/kg	SW846 6020
C37833-7	**CAT-B-5-1**					
Acenaphthylene		4.7 J	21	2.1	ug/kg	SW846 8270C BY SIM
Anthracene		5.2 J	21	2.1	ug/kg	SW846 8270C BY SIM
Benzo(a)anthracene		61.9	4.3	1.1	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene		123	4.3	0.73	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene		110	4.3	0.86	ug/kg	SW846 8270C BY SIM

Summary of Hits

Job Number: C37833
Account: Tetra Tech EMI
Project: Alameda Cross Trail Phase II
Collected: 12/29/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(g,h,i)perylene		176	4.3	0.94	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene		62.0	4.3	0.99	ug/kg	SW846 8270C BY SIM
Chrysene		84.0	4.3	0.86	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene		14.1	4.3	1.2	ug/kg	SW846 8270C BY SIM
Fluoranthene		162	21	2.1	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene		179	4.3	1.1	ug/kg	SW846 8270C BY SIM
Phenanthrene		28.6	21	2.1	ug/kg	SW846 8270C BY SIM
Pyrene		191	21	2.1	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [e]		6.17	4.3	2.1	mg/kg	SW846 8015B M
TPH (Motor Oil) [g]		22.7	8.6	4.3	mg/kg	SW846 8015B M
Arsenic		6.2	0.28		mg/kg	SW846 6020
Lead		68.4	0.28		mg/kg	SW846 6020
C37833-8	**CAT-B-4-5**					
Acenaphthene		6.8 J	23	2.3	ug/kg	SW846 8270C BY SIM
Acenaphthylene		15.9 J	23	2.3	ug/kg	SW846 8270C BY SIM
Anthracene		32.5	23	2.3	ug/kg	SW846 8270C BY SIM
Benzo(a)anthracene		156	4.5	1.1	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene		264	4.5	0.77	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene		239	4.5	0.91	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene		286	4.5	1.0	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene		118	4.5	1.0	ug/kg	SW846 8270C BY SIM
Chrysene		204	4.5	0.91	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene		30.2	4.5	1.3	ug/kg	SW846 8270C BY SIM
Fluoranthene		515	23	2.3	ug/kg	SW846 8270C BY SIM
Fluorene		12.6 J	23	2.3	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene		300	4.5	1.1	ug/kg	SW846 8270C BY SIM
Phenanthrene		242	23	2.3	ug/kg	SW846 8270C BY SIM
Pyrene		495	23	2.3	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [e]		11.7	4.6	2.3	mg/kg	SW846 8015B M
TPH (Motor Oil)		26.6	9.1	4.6	mg/kg	SW846 8015B M
Arsenic		6.3	0.29		mg/kg	SW846 6020
Lead		36.6	0.29		mg/kg	SW846 6020
C37833-9	**CAT-B-4-2**					
Acenaphthylene		7.6 J	21	2.1	ug/kg	SW846 8270C BY SIM
Anthracene		7.6 J	21	2.1	ug/kg	SW846 8270C BY SIM
Benzo(a)anthracene		99.6	4.2	1.0	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene		219	4.2	0.71	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene		220	4.2	0.83	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene		293	4.2	0.92	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene		114	4.2	0.96	ug/kg	SW846 8270C BY SIM
Chrysene		163	4.2	0.83	ug/kg	SW846 8270C BY SIM

Summary of Hits

Job Number: C37833
Account: Tetra Tech EMI
Project: Alameda Cross Trail Phase II
Collected: 12/29/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Dibenzo(a,h)anthracene		28.4	4.2	1.2	ug/kg	SW846 8270C BY SIM
Fluoranthene		285	21	2.1	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene		320	4.2	1.0	ug/kg	SW846 8270C BY SIM
Phenanthrene		60.0	21	2.1	ug/kg	SW846 8270C BY SIM
Pyrene		295	21	2.1	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [e]		8.76	4.2	2.1	mg/kg	SW846 8015B M
TPH (Motor Oil)		28.2	8.4	4.2	mg/kg	SW846 8015B M
Pentachlorophenol [b]		2.6 J	4.1	0.62	ug/kg	SW846 8151A
Arsenic		6.8	0.27		mg/kg	SW846 6020
Lead		37.0	0.27		mg/kg	SW846 6020
C37833-10	**CAT-B-5-5**					
Benzo(a)anthracene		7.8	3.6	0.89	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene		14.7	3.6	0.61	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene		14.2	3.6	0.71	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene		18.5	3.6	0.79	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene		7.4	3.6	0.82	ug/kg	SW846 8270C BY SIM
Chrysene		10.2	3.6	0.71	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene		1.9 J	3.6	1.0	ug/kg	SW846 8270C BY SIM
Fluoranthene		17.7 J	18	1.8	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene		18.8	3.6	0.89	ug/kg	SW846 8270C BY SIM
Pyrene		21.2	18	1.8	ug/kg	SW846 8270C BY SIM
Pentachlorophenol [b]		2.9 J	3.5	0.54	ug/kg	SW846 8151A
Arsenic [d]		1.7	0.52		mg/kg	SW846 6020
Lead		3.3	0.23		mg/kg	SW846 6020
C37833-11	**CAT-B-6-4**					
Benzo(a)anthracene		5.6	4.9	1.2	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene		7.4	4.9	0.83	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene		8.3	4.9	0.97	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene		8.6	4.9	1.1	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene		4.3 J	4.9	1.1	ug/kg	SW846 8270C BY SIM
Chrysene		7.8	4.9	0.97	ug/kg	SW846 8270C BY SIM
Fluoranthene		10.8 J	24	2.4	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene		8.7	4.9	1.2	ug/kg	SW846 8270C BY SIM
Phenanthrene		3.1 J	24	2.4	ug/kg	SW846 8270C BY SIM
Pyrene		10 J	24	2.4	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [h]		5.74	4.9	2.4	mg/kg	SW846 8015B M
TPH (Motor Oil) [f]		9.43 J	9.8	4.9	mg/kg	SW846 8015B M
Pentachlorophenol [b]		1.4 J	4.9	0.75	ug/kg	SW846 8151A
Arsenic [d]		3.9	0.68		mg/kg	SW846 6020
Lead		185	0.31		mg/kg	SW846 6020

Summary of Hits

Job Number: C37833
Account: Tetra Tech EMI
Project: Alameda Cross Trail Phase II
Collected: 12/29/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C37833-12	**CAT-B-6-1**					
Acenaphthylene		4.4 J	21	2.1	ug/kg	SW846 8270C BY SIM
Anthracene		2.9 J	21	2.1	ug/kg	SW846 8270C BY SIM
Benzo(a)anthracene		22.6	4.1	1.0	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene		47.6	4.1	0.71	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene		49.3	4.1	0.83	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene		57.6	4.1	0.91	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene		30.4	4.1	0.95	ug/kg	SW846 8270C BY SIM
Chrysene		41.5	4.1	0.83	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene		8.4	4.1	1.2	ug/kg	SW846 8270C BY SIM
Fluoranthene		57.6	21	2.1	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene		63.0	4.1	1.0	ug/kg	SW846 8270C BY SIM
Phenanthrene		26.1	21	2.1	ug/kg	SW846 8270C BY SIM
Pyrene		69.3	21	2.1	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [h]		8.22	4.3	2.1	mg/kg	SW846 8015B M
TPH (Motor Oil) [f]		36.5	8.5	4.3	mg/kg	SW846 8015B M
Arsenic		5.3	0.27		mg/kg	SW846 6020
Lead		26.2	0.27		mg/kg	SW846 6020

(a) Atypical Diesel pattern (C10-C28); heavier hydrocarbons contributing to quantitation.
(b) All hits confirmed by dual column analysis. Analysis performed at Accutest Laboratories, Orlando FL.
(c) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).
(d) Elevated RL/MDL due to positive bias of Method Blank.
(e) Atypical Diesel pattern (C12-C28); value due on discrete peaks and heavier hydrocarbons contributing to quantitation.
(f) Estimated value due to the presence of interfering peaks in the Motor Oil range.
(g) Estimated value due to the presence of interfering peaks.
(h) Atypical Diesel pattern (C12-C28); heavier hydrocarbons contributing to quantitation.

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	CAT-B-1-2		
Lab Sample ID:	C37833-1	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	94.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	T17361.D	40	01/03/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	5.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	3500	350	ug/kg	
208-96-8	Acenaphthylene	ND	3500	350	ug/kg	
120-12-7	Anthracene	ND	3500	350	ug/kg	
56-55-3	Benzo(a)anthracene	ND	690	170	ug/kg	
50-32-8	Benzo(a)pyrene	ND	690	120	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	690	140	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	690	150	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	690	160	ug/kg	
218-01-9	Chrysene	ND	690	140	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	690	190	ug/kg	
206-44-0	Fluoranthene	ND	3500	350	ug/kg	
86-73-7	Fluorene	ND	3500	350	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	690	170	ug/kg	
90-12-0	1-Methylnaphthalene	ND	3500	690	ug/kg	
91-57-6	2-Methylnaphthalene	ND	3500	690	ug/kg	
91-20-3	Naphthalene	ND	3500	690	ug/kg	
85-01-8	Phenanthrene	ND	3500	350	ug/kg	
129-00-0	Pyrene	ND	3500	350	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		32-128%
321-60-8	2-Fluorobiphenyl	117%		48-122%
1718-51-0	Terphenyl-d14	116%		48-148%

(a) Dilution required due to matrix interference. Extract would not concentrate (dark and viscous); and high concentration of non-target hydrocarbons.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-1-2		
Lab Sample ID:	C37833-1	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	94.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046845.D	1	01/08/15	AFL	01/05/15	F:OP54497	F:GCC779
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	35	5.9	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.5	0.94	ug/kg	
93-76-5	2,4,5-T	ND	3.5	0.70	ug/kg	
1918-00-9	Dicamba	ND	3.5	1.2	ug/kg	
88-85-7	Dinoseb	ND	87	17	ug/kg	
75-99-0	Dalapon	ND	170	35	ug/kg	
120-36-5	Dichloroprop	ND	35	13	ug/kg	
94-82-6	2,4-DB	ND	35	13	ug/kg	
93-65-2	MCPP	ND	3500	920	ug/kg	
94-74-6	MCPA	ND	3500	830	ug/kg	
87-86-5	Pentachlorophenol	0.94	3.5	0.53	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	70% [b]		31-132%

(a) All hits confirmed by dual column analysis. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-1-2		
Lab Sample ID:	C37833-1	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	94.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319851.D	20	01/05/15	AG	01/02/15	OP11469	GHH1431
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.5 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	132	110	53	mg/kg	
	TPH (Motor Oil)	1160	210	110	mg/kg	
	TPH (Mineral Spirits)	ND	110	53	mg/kg	
	TPH (Kerosene)	ND	110	53	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	72%		37-122%

(a) Atypical Diesel pattern (C10-C28); heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-1-2		
Lab Sample ID:	C37833-1	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	94.7
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	15.4	0.22	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	40.4	0.22	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8938

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-1-2		
Lab Sample ID:	C37833-1	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	94.7
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	5.3		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-1-4		
Lab Sample ID:	C37833-2	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	93.0
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	T17362.D	5	01/03/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	89	8.9	ug/kg	
208-96-8	Acenaphthylene	ND	89	8.9	ug/kg	
120-12-7	Anthracene	ND	89	8.9	ug/kg	
56-55-3	Benzo(a)anthracene	36.4	18	4.5	ug/kg	
50-32-8	Benzo(a)pyrene	45.9	18	3.0	ug/kg	
205-99-2	Benzo(b)fluoranthene	33.0	18	3.6	ug/kg	
191-24-2	Benzo(g,h,i)perylene	37.8	18	3.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	28.5	18	4.1	ug/kg	
218-01-9	Chrysene	40.3	18	3.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	7.9	18	5.0	ug/kg	J
206-44-0	Fluoranthene	78.0	89	8.9	ug/kg	J
86-73-7	Fluorene	ND	89	8.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	37.3	18	4.5	ug/kg	
90-12-0	1-Methylnaphthalene	ND	89	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	89	18	ug/kg	
91-20-3	Naphthalene	ND	89	18	ug/kg	
85-01-8	Phenanthrene	27.2	89	8.9	ug/kg	J
129-00-0	Pyrene	79.2	89	8.9	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	98%		32-128%
321-60-8	2-Fluorobiphenyl	94%		48-122%
1718-51-0	Terphenyl-d14	91%		48-148%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-1-4		
Lab Sample ID:	C37833-2	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	93.0
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046771.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	36	6.1	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.6	0.97	ug/kg	
93-76-5	2,4,5-T	ND	3.6	0.72	ug/kg	
1918-00-9	Dicamba	ND	3.6	1.2	ug/kg	
88-85-7	Dinoseb	ND	90	18	ug/kg	
75-99-0	Dalapon	ND	180	36	ug/kg	
120-36-5	Dichloroprop	ND	36	13	ug/kg	
94-82-6	2,4-DB	ND	36	13	ug/kg	
93-65-2	MCPP	ND	3600	950	ug/kg	
94-74-6	MCPA	ND	3600	860	ug/kg	
87-86-5	Pentachlorophenol	2.5	3.6	0.55	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	70% [b]		31-132%

(a) All hits confirmed by dual column analysis. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-1-4			
Lab Sample ID:	C37833-2		**Date Sampled:**	12/29/14
Matrix:	SO - Soil		**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B		**Percent Solids:**	93.0
Project:	Alameda Cross Trail Phase II			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319852.D	3	01/05/15	AG	01/02/15	OP11469	GHH1431
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	14.5	11	5.4	mg/kg	
	TPH (Motor Oil)	106	21	11	mg/kg	
	TPH (Mineral Spirits)	ND	11	5.4	mg/kg	
	TPH (Kerosene)	ND	11	5.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	88%		37-122%

(a) Atypical Diesel pattern (C10-C28); heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-1-4		
Lab Sample ID:	C37833-2	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	93.0
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	27.2	0.23	mg/kg	5	01/06/15	01/07/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	35.7	0.23	mg/kg	5	01/06/15	01/07/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8938

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-1-4		
Lab Sample ID:	C37833-2	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	93.0
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	7		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-2-2		
Lab Sample ID:	C37833-3	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	90.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	T17363.D	5	01/03/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	91	9.1	ug/kg	
208-96-8	Acenaphthylene	ND	91	9.1	ug/kg	
120-12-7	Anthracene	ND	91	9.1	ug/kg	
56-55-3	Benzo(a)anthracene	9.5	18	4.5	ug/kg	J
50-32-8	Benzo(a)pyrene	14.4	18	3.1	ug/kg	J
205-99-2	Benzo(b)fluoranthene	19.0	18	3.6	ug/kg	
191-24-2	Benzo(g,h,i)perylene	18.8	18	4.0	ug/kg	
207-08-9	Benzo(k)fluoranthene	6.5	18	4.2	ug/kg	J
218-01-9	Chrysene	12.9	18	3.6	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	18	5.1	ug/kg	
206-44-0	Fluoranthene	17.6	91	9.1	ug/kg	J
86-73-7	Fluorene	ND	91	9.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	16.6	18	4.5	ug/kg	J
90-12-0	1-Methylnaphthalene	ND	91	18	ug/kg	
91-57-6	2-Methylnaphthalene	ND	91	18	ug/kg	
91-20-3	Naphthalene	ND	91	18	ug/kg	
85-01-8	Phenanthrene	ND	91	9.1	ug/kg	
129-00-0	Pyrene	23.1	91	9.1	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	92%		32-128%
321-60-8	2-Fluorobiphenyl	94%		48-122%
1718-51-0	Terphenyl-d14	105%		48-148%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-2-2		
Lab Sample ID:	C37833-3	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	90.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046846.D	5	01/08/15	AFL	01/05/15	F:OP54497	F:GCC779
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	180	30	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	18	4.8	ug/kg	
93-76-5	2,4,5-T	ND	18	3.6	ug/kg	
1918-00-9	Dicamba	ND	18	5.9	ug/kg	
88-85-7	Dinoseb	ND	440	89	ug/kg	
75-99-0	Dalapon	ND	890	180	ug/kg	
120-36-5	Dichloroprop	ND	180	67	ug/kg	
94-82-6	2,4-DB	ND	180	66	ug/kg	
93-65-2	MCPP	ND	18000	4700	ug/kg	
94-74-6	MCPA	ND	18000	4300	ug/kg	
87-86-5	Pentachlorophenol	ND	18	2.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	90% [b]		31-132%

(a) Dilution required due to matrix interference. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-2-2		
Lab Sample ID:	C37833-3	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	90.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319819.D	5	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	18	9.1	mg/kg	
	TPH (Motor Oil)	236	37	18	mg/kg	
	TPH (Mineral Spirits)	ND	18	9.1	mg/kg	
	TPH (Kerosene)	ND	18	9.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	76%		37-122%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-2-2		
Lab Sample ID:	C37833-3	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	90.9
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	29.7	0.24	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	61.3	0.24	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8938

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-2-2		
Lab Sample ID:	C37833-3	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	90.9
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	9.1		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-2-5		
Lab Sample ID:	C37833-4	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	81.4
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	T17364.D	5	01/03/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	100	10	ug/kg	
208-96-8	Acenaphthylene	ND	100	10	ug/kg	
120-12-7	Anthracene	ND	100	10	ug/kg	
56-55-3	Benzo(a)anthracene	18.8	20	5.1	ug/kg	J
50-32-8	Benzo(a)pyrene	30.6	20	3.4	ug/kg	
205-99-2	Benzo(b)fluoranthene	33.3	20	4.0	ug/kg	
191-24-2	Benzo(g,h,i)perylene	42.9	20	4.4	ug/kg	
207-08-9	Benzo(k)fluoranthene	21.7	20	4.7	ug/kg	
218-01-9	Chrysene	29.6	20	4.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	6.6	20	5.7	ug/kg	J
206-44-0	Fluoranthene	46.5	100	10	ug/kg	J
86-73-7	Fluorene	ND	100	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	42.2	20	5.1	ug/kg	
90-12-0	1-Methylnaphthalene	ND	100	20	ug/kg	
91-57-6	2-Methylnaphthalene	ND	100	20	ug/kg	
91-20-3	Naphthalene	ND	100	20	ug/kg	
85-01-8	Phenanthrene	18.4	100	10	ug/kg	J
129-00-0	Pyrene	49.0	100	10	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	99%		32-128%
321-60-8	2-Fluorobiphenyl	94%		48-122%
1718-51-0	Terphenyl-d14	98%		48-148%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-2-5		
Lab Sample ID:	C37833-4	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	81.4
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046773.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	40	6.8	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.0	1.1	ug/kg	
93-76-5	2,4,5-T	ND	4.0	0.80	ug/kg	
1918-00-9	Dicamba	ND	4.0	1.3	ug/kg	
88-85-7	Dinoseb	ND	100	20	ug/kg	
75-99-0	Dalapon	ND	200	40	ug/kg	
120-36-5	Dichloroprop	ND	40	15	ug/kg	
94-82-6	2,4-DB	ND	40	15	ug/kg	
93-65-2	MCPP	ND	4000	1100	ug/kg	
94-74-6	MCPA	ND	4000	960	ug/kg	
87-86-5	Pentachlorophenol	ND	4.0	0.61	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	110% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-2-5		
Lab Sample ID:	C37833-4	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	81.4
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319820.D	5	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	20	10	mg/kg	
	TPH (Motor Oil)	178	41	20	mg/kg	
	TPH (Mineral Spirits)	ND	20	10	mg/kg	
	TPH (Kerosene)	ND	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	70%		37-122%

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-2-5		
Lab Sample ID:	C37833-4	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	81.4
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	12.3	0.26	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	79.7	0.26	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8938

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-2-5		
Lab Sample ID:	C37833-4	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	81.4
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	18.6		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-3-4		
Lab Sample ID:	C37833-5	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	77.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17348.D	1	01/02/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	42	4.2	ug/kg	
208-96-8	Acenaphthylene	ND	42	4.2	ug/kg	
120-12-7	Anthracene	ND	42	4.2	ug/kg	
56-55-3	Benzo(a)anthracene	ND	8.4	2.1	ug/kg	
50-32-8	Benzo(a)pyrene	ND	8.4	1.4	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	8.4	1.7	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	8.4	1.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	8.4	1.9	ug/kg	
218-01-9	Chrysene	ND	8.4	1.7	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	8.4	2.4	ug/kg	
206-44-0	Fluoranthene	ND	42	4.2	ug/kg	
86-73-7	Fluorene	ND	42	4.2	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	8.4	2.1	ug/kg	
90-12-0	1-Methylnaphthalene	ND	42	8.4	ug/kg	
91-57-6	2-Methylnaphthalene	ND	42	8.4	ug/kg	
91-20-3	Naphthalene	ND	42	8.4	ug/kg	
85-01-8	Phenanthrene	ND	42	4.2	ug/kg	
129-00-0	Pyrene	ND	42	4.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	105%		32-128%
321-60-8	2-Fluorobiphenyl	100%		48-122%
1718-51-0	Terphenyl-d14	112%		48-148%

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-3-4		
Lab Sample ID:	C37833-5	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	77.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046796.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	43	7.3	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.3	1.2	ug/kg	
93-76-5	2,4,5-T	ND	4.3	0.86	ug/kg	
1918-00-9	Dicamba	ND	4.3	1.4	ug/kg	
88-85-7	Dinoseb	ND	110	21	ug/kg	
75-99-0	Dalapon	ND	210	43	ug/kg	
120-36-5	Dichloroprop	ND	43	16	ug/kg	
94-82-6	2,4-DB	ND	43	16	ug/kg	
93-65-2	MCPP	ND	4300	1100	ug/kg	
94-74-6	MCPA	ND	4300	1000	ug/kg	
87-86-5	Pentachlorophenol	ND	4.3	0.66	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	100% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-3-4		
Lab Sample ID:	C37833-5	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	77.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319821.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	8.3	4.1	mg/kg	
	TPH (Motor Oil)	15.3	17	8.3	mg/kg	J
	TPH (Mineral Spirits)	ND	8.3	4.1	mg/kg	
	TPH (Kerosene)	ND	8.3	4.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	94%		37-122%

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-3-4			
Lab Sample ID:	C37833-5		**Date Sampled:**	12/29/14
Matrix:	SO - Soil		**Date Received:**	12/31/14
			Percent Solids:	77.7
Project:	Alameda Cross Trail Phase II			

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	7.2	0.56	mg/kg	5	01/09/15	01/12/15	RS	SW846 6020 [2]	SW846 3050B [4]
Lead	2.6	0.28	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA4523
(2) Instrument QC Batch: MA4533
(3) Prep QC Batch: MP8938
(4) Prep QC Batch: MP8965

(a) Elevated RL/MDL due to positive bias of Method Blank.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-3-4		
Lab Sample ID:	C37833-5	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	77.7
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	22.3		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-3-1		
Lab Sample ID:	C37833-6	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	67.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17349.D	1	01/02/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	24	2.4	ug/kg	
208-96-8	Acenaphthylene	ND	24	2.4	ug/kg	
120-12-7	Anthracene	3.4	24	2.4	ug/kg	J
56-55-3	Benzo(a)anthracene	23.5	4.9	1.2	ug/kg	
50-32-8	Benzo(a)pyrene	35.4	4.9	0.83	ug/kg	
205-99-2	Benzo(b)fluoranthene	36.7	4.9	0.97	ug/kg	
191-24-2	Benzo(g,h,i)perylene	43.1	4.9	1.1	ug/kg	
207-08-9	Benzo(k)fluoranthene	19.3	4.9	1.1	ug/kg	
218-01-9	Chrysene	36.2	4.9	0.97	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	1.4	ug/kg	
206-44-0	Fluoranthene	62.5	24	2.4	ug/kg	
86-73-7	Fluorene	ND	24	2.4	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	40.2	4.9	1.2	ug/kg	
90-12-0	1-Methylnaphthalene	ND	24	4.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	24	4.9	ug/kg	
91-20-3	Naphthalene	ND	24	4.9	ug/kg	
85-01-8	Phenanthrene	21.1	24	2.4	ug/kg	J
129-00-0	Pyrene	60.1	24	2.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	109%		32-128%
321-60-8	2-Fluorobiphenyl	101%		48-122%
1718-51-0	Terphenyl-d14	90%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-3-1		
Lab Sample ID:	C37833-6	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	67.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046779.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	49	8.3	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.9	1.3	ug/kg	
93-76-5	2,4,5-T	ND	4.9	0.98	ug/kg	
1918-00-9	Dicamba	ND	4.9	1.6	ug/kg	
88-85-7	Dinoseb	ND	120	24	ug/kg	
75-99-0	Dalapon	ND	240	49	ug/kg	
120-36-5	Dichloroprop	ND	49	18	ug/kg	
94-82-6	2,4-DB	ND	49	18	ug/kg	
93-65-2	MCPP	ND	4900	1300	ug/kg	
94-74-6	MCPA	ND	4900	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	4.9	0.75	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	80% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-3-1		
Lab Sample ID:	C37833-6	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	67.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319822.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	42.7	4.9	2.5	mg/kg	
	TPH (Motor Oil) [b]	78.2	9.8	4.9	mg/kg	
	TPH (Mineral Spirits)	ND	4.9	2.5	mg/kg	
	TPH (Kerosene)	ND	4.9	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	105%		37-122%

(a) Atypical Diesel pattern (C12-C28); value due on discrete peaks and heavier hydrocarbons contributing to quantitation.
(b) Estimated value due to the presence of interfering peaks in the Motor Oil range.

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-3-1			
Lab Sample ID:	C37833-6		**Date Sampled:**	12/29/14
Matrix:	SO - Soil		**Date Received:**	12/31/14
			Percent Solids:	67.7
Project:	Alameda Cross Trail Phase II			

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	8.0	0.31	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	24.0	0.31	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8938

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-3-1		
Lab Sample ID:	C37833-6	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	67.7
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	32.3		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-5-1		
Lab Sample ID:	C37833-7	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	77.5
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17350.D	1	01/02/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	21	2.1	ug/kg	
208-96-8	Acenaphthylene	4.7	21	2.1	ug/kg	J
120-12-7	Anthracene	5.2	21	2.1	ug/kg	J
56-55-3	Benzo(a)anthracene	61.9	4.3	1.1	ug/kg	
50-32-8	Benzo(a)pyrene	123	4.3	0.73	ug/kg	
205-99-2	Benzo(b)fluoranthene	110	4.3	0.86	ug/kg	
191-24-2	Benzo(g,h,i)perylene	176	4.3	0.94	ug/kg	
207-08-9	Benzo(k)fluoranthene	62.0	4.3	0.99	ug/kg	
218-01-9	Chrysene	84.0	4.3	0.86	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	14.1	4.3	1.2	ug/kg	
206-44-0	Fluoranthene	162	21	2.1	ug/kg	
86-73-7	Fluorene	ND	21	2.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	179	4.3	1.1	ug/kg	
90-12-0	1-Methylnaphthalene	ND	21	4.3	ug/kg	
91-57-6	2-Methylnaphthalene	ND	21	4.3	ug/kg	
91-20-3	Naphthalene	ND	21	4.3	ug/kg	
85-01-8	Phenanthrene	28.6	21	2.1	ug/kg	
129-00-0	Pyrene	191	21	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	110%		32-128%
321-60-8	2-Fluorobiphenyl	104%		48-122%
1718-51-0	Terphenyl-d14	102%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-5-1		
Lab Sample ID:	C37833-7	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	77.5
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046780.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	43	7.3	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.3	1.2	ug/kg	
93-76-5	2,4,5-T	ND	4.3	0.86	ug/kg	
1918-00-9	Dicamba	ND	4.3	1.4	ug/kg	
88-85-7	Dinoseb	ND	110	21	ug/kg	
75-99-0	Dalapon	ND	210	43	ug/kg	
120-36-5	Dichloroprop	ND	43	16	ug/kg	
94-82-6	2,4-DB	ND	43	16	ug/kg	
93-65-2	MCPP	ND	4300	1100	ug/kg	
94-74-6	MCPA	ND	4300	1000	ug/kg	
87-86-5	Pentachlorophenol	ND	4.3	0.65	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	80% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-5-1		
Lab Sample ID:	C37833-7	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	77.5
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319823.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	6.17	4.3	2.1	mg/kg	
	TPH (Motor Oil) [b]	22.7	8.6	4.3	mg/kg	
	TPH (Mineral Spirits)	ND	4.3	2.1	mg/kg	
	TPH (Kerosene)	ND	4.3	2.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	99%		37-122%

(a) Atypical Diesel pattern (C12-C28); value due on discrete peaks and heavier hydrocarbons contributing to quantitation.
(b) Estimated value due to the presence of interfering peaks.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-5-1		
Lab Sample ID:	C37833-7	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	77.5
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	6.2	0.28	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	68.4	0.28	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8938

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-5-1		
Lab Sample ID:	C37833-7	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	77.5
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	22.5		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-4-5		
Lab Sample ID:	C37833-8	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	72.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17351.D	1	01/02/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	6.8	23	2.3	ug/kg	J
208-96-8	Acenaphthylene	15.9	23	2.3	ug/kg	J
120-12-7	Anthracene	32.5	23	2.3	ug/kg	
56-55-3	Benzo(a)anthracene	156	4.5	1.1	ug/kg	
50-32-8	Benzo(a)pyrene	264	4.5	0.77	ug/kg	
205-99-2	Benzo(b)fluoranthene	239	4.5	0.91	ug/kg	
191-24-2	Benzo(g,h,i)perylene	286	4.5	1.0	ug/kg	
207-08-9	Benzo(k)fluoranthene	118	4.5	1.0	ug/kg	
218-01-9	Chrysene	204	4.5	0.91	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	30.2	4.5	1.3	ug/kg	
206-44-0	Fluoranthene	515	23	2.3	ug/kg	
86-73-7	Fluorene	12.6	23	2.3	ug/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	300	4.5	1.1	ug/kg	
90-12-0	1-Methylnaphthalene	ND	23	4.5	ug/kg	
91-57-6	2-Methylnaphthalene	ND	23	4.5	ug/kg	
91-20-3	Naphthalene	ND	23	4.5	ug/kg	
85-01-8	Phenanthrene	242	23	2.3	ug/kg	
129-00-0	Pyrene	495	23	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	109%		32-128%
321-60-8	2-Fluorobiphenyl	92%		48-122%
1718-51-0	Terphenyl-d14	90%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-4-5		
Lab Sample ID:	C37833-8	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	72.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046781.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	45	7.7	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.5	1.2	ug/kg	
93-76-5	2,4,5-T	ND	4.5	0.91	ug/kg	
1918-00-9	Dicamba	ND	4.5	1.5	ug/kg	
88-85-7	Dinoseb	ND	110	23	ug/kg	
75-99-0	Dalapon	ND	230	45	ug/kg	
120-36-5	Dichloroprop	ND	45	17	ug/kg	
94-82-6	2,4-DB	ND	45	17	ug/kg	
93-65-2	MCPP	ND	4500	1200	ug/kg	
94-74-6	MCPA	ND	4500	1100	ug/kg	
87-86-5	Pentachlorophenol	ND	4.5	0.69	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	80% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-4-5		
Lab Sample ID:	C37833-8	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	72.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319824.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	11.7	4.6	2.3	mg/kg	
	TPH (Motor Oil)	26.6	9.1	4.6	mg/kg	
	TPH (Mineral Spirits)	ND	4.6	2.3	mg/kg	
	TPH (Kerosene)	ND	4.6	2.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	95%		37-122%

(a) Atypical Diesel pattern (C12-C28); value due on discrete peaks and heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-4-5		
Lab Sample ID:	C37833-8	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	72.9
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	6.3	0.29	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	36.6	0.29	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8938

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-4-5		
Lab Sample ID:	C37833-8	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	72.9
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	27.1		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-4-2		
Lab Sample ID:	C37833-9	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	79.4
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17352.D	1	01/02/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	21	2.1	ug/kg	
208-96-8	Acenaphthylene	7.6	21	2.1	ug/kg	J
120-12-7	Anthracene	7.6	21	2.1	ug/kg	J
56-55-3	Benzo(a)anthracene	99.6	4.2	1.0	ug/kg	
50-32-8	Benzo(a)pyrene	219	4.2	0.71	ug/kg	
205-99-2	Benzo(b)fluoranthene	220	4.2	0.83	ug/kg	
191-24-2	Benzo(g,h,i)perylene	293	4.2	0.92	ug/kg	
207-08-9	Benzo(k)fluoranthene	114	4.2	0.96	ug/kg	
218-01-9	Chrysene	163	4.2	0.83	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	28.4	4.2	1.2	ug/kg	
206-44-0	Fluoranthene	285	21	2.1	ug/kg	
86-73-7	Fluorene	ND	21	2.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	320	4.2	1.0	ug/kg	
90-12-0	1-Methylnaphthalene	ND	21	4.2	ug/kg	
91-57-6	2-Methylnaphthalene	ND	21	4.2	ug/kg	
91-20-3	Naphthalene	ND	21	4.2	ug/kg	
85-01-8	Phenanthrene	60.0	21	2.1	ug/kg	
129-00-0	Pyrene	295	21	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	109%		32-128%
321-60-8	2-Fluorobiphenyl	103%		48-122%
1718-51-0	Terphenyl-d14	90%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-4-2		
Lab Sample ID:	C37833-9	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	79.4
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046782.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	41	6.9	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.1	1.1	ug/kg	
93-76-5	2,4,5-T	ND	4.1	0.82	ug/kg	
1918-00-9	Dicamba	ND	4.1	1.4	ug/kg	
88-85-7	Dinoseb	ND	100	20	ug/kg	
75-99-0	Dalapon	ND	200	41	ug/kg	
120-36-5	Dichloroprop	ND	41	15	ug/kg	
94-82-6	2,4-DB	ND	41	15	ug/kg	
93-65-2	MCPP	ND	4100	1100	ug/kg	
94-74-6	MCPA	ND	4100	980	ug/kg	
87-86-5	Pentachlorophenol	2.6	4.1	0.62	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	70% [b]		31-132%

(a) All hits confirmed by dual column analysis. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-4-2		
Lab Sample ID:	C37833-9	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	79.4
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319825.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	8.76	4.2	2.1	mg/kg	
	TPH (Motor Oil)	28.2	8.4	4.2	mg/kg	
	TPH (Mineral Spirits)	ND	4.2	2.1	mg/kg	
	TPH (Kerosene)	ND	4.2	2.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	94%		37-122%

(a) Atypical Diesel pattern (C12-C28); value due on discrete peaks and heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-4-2		
Lab Sample ID:	C37833-9	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	79.4
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	6.8	0.27	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	37.0	0.27	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8938

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-4-2			
Lab Sample ID:	C37833-9		**Date Sampled:**	12/29/14
Matrix:	SO - Soil		**Date Received:**	12/31/14
			Percent Solids:	79.4
Project:	Alameda Cross Trail Phase II			

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	20.6		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-5-5		
Lab Sample ID:	C37833-10	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	91.8
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17353.D	1	01/02/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	18	1.8	ug/kg	
208-96-8	Acenaphthylene	ND	18	1.8	ug/kg	
120-12-7	Anthracene	ND	18	1.8	ug/kg	
56-55-3	Benzo(a)anthracene	7.8	3.6	0.89	ug/kg	
50-32-8	Benzo(a)pyrene	14.7	3.6	0.61	ug/kg	
205-99-2	Benzo(b)fluoranthene	14.2	3.6	0.71	ug/kg	
191-24-2	Benzo(g,h,i)perylene	18.5	3.6	0.79	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.4	3.6	0.82	ug/kg	
218-01-9	Chrysene	10.2	3.6	0.71	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	1.9	3.6	1.0	ug/kg	J
206-44-0	Fluoranthene	17.7	18	1.8	ug/kg	J
86-73-7	Fluorene	ND	18	1.8	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	18.8	3.6	0.89	ug/kg	
90-12-0	1-Methylnaphthalene	ND	18	3.6	ug/kg	
91-57-6	2-Methylnaphthalene	ND	18	3.6	ug/kg	
91-20-3	Naphthalene	ND	18	3.6	ug/kg	
85-01-8	Phenanthrene	ND	18	1.8	ug/kg	
129-00-0	Pyrene	21.2	18	1.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	107%		32-128%
321-60-8	2-Fluorobiphenyl	100%		48-122%
1718-51-0	Terphenyl-d14	98%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-5-5		
Lab Sample ID:	C37833-10	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	91.8
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046783.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	35	6.0	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.5	0.96	ug/kg	
93-76-5	2,4,5-T	ND	3.5	0.71	ug/kg	
1918-00-9	Dicamba	ND	3.5	1.2	ug/kg	
88-85-7	Dinoseb	ND	88	18	ug/kg	
75-99-0	Dalapon	ND	180	35	ug/kg	
120-36-5	Dichloroprop	ND	35	13	ug/kg	
94-82-6	2,4-DB	ND	35	13	ug/kg	
93-65-2	MCPP	ND	3500	940	ug/kg	
94-74-6	MCPA	ND	3500	850	ug/kg	
87-86-5	Pentachlorophenol	2.9	3.5	0.54	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	40% [b]		31-132%

(a) All hits confirmed by dual column analysis. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-5-5		
Lab Sample ID:	C37833-10	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	91.8
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319826.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	3.6	1.8	mg/kg	
	TPH (Motor Oil)	ND	7.2	3.6	mg/kg	
	TPH (Mineral Spirits)	ND	3.6	1.8	mg/kg	
	TPH (Kerosene)	ND	3.6	1.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	97%		37-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-5-5		
Lab Sample ID:	C37833-10	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	91.8
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	1.7	0.52	mg/kg	5	01/09/15	01/12/15	RS	SW846 6020 [2]	SW846 3050B [4]
Lead	3.3	0.23	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA4523
(2) Instrument QC Batch: MA4533
(3) Prep QC Batch: MP8938
(4) Prep QC Batch: MP8965

(a) Elevated RL/MDL due to positive bias of Method Blank.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-5-5		
Lab Sample ID:	C37833-10	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	91.8
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	8.2		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-6-4		
Lab Sample ID:	C37833-11	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	67.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17354.D	1	01/02/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	24	2.4	ug/kg	
208-96-8	Acenaphthylene	ND	24	2.4	ug/kg	
120-12-7	Anthracene	ND	24	2.4	ug/kg	
56-55-3	Benzo(a)anthracene	5.6	4.9	1.2	ug/kg	
50-32-8	Benzo(a)pyrene	7.4	4.9	0.83	ug/kg	
205-99-2	Benzo(b)fluoranthene	8.3	4.9	0.97	ug/kg	
191-24-2	Benzo(g,h,i)perylene	8.6	4.9	1.1	ug/kg	
207-08-9	Benzo(k)fluoranthene	4.3	4.9	1.1	ug/kg	J
218-01-9	Chrysene	7.8	4.9	0.97	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	1.4	ug/kg	
206-44-0	Fluoranthene	10.8	24	2.4	ug/kg	J
86-73-7	Fluorene	ND	24	2.4	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	8.7	4.9	1.2	ug/kg	
90-12-0	1-Methylnaphthalene	ND	24	4.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	24	4.9	ug/kg	
91-20-3	Naphthalene	ND	24	4.9	ug/kg	
85-01-8	Phenanthrene	3.1	24	2.4	ug/kg	J
129-00-0	Pyrene	10	24	2.4	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	114%		32-128%
321-60-8	2-Fluorobiphenyl	106%		48-122%
1718-51-0	Terphenyl-d14	102%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-6-4		
Lab Sample ID:	C37833-11	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	67.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046784.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	49	8.3	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.9	1.3	ug/kg	
93-76-5	2,4,5-T	ND	4.9	0.99	ug/kg	
1918-00-9	Dicamba	ND	4.9	1.6	ug/kg	
88-85-7	Dinoseb	ND	120	25	ug/kg	
75-99-0	Dalapon	ND	250	49	ug/kg	
120-36-5	Dichloroprop	ND	49	18	ug/kg	
94-82-6	2,4-DB	ND	49	18	ug/kg	
93-65-2	MCPP	ND	4900	1300	ug/kg	
94-74-6	MCPA	ND	4900	1200	ug/kg	
87-86-5	Pentachlorophenol	1.4	4.9	0.75	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	90% [b]		31-132%

(a) All hits confirmed by dual column analysis. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-6-4		
Lab Sample ID:	C37833-11	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	67.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319828.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	5.74	4.9	2.4	mg/kg	
	TPH (Motor Oil) [b]	9.43	9.8	4.9	mg/kg	J
	TPH (Mineral Spirits)	ND	4.9	2.4	mg/kg	
	TPH (Kerosene)	ND	4.9	2.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	93%		37-122%

(a) Atypical Diesel pattern (C12-C28); heavier hydrocarbons contributing to quantitation.
(b) Estimated value due to the presence of interfering peaks in the Motor Oil range.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-6-4		
Lab Sample ID:	C37833-11	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	67.9
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	3.9	0.68	mg/kg	5	01/09/15	01/12/15	RS	SW846 6020 [2]	SW846 3050B [4]
Lead	185	0.31	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA4523
(2) Instrument QC Batch: MA4533
(3) Prep QC Batch: MP8938
(4) Prep QC Batch: MP8965

(a) Elevated RL/MDL due to positive bias of Method Blank.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-6-4		
Lab Sample ID:	C37833-11	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	67.9
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	32.1		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-6-1		
Lab Sample ID:	C37833-12	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	78.1
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17355.D	1	01/02/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.9 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	21	2.1	ug/kg	
208-96-8	Acenaphthylene	4.4	21	2.1	ug/kg	J
120-12-7	Anthracene	2.9	21	2.1	ug/kg	J
56-55-3	Benzo(a)anthracene	22.6	4.1	1.0	ug/kg	
50-32-8	Benzo(a)pyrene	47.6	4.1	0.71	ug/kg	
205-99-2	Benzo(b)fluoranthene	49.3	4.1	0.83	ug/kg	
191-24-2	Benzo(g,h,i)perylene	57.6	4.1	0.91	ug/kg	
207-08-9	Benzo(k)fluoranthene	30.4	4.1	0.95	ug/kg	
218-01-9	Chrysene	41.5	4.1	0.83	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	8.4	4.1	1.2	ug/kg	
206-44-0	Fluoranthene	57.6	21	2.1	ug/kg	
86-73-7	Fluorene	ND	21	2.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	63.0	4.1	1.0	ug/kg	
90-12-0	1-Methylnaphthalene	ND	21	4.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	21	4.1	ug/kg	
91-20-3	Naphthalene	ND	21	4.1	ug/kg	
85-01-8	Phenanthrene	26.1	21	2.1	ug/kg	
129-00-0	Pyrene	69.3	21	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	109%		32-128%
321-60-8	2-Fluorobiphenyl	99%		48-122%
1718-51-0	Terphenyl-d14	94%		48-148%

ND = Not detected　　MDL = Method Detection Limit　　J = Indicates an estimated value
RL = Reporting Limit　　B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range　　N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-6-1		
Lab Sample ID:	C37833-12	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	78.1
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046785.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	41	7.0	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.1	1.1	ug/kg	
93-76-5	2,4,5-T	ND	4.1	0.83	ug/kg	
1918-00-9	Dicamba	ND	4.1	1.4	ug/kg	
88-85-7	Dinoseb	ND	100	21	ug/kg	
75-99-0	Dalapon	ND	210	41	ug/kg	
120-36-5	Dichloroprop	ND	41	16	ug/kg	
94-82-6	2,4-DB	ND	41	15	ug/kg	
93-65-2	MCPP	ND	4100	1100	ug/kg	
94-74-6	MCPA	ND	4100	990	ug/kg	
87-86-5	Pentachlorophenol	ND	4.1	0.63	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	80% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-6-1		
Lab Sample ID:	C37833-12	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	78.1
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319829.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	8.22	4.3	2.1	mg/kg	
	TPH (Motor Oil) [b]	36.5	8.5	4.3	mg/kg	
	TPH (Mineral Spirits)	ND	4.3	2.1	mg/kg	
	TPH (Kerosene)	ND	4.3	2.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	97%		37-122%

(a) Atypical Diesel pattern (C12-C28); heavier hydrocarbons contributing to quantitation.
(b) Estimated value due to the presence of interfering peaks in the Motor Oil range.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-6-1		
Lab Sample ID:	C37833-12	**Date Sampled:**	12/29/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	78.1
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	5.3	0.27	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	26.2	0.27	mg/kg	5	01/06/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8938

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-6-1			
Lab Sample ID:	C37833-12		**Date Sampled:**	12/29/14
Matrix:	SO - Soil		**Date Received:**	12/31/14
			Percent Solids:	78.1
Project:	Alameda Cross Trail Phase II			

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	21.9		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Northern California
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LABORATORIES

4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

C37833

Tetra Tech EM Inc.
San Francisco Office

Chain of Custody Record No. 6926

Page 1 of 1

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Lab PO#:

Lab: Accutest

Project name: Cross-Trail Alameda Phase II
TtEMI technical contact: Mark Duffy
Field samplers: Mark Duffy
Project (CTO) number: 103S 3635
TtEMI project manager: Victor Early
Field samplers' signatures: [signature]

Preservative Added: NA

No./Container Types: 40 ml VOA, 1 liter Amber, 500 ml Poly, Sleeve, Glass Jar 4oz/8oz

Analysis Required: VOA, SVOA, Pest/PCBs, Metals, TPH Purgeables, TPH Extractables w Silica Gel, Method EPA 8151, PAH 8270 SIM, Lead 6020, Arsenic 6020

	Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	Glass Jar 4oz/8oz	TPH Extractables w Silica Gel	Method EPA 8151	PAH 8270 SIM	Lead 6020	Arsenic 6020
-1	CAT-B-1-2		12-29-14	1115	Soil		2	X	X	X	X	X
-2	CAT-B-1-4		↓	1130	↓		↓	↓	↓	↓	↓	↓
-3	CAT-B-2-2			1215								
-4	CAT-B-2-5			1230								
-5	CAT-B-3-4			1315								
-6	CAT-B-3-1			1305								
-7	CAT-B-5-1			1450								
-8	CAT-B-4-5			1425								
-9	CAT-B-4-2			1415								
-10	CAT-B-5-5			1500								
-11	CAT-B-6-4			1530								
-12	CAT-B-6-1		↓	1535	↓		↓	↓	↓	↓	↓	↓

		Name (print)	Company Name	Date	Time
Relinquished by:	[signature]	Mark Duffy	Company: Tetra Tech	12-30-14	1600
Received by:					
Relinquished by:	FedEx		FedEx	12/31/14	0930
Received by:	[signature]	LEE BAUTISTA	ACCUTEST	12/31/14	0930
Relinquished by:					
Received by:					

Turnaround time/remarks:

Fed Ex #: ~~813~~ 8043 1647 0333

Temp 4.5|4.5

WHITE-Laboratory Copy YELLOW-Sample Tracker PINK-File Copy

4.1
4

C37833: Chain of Custody
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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C37833 **Client:** TETRA TECH **Project:** CROSS-TRAIL ALAMEDA PHASE II

Date / Time Received: 12/31/2014 9:30:00 AM **Delivery Method:** FedEx **Airbill #'s:** 804316470333

Cooler Temps (Initial/Adjusted): #1: (4.5/4.5);

Cooler Security

	Y	N		Y	N
1. Custody Seals Present:	☐	☑	3. COC Present:	☑	☐
2. Custody Seals Intact:	☐	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature

	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR2;	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control_Preservation

	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation

	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition

	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions

	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

C37833: Chain of Custody
Page 2 of 2

Northern California
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GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C37833
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11467-MB	T17345.D	1	01/02/15	MT	01/02/15	OP11467	ET768

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	17	1.7	ug/kg	
208-96-8	Acenaphthylene	ND	17	1.7	ug/kg	
120-12-7	Anthracene	ND	17	1.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	3.3	0.83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	3.3	0.57	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	3.3	0.67	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	3.3	0.73	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	3.3	0.77	ug/kg	
218-01-9	Chrysene	ND	3.3	0.67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	3.3	0.93	ug/kg	
206-44-0	Fluoranthene	ND	17	1.7	ug/kg	
86-73-7	Fluorene	ND	17	1.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	3.3	0.83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	17	3.3	ug/kg	
91-57-6	2-Methylnaphthalene	ND	17	3.3	ug/kg	
91-20-3	Naphthalene	ND	17	3.3	ug/kg	
85-01-8	Phenanthrene	ND	17	1.7	ug/kg	
129-00-0	Pyrene	ND	17	1.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	110%	32-128%
321-60-8	2-Fluorobiphenyl	106%	48-122%
1718-51-0	Terphenyl-d14	110%	48-148%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37833
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11467-BS	T17346.D	1	01/02/15	MT	01/02/15	OP11467	ET768
OP11467-BSD	T17347.D	1	01/02/15	MT	01/02/15	OP11467	ET768

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	167	175	105	164	98	6	67-106/9
208-96-8	Acenaphthylene	167	168	101	162	97	4	67-104/9
120-12-7	Anthracene	167	181	109* [a]	166	100	9	66-107/11
56-55-3	Benzo(a)anthracene	167	170	102	171	103	1	72-115/9
50-32-8	Benzo(a)pyrene	167	157	94	162	97	3	64-107/10
205-99-2	Benzo(b)fluoranthene	167	182	109	168	101	8	69-127/15
191-24-2	Benzo(g,h,i)perylene	167	179	107	186	112	4	63-125/14
207-08-9	Benzo(k)fluoranthene	167	151	91	159	95	5	73-127/14
218-01-9	Chrysene	167	174	104	168	101	4	72-119/8
53-70-3	Dibenzo(a,h)anthracene	167	169	101	183	110	8	65-128/16
206-44-0	Fluoranthene	167	174	104	168	101	4	74-119/11
86-73-7	Fluorene	167	170	102	168	101	1	71-111/10
193-39-5	Indeno(1,2,3-cd)pyrene	167	162	97	170	102	5	59-128/18
90-12-0	1-Methylnaphthalene	167	130	78	167	100	25* [b]	63-103/12
91-57-6	2-Methylnaphthalene	167	161	97	166	100	3	64-106/12
91-20-3	Naphthalene	167	161	97	160	96	1	62-99/10
85-01-8	Phenanthrene	167	173	104	163	98	6	68-111/14
129-00-0	Pyrene	167	167	100	163	98	2	62-122/15

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	111%	110%	32-128%
321-60-8	2-Fluorobiphenyl	104%	101%	48-122%
1718-51-0	Terphenyl-d14	105%	101%	48-148%

(a) Outside of in-house control limits; but within the method control limits.
(b) Outside laboratory control limits. BS/BSD recoveries within control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37833
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11467-MS [a]	T17368.D	4	01/03/15	MT	01/02/15	OP11467	ET768
OP11467-MSD [a]	T17369.D	4	01/03/15	MT	01/02/15	OP11467	ET768
C37834-5 [a]	T17365.D	4	01/03/15	MT	01/02/15	OP11467	ET768

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

CAS No.	Compound	C37834-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		218	227	104	218	218	100	4	67-106/9
208-96-8	Acenaphthylene	ND		218	230	105* [b]	218	220	101	4	67-104/9
120-12-7	Anthracene	ND		218	219	100	218	239	110* [b]	9	66-107/11
56-55-3	Benzo(a)anthracene	59.3		218	267	95	218	276	99	3	72-115/9
50-32-8	Benzo(a)pyrene	121		218	306	85	218	297	81	3	64-107/10
205-99-2	Benzo(b)fluoranthene	123		218	374	115	218	345	102	8	69-127/15
191-24-2	Benzo(g,h,i)perylene	145		218	307	74	218	316	78	3	63-125/14
207-08-9	Benzo(k)fluoranthene	54.3		218	212	72* [b]	218	217	75	2	73-127/14
218-01-9	Chrysene	86.2		218	263	81	218	264	82	0	72-119/8
53-70-3	Dibenzo(a,h)anthracene	16.0	J	218	243	104	218	246	105	1	65-128/16
206-44-0	Fluoranthene	163		218	310	67* [b]	218	357	89	14* [b]	74-119/11
86-73-7	Fluorene	ND		218	231	106	218	222	102	4	71-111/10
193-39-5	Indeno(1,2,3-cd)pyrene	153		218	356	93	218	352	91	1	59-128/18
90-12-0	1-Methylnaphthalene	ND		218	218	100	218	214	98	2	63-103/12
91-57-6	2-Methylnaphthalene	ND		218	212	97	218	216	99	2	64-106/12
91-20-3	Naphthalene	ND		218	212	97	218	205	94	3	62-99/10
85-01-8	Phenanthrene	39.9	J	218	240	92	218	222	84	8	68-111/14
129-00-0	Pyrene	181		218	314	61* [b]	218	330	68	5	62-122/15

CAS No.	Surrogate Recoveries	MS	MSD	C37834-5	Limits
4165-60-0	Nitrobenzene-d5	105%	107%	115%	32-128%
321-60-8	2-Fluorobiphenyl	110%	104%	108%	48-122%
1718-51-0	Terphenyl-d14	101%	98%	109%	48-148%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).
(b) Outside laboratory control limits.

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C37833
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11469-MB	HH319843.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	3.3	1.7	mg/kg	
	TPH (Motor Oil)	ND	6.7	3.3	mg/kg	
	TPH (Mineral Spirits)	ND	3.3	1.7	mg/kg	
	TPH (Kerosene)	ND	3.3	1.7	mg/kg	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	96%	37-122%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37833
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11469-BS	HH319841.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
OP11469-BSD	HH319842.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	33.3	27.0	81	29.1	87	7	38-102/28
	TPH (Motor Oil)	33.3	30.0	90	30.1	90	0	42-111/26

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	97%	98%	37-122%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37833
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11469-MS	HH319839.D	3	01/03/15	AG	01/02/15	OP11469	GHH1430
OP11469-MSD	HH319840.D	3	01/03/15	AG	01/02/15	OP11469	GHH1430
C37834-5	HH319834.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

CAS No.	Compound	C37834-5 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	6.39		43.7	34.7	65	43.6	44.9	88	26	38-102/28
	TPH (Motor Oil)	30.3		43.7	66.7	83	43.6	127	222* [a]	62* [a]	42-111/26

CAS No.	Surrogate Recoveries	MS	MSD	C37834-5	Limits
630-01-3	Hexacosane	92%	88%	93%	37-122%

(a) Outside laboratory control limits.

* = Outside of Control Limits.

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Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8938
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/06/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	2.3	2.5		
Antimony	0.25	.14	.008		
Arsenic	0.25	.3	.017	0.53	* (a)
Barium	0.50	.011	.036		
Beryllium	0.25		.027		
Boron	2.5	.09	.066		
Cadmium	0.25	.0028	.011		
Calcium	250	40	38		
Chromium	1.0	.025	.053		
Cobalt	0.25	.018	.0085		
Copper	1.0	.018	.11		
Iron	25	3.1	1.6		
Lead	0.25	.0056	.038	0.024	<0.25
Magnesium	250	.54	2.1		
Manganese	0.50	.012	.18		
Molybdenum	0.50	.11	.026		
Nickel	1.0	.18	.043		
Potassium	250	2.3	1.5		
Selenium	0.25	.17	.012		
Silver	0.25	.0048	.006		
Sodium	250	2.2	2.6		
Strontium	2.5	.021	.018		
Thallium	0.25	.04	.015		
Tin	2.5	.055	.036		
Titanium	0.50	.083	.038		
Uranium	0.25	.06	.006		
Vanadium	1.0	.36	.051		
Zinc	2.0	.22	.11		

Associated samples MP8938: C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All sample results < RL or > 10x method blank concentration.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8938
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/06/15

Metal	C37833-2 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	27.2	55.4	45.6	61.9N(a)	75-125
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead	34.1	74.0	45.6	84.1	75-125
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP8938: C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8938
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/06/15

Metal	C37833-2 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	27.2	88.2	46	132.7N(a	21.2 (b)	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead	34.1	89.0	46	116.0	4.7	20
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP8938: C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) RPD acceptable due to low duplicate and sample concentrations.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8938
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/06/15

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	54.5	50	109.0	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	54.6	50	109.2	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8938: C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8938 Methods: SW846 6020
Matrix Type: SOLID Units: ug/l

Prep Date: 01/06/15

Metal	C37833-2 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	296	366	10.5 (a)	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	388	409	10.0	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8938: C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/09/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	2.3	2.5		
Antimony	0.25	.14	.008		
Arsenic	0.50	.3	.017	0.26	<0.50(a)
Barium	0.50	.011	.036		
Beryllium	0.25		.027		
Boron	2.5	.09	.066		
Cadmium	0.25	.0028	.011		
Calcium	250	40	38		
Chromium	1.0	.025	.053		
Cobalt	0.25	.018	.0085		
Copper	1.0	.018	.11		
Iron	25	3.1	1.6		
Lead	0.25	.0056	.038		
Magnesium	250	.54	2.1		
Manganese	0.50	.012	.18		
Molybdenum	0.50	.11	.026		
Nickel	1.0	.18	.043		
Potassium	250	2.3	1.5		
Selenium	0.25	.17	.012		
Silver	0.25	.0048	.006		
Sodium	250	2.2	2.6		
Strontium	2.5	.021	.018		
Thallium	0.25	.04	.015		
Tin	2.5	.055	.036		
Titanium	0.50	.083	.038		
Uranium	0.25	.06	.006		
Vanadium	1.0	.36	.051		
Zinc	2.0	.22	.11		

Associated samples MP8965: C37833-5, C37833-10, C37833-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Elevated RL/MDL due to positive bias of Method Blank.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/09/15

Metal	C37834-1 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	2.7	53.2	57.8	87.4	75-125
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP8965: C37833-5, C37833-10, C37833-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/09/15

Metal	C37834-1 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	2.7	58.5	59.9	93.2	9.5	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP8965: C37833-5, C37833-10, C37833-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/09/15

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	45.1	50	90.2	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8965: C37833-5, C37833-10, C37833-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C37833
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: ug/l

Prep Date: 01/09/15

Metal	C37834-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	22.5	29.1	29.4 (a)	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8965: C37833-5, C37833-10, C37833-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Northern California ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

(Accutest Laboratories Southeast, Inc.)

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories

2105 Lundy Avenue, San Jose, CA 95131 Phone :(408)588-0200 Fax: (408)588-0201

Accutest ID and PO#: C37833

Subcontract Chain of Custody

Subcontract Lab: Accutest Laboratories Southeast
Date Sent: 01/02/2015
Date Due: 01/08/2015

Project Name: TETRCAO6786
Project Location:

Accutest Lab Number	Customer Sample Name/Field Point ID	Matrix	Method	Collect Date	Collect Time
C37833-1		SO	H8151FL		
C37833-2		SO	H8151FL		
C37833-3		SO	H8151FL		
C37833-4		SO	H8151FL		
C37833-5		SO	H8151FL		
C37833-6		SO	H8151FL		
C37833-7		SO	H8151FL		
C37833-8		SO	H8151FL		
C37833-9		SO	H8151FL		
C37833-10		SO	H8151FL		
C37833-11		SO	H8151FL		
C37833-12		SO	H8151FL		

Comments: 1 x 4oz Glass Jar per sample

Relinquished By: Lee.B	Received By: FedEx	Date: 01/02/15	Time: 15:00
Relinquished By: FedEx 01-03-15 12:15	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

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3.0

Send Report to: nutank@accutest.com

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: C37833 CLIENT: ALNC PROJECT: Tetrca06786

DATE/TIME RECEIVED: 01-03-15 12:15 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER DELIVERY OTHER: ______

AIRBILL NUMBERS: 7724 4045 6232

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM______ 5-GRAM______

NUMBER OF 5035 FIELD KITS ? ______

NUMBER OF LAB FILTERED METALS ? ______

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 2.6
- [ ] CORRECTED TEMPS: 3.0

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT LOT#______

{APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

pH PAPER LOT#s WIDE RANGE A036122 NARROW RANGE HC421754 OTHER (specify) 405-230010

SUMMARY OF COMMENTS: ______

TECHNICIAN SIGNATURE/DATE [signature] 01-03-15 REVIEWER SIGNATURE/DATE [signature] 01/03/15

NF 10/14

receipt confirmation 102914.xls

8.1

8

C37833: Chain of Custody

Page 2 of 3

ORIGIN ID:RBKA (408) 588-0200
ELVIN KUMAR
ACCUTEST NORTHERN CA
2105 LUNDY AVE

SAN JOSE, CA 95131
UNITED STATES US

SHIP DATE: 02JAN15
ACTWGT: 27.0 LB
CAD: 104695527/INET3550

BILL RECIPIENT

TO SAMPLE MANAGEMENT
ACCUTEST LABORATORIES SOUTHEAST
4405 VINELAND ROAD

ORLANDO
(407) 425-6700
INV:
PO:

RT 965 4 B
ST 39.2 12:00
6232
01.03

FedEx
Express

E

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 7724 4045 6232
0201

32811
FL-US MCO

XO TIXA

8.1

8

C37833: Chain of Custody
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Northern California
ACCUTEST
LABORATORIES

GC Semi-volatiles

QC Data Summaries

(Accutest Laboratories Southeast, Inc.)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C37833
Account: ALNCA Accutest Northern California, Inc.
Project: TETRCAO: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP54497-MB	CC046769.D	1	01/06/15	FS	01/05/15	OP54497	GCC777

The QC reported here applies to the following samples: **Method:** SW846 8151A

C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	33	5.7	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.3	0.91	ug/kg	
93-76-5	2,4,5-T	ND	3.3	0.67	ug/kg	
1918-00-9	Dicamba	ND	3.3	1.1	ug/kg	
88-85-7	Dinoseb	ND	83	17	ug/kg	
75-99-0	Dalapon	ND	170	33	ug/kg	
120-36-5	Dichloroprop	ND	33	13	ug/kg	
94-82-6	2,4-DB	ND	33	12	ug/kg	
93-65-2	MCPP	ND	3300	890	ug/kg	
94-74-6	MCPA	ND	3300	800	ug/kg	
87-86-5	Pentachlorophenol	ND	3.3	0.51	ug/kg	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	100% [a]	31-132%

(a) Surrogate recoveries corrected for actual spike amount.

Blank Spike Summary

Job Number: C37833
Account: ALNCA Accutest Northern California, Inc.
Project: TETRCAO: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP54497-BS	CC046768.D	1	01/06/15	FS	01/05/15	OP54497	GCC777

The QC reported here applies to the following samples: **Method:** SW846 8151A

C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
94-75-7	2,4-D	167	163	98	43-124
93-72-1	2,4,5-TP (Silvex)	16.7	16.1	97	41-130
93-76-5	2,4,5-T	16.7	15.5	93	40-124
1918-00-9	Dicamba	16.7	14.8	89	32-129
88-85-7	Dinoseb	83.3	32.2	39	10-124
75-99-0	Dalapon	417	158	38	10-133
120-36-5	Dichloroprop	167	190	114	51-145
94-82-6	2,4-DB	167	134	80	42-130
93-65-2	MCPP	16700	14800	89	34-130
94-74-6	MCPA	16700	14600	88	37-124
87-86-5	Pentachlorophenol	33.4	33.3	100	45-126

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	130% [a]	31-132%

(a) Surrogate recoveries corrected for actual spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37833
Account: ALNCA Accutest Northern California, Inc.
Project: TETRCAO: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP54497-MS	CC046797.D	1	01/06/15	FS	01/05/15	OP54497	GCC777
OP54497-MSD	CC046798.D	1	01/06/15	FS	01/05/15	OP54497	GCC777
C37834-5	CC046792.D	1	01/06/15	FS	01/05/15	OP54497	GCC777

The QC reported here applies to the following samples: **Method:** SW846 8151A

C37833-1, C37833-2, C37833-3, C37833-4, C37833-5, C37833-6, C37833-7, C37833-8, C37833-9, C37833-10, C37833-11, C37833-12

CAS No.	Compound	C37834-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND		216	187	87	213	192	90	3	43-124/32
93-72-1	2,4,5-TP (Silvex)	ND		21.6	19.8	92	21.3	16.9	79	16	41-130/31
93-76-5	2,4,5-T	ND		21.6	17.0	79	21.3	16.4	77	4	40-124/35
1918-00-9	Dicamba	ND		21.6	15.0	69	21.3	13.9	65	8	32-129/34
88-85-7	Dinoseb	ND		108	59.9	56	107	45.9	43	26	10-124/41
75-99-0	Dalapon	ND		540	242	45	533	174	33	33	10-133/35
120-36-5	Dichloroprop	ND		216	231	107	213	213	100	8	51-145/34
94-82-6	2,4-DB	ND		216	7300	3382*	213	909	427*	156*	42-130/34
93-65-2	MCPP	ND		21600	19100	88	21300	18900	89	1	34-130/34
94-74-6	MCPA	ND		21600	20000	93	21300	19300	91	4	37-124/35
87-86-5	Pentachlorophenol	ND		43.2	41.3	96	42.6	39.9	94	3	45-126/32

CAS No.	Surrogate Recoveries	MS	MSD	C37834-5	Limits
19719-28-9	2,4-DCAA	110% [a]	80% [a]	60% [a]	31-132%

(a) Surrogate recoveries corrected for actual spike amount.

* = Outside of Control Limits.

Northern California
ACCUTEST
LABORATORIES

01/13/15

Technical Report for

Tetra Tech EMI

Alameda Cross Trail Phase II

10353635

Accutest Job Number: C37834

Sampling Date: 12/30/14

Report to:

Tetra Tech
1999 Harrison St. Suite 500
Oakland, CA 94612
mark.duffy@tetratech.com; victor.early@tetratech.com

ATTN: Mark Duffy

Total number of pages in report: **93**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

James J. Rhudy
Lab Director

Client Service contact: Nutan Kabir 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925)
DoD ELAP (L-A-B L2242)

Sections: 1 2 3 4 5 6 7 8 9

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Accutest Laboratories

Sample Summary

Tetra Tech EMI

Job No: C37834

Alameda Cross Trail Phase II
Project No: 10353635

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C37834-1	12/30/14	11:20	MD	12/31/14	SO	Soil	CAT-B-8-8
C37834-2	12/30/14	11:25	MD	12/31/14	SO	Soil	CAT-B-8-2
C37834-3	12/30/14	08:40	MD	12/31/14	SO	Soil	CAT-B-7-4
C37834-4	12/30/14	08:35	MD	12/31/14	SO	Soil	CAT-B-7-1
C37834-5	12/30/14	12:25	MD	12/31/14	SO	Soil	CAT-B-9-1
C37834-5D	12/30/14	12:25	MD	12/31/14	SO	Soil	CAT-B-9-1
C37834-5S	12/30/14	12:25	MD	12/31/14	SO	Soil	CAT-B-9-1
C37834-6	12/30/14	12:30	MD	12/31/14	SO	Soil	CAT-B-9-6
C37834-7	12/30/14	13:05	MD	12/31/14	SO	Soil	CAT-B-10-5
C37834-8	12/30/14	13:20	MD	12/31/14	SO	Soil	CAT-B
C37834-9	12/30/14	13:10	MD	12/31/14	SO	Soil	CAT-B-10-2

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: C37834
Account: Tetra Tech EMI
Project: Alameda Cross Trail Phase II
Collected: 12/30/14

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
C37834-1 CAT-B-8-8					
Benzo(a)anthracene	2.0 J	4.3	1.1	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene	2.0 J	4.3	0.73	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene	5.0	4.3	0.86	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene	5.0	4.3	0.95	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene	4.9	4.3	0.99	ug/kg	SW846 8270C BY SIM
Chrysene	2.8 J	4.3	0.86	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene	3.7 J	4.3	1.1	ug/kg	SW846 8270C BY SIM
Pyrene	2.3 J	22	2.2	ug/kg	SW846 8270C BY SIM
Pentachlorophenol [a]	5.2 J	21	3.2	ug/kg	SW846 8151A
Arsenic [b]	2.7	0.60		mg/kg	SW846 6020
Lead	16.9	0.28		mg/kg	SW846 6020
C37834-2 CAT-B-8-2					
Benzo(a)anthracene [c]	36.4	20	5.1	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene [c]	81.6	20	3.5	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [c]	79.4	20	4.1	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [c]	105	20	4.5	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene [c]	42.6	20	4.7	ug/kg	SW846 8270C BY SIM
Chrysene [c]	54.9	20	4.1	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene [c]	12.3 J	20	5.7	ug/kg	SW846 8270C BY SIM
Fluoranthene [c]	89.6 J	100	10	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [c]	100	20	5.1	ug/kg	SW846 8270C BY SIM
Phenanthrene [c]	20.3 J	100	10	ug/kg	SW846 8270C BY SIM
Pyrene [c]	113	100	10	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [d]	7.35	4.1	2.1	mg/kg	SW846 8015B M
TPH (Motor Oil)	31.8	8.2	4.1	mg/kg	SW846 8015B M
Arsenic	6.5	0.27		mg/kg	SW846 6020
Lead	40.5	0.27		mg/kg	SW846 6020
C37834-3 CAT-B-7-4					
Benzo(a)anthracene	5.9	3.8	0.95	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene	9.8	3.8	0.65	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene	9.1	3.8	0.76	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene	11.5	3.8	0.84	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene	5.8	3.8	0.88	ug/kg	SW846 8270C BY SIM
Chrysene	8.5	3.8	0.76	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene	1.7 J	3.8	1.1	ug/kg	SW846 8270C BY SIM
Fluoranthene	12.9 J	19	1.9	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene	9.7	3.8	0.95	ug/kg	SW846 8270C BY SIM
Phenanthrene	4.9 J	19	1.9	ug/kg	SW846 8270C BY SIM
Pyrene	18.9 J	19	1.9	ug/kg	SW846 8270C BY SIM

Summary of Hits

Job Number: C37834
Account: Tetra Tech EMI
Project: Alameda Cross Trail Phase II
Collected: 12/30/14

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
TPH (Diesel) [d]	8.49	3.8	1.9	mg/kg	SW846 8015B M
TPH (Motor Oil)	19.9	7.6	3.8	mg/kg	SW846 8015B M
Arsenic	5.1	0.25		mg/kg	SW846 6020
Lead	92.9	0.25		mg/kg	SW846 6020
C37834-4 CAT-B-7-1					
Acenaphthylene	2.4 J	21	2.1	ug/kg	SW846 8270C BY SIM
Anthracene	2.7 J	21	2.1	ug/kg	SW846 8270C BY SIM
Benzo(a)anthracene	49.2	4.2	1.1	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene	119	4.2	0.71	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene	105	4.2	0.84	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene	146	4.2	0.93	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene	55.8	4.2	0.97	ug/kg	SW846 8270C BY SIM
Chrysene	69.4	4.2	0.84	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene	11.6	4.2	1.2	ug/kg	SW846 8270C BY SIM
Fluoranthene	133	21	2.1	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene	123	4.2	1.1	ug/kg	SW846 8270C BY SIM
Phenanthrene	25.0	21	2.1	ug/kg	SW846 8270C BY SIM
Pyrene	192	21	2.1	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [d]	6.52	4.2	2.1	mg/kg	SW846 8015B M
TPH (Motor Oil)	16.0	8.4	4.2	mg/kg	SW846 8015B M
Arsenic	4.3	0.27		mg/kg	SW846 6020
Lead	22.0	0.27		mg/kg	SW846 6020
C37834-5 CAT-B-9-1					
Benzo(a)anthracene [c]	59.3	17	4.3	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene [c]	121	17	2.9	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [c]	123	17	3.4	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [c]	145	17	3.8	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene [c]	54.3	17	4.0	ug/kg	SW846 8270C BY SIM
Chrysene [c]	86.2	17	3.4	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene [c]	16.0 J	17	4.8	ug/kg	SW846 8270C BY SIM
Fluoranthene [c]	163	86	8.6	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [c]	153	17	4.3	ug/kg	SW846 8270C BY SIM
Phenanthrene [c]	39.9 J	86	8.6	ug/kg	SW846 8270C BY SIM
Pyrene [c]	181	86	8.6	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [d]	6.39	4.4	2.2	mg/kg	SW846 8015B M
TPH (Motor Oil)	30.3	8.7	4.4	mg/kg	SW846 8015B M
Arsenic	7.8	0.27		mg/kg	SW846 6020
Lead	54.6	0.27		mg/kg	SW846 6020

Summary of Hits

Job Number: C37834
Account: Tetra Tech EMI
Project: Alameda Cross Trail Phase II
Collected: 12/30/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C37834-6	**CAT-B-9-6**					
Benzo(a)anthracene		1.4 J	4.1	1.0	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene		1.3 J	4.1	0.70	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene		1.2 J	4.1	0.82	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene		0.95 J	4.1	0.90	ug/kg	SW846 8270C BY SIM
Chrysene		1.2 J	4.1	0.82	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene		1.3 J	4.1	1.0	ug/kg	SW846 8270C BY SIM
Arsenic		4.9	0.26		mg/kg	SW846 6020
Lead		6.9	0.26		mg/kg	SW846 6020
C37834-7	**CAT-B-10-5**					
TPH (Diesel) [e]		88.2	12	6.2	mg/kg	SW846 8015B M
TPH (Motor Oil)		164	25	12	mg/kg	SW846 8015B M
Arsenic [b]		1.4	0.58		mg/kg	SW846 6020
Lead		26.0	0.26		mg/kg	SW846 6020
C37834-8	**CAT-B**					
Benzo(a)pyrene [c]		10.4 J	41	6.9	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [c]		10.5 J	41	8.1	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [c]		14.8 J	41	9.0	ug/kg	SW846 8270C BY SIM
Chrysene [c]		10.7 J	41	8.1	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [c]		12.0 J	41	10	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [e]		188	100	51	mg/kg	SW846 8015B M
TPH (Motor Oil)		922	200	100	mg/kg	SW846 8015B M
Pentachlorophenol [f]		1.1 J	4.0	0.61	ug/kg	SW846 8151A
Arsenic		4.9	0.26		mg/kg	SW846 6020
Lead		170	0.26		mg/kg	SW846 6020
C37834-9	**CAT-B-10-2**					
Benzo(a)anthracene [g]		52.6 J	110	28	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene [g]		65.7 J	110	19	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [g]		57.1 J	110	22	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [g]		97.7 J	110	24	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene [g]		45.9 J	110	25	ug/kg	SW846 8270C BY SIM
Chrysene [g]		61.8 J	110	22	ug/kg	SW846 8270C BY SIM
Fluoranthene [g]		88.7 J	550	55	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [g]		66.8 J	110	28	ug/kg	SW846 8270C BY SIM
Phenanthrene [g]		84.3 J	550	55	ug/kg	SW846 8270C BY SIM
Pyrene [g]		85.8 J	550	55	ug/kg	SW846 8270C BY SIM
TPH (Diesel) [e]		129	92	46	mg/kg	SW846 8015B M
TPH (Motor Oil)		609	180	92	mg/kg	SW846 8015B M

Summary of Hits

Job Number: C37834
Account: Tetra Tech EMI
Project: Alameda Cross Trail Phase II
Collected: 12/30/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Arsenic		6.2	0.23		mg/kg	SW846 6020
Lead		126	0.23		mg/kg	SW846 6020

(a) All hits confirmed by dual column analysis. Dilution required due to matrix interference. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Elevated RL/MDL due to positive bias of Method Blank.
(c) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).
(d) Atypical Diesel pattern (C12-C28); heavier hydrocarbons contributing to quantitation.
(e) Atypical Diesel pattern (C10-C28); heavier hydrocarbons contributing to quantitation.
(f) All hits confirmed by dual column analysis. Analysis performed at Accutest Laboratories, Orlando FL. Primary and confirmation results differ by more than 40%. Lower value reported due to possible coelution.
(g) Dilution required due to matrix interference. Extract would not concentrate (dark and viscous); and high concentration of non-target hydrocarbons.

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Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-8-8		
Lab Sample ID:	C37834-1	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	77.3
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X41457.D	1	01/05/15	BJ	01/05/15	OP11471	EX1771
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	22	2.2	ug/kg	
208-96-8	Acenaphthylene	ND	22	2.2	ug/kg	
120-12-7	Anthracene	ND	22	2.2	ug/kg	
56-55-3	Benzo(a)anthracene	2.0	4.3	1.1	ug/kg	J
50-32-8	Benzo(a)pyrene	2.0	4.3	0.73	ug/kg	J
205-99-2	Benzo(b)fluoranthene	5.0	4.3	0.86	ug/kg	
191-24-2	Benzo(g,h,i)perylene	5.0	4.3	0.95	ug/kg	
207-08-9	Benzo(k)fluoranthene	4.9	4.3	0.99	ug/kg	
218-01-9	Chrysene	2.8	4.3	0.86	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	4.3	1.2	ug/kg	
206-44-0	Fluoranthene	ND	22	2.2	ug/kg	
86-73-7	Fluorene	ND	22	2.2	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	3.7	4.3	1.1	ug/kg	J
90-12-0	1-Methylnaphthalene	ND	22	4.3	ug/kg	
91-57-6	2-Methylnaphthalene	ND	22	4.3	ug/kg	
91-20-3	Naphthalene	ND	22	4.3	ug/kg	
85-01-8	Phenanthrene	ND	22	2.2	ug/kg	
129-00-0	Pyrene	2.3	22	2.2	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	98%		32-128%
321-60-8	2-Fluorobiphenyl	94%		48-122%
1718-51-0	Terphenyl-d14	108%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-8-8		
Lab Sample ID:	C37834-1	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	77.3
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046847.D	5	01/08/15	AFL	01/05/15	F:OP54497	F:GCC779
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	210	35	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	21	5.7	ug/kg	
93-76-5	2,4,5-T	ND	21	4.2	ug/kg	
1918-00-9	Dicamba	ND	21	7.0	ug/kg	
88-85-7	Dinoseb	ND	520	100	ug/kg	
75-99-0	Dalapon	ND	1000	210	ug/kg	
120-36-5	Dichloroprop	ND	210	78	ug/kg	
94-82-6	2,4-DB	ND	210	78	ug/kg	
93-65-2	MCPP	ND	21000	5600	ug/kg	
94-74-6	MCPA	ND	21000	5000	ug/kg	
87-86-5	Pentachlorophenol	5.2	21	3.2	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	100% [b]		31-132%

(a) All hits confirmed by dual column analysis. Dilution required due to matrix interference. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-8-8		
Lab Sample ID:	C37834-1	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	77.3
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319830.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	4.3	2.2	mg/kg	
	TPH (Motor Oil)	ND	8.6	4.3	mg/kg	
	TPH (Mineral Spirits)	ND	4.3	2.2	mg/kg	
	TPH (Kerosene)	ND	4.3	2.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	94%		37-122%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-8-8		
Lab Sample ID:	C37834-1	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	77.3
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	2.7	0.60	mg/kg	5	01/09/15	01/12/15	RS	SW846 6020 [2]	SW846 3050B [4]
Lead	16.9	0.28	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA4523
(2) Instrument QC Batch: MA4533
(3) Prep QC Batch: MP8944
(4) Prep QC Batch: MP8965

(a) Elevated RL/MDL due to positive bias of Method Blank.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-8-8		
Lab Sample ID:	C37834-1	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	77.3
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	22.7		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-8-2		
Lab Sample ID:	C37834-2	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	80.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	T17366.D	5	01/03/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	100	10	ug/kg	
208-96-8	Acenaphthylene	ND	100	10	ug/kg	
120-12-7	Anthracene	ND	100	10	ug/kg	
56-55-3	Benzo(a)anthracene	36.4	20	5.1	ug/kg	
50-32-8	Benzo(a)pyrene	81.6	20	3.5	ug/kg	
205-99-2	Benzo(b)fluoranthene	79.4	20	4.1	ug/kg	
191-24-2	Benzo(g,h,i)perylene	105	20	4.5	ug/kg	
207-08-9	Benzo(k)fluoranthene	42.6	20	4.7	ug/kg	
218-01-9	Chrysene	54.9	20	4.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	12.3	20	5.7	ug/kg	J
206-44-0	Fluoranthene	89.6	100	10	ug/kg	J
86-73-7	Fluorene	ND	100	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	100	20	5.1	ug/kg	
90-12-0	1-Methylnaphthalene	ND	100	20	ug/kg	
91-57-6	2-Methylnaphthalene	ND	100	20	ug/kg	
91-20-3	Naphthalene	ND	100	20	ug/kg	
85-01-8	Phenanthrene	20.3	100	10	ug/kg	J
129-00-0	Pyrene	113	100	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		32-128%
321-60-8	2-Fluorobiphenyl	85%		48-122%
1718-51-0	Terphenyl-d14	88%		48-148%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-8-2		
Lab Sample ID:	C37834-2	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	80.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046787.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	41	6.9	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.1	1.1	ug/kg	
93-76-5	2,4,5-T	ND	4.1	0.82	ug/kg	
1918-00-9	Dicamba	ND	4.1	1.4	ug/kg	
88-85-7	Dinoseb	ND	100	20	ug/kg	
75-99-0	Dalapon	ND	200	41	ug/kg	
120-36-5	Dichloroprop	ND	41	15	ug/kg	
94-82-6	2,4-DB	ND	41	15	ug/kg	
93-65-2	MCPP	ND	4100	1100	ug/kg	
94-74-6	MCPA	ND	4100	980	ug/kg	
87-86-5	Pentachlorophenol	ND	4.1	0.62	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	90% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-8-2		
Lab Sample ID:	C37834-2	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	80.7
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319831.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	7.35	4.1	2.1	mg/kg	
	TPH (Motor Oil)	31.8	8.2	4.1	mg/kg	
	TPH (Mineral Spirits)	ND	4.1	2.1	mg/kg	
	TPH (Kerosene)	ND	4.1	2.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	83%		37-122%

(a) Atypical Diesel pattern (C12-C28); heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-8-2		
Lab Sample ID:	C37834-2	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	80.7
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	6.5	0.27	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	40.5	0.27	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8944

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-8-2		
Lab Sample ID:	C37834-2	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	80.7
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	19.3		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-7-4		
Lab Sample ID:	C37834-3	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	87.5
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X41458.D	1	01/05/15	BJ	01/05/15	OP11471	EX1771
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	19	1.9	ug/kg	
208-96-8	Acenaphthylene	ND	19	1.9	ug/kg	
120-12-7	Anthracene	ND	19	1.9	ug/kg	
56-55-3	Benzo(a)anthracene	5.9	3.8	0.95	ug/kg	
50-32-8	Benzo(a)pyrene	9.8	3.8	0.65	ug/kg	
205-99-2	Benzo(b)fluoranthene	9.1	3.8	0.76	ug/kg	
191-24-2	Benzo(g,h,i)perylene	11.5	3.8	0.84	ug/kg	
207-08-9	Benzo(k)fluoranthene	5.8	3.8	0.88	ug/kg	
218-01-9	Chrysene	8.5	3.8	0.76	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	1.7	3.8	1.1	ug/kg	J
206-44-0	Fluoranthene	12.9	19	1.9	ug/kg	J
86-73-7	Fluorene	ND	19	1.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	9.7	3.8	0.95	ug/kg	
90-12-0	1-Methylnaphthalene	ND	19	3.8	ug/kg	
91-57-6	2-Methylnaphthalene	ND	19	3.8	ug/kg	
91-20-3	Naphthalene	ND	19	3.8	ug/kg	
85-01-8	Phenanthrene	4.9	19	1.9	ug/kg	J
129-00-0	Pyrene	18.9	19	1.9	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		32-128%
321-60-8	2-Fluorobiphenyl	89%		48-122%
1718-51-0	Terphenyl-d14	103%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-7-4		
Lab Sample ID:	C37834-3	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	87.5
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046788.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	38	6.5	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.8	1.0	ug/kg	
93-76-5	2,4,5-T	ND	3.8	0.77	ug/kg	
1918-00-9	Dicamba	ND	3.8	1.3	ug/kg	
88-85-7	Dinoseb	ND	95	19	ug/kg	
75-99-0	Dalapon	ND	190	38	ug/kg	
120-36-5	Dichloroprop	ND	38	14	ug/kg	
94-82-6	2,4-DB	ND	38	14	ug/kg	
93-65-2	MCPP	ND	3800	1000	ug/kg	
94-74-6	MCPA	ND	3800	910	ug/kg	
87-86-5	Pentachlorophenol	ND	3.8	0.58	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	80% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-7-4		
Lab Sample ID:	C37834-3	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	87.5
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319832.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	8.49	3.8	1.9	mg/kg	
	TPH (Motor Oil)	19.9	7.6	3.8	mg/kg	
	TPH (Mineral Spirits)	ND	3.8	1.9	mg/kg	
	TPH (Kerosene)	ND	3.8	1.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	85%		37-122%

(a) Atypical Diesel pattern (C12-C28); heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-7-4		
Lab Sample ID:	C37834-3	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	87.5
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	5.1	0.25	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	92.9	0.25	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8944

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-7-4		
Lab Sample ID:	C37834-3	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	87.5
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	12.5		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-7-1		
Lab Sample ID:	C37834-4	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	79.2
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X41459.D	1	01/05/15	BJ	01/05/15	OP11471	EX1771
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	21	2.1	ug/kg	
208-96-8	Acenaphthylene	2.4	21	2.1	ug/kg	J
120-12-7	Anthracene	2.7	21	2.1	ug/kg	J
56-55-3	Benzo(a)anthracene	49.2	4.2	1.1	ug/kg	
50-32-8	Benzo(a)pyrene	119	4.2	0.71	ug/kg	
205-99-2	Benzo(b)fluoranthene	105	4.2	0.84	ug/kg	
191-24-2	Benzo(g,h,i)perylene	146	4.2	0.93	ug/kg	
207-08-9	Benzo(k)fluoranthene	55.8	4.2	0.97	ug/kg	
218-01-9	Chrysene	69.4	4.2	0.84	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	11.6	4.2	1.2	ug/kg	
206-44-0	Fluoranthene	133	21	2.1	ug/kg	
86-73-7	Fluorene	ND	21	2.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	123	4.2	1.1	ug/kg	
90-12-0	1-Methylnaphthalene	ND	21	4.2	ug/kg	
91-57-6	2-Methylnaphthalene	ND	21	4.2	ug/kg	
91-20-3	Naphthalene	ND	21	4.2	ug/kg	
85-01-8	Phenanthrene	25.0	21	2.1	ug/kg	
129-00-0	Pyrene	192	21	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	99%		32-128%
321-60-8	2-Fluorobiphenyl	95%		48-122%
1718-51-0	Terphenyl-d14	110%		48-148%

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-7-1		
Lab Sample ID:	C37834-4	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	79.2
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046791.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	41	6.9	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.1	1.1	ug/kg	
93-76-5	2,4,5-T	ND	4.1	0.82	ug/kg	
1918-00-9	Dicamba	ND	4.1	1.4	ug/kg	
88-85-7	Dinoseb	ND	100	20	ug/kg	
75-99-0	Dalapon	ND	200	41	ug/kg	
120-36-5	Dichloroprop	ND	41	15	ug/kg	
94-82-6	2,4-DB	ND	41	15	ug/kg	
93-65-2	MCPP	ND	4100	1100	ug/kg	
94-74-6	MCPA	ND	4100	980	ug/kg	
87-86-5	Pentachlorophenol	ND	4.1	0.62	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	70% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-7-1		
Lab Sample ID:	C37834-4	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	79.2
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319833.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	6.52	4.2	2.1	mg/kg	
	TPH (Motor Oil)	16.0	8.4	4.2	mg/kg	
	TPH (Mineral Spirits)	ND	4.2	2.1	mg/kg	
	TPH (Kerosene)	ND	4.2	2.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	94%		37-122%

(a) Atypical Diesel pattern (C12-C28); heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-7-1		
Lab Sample ID:	C37834-4	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	79.2
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.3	0.27	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	22.0	0.27	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8944

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-7-1		
Lab Sample ID:	C37834-4	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	79.2
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	20.8		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-9-1		
Lab Sample ID:	C37834-5	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	76.2
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	T17365.D	4	01/03/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	86	8.6	ug/kg	
208-96-8	Acenaphthylene	ND	86	8.6	ug/kg	
120-12-7	Anthracene	ND	86	8.6	ug/kg	
56-55-3	Benzo(a)anthracene	59.3	17	4.3	ug/kg	
50-32-8	Benzo(a)pyrene	121	17	2.9	ug/kg	
205-99-2	Benzo(b)fluoranthene	123	17	3.4	ug/kg	
191-24-2	Benzo(g,h,i)perylene	145	17	3.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	54.3	17	4.0	ug/kg	
218-01-9	Chrysene	86.2	17	3.4	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	16.0	17	4.8	ug/kg	J
206-44-0	Fluoranthene	163	86	8.6	ug/kg	
86-73-7	Fluorene	ND	86	8.6	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	153	17	4.3	ug/kg	
90-12-0	1-Methylnaphthalene	ND	86	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	86	17	ug/kg	
91-20-3	Naphthalene	ND	86	17	ug/kg	
85-01-8	Phenanthrene	39.9	86	8.6	ug/kg	J
129-00-0	Pyrene	181	86	8.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	115%		32-128%
321-60-8	2-Fluorobiphenyl	108%		48-122%
1718-51-0	Terphenyl-d14	109%		48-148%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-9-1		
Lab Sample ID:	C37834-5	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	76.2
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046792.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	42	7.2	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.2	1.2	ug/kg	
93-76-5	2,4,5-T	ND	4.2	0.85	ug/kg	
1918-00-9	Dicamba	ND	4.2	1.4	ug/kg	
88-85-7	Dinoseb	ND	110	21	ug/kg	
75-99-0	Dalapon	ND	210	42	ug/kg	
120-36-5	Dichloroprop	ND	42	16	ug/kg	
94-82-6	2,4-DB	ND	42	16	ug/kg	
93-65-2	MCPP	ND	4200	1100	ug/kg	
94-74-6	MCPA	ND	4200	1000	ug/kg	
87-86-5	Pentachlorophenol	ND	4.2	0.65	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	60% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-9-1		
Lab Sample ID:	C37834-5	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	76.2
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319834.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	6.39	4.4	2.2	mg/kg	
	TPH (Motor Oil)	30.3	8.7	4.4	mg/kg	
	TPH (Mineral Spirits)	ND	4.4	2.2	mg/kg	
	TPH (Kerosene)	ND	4.4	2.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	93%		37-122%

(a) Atypical Diesel pattern (C12-C28); heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-9-1		
Lab Sample ID:	C37834-5	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	76.2
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	7.8	0.27	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	54.6	0.27	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8944

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-9-1		
Lab Sample ID:	C37834-5	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	76.2
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	23.8		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-9-6		
Lab Sample ID:	C37834-6	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	80.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17359.D	1	01/03/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	20	2.0	ug/kg	
208-96-8	Acenaphthylene	ND	20	2.0	ug/kg	
120-12-7	Anthracene	ND	20	2.0	ug/kg	
56-55-3	Benzo(a)anthracene	1.4	4.1	1.0	ug/kg	J
50-32-8	Benzo(a)pyrene	1.3	4.1	0.70	ug/kg	J
205-99-2	Benzo(b)fluoranthene	1.2	4.1	0.82	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	0.95	4.1	0.90	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	4.1	0.94	ug/kg	
218-01-9	Chrysene	1.2	4.1	0.82	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	4.1	1.1	ug/kg	
206-44-0	Fluoranthene	ND	20	2.0	ug/kg	
86-73-7	Fluorene	ND	20	2.0	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1.3	4.1	1.0	ug/kg	J
90-12-0	1-Methylnaphthalene	ND	20	4.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	20	4.1	ug/kg	
91-20-3	Naphthalene	ND	20	4.1	ug/kg	
85-01-8	Phenanthrene	ND	20	2.0	ug/kg	
129-00-0	Pyrene	ND	20	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	96%		32-128%
321-60-8	2-Fluorobiphenyl	94%		48-122%
1718-51-0	Terphenyl-d14	99%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-9-6		
Lab Sample ID:	C37834-6	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	80.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046793.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	41	6.9	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.1	1.1	ug/kg	
93-76-5	2,4,5-T	ND	4.1	0.82	ug/kg	
1918-00-9	Dicamba	ND	4.1	1.4	ug/kg	
88-85-7	Dinoseb	ND	100	20	ug/kg	
75-99-0	Dalapon	ND	200	41	ug/kg	
120-36-5	Dichloroprop	ND	41	15	ug/kg	
94-82-6	2,4-DB	ND	41	15	ug/kg	
93-65-2	MCPP	ND	4100	1100	ug/kg	
94-74-6	MCPA	ND	4100	980	ug/kg	
87-86-5	Pentachlorophenol	ND	4.1	0.62	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	110% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-9-6		
Lab Sample ID:	C37834-6	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	80.9
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319835.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	4.1	2.1	mg/kg	
	TPH (Motor Oil)	ND	8.2	4.1	mg/kg	
	TPH (Mineral Spirits)	ND	4.1	2.1	mg/kg	
	TPH (Kerosene)	ND	4.1	2.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	93%		37-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-9-6		
Lab Sample ID:	C37834-6	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	80.9
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.9	0.26	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	6.9	0.26	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8944

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-9-6		
Lab Sample ID:	C37834-6	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	80.9
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	19.1		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-10-5		
Lab Sample ID:	C37834-7	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	80.2
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T17360.D	1	01/03/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	21	2.1	ug/kg	
208-96-8	Acenaphthylene	ND	21	2.1	ug/kg	
120-12-7	Anthracene	ND	21	2.1	ug/kg	
56-55-3	Benzo(a)anthracene	ND	4.1	1.0	ug/kg	
50-32-8	Benzo(a)pyrene	ND	4.1	0.70	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	4.1	0.83	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	4.1	0.91	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	4.1	0.95	ug/kg	
218-01-9	Chrysene	ND	4.1	0.83	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	4.1	1.2	ug/kg	
206-44-0	Fluoranthene	ND	21	2.1	ug/kg	
86-73-7	Fluorene	ND	21	2.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.1	1.0	ug/kg	
90-12-0	1-Methylnaphthalene	ND	21	4.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	21	4.1	ug/kg	
91-20-3	Naphthalene	ND	21	4.1	ug/kg	
85-01-8	Phenanthrene	ND	21	2.1	ug/kg	
129-00-0	Pyrene	ND	21	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	112%		32-128%
321-60-8	2-Fluorobiphenyl	101%		48-122%
1718-51-0	Terphenyl-d14	103%		48-148%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-10-5		
Lab Sample ID:	C37834-7	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	80.2
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046848.D	5	01/08/15	AFL	01/05/15	F:OP54497	F:GCC779
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	210	35	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	21	5.7	ug/kg	
93-76-5	2,4,5-T	ND	21	4.2	ug/kg	
1918-00-9	Dicamba	ND	21	6.9	ug/kg	
88-85-7	Dinoseb	ND	520	100	ug/kg	
75-99-0	Dalapon	ND	1000	210	ug/kg	
120-36-5	Dichloroprop	ND	210	78	ug/kg	
94-82-6	2,4-DB	ND	210	78	ug/kg	
93-65-2	MCPP	ND	21000	5500	ug/kg	
94-74-6	MCPA	ND	21000	5000	ug/kg	
87-86-5	Pentachlorophenol	ND	21	3.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	60% [b]		31-132%

(a) Dilution required due to matrix interference. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-10-5		
Lab Sample ID:	C37834-7	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	80.2
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319853.D	3	01/05/15	AG	01/02/15	OP11469	GHH1431
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	88.2	12	6.2	mg/kg	
	TPH (Motor Oil)	164	25	12	mg/kg	
	TPH (Mineral Spirits)	ND	12	6.2	mg/kg	
	TPH (Kerosene)	ND	12	6.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	94%		37-122%

(a) Atypical Diesel pattern (C10-C28); heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B-10-5		
Lab Sample ID:	C37834-7	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	80.2
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic [a]	1.4	0.58	mg/kg	5	01/09/15	01/12/15	RS	SW846 6020 [2]	SW846 3050B [4]
Lead	26.0	0.26	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA4523
(2) Instrument QC Batch: MA4533
(3) Prep QC Batch: MP8944
(4) Prep QC Batch: MP8965

(a) Elevated RL/MDL due to positive bias of Method Blank.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-10-5		
Lab Sample ID:	C37834-7	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	80.2
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	19.8		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B		
Lab Sample ID:	C37834-8	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	81.6
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	T17367.D	10	01/03/15	MT	01/02/15	OP11467	ET768
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	200	20	ug/kg	
208-96-8	Acenaphthylene	ND	200	20	ug/kg	
120-12-7	Anthracene	ND	200	20	ug/kg	
56-55-3	Benzo(a)anthracene	ND	41	10	ug/kg	
50-32-8	Benzo(a)pyrene	10.4	41	6.9	ug/kg	J
205-99-2	Benzo(b)fluoranthene	10.5	41	8.1	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	14.8	41	9.0	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	41	9.4	ug/kg	
218-01-9	Chrysene	10.7	41	8.1	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	41	11	ug/kg	
206-44-0	Fluoranthene	ND	200	20	ug/kg	
86-73-7	Fluorene	ND	200	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	12.0	41	10	ug/kg	J
90-12-0	1-Methylnaphthalene	ND	200	41	ug/kg	
91-57-6	2-Methylnaphthalene	ND	200	41	ug/kg	
91-20-3	Naphthalene	ND	200	41	ug/kg	
85-01-8	Phenanthrene	ND	200	20	ug/kg	
129-00-0	Pyrene	ND	200	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	105%		32-128%
321-60-8	2-Fluorobiphenyl	110%		48-122%
1718-51-0	Terphenyl-d14	101%		48-148%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B		
Lab Sample ID:	C37834-8	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	81.6
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046795.D	1	01/06/15	AFL	01/05/15	F:OP54497	F:GCC777
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	40	6.8	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	4.0	1.1	ug/kg	
93-76-5	2,4,5-T	ND	4.0	0.80	ug/kg	
1918-00-9	Dicamba	ND	4.0	1.3	ug/kg	
88-85-7	Dinoseb	ND	100	20	ug/kg	
75-99-0	Dalapon	ND	200	40	ug/kg	
120-36-5	Dichloroprop	ND	40	15	ug/kg	
94-82-6	2,4-DB	ND	40	15	ug/kg	
93-65-2	MCPP	ND	4000	1100	ug/kg	
94-74-6	MCPA	ND	4000	960	ug/kg	
87-86-5	Pentachlorophenol [b]	1.1	4.0	0.61	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	60% [c]		31-132%

(a) All hits confirmed by dual column analysis. Analysis performed at Accutest Laboratories, Orlando FL.
(b) Primary and confirmation results differ by more than 40%. Lower value reported due to possible coelution.
(c) Surrogate recoveries corrected for actual spike amount.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B		
Lab Sample ID:	C37834-8	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	81.6
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319854.D	25	01/05/15	AG	01/02/15	OP11469	GHH1431
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	188	100	51	mg/kg	
	TPH (Motor Oil)	922	200	100	mg/kg	
	TPH (Mineral Spirits)	ND	100	51	mg/kg	
	TPH (Kerosene)	ND	100	51	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	41%		37-122%

(a) Atypical Diesel pattern (C10-C28); heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAT-B		
Lab Sample ID:	C37834-8	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	81.6
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.9	0.26	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	170	0.26	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8944

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B		
Lab Sample ID:	C37834-8	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	81.6
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	18.4		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-10-2		
Lab Sample ID:	C37834-9	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	90.1
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	T17397.D	20	01/05/15	MT	01/05/15	OP11471	ET769
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.5 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	550	55	ug/kg	
208-96-8	Acenaphthylene	ND	550	55	ug/kg	
120-12-7	Anthracene	ND	550	55	ug/kg	
56-55-3	Benzo(a)anthracene	52.6	110	28	ug/kg	J
50-32-8	Benzo(a)pyrene	65.7	110	19	ug/kg	J
205-99-2	Benzo(b)fluoranthene	57.1	110	22	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	97.7	110	24	ug/kg	J
207-08-9	Benzo(k)fluoranthene	45.9	110	25	ug/kg	J
218-01-9	Chrysene	61.8	110	22	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	110	31	ug/kg	
206-44-0	Fluoranthene	88.7	550	55	ug/kg	J
86-73-7	Fluorene	ND	550	55	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	66.8	110	28	ug/kg	J
90-12-0	1-Methylnaphthalene	ND	550	110	ug/kg	
91-57-6	2-Methylnaphthalene	ND	550	110	ug/kg	
91-20-3	Naphthalene	ND	550	110	ug/kg	
85-01-8	Phenanthrene	84.3	550	55	ug/kg	J
129-00-0	Pyrene	85.8	550	55	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	90%		32-128%
321-60-8	2-Fluorobiphenyl	98%		48-122%
1718-51-0	Terphenyl-d14	86%		48-148%

(a) Dilution required due to matrix interference. Extract would not concentrate (dark and viscous); and high concentration of non-target hydrocarbons.

ND = Not detected   MDL = Method Detection Limit   J = Indicates an estimated value
RL = Reporting Limit   B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range   N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-10-2		
Lab Sample ID:	C37834-9	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8151A SW846 3546	**Percent Solids:**	90.1
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CC046855.D	1	01/08/15	AFL	01/06/15	F:OP54503	F:GCC779
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	37	6.3	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.7	1.0	ug/kg	
93-76-5	2,4,5-T	ND	3.7	0.74	ug/kg	
1918-00-9	Dicamba	ND	3.7	1.2	ug/kg	
88-85-7	Dinoseb	ND	92	18	ug/kg	
75-99-0	Dalapon	ND	180	37	ug/kg	
120-36-5	Dichloroprop	ND	37	14	ug/kg	
94-82-6	2,4-DB	ND	37	14	ug/kg	
93-65-2	MCPP	ND	3700	980	ug/kg	
94-74-6	MCPA	ND	3700	890	ug/kg	
87-86-5	Pentachlorophenol	ND	3.7	0.57	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	15% [b]		31-132%

(a) Analysis performed at Accutest Laboratories, Orlando FL.
(b) Surrogate recoveries outside of control limits,confirmed by MS/MSD.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-10-2		
Lab Sample ID:	C37834-9	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	90.1
Project:	Alameda Cross Trail Phase II		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH319873.D	25	01/05/15	AG	01/05/15	OP11472	GHH1431
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	129	92	46	mg/kg	
	TPH (Motor Oil)	609	180	92	mg/kg	
	TPH (Mineral Spirits)	ND	92	46	mg/kg	
	TPH (Kerosene)	ND	92	46	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	55%		37-122%

(a) Atypical Diesel pattern (C10-C28); heavier hydrocarbons contributing to quantitation.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CAT-B-10-2		
Lab Sample ID:	C37834-9	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	90.1
Project:	Alameda Cross Trail Phase II		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	6.2	0.23	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]
Lead	126	0.23	mg/kg	5	01/07/15	01/08/15	RS	SW846 6020 [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA4523
(2) Prep QC Batch: MP8944

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CAT-B-10-2		
Lab Sample ID:	C37834-9	**Date Sampled:**	12/30/14
Matrix:	SO - Soil	**Date Received:**	12/31/14
		Percent Solids:	90.1
Project:	Alameda Cross Trail Phase II		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	9.9		%	1	01/02/15 13:00	TN	SM2540MOD G-97

RL = Reporting Limit

Northern California
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LABORATORIES

4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FedEX # 804316470333

C37834

Tetra Tech EM Inc.
San Francisco Office

Chain of Custody Record No. 6927

Page 1 of 1

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Lab PO#:	Lab: Accutest	
Project name: Cross-trail Alameda Phase II	TtEMI technical contact: Mark Duffy	Field samplers: Mark Duffy
Project (CTO) number: 10353635	TtEMI project manager: Victor Early	Field samplers' signatures:

Preservative Added: NA

	Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar 4oz/8oz				VOA	SVOA	Pest/PCBs	Metals	TPH Purgeables	TPH Extractables w/ Silica gel	EDA 8151	PAH 8270 SIM	Lead 6020	Arsenic 6020					
-1	CAT-B-8-8		12-30-14	1120	Soil						2									X	X	X	X	X					
-2	CAT-B-8-2			1125																									
-3	CAT-B-7-4			840																									
-4	CAT-B-7-1			835																									
-5	CAT-B-9-1			1225		X					4																		
-6	CAT-B-9-6			1230							2																		
-7	CAT-B-10-5			1305																									
-8	CAT-B			1320																									
-9	CAT-B-10-2			1310																									

MD

MD

	Name (print)	Company Name	Date	Time
Relinquished by:	Mark Duffy	Tetra Tech	12-31-14	1600
Received by: Lee Bautista	Lee Bautista	Accutest	12/31/14	09:30
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Temp Blank included

Fed Ex #: 8043 1647 0333

WHITE-Laboratory Copy YELLOW-Sample Tracker PINK-File Copy

Temp: 4.5°C

4.1

4

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C37834 **Client:** TETRA TECH **Project:** CROSS-TRAIL ALAMEDA PHASE II

Date / Time Received: 12/31/2014 9:30:00 AM **Delivery Method:** FedEx **Airbill #'s:** 804316470333

Cooler Temps (Initial/Adjusted): #1: (4.5/4.5);

Cooler Security	Y	N
1. Custody Seals Present:	☐	☑
2. Custody Seals Intact:	☐	☐
3. COC Present:	☑	☐
4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR2;	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control_Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

C37834: Chain of Custody
Page 2 of 2

Northern California
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GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11467-MB	T17345.D	1	01/02/15	MT	01/02/15	OP11467	ET768

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37834-2, C37834-5, C37834-6, C37834-7, C37834-8

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	17	1.7	ug/kg	
208-96-8	Acenaphthylene	ND	17	1.7	ug/kg	
120-12-7	Anthracene	ND	17	1.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	3.3	0.83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	3.3	0.57	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	3.3	0.67	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	3.3	0.73	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	3.3	0.77	ug/kg	
218-01-9	Chrysene	ND	3.3	0.67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	3.3	0.93	ug/kg	
206-44-0	Fluoranthene	ND	17	1.7	ug/kg	
86-73-7	Fluorene	ND	17	1.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	3.3	0.83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	17	3.3	ug/kg	
91-57-6	2-Methylnaphthalene	ND	17	3.3	ug/kg	
91-20-3	Naphthalene	ND	17	3.3	ug/kg	
85-01-8	Phenanthrene	ND	17	1.7	ug/kg	
129-00-0	Pyrene	ND	17	1.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	110%	32-128%
321-60-8	2-Fluorobiphenyl	106%	48-122%
1718-51-0	Terphenyl-d14	110%	48-148%

Method Blank Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11471-MB	T17382.D	1	01/05/15	MT	01/05/15	OP11471	ET769

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37834-1, C37834-3, C37834-4, C37834-9

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	17	1.7	ug/kg	
208-96-8	Acenaphthylene	ND	17	1.7	ug/kg	
120-12-7	Anthracene	ND	17	1.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	3.3	0.83	ug/kg	
50-32-8	Benzo(a)pyrene [a]	0.62	3.3	0.57	ug/kg	J
205-99-2	Benzo(b)fluoranthene	ND	3.3	0.67	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	3.3	0.73	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	3.3	0.77	ug/kg	
218-01-9	Chrysene	ND	3.3	0.67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	3.3	0.93	ug/kg	
206-44-0	Fluoranthene	ND	17	1.7	ug/kg	
86-73-7	Fluorene	ND	17	1.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	3.3	0.83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	17	3.3	ug/kg	
91-57-6	2-Methylnaphthalene	ND	17	3.3	ug/kg	
91-20-3	Naphthalene	ND	17	3.3	ug/kg	
85-01-8	Phenanthrene	ND	17	1.7	ug/kg	
129-00-0	Pyrene	ND	17	1.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	98%	32-128%
321-60-8	2-Fluorobiphenyl	95%	48-122%
1718-51-0	Terphenyl-d14	113%	48-148%

(a) Associated sample(s) with "B" qualifiers indicate analyte is found at concentrations less than 10 times of method blank. Concentration present in blank is less than 1/2 RL; meeting method criteria.

Method Blank Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11471-MB	X41456.D	1	01/05/15	BJ	01/05/15	OP11471	EX1771

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37834-1, C37834-3, C37834-4, C37834-9

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	17	1.7	ug/kg	
208-96-8	Acenaphthylene	ND	17	1.7	ug/kg	
120-12-7	Anthracene	ND	17	1.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	3.3	0.83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	3.3	0.57	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	3.3	0.67	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	3.3	0.73	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	3.3	0.77	ug/kg	
218-01-9	Chrysene	ND	3.3	0.67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	3.3	0.93	ug/kg	
206-44-0	Fluoranthene	ND	17	1.7	ug/kg	
86-73-7	Fluorene	ND	17	1.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	3.3	0.83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	17	3.3	ug/kg	
91-57-6	2-Methylnaphthalene	ND	17	3.3	ug/kg	
91-20-3	Naphthalene	ND	17	3.3	ug/kg	
85-01-8	Phenanthrene	ND	17	1.7	ug/kg	
129-00-0	Pyrene	ND	17	1.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	97%	32-128%
321-60-8	2-Fluorobiphenyl	97%	48-122%
1718-51-0	Terphenyl-d14	115%	48-148%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11467-BS	T17346.D	1	01/02/15	MT	01/02/15	OP11467	ET768
OP11467-BSD	T17347.D	1	01/02/15	MT	01/02/15	OP11467	ET768

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37834-2, C37834-5, C37834-6, C37834-7, C37834-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	167	175	105	164	98	6	67-106/9
208-96-8	Acenaphthylene	167	168	101	162	97	4	67-104/9
120-12-7	Anthracene	167	181	109* [a]	166	100	9	66-107/11
56-55-3	Benzo(a)anthracene	167	170	102	171	103	1	72-115/9
50-32-8	Benzo(a)pyrene	167	157	94	162	97	3	64-107/10
205-99-2	Benzo(b)fluoranthene	167	182	109	168	101	8	69-127/15
191-24-2	Benzo(g,h,i)perylene	167	179	107	186	112	4	63-125/14
207-08-9	Benzo(k)fluoranthene	167	151	91	159	95	5	73-127/14
218-01-9	Chrysene	167	174	104	168	101	4	72-119/8
53-70-3	Dibenzo(a,h)anthracene	167	169	101	183	110	8	65-128/16
206-44-0	Fluoranthene	167	174	104	168	101	4	74-119/11
86-73-7	Fluorene	167	170	102	168	101	1	71-111/10
193-39-5	Indeno(1,2,3-cd)pyrene	167	162	97	170	102	5	59-128/18
90-12-0	1-Methylnaphthalene	167	130	78	167	100	25* [b]	63-103/12
91-57-6	2-Methylnaphthalene	167	161	97	166	100	3	64-106/12
91-20-3	Naphthalene	167	161	97	160	96	1	62-99/10
85-01-8	Phenanthrene	167	173	104	163	98	6	68-111/14
129-00-0	Pyrene	167	167	100	163	98	2	62-122/15

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	111%	110%	32-128%
321-60-8	2-Fluorobiphenyl	104%	101%	48-122%
1718-51-0	Terphenyl-d14	105%	101%	48-148%

(a) Outside of in-house control limits; but within the method control limits.
(b) Outside laboratory control limits. BS/BSD recoveries within control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11471-BS	T17380.D	1	01/05/15	MT	01/05/15	OP11471	ET769
OP11471-BSD	T17381.D	1	01/05/15	MT	01/05/15	OP11471	ET769

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37834-1, C37834-3, C37834-4, C37834-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	167	161	97	165	99	2	67-106/9
208-96-8	Acenaphthylene	167	137	82	169	101	21* [a]	67-104/9
120-12-7	Anthracene	167	167	100	175	105	5	66-107/11
56-55-3	Benzo(a)anthracene	167	175	105	175	105	0	72-115/9
50-32-8	Benzo(a)pyrene	167	158	95	152	91	4	64-107/10
205-99-2	Benzo(b)fluoranthene	167	197	118	192	115	3	69-127/15
191-24-2	Benzo(g,h,i)perylene	167	197	118	197	118	0	63-125/14
207-08-9	Benzo(k)fluoranthene	167	141	85	145	87	3	73-127/14
218-01-9	Chrysene	167	167	100	175	105	5	72-119/8
53-70-3	Dibenzo(a,h)anthracene	167	185	111	192	115	4	65-128/16
206-44-0	Fluoranthene	167	181	109	187	112	3	74-119/11
86-73-7	Fluorene	167	155	93	179	107	14* [a]	71-111/10
193-39-5	Indeno(1,2,3-cd)pyrene	167	196	118	211	127	7	59-128/18
90-12-0	1-Methylnaphthalene	167	176	106* [b]	162	97	8	63-103/12
91-57-6	2-Methylnaphthalene	167	173	104	159	95	8	64-106/12
91-20-3	Naphthalene	167	167	100* [c]	154	92	8	62-99/10
85-01-8	Phenanthrene	167	180	108	172	103	5	68-111/14
129-00-0	Pyrene	167	164	98	152	91	8	62-122/15

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	96%	100%	32-128%
321-60-8	2-Fluorobiphenyl	92%	103%	48-122%
1718-51-0	Terphenyl-d14	96%	98%	48-148%

(a) Outside laboratory control limits. BS/BSD recoveries within control limits.
(b) Outside laboratory control limits; but within marginal exceedence criteria.
(c) Outside of in-house control limits; but within the method control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11467-MS [a]	T17368.D	4	01/03/15	MT	01/02/15	OP11467	ET768
OP11467-MSD [a]	T17369.D	4	01/03/15	MT	01/02/15	OP11467	ET768
C37834-5 [a]	T17365.D	4	01/03/15	MT	01/02/15	OP11467	ET768

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37834-2, C37834-5, C37834-6, C37834-7, C37834-8

CAS No.	Compound	C37834-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		218	227	104	218	218	100	4	67-106/9
208-96-8	Acenaphthylene	ND		218	230	105* [b]	218	220	101	4	67-104/9
120-12-7	Anthracene	ND		218	219	100	218	239	110* [b]	9	66-107/11
56-55-3	Benzo(a)anthracene	59.3		218	267	95	218	276	99	3	72-115/9
50-32-8	Benzo(a)pyrene	121		218	306	85	218	297	81	3	64-107/10
205-99-2	Benzo(b)fluoranthene	123		218	374	115	218	345	102	8	69-127/15
191-24-2	Benzo(g,h,i)perylene	145		218	307	74	218	316	78	3	63-125/14
207-08-9	Benzo(k)fluoranthene	54.3		218	212	72* [b]	218	217	75	2	73-127/14
218-01-9	Chrysene	86.2		218	263	81	218	264	82	0	72-119/8
53-70-3	Dibenzo(a,h)anthracene	16.0	J	218	243	104	218	246	105	1	65-128/16
206-44-0	Fluoranthene	163		218	310	67* [b]	218	357	89	14* [b]	74-119/11
86-73-7	Fluorene	ND		218	231	106	218	222	102	4	71-111/10
193-39-5	Indeno(1,2,3-cd)pyrene	153		218	356	93	218	352	91	1	59-128/18
90-12-0	1-Methylnaphthalene	ND		218	218	100	218	214	98	2	63-103/12
91-57-6	2-Methylnaphthalene	ND		218	212	97	218	216	99	2	64-106/12
91-20-3	Naphthalene	ND		218	212	97	218	205	94	3	62-99/10
85-01-8	Phenanthrene	39.9	J	218	240	92	218	222	84	8	68-111/14
129-00-0	Pyrene	181		218	314	61* [b]	218	330	68	5	62-122/15

CAS No.	Surrogate Recoveries	MS	MSD	C37834-5	Limits
4165-60-0	Nitrobenzene-d5	105%	107%	115%	32-128%
321-60-8	2-Fluorobiphenyl	110%	104%	108%	48-122%
1718-51-0	Terphenyl-d14	101%	98%	109%	48-148%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).
(b) Outside laboratory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11471-MS	T17395.D	1	01/05/15	MT	01/05/15	OP11471	ET769
OP11471-MSD	T17396.D	1	01/05/15	MT	01/05/15	OP11471	ET769
C37843-9	T17393.D	1	01/05/15	MT	01/05/15	OP11471	ET769

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C37834-1, C37834-3, C37834-4, C37834-9

CAS No.	Compound	C37843-9 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		166	160	96	166	169	102	5	67-106/9
208-96-8	Acenaphthylene	ND		166	161	97	166	173	104	7	67-104/9
120-12-7	Anthracene	ND		166	164	99	166	168	101	2	66-107/11
56-55-3	Benzo(a)anthracene	ND		166	162	98	166	172	104	6	72-115/9
50-32-8	Benzo(a)pyrene	ND		166	149	90	166	155	93	4	64-107/10
205-99-2	Benzo(b)fluoranthene	ND		166	189	114	166	209	126	10	69-127/15
191-24-2	Benzo(g,h,i)perylene	ND		166	160	96	166	170	102	6	63-125/14
207-08-9	Benzo(k)fluoranthene	ND		166	132	79	166	141	85	7	73-127/14
218-01-9	Chrysene	ND		166	153	92	166	172	104	12* [a]	72-119/8
53-70-3	Dibenzo(a,h)anthracene	ND		166	166	100	166	175	105	5	65-128/16
206-44-0	Fluoranthene	ND		166	180	108	166	181	109	1	74-119/11
86-73-7	Fluorene	ND		166	169	102	166	179	108	6	71-111/10
193-39-5	Indeno(1,2,3-cd)pyrene	ND		166	186	112	166	180	108	3	59-128/18
90-12-0	1-Methylnaphthalene	ND		166	172	104* [b]	166	167	101	3	63-103/12
91-57-6	2-Methylnaphthalene	ND		166	163	98	166	168	101	3	64-106/12
91-20-3	Naphthalene	ND		166	158	95	166	161	97	2	62-99/10
85-01-8	Phenanthrene	ND		166	165	99	166	163	98	1	68-111/14
129-00-0	Pyrene	ND		166	145	87	166	149	90	3	62-122/15

CAS No.	Surrogate Recoveries	MS	MSD	C37843-9	Limits
4165-60-0	Nitrobenzene-d5	96%	103%	98%	32-128%
321-60-8	2-Fluorobiphenyl	94%	103%	87%	48-122%
1718-51-0	Terphenyl-d14	84%	89%	95%	48-148%

(a) Outside laboratory control limits. MS/MSD recoveries within control limits.
(b) Outside laboratory control limits.

* = Outside of Control Limits.

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GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11469-MB	HH319843.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	3.3	1.7	mg/kg	
	TPH (Motor Oil)	ND	6.7	3.3	mg/kg	
	TPH (Mineral Spirits)	ND	3.3	1.7	mg/kg	
	TPH (Kerosene)	ND	3.3	1.7	mg/kg	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	96%	37-122%

Method Blank Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11472-MB	HH319860.D	1	01/05/15	AG	01/05/15	OP11472	GHH1431

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C37834-9

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	3.3	1.7	mg/kg	
	TPH (Motor Oil)	ND	6.7	3.3	mg/kg	
	TPH (Mineral Spirits)	ND	3.3	1.7	mg/kg	
	TPH (Kerosene)	ND	3.3	1.7	mg/kg	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	92%	37-122%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11469-BS	HH319841.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430
OP11469-BSD	HH319842.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	33.3	27.0	81	29.1	87	7	38-102/28
	TPH (Motor Oil)	33.3	30.0	90	30.1	90	0	42-111/26

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	97%	98%	37-122%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11472-BS	HH319858.D	1	01/05/15	AG	01/05/15	OP11472	GHH1431
OP11472-BSD	HH319859.D	1	01/05/15	AG	01/05/15	OP11472	GHH1431

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C37834-9

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	33.3	28.9	87	28.8	86	0	38-102/28
	TPH (Motor Oil)	33.3	30.2	91	28.8	86	5	42-111/26

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	92%	90%	37-122%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11469-MS	HH319839.D	3	01/03/15	AG	01/02/15	OP11469	GHH1430
OP11469-MSD	HH319840.D	3	01/03/15	AG	01/02/15	OP11469	GHH1430
C37834-5	HH319834.D	1	01/03/15	AG	01/02/15	OP11469	GHH1430

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8

CAS No.	Compound	C37834-5 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	6.39		43.7	34.7	65	43.6	44.9	88	26	38-102/28
	TPH (Motor Oil)	30.3		43.7	66.7	83	43.6	127	222* [a]	62* [a]	42-111/26

CAS No.	Surrogate Recoveries	MS	MSD	C37834-5	Limits
630-01-3	Hexacosane	92%	88%	93%	37-122%

(a) Outside laboratory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37834
Account: TETRCAO Tetra Tech EMI
Project: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP11472-MS	HH319856.D	25	01/05/15	AG	01/05/15	OP11472	GHH1431
OP11472-MSD	HH319857.D	25	01/05/15	AG	01/05/15	OP11472	GHH1431
C37834-9	HH319873.D	25	01/05/15	AG	01/05/15	OP11472	GHH1431

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C37834-9

CAS No.	Compound	C37834-9 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	129		36.8	127	-5* [a]	36.8	96.0	-90* [a]	28	38-102/28
	TPH (Motor Oil)	609		36.8	577	-87* [a]	36.8	560	-133* [a]	3	42-111/26

CAS No.	Surrogate Recoveries	MS	MSD	C37834-9	Limits
630-01-3	Hexacosane	49%	45%	55%	37-122%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Northern California
ACCUTEST
LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8944
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/07/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	2.3	2.5		
Antimony	0.25	.14	.008		
Arsenic	0.25	.3	.017	0.33	* (a)
Barium	0.50	.011	.036		
Beryllium	0.25		.027		
Boron	2.5	.09	.066		
Cadmium	0.25	.0028	.011		
Calcium	250	40	38		
Chromium	1.0	.025	.053		
Cobalt	0.25	.018	.0085		
Copper	1.0	.018	.11		
Iron	25	3.1	1.6		
Lead	0.25	.0056	.038	0.018	<0.25
Magnesium	250	.54	2.1		
Manganese	0.50	.012	.18		
Molybdenum	0.50	.11	.026		
Nickel	1.0	.18	.043		
Potassium	250	2.3	1.5		
Selenium	0.25	.17	.012		
Silver	0.25	.0048	.006		
Sodium	250	2.2	2.6		
Strontium	2.5	.021	.018		
Thallium	0.25	.04	.015		
Tin	2.5	.055	.036		
Titanium	0.50	.083	.038		
Uranium	0.25	.06	.006		
Vanadium	1.0	.36	.051		
Zinc	2.0	.22	.11		

Associated samples MP8944: C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8, C37834-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All sample results < RL or > 10x method blank concentration.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8944
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/07/15

Metal	C37834-5 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	7.8	51.4	56.1	72.4N(a)	75-125
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead	54.6	141	56.1	151.9N	75-125
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP8944: C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8, C37834-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8944
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/07/15

Metal	C37834-5 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	7.8	47.2	56.1	64.9N(a)	8.5	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead	54.6	206	56.1	267.8N(a	37.5 (b)	20
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP8944: C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8, C37834-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) RPD acceptable due to low duplicate and sample concentrations.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8944
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/07/15

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	46.7	50	93.4	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	45.8	50	91.6	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8944: C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8, C37834-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8944
Matrix Type: SOLID

Methods: SW846 6020
Units: ug/l

Prep Date: 01/07/15

Metal	C37834-5 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	71.7	112	12.7 (a)	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	500	553	8.4	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8944: C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8, C37834-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/09/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	2.3	2.5		
Antimony	0.25	.14	.008		
Arsenic	0.50	.3	.017	0.26	<0.50(a)
Barium	0.50	.011	.036		
Beryllium	0.25		.027		
Boron	2.5	.09	.066		
Cadmium	0.25	.0028	.011		
Calcium	250	40	38		
Chromium	1.0	.025	.053		
Cobalt	0.25	.018	.0085		
Copper	1.0	.018	.11		
Iron	25	3.1	1.6		
Lead	0.25	.0056	.038		
Magnesium	250	.54	2.1		
Manganese	0.50	.012	.18		
Molybdenum	0.50	.11	.026		
Nickel	1.0	.18	.043		
Potassium	250	2.3	1.5		
Selenium	0.25	.17	.012		
Silver	0.25	.0048	.006		
Sodium	250	2.2	2.6		
Strontium	2.5	.021	.018		
Thallium	0.25	.04	.015		
Tin	2.5	.055	.036		
Titanium	0.50	.083	.038		
Uranium	0.25	.06	.006		
Vanadium	1.0	.36	.051		
Zinc	2.0	.22	.11		

Associated samples MP8965: C37834-1, C37834-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Elevated RL/MDL due to positive bias of Method Blank.

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/09/15

Metal	C37834-1 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	2.7	53.2	57.8	87.4	75-125
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP8965: C37834-1, C37834-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/09/15

Metal	C37834-1 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	2.7	58.5	59.9	93.2	9.5	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP8965: C37834-1, C37834-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/09/15

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	45.1	50	90.2	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8965: C37834-1, C37834-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C37834
Account: TETRCAO - Tetra Tech EMI
Project: Alameda Cross Trail Phase II

QC Batch ID: MP8965
Matrix Type: SOLID

Methods: SW846 6020
Units: ug/l

Prep Date: 01/09/15

Metal	C37834-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	22.5	29.1	29.4 (a)	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8965: C37834-1, C37834-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Northern California
ACCUTEST
LABORATORIES

Misc. Forms

Custody Documents and Other Forms

(Accutest Laboratories Southeast, Inc.)

Includes the following where applicable:

- Chain of Custody

ACCUTEST LABORATORIES

Accutest ID and PO#: C37834

2105 Lundy Avenue, San Jose, CA 95131 Phone :(408)588-0200 Fax: (408)588-0201

Subcontract Chain of Custody

Subcontract Lab: Accutest Laboratories Southeast
Date Sent: 01/02/2015
Date Due: 01/08/2015

Project Name: TETRCAO6786
Project Location:

Accutest Lab Number	Customer Sample Name/Field Point ID	Matrix	Method	Collect Date	Collect Time
C37834-1		SO	H8151FL		
C37834-2		SO	H8151FL		
C37834-3		SO	H8151FL		
C37834-4		SO	H8151FL		
C37834-5 (run MS/MSD)		SO	H8151FL (run MS/MSD)		
C37834-6		SO	H8151FL		
C37834-7		SO	H8151FL		
C37834-8		SO	H8151FL		
C37834-9		SO	H8151FL		

Comments: 1 x 4oz Glass Jar per sample

Relinquished By: Lee.B	Received By: FedEx	Date: 01/02/15	Time: 15:00
Relinquished By: FedEx 01-03-15 1215	Received By: [signature]	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

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Page 1

Send Report to: nutank@accutest.com

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: C37834 CLIENT: ALNC PROJECT: Tetra Tech 06786

DATE/TIME RECEIVED: 01-03-15 12:15 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER DELIVERY OTHER:

AIRBILL NUMBERS: 7724 4045 6232

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 2.6
- [ ] CORRECTED TEMPS: 3.0

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT LOT#

{APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM ____ 5-GRAM ____

NUMBER OF 5035 FIELD KITS ? ____

NUMBER OF LAB FILTERED METALS ? ____

pH PAPER LOT#s WIDE RANGE A036122 NARROW RANGE HC421754 OTHER (specify) 405-230010

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE [signature] 01-03-15 REVIEWER SIGNATURE/DATE [signature] 01/03/15

NF 10/14

receipt confirmation 102914.xls

C37834: Chain of Custody

Page 2 of 3

ORIGIN ID:RBKA (408) 588-0200
ELVIN KUMAR
ACCUTEST NORTHERN CA
2105 LUNDY AVE

SAN JOSE, CA 95131
UNITED STATES US

SHIP DATE: 02JAN15
ACTWGT: 27.0 LB
CAD: 104695527/INET3550

BILL RECIPIENT

TO SAMPLE MANAGEMENT
ACCUTEST LABORATORIES SOUTHEAST
4405 VINELAND ROAD

ORLANDO
(407) 425-6700
INV:
PO:

RT 965
ST 39.2

4
12:00

B

6232
01.03

FedEx
Express

E

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 7724 4045 6232
1201

XO TIXA

32811
FL-US MCO

C37834: Chain of Custody
Page 3 of 3

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Northern California
ACCUTEST
LABORATORIES

GC Semi-volatiles

QC Data Summaries

(Accutest Laboratories Southeast, Inc.)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C37834
Account: ALNCA Accutest Northern California, Inc.
Project: TETRCAO: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP54497-MB	CC046769.D	1	01/06/15	FS	01/05/15	OP54497	GCC777

The QC reported here applies to the following samples: **Method:** SW846 8151A

C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	33	5.7	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.3	0.91	ug/kg	
93-76-5	2,4,5-T	ND	3.3	0.67	ug/kg	
1918-00-9	Dicamba	ND	3.3	1.1	ug/kg	
88-85-7	Dinoseb	ND	83	17	ug/kg	
75-99-0	Dalapon	ND	170	33	ug/kg	
120-36-5	Dichloroprop	ND	33	13	ug/kg	
94-82-6	2,4-DB	ND	33	12	ug/kg	
93-65-2	MCPP	ND	3300	890	ug/kg	
94-74-6	MCPA	ND	3300	800	ug/kg	
87-86-5	Pentachlorophenol	ND	3.3	0.51	ug/kg	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	100% [a]	31-132%

(a) Surrogate recoveries corrected for actual spike amount.

Method Blank Summary

Job Number: C37834
Account: ALNCA Accutest Northern California, Inc.
Project: TETRCAO: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP54503-MB	CC046854.D	1	01/08/15	EM	01/06/15	OP54503	GCC779

The QC reported here applies to the following samples: **Method:** SW846 8151A

C37834-9

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	33	5.7	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.3	0.91	ug/kg	
93-76-5	2,4,5-T	ND	3.3	0.67	ug/kg	
1918-00-9	Dicamba	ND	3.3	1.1	ug/kg	
88-85-7	Dinoseb	ND	83	17	ug/kg	
75-99-0	Dalapon	ND	170	33	ug/kg	
120-36-5	Dichloroprop	ND	33	13	ug/kg	
94-82-6	2,4-DB	ND	33	12	ug/kg	
93-65-2	MCPP	ND	3300	890	ug/kg	
94-74-6	MCPA	ND	3300	800	ug/kg	
87-86-5	Pentachlorophenol	ND	3.3	0.51	ug/kg	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	80%	31-132%

Blank Spike Summary

Job Number: C37834
Account: ALNCA Accutest Northern California, Inc.
Project: TETRCAO: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP54497-BS	CC046768.D	1	01/06/15	FS	01/05/15	OP54497	GCC777

The QC reported here applies to the following samples: **Method:** SW846 8151A

C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
94-75-7	2,4-D	167	163	98	43-124
93-72-1	2,4,5-TP (Silvex)	16.7	16.1	97	41-130
93-76-5	2,4,5-T	16.7	15.5	93	40-124
1918-00-9	Dicamba	16.7	14.8	89	32-129
88-85-7	Dinoseb	83.3	32.2	39	10-124
75-99-0	Dalapon	417	158	38	10-133
120-36-5	Dichloroprop	167	190	114	51-145
94-82-6	2,4-DB	167	134	80	42-130
93-65-2	MCPP	16700	14800	89	34-130
94-74-6	MCPA	16700	14600	88	37-124
87-86-5	Pentachlorophenol	33.4	33.3	100	45-126

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	130% [a]	31-132%

(a) Surrogate recoveries corrected for actual spike amount.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: C37834
Account: ALNCA Accutest Northern California, Inc.
Project: TETRCAO: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP54503-BS	CC046853.D	1	01/08/15	EM	01/06/15	OP54503	GCC779

The QC reported here applies to the following samples: **Method:** SW846 8151A

C37834-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
94-75-7	2,4-D	167	186	112	43-124
93-72-1	2,4,5-TP (Silvex)	16.7	19.1	115	41-130
93-76-5	2,4,5-T	16.7	19.4	116	40-124
1918-00-9	Dicamba	16.7	16.9	101	32-129
88-85-7	Dinoseb	83.3	36.7	44	10-124
75-99-0	Dalapon	417	134	32	10-133
120-36-5	Dichloroprop	167	214	128	51-145
94-82-6	2,4-DB	167	176	106	42-130
93-65-2	MCPP	16700	17700	106	34-130
94-74-6	MCPA	16700	16700	100	37-124
87-86-5	Pentachlorophenol	33.3	39.2	118	45-126

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	100%	31-132%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37834
Account: ALNCA Accutest Northern California, Inc.
Project: TETRCAO: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP54497-MS	CC046797.D	1	01/06/15	FS	01/05/15	OP54497	GCC777
OP54497-MSD	CC046798.D	1	01/06/15	FS	01/05/15	OP54497	GCC777
C37834-5	CC046792.D	1	01/06/15	FS	01/05/15	OP54497	GCC777

The QC reported here applies to the following samples: **Method:** SW846 8151A

C37834-1, C37834-2, C37834-3, C37834-4, C37834-5, C37834-6, C37834-7, C37834-8

CAS No.	Compound	C37834-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND		216	187	87	213	192	90	3	43-124/32
93-72-1	2,4,5-TP (Silvex)	ND		21.6	19.8	92	21.3	16.9	79	16	41-130/31
93-76-5	2,4,5-T	ND		21.6	17.0	79	21.3	16.4	77	4	40-124/35
1918-00-9	Dicamba	ND		21.6	15.0	69	21.3	13.9	65	8	32-129/34
88-85-7	Dinoseb	ND		108	59.9	56	107	45.9	43	26	10-124/41
75-99-0	Dalapon	ND		540	242	45	533	174	33	33	10-133/35
120-36-5	Dichloroprop	ND		216	231	107	213	213	100	8	51-145/34
94-82-6	2,4-DB	ND		216	7300	3382*	213	909	427*	156*	42-130/34
93-65-2	MCPP	ND		21600	19100	88	21300	18900	89	1	34-130/34
94-74-6	MCPA	ND		21600	20000	93	21300	19300	91	4	37-124/35
87-86-5	Pentachlorophenol	ND		43.2	41.3	96	42.6	39.9	94	3	45-126/32

CAS No.	Surrogate Recoveries	MS	MSD	C37834-5	Limits
19719-28-9	2,4-DCAA	110% [a]	80% [a]	60% [a]	31-132%

(a) Surrogate recoveries corrected for actual spike amount.

* = Outside of Control Limits.

9.3.1

9

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37834
Account: ALNCA Accutest Northern California, Inc.
Project: TETRCAO: Alameda Cross Trail Phase II

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP54503-MS	CC046856.D	1	01/08/15	EM	01/06/15	OP54503	GCC779
OP54503-MSD	CC046857.D	1	01/08/15	EM	01/06/15	OP54503	GCC779
C37834-9	CC046855.D	1	01/08/15	EM	01/06/15	OP54503	GCC779

The QC reported here applies to the following samples: **Method:** SW846 8151A

C37834-9

CAS No.	Compound	C37834-9 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND		185	76.2	41*	185	101	55	28	43-124/32
93-72-1	2,4,5-TP (Silvex)	ND		18.5	7.0	38*	18.5	9.9	54	34*	41-130/31
93-76-5	2,4,5-T	ND		18.5	6.4	35*	18.5	9.2	50	36*	40-124/35
1918-00-9	Dicamba	ND		18.5	5.4	29*	18.5	8.7	47	47*	32-129/34
88-85-7	Dinoseb	ND		92.5	38.3	41	92.5	52.9	57	32	10-124/41
75-99-0	Dalapon	ND		462	44.3	10	462	151	33	109*	10-133/35
120-36-5	Dichloroprop	ND		185	96.9	52	185	152	82	44*	51-145/34
94-82-6	2,4-DB	ND		185	992	536*	185	502	271*	66*	42-130/34
93-65-2	MCPP	ND		18500	8370	45	18500	20400	110	84*	34-130/34
94-74-6	MCPA	ND		18500	9020	49	18500	13100	71	37*	37-124/35
87-86-5	Pentachlorophenol	ND		37	16.3	44*	37	23.5	64	36*	45-126/32

CAS No.	Surrogate Recoveries	MS	MSD	C37834-9	Limits
19719-28-9	2,4-DCAA	30%*	46%	15%* [a]	31-132%

(a) Surrogate recoveries outside of control limits,confirmed by MS/MSD.

* = Outside of Control Limits.

ATTACHMENT C

Permits

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 12/22/2014 By jamesy

Permit Numbers: W2014-1180
Permits Valid from 12/29/2014 to 12/30/2014

Application Id: 1419011003212 **City of Project Site:** Alameda
Site Location: APN: 74-905-20-3 Former railroad immediately south of Ralph Appazzato Parkway, between Main St. and Webster St.
Project Start Date: 12/29/2014 **Completion Date:** 12/30/2014
Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: Tetra Tech - Mark Duffy
1999 Harrison St., Suite 500, Oakland, CA 94612 **Phone:** 510-302-6278
Property Owner: City of Alameda Public Works Dept.
950 West Mall Square, Alameda, CA 94501 **Phone:** 510-747-7948
Client: City of Alameda Public Works Dept.
950 West Mall Square, Alameda, CA 94501 **Phone:** 510-747-7930
Contact: Mark Duffy **Phone:** 510-302-6278
Cell: 518-480-5947

Total Due: $265.00
Receipt Number: WR2014-0521 **Total Amount Paid:** $265.00
Payer Name : Mark T. Duffy Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 10 Boreholes
Driler: Vironex - Lic #: 705927 - Method: DP **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2014-1180	12/22/2014	03/29/2015	10	2.25 in.	8.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled,

properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

7. NOTE:
Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

9. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

ATTACHMENT O – SITE MANAGEMENT PLAN, JUNE 2018

COVER LETTER

Draft Site Management Plan

Cross Alameda Trail
Alameda, California

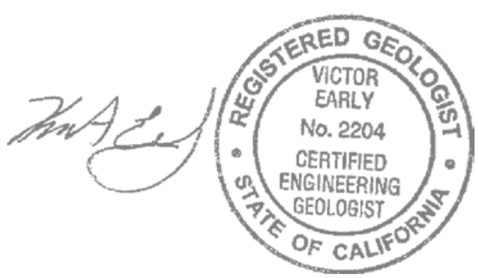
PREPARED FOR:

City of Alameda
Department of Public Works
Alameda, California

Submittal Statement:

I have read and acknowledge the content, recommendations, and/or conclusions contained in the attached document submitted on my behalf to ACDEH's FTP server and the State Water Resource Control Board's GeoTracker website.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.



Project Manager: Date: June 26, 2018

Victor Early, CEG, Tetra Tech

Draft

Site Management Plan

Cross Alameda Trail, Alameda, California

City of Alameda
Department of Public Works
Alameda, California

June 2018

Prepared for:
City of Alameda
Department of Public Works
Alameda, California

Prepared by:
Tetra Tech, Inc.
1999 Harrison Street, Suite 500
Oakland, California 94612
510-302-6300

TABLE OF CONTENTS

FIGURES

ACRONYMS AND ABBREVIATIONS

ACDEH	Alameda County Department of Environmental Health
APN	Assessor’s Parcel Number
bgs	Below ground surface
C&D	Construction and demolition
COC	Contaminant of concern
CQRC	Contractor Quality Control Report
CY	Cubic yard
ESA	Environmental site assessment
HAZWOPER	Hazardous Waste Operations and Emergency Response
HDPE	High density polyethylene
mg/kg	Milligrams per kilogram
OSHA	Occupational Safety and Health Administration
PAH	Polycyclic aromatic hydrocarbon
QA/QC	Quality assurance/quality control
RAMP	Ralph Appezzato Memorial Parkway
RAP	Remedial Action Plan
RWQCB	Regional Water Quality Control Board
SLHHRA	Screening-level human health risk assessment
SMP	Site management plan
SSHO	Site safety and health officer
SWPPP	Stormwater Pollution Prevention Plan
Tetra Tech	Tetra Tech, Inc.

1.0 INTRODUCTION

Tetra Tech Inc. (Tetra Tech) prepared this Site Management Plan (SMP) to address the contaminants that may be encountered as part of development and construction of the Cross Alameda Trail, located within the former railroad corridor along the south side of the Ralph Appezzato Memorial Parkway (RAMP) between Webster and Main Street in Alameda, California (Figure 1). The areas where contaminants may be encountered, or the "site," is identified as the remediation area on Figure 1. The remediation area excludes the portion of the trail from Webster Street east. This SMP is intended to outline measures for protecting the construction workers and the public from contact with contaminated soil at the site. The remedial action applies to the entirety of property of Assessor's Parcel Numbers [APN] 74-905-20-3 and 74-905-20-2, owned by the City of Alameda.

Construction of the trail is scheduled for the fall of 2018 and last approximately 6 months. The proposed path will be mostly at grade, with limited landscaping, sloping, and self-retaining stormwater drainage systems. The project will add 0.8 mile of walking, jogging, and biking paths for recreational use and will add to the San Francisco Bay Trail.

The site has undergone a Phase II Environmental Site Assessment (ESA) (Tetra Tech 2015a) and subsequent investigations (Tetra Tech 2015b, 2016). The investigations revealed elevated levels of polycyclic aromatic hydrocarbons (PAHs) within the shallow soil across most of the site, considered a part of the marsh crust fill material (City of Alameda 2015). During the Phase II ESA, marsh crust material was found throughout most of the site near the ground surface and to depths of 5 to 6 feet below ground surface (bgs). In addition to the PAHs in the marsh crust, three hot spots containing elevated levels of lead and arsenic were identified. The three hotspot areas are within the remediation area and will be capped along with the rest of the site. The site investigations also found no groundwater contamination requiring remediation.

The investigation included a screening-level human health risk assessment (SLHHRA) using construction work and recreational long-term use of the trail. The SLHHRA results indicated the elevated levels of lead and arsenic found within the site's three hotspot areas present unacceptable risks to humans. Additionally, the PAHs associated with the City of Alameda marsh crust located in surface soil throughout much of site also present an unacceptable risk to humans.

The remedial objective is to prevent human exposure to soil containing lead at concentrations above 80 milligrams per kilogram (mg/kg) (Regional Water Quality Control Board [RWQCB] 2016), arsenic above 11 mg/kg (Duverge 2011), and PAHs above residential and construction worker screening criteria (SRWQCB 2016). The Remedial Action Work Plan (RAP) (Tetra Tech 2018) and the associated construction plans present the City of Alameda's plan to remediate the unacceptable risk to humans.

The proposed remediation will involve capping the entire remediation area with geotextile and clean soil or pavement. Soil fill for the cap will be imported from an off-site location.

Under the RAP, the site is classified as a removal/remedial action site, as it requires the contractor to dig into the surface of the earth to remove material and the action is at a site pursuant to California Section 25356 of the Health and Safety Code or is listed as a hazardous waste site by the California Department of Toxic Substances Control and the Alameda County Department of Environmental Health.

2.0 PURPOSE OF THE SITE MANAGEMENT PLAN AND PROJECT ORGANIZATION

This SMP provides a plan for handling the potential contaminants of concern (COCs) at the site to protect the workers and public during the construction phase of the trail project. The site is being regulated by ACDEH, and the regulatory case number is RO0003168. After project construction is deemed complete, a report certifying completion of the remediation will be submitted by the City to ACDEH.

Table 1 presents the names, affiliations, responsibilities, and contact information for the responsible parties associated with this site.

Table 1 – Responsible Parties for Site

Name	Responsibility	Contact Information
Dilan Roe, P.E. Chief Land Water Division Alameda County Department of Environmental Health (ACDEH)	Lead Environmental Governmental Regulator	Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Alameda, CA 510.567.6767; Ext. 36767 dilan.roe@acgov.org
Jonathan Sanders Senior Hazardous Materials Specialist Local Oversight and Site Cleanup Program ACDEH	Assistant Environmental Governmental Regulator	Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Alameda, CA 510.567.6767; jonathan.sanders@acgov.org
Jack Dybas Project Manager City of Alameda Public Works Department	Project Manager for the City of Alameda	City of Alameda Public Works 950 West Mall Square, Alameda, CA 510-747-7948 JDybas@alamedaca.gov
Victor Early, P.G., C.E.G Project Manager Tetra Tech	Environmental Consultant to the City of Alameda	Tetra Tech 1999 Harrison St, Suite 500, Oakland, CA 510-706-0675 victor.early@tetratech.com
Eric Swanson, P.E. Project Manager BKF Engineers	Civil Engineering Consultant to the City of Alameda	BKF Engineers 1646 N California Blvd., Suite 400, Walnut Creek, CA 925-940-2200 eswanson@bkf.com

Notes:

C.E.G. Certified engineering geologist
Ext. Extension
P.E. Professional engineer
P.G. Professional geologist

ACDEH representatives with 40-hour Hazardous Waste Operations (HAZWOPER) training will be granted access to the site to conduct inspections.

There are no tenants or occupants of the site. Known existing utilities are shown on the Cross Alameda Trail Construction drawing sheets C1.01 to C1.14 (BKF 2018). The contractor will verify location of underground utilities prior to any digging or excavation.

3.0 ENVIRONMENTAL RISK TO CONSTRUCTION WORKERS AND PUBLIC DURING CONSTRUCTION

The results of the Phase II ESA Report for the Cross Alameda Trail (Tetra Tech 2015a) and subsequent site investigations (Tetra Tech 2015b, 2016) revealed elevated risk to potential residents, commercial occupants, and construction workers at the site. Figure 1 shows the remediation area where this risk occurs and where this SMP is to be applied.

3.1 ENVIRONMENTAL RISK AREAS

The COCs at the site in soil are lead, arsenic, and PAHs. The results of the Phase II ESA identified shallow soil across most of the site with elevated levels of PAHs associated with the marsh crust (City of Alameda 2015). Marsh crust and fill material were identified near the surface to depths of 5 to 6 feet bgs. Contaminants associated with the marsh crust are present throughout the areas of the site between Webster Street and Main Street. Marsh crust material is generally present north of the original shoreline, along the southern boundary of the site (see sheet C8.01 of the construction drawings). Additionally, at least three areas between Webster street and Main Street had elevated levels of lead and arsenic in soil. The lateral boundaries of these areas were not fully defined in the site investigations. The lead and arsenic areas are generally indicated on sheet C8.01 of the construction drawings (BKF 2018).

Site investigation results showed low levels of groundwater contamination that does not pose environmental risk or require remediation.

Table 2 presents the hazards and possible means for exposure associated with the COCs in soil:

Table 2 – Hazards and Exposures for COCs

Contaminant of Concern (Soil)	Possible Hazard	Potential Exposure Route
Lead	Probable carcinogen; affects brain, nervous system, and kidneys; increased blood pressure	Ingestion, dust inhalation
Arsenic	Human carcinogen; irritation of skin, throat and lungs	Direct contact, ingestion, dust inhalation
Polycyclic aromatic hydrocarbons (PAH)	Probable carcinogen; birth defects, affects skin, body fluids, immune system	Direct contact, ingestion, dust inhalation

3.2 ENGINEERING AND ADMINISTRATIVE CONTROLS TO PREVENT EXPOSURE TO CONTAMINATION

Currently, there are no engineering controls at the site to prevent exposure to site COCs. Some areas are covered with pavement and vegetation, which would minimize potential exposure. These areas are shown on sheets C1.01 to C1.14 of the construction drawings. The site is located along the original (historical) shoreline to the bay. Soil borings completed during the environmental and geotechnical site investigations revealed soil types of sandy clay to clayey sand. Many areas of the site have organic mulch and vegetation at the surface.

As presented in the RAP, construction of the trail will include engineering controls to prevent exposure to the contaminated soil at the site¸ consisting of capping with either pavement or a 2-foot-thick soil cap. Permanent fencing will not be used as an engineering control to prevent possible exposure to contaminated soil. Underlying the cap will be a geotextile fabric to prevent mixing of the cap material with underlying contaminated soil, and provide a visual warning if future digging or excavation were to occur. The geotextile will not be a structural element and will not impede vertical infiltration of groundwater. The construction of Cross Alameda Trail itself includes a 12-foot-wide bicycle path, a 5- to 7-foot-wide jogging path, and a 6-foot-wide walking path. A landscape self-retaining area in some areas varies in width. When complete, this portion of the trail will be 0.8 mile in length. The total remediation area is approximately 6.4 acres.

Current administrative controls include provisions stipulated in the City of Alameda Marsh Crust Ordinance (City of Alameda Municipal Code Chapter XIII, Article XVII, Section 13-56). All contractors are required to comply with all the requirements of Section 13-56. This ordinance covers requirements necessary to excavate into the Marsh Crust, which is present at the surface of the site. The contractor must not disturb or excavate any soil at the site without first obtaining a Marsh Crust Permit and complying with the provisions in Section 13-56 and the requirements of this SMP. This SMP is intended to suffice for the Construction Site Management Plan required by Section 13-56.8-C.

The contractor must stop work under the following conditions:

(a) Underground fuel tanks or piping are discovered

(b) Uncontrolled release of dust or soil are emitted from the site

(c) Unauthorized personnel enter the site

(d) Other unanticipated environmental conditions arise that may pose a health or environmental hazard.

If the contractor encounters any of the above conditions, any release of environmental contamination must be mitigated to the extent possible before stopping work. The contractor will also document the conditions with photographs and a written description and immediately notify the City of Alameda Project Manager and ACDEH.

4.0 MOBILIZATION AND SITE WORK

Work activities will be sequenced to allow for the safe and efficient execution of the construction elements.

Once required permits have been secured, qualified field personnel and equipment will mobilize. Necessary permits must be made available by the contractor on site before site activities begin.

5.0 SITE MANAGEMENT (SECURITY, ACCESS, AND TRAFFIC CONTROL)

The entire portion of the site between Webster Street and Main Street (remediation area) is considered a hazardous waste site, and all work must be conducted in accordance with the Occupational Safety and Health Administration's (OSHA) HAZWOPER standards including 29 CFR 1910.120. The contractor will also possess a California Contractors Hazardous Substance Removal Certificate (California DCA 2008) as part of their state Contractor's License. The entire remediation area will be fenced and appropriate flagging and warning signs posted so that any trespassers are forewarned that they are entering a construction site with potential hazardous waste.

Temporary facilities will be set up or constructed in areas chosen by the contractor with approval by the city to reduce the accidental spread of hazardous substances by workers from contaminated to clean areas. A generic Exclusion Zone, Contaminant Reduction Zone, and Support Zone are identified on Figure 2. The actual location and configuration of these areas will be revised depending on the site conditions and layout chosen by the contractor.

Because the site is a hazardous waste site, the area chosen for temporary use as the contractor's field office and equipment yard must be located predominantly upwind of the exclusion zone and must first be capped in accordance with the requirements of the construction plans. At a minimum, the contractor yard must be cleared of vegetation, followed by placement of the geotextile fabric and soil cap over the area. As a temporary measure, the contractor yard can be capped with approximately 12 inches of crushed rock over the geotextile fabric. Facilities anticipated on site include a construction trailer, mobile mini/Conex box, equipment staging and maintenance area, supply delivery and storage area, equipment fueling and spill containment area, a roll-off dumpster, a settling tank, sanitary facilities, a decontamination area, and a construction entrance/exit. The support area will be prepared using aggregate material as necessary to level the placement of a construction office, settling tank, and other site equipment. This area will be used for equipment inspections (both entering and exiting), staging materials and supplies, and parking for on-site vehicles. A stabilized construction entrance/exit can be constructed on top of the geotextile fabric with crushed rock to a thickness of approximately 12 inches and graded in a manner to prevent runoff from leaving the site.

5.1 PROJECT MEETINGS AND INSPECTIONS

Anticipated project meetings and inspections are:

- Prior to any on-site activities, personnel will be required to attend a pre-construction kick-off meeting.

- Project personnel will be required to attend initial site safety training to be conducted by the contractor site safety and health officer (SSHO).

- Daily tailgate meetings will be used to review activities completed the prior day, activities planned for the current day, communicating any changes to the site conditions or activities, and communicating potential health and safety concerns associated with the planned activities and site conditions.

- The Site Superintendent/SSHO will conduct periodic inspections to ensure good housekeeping practices are being followed in accordance with the Construction Specifications.

- A post-construction final inspection will be formally scheduled and completed with the City Project Manager. Incorporated into the final inspection includes a punch-out inspection, pre-final inspection, and final acceptance inspection. A punch-out inspection will be performed at or near the end of the work, or phase of work as required in the construction specifications.

- The pre-final inspection will be performed following the punch-out inspection to ensure conformance with the contract specifications.

- After both the punch-out inspection and pre-final inspection have been completed, the City Project Manager, Site Superintendent, and ACDEH Regulator will perform the final acceptance inspection.

5.2 CONSTRUCTION QUALITY CONTROL (QC)

Construction QC activities will be conducted in accordance with the construction plans and specifications (BKF 2018). The contractor shall provide construction quality assurance/quality control (QA/QC) and the city will provide its own QA/QC as oversight. A member of the contractor QC staff must be on site throughout the duration of construction activities. A Contractor Quality Control Report (CQCR) will be generated and submitted daily to the city during site work. The CQCRs, included with the Daily Log Report, will be produced within 36 hours of the end of the reporting period. Reports are used to document the QC data including QC deficiencies, inspections conducted, activities started/finished, contractors and equipment on site and hours logged, and accidents reported. Specific activities incorporated into the QC oversight include confirmation of surveying equipment functionality; confirmation of fill depths dimensions; proper segregation of clean material, contaminated material, and construction debris; confirmation of backfill, grading, and compaction requirements; confirmation of final grading; and confirmation of final restoration requirements.

5.3 HOUSEKEEPING

The city requires that all site personnel practice good housekeeping in both common areas and at the work site. All work areas will be kept clean, and waste receptacles will be available. Trash will be removed from the site daily or kept in waste receptacles that can be sealed overnight to prevent foraging by animals. Drinking water will be readily available. No potable water supplies will be mixed with non-potable water supplies. Portable toilet facilities and sanitation supplies will be in the support area.

5.4 CLEARING AND GRUBBING

Clearing and grubbing will be conducted in accordance with the construction plans and specifications. Vegetation will be removed to the extent shown on the construction drawings. A significant portion of the site is covered with organic mulch which will be removed and stockpiled for later use. Vegetation and mulch will be removed in a practical manner so that soil is left in place. Mulch can be removed using a construction rake to avoid disturbance of underlying soil. Clearing and grubbing will be supervised by a representative of the city.

6.0 TOPOGRAPHIC SURVEY

A topographic survey will be completed by the contractor after placement of the geotextile fabric and at the completion of site construction to verify completeness of the remedial cap.

Survey data will be maintained and compiled for inclusion in the Construction Completion Report.

Pre- and post-construction topographic surveys will be conducted by a California State Licensed surveyor. Survey data will be accurate to 0.1 foot horizontally and 0.1 foot vertically.

7.0 REMOVAL OF CONSTRUCTION DEBRIS

Construction and demolition (C&D) debris, such as reinforced concrete, asphalt, and wood debris, encountered during the demolition, clearing, and grubbing will be segregated from soil and disposed of off site. Contaminated soil will be disposed of on site beneath the trail pavement areas. The contractor will separate and stockpile mulch and will conduct analytical testing to verify mulch suitability for later use on-site. With approval from the city, construction debris in uncontaminated material that does not pose a safety risk may remain on site to reduce the volume of debris transported and disposed of off site. Rebar found to be protruding from the ground surface that does not require excavation and that might pose a safety risk or a detriment to the geotextile fabric will be removed.

8.0 EXCAVATION OF CONTAMINATED MATERIAL

Contaminated soil will be excavated in utility trenches, drainage bio-retention areas, and other areas as necessary to achieve the cap thickness and final grades.

8.1 SEQUENCE OF ACTIVITIES

Areas of contamination will be excavated to the depth and extent provided by the construction drawings. Excavation, grading, and construction of the trail will proceed in a sequence to minimize the area of excavation at any given time and to minimize exposure to dust. This area can be minimized by dividing the site into individual areas where contaminated soil is being disturbed or excavated in only one area at a time. Once the geotextile fabric is in place and covered with at least 12 inches of compacted soil, the risk to workers from exposure during the remaining work in that area would be significantly reduced.

8.2 EXCAVATION AND FILL ACTIVITIES

Prevailing winds are from the west/northwest, so all subgrade work including excavation, clearing, proof-rolling, geotextile installation, and fill sequencing should occur downwind and to the east of the contractor's trailer and equipment yard. No more than 20 percent of the soil within the remediation area should be exposed at one time.

The excavation footprint of utility lines and drainage trenches will be based on the depth necessary and the slope required for each individual area. Once the excavation footprint is established, temporary construction fencing or barriers will be posted around the excavation footprint to define the exclusion zone and prevent unauthorized entry. The contaminated material will be excavated and loaded into dump trucks for transport to either on-site designated disposal areas or temporary stockpiles within the designated hazardous material compound area. Temporary stockpiles will not exceed 500 cubic yards (CY) and will be covered by high-density polyethylene (HDPE) sheeting and anchored or ballasted to prevent it from being removed or damaged by wind.

During excavation, any construction debris encountered will be segregated. Any potentially contaminated debris will be characterized then loaded into a dump truck for off-site transport and disposal. Additionally, if during excavation activities any previously unidentified historical, archeological, and cultural resources are discovered, activities that pose a threat to these items will cease and the city project manager will be immediately notified. Following excavation of an area, the area will be covered with the geotextile fabric, backfilled with clean imported material, and compacted according to the specifications in the construction plans. Prior to importing, proposed import soil will be evaluated and approved by the City and Alameda County in accordance with a Soil Import Management Plan with proposed protocols for documenting that soil imported to the site is clean in accordance with Department of Toxic Substances Control Board's Clean Fill Advisory.

Equipment will be mobilized to the site once the staging area has been established and will be stored on site within the designated areas. All equipment on site will be maintained, inspected, and operated in accordance with manufacturer's specifications. All equipment will undergo an inbound inspection to identify any operational or mechanical deficiencies and ensure all safety devices are operational. During this project, if required, the equipment will be serviced by mechanics employed by the contractor or equipment dealer in a designated equipment staging and maintenance area.

Light duty trucks will be used to transport site personnel, supplies, and materials when feasible. Excavators, graders, dozers, loaders, and compactors will be chosen by the contractor to perform the necessary work. Dust will be mitigated using a water truck.

8.3 STORMWATER

The contractor's storm water pollution prevention plan (SWPPP) will address the potential to encounter surface water or stormwater during excavation.

Dewatering will be completed as necessary to assure adequate access, a safe excavation, prevent the spread of contamination, and to ensure that compaction requirements can be met. No dewatering will be performed without prior approval of the city. It is likely that if dewatering is necessary, the water would have contacted contaminated soil

Surface water that poses a risk of entering the excavation will be diverted. Stormwater that accumulates in excavations will be removed using small sumps, filtered to remove sediments, and pumped into an on-site settling tank for characterization. Based on characterization results, the accumulated water will be either disposed of off site, or pumped to an adjacent stormwater collection system. If accumulated water is not suspected of having encountered contaminated soil, it will be collected in a sump, filtered to remove sediments, and pumped directly into the adjacent stormwater drainage system.

8.4 STORAGE METHODS AND LOCATION FOR LIQUID AND SOLID CONTAMINATED MATERIAL

Contaminated materials expected to be encountered during construction include contaminated liquid (wastewater from decontamination) and solids (excavated soil). Decontamination fluid will be captured within the decontamination area and pumped directly into an SWPPP-compliant storage vessel. Additional C&D material will be characterized and be disposed, as appropriate, based on condition and any evidence of contamination.

Contaminated excavated soils will be loaded into dump trucks for either on-site disposal or temporary stockpiling. Any excavated material that requires temporary storage will be kept on site and covered with HDPE sheeting until it is loaded into a dump truck.

8.5 HAUL ROUTES

Vehicles will enter the site through the construction entrance designated by the contractor. Once on site, traffic will be directed either to the truck staging area or the off-loading area. The staging area will have predetermined areas for vehicles, depending on the nature of their purpose.

To accommodate staging or loading of materials, both areas will be moved during activities. Vehicles traveling from the truck staging area to the off-load areas will do so following the on-site haul route, which will extend from the construction entrance to the off-load area.

Vehicles will exit the site via the construction entrance/exit. When exiting the facility, trucks will merge onto RAMP and continue to the predetermined disposal facility or fill source site.

The contractor transportation, disposal, and fill coordinator will manage all activities including scheduling dump trucks, confirming proper bills of laden, tracking tonnage and dates of shipments, and cataloguing bills of laden.

8.6 DECONTAMINATION PROCEDURES

Visible soil will be removed from parts of the excavation or off-loading equipment that encounter potentially contaminated soils (tires, tracks and bucket) via wire brush, and then the equipment will undergo wet decontamination using soap water and brush (and as necessary for contact with hazardous material, a high-pressure water rinse). Decontamination will be performed in the decontamination area, which will be constructed of bermed impermeable liner with a water collection sump. Rinse water will be transferred to a U.S. Department of Transportation approved container (55-gallon drum, poly tote, or settling tank) with sump pump and hosing. Equipment will be decontaminated after it has encountered contaminated soils and before it encounters clean soils or leaves the contaminated area. Equipment that is strictly used for placement and movement of clean material only does not require wet decontamination and will undergo only dry removal of soil as necessary. All vehicles will be required to enter and exit the site via a crushed-stone construction entrance/exit driveway designed to remove soil from the vehicles tires. Dry decontamination will occur within the stone construction entrance/exit. At the completion of construction, the stone construction entrance will be removed and placed into a tri-axle dump truck for off-site disposal.

8.7 DUST CONTROL

Air monitoring will be conducted by the contractor continuously during construction activities for fugitive dust in accordance with the contractor's health and safety plan (HSP). Air monitoring will be continuously conducted at the site perimeter and on personnel working in the exclusion zone. The HSP will establish air monitoring protocols, sampling and analysis methods, and equipment necessary to monitor background conditions, baseline monitoring, work zone monitoring, personnel monitoring, and monitoring the site perimeter. The HSP will establish equipment calibration and operation procedures and quality assurance and quality control. Air monitoring results will be reported daily in a daily construction summary. Protocols for corrective action or stopping work will also be established in the HSP.

Dust control measures to be implemented during excavation include covering loose material/stockpiles, watering exposed soil, and street sweeping measures. All trucks carrying material onto or off the site are required to cover the truck bed with a tarp. Areas of exposed soil (including stockpiles, cleared areas, excavation areas, staging areas, and haul routes) may be kept damp (as necessary) using a water sprinkling truck or will be covered with HDPE.

Truck tires will be decontaminated before leaving the site to prevent track out of dirt. Street sweeping will occur along RAMP as needed, to collect loose spoils.

8.8 SPILL CONTINGENCY PLAN

During excavation activities, there will be the potential risk of a release of material in the form of contaminated soil, fuel to power construction equipment, or other vehicle fluids. Spill response should be addressed according to the following procedures and those presented in the contractor's SWPPP and HSP.

The potential exists for spills during refueling of equipment. All fueling will be performed in a designated fueling area where safeguards against fuel spills are present, including spill kits, drip pans, absorbents, and fueling pumps with automatic nozzle shutoffs and vapor recovery nozzles. The fueling area will be situated in a level area and protected from stormwater run-off. In the event fuel is spilled, measures will immediately be implemented to contain the spill. Measures to contain the spill include capturing fuel into an appropriate container or using absorbent material to either soak up a small spill of create a berm around a slightly larger spill. Once the fuel is contained and the cause of the spill is corrected (or fluid discharge ceases), all contaminated material will be containerized and disposed of according to regulatory requirements. These same procedures will be followed in the event other vehicle fluids, such as hydraulic fluid, are spilled. Vehicle and equipment will be inspected daily for potential leaks (such as fuel and hydraulic oil). Identified leaks will be addressed immediately, and any equipment that continues to cause problems will be removed from the site. Appropriate spill response material will be maintained on site always throughout the course of construction. These materials include appropriate containers, absorbents, shovels, and personal protective equipment.

9.0 GRADING AND SITE RESTORATION

Final site grading, landscaping, and paving will be conducted in accordance with the construction plans, at which time the contractor will document for approval by the City the final thickness and area of the cap with land surveying, construction inspection and materials testing reports.

When paving and grading are complete, site vegetation and landscaping will be established as detailed in the construction plans.

10.0 DEMOBILIZATION

Demobilization will occur after construction has been satisfactorily completed. Based on the pre-construction roadway survey and post-construction condition of RAMP, repairs may be required because of the volume of traffic during construction. If required, it is assumed that any repairs will be minimal consisting of cleaning, hot patching, and repair of curbing. As equipment, personnel, and facilities are no longer needed to support the field activities, they will be prepared for demobilization. All equipment (and facilities as applicable) will be decontaminated before demobilization. As the project nears completion, temporary facilities will be deconstructed, including the construction entrance/exit and staging area. Once all equipment and facilities have been demobilized, and after the final inspection, all personnel will demobilize from the site.

11.0 REFERENCES

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Tetra Tech. 2015b. Investigation and Risk Assessment Report for the Cross Alameda Trail. October 30.

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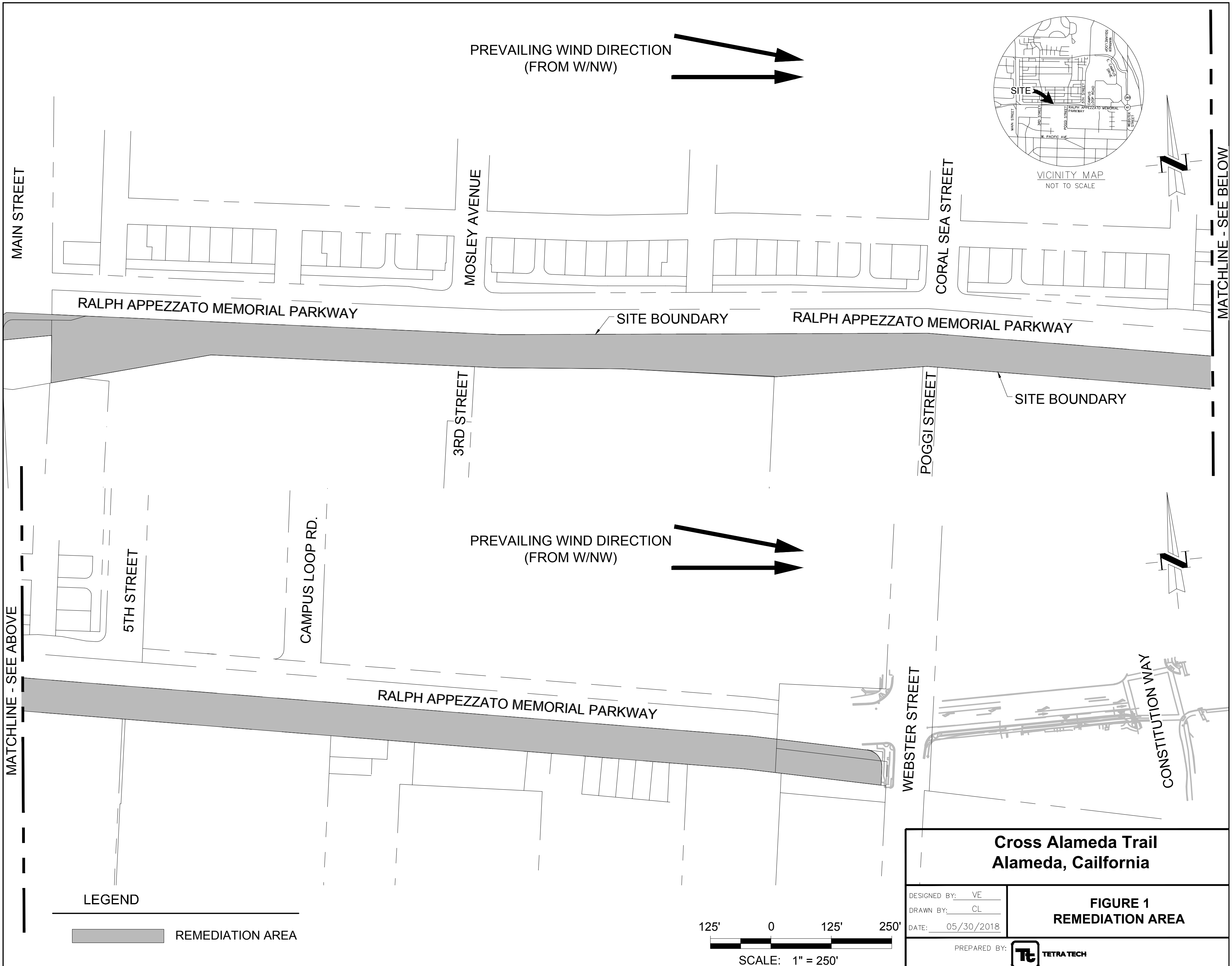
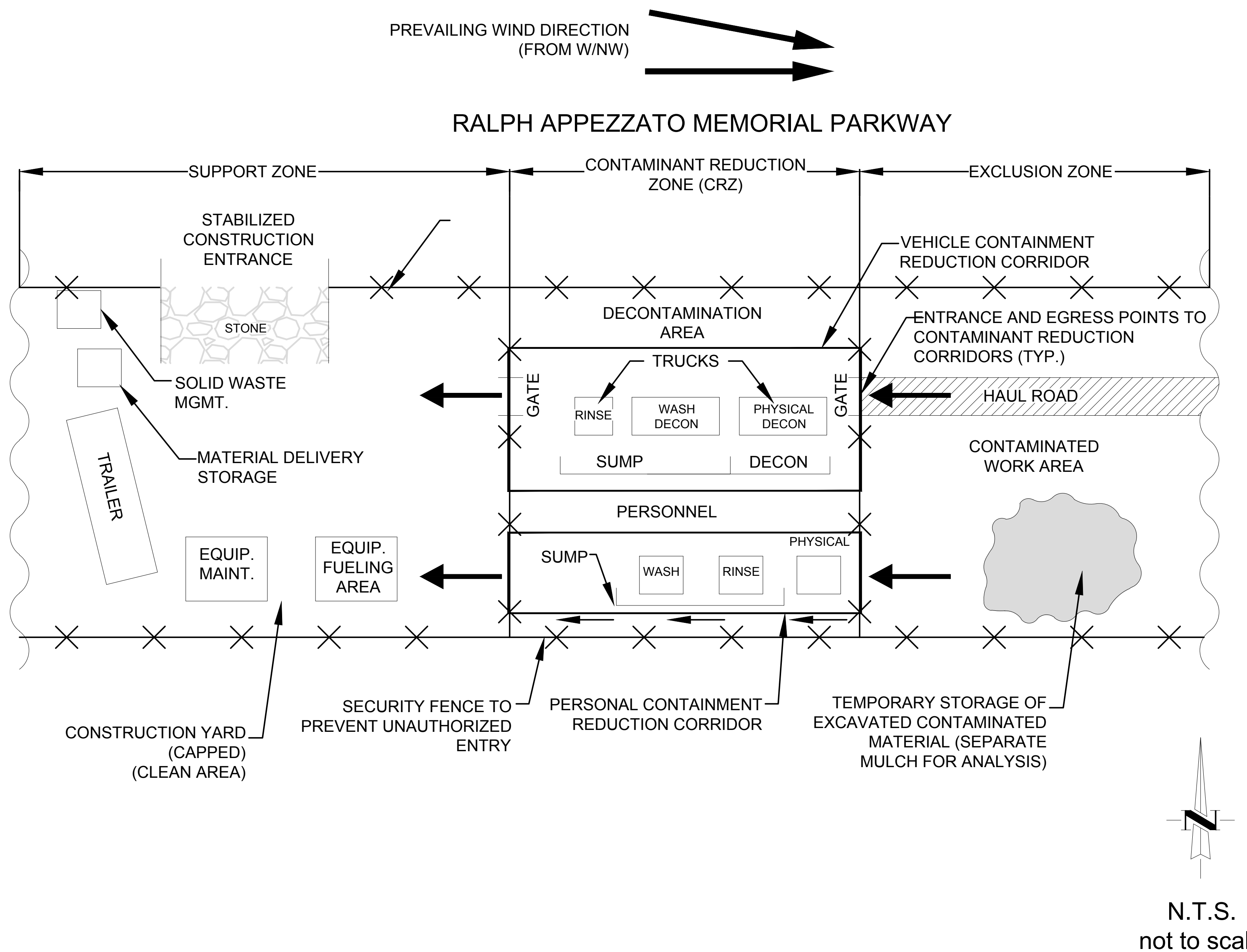
FIGURES



Cross Alameda Trail Alameda, Cailfornia	
DESIGNED BY: VE DRAWN BY: CL DATE: 05/30/2018	**FIGURE 1** **REMEDIATION AREA**
PREPARED BY: TETRA TECH	



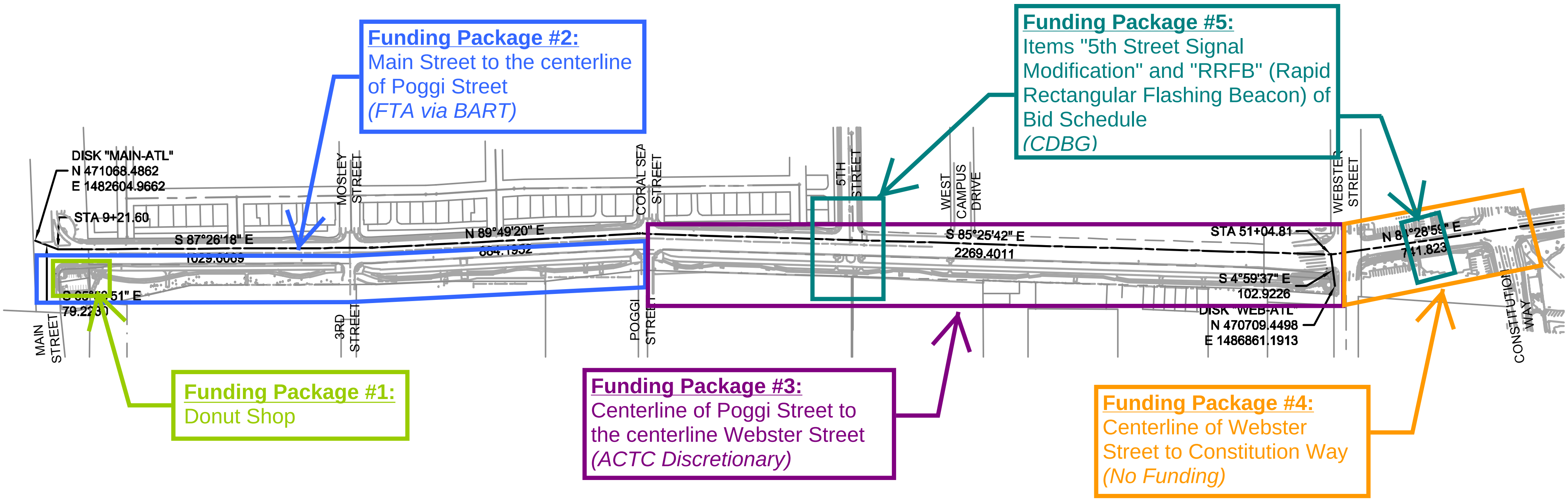
Cross Alameda Trail
Alameda, California

DESIGNED BY: VE
DRAWN BY: CL
DATE: 05/30/2018

FIGURE 2
SITE MANAGEMENT PLAN

PREPARED BY: TETRA TECH

ATTACHMENT P – CAT RAMP FUNDING PACKAGE EXHIBIT



CAT RAMP- Funding Package Exhibit

July 2018

City of Alameda

ATTACHMENT Q – MARSH CRUST ORDINANCE

MARSH CRUST ORDINANCE

(Section 13-56 of the City of Alameda, California Municipal Code)

13-56 - EXCAVATION INTO THE MARSH CRUST/SUBTIDAL ZONE AT THE FORMER NAVAL AIR STATION ALAMEDA AND FLEET INDUSTRIAL SUPPLY CENTER, ALAMEDA ANNEX AND FACILITY.

13-56.1 - Definitions.

For purposes of this Section 13-56 the following definitions shall apply:

Bay shall mean San Francisco Bay, including the Oakland Estuary and the Oakland Inner Harbor.

DTSC shall mean the California Environmental Protection Agency, Department of Toxic Substances Control.

Earth material shall mean any rock, natural soil or fill or any combination thereof.

Excavation shall mean the mechanical removal of earth material.

Hazardous materials , as defined in California Health and Safety Code sections 25260(d) and 25501(k), shall mean any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste and any material which a handler or the administering agency has reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Marsh crust shall mean the underground layer that is the remnant of the tidal marsh that existed along the shoreline of Alameda Island before filling to create additional dry land. In many places, this layer contains substances from former industrial discharges that were retained in the historic marsh before filling.

Subtidal zone shall mean the underground layer that is the pre-filling bay floor extension of the historic marsh. Together, the marsh crust and the subtidal zone constitute a single, continuous, underground layer that extends bayward of the original mean higher high tide line of Alameda Island, before filling, throughout the area that was filled.

Threshold depth shall mean the depth below which a permit is required by this Section 13-56. The threshold depth is conservatively identified with the elevation above which there is little likelihood that substances from the historic marsh or bay floor would have mixed during filling, including a margin of safety above the elevation of the historic marsh surface or subtidal zone. In no event will the threshold depth be above mean higher high water.

(Ord. No. 2824 N.S.)

13-56.2 - Permit Required.

a. It shall be unlawful for any person, including utility companies and their employees and contractors, to excavate below a threshold depth above the marsh crust/subtidal zone within the area of the former Naval Air Station Alameda and Fleet and Industrial Supply Center, Alameda Annex and Facility, as depicted in Exhibit A, hereto, without first obtaining a permit in writing from the Chief Building Official.

b. All excavation below the threshold depth in the area subject to this Section 13-56 shall be performed solely in accordance with the permit as approved and issued by the City.

(Ord. No. 2824 N.S.)

13-56.3 - Depth of Excavation Subject to Permit Requirement.

The Chief Building Official shall establish a threshold depth, consistent with DTSC's remedial decision documents pertaining to the marsh crust/subtidal zone, below which a permit shall be required for excavation pursuant to this Section 13-56. The threshold depth may vary by location. The Chief Building Official shall publish a map depicting the parcels and threshold depths for which a permit is required under this Section 13-56. The Chief Building Official may update the map, consistent with DTSC's remedial decision documents pertaining to the marsh crust/subtidal zone, as necessary to incorporate any new information concerning the depth of the marsh crust/subtidal zone received by the City since the preparation of the initial map or last update.

(Ord. No. 2824 N.S.)

13-56.4 - Exception to Permit Requirement.

a. No permit shall be required under this Section 13-56 for pile driving or other penetration of the marsh crust/subtidal zone that involves neither (1) bringing materials from below the threshold depth to above the threshold depth; nor (2) exposure of construction workers to soil excavated from below the threshold depth.

b. No permit shall be required under this Section 13-56 for excavation associated with emergency repair of public infrastructure facilities; provided, however, that soil excavated from below the threshold depth in the area of the marsh crust/subtidal zone, as depicted on Exhibit A, must be managed as though it were hazardous in accordance with subsection 13-56.8b.

(Ord. No. 2824 N.S.)

13-56.5 - Permit Application.

Application for a permit shall be made in writing on forms available in or from the Building Services Office and shall be filed in the Building Services Office. Subsection 13-1.2 of Article I of Chapter XIII regarding Appeals (Section 204.1 1997 Uniform Administrative Code), Appeal Fee (Section 204.2 1997 Uniform Administrative Code), Expiration (Section 303.4 1997 Uniform Administrative Code), Permit Fees (Section 304.2 1997 Uniform Administrative Code), and Plan Review Fees (Section 304.3 1997 Uniform Administrative Code), shall apply to all permits issued pursuant to this Section 13-56. The information required to be provided on the application shall be determined by the Chief Building Official and shall include at a minimum:

a. A description and map of the property that is to be excavated sufficient to locate the area of proposed excavation on Ordinance No. 2824, Exhibit A.

b. Detailed plans, prepared by a registered civil engineer licensed in the State of California, of the excavation work to be done, including a drawing with dimensions to scale of all proposed excavation activity.

c. A statement of the maximum depth of excavation.

d. All elevations in plans and application materials submitted to the City shall be referenced to City Datum and shall show depth below ground surface.

e. A cost estimate for purposes of determining the amount of the bond required to be obtained pursuant to subsection 13-56.11.

(Ord. No. 2824 N.S.)

13-56.6 - Certifications and Acknowledgments.

a. The following certifications shall be required as part of the permit application:

1. The applicant shall sign a certification prepared by the Chief Building Official acknowledging receipt of notice that the property to be excavated may be in the area of the marsh crust/subtidal zone, and that hazardous materials may be encountered during excavation.
2. The applicant shall sign a certification prepared by the Chief Building Official acknowledging that Federal and State hazardous materials laws and regulations will apply to storage, transportation and disposal of any materials excavated from the marsh crust/subtidal zone that are hazardous materials.
3. The applicant shall sign a certification prepared by the Chief Building Official acknowledging liability for disturbing and removing all materials from the marsh crust/subtidal zone in accordance with this Section 13-56 and the permit.

b. All building and excavation permits issued for construction or excavation within the area subject to this Subsection 13-56 shall contain the following written warning:

"Pursuant to Section 13-56 of Article XVII of Chapter XIII of the Alameda Municipal Code, excavation work in the area of the marsh crust/subtidal zone within the area of the former Naval Air Station Alameda and Fleet and Industrial Supply Center, Alameda Annex and Facility, as depicted in Ordinance 2824, Exhibit A to Section 13-56 of Article XVII of Chapter XIII of the Alameda Municipal Code, may be subject to special materials handling requirements. The permittee acknowledges that he or she has been informed of the special materials handling requirements of Section 13-56 of Article XVII of Chapter XIII of the Alameda Municipal Code and that hazardous materials may be encountered during excavation."

(Ord. No. 2824 N.S.)

13-56.7 - Notification Prior to Start of Excavation.

a. After receipt of a permit and no less than two (2) business days (forty-eight (48) hours minimum) before commencement of any excavation activity in the area subject to this Section 13-56, the permittee shall notify the Chief Building Official of the planned start of excavation. Said notification shall include a schedule for any excavation work that will last for more than one (1) day.

b. The permittee shall give adequate notice to Underground Service Alert prior to commencing any excavation activity subject to this Section 13-56.

(Ord. No. 2824 N.S.)

13-56.8 - Materials Handling.

The permittee shall elect to follow one or more of the courses of action set forth below before beginning any excavation activities in the area subject to this Section 13-56. Unless otherwise demonstrated by the permittee by means of reconnaissance investigation pursuant to subsection 13-56.8a, or unless the permittee prepares site management plans pursuant to subsection 13-56.8c, soil below the threshold depth in the area of the marsh crust/subtidal zone, as depicted on Exhibit A, must be managed as though it were hazardous pursuant to subsection 13-56.8b. The permittee may elect to follow subsection 13-56.8a, but must comply with subsection 13-56.8b or 13-56.8c if testing demonstrates that the materials below the threshold depth are hazardous materials. Copies of all reconnaissance testing results and/or existing information used to satisfy the reconnaissance investigation requirements of subsection 13-56.8a shall be reported to and filed with the City. All observations or encounters with the marsh crust/subtidal zone during excavation shall be reported to the City.

a. *Reconnaissance Investigation to Rule Out the Presence of Hazardous Materials Below the Threshold Depth.*

The permittee may elect to use reconnaissance borings, pursuant to a plan prepared by a qualified registered engineer or registered geologist, licensed in the State of California, to rule out, to the satisfaction of the Chief Building Official, the presence of hazardous materials below the threshold depth in the area to be excavated. As part or all of the reconnaissance plan, the permittee may make use of existing information, where appropriate, if the existing information is directly relevant to the location and depth to be excavated and contains observations or results of analyses that assist in concluding whether hazardous materials are present. The reconnaissance report shall include a description of all observations from below the threshold depth evidencing the presence or absence of the marsh crust/subtidal zone.

1. If hazardous materials are found below the threshold depth within the area to be excavated at any time (during reconnaissance or during excavation), the permittee shall comply with either subsection 13-56.8b or subsection 13-56.8c, at his or her election.
2. If hazardous materials are not found below the threshold depth within the area to be excavated, no additional materials controls, except as otherwise may be required under applicable Federal, State or local law, are required under this Section 13-56.

b. *Handling Materials Excavated From Below the Threshold Depth as Hazardous Materials.*

If the permittee has not ruled out the presence of hazardous materials pursuant to subsection 13-56.8a, or elects not to prepare a site management plan and materials testing program pursuant to subsection 13-56.8c, the permittee shall presume that materials excavated from below the threshold depth must be disposed at an appropriately permitted disposal facility. In addition, no excavated materials from below the threshold depth may be stockpiled prior to disposal or returned to the excavation.

c. *Preparation of Construction Site Management Plan for Handling Materials Excavated From Below the Threshold Depth.*

1. In lieu of handling materials excavated from below the threshold depth pursuant to the restrictions in subsection 13-56.8b, the permittee may elect to hire a qualified registered engineer or registered geologist, licensed in the State of California, to develop a site-specific construction site management plan, including a materials testing program, to the satisfaction of the Chief Building Official. The construction site management plan shall include, at a minimum, provisions governing control of precipitation run-on and run-off from stockpiled soils, soil segregation, securing of stockpiled soils, duration of stockpiling, and contingency plans for handling materials excavated from below the threshold depth that prove to be hazardous materials.
2. The permittee shall hire a qualified registered engineer or registered geologist, licensed in the State of California, to oversee compliance with the approved construction site management plan, and shall transmit to the Chief Building Official upon completion of the project written certification of compliance with the construction site management plan. The certification report shall include a description of all observations from below the threshold depth evidencing the presence or absence of the marsh crust/subtidal zone.

(Ord. No. 2824 N.S.)

13-56.9 - Health and Safety Plan.

The applicant shall cause to be prepared by a certified industrial hygienist, and keep on the construction site at all times, a health and safety plan to protect workers at the excavation site and the general public to the satisfaction of the Chief Building Official. The Chief Building Official may prepare and provide to applicants a model health and safety plan which, if used by the applicant, shall be modified by the applicant's certified industrial hygienist to suit the specific requirements of the applicant's project.

(Ord. No. 2824 N.S.)

13-56.10 - Excavation Site Best Management Practices.

All excavation and materials handling activities permitted under this Section 13-56 shall be conducted in accordance with applicable Alameda Countywide Clean Water Program Best Management Practices and City of Alameda Storm Water Management and Discharge Control Program Ordinance requirements.

(Ord. No. 2824 N.S.)

13-56.11 - Bonds.

Upon a finding by the Chief Building Official that a permit should issue for excavation pursuant to this Section 13-56, a surety or performance bond conditioned upon the faithful performance and completion of the permitted excavation activity shall be filed with the City. Such bond shall be executed in favor of the City and shall be maintained in such form and amounts prescribed by the risk manager sufficient to ensure that the work, if not completed in accordance with the approved plans and specifications, will be corrected to eliminate hazardous conditions.

(Ord. No. 2824 N.S.)

13-56.12 - Nonassumption of Liability.

In undertaking to require applicants for certain excavation permits to comply with the requirements of this Section 13-56, the City of Alameda is assuming an undertaking only to promote the general welfare. The City is not assuming, nor is it imposing on itself or on its officers and employees, an obligation for breach of which it is liable in money damages to any person who claims that such breach proximately caused injury.

(Ord. No. 2824 N.S.)

13-56.13 - Construction on City Property.

a. The Chief Building Official shall prepare standard work procedures that comply with all the requirements of this Section 13-56 for all City construction or improvement activities involving excavation below the threshold depth in the area subject to this Section 13-56. All departments, boards, commissions, bureaus and agencies of the City of Alameda that conduct construction or improvements on land under their jurisdiction involving excavation below the threshold depth in the area subject to this Section 13-56 shall follow such standard work procedures.

b. The City shall include in all contracts involving excavation below the threshold depth in the area subject to this Section 13-56 a provision requiring City contractors to comply with all the requirements of this Section 13-56. All contracts entered into by departments, boards, commissions, bureaus and agencies of the City of Alameda that authorize construction or improvements on land under their jurisdiction involving excavation below the threshold depth in the area subject to this Section 13-56 also shall contain such standard contract provision.

(Ord. No. 2824 N.S.)

13-56.14 - Severability.

If any section, subsection, subdivision, paragraph, sentence, clause or phrase of this Section 13-56 or any part thereof is for any reason held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Section 13-56 or any part thereof. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase of this Section 13-56 irrespective of the fact that one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional or invalid or ineffective.

(Ord. No. 2824 N.S.)

13-56.15 - Permit Fee.

No permits for excavation in the marsh crust/subtidal zone shall be issued unless a fee has been paid. The fee shall be set by City Council resolution.

(Ord. No. 2824 N.S.)

13-56.16 - Penalties.

a. Any person, including utility companies and their employees and contractors, violating any of the provisions of this Section 13-56 shall be deemed guilty of a misdemeanor, and each person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Section 13-56 is committed, continued or permitted, and such violation may be prosecuted and punished as an infraction or misdemeanor pursuant to the provisions of Section 1-5.1 of the Alameda Municipal Code.

b. Any person, including utility companies and their employees and contractors, that commences any excavation without first obtaining the necessary permits therefor shall, if subsequently allowed to obtain a permit, pay an amount, in addition to the ordinary permit fee required, quadruple the permit fee otherwise required.

(Ord. No. 2824 N.S.)

13-56.17 - Retention and Availability of Permit Files.

The City shall maintain files pertaining to all permits issued under this Section 13-56, and shall make such files available to DTSC for inspection upon request during normal business hours.

(Ord. No. 2824 N.S.)

13-56.18 - Amendment of Section 13-56.

This Section 13-56 shall not be repealed or amended without thirty (30) days prior written notice to the DTSC Deputy Director for Site Mitigation.

(Ord. No. 2824 N.S.)

[END OF DOCUMENT]