

FOR CONTRACT NO. 06-324504

ADDITIONAL INFORMATION HANDOUT

PERMIT

CENTRAL VALLEY FLOOD PROTECTION BOARD

MATERIALS INFORMATION

**SITE INVESTIGATION REPORT, REPORT EIGHT OF NINE
Aerially Deposited Lead Study,
Master Task Order No. 307000-H0, dated May 12 ,2000**

ROUTE: 06-Tul, Fre-~~99~~-41.3/R53.9, R0.0/R1.2

ADDED PER ADDENDUM NO.2 DATED OCTOBER 14, 2010

CENTRAL VALLEY FLOOD PROTECTION BOARD

3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682



SEP 13 2010

Permit No. 18602 BD

California Department of Transportation
2015 East Shields Avenue, Suite 100
Fresno, California 93726

Enclosed is your approved Central Valley Flood Protection Board Encroachment Permit Conditions.

Under the Standard General Condition Four (4) of the permit, you are required to accomplish the work under direction and supervision of the Department of Water Resources; therefore, you must advise the Department at 3310 El Camino Avenue, Sacramento, California 95821, attention Lorraine Pendlebury, telephone (916) 574-0609, at least ten days prior to starting your project. An addressed postcard is enclosed for your convenience.

Please note that the permit grants the work proposed in your application. This permit, in addition to the twelve (12) standard conditions, includes special conditions, which may place limitations on or require modifications to your project. You are advised to read all conditions prior to starting the project. Commencing any work under this permit shall constitute an acceptance of the provisions of the permit and an agreement to perform accordingly. This permit does not relieve you from the responsibility for obtaining authorization from any State, local, or federal agencies for your proposed project.

Please refer to your permit number when communicating with this office. For further information, contact Michael Petersen at (916) 574-0685.

Sincerely,

Gary Lemon, Acting Chief
Floodway Protection Section
Central Valley Flood Protection Board

Enclosure

STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18602 BD

This Permit is issued to:

California Department of Transportation
2015 East Shields Avenue, Suite 100
Fresno, California 93726

To remove north and southbound bridges and construct a new 500-foot-long, 117.2-foot-wide bridge supported by 18 columns, 3 rows of 6, with 4-foot-diameter piers within the Kings River Designated Floodway. The project is located southeast of Kingsburg (Section 36, T16S, R22E, MDB&M, Kings River, Tulare County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

(SEAL)

Dated: 9/9/10

Jay Punia
Executive Officer

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15

Page 1 of 5

days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 18602 BD

THIRTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

FOURTEEN: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

FIFTEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims related to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

SIXTEEN: The mitigation measures approved by the CEQA lead agency and the permittee are found in the Mitigation Monitoring and Reporting Plan (MMRP) adopted by the CEQA lead agency. The permittee shall implement all such mitigation measures as allowed by law under CEQA Guidelines, Title 14, California Code of Regulations Sections 15000 - 15387.

SEVENTEEN: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of

the Department of Water Resources or any other agency responsible for maintenance.

EIGHTEEN: The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

NINETEEN: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

TWENTY: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

TWENTY-ONE: No construction work of any kind shall be done during the flood season from November 1 to July 15 without prior approval of the Central Valley Flood Protection Board.

TWENTY-TWO: The Central Valley Flood Protection Board, Department of Water Resources, and Kings River Conservation District shall not be held liable for damages to the permitted encroachment(s) resulting from releases of water from reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

TWENTY-THREE: The permitted encroachment(s) shall not interfere with operation and maintenance of the flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

TWENTY-FOUR: Debris that may accumulate on the permitted encroachment(s) and/or any temporary falsework within the floodway shall be cleared off and disposed of outside the floodway after each period of high water.

TWENTY-FIVE: All debris generated by this project shall be disposed of outside the floodway.

TWENTY-SIX: The abandoned or dismantled bridge shall be completely removed and disposed of outside the limits of the floodway.

TWENTY-SEVEN: Prior to start of any demolition and/or construction activities within the floodway, the applicant shall provide the Central Valley Flood Protection Board with two sets of layout plans for any and all temporary, in channel cofferdam(s), gravel work pad(s), work trestle(s), scaffolding, piles and/or other appurtenances that are to remain in the floodway during the flood season from November 1 through July 15.

TWENTY-EIGHT: Cleared trees and brush shall be completely burned or removed from the floodway,

and downed trees or brush shall not remain in the floodway during the flood season from November 1 to July 15.

TWENTY-NINE: *Backfill material for excavations within the levee section and within 10 feet of bridge supports within the floodway shall be placed in 4- to 6-inch layers and compacted to a minimum of 90 percent relative compaction per ASTM Method D1557-91 and above optimum moisture content.*

THIRTY: *Density tests by a certified materials laboratory will be required to verify compaction of backfill within the floodway.*

THIRTY-ONE: *The permittee shall submit as-built drawings to the Department of Water Resources' Flood Project Inspection Section upon completion of the project.*

THIRTY-TWO: *The soffit of the bridge shall provide a minimum freeboard of 3-feet above the design flood elevation.*

THIRTY-THREE: *Temporary staging, formwork, stockpiled material, equipment, and temporary buildings shall not remain in the floodway during the flood season from November 1 to July 15.*

THIRTY-FOUR: *The work area shall be restored to the condition that existed prior to start of work.*

THIRTY-FIVE: *In the event that bank erosion injurious to the adopted plan of flood control occurs at or adjacent to the permitted encroachment(s), the permittee shall repair the eroded area and propose measures, to be approved by the Central Valley Flood Protection Board, to prevent further erosion.*

THIRTY-SIX: *Revetment (rip-rap) shall be uniformly placed and properly transitioned into the bank, or adjacent revetment (rip-rap) and in a manner which avoids segregation. Asphalt or other petroleum-based products shall not be used as fill or erosion protection within the floodway.*

THIRTY-SEVEN: *The recommended minimum thickness of revetment (rip-rap), measured perpendicular to the bank, is 18 inches below the usual water surface and 12 inches above the usual water surface.*

THIRTY-EIGHT: *Piers, bents, and abutments being dismantled shall be removed to at least 1 foot below the natural ground line and at least 3 feet below the bottom of the low-water channel.*

THIRTY-NINE: *The piers shall be constructed parallel to the direction of flow.*

FORTY: *Drainage from the bridge or highway shall not be discharged onto the streambank.*

FORTY-ONE: *The permittee shall comply with all conditions set forth in the letter from the Kings River Conservation District dated July 14, 2010, which is attached to this permit as Exhibit A and is incorporated by reference.*

FORTY-TWO: *The permittee shall notify the Kings River Conservation District, 4886 East Jensen Avenue, Fresno, California 93725, telephone (559) 237-5567, at least ten working days prior to commencement of work.*

FORTY-THREE: A letter from the U. S. Army Corps of Engineers dated June 22, 2010 indicating that the project does not impact a federally constructed project is attached to this permit for reference as Exhibit B.

EXHIBIT - A



4886 East Jensen Avenue
Fresno, California 93725

Tel: 559-237-5567
Fax: 559-237-5560

www.krcd.org

July 14, 2010

Mr. Mike Patterson
Floodway Protection Section
Central Valley Flood Protection Board
P.O. Box 942836
Sacramento, CA 94236

Re: Kings River Designated Floodway – Encroachment Permit Application
KRCDD No. 800.05-245 – California Department of Transportation
Widening of State Route 99

Dear Mr. Patterson:

The Kings River Conservation District (District) received a copy of the application previously transmitted to the Central Valley Flood Protection Board (CVFPB) by the California Department of Transportation. The project is located on the Upper Kings River, C.M. 42.2 in Section 36, T.16 S., R.22 E., M.D.B. & M. of Tulare County.

The District has no objection to the approval of this Application subject to the following conditions:

1. The applicant shall be responsible for the removal and clearance of all debris which lodges or collects against any portion of the bridge structure during periods of high water.
2. As trees and brush are cleared, they shall be properly disposed outside the limits of the designated floodway.
3. The applicant shall repair any erosion of the banks at the project site and the repaired areas are provided with adequate protection to prevent further erosion.
4. The applicant shall notify the Kings River Conservation District, 4886 East Jensen Avenue, Fresno, California 93725, (559) 237-5567 at least ten (10) day's prior to commencement of work.

If you have any questions, please contact Keith Seligman, Manager of Flood Operations & Maintenance at (559) 237-5567 extension 120 or at (559) 217-4285. Please provide the District with a copy of any pertinent correspondence and Board action concerning this application.

BOARD OF DIRECTORS

Division I, NORMAN B. WALDNER, Dinuba • Division II, MASARU YOSHIMOTO, Fowler • Division III, GILDO NONINI, Fresno • Division IV, MARK McKEAN, Riverdale • Division V, BRENT GRAHAM, Hanford
Division VI, CEIL W. HOWE, JR., Stratford • At Large, DR. DAVID CEHRS, Sanger

OFFICERS

MARK McKEAN, President • BRENT GRAHAM, Vice President • DAVID ORTH, General Manager-Secretary • RANDY SHILLING, Auditor

EXHIBIT - A

Mr. Mike Patterson
July 14, 2010
Page 2

Sincerely,

A handwritten signature in black ink, appearing to read "Steven P. Stadler". The signature is fluid and cursive, with the first name "Steven" being the most prominent.

Steven P. Stadler, P.E.
Chief Engineer

SPS/KS/sjs

Cc: G. William Norris, III - California Department of Transportation

L10-0129
File: 800.05.245



Date

1/2

**SITE INVESTIGATION REPORT
REPORT EIGHT OF NINE**

**Tulare County Route 99 PM 41.3 to PM 53.94 and
Fresno County Route 99 PM 0.0 to PM 1.0**

**Aerially Deposited Lead Study
Tulare, Fresno, and Kings Counties, California**

*Same EA #
is used*

Prepared For:
California Department of Transportation
Central California Environmental Technical Branch
3402 N. Blackstone, Suite 201
Fresno, California 93726

Prepared By:
IT Corporation
1433 N. Market Boulevard, Suite 1
Sacramento, California 95834

EA 32450K TUL-99
EA32450K FRE-99
Master Task Order No. 06-307000-HO
Contract No. 43A0012

IT Project No. 798864

May 12, 2000

Volume 1 of 2

**SITE INVESTIGATION REPORT
REPORT EIGHT OF NINE
Tulare County Route 99 PM 41.3 to PM 53.94 and
Fresno County Route 99 PM 0.0 to PM 1.0
Aerially Deposited Lead Study
Tulare, Fresno, and Kings Counties, California**

Prepared For:
California Department of Transportation
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3402 N. Blackstone, Suite 201
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EA 32450K TUL-99
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Master Task Order No. 06-307000-HO
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May 12, 2000

Volume 1 of 2

**SITE INVESTIGATION REPORT
REPORT EIGHT OF NINE
Tulare County Route 99 PM 41.3 to PM 53.94 and
Fresno County Route 99 PM 0.0 to PM 1.0
Aerially Deposited Lead Study
Tulare, Fresno, and Kings Counties, California**

Prepared For:
California Department of Transportation
Central California Environmental Technical Branch
3402 N. Blackstone, Suite 201
Fresno, California 93726

Prepared By:
IT Corporation
1433 N. Market Boulevard, Suite 1
Sacramento, California 95834

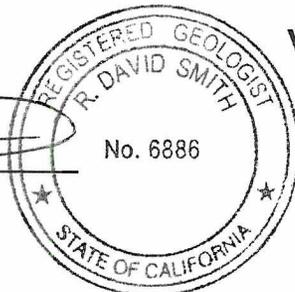
EA 32450K TUL-99
EA 324520K FRE-99
Master Task Order No. 06-307000-HO
Contract No. 43A0012

IT Project No. 798864

May 12, 2000

Volume 1 of 2


R. David Smith, RG
Project Manager




Mandy Lauenroth
Staff Geologist

1433 North Market Boulevard
Sacramento, CA 95834-1943
Tel. 916.928.3300
Fax. 916.928.3341



May 12, 2000
IT Project: 798864

Mr. Ken Doran
California Department of Transportation, District 6
Central California Environmental Technical Branch
3402 N. Blackstone, Suite 201
Fresno, California 93726

Subject: Site Investigation Report (eight of nine)
Aerially Deposited Lead Study
Tulare, Fresno, and Kings Counties, California

Dear Mr. Doran:

IT Corporation (IT) is pleased to submit this Site Investigation Report for the Lead Study along State Route 99, PM 41.3 to PM 53.94 in Tulare County and PM 0.0 to PM 1.0 in Fresno County, California. This report is submitted in accordance with Contract No. 43A0012, Master Task Order No. 06-307000-HO, EA 32450K.

If you have any questions, please feel free to contact me at your convenience.

Respectfully,
IT CORPORATION

A handwritten signature in black ink, appearing to read 'R. David Smith', is written over a horizontal line.

R. David Smith, R.G.
Project Geologist

Enclosure

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1.0 Introduction

This is the eighth of nine reports prepared by IT Corporation (IT) that present the results from environmental site investigation conducted for the evaluation of aerially deposited lead along various State Routes (SR) in Tulare, Fresno, and Kings Counties, California (Figure 1). This report documents investigation of Route 99 in Tulare County between post miles (PM) 41.3 and 53.4 and in Fresno County between PM 0.0 and 1.0. The field investigation was conducted during October and November 1999. This investigation was conducted at the request and authorization of Mr. Ken Doran of the California State Department of Transportation (Caltrans) under Contract 43A0012, Master Task Order 06-307000-HO, Expenditure Authorization (EA) 32450K.

1.1 Project Description

The entire project site is composed of portions of State Routes (SR) 41, SR63, SR65, SR99, SR190, and SR198 in the eastern San Joaquin Valley. Caltrans proposes to construct and upgrade selected portions of these State Routes. The construction and upgrade will consist of improving and/or widening the following: graded shoulders; paved parking lots; intersections; sidewalks; culverts; bridges; median landscaping and guardrails; bus stops; and street accesses. The project was conducted in portions of Tulare County, Fresno County, and Kings County (Figure 1). All work was conducted within Caltrans right-of-way.

In 1995, the Department of Toxics and Substance Control (DTSC) issued Caltrans a variance concerning the handling and reuse of material contaminated by lead from motor vehicle emissions. Prior to implementation of engineering and construction projects, Caltrans performs environmental investigations preceding engineering and construction projects to evaluate potential re-use of soil within project boundaries; however, additional benefits derived from this type of study include the following:

- The ability to evaluate lead concentrations in soil to assess future construction worker safety.
- The generation of regional lead concentration data to supplement a statewide database used for the assessment of lead levels along major transportation corridors.

1.2 Project Objective

The purpose of this project was to evaluate the presence and concentration of aerially deposited lead where soil excavation may be anticipated at medians, intersections, shoulders, landscape islands, and culvert and bridge inlets along selected State Routes (Caltrans, 1999).

2.0 Scope of Work

The scope of work for the investigation was presented in IT's workplan dated October 6, 1999, which was approved for implementation by Caltrans (IT, 1999a). To achieve the project objective, the following scope of work was performed:

1. Permitting and Mobilization
2. Preparation of Work Plan and Health and Safety Plan
3. Field Investigation
4. Laboratory Analyses
5. Site Investigation Report Preparation

2.1 Permitting and Pre-Work Site Visit

A standard Caltrans encroachment permit was obtained (Appendix A). County Environmental Health Drilling Permits were not required. Underground Service Alert was notified of the subsurface investigation approximately 48 hours prior to initiation of the investigation.

A pre-work site visit was convened on September 13, 1999 and attended by Michael Miller and David Smith of IT and Ken Doran of Caltrans. Among the items discussed and reviewed were the scope of work, the site visit checklist, and the schedule. In addition, computer digital images (virtual images) of various State Route sections within the project boundaries were reviewed.

2.2 Work Plan and Health and Safety Plan

A Work Plan was prepared to present the scope of work and the procedures to be used in the field (IT, 1999a). A site-specific health and safety plan was prepared in accordance with 29 CFR 1910.120. The health and safety plan included safety procedures for work to be performed at the site, chemical hazard information, site safety officers, and preferred medical emergency locations (IT, 1999b).

2.3 Field Investigation

The field investigation for all nine State Route segments was conducted between October 11, 1999 and November 4, 1999 and included the advancement of 975 soil borings and the collection of 3,843 soil samples. The boring locations were selected according to guidelines presented in Caltrans Master Task Order 06-307000-HO (Figure 2-Borehole Template). In general, the borings were placed according to the following guidelines:

- A boring was located approximately every 305 meters (1,000 feet [ft]) along both road shoulders beginning and ending at selected Post Mile (PM) designations.
- Additional borings were located where the highway was divided.
 - In areas where the median width is 10 meters (30 ft) or less, only one boring was drilled.
 - When the median width was greater than 10 meters (30 ft) and less than 30 meters (90 ft), two borings were located 2 meters (6 ft) from the pavement edges.
 - When the median width was greater than 30 meters (90 ft), three borings were drilled. Two were located 2 meters (6 ft) from the pavement edges and one located approximately halfway between the pavement edges.
- Additional borings were placed in close proximity to culvert and bridge inlets, and road intersections with exposed soil. If these features occurred near the standard 305 meter shoulder spacing, they substituted for that location; otherwise, they were additional borings.

Borings were designated by State Route (i.e. borings 99b-001 to 99b-321 were drilled sequentially along SR 99 [Figure 1]). In general, borings were located sequentially starting at the south (or west) end of a segment and were placed along highway shoulders and medians. The Trimble GPS Pathfinder™ Pro XRS Global Positioning System (GPS) instrumentation was used to establish the coordinates for each boring location. The GPS system utilized a GPS receiver and a radio beacon differential receiver to provide real-time differential corrections to the possible coordinates. Coordinates not collected with real-time corrections were corrected later with the appropriate software. IT provided Caltrans with the uncorrected and corrected files in electronic format. Coordinates were measured with a minimum accuracy of 1 to 5 meters and are reported on Table 4.

The soil borings were drilled using 2 1/4-inch diameter hand-held augers. The soil borings were advanced to a depth of approximately 0.9 meter (3 feet) below ground surface (bgs) with samples collected from 0.15 meter (0.5 ft), 0.3 meter (1 ft), 0.6 meter (2 ft), and 0.9 meter (3 ft) depths as

specified by the contract manager (Caltrans, 1999). Groundwater was not encountered in any of the soil borings. Drilling and sampling procedures are presented in Appendix B.

Soil samples were collected using the hand-auger and transferred to sealable plastic baggies. The samples were then labeled, packaged, and stored in an insulated chest for transport under chain-of-custody manifest to Sparger Technology, Inc., a California-certified analytical laboratory. Soil samples were analyzed according to the analytical protocols shown on Table 1 and discussed in Section 2.4.

After sample collection, the borings were back-filled with the remaining borehole cuttings. All drilling and sampling equipment was washed prior to use. All appropriate downhole drilling and sampling equipment was washed between borings. No excess soil waste was generated.

EA 32450K State Route 99 – PM 41.3 to PM 53.4 (Tulare) and PM 0.0 to PM 1.0 (Fresno)

This report presents the results obtained from 220 soil borings that were drilled to 0.9 meters (3 ft) along the shoulders and median of SR 99 between PM 41.3 and PM 53.94 in Tulare County and PM 0.0 and PM 1.0 in Fresno County. IT designated this segment SR99B. Eight hundred sixty-three soil samples were collected for laboratory analysis (Table 2). Boring locations (GPS coordinates) are presented on Table 4.

2.4 Laboratory Analyses

The soil samples collected and retained for laboratory analysis were submitted to Sparger Technology, Inc. (Sparger), of Sacramento, California, a California-certified analytical laboratory. Chain-of-custody procedures, including the use of chain-of-custody forms, were used to document sample handling and transport from the time of collection to delivery to the laboratory for analysis. The analyses were performed on a normal turn-around basis in general accordance with U.S. Environmental Protection Agency (EPA) specified holding times. Pursuant to the task order, all samples were analyzed for total lead and selected samples were tested for pH. The analyses were performed in general accordance with the EPA method listed below.

<u>Matrix</u>	<u>Analyses</u>
Soil	Atomic Absorption EPA 7000 (7420) series: total lead
Soil	Waste Extraction Test (WET) 22CCR 667000 Extract EPA 3050
Soil	Waste Extraction Test (WET) 22CCR 667000 EPA 7000
Soil	Soil pH EPA 9045

Soil samples reported to contain total lead in excess of 20 times the Soluble Threshold Limit Concentration (STLC =5 parts per million (ppm), 20x STLC = 100 ppm) and/or in excess of the Total Limit Threshold Concentration (TTLC =1,000 ppm), were discussed with the Caltrans Contract Manager. Selected samples were chosen for analysis using the Waste Extraction Test (WET).

3.0 Site Investigation Results

Laboratory results are summarized on Table 1 and presented on Table 2. Statistical results are presented on Table 3. The GPS data is presented on Table 4. The laboratory reports and chain of custody forms are contained in Appendix C in a separate volume. All soil samples were analyzed for total lead and random samples were analyzed for pH. Selected samples reported with total lead in excess of 20 times the STLC (100 ppm) and/or in excess of the TTLC (1,000 ppm) were analyzed for soluble lead using the WET. These results are discussed below.

State Route 99 – PM 41.3 to PM 53.94 (Tulare) and PM 0.0 to PM 1.0 (Fresno)

For the SR99B segment, total lead analysis was performed on 863 samples, soluble lead analyses were performed on 105 samples, and pH tests were performed on 71 samples.

Total lead was reported at concentrations ranging from <25 to 1,100 milligrams per kilogram (mg/kg) (mg/kg is equivalent to parts per million [ppm]). The pH ranged from 5.8 to 9.9. One hundred five samples reported with total lead in excess of 20 times the STLC were analyzed by the WET. Soluble lead was reported at concentrations ranging from 0.057 to 32 ppm and 50 of these samples exceeded the STLC of 5 ppm.

4.0 Data Evaluation

Soil samples collected from the shoulders and median areas along Route 99 PM 41.3 to PM 53.94 (Tulare) and PM 0.0 to PM 1.0 (Fresno) were reported to contain lead (Table 1). Studies conducted along transportation corridors have attributed elevated lead concentrations within soil to accumulation of dust and debris containing lead derived from leaded gasoline emissions (Coltrin, et al., 1993).

Along SR99B, 143 of the 863 soil samples collected (17%) were reported to contain total lead in excess of 20 times the STLC (100 ppm). One hundred five of these were chosen for WET analyses and Table 1 lists the total lead results in “bold” for these samples. One total lead

concentration (.001%) exceeded the TTLC (1,000 ppm). Fifty of the 105 samples (48%) analyzed by the WET exceeded the STLC of 5 ppm.

The higher concentrations of total lead were generally detected in the shallower samples; with few exceptions, total lead concentrations decreased with increasing depth within each borehole (Table 2), which is indicative of aurally deposited lead impacted soils near major transportation routes.

IT conducted a statistical evaluation of all total lead analytical data for this project at the request of Caltrans. The statistical evaluation was conducted in general accordance with guidelines developed by the Caltrans Noise, Air, and Hazardous Waste Management Office dated February 4, 1998 (Caltrans, 1998), and with the Supplemental Guidance to Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (RAGS/HHEM- USEPA, 1992). Caltrans received a variance from The Department of Toxics and Substance Control (DTSC) which allows, under certain conditions, to excavate, collect, and reuse contaminated soils within existing rights of way. Within the limitations of the variance, soil analytical data is used to determine if and how soil material may be reused.

The statistical evaluation addressed the following items:

- Determination of normal or lognormal distribution of sample data to identify the proper equation for certainty analysis;
- Calculation of mean;
- Calculation of standard deviation; AND
- Calculation of the 95% Upper Confidence Level (UCL).

The data was divided into two combined depth intervals (two populations) based on the four sampling intervals. The lead concentrations for samples collected at 0.15 and 0.3 meters (0.5 and 1 feet) were summed at each boring location and collectively represented the shallow population, likewise, the lead concentrations for samples collected at 0.6 and 0.9 meters (2 and 3 feet) were summed and represented the deeper population. As such, two populations of lead data were evaluated. Lead results below the laboratory reporting limit of 25 ppm (non-detects) were treated as one-half of the reporting limit (12.5 ppm) in the statistical evaluation. Calculations were performed in EXCEL 97™ and were proofed by hand calculation using equations from "Statistical Methods for Environmental Pollution Monitoring", Gilbert, 1987. The equation used for the calculation of the 95% UCL (Caltrans, 1998; USEPA, 1992) was entered into EXCEL 97™ and proofed by hand calculation (Gilbert, 1987).

The 95% UCL was calculated using the following equation:

$$UCL = \exp(x + 0.5s^2 + (sH/\sqrt{n-1})) \quad (1)$$

where \exp = constant (base of the natural log (LN) = 2.718)
 x = mean of the transformed data (LN(concentration))
 s = standard deviation of the transformed data
 H = H-statistic
 n = number of samples

Determination of the H-statistic was accomplished by linear extrapolation between given values (Table A12, p265, Gilbert, 1987). Results of the statistical calculations are provided in Table 2.

With few exceptions, for SR99B, the mean (average) total lead concentrations decreased markedly below the shallow interval (0 to 0.3 meters). The average concentration of total lead in the shallow interval was 149 ppm and in the deeper interval was 79 ppm (Table 3).

The 95% UCL (based on equation (1)) is a function of the standard deviation (s), the number of samples (n), and the H-statistic. The H-statistic (Gilbert, 1987) is determined from tabulated values based on s and n . Therefore, the calculated 95% UCL is sensitive to s and n . In general, for high values of n and/or low values of s , the 95% UCL will be close to the mean concentration. In this case, the average for the population is representative. Conversely, for low values of n and/or high values of s , the 95% UCL may be far away from the mean, and the 95% UCL cannot be defined accurately because the uncertainty involved in the sample population is too high. In this case, the lead concentration is not necessarily higher than in other sites, but that more data are required before recommendations can be made based on the statistical evaluation.

For this study, the 95% UCL was calculated for all total lead results and soluble lead results where possible. If too few samples were analyzed by a soluble lead test (i.e. <5 samples by WET, DI WET, or TCLP), no statistics were performed for that data.

Along SR99B, the 95% UCLs calculated for total lead are near the respective mean concentrations (Table 3) and were 167 ppm in the shallow interval and 84 ppm in the deeper interval. Along SR99B, the 95% UCLs calculated for soluble lead were significantly higher than the respective mean concentrations (Table 3) and were 11.74 ppm in the shallow interval and 19 ppm in the deeper interval. The elevated 95% UCLs calculated for soluble lead may not be

representative of soluble lead levels in the project area and are considered an artifact of the high standard deviation of the soluble lead population (Table 3).

5.0 Conclusions

Caltrans proposes to construct and upgrade selected portions of State Routes (SR) 41, SR63, SR65, SR99, SR190, and SR198 in the eastern San Joaquin Valley. The construction and upgrade will consist of improving graded shoulders, paved parking lots, intersections, sidewalks, culverts, bridges, median landscaping and guardrails, bus stops, and street accesses. On behalf of Caltrans, IT conducted site investigation to evaluate the presence and concentrations of lead in soil at nine distinct segments of these State Routes. This section concludes the eighth of nine reports and documents site investigation along SR99B between PM 41.3 and 53.94 in Tulare County, and PM 0.0 and 1.0 in Fresno County.

Based on the results and data evaluation of this investigation, the following conclusions are offered for SR99B between PM 41.3 and 53.94 in Tulare County, and PM 0.0 and 1.0 in Fresno County:

- Total lead concentrations ranged from <25 to 1,100 ppm in 863 samples analyzed. One total lead concentration exceeded the TTLC of 1,000 ppm. Total lead concentrations were generally observed to decrease with increasing depth. The mean concentration from 0 to 0.3 meters was 149 ppm, and from 0.6 to 0.9 meters was 79 ppm.

$$\begin{array}{r} 149 \\ + 79 \\ \hline 228 \end{array} \quad \frac{228}{2} = 114$$

- Based on the results of the WET method utilizing a sodium citrate (acidic) extraction fluid, 50 of 105 samples analyzed for soluble lead exceeded the STLC of 5 ppm. Soluble lead concentrations were observed to decrease with increasing depth. The mean concentration from 0 to 0.3 meters was 7.4 ppm, and from 0.6 to 0.9 meters was 5.72 ppm.

$$\begin{array}{r} 7.4 \\ + 5.72 \\ \hline 13.12 \end{array} \quad \frac{13.12}{2} = 6.56$$

- The calculated 95% UCLs of total lead concentrations were 167 ppm for 0 to 0.3 meters and 84 ppm for 0.6 to 0.9 meters. These 95% UCLs lie close to the mean concentrations of 149 and 79 ppm, respectively, and are representative of the total lead concentrations along the project area.

$$\begin{array}{r} 167 \\ 84 \\ \hline 251 \end{array} \quad \frac{251}{2} = 125.5$$

- The calculated 95% UCLs of soluble lead concentrations were 11.74 ppm for 0 to 0.3 meters and 19.16 ppm for 0.6 to 0.9 meters. These 95% UCLs are significantly higher than the mean

$$\begin{array}{r} 11.74 \\ 19.16 \\ \hline 30.90 \end{array} \quad \frac{30.90}{2} = 15.45$$

concentrations of 7.4 and 5.72 ppm, respectively, and may be artificially high due to the high standard deviation inherent in the calculation. Therefore, recommendations should not be made with respect to the soluble lead statistics.

- Based on the current total and soluble lead results for SR99B between PM 41.3 and 53.94 in Tulare County, and PM 0.0 and 1.0 in Fresno County, should Caltrans be required to identify disposal options or soil re-use options with respect to the DTSC variance, the following items may apply:
 - Total lead results indicated site soil contains well below the lowest DTSC variance threshold of 1,575 ppm regardless of depth or location. Only one total lead result exceeded the TTLC of 1,000 ppm. As such, there would be few, if any, restrictions for disposal or soil-re-use options based on total lead.
 - Because the soluble lead statistics may not be representative, soluble lead results should be evaluated on an area-specific basis only. Most soluble results that exceeded the STLC (5.0 ppm) occurred in the upper 0.3 meters (1 foot) in the areas tested (Table 2). These soils could be re-tested for soluble lead using the WET method that utilizes deionized water (DI WET). DI WET results would provide additional information for re-use or disposal guidelines.
 - Based on the DTSC variance and in the absence of DI WET data, for areas in which the soluble lead was less than 0.5 ppm soil could be re-used provided that it be placed 5 feet above the water table and covered with at least 1 foot of clean soil. For areas in which the soluble lead was greater than 0.5, but less than 50 ppm, soil could be re-used provided that it be placed 5 feet above the water table and capped with pavement or other similar material. Soils with greater than 5.0 ppm soluble lead may require special disposal consideration; although, if tested, DI WET data might benefit and change the disposal classification of these soils from Class I to Class II, and possibly to Class III in conjunction with the relatively low (<170 ppm) total lead concentrations.
- Finally, this investigation provides lead concentration data useful in the evaluation of future worker health and safety for SR99B, and generates regional lead concentration data that supplements a statewide database used for the assessment of lead levels along major transportation corridors.

6.0 References

- Caltrans, (California Department of Transportation), 1999, California Department of Transportation, District 6, Central California Environmental Technical Branch, Task Order 05-402800-HS, dated September 15, 1999.
- Caltrans, 1998, Memorandum on Guidance for Conducting Statistical Evaluation of Lead Data, Noise, Air, and Hazardous Waste Management Office, February 4, 1998.
- California Environmental Protection Agency (CalEPA), Department of Toxics and Substances Control (DTSC), *Caltrans Variance For Reuse of Lead Contaminated Soils*, February, 1995.
- Coltrin, D., Teichman, J., and Prouty, K., 1993, A survey of lead contamination in soil along Interstate-880, Alameda County, California: *Applied Occupational and Environmental Hygiene*, Tharr, D., ed., vol.8, no. 4, April 1993, p.217-220.
- Gilbert, R.O., "Statistical Methods for Environmental Pollution Monitoring", Van Nostrand Reinhold, New York, New York, 1987.
- IT (IT Corporation), 1999a, Workplan, Aerially Deposited Lead Study for Selected State Routes in Tulare, Fresno, and Kings Counties, California, dated October 6, 1999.
- IT, 1999b, Health and Safety Plan, Aerially Deposited Lead Study for Selected State Routes in Tulare, Fresno, and Kings Counties, California, dated October 6, 1999.
- USEPA, 1992, "Supplemental Guidance to RAGS: Calculating the Concentration Term", (OSWER Directive 9285.7-0?), May, 1992.

TABLE 1
SUMMARY OF THE
LABORATORY ANALYTICAL PROGRAM
 Caltrans-Construction and Upgrade of Selected State Routes
 Tulare, Fresno, and Kings Counties, California

Boring Number	Hand-Held Auger (approx. feet)	Number of Bore Holes	No. of Samples @ 0.15, 0.3, 0.6, 0.9m	No. of 9045 Soil pH Tests	No. of EPA 7420 Lead Tests	No. of Total Leads >1000 ppm	No. of WETs	No. of WET Results >5.0 ug/l
63a-001 to 63a-097	281	95	374	19	374	0	44	19
63b-003 to 63b-058	160	56	213	9	213	0	10	4
65-001 to 65-198	578	198	774	55	774	0	65	28
190-001 to 190-164	494	164	658	19	658	1	23	7
198a-01 to 198a-57	168	56	224	21	224	0	27	21
198b-001 to 198b-067	194	66	259	18	259	0	15	4
99a-01 to 99a-044	132	44	176	15	176	1	15	9
99b-001 to 99b-321 (246 borings)	648	220	863	71	863	1	105	50
41-001 to 41-076	227	76	302	17	302	0	12	0
TOTAL:	2881	975	3843	244	3843	3	316	142

Notes:

1. Analyses conducted in general accordance with the U.S. Environmental Protection Agency Method listed.
2. Hand-Augers locations, depths drilled, and number of boring holes and samples approximated as shown above.
3. 0.15, 0.3, 0.6, 0.9 = approximate soil sample collection depth in meters below the ground surface.
4. 198B-001 = the first number designates the State Route where the boring hole was drilled. If a letter exists after the first number, it indicates that there are two sites along that State Route which has the boring number as indicated on Figure 1. The second number represents the hole number. See Figure 1 for the planned boring hole number for each site.
5. Generally, soil samples reported to contain total lead in excess of 20 times the Soluble Threshold Limit Concentration (STLC), but less than the Total Limit Threshold Concentration (TTL), were analyzed using the WET method.
6. Laboratory reporting limit for lead in soil (EPA 7420) = 25 milligram per kilogram (mg/kg).

TABLE 2
Total Lead Analytical Results
State Route 99
PM 41.3 to PM 53.94 in Tulare County
PM 0.0 to PM 1.0 in Fresno County

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b001	99B - 001 - 0.15	150	5.2	
	99B - 001 - 0.30	100		
	99B - 001 - 0.60	30		
9902	99B - 001 - 0.90	120	2.9	
	99B - 002 - 0.15	30		
	99B - 002 - 0.30	ND		7.3
99b003	99B - 002 - 0.60	ND		
	99B - 002 - 0.90	ND		
	99B - 003 - 0.15	220	7.1	
9904	99B - 003 - 0.30	60		
	99B - 003 - 0.60	ND		9.9
	99B - 003 - 0.90	ND		
99b005	99B - 004 - 0.15	50		7.2
	99B - 004 - 0.30	ND		
	99B - 004 - 0.60	ND		
9906	99B - 004 - 0.90	ND		
	99B - 005 - 0.15	90		
	99B - 005 - 0.30	60		9.4
99b007	99B - 005 - 0.60	120	0.10	
	99B - 005 - 0.90	30		
	99B - 006 - 0.15	110	3.6	
9908	99B - 006 - 0.30	220	14	
	99B - 006 - 0.60	ND		
	99B - 006 - 0.90	ND		
99b009	99B - 007 - 0.15	50		
	99B - 007 - 0.30	30		
	99B - 008 - 0.15	ND		
9910	99B - 008 - 0.30	180	11	
	99B - 008 - 0.60	ND		
	99B - 008 - 0.90	ND		
99b011	99B - 009 - 0.15	100		
	99B - 009 - 0.30	60		
	99B - 009 - 0.60	90		
9912	99B - 009 - 0.90	90		
	99B - 010 - 0.15	ND		
	99B - 010 - 0.30	ND		
99b013	99B - 010 - 0.60	ND		
	99B - 010 - 0.90	ND		
	99B - 011 - 0.15	70		7.6
9914	99B - 011 - 0.30	30		
	99B - 011 - 0.60	30		
	99B - 011 - 0.90	220	10	
99b015	99B - 012 - 0.15	120	1.7	
	99B - 012 - 0.30	ND		
	99B - 012 - 0.60	ND		7.7
9916	99B - 012 - 0.90	ND		
	99B - 013 - 0.15	100		
	99B - 013 - 0.30	70		
99b017	99B - 013 - 0.60	70		
	99B - 013 - 0.90	60		
	99B - 014 - 0.15	60		
9918	99B - 014 - 0.30	30		
	99B - 014 - 0.60	ND		
	99B - 014 - 0.90	ND		
99b019	99B - 015 - 0.15	30		
	99B - 015 - 0.30	70		
	99B - 015 - 0.60	ND		
9902	99B - 015 - 0.90	ND		
	99B - 016 - 0.15	30		
	99B - 016 - 0.30	ND		
9904	99B - 016 - 0.60	ND		
	99B - 016 - 0.90	ND		
	99B - 017 - 0.15	140	3.4	
9906	99B - 017 - 0.30	60		
	99B - 017 - 0.60	70		
	99B - 017 - 0.90	110	0.90	
9908	99B - 018 - 0.15	90		
	99B - 018 - 0.30	ND		
	99B - 018 - 0.60	ND		
99b019	99B - 018 - 0.90	ND		
	99B - 019 - 0.15	30		
	99B - 019 - 0.30	50		
99b001	99B - 019 - 0.60	100		

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
9920	99B - 020 - 0.15	300	4.5	
	99B - 020 - 0.30	ND		
	99B - 020 - 0.60	ND		
99b021	99B - 020 - 0.90	ND		
	99B - 021 - 0.15	300	0.057	
	99B - 021 - 0.30	70		
9922	99B - 021 - 0.60	130	4.3	
	99B - 021 - 0.90	100		
	99B - 022 - 0.15	60		7.6
99b023	99B - 022 - 0.30	60		
	99B - 023 - 0.15	40		
	99B - 023 - 0.30	40		
9924	99B - 023 - 0.60	70		
	99B - 023 - 0.90	110	3.3	
	99B - 024 - 0.15	ND		
99b025	99B - 024 - 0.30	ND		
	99B - 024 - 0.60	ND		8.8
	99B - 024 - 0.90	ND		
9926	99B - 025 - 0.15	60		
	99B - 025 - 0.30	60		
	99B - 025 - 0.60	1100	NA	
99b027	99B - 025 - 0.90	180	6.4	
	99B - 026 - 0.15	60		
	99B - 026 - 0.30	130	8.2	
9928	99B - 026 - 0.60	ND		
	99B - 026 - 0.90	ND		8.4
	99B - 027 - 0.15	50		
99b029	99B - 027 - 0.30	30		
	99B - 027 - 0.60	50		
	99B - 027 - 0.90	30		8.3
9930	99B - 028 - 0.15	60		
	99B - 028 - 0.30	ND		
	99B - 028 - 0.60	ND		
99b031	99B - 028 - 0.90	ND		
	99B - 029 - 0.15	30		
	99B - 029 - 0.30	40		
9932	99B - 029 - 0.60	60		
	99B - 029 - 0.90	110	5.2	
	99B - 030 - 0.15	50		
99b033	99B - 030 - 0.30	140	9.2	
	99B - 030 - 0.60	50		
	99B - 030 - 0.90	ND		
9934	99B - 031 - 0.15	70		
	99B - 031 - 0.30	80		
	99B - 031 - 0.60	70		
99b035	99B - 031 - 0.90	90		
	99B - 032 - 0.15	60		
	99B - 032 - 0.30	ND		
9936	99B - 032 - 0.60	ND		
	99B - 032 - 0.90	ND		8.6
	99B - 033 - 0.15	80		
99b037	99B - 033 - 0.30	60		
	99B - 033 - 0.60	50		
	99B - 033 - 0.90	50		
9938	99B - 034 - 0.15	250	6.8	
	99B - 034 - 0.30	40		
	99B - 034 - 0.60	30		
99b039	99B - 034 - 0.90	ND		
	99B - 035 - 0.15	50		
	99B - 035 - 0.30	40		8.0
9940	99B - 035 - 0.60	30		
	99B - 035 - 0.90	ND		
	99B - 036 - 0.15	40		
9941	99B - 036 - 0.30	60		
	99B - 037 - 0.15	100		
	99B - 037 - 0.30	70		
9942	99B - 037 - 0.60	70		
	99B - 037 - 0.90	60		
	99B - 038 - 0.15	50		
9943	99B - 038 - 0.30	ND		
	99B - 038 - 0.60	ND		
	99B - 038 - 0.90	ND		

TABLE 2
Total Lead Analytical Results
State Route 99
PM 41.3 to PM 53.94 in Tulare County
PM 0.0 to PM 1.0 in Fresno County

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b039	99B - 039 - 0.15	ND		
	99B - 039 - 0.30	ND		
	99B - 039 - 0.60	30		
	99B - 039 - 0.90	30		
9940	99B - 040 - 0.15	60		
	99B - 040 - 0.30	160	4.8	
	99B - 040 - 0.60	ND		
	99B - 040 - 0.90	ND		
99b041	99B - 041 - 0.15	230	31	
	99B - 041 - 0.30	140	4.8	
	99B - 041 - 0.60	100		
	99B - 041 - 0.90	80		
9942	99B - 042 - 0.15	90		
	99B - 042 - 0.30	ND		
	99B - 042 - 0.60	30		
	99B - 042 - 0.90	ND		
99b043	99B - 043 - 0.15	60		
	99B - 043 - 0.30	110	3.1	
	99B - 043 - 0.60	60		
	99B - 043 - 0.90	60		
9944	99B - 044 - 0.15	92		
	99B - 044 - 0.30	30		
	99B - 044 - 0.60	50		
	99B - 044 - 0.90	ND		8.3
99b045	99B - 045 - 0.15	70		
	99B - 045 - 0.30	120	3.3	
	99B - 045 - 0.60	100		
	99B - 045 - 0.90	100		
9946	99B - 046 - 0.15	140	3.5	
	99B - 046 - 0.30	ND		
	99B - 046 - 0.60	ND		
	99B - 046 - 0.90	ND		
99b047	99B - 047 - 0.15	30		
	99B - 047 - 0.30	ND		
	99B - 047 - 0.60	90		
	99B - 047 - 0.90	50		8.3
9948	99B - 048 - 0.15	30		
	99B - 048 - 0.30	ND		
	99B - 048 - 0.60	ND		
	99B - 048 - 0.90	ND		
99b049	99B - 049 - 0.15	90		
	99B - 049 - 0.30	60		
	99B - 049 - 0.60	70		
	99B - 049 - 0.90	110	1.8	
9950	99B - 050 - 0.15	ND		
	99B - 050 - 0.30	ND		
	99B - 050 - 0.60	ND		
	99B - 050 - 0.90	ND		
99b051	99B - 051 - 0.15	40		
	99B - 051 - 0.30	70		
	99B - 051 - 0.60	90		
	99B - 051 - 0.90	30		
9952	99B - 052 - 0.15	220	7.6	
	99B - 052 - 0.30	70		8.0
	99B - 052 - 0.60	ND		
	99B - 052 - 0.90	ND		
99b053	99B - 053 - 0.15	70		
	99B - 053 - 0.30	80		
	99B - 053 - 0.60	70		
	99B - 053 - 0.90	80		
9954	99B - 054 - 0.15	80		8.4
	99B - 054 - 0.30	ND		
	99B - 054 - 0.60	40		
	99B - 054 - 0.90	ND		
99b055	99B - 055 - 0.15	50		
	99B - 055 - 0.30	40		
	99B - 055 - 0.60	150	2.1	
	99B - 055 - 0.90	40		
9956	99B - 056 - 0.15	90		
	99B - 056 - 0.30	ND		
	99B - 056 - 0.60	30		
	99B - 056 - 0.90	ND		
99b057	99B - 057 - 0.15	120	3.9	
	99B - 057 - 0.30	70		
	99B - 057 - 0.60	70		
	99B - 057 - 0.90	60		
9958	99B - 058 - 0.15	260	2.9	7.8
	99B - 058 - 0.30	ND		
	99B - 058 - 0.60	ND		
	99B - 058 - 0.90	ND		

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b059	99B - 059 - 0.15	30		
	99B - 059 - 0.30	30		9.2
	99B - 059 - 0.60	ND		
	99B - 059 - 0.90	ND		
9960	99B - 060 - 0.15	80		
	99B - 060 - 0.30	ND		
	99B - 060 - 0.60	ND		
	99B - 060 - 0.90	ND		
99b061	99B - 061 - 0.15	250	16	
	99B - 061 - 0.30	40		
	99B - 061 - 0.60	30		
	99B - 061 - 0.90	30		
9962	99B - 062 - 0.15	60		
	99B - 062 - 0.30	ND		
	99B - 062 - 0.60	ND		
	99B - 062 - 0.90	ND		
99b063	99B - 063 - 0.15	180	4.7	
	99B - 063 - 0.30	90		
	99B - 063 - 0.60	80		
	99B - 063 - 0.90	80		
9964	99B - 064 - 0.15	60		
	99B - 064 - 0.30	50		
	99B - 064 - 0.60	ND		
	99B - 064 - 0.90	ND		
99b065	99B - 065 - 0.15	80		
	99B - 065 - 0.30	140	2.7	
	99B - 065 - 0.60	70		
	99B - 065 - 0.90	ND		
9966	99B - 066 - 0.15	110	4.6	
	99B - 066 - 0.30	90		
	99B - 066 - 0.60	70		
	99B - 066 - 0.90	70		
99b067	99B - 067 - 0.15	40		9.3
	99B - 067 - 0.30	ND		
	99B - 067 - 0.60	ND		
	99B - 067 - 0.90	ND		
9968	99B - 068 - 0.15	ND		
	99B - 068 - 0.30	30		
	99B - 068 - 0.60	ND		
	99B - 068 - 0.90	ND		
99b069	99B - 069 - 0.15	80		
	99B - 069 - 0.30	70		
	99B - 069 - 0.60	70		
	99B - 069 - 0.90	90		
9970	99B - 070 - 0.15	120	9.4	
	99B - 070 - 0.30	ND		
	99B - 070 - 0.60	ND		
	99B - 070 - 0.90	ND		
99b071	99B - 071 - 0.15	100		
	99B - 071 - 0.30	ND		
	99B - 071 - 0.60	ND		
	99B - 071 - 0.90	ND		
9972	99B - 072 - 0.15	ND		
	99B - 072 - 0.30	ND		
	99B - 072 - 0.60	ND		
	99B - 072 - 0.90	ND		
99b073	99B - 073 - 0.15	80		
	99B - 073 - 0.30	240	8.0	
	99B - 073 - 0.60	70		
	99B - 073 - 0.90	70		
9974	99B - 074 - 0.15	60		
	99B - 074 - 0.30	280	2.2	
	99B - 074 - 0.60	40		8.0
	99B - 074 - 0.90	100		
99b075	99B - 075 - 0.15	50		
	99B - 075 - 0.30	30		
	99B - 075 - 0.60	ND		
	99B - 075 - 0.90	ND		
9976	99B - 076 - 0.15	ND		
	99B - 076 - 0.30	180	9.8	
	99B - 076 - 0.60	30		
	99B - 076 - 0.90	ND		
99b077	99B - 077 - 0.15	ND		
	99B - 077 - 0.30	ND		
	99B - 077 - 0.60	ND		
	99B - 077 - 0.90	ND		
9978	99B - 078 - 0.15	ND		
	99B - 078 - 0.30	120	4.2	5.8
	99B - 078 - 0.60	ND		
	99B - 078 - 0.90	ND		

TABLE 2
Total Lead Analytical Results
State Route 99
PM 41.3 to PM 53.94 in Tulare County
PM 0.0 to PM 1.0 in Fresno County

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b079	99B - 079 - 0.15	140	4.0	
	99B - 079 - 0.30	90		
	99B - 079 - 0.60	70		
	99B - 079 - 0.90	70		
99B080	99B - 080 - 0.15	120	7.7	
	99B - 080 - 0.30	150	2.0	
	99B - 080 - 0.60	30		7.5
	99B - 080 - 0.90	30		
99b081	99B - 081 - 0.15	70		
	99B - 081 - 0.30	30		
	99B - 081 - 0.60	30		
	99B - 081 - 0.90	30		
99B082	99B - 082 - 0.15	70		
	99B - 082 - 0.30	ND		
	99B - 082 - 0.60	30		
	99B - 082 - 0.90	ND		
99b083	99B - 083 - 0.15	70		
	99B - 083 - 0.30	30		
	99B - 083 - 0.60	ND		
	99B - 083 - 0.90	30		7.5
9984	99B - 084 - 0.15	ND		
	99B - 084 - 0.30	90		7.1
	99B - 084 - 0.60	ND		
	99B - 084 - 0.90	ND		
99b085	99B - 085 - 0.15	140	3.5	
	99B - 085 - 0.30	110	0.84	
	99B - 085 - 0.60	90		
	99B - 085 - 0.90	100		
9986	99B - 086 - 0.15	ND		
	99B - 086 - 0.30	80		
	99B - 086 - 0.60	30		
	99B - 086 - 0.90	ND		
99b087	99B - 087 - 0.15	120	3.5	
	99B - 087 - 0.30	70		
	99B - 087 - 0.60	70		
	99B - 087 - 0.90	60		
9988	99B - 088 - 0.15	ND		
	99B - 088 - 0.30	70		
	99B - 088 - 0.60	50		
	99B - 088 - 0.90	ND		
99b089	99B - 089 - 0.15	60		
	99B - 089 - 0.30	ND		
	99B - 089 - 0.60	ND		
	99B - 089 - 0.90	ND		
9990	99B - 090 - 0.15	110	1.6	
	99B - 090 - 0.30	50		6.1
	99B - 090 - 0.60	30		
	99B - 090 - 0.90	ND		
99b091	99B - 091 - 0.15	130	3.5	
	99B - 091 - 0.30	30		7.2
	99B - 091 - 0.60	30		
	99B - 091 - 0.90	30		
9992	99B - 092 - 0.15	ND		
	99B - 092 - 0.30	ND		
	99B - 092 - 0.60	ND		
	99B - 092 - 0.90	ND		
99b093	99B - 093 - 0.15	310	8.6	
	99B - 093 - 0.30	210	2.4	
	99B - 093 - 0.60	150	4.8	
	99B - 093 - 0.90	90		
9994	99B - 094 - 0.15	180	7.0	
	99B - 094 - 0.30	180	10	
	99B - 094 - 0.60	120	6.6	
	99B - 094 - 0.90	190	11	
99b095	99B - 095 - 0.15	150	4.1	
	99B - 095 - 0.30	100		
	99B - 095 - 0.60	70		
	99B - 095 - 0.90	70		
9996	99B - 096 - 0.15	150	6.3	6.3
	99B - 096 - 0.30	ND		
	99B - 096 - 0.60	ND		
	99B - 096 - 0.90	ND		
99b097	99B - 097 - 0.15	350	6.4	
	99B - 097 - 0.30	30		
	99B - 097 - 0.60	30		
	99B - 097 - 0.90	30		
9998	99B - 098 - 0.15	160	3.2	
	99B - 098 - 0.30	ND		
	99B - 098 - 0.60	50		6.2
	99B - 098 - 0.90	ND		

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b099	99B - 099 - 0.15	30		
	99B - 099 - 0.30	40		
	99B - 099 - 0.60	ND		
	99B - 099 - 0.90	ND		
99100	99B - 100 - 0.15	40		
	99B - 100 - 0.30	ND		
	99B - 100 - 0.60	ND		
	99B - 100 - 0.90	ND		
99b101	99B - 101 - 0.15	940	18	
	99B - 101 - 0.30	80		
	99B - 101 - 0.60	290	1.8	
	99B - 101 - 0.90	90		
99102	99B - 102 - 0.15	70		
	99B - 102 - 0.30	50		
	99B - 102 - 0.60	ND		
	99B - 102 - 0.90	ND		
99b103	99B - 103 - 0.15	130	3.0	
	99B - 103 - 0.30	300	1.6	
	99B - 103 - 0.60	100		
	99B - 103 - 0.90	100		
99104	99B - 104 - 0.15	50		
	99B - 104 - 0.30	310	17	
	99B - 104 - 0.60	ND		
	99B - 104 - 0.90	ND		
99b105	99B - 105 - 0.15	150	6.5	
	99B - 105 - 0.30	80		
	99B - 105 - 0.60	30		
	99B - 105 - 0.90	30		
99106	99B - 106 - 0.15	30		
	99B - 106 - 0.30	150	8.3	7.0
	99B - 107 - 0.15	100		
	99B - 107 - 0.30	40		
99b107	99B - 107 - 0.60	30		
	99B - 107 - 0.90	ND		
	99B - 107 - 0.15	210	9.4	6.3
	99B - 108 - 0.30	40		
99b109	99B - 109 - 0.15	140	2.4	
	99B - 109 - 0.30	80		
	99B - 109 - 0.60	90		
	99B - 109 - 0.90	80		
99110	99B - 110 - 0.15	30		
	99B - 110 - 0.30	ND		
	99B - 110 - 0.60	ND		
	99B - 110 - 0.90	30		
99b111	99B - 111 - 0.15	70		
	99B - 111 - 0.30	260	7.7	
	99B - 111 - 0.60	180	1.5	
	99B - 111 - 0.90	80		
99112	99B - 112 - 0.15	130	7.3	
	99B - 112 - 0.30	ND		
	99B - 112 - 0.60	ND		
	99B - 112 - 0.90	80		
99b113	99B - 113 - 0.15	30		7.6
	99B - 113 - 0.30	30		
	99B - 113 - 0.60	60		
	99B - 113 - 0.90	60		
99b115	99B - 115 - 0.15	90		
	99B - 115 - 0.30	30		6.9
	99B - 115 - 0.60	30		
	99B - 115 - 0.90	ND		
99116	99B - 116 - 0.15	ND		
	99B - 116 - 0.30	ND		
	99B - 116 - 0.60	ND		
	99B - 116 - 0.90	ND		
99118	99B - 118 - 0.15	70		
	99B - 118 - 0.30	70		
	99B - 118 - 0.60	80		
	99B - 118 - 0.90	90		
99b119	99B - 119 - 0.15	80		
	99B - 119 - 0.30	310	14	
	99B - 119 - 0.60	80		
	99B - 119 - 0.90	80		
99120	99B - 120 - 0.15	ND		
	99B - 120 - 0.30	ND		
	99B - 120 - 0.60	50		
	99B - 120 - 0.90	40		
99b121	99B - 121 - 0.15	90		
	99B - 121 - 0.30	30		
	99B - 121 - 0.60	30		
	99B - 121 - 0.90	30		

TABLE 2
Total Lead Analytical Results
State Route 99
PM 41.3 to PM 53.94 in Tulare County
PM 0.0 to PM 1.0 in Fresno County

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b123	99B - 123 - 0.15	70		
	99B - 123 - 0.30	30		
	99B - 123 - 0.60	30		
	99B - 123 - 0.90	30		
99b125	99B - 125 - 0.15	90		
	99B - 125 - 0.30	ND		
	99B - 125 - 0.60	ND		
	99B - 125 - 0.90	ND		
99b127	99B - 127 - 0.15	250	1.2	
	99B - 127 - 0.30	50		7.6
	99B - 127 - 0.60	40		
	99B - 127 - 0.90	40		
99b129	99B - 129 - 0.15	ND		
	99B - 129 - 0.30	ND		
	99B - 129 - 0.60	ND		
	99B - 129 - 0.90	ND		
99b133	99B - 133 - 0.15	ND		
	99B - 133 - 0.30	ND		
	99B - 133 - 0.60	ND		
	99B - 133 - 0.90	ND		
99b135	99B - 135 - 0.15	ND		
	99B - 135 - 0.30	ND		
	99B - 135 - 0.60	ND		
	99B - 135 - 0.90	ND		
99b137	99B - 137 - 0.15	ND		
	99B - 137 - 0.30	30		
	99B - 137 - 0.60	ND		
	99B - 137 - 0.90	ND		
99b199	99B - 199 - 0.15	90		7.9
	99B - 199 - 0.30	70		
	99B - 199 - 0.60	30		
	99B - 199 - 0.90	30		
99b201	99B - 201 - 0.15	30		
	99B - 201 - 0.30	90		
	99B - 201 - 0.60	90		
	99B - 201 - 0.90	30		7.6
99b203	99B - 203 - 0.15	ND		
	99B - 203 - 0.30	ND		
	99B - 203 - 0.60	ND		
	99B - 203 - 0.90	ND		
99b205	99B - 205 - 0.15	50		
	99B - 205 - 0.30	30		
	99B - 205 - 0.60	30		8.6
	99B - 205 - 0.90	30		
99b207	99B - 207 - 0.15	70		
	99B - 207 - 0.30	30		
	99B - 207 - 0.60	60		
	99B - 207 - 0.90	40		8.9
99b209	99B - 209 - 0.15	60		
	99B - 209 - 0.30	ND		
	99B - 209 - 0.60	ND		8.4
	99B - 209 - 0.90	ND		
99b211	99B - 211 - 0.15	110	2.9	
	99B - 211 - 0.30	50		8.2
	99B - 211 - 0.60	50		
	99B - 211 - 0.90	60		
99b213	99B - 213 - 0.15	40		
	99B - 213 - 0.30	30		
	99B - 213 - 0.60	ND		
	99B - 213 - 0.90	ND		
99b215	99B - 215 - 0.15	120	32	
	99B - 215 - 0.30	ND		7.2
	99B - 215 - 0.60	40		
	99B - 215 - 0.90	30		
99b216	99B - 216 - 0.15	100		
	99B - 216 - 0.30	50		
	99B - 216 - 0.60	ND		
	99B - 216 - 0.90	ND		
99b217	99B - 217 - 0.15	110	2.9	
	99B - 217 - 0.30	120	4.4	
	99B - 217 - 0.60	90		
	99B - 217 - 0.90	80		
99b219	99B - 219 - 0.15	40		
	99B - 219 - 0.30	ND		
	99B - 219 - 0.60	ND		
	99B - 219 - 0.90	ND		
99b221	99B - 221 - 0.15	330	18	
	99B - 221 - 0.30	90		
	99B - 221 - 0.60	70		9.6
	99B - 221 - 0.90	90		

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b223	99B - 223 - 0.15	110	1.4	
	99B - 223 - 0.30	ND		
	99B - 223 - 0.60	ND		
	99B - 223 - 0.90	ND		
99b224	99B - 224 - 0.15	ND		
	99B - 224 - 0.30	ND		
	99B - 224 - 0.60	30		
	99B - 224 - 0.90	ND		7.0
99b225	99B - 225 - 0.15	60		
	99B - 225 - 0.30	80		
	99B - 225 - 0.60	60		
	99B - 225 - 0.90	70		
99b226	99B - 226 - 0.15	110	2.8	6.8
	99B - 226 - 0.30	ND		
	99B - 226 - 0.60	60		
	99B - 226 - 0.90	40		
99b227	99B - 227 - 0.15	40		
	99B - 227 - 0.30	90		
	99B - 227 - 0.60	ND		
	99B - 227 - 0.90	ND		
99b228	99B - 228 - 0.15	70		
	99B - 228 - 0.30	60		
	99B - 228 - 0.60	40		
	99B - 228 - 0.90	ND		
99b229	99B - 229 - 0.15	190	11	
	99B - 229 - 0.30	100		
	99B - 229 - 0.60	60		
	99B - 229 - 0.90	60		7.4
99b230	99B - 230 - 0.15	ND		
	99B - 230 - 0.30	80		
	99B - 230 - 0.60	ND		
	99B - 230 - 0.90	ND		
99b231	99B - 231 - 0.15	110	3.4	6.9
	99B - 231 - 0.30	ND		
	99B - 231 - 0.60	ND		
	99B - 231 - 0.90	ND		
99b232	99B - 232 - 0.15	40		
	99B - 232 - 0.30	80		
	99B - 232 - 0.60	130	7.0	
	99B - 232 - 0.90	150	7.2	
99b233	99B - 233 - 0.15	ND		
	99B - 233 - 0.30	50		
	99B - 233 - 0.60	140	7.2	6.5
	99B - 233 - 0.90	ND		
99b234	99B - 234 - 0.15	70		
	99B - 234 - 0.30	40		7.6
	99B - 234 - 0.60	ND		
	99B - 234 - 0.90	ND		
99b235	99B - 235 - 0.15	ND		
	99B - 235 - 0.30	110	3.0	
	99B - 235 - 0.60	ND		
	99B - 235 - 0.90	ND		
99b236	99B - 236 - 0.15	60		
	99B - 236 - 0.30	30		
	99B - 236 - 0.60	ND		6.6
	99B - 236 - 0.90	ND		
99b237	99B - 237 - 0.15	ND		
	99B - 237 - 0.30	80		
	99B - 237 - 0.60	ND		
	99B - 237 - 0.90	ND		
99b238	99B - 238 - 0.15	140	NA	
	99B - 238 - 0.30	140	0.094	
	99B - 238 - 0.60	ND		
	99B - 238 - 0.90	ND		
99b239	99B - 239 - 0.15	40		
	99B - 239 - 0.30	100		
	99B - 239 - 0.60	40		
	99B - 239 - 0.90	30		6.3
99b240	99B - 240 - 0.15	ND		
	99B - 240 - 0.30	90		
	99B - 240 - 0.60	ND		
	99B - 240 - 0.90	ND		
99b241	99B - 241 - 0.15	50		
	99B - 241 - 0.30	40		
	99B - 241 - 0.60	ND		
	99B - 241 - 0.90	ND		
99b242	99B - 242 - 0.15	30		
	99B - 242 - 0.30	40		
	99B - 242 - 0.60	ND		
	99B - 242 - 0.90	ND		

TABLE 2
Total Lead Analytical Results
State Route 99
PM 41.3 to PM 53.94 in Tulare County
PM 0.0 to PM 1.0 in Fresno County

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b243	99B - 243 - 0.15	70		
	99B - 243 - 0.30	ND		7.8
	99B - 243 - 0.60	ND		7.7
	99B - 243 - 0.90	30		
99b244	99B - 244 - 0.15	80		
	99B - 244 - 0.30	ND		
	99B - 244 - 0.60	ND		
	99B - 244 - 0.90	ND		
99b245	99B - 245 - 0.15	50		
	99B - 245 - 0.30	50		
	99B - 245 - 0.60	30		
	99B - 245 - 0.90	ND		
99b246	99B - 246 - 0.15	80		
	99B - 246 - 0.30	120	6.1	
	99B - 246 - 0.60	ND		
	99B - 246 - 0.90	ND		
99b247	99B - 247 - 0.15	ND		
	99B - 247 - 0.30	40		
	99B - 247 - 0.60	ND		
	99B - 247 - 0.90	100		
99b248	99B - 248 - 0.15	60		
	99B - 248 - 0.30	100		
	99B - 248 - 0.60	ND		
	99B - 248 - 0.90	ND		
99b249	99B - 249 - 0.15	30		
	99B - 249 - 0.30	50		
	99B - 249 - 0.60	ND		
	99B - 249 - 0.90	ND		
99b250	99B - 250 - 0.15	ND		
	99B - 250 - 0.30	ND		
	99B - 250 - 0.60	ND		
	99B - 250 - 0.90	ND		
99b251	99B - 251 - 0.15	90		
	99B - 251 - 0.30	ND		
	99B - 251 - 0.60	ND		
	99B - 251 - 0.90	ND		
99b252	99B - 252 - 0.15	60		
	99B - 252 - 0.30	210	4.0	
	99B - 252 - 0.60	40		8.4
	99B - 252 - 0.90	ND		
99b253	99B - 253 - 0.15	100		7.4
	99B - 253 - 0.30	80		
	99B - 253 - 0.60	ND		
	99B - 253 - 0.90	ND		
99b254	99B - 254 - 0.15	50		
	99B - 254 - 0.30	30		
	99B - 254 - 0.60	ND		
	99B - 254 - 0.90	ND		
99b255	99B - 255 - 0.15	140	4.6	
	99B - 255 - 0.30	ND		8.5
	99B - 255 - 0.60	ND		
	99B - 255 - 0.90	ND		
99b256	99B - 256 - 0.15	60		7.3
	99B - 256 - 0.30	60		
	99B - 256 - 0.60	30		
	99B - 256 - 0.90	ND		
99b257	99B - 257 - 0.15	ND		
	99B - 257 - 0.30	80		7.8
	99B - 257 - 0.60	ND		
	99B - 257 - 0.90	ND		
99b258	99B - 258 - 0.15	60		
	99B - 258 - 0.30	30		
	99B - 258 - 0.60	ND		
	99B - 258 - 0.90	ND		
99b259	99B - 259 - 0.15	50		
	99B - 259 - 0.30	ND		
	99B - 259 - 0.60	ND		
	99B - 259 - 0.90	ND		
99b260	99B - 260 - 0.15	ND		
	99B - 260 - 0.30	ND		8.1
	99B - 260 - 0.60	ND		
	99B - 260 - 0.90	70		
99b261	99B - 261 - 0.15	60		
	99B - 261 - 0.30	40		
	99B - 261 - 0.60	50		
	99B - 261 - 0.90	ND		
99b262	99B - 262 - 0.15	80		
	99B - 262 - 0.30	250	8.5	
	99B - 262 - 0.60	40		
	99B - 262 - 0.90	ND		

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b263	99B - 263 - 0.15	50		
	99B - 263 - 0.30	140	NA	
	99B - 263 - 0.60	ND		
	99B - 263 - 0.90	30		8.3
99b264	99B - 264 - 0.15	30		
	99B - 264 - 0.30	ND		
	99B - 264 - 0.60	70		
	99B - 264 - 0.90	430	7.5	
99b265	99B - 265 - 0.15	50		
	99B - 265 - 0.30	30		
	99B - 265 - 0.60	ND		
	99B - 265 - 0.90	ND		
99b266	99B - 266 - 0.15	120	NA	
	99B - 266 - 0.30	ND		7.7
	99B - 266 - 0.60	ND		
	99B - 266 - 0.90	ND		
99b267	99B - 267 - 0.15	100		7.4
	99B - 267 - 0.30	50		
	99B - 267 - 0.60	ND		
	99B - 267 - 0.90	ND		
99b268	99B - 268 - 0.15	40		
	99B - 268 - 0.30	100		
	99B - 268 - 0.60	90		
	99B - 268 - 0.90	ND		
99b269	99B - 269 - 0.15	90		
	99B - 269 - 0.30	ND		
	99B - 269 - 0.60	ND		
	99B - 269 - 0.90	ND		
99b270	99B - 270 - 0.15	40		
	99B - 270 - 0.30	50		8.1
	99B - 270 - 0.60	90		
	99B - 270 - 0.90	60		
99b271	99B - 271 - 0.15	ND		
	99B - 271 - 0.30	90		
	99B - 271 - 0.60	40		
	99B - 271 - 0.90	30		8.1
99b272	99B - 272 - 0.15	100		
	99B - 272 - 0.30	100		
	99B - 272 - 0.60	30		
	99B - 272 - 0.90	30		
99b273	99B - 273 - 0.15	80		
	99B - 273 - 0.30	540	10	
	99B - 273 - 0.60	70		
	99B - 273 - 0.90	ND		
99b274	99B - 274 - 0.15	100		
	99B - 274 - 0.30	60		
	99B - 274 - 0.60	40		
	99B - 274 - 0.90	40		
99b275	99B - 275 - 0.15	40		
	99B - 275 - 0.30	230	10	7.6
	99B - 275 - 0.60	30		
	99B - 275 - 0.90	150	7.1	
99b276	99B - 276 - 0.15	130	NA	
	99B - 276 - 0.30	ND		
	99B - 276 - 0.60	ND		
	99B - 276 - 0.90	30		
99b277	99B - 277 - 0.15	190	7.0	
	99B - 277 - 0.30	ND		
	99B - 277 - 0.60	ND		
	99B - 277 - 0.90	ND		
99b278	99B - 278 - 0.15	ND		
	99B - 278 - 0.30	30		
	99B - 278 - 0.60	30		7.8
	99B - 278 - 0.90	30		
99b279	99B - 279 - 0.15	ND		
	99B - 279 - 0.30	140	NA	
	99B - 279 - 0.60	ND		
	99B - 279 - 0.90	ND		
99b280	99B - 280 - 0.15	40		
	99B - 280 - 0.30	ND		
	99B - 280 - 0.60	ND		
	99B - 280 - 0.90	ND		
99b281	99B - 281 - 0.15	190	2.9	7.8
	99B - 281 - 0.30	ND		
	99B - 281 - 0.60	ND		
	99B - 281 - 0.90	ND		
99b282	99B - 282 - 0.15	60		
	99B - 282 - 0.30	50		8.2
	99B - 282 - 0.60	30		
	99B - 282 - 0.90	ND		
99b283	99B - 283 - 0.15	50		8.2
	99B - 283 - 0.30	ND		
	99B - 283 - 0.60	ND		
	99B - 283 - 0.90	ND		

TABLE 2
Total Lead Analytical Results
State Route 99
PM 41.3 to PM 53.94 in Tulare County
PM 0.0 to PM 1.0 in Fresno County

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b284	99B - 284 - 0.15	ND		
	99B - 284 - 0.30	130	NA	
	99B - 284 - 0.60	30		
	99B - 284 - 0.90	30		
99b285	99B - 285 - 0.15	70		
	99B - 285 - 0.30	ND		
	99B - 285 - 0.60	ND		
	99B - 285 - 0.90	ND		
99b286	99B - 286 - 0.15	40		
	99B - 286 - 0.30	30		
	99B - 286 - 0.60	ND		
	99B - 286 - 0.90	ND		
99b287	99B - 287 - 0.15	50		
	99B - 287 - 0.30	ND		
	99B - 287 - 0.60	ND		
	99B - 287 - 0.90	ND		
99b288	99B - 288 - 0.15	180	5.2	
	99B - 288 - 0.30	110	5.7	
	99B - 288 - 0.60	100		
	99B - 288 - 0.90	40		8.1
99b289	99B - 289 - 0.15	ND		
	99B - 289 - 0.30	50		7.9
	99B - 289 - 0.60	ND		
	99B - 289 - 0.90	ND		
99b290	99B - 290 - 0.15	50		
	99B - 290 - 0.30	40		
	99B - 290 - 0.60	30		
	99B - 290 - 0.90	ND		
99b291	99B - 291 - 0.15	30		
	99B - 291 - 0.30	ND		
	99B - 291 - 0.60	ND		
	99B - 291 - 0.90	ND		
99b292	99B - 292 - 0.15	30		
	99B - 292 - 0.30	30		8.1
	99B - 292 - 0.60	40		
	99B - 292 - 0.90	ND		

Boring ID (GPS ID)	Sample Number (Boring ID with depth in meters)	EPA 7420 Total Lead (mg/kg)	WET 6010 STLC Lead (mg/L)	EPA 9045 pH
99b311	99B - 311 - 0.15	100		
	99B - 311 - 0.30	ND		
	99B - 311 - 0.60	ND		
	99B - 311 - 0.90	ND		
99b312	99B - 312 - 0.15	ND		
	99B - 312 - 0.30	ND		
	99B - 312 - 0.60	ND		
	99B - 312 - 0.90	ND		
99b313	99B - 313 - 0.15	80		
	99B - 313 - 0.30	130	0.55	
	99B - 313 - 0.60	100		
	99B - 313 - 0.90	70		
99b314	99B - 314 - 0.15	300	11	
	99B - 314 - 0.30	140	15	
	99B - 314 - 0.60	80		
	99B - 314 - 0.90	80		
99b315	99B - 315 - 0.15	170	1.6	
	99B - 315 - 0.30	40		
	99B - 315 - 0.60	30		
	99B - 315 - 0.90	30		
99b316	99B - 316 - 0.15	70		
	99B - 316 - 0.30	50		
	99B - 316 - 0.60	ND		
	99B - 316 - 0.90	ND		
99b317	99B - 317 - 0.15	140	6.5	
	99B - 317 - 0.30	40		
	99B - 317 - 0.60	60		
	99B - 317 - 0.90	60		8.4
99b318	99B - 318 - 0.15	280	0.56	
	99B - 318 - 0.30	80		
	99B - 318 - 0.60	40		
	99B - 318 - 0.90	30		
99b319	99B - 319 - 0.15	80		
	99B - 319 - 0.30	80		
	99B - 319 - 0.60	80		
	99B - 319 - 0.90	100		
99b320	99B - 320 - 0.15	ND		
	99B - 320 - 0.30	ND		
	99B - 320 - 0.60	ND		
	99B - 320 - 0.90	ND		
99b321	99B - 321 - 0.15	ND		
	99B - 321 - 0.30	ND		
	99B - 321 - 0.60	ND		
	99B - 321 - 0.90	ND		

**TABLE 3
DATA NORMALIZATION AND CONFIDENCE INTERVAL CALCULATION**

Caltrans - Aerially Deposited Lead Study
Route Route 99
PM 41.3 to PM 53.94 in Tulare County
PM 0.0 to PM 1.0 in Fresno County

Boring Number	Depth Interval 0 to 0.3 meters (0 to 1 foot)						Depth Interval 0.3 to 0.9 meters (1 to 3 feet)				
	Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)		Boring Number		Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)		
			WET	WET LN(X)					WET	WET LN(X)	
1	250	5.52	5.2	1.65		1	150	5.01	2.9	1.06	
2	42.5	3.75				2	25	3.22			
3	280	5.63	7.1	1.96		3	25	3.22			
4	62.5	4.14				4	25	3.22			
5	150	5.01				5	150	5.01	0.10	-2.30	
6	330	5.80	17.6	2.87		6	25	3.22			
7	80	4.38				8	25	3.22			
8	192.5	5.26	11	2.40		9	180	5.19			
9	150	5.01				10	25	3.22			
10	25	3.22				11	250	5.52	10	2.30	
11	100	4.61				12	25	3.22			
12	132.5	4.89	1.7	0.53		13	130	4.87			
13	180	5.19				14	25	3.22			
14	90	4.50				15	25	3.22			
15	100	4.61				16	25	3.22			
16	42.5	3.75				17	180	5.19	0.90	-0.11	
17	200	5.30	3.4	1.22		18	25	3.22			
18	102.5	4.63				19	100	4.61			
19	80	4.38				20	25	3.22			
20	312.5	5.74	4.5	1.50		21	230	5.44	4.3	1.46	
21	370	5.91	0.057	-2.86		23	180	5.19	3.3	1.19	
22	120	4.79				24	25	3.22			
23	80	4.38				25	1280	7.15	6.4	1.86	
24	25	3.22				26	25	3.22			
25	120	4.79				27	80	4.38			
26	190	5.25	8.2	2.10		28	25	3.22			
27	80	4.38				29	170	5.14	5.2	1.65	
28	72.5	4.28				30	62.5	4.14			
29	70	4.25				31	160	5.08			
30	190	5.25	9.2	2.22		32	25	3.22			
31	150	5.01				33	100	4.61			
32	72.5	4.28				34	43	3.75			
33	140	4.94				35	42.5	3.75			
34	290	5.67	6.8	1.92		37	130	4.87			
35	90	4.50				38	25	3.22			
36	100	4.61				39	60	4.09			
37	170	5.14				40	25	3.22			
38	62.5	4.14				41	180	5.19			

TABLE 3
DATA NORMALIZATION AND CONFIDENCE INTERVAL CALCULATION
 Caltrans - Aerially Deposited Lead Study
 Route Route 99
 PM 41.3 to PM 53.94 in Tulare County
 PM 0.0 to PM 1.0 in Fresno County

Depth Interval 0 to 0.3 meters (0 to 1 foot)					Depth Interval 0.3 to 0.9 meters (1 to 3 feet)				
Boring Number	Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)		Boring Number	Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)	
			WET	WET LN(X)				WET	WET LN(X)
39	25	3.22			42	42.5	3.75		
40	220	5.39	4.8	1.57	43	120	4.79		
41	370	5.91	35.8	3.58	44	62.5	4.14		
42	102.5	4.63			45	200	5.30		
43	170	5.14	3.1	1.13	46	25	3.22		
44	122	4.80			47	140	4.94		
45	190	5.25	3.3	1.19	48	25	3.22		
46	152.5	5.03	3.5	1.25	49	180	5.19	1.8	0.59
47	42.5	3.75			50	25	3.22		
48	42.5	3.75			51	110	4.70		
49	150	5.01			52	25	3.22		
50	25	3.22			53	150	5.01		
51	110	4.70			54	53	3.96		
52	290	5.67	7.6	2.03	55	190	5.25	2.1	0.74
53	150	5.01			56	42.5	3.75		
54	92.5	4.53			57	130	4.87		
55	90	4.50			58	25	3.22		
56	102.5	4.63			59	25	3.22		
57	190	5.25	3.9	1.36	60	25	3.22		
58	272.5	5.61	2.9	1.06	61	60	4.09		
59	60.0	4.09			62	12.5	2.53		
60	92.5	4.53			63	160	5.08		
61	290	5.67	16	2.77	64	25	3.22		
62	72.5	4.28			65	82.5	4.41		
63	270	5.60	4.7	1.55	66	140	4.94		
64	110.0	4.70			67	25	3.22		
65	220	5.39	2.7	0.99	68	25	3.22		
66	200	5.30	4.6	1.53	69	160	5.08		
67	52.5	3.96			70	25	3.22		
68	42.5	3.75			71	25	3.22		
69	150	5.01			72	25	3.22		
70	132.5	4.89	9.4	2.24	73	140	4.94		
71	112.5	4.72			74	140	4.94		
72	25	3.22			75	25	3.22		
73	320	5.77	8.0	2.08	76	42.5	3.75		
74	340	5.83	2.2	0.79	77	25	3.22		
75	80	4.38			78	25	3.22		
76	192.5	5.26	9.8	2.28	79	140	4.94		

**TABLE 3
DATA NORMALIZATION AND CONFIDENCE INTERVAL CALCULATION**

Caltrans - Aerially Deposited Lead Study
Route Route 99

PM 41.3 to PM 53.94 in Tulare County

PM 0.0 to PM 1.0 in Fresno County

Boring Number	Depth Interval 0 to 0.3 meters (0 to 1 foot)			Depth Interval 0.3 to 0.9 meters (1 to 3 feet)		
	Total Lead mg/kg	LN(X)	Soluble Lead (mg/l) WET LN(X)	Total Lead mg/kg	LN(X)	Soluble Lead (mg/l) WET LN(X)
77	25	3.22		60	4.09	
78	132.5	4.89	1.44	60	4.09	
79	230	5.44	1.39	42.5	3.75	
80	270	5.60	2.27	42.5	3.75	
81	100	4.61		25	3.22	
82	82.5	4.41		190	5.25	
83	100	4.61		42.5	3.75	
84	102.5	4.63		190	4.87	
85	250	5.52	1.47	62.5	4.14	
86	92.5	4.53		25	3.22	
87	190	5.25	1.25	42.5	3.75	
88	82.5	4.41		60	4.09	
89	72.5	4.28		25	3.22	
90	160	5.08	0.47	240	5.48	4.8
91	160	5.08	1.25	310	5.74	17.6
92	125	4.83		140	4.94	
93	520	6.25	2.40	25	3.22	
94	360	5.89	2.83	60	4.09	
95	250	5.52	1.41	62.5	4.14	1.57
96	162.5	5.09	1.84	25	3.22	2.87
97	380	5.94	1.86	25	3.22	
98	172.5	5.15	1.16	380	5.94	1.8
99	70	4.25		25	3.22	0.59
100	52.5	3.96		25	3.22	
101	1020	6.93	2.89	200	5.30	
102	120	4.79		25	3.22	
103	430	6.06	1.53	60	4.09	
104	360	5.89	2.83	42.5	3.75	
105	230	5.44	1.87	170	5.14	
106	180	5.19	2.12	42.5	3.75	
107	140	4.94	8.3	260	5.56	
108	250	5.52	9.4	92.5	4.53	
109	220	5.39	2.24	120	4.79	
110	42.5	3.75	0.88	42.5	3.75	
111	330	5.80	2.22	12.5	2.53	
112	142.5	4.96	9.2	170	5.14	
113	60	4.09	7.3	160	5.08	
115	120	4.79	1.99	90	4.50	
				60	4.09	

**TABLE 3
DATA NORMALIZATION AND CONFIDENCE INTERVAL CALCULATION**

Caltrans - Aerially Deposited Lead Study
Route Route 99

PM 41.3 to PM 53.94 in Tulare County
PM 0.0 to PM 1.0 in Fresno County

Boring Number	Depth Interval 0 to 0.3 meters (0 to 1 foot)					Boring Number	Depth Interval 0.3 to 0.9 meters (1 to 3 feet)				
	Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)				Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)		
			WET	WET	LN(X)				WET	WET	LN(X)
116	25	3.22				123	60	4.09			
118	140	4.94				125	25	3.22			
119	390	5.97	14	2.64		127	80	4.38			
120	25	3.22				129	25	3.22			
121	120	4.79				133	25	3.22			
123	100	4.61				135	25	3.22			
125	102.5	4.63				137A	25	3.22			
127	300	5.70	1.2	0.18		137B	60	4.09			
129	25	3.22				201	120	4.79			
133	25	3.22				203	25	3.22			
135	25	3.22				205	60	4.09			
137A	42.5	3.75				207	100	4.61			
137B	160	5.08				209	25	3.22			
201	120	4.79				211	110	4.70			
203	25	3.22				213	25	3.22			
205	80	4.38				215	70	4.25			
207	100	4.61				216	25	3.22			
209	72.5	4.28				217	170	5.14			
211	160	5.08	2.9	1.06		219	25	3.22			
213	70	4.25				221	160	5.08			
215	132.5	4.89	32	3.47		223	25	3.22			
216	150	5.01				224	42.5	3.75			
217	230	5.44	7.3	1.99		225	130	4.87			
219	52.5	3.96				226	120	4.79			
221	420	6.04	18	2.89		227	25	3.22			
223	122.5	4.81	1.4	0.34		228	52.5	3.96			
224	25	3.22				229	120	4.79			
225	140	4.94				230	25	3.22			
226	122.5	4.81	2.8	1.03		231	25	3.22			
227	130	4.87				232	280	5.63	14.2	2.65	
228	130	4.87				233	152.5	5.03	7.2	1.97	
229	290	5.67	11	2.40		234	25	3.22			
230	92.5	4.53				235	25	3.22			
231	122.5	4.81	3.4	1.22		236	25	3.22			
232	120	4.79				237	25	3.22			
233	62.5	4.14				238	25	3.22			
234	110	4.70				239	70	4.25			
235	122.5	4.81	3.0	1.10		240	25	3.22			

**TABLE 3
DATA NORMALIZATION AND CONFIDENCE INTERVAL CALCULATION**

Caltrans - Aerially Deposited Lead Study

Route Route 99

PM 41.3 to PM 53.94 in Tulare County

PM 0.0 to PM 1.0 in Fresno County

Boring Number	Depth Interval 0 to 0.3 meters (0 to 1 foot)						Depth Interval 0.3 to 0.9 meters (1 to 3 feet)				
	Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)				Boring Number	Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)	
			WET	WET	LN(X)					WET	WET LN(X)
236	90	4.50				241	25	3.22			
237	92.5	4.53				242	25	3.22			
238	280	5.63	0.094	-2.36		243	42.5	3.75			
239	140	4.94				244	25	3.22			
240	102.5	4.63				245	42.5	3.75			
241	90	4.50				246	25	3.22			
242	70	4.25				247	112.5	4.72			
243	82.5	4.41				248	25	3.22			
244	92.5	4.53				249	25	3.22			
245	100	4.61				250	25	3.22			
246	200	5.30	6.1	1.81		251	25	3.22			
247	52.5	3.96				252	52.5	3.96			
248	160	5.08				253	25	3.22			
249	80	4.38				254	25	3.22			
250	25	3.22				255	25	3.22			
251	102.5	4.63				256	42.5	3.75			
252	270	5.60	4.0	1.39		257	25	3.22			
253	180	5.19				258	25	3.22			
254	80	4.38				259	25	3.22			
255	152.5	5.03	4.6	1.53		260	82.5	4.41			
256	120	4.79				261	62.5	4.14			
257	92.5	4.53				262	52.5	3.96			
258	90	4.50				263	42.5	3.75			
259	62.5	4.14				264	500	6.21	7.5	2.01	
260	25	3.22				265	25	3.22			
261	100	4.61				266	12.5	2.53			
262	330	5.80	8.5	2.14		267	25	3.22			
263	190	5.25				269	25	3.22			
264	42.5	3.75				270	150	5.01			
265	80	4.38				271	70	4.25			
266	132.5	4.89				272	60	4.09			
267	150	5.01				273	82.5	4.41			
268	140	4.94				274	40	3.69			
269	102.5	4.63				275	180	5.19	7.1	1.96	
270	90	4.50				276	42.5	3.75			
271	102.5	4.63				277	25	3.22			
272	200	5.30				278	60	4.09			
273	620	6.43	10	2.30		279	25	3.22			

**TABLE 3
DATA NORMALIZATION AND CONFIDENCE INTERVAL CALCULATION**

Caltrans - Aerially Deposited Lead Study

Route Route 99

PM 41.3 to PM 53.94 in Tulare County

PM 0.0 to PM 1.0 in Fresno County

Depth Interval 0 to 0.3 meters (0 to 1 foot)					Depth Interval 0.3 to 0.9 meters (1 to 3 feet)				
Boring Number	Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)		Boring Number	Total Lead mg/kg	Total Lead LN(X)	Soluble Lead (mg/l)	
			WET	WET LN(X)				WET	WET LN(X)
274	160	5.08			280	25	3.22		
275	270	5.60	10	2.30	281	25	3.22		
276	142.5	4.96			282	42.5	3.75		
277	202.5	5.31	7.0	1.95	283	25	3.22		
278	42.5	3.75			284	60	4.09		
279	152.5	5.03			285	25	3.22		
280	52.5	3.96			286	25	3.22		
281	202.5	5.31	2.9	1.06	287	25	3.22		
282	110	4.70			288	140	4.94		
283	62.5	4.14			289	25	3.22		
284	142.5	4.96			290	42.5	3.75		
285	82.5	4.41			291	25	3.22		
286	70	4.25			292	52.5	3.96		
287	62.5	4.14			311	25	3.22		
288	290	5.67	10.9	2.39	312	25	3.22		
289	62.5	4.14			313	170	5.14		
290	90	4.50			314	160	5.08		
291	42.5	3.75			315	60	4.09		
292	60	4.09			316	25	3.22		
311	112.5	4.72			317	120	4.79		
312	25	3.22			318	70	4.25		
313	210	5.35	0.55	-0.60	319	180	5.19		
314	440	6.09	26	3.26	320	25	3.22		
315	210	5.35	1.6	0.47	321	25	3.22		
316	120	4.79							
317	180	5.19	6.5	1.87					
318	360	5.89	0.56	-0.58					
319	180	5.19							
320	25	3.22							
321	25	3.22							

Lognormal Population Characterization					Lognormal Population Characterization				
Mean	148.80	4.75	7.40	1.60	Mean	79.15	3.95	5.72	1.30
Standard Deviation	116.80	0.74	6.66	1.08	Standard Deviation	108.91	0.84	4.71	1.21
H (0.95) for UCL		1.99		2.29	H (0.95) for UCL		2.07		3.03
No. of Samples	220		75		No. of Samples	214		17	
95% UCL	166.88		11.74		95% UCL	83.59		19.16	

Sample Location Coordinates for State Route 99

PM 41.3 to 53.94 in Tulare County and 0.0 to 7.1 in Fresno County
336 Borehole Locations including PM 1.0 to 7.1 which were not sampled

Boring ID	Latitude	Longitude	MSL
99b001	36.35897379	-119.4285564	86.748
9902	36.35876822	-119.4283018	85.652
99b003	36.36186472	-119.4290593	86.17
9904	36.36186962	-119.428788	85.67
99b005	36.36461943	-119.430235	86.082
9906	36.36467544	-119.4299916	86.461
99b007	36.36739878	-119.432052	85.459
9908	36.36780014	-119.4320584	84.977
99b009	36.36997136	-119.4337302	85.912
9910	36.3701405	-119.4335953	87.35
99b011	36.37265849	-119.4355041	85.012
9912	36.37278938	-119.4353268	86.978
99b013	36.37556371	-119.437424	84.589
9914	36.37567686	-119.4372368	86.092
99b015	36.37803948	-119.4390514	84.815
9916	36.37814912	-119.4388755	85.834
99b017	36.38125392	-119.4411654	84.879
9918	36.380984	-119.4407346	84.643
99b019	36.38385706	-119.4428706	85.332
9920	36.38396574	-119.442716	84.814
99b021	36.3859979	-119.444285	85.244
9922	36.38554421	-119.4437359	84.874
99b023	36.38938619	-119.4465265	85.109
9924	36.38675062	-119.4445438	85.063
99b025	36.39265862	-119.448683	84.562
9926	36.38943305	-119.4463182	84.705
99b027	36.39570881	-119.4506997	84.954
9928	36.39273907	-119.4484919	84.103
99b029	36.39937397	-119.4531125	85.134
9930	36.39579818	-119.4505209	84.052
99b031	36.40501435	-119.4568353	84.855
9932	36.39945279	-119.4529358	83.932
99b033	36.40820293	-119.4590406	84.617
9934	36.40136751	-119.4541881	84.161
99b035	36.41181815	-119.4613241	83.562
9936	36.40259256	-119.4550003	85.678
99b037	36.41538773	-119.4636822	83.55
9938	36.40508437	-119.4566533	85.961
99b039	36.41861107	-119.4658055	83.972
9940	36.4059027	-119.4571775	85.336
99b041	36.4227536	-119.4685384	83.915
9942	36.40795156	-119.4585331	85.437
99b043	36.42591697	-119.4706282	84.216
9944	36.41102419	-119.4605627	85.067
99b045	36.42967078	-119.4731078	84.968
9946	36.41545268	-119.4634845	84.49
99b047	36.43308421	-119.4753539	86.196
9948	36.41869711	-119.4656237	84.342
99b049	36.43647328	-119.4775871	86.055

Sample Location Coordinates for State Route 99

PM 41.3 to 53.94 in Tulare County and 0.0 to 7.1 in Fresno County
336 Borehole Locations including PM 1.0 to 7.1 which were not sampled

Boring ID	Latitude	Longitude	MSL
9950	36.42207044	-119.4678458	84.32
99b051	36.43977776	-119.4797725	85.882
9952	36.42600511	-119.4704412	85.321
99b053	36.44276705	-119.4817587	88.317
9954	36.42974857	-119.4728981	85.466
99b055	36.44522196	-119.4838195	88.024
9956	36.43318572	-119.4751664	85.827
99b057	36.44759643	-119.4862465	87.917
9958	36.43656323	-119.4774036	86.733
99b059	36.44967789	-119.4884581	88.264
9960	36.43985768	-119.4795755	87.066
99b061	36.4521123	-119.4905112	87.769
9962	36.44285845	-119.4815474	88.465
99b063	36.45627853	-119.4921525	89.926
9964	36.44655858	-119.4849327	88.261
99b065	36.45666215	-119.4922631	89.262
9966	36.44978104	-119.4883483	87.901
99b067	36.4587878	-119.4929337	90.058
9968	36.45297869	-119.4907506	88.879
99b069	36.4616702	-119.4941485	87.707
9970	36.45631166	-119.4919869	88.921
99b071	36.46438009	-119.4960887	87.465
9972	36.45881579	-119.4927153	90.029
99b073	36.46696535	-119.4976275	90.146
9974	36.46174234	-119.4939938	89.518
99b075	36.46967262	-119.4994482	88.12
9976	36.46480417	-119.4959858	89.103
99b077	36.46966534	-119.4995665	88.544
9978	36.46696484	-119.4974047	89.296
99b079	36.47235991	-119.5012022	89.962
9980	36.46975427	-119.4992589	89.647
99b081	36.47237034	-119.5013565	90.585
9982	36.47086558	-119.499996	89.261
99b083	36.47519446	-119.5030666	90.93
9984	36.47245387	-119.5010468	89.456
99b085	36.47518883	-119.5032157	90.134
9986	36.47529737	-119.5029226	89.269
99b087	36.47726672	-119.5044458	90.465
9988	36.47736484	-119.5042821	89.343
99b089	36.47724972	-119.5045771	90.41
9990	36.48079794	-119.5065582	90.453
99b091	36.48068509	-119.506718	91.435
9992	36.48336081	-119.5085645	90.651
99b093	36.48067742	-119.5068585	91.032
9994	36.48541793	-119.5106546	92.104
99b095	36.48323856	-119.5087068	91.13
9996	36.48718513	-119.5134323	91.488
99b097	36.48319847	-119.5088398	91.269
9998	36.48935048	-119.517056	88.29

Sample Location Coordinates for State Route 99

PM 41.3 to 53.94 in Tulare County and 0.0 to 7.1 in Fresno County
336 Borehole Locations including PM 1.0 to 7.1 which were not sampled

Boring ID	Latitude	Longitude	MSL
99b099	36.4852764	-119.5107418	91.975
99100	36.49262119	-119.5224738	88.314
99b101	36.48525271	-119.5108295	90.259
99102	36.49388323	-119.5246052	86.401
99b103	36.48704557	-119.5135419	93.068
99104	36.49411402	-119.5249875	87.019
99b105	36.48872293	-119.5164352	91.897
99106	36.49762774	-119.5327048	88.885
99b107	36.49000134	-119.5184801	90.498
99108	36.49944841	-119.5364969	88.146
99b109	36.4923927	-119.5225414	90.937
99110	36.50073253	-119.5388027	89.903
99b111	36.49398433	-119.5251074	89.983
99112	36.50159264	-119.540198	89.54
99b113	36.49563875	-119.528572	91.528
99114	36.50482863	-119.5449829	90.537
99b115	36.49748308	-119.5327634	92.313
99116	36.50774276	-119.5491823	91.077
99b117	36.49905882	-119.53613	90.931
99118	36.50901968	-119.5507768	91.265
99b119	36.50150609	-119.5402903	85.835
99120	36.51151189	-119.5534878	93.546
99b121	36.50317998	-119.5429611	90.685
99122	36.51566798	-119.5583049	94.2
99b123	36.50537302	-119.5460097	87.09
99124	36.52240382	-119.5666196	92.601
99b125	36.50656966	-119.5478866	90.028
99126	36.5247391	-119.5695259	92.96
99b127	36.50888129	-119.5508484	89.131
99128	36.52738235	-119.5726135	92.008
99b129	36.51126747	-119.5535728	93.184
99130	36.52909524	-119.574699	90.889
99b131	36.51264196	-119.5549648	94.863
99132	36.53024219	-119.5760698	88.933
99b133	36.51436543	-119.5570286	95.816
99134	36.53193371	-119.5780815	89.484
99b135	36.51630989	-119.5593249	95.163
99136	36.53381078	-119.5802388	89.988
99b137	36.51833036	-119.5619584	96.405
99138	36.537483	-119.5846063	93.659
99b139	36.52050267	-119.5645273	92.155
99140	36.53982662	-119.5874114	92.982
99b141	36.52245948	-119.5670886	91.535
99142	36.54153671	-119.5894296	94.154
99b143	36.52460767	-119.5696095	92.85
99144	36.54386972	-119.5921848	93.773
99b145	36.52650726	-119.5719913	92.588
99146	36.55004546	-119.5994678	92.981
99b147	36.52884599	-119.5746346	91.265

Sample Location Coordinates for State Route 99

PM 41.3 to 53.94 in Tulare County and 0.0 to 7.1 in Fresno County
336 Borehole Locations including PM 1.0 to 7.1 which were not sampled

Boring ID	Latitude	Longitude	MSL
99148	36.55251179	-119.602408	92.761
99b149	36.53075289	-119.5770163	89.588
99150	36.55416032	-119.6043653	93.136
99b151	36.53313346	-119.5797078	91.516
99152	36.55570049	-119.6061859	93.282
99b153	36.53518835	-119.5822744	93.549
99154	36.55669552	-119.607373	92.855
99b155	36.53737703	-119.5847393	92.717
99156	36.5620383	-119.6134056	97.628
99b157	36.5392759	-119.5871174	94.524
99158	36.57127098	-119.6235576	96.938
99b159	36.54144204	-119.5895539	92.79
99160	36.58025146	-119.633361	96.516
99b161	36.54355431	-119.5921827	95.122
99162	36.58275168	-119.6361085	95.631
99b163	36.5458243	-119.5947642	91.677
99164	36.58356365	-119.6369976	94.439
99b165	36.54765731	-119.5970441	94.811
99166	36.57930149	-119.6329635	96.731
99b167	36.54993848	-119.5996381	91.638
99168	36.57316043	-119.626214	97.029
99b169	36.5518144	-119.601956	94.12
99170	36.56597462	-119.6182879	96.345
99b171	36.55404653	-119.604495	92.011
99172	36.56213026	-119.6140406	96.328
99b173	36.55605851	-119.6070001	94.685
99174	36.55658995	-119.6078552	92.398
99b175	36.55796943	-119.6091272	95.095
99176	36.55659187	-119.6078556	92.634
99b177	36.56065914	-119.6122375	99.849
99178	36.55595117	-119.6070999	92.942
99b179	36.56258429	-119.6142347	96.386
99180	36.55502907	-119.6060107	92.239
99b181	36.56490577	-119.616906	102.062
99182	36.55368225	-119.6044205	91.293
99b183	36.56776764	-119.6199418	97.658
99184	36.55168506	-119.6020442	93.004
99b185	36.57031514	-119.6228566	100.104
99186	36.55137002	-119.6016665	92.941
99b187	36.5719858	-119.6245849	94.655
99188	36.54943296	-119.5994519	92.76
99b189	36.5743679	-119.6273134	99.96
99190	36.54383163	-119.5928057	93.546
99b191	36.57733813	-119.6304869	97.386
99192	36.54340363	-119.5922891	93.695
99b193	36.57941206	-119.6328678	97.051
99194	36.54108026	-119.5894935	93.556
99b195	36.58185579	-119.6354358	92.138
99196	36.53926477	-119.5873386	93.441

Sample Location Coordinates for State Route 99

PM 41.3 to 53.94 in Tulare County and 0.0 to 7.1 in Fresno County
336 Borehole Locations including PM 1.0 to 7.1 which were not sampled

Boring ID	Latitude	Longitude	MSL
99b197	36.58322484	-119.6370253	94.551
99198	36.53691874	-119.5845762	93.217
99200	36.53391309	-119.5809805	92.2
99b201	36.46443253	-119.4959489	88.61
99b202	36.53024049	-119.5766273	89.83
99b203	36.44727202	-119.4860156	85.275
99b204	36.52790085	-119.5738932	92.86
99b205	36.44216393	-119.481464	84.504
99b206	36.52510233	-119.5705692	93.823
99b207	36.43223657	-119.4748783	84.939
99b208	36.52282766	-119.5677721	92.897
99b209	36.4269661	-119.4714141	83.974
99b210	36.52236418	-119.5671987	92.681
99b211	36.42119281	-119.4676042	83.295
99b212	36.52003734	-119.5642884	93.027
99b213	36.41677762	-119.4646993	83.481
99b214	36.51488787	-119.5579595	94.471
99b215	36.41108722	-119.4609366	84.079
99b216	36.51102408	-119.5535037	93.019
99b217	36.4018764	-119.4548666	83.744
99b218	36.50769525	-119.5497333	91.663
99b219	36.39633351	-119.4512085	83.32
99b220	36.50453344	-119.545206	91.829
99b221	36.39135386	-119.4479212	83.242
99b222	36.5030748	-119.5430263	92.157
99b223	36.38514669	-119.4438364	85.716
99224	36.50094518	-119.5397424	91.888
99b225	36.38037503	-119.4406829	86.235
99b226	36.49920283	-119.5366731	92.028
99b227	36.37525769	-119.4373222	86.805
99b228	36.49895721	-119.5361987	92.519
99b229	36.37044338	-119.4341472	86.499
99b230	36.49737556	-119.5329479	93.478
99b231	36.36398609	-119.4300026	87.066
99b232	36.49555486	-119.5287354	92.68
99b233	36.49388934	-119.5253072	91.008
99b234	36.49226894	-119.5226359	90.864
99b235	36.49042553	-119.5195684	90.834
99b236	36.4885816	-119.5165878	91.135
99b237	36.48667412	-119.513333	91.581
99b238	36.48511195	-119.5109608	90.85
99b239	36.48308863	-119.5089951	91.318
99b240	36.48057661	-119.5070315	91.329
99b241	36.47776626	-119.5051454	90.543
99b242	36.4750941	-119.5033786	90.304
99b243	36.47226495	-119.5015162	89.747
99b244	36.46956859	-119.4997495	90.736
99b245	36.46683802	-119.4979467	90.051

Sample Location Coordinates for State Route 99

PM 41.3 to 53.94 in Tulare County and 0.0 to 7.1 in Fresno County
336 Borehole Locations including PM 1.0 to 7.1 which were not sampled

Boring ID	Latitude	Longitude	MSL
99b246	36.46379084	-119.495931	88.122
99b247	36.46119064	-119.4942125	89.572
99b248	36.45937628	-119.4933145	89.615
99b249	36.45898285	-119.4932003	90.133
99b250	36.45586747	-119.4922978	89.985
99b251	36.45284025	-119.4911538	89.78
99b252	36.44992455	-119.4890319	89.821
99b253	36.44759738	-119.4865846	88.852
99b254	36.44527338	-119.4841354	88.357
99b255	36.44274196	-119.4820891	87.934
99b256	36.44206574	-119.4815991	87.991
99b257	36.43941499	-119.4798408	87.433
99b258	36.43668814	-119.4780413	86.89
99b259	36.43403207	-119.4762884	86.373
99b260	36.43214552	-119.4750464	85.931
99b261	36.42955527	-119.4733408	85.419
99b262	36.42688545	-119.4715794	84.429
99b263	36.4241372	-119.469768	83.142
99b264	36.42146205	-119.4680019	82.601
99b265	36.41832633	-119.4659247	83.616
99b266	36.41669696	-119.4648575	83.532
99b267	36.4139035	-119.463014	83.528
99b268	36.41099445	-119.4610995	82.76
99b269	36.4081147	-119.4591999	82.825
99b270	36.40583689	-119.4577022	82.303
99b271	36.40554348	-119.457503	82.904
99b272	36.40418168	-119.4566013	83.544
99b273	36.40250502	-119.4554956	84.431
99b274	36.40075425	-119.4543426	83.34
99b275	36.3998504	-119.4537512	83.902
99b276	36.39714915	-119.4519644	84.403
99b277	36.39445623	-119.4501957	84.279
99b278	36.39175513	-119.4484129	84.487
99b279	36.39125449	-119.4481006	84.368
99b280	36.38857891	-119.446325	84.711
99b281	36.38585621	-119.4445256	84.391
99b282	36.38322895	-119.4427976	84.938
99b283	36.38032595	-119.4408834	85.437
99b284	36.37759613	-119.4390732	85.63
99b285	36.37517868	-119.4374827	85.782
99b286	36.37232609	-119.4356092	85.852
99b287	36.37039505	-119.4343345	85.716
99b288	36.36757175	-119.432463	86.516
99b289	36.3648579	-119.4306903	87.085
99b290	36.36366182	-119.43005	86.928
99b291	36.36184213	-119.4293353	87.006
99b292	36.36090887	-119.4290732	87.237
99b293	36.58191714	-119.6356168	95.644
99b294	36.57740292	-119.6306646	98.806

Sample Location Coordinates for State Route 99

PM 41.3 to 53.94 in Tulare County and 0.0 to 7.1 in Fresno County
336 Borehole Locations including PM 1.0 to 7.1 which were not sampled

Boring ID	Latitude	Longitude	MSL
99b295	36.57490347	-119.6279161	99.153
99b296	36.57272972	-119.6255151	95.337
99b297	36.56804327	-119.620353	99.453
99b298	36.5657249	-119.6177956	97.143
99b299	36.5625012	-119.6142666	97.156
99b300	36.55831513	-119.6096443	96.906
99b301	36.55393499	-119.6044658	92.2
99b302	36.54945851	-119.599161	92.515
99b303	36.54527496	-119.5941992	93.221
99b304	36.5411562	-119.589307	94.393
99B305	36.53730021	-119.5847362	94.251
99b306	36.53280534	-119.5794198	91.772
99b307	36.5288106	-119.5747095	90.609
99b308	36.52465078	-119.5697713	92.442
99b309	36.52057173	-119.5647247	91.964
99b310	36.51622429	-119.5593321	95.172
99b311	36.51236687	-119.5547573	96.967
99b312	36.50919941	-119.5512983	91.223
99b313	36.50462521	-119.5450879	92.102
99b314	36.50117124	-119.5398749	92.281
99b315	36.46222373	-119.4946608	85.418
99b316	36.4370362	-119.4780623	84.658
99b317	36.41530168	-119.4637385	82.221
99b318	36.40485249	-119.4568416	82.07
99b319	36.50667454	-119.5479031	91.752
99b320	36.51134888	-119.5535453	92.875
99b321	36.51482192	-119.5574844	93.707
99b322	36.51889311	-119.5625267	95.168
99b323	36.52288881	-119.5674845	91.774
99b324	36.52683506	-119.5722557	92.207
99b325	36.53102203	-119.577203	89.495
99b326	36.53523853	-119.5822031	91.506
99b327	36.53948495	-119.5872284	92.116
99b328	36.54364063	-119.5921422	93.114
99b329	36.54866195	-119.5980992	92.491
99b330	36.55234368	-119.6024673	91.606
99b331	36.55659267	-119.6074994	92.685
99b332	36.5606944	-119.6121295	99.237
99b333	36.56504119	-119.616935	98.354
99b334	36.56980097	-119.6221635	97.626
99b335	36.57426993	-119.6270799	96.45
99b336	36 34 46.572266693 +	119 37 58.571387521 -	94.839

Notes for Tables 2, 3 and 4

ND = not detected at analytical reporting limit

mg/kg = milligrams per kilogram

mg/l - milligram per liter

ppm = parts per million

EPA 7420 reporting limit = 25 mg/kg

WET (Waste Extraction Test) reporting limit = 0.05 mg/l

GPS = Global Positioning System

Latitude in degrees

Longitude in degrees; negative sign is unavoidable artifact occurring as a result of data transfer from the corrected raw data files into the Excel 97 (TM) spreadsheet document.

Altitude in feet relative to the mean sea level (feet msl); values are height corrected at the time of measurement

STLC = Soluble Threshold Limit Concentration

0-0.3 m = sample depth in meters below ground surface

LN(X) = natural log of lead concentration

Total Lead = reported concentration from EPA method 7420 in milligrams per kilogram, equivalent to parts per million (ppm)

Soluble Lead = reported concentration from Waste Extraction Test (WET) method. Values in mg/l equivalent to ppm

mean = arithmetic mean

stdev = standard deviation

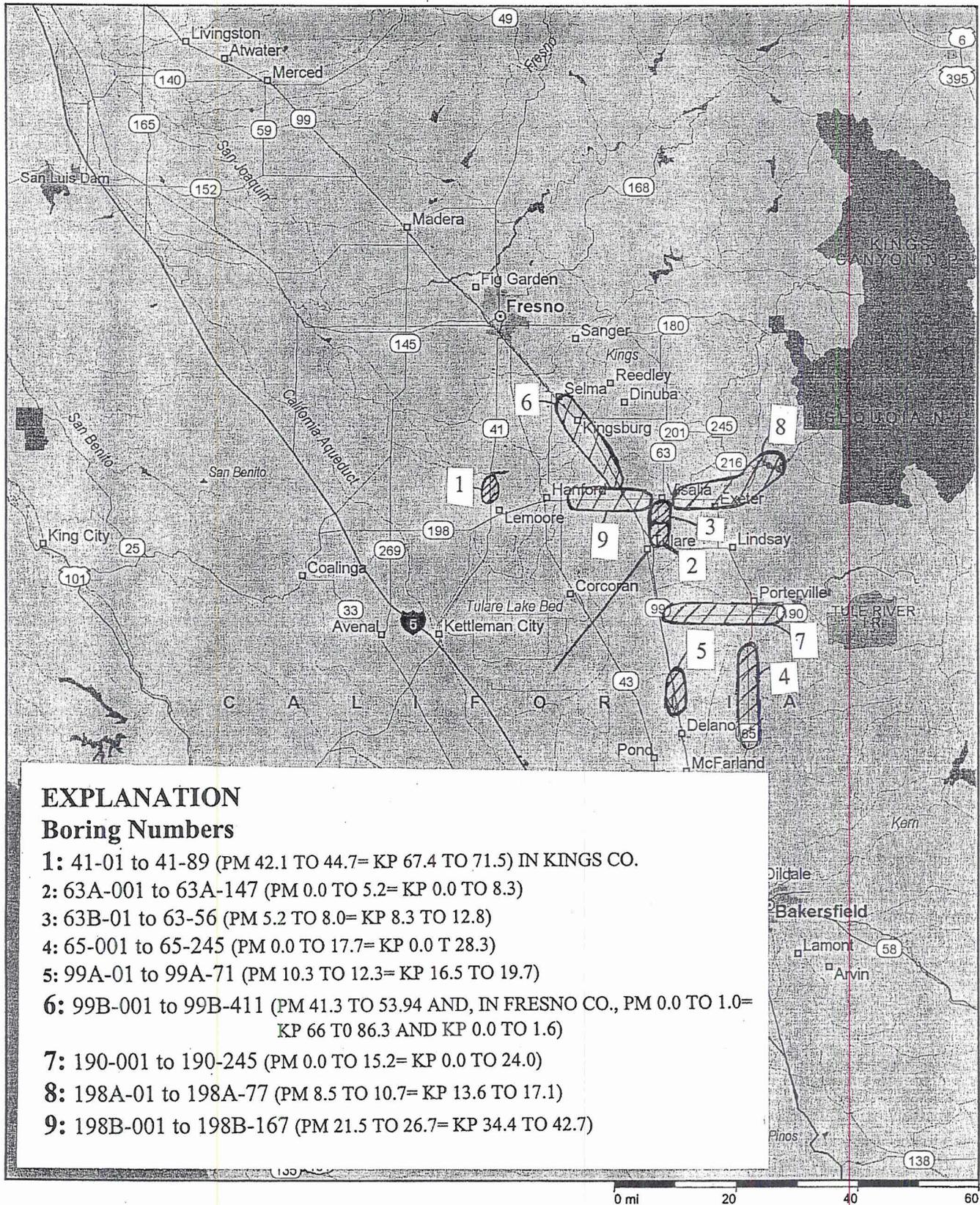
H(0.95) for UCL = H value for calculation of one-sided 95% Upper Confidence Level for a lognormal distribution (Gilbert, 1987)

95% UCL = 95% Upper Confidence Level. Interpreted as a 95% confidence that the true mean for a given population is no higher than the calculated value

Figures

FIGURE 1. SITE LOCATION MAP

Aerially Deposited Lead Study

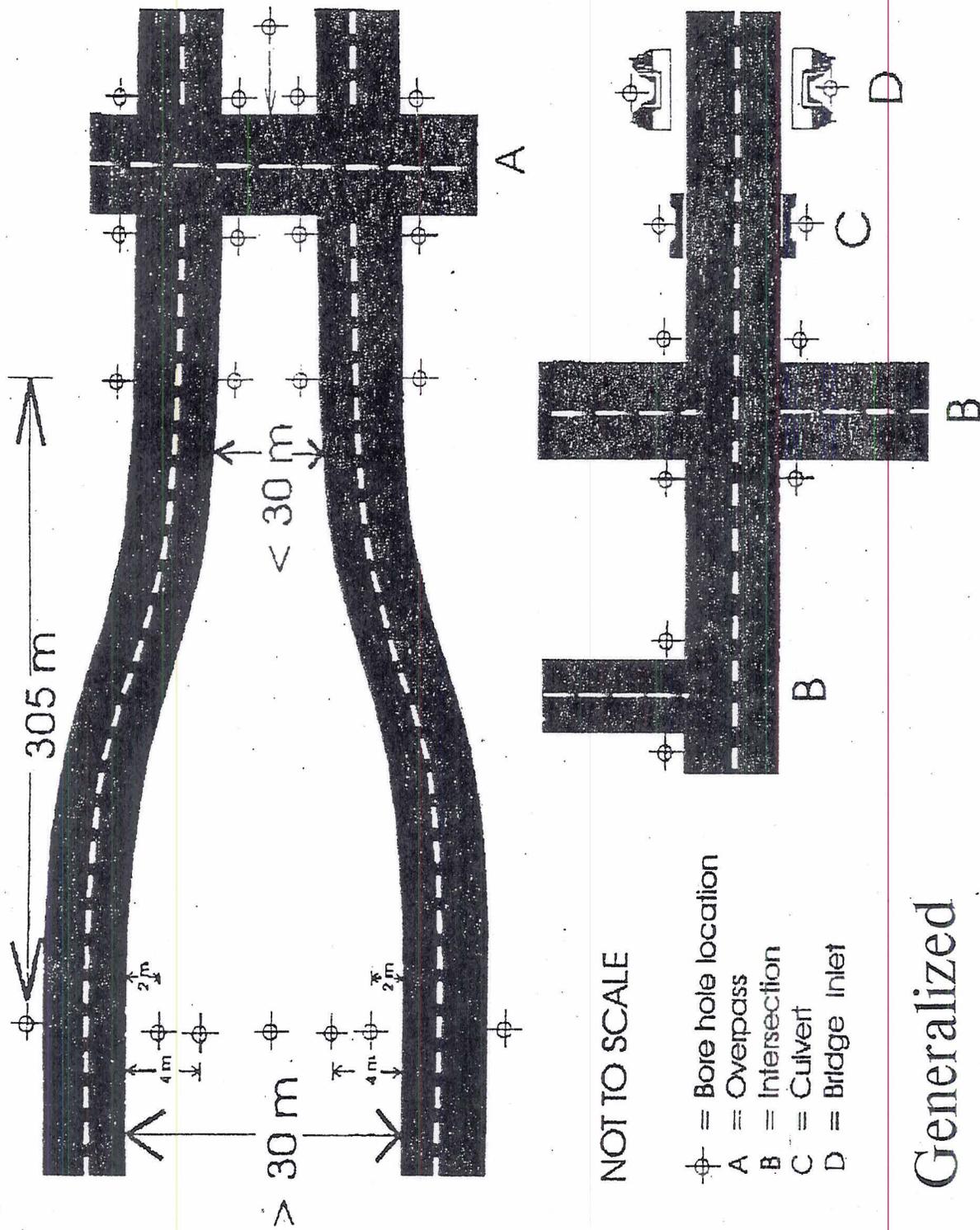


EXPLANATION

Boring Numbers

- 1: 41-01 to 41-89 (PM 42.1 TO 44.7= KP 67.4 TO 71.5) IN KINGS CO.
- 2: 63A-001 to 63A-147 (PM 0.0 TO 5.2= KP 0.0 TO 8.3)
- 3: 63B-01 to 63-56 (PM 5.2 TO 8.0= KP 8.3 TO 12.8)
- 4: 65-001 to 65-245 (PM 0.0 TO 17.7= KP 0.0 T 28.3)
- 5: 99A-01 to 99A-71 (PM 10.3 TO 12.3= KP 16.5 TO 19.7)
- 6: 99B-001 to 99B-411 (PM 41.3 TO 53.94 AND, IN FRESNO CO., PM 0.0 TO 1.0= KP 66 TO 86.3 AND KP 0.0 TO 1.6)
- 7: 190-001 to 190-245 (PM 0.0 TO 15.2= KP 0.0 TO 24.0)
- 8: 198A-01 to 198A-77 (PM 8.5 TO 10.7= KP 13.6 TO 17.1)
- 9: 198B-001 to 198B-167 (PM 21.5 TO 26.7= KP 34.4 TO 42.7)

FIGURE 2



NOT TO SCALE

- ⊕ = Bore hole location
- A = Overpass
- B = Intersection
- C = Culvert
- D = Bridge Inlet

Generalized Bore Hole Template

Appendix A
Permits

ENCROACHMENT PERMIT

TR-0120 (REV. 2/98)

Permit No. 0699-NSV-0743	
Dist/Co/Rte/PM 06/TUL, FRE, KIN/VAR/VAR	
EA 06-307000-HO	
Date October 27, 1999	
Fee Paid \$ EXEMPT	Deposit \$ EXEMPT
Performance Bond Amount (1) \$ N/A	Payment Bond Amount (2) \$ N/A
Bond Company	
Bond Number (1)	Bond Number (2)

In compliance with (Check one):

- Your application of **October 25, 1999**
- Utility Notice No. _____ of _____
- Agreement No. _____ of _____
- Your Reference No. _____

TO:

IT CORPORATION
 11315 SUNRISE GOLD CICLE, SUITE A
 RANCHO CORDOVA, CA 95742

 Attn: MIKE MILLER/DAVE SMITH
 Phone: (916) 858-2350

, PERMITTEE

And subject to the following, PERMISSION IS HEREBY GRANTED to:

enter upon State Highway right-of-way on State Highways 63, 65, 99, 190, and 198 at various post miles within the limits of District 06 boundaries in Tulare County, State Highway 41 from post mile 42.1 to post mile 44.7 in Kings County, and State Highway 99 from post mile 0.0 to post mile 1.0 in Fresno County to hand auger and obtain soil samples in accordance with Statewide Contract No. 43A0012 Task Order No. 06-3007000-HO.

NOTIFICATION: Permittee shall notify Caltrans Contract Manager forty-eight (48) hours prior to initial start of work and additional twenty-four (24) hours for subsequent starts when work schedule is interrupted.

NOTIFY: KEN DORAN, PH: (559) 243-8228

ADDITIONAL NOTIFICATION: PERMITTEE SHALL NOTIFY CALTRANS PERMIT INSPECTOR TWO (2) WORKING DAYS PRIOR TO STARTING WORK.

NOTIFY: BOB BIBB, PH: (559) 288-8553

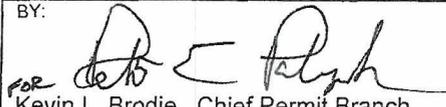
The following attachments are also included as part of this permit (Check applicable):			In addition to fee, the permittee will be billed actual costs for:		
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	General Provisions	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Review
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Utility Maintenance Provisions	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Inspection
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Special Provisions	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Field Work
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	A Cal-OSHA permit required prior to beginning work;	(If any Caltrans effort expended)		
		# N/A			

Yes No The information in the environmental documentation has been reviewed and is considered prior to approval of this permit.

This permit is void unless the work is complete before **December 7, 1999**
 This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.
 No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

REP (3) (1)
 cc: DO, RAB, JLF (2), STM (2),
 ENVIRONMENTAL - KEN DORAN

APPROVED:

 Bart Bohn, Director, District 6 - Central Region
 BY: 
 Kevin L. Brodie, Chief Permit Branch

ROBERT E. POLYACK (559) 488-4289

AUTHORIZED CONTRACTORS: NONE

CONTRACTORS: Notwithstanding Item 4. of the attached Department of Transportation Encroachment Permit General Provisions TR-0045 (REV. 10/98), your contractor(s) and/or subcontractor(s), if not named on this permit, are required to apply for and obtain an encroachment permit prior to starting work.

It is the Permittee's responsibility to assure that a copy of this permit, all attachments and plans are available on site for use and viewing by the Contractor and Subcontractors, Caltrans Employees and California Highway Patrol any time work is being accomplished within State Highway right-of-way.

CONSTRUCTION SIGNS: Permittee shall install and maintain appropriate Caltrans Standard construction zone signs whenever work is being performed within the State right-of-way.

TRAFFIC CONTROL: Permittee shall furnish all safety devices and measures, (including changeable message signs and flashing arrow boards) necessary to allow safe passage of traffic through the work area at all times as required in Item 14 of the attached General Provision.

If there is work within six (6) foot of a traffic lane, the permittee shall close the lane by placing appropriate advance signs, flag trees and reflective cones and a Changeable Message Sign (CMS), in conformance with the latest edition of the "Manual of Traffic Controls for Construction and Maintenance Work Zones" and/or the applicable Caltrans Standard Traffic Control System Plan.

If traffic begins to back-up due to the lane closure, permittee will terminate the closure until such time as traffic volume is reduced.

A traffic control company may be used if they have a current Caltrans District 06 Biennial Traffic Control Permit in their possession. If a traffic control company does not have a current Caltrans 06 Permit then they must apply and receive a Double Permit prior to beginning work.

PERMITTEE SHALL NOTIFY CALTRANS CENTRAL VALLEY TRANSPORTATION MANAGEMENT CENTER DISPATCH PH: (559) 488-4152 BEFORE BEGINNING A LANE CLOSURE AND WHEN REMOVING A LANE CLOSURE.

EXCAVATION: Any equipment that causes undue damage to existing pavement or highway facilities during operation shall not be allowed to continue and shall be removed from the right-of-way.

Materials generated from excavation shall be placed at locations to cause the least amount of obstruction to traffic. Excavated material, not to be used for backfill, shall be removed from the R/W at the end of each working period or as directed by Caltrans Engineer.

BACKFILL: Backfill of the boring holes may be with sand or concrete slurry.

If drilling is in a paved shoulder area then temporary patching with oil mix surfacing is permissible. Permanent patch shall be completed within 14 days after temporary patch has been placed. Permittee shall maintain all temporary patching in a safe trafficable condition. Permanent pavement and aggregate base thickness shall match the existing.

SURVEY MONUMENTS: Your attention is directed to Standard Specification, Section 7-1.11 Preservation of Property, and Business and Professions Code, Section 8771. Permittee shall physically inspect the work site and locate survey monuments prior to work commencement. Monuments that might be disturbed shall be referenced or reset in accordance with Business and Professions Code.

If feasible, monuments should not be set within the traveled way. All monuments that must be set or perpetuated in paved surfaces, shall be constructed in accordance with Caltrans Standard Specification Section 81, 'Monuments' and Standard Plan A74, Type D, or equal with prior approval of the District Surveys Engineer.

Copies of Corner Records filed or Record of Surveys recorded in compliance with the Business and Professions Code shall be forwarded to the District Surveys Engineer.

MISCELLANEOUS: Work shall be left in a clean, well groomed condition as directed by Caltrans Engineer or Inspector.

Any work not covered by plan or conditions of this permit shall be completed in accordance with current Caltrans Standards as directed by Caltrans Engineer.

All Personnel working within the State Highway right-of-way shall wear the required orange vest, jacket or shirt.

No work shall be accomplished in the state right-of-way on Saturdays, Sundays, after 3:00 p.m. on Fridays, designated legal holidays, on the last work day preceding designated legal holidays, on the next work day following a designated legal holiday. Designated legal holidays are: January 1st, the third Monday in January, February 12th, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, the second Monday in October, November 11th, Thanksgiving Day and the day after, and December 25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When November 11th falls on a Saturday, the preceding Friday shall be a Designated legal holiday. Minor exceptions may be approved, in writing, by the Caltrans Permit Inspector.

DAMAGE: Any damage done to private or public facilities shall be immediately repaired or replaced to the satisfaction of the Caltrans Inspector and/or facility owner at the expense of the Permittee. The Permittee shall be responsible for locating and protecting all underground facilities that may be in work area. Before any excavation the permittee or his contractor shall call USA UNDERGROUND ALERT Ph: 1-800-227-2600.

CONFLICT WITH STATE CONTRACTS: If this work comes in conflict with work in progress under State Construction Contract and both operations cannot be accomplished at the same time, the State Construction Contract work shall take precedence. State Contractor shall have access to the work-site at all times.

FAILURE TO PROPERLY PROVIDE SIGNS AND TRAFFIC CONTROL IN ACCORDANCE WITH CALTRANS STANDARDS AND ADHERE TO ALL REQUIREMENTS IN THIS PERMIT SHALL BE GROUNDS FOR REVOCATION OF THIS PERMIT AND/OR DENIAL OF FUTURE PERMITS.

Appendix B
Drilling and Sampling Procedures

The procedures that were used for drilling the borings and collecting soil samples are presented below.

- A standard encroachment permit was obtained from Caltrans. No county drilling permits were required.

Drilling and Soil Sample Collection

- Soil borings were advanced and sampled using hand-held auger soil sampling equipment.
- The drilling and sampling equipment was washed in a detergent rinse, two clear water rinses, and a final deionized/distilled water rinse prior to drilling.
- Soil borings were not logged for lithologic characteristics.
- Soil samples were collected from depths of approximately 0.15, 0.3, 0.6, and 0.9 meters (0.5, 1.0, 2.0, and 3.0 feet) below ground surface (bgs) along the selected State Routes. Soil samples were collected by transferring the desired amount of soil from the cutting end of the hand auger into a sealable plastic baggie
- The sample equipment was washed between locations using a bristle brush with Alconox solution followed by two clear water rinses, and a final deionized/distilled water rinse. The sample equipment was dried by air or with paper towels prior to sampling.
- Each sample was labeled with the sample number, date, project number, and sampler's initials.
- Any soil not retained for laboratory analysis was used as backfill.

Sample Retention and Analysis

- All samples were placed on ice in an insulated chest cooled to a temperature of approximately 4 degrees Celsius.
- Chain of custody procedures, including the use of chain of custody forms, were used to document sample handling and transport from collection to delivery to the laboratory for analysis.
- The samples were retained in the insulated chests preserved with ice in the custody of an IT employee. The samples were picked up by a courier supplied by the laboratory, shipped to the laboratory using an overnight courier service, or were delivered to the laboratory by IT personnel. The samples were transported to the laboratory in a motor vehicle.

- Soil samples were labeled with the boring hole number and the sample collection depth. For example, "198B-001-0.3" represented the first boring hole ("001) along the second site ("B") on Route 198 collected at a depth of 0.3 meters bgs. This convention of "198B-001-0.3" was used for samples collected along Route 198. See Figure 1 for the Site Location Map showing all State Route segments.
- Laboratory quality assurance/quality control procedures are summarized below:
 - Method Blank Frequency = one per 20 samples
 - Matrix Spike/Matrix Spike Duplicate = one per 20 samples
 - Laboratory Control Sample/Laboratory Control Sample Duplicate = one per 20 samples

Appendix C
Laboratory Analytical Reports
and Chain of Custody Forms
(Volume 2 of 2)

EXHIBIT - B



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. Army Engineer District, Sacramento
Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Flood Protection and Navigation Section (18602)

JUN 22 2010

Mr. Jay Punia, Executive Officer
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, California 95821

Dear Mr. Punia:

We have reviewed a permit application by the California Department of Transportation (application number 18602). This project includes replacing the existing Highway 99 northbound and southbound bridges over the Kings River with a 500 foot long, 117.2 foot wide bridge supported by 18 four foot diameter piers within the designated floodway of the Kings River. The project is located southeast of Kingsburg at 36.4968°N 119.5302°W NAD83, in Tulare County, California.

The District Engineer has no comments or recommendations regarding flood control because this proposed work does not affect a federally constructed project.

A file (SPK-2009-01567) has been opened because a Section 10 and/or Section 404 permit may be required. Please advise the applicant to contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Division, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250.

A copy of this letter is being furnished to the acting chief, Flood Project Integrity and Inspection Branch, 3310 El Camino Avenue, Suite LL30, Sacramento, CA 95821.

Sincerely,


for Meegan G. Nagy, P.E.
Chief, Flood Protection and Navigation Section