FOR CONTRACT NO.: 03-3F6404

INFORMATION HANDOUT

WATER QUALITY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WDID NO. 5A04CR00183

PERMIT

BUTTE COUNTY ENCROACHMENT PERMIT
PERMIT #100066

UNITED STATES ARMY CORPS OF ENGINEERS
NON-REPORTING NATIONWIDE 404 PERMIT

AGREEMENT

DEPARTMENT OF FISH AND GAME
STREAMBED ALTERATION 1602

MATERIALS INFORMATION

AERIALLY DEPOSITED LEAD, TRAFFIC STRIPE
PAINT AND NATURALLY OCCURRING ASBESTOS
SITE INVESTIGATION REPORT

ROUTE: 03-But-162-22.7/23.1

California Regional Water Quality Control Board
Central Valley Region
Karl E. Longley, ScD, P.E., Chair.

Linda S. Adams
Secretary for
Environmental Protection

415 Knollcrest Drive, Suite 100, Redding, California 96002
(530) 224-4845 • Fax (530) 224-4857
http://www.waterboards.ca.gov/centralvalley

Arnold Schwarzenegger
Governor

3 December 2009

Suzanne Melim
c/o California Department of Transportation
District 3
P.O. Box 911
Marysville, CA 95901

ACTION ON REQUEST FOR CLEAN WATER ACT §401 WATER QUALITY CERTIFICATION FOR DISCHARGE OF DREDGED AND/OR FILL MATERIALS FOR THE BUTTE 162 SIGNALIZATION PROJECT, WDID NO. 5A04CR00183, OROVILLE, BUTTE COUNTY

ACTION:

1. ☐ Order for Standard Certification
2. ■ Order for Technically-conditioned Certification
3. ☐ Order for Denial of Certification

WATER QUALITY CERTIFICATION STANDARD CONDITIONS:

1. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to §13330 of the California Water Code and §3867 of Title 23 of the California Code of Regulations (23 CCR).

2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. The validity of any non-denial certification action shall be conditioned upon total payment of the full fee required under 23 CCR §3833, unless otherwise stated in writing by the certifying agency.

4. Certification is valid for the duration of the described project. The Discharger shall notify the Central Valley Water Board in writing within 7 days of project completion.

ADDITIONAL CONDITIONS (for Certification Action 2):

In addition to the four standard conditions, the applicant shall satisfy the following:

1. Discharger shall notify the Central Valley Regional Water Quality Control Board (Central Valley Water Board) in writing of the start of any in-water activities.

2. Except for activities permitted by the U.S. Army Corps of Engineers (Corps) under §404 of the Clean Water Act, soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.

3. The discharge of petroleum products or other excavated materials to surface waters is prohibited.

4. Activities shall not cause turbidity increases in surface waters to exceed:

   a. Where natural turbidity is less than 1 Nephelometric Turbidity Units (NTUs), controllable factors shall not cause downstream turbidity to exceed 2 NTU;
   b. Where natural turbidity is between 1 and 5 NTUs, increases shall not exceed 1 NTU;
   c. Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent;
   d. Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs;
   e. Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.

   Except that these limits will be eased during in-water working periods to allow a turbidity increase of 15 NTU over background turbidity as measured in surface waters 300 feet downstream from the working area. In determining compliance with the above limits, appropriate averaging periods may be applied provided that beneficial uses will be fully protected.

5. Activities shall not cause settleable matter to exceed 0.1 mL/l in surface waters as measured in surface waters 300 feet downstream from the project work.

6. Activities shall not cause visible oil, grease, or foam in the work area or downstream.

7. All areas disturbed by project activities shall be protected from washout or erosion.

8. In the event that project activities result in the deposition of soil materials or creation of a visible plume in surface waters, the following monitoring shall be conducted immediately upstream and 300 feet downstream of the work site and the results reported to this office within two weeks

Parameter	Unit	Type of Sample	Frequency of Sample
Turbidity	**NTU**	**Grab**	Every 4 hours during in water work
Settleable Material	**mL/l**	**Grab**	Same as above.

9. Discharger shall notify the Central Valley Water Board immediately if the above criteria for turbidity, settleable matter, oil/grease, or foam are exceeded.

10. Discharger shall ensure all equipment has been inspected and is free of leaks (fuel, hydraulic and oil) before use in channel areas.

11. Discharger shall notify the Central Valley Water Board immediately of any spill of petroleum products or other organic or earthen materials.

12. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes §401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.

13. In response to a suspected violation of any condition of this certification, the Central Valley Water Board may require the holder of any permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the Central Valley Water Board deems appropriate, provided that the burden, including costs, of the reports shall be a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

14. In response to any violation of the conditions of this certification, the Central Valley Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

15. Discharger complies with all Department of Fish and Game 1600 requirements for the project as required in Lake & Streambed Alteration Agreement No. 1600-2009-0204-R2. Discharger shall comply with all requirements of Corps §404 Nationwide Permit Number 14 (Linear Transportation Projects).

16. The California Department of Transportation shall comply with their General NPDES Permit Order No 99-06-DWQ (NPDES No. CAS 000003) issued by the State Water Resources Control Board.

CENTRAL VALLEY WATER BOARD CONTACT PERSON:

Scott A. Zaitz, R.E.H.S., Redding Branch Office, 415 Knollcrest Drive, Suite 100, Redding, California 96002, (530) 224-4784, szaitz@waterboards.ca.gov

WATER QUALITY CERTIFICATION:

I hereby issue an order certifying that any discharge from the Butte 162 Signalization Project (WDID No. 5A04CR00183) will comply with the applicable provisions of §301 ("Effluent Limitations"), §302 ("Water Quality Related Effluent Limitations"), §303 ("Water Quality Standards and Implementation Plans"), §306 ("National Standards of Performance"), and §307

("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Resources Control Board Water Quality Order No. 2003-0017 DWQ "Statewide General Waste Discharge Requirements For Dredged Or Fill Discharges that have received State Water Quality Certification (General WDRs)".

Except insofar as may be modified by any preceding conditions, all certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicant's project description and the attached Project Information Sheet, and (b) compliance with all applicable requirements of the Central Valley Water Board, Water Quality Control Plan (Basin Plan).

(for) PAMELA C. CREEDON
Executive Officer

SAZ: als/knr

Enclosure: Project Information

cc: Ms. Leah Fisher, U.S. Army Corp of Engineers, Sacramento
U.S. Fish and Wildlife Service, Sacramento
Department of Fish and Game, Region 2, Rancho Cordova
Mr. Bill Jennings, CALSPA, Stockton
Butte County Public Works, Oroville

cc by email: Mr. Dave Smith, U.S. EPA, Region 9, San Francisco
Mr. Bill Orme, SWRCB, Certification Unit, Sacramento

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PROJECT INFORMATION

Application Date: 23 October 2009

Applicant: California Department of Transportation-Caltrans District 3

Applicant Representatives: Suzanne Melim

Project Name: Butte 162 Signalization Project

Central Valley Board: Central Valley Regional Water Quality Control Board-Redding Office

Central Valley Board Application Number: WDID No.5A04CR000183

U.S. Corps Application Number: Nationwide Permit No. 14 (Linear Transportation projects)

Type of Project: Signalization Project

Project Location: Butte County along SR 162 between post mile (PM) 22.68/23.05, Section 18, Township 19N, Range 5E, M.D.B.&M.,
Latitude: 121°27'34.24"W and Longitude: 39°30'13.15"N

County: Butte County

Receiving Water (hydrologic unit): North Fork Honcut Creek, which is tributary to the Sacramento River. Marysville Hydrologic Unit-Lower Feather River HA Hydrologic Area No. 515.40

Water Body Type: North Fork Honcut Creek

Designated Beneficial Uses: The Basin Plan for the Central Valley Regional Board has designated beneficial uses for surface and ground waters within the region. Beneficial uses that could be impacted by the project include: Municipal and Domestic Water Supply (MUN); Agricultural Supply (AGR); Industrial Service Supply (IND); Hydropower Generation (POW); Water Contact Recreation (REC-1); Non-contact Water Recreation (REC-2); Warm Freshwater Habitat (WARM); Cold Freshwater Habitat (COLD); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and /or Early Development (SPWN); Wildlife Habitat (WILD); and Navigation (NAV).

Project Description (purpose/goal): The California Department of Transportation is proposing to install a traffic signal at the intersection of Miner's Ranch Road and Kelly Ridge Road with State Route (SR) 162. There will be a slight increase in roadway fill, but the project will primarily redefine paved areas to accommodate the new intersection.

Preliminary Water Quality Concerns: Turbidity, suspended matter, settleable matter, and various pollutants associated with construction activities.

Proposed Mitigation to Address Concerns: The Discharger will be required to obtain coverage under the States Construction Storm Water General Permit and must prepare and implement a Storm Water Pollution Prevention Plan. Discharger will implement Best Management Practices (BMPs) to control sedimentation and erosion. All disturbed areas must have an effective combination of erosion and sediment control BMP's in place during the rainy season. All temporary affected areas will be restored to pre-construction contours and conditions upon completion of construction activities. Discharger will conduct turbidity and settleable matter testing during water work, stopping work if Basin Plan criteria are exceeded and/or observed.

Fill/Excavation Area: Project implementation will temporarily impact 0.01 acres (95 linear feet) un-vegetated streambed.

Dredge Volume: Not Applicable

U.S. Army Corps of Engineers Permit Number: The Discharger will be using a non-reporting Nationwide #14 permit (Linear Transportation) and will not have a reference number assigned.

Central Valley Water Board Public Notice: Information regarding this project was noticed on the Central Valley Water Board's website from 30 October 2009 to 20 November 2009. No comments were received.

Department of Fish & Game Streambed Alteration Agreement: Discharger applied for a Streambed Alteration Agreement with the Department of Fish and Game on 23 October 2009. The applicant must comply with all conditions in Lake or Streambed Alteration Agreement SAA 1600-2009-0204-R2.

Possible Listed Species: On 22 October 2009, in a letter to the Central Valley Regional Water Quality Control Board, Suzanne Melim states, "It was determined through informal consultation with USFWS, CDFG and NOAA that the project area is unlikely to have any adverse effects on listed species, particularly listed anadromous fish."

Status of CEQA Compliance: California Department of Water Resources signed a Notice of Exemption (Class 1) on 10 June 2009 approving a Categorical Exemption stating the project will not have a significant effect on the environment.

Application Fee Provided: A certification fee of $640.00 was submitted on 23 October 2009 as required by 23 CCR §3833b(2)(A) and by 23 CCR § 2200(e). A remaining certification fee of $608.00 was paid on 2 December 2009.

ENCROACHMENT PERMIT

County of Butte Department of Public Works
7 County Center Drive Oroville, CA 95965
Phone: (530) 538-7681 Fax: (530) 538-4356

All information except signature must be typed or legibly printed | Permit #: 100066

NOTIFY COUNTY 24 HOURS BEFORE WORK IS TO BE STARTED

PROPERTY OWNER

Assessor's Parcel Number (Required):	Property Owner's Name: Caltrans
Phone: (530) 741-5719	Property Address: Intersection of Rte 162 and Kelly Ridge Rd/Minor's Ranch Rd.
Mailing Address (If Different): 703 B Street Marysville, California 95901	

WORK PERFORMED BY

Work will be performed by: ☑ Contractor ☐ Property Owner	Contractor's Name: To be determined after Bid opening
Phone:	Address:
Fax:	
Contractor's License Number:	Certificate of Insurance currently on file with Department? ☐ Yes ☐ No

Applicant is: ☑ Property Owner ☐ Property Owner's Agent ☐ Contractor ☐ Other: _____

I / WE, the undersigned, hereby apply to the County of Butte for an encroachment permit to do the following work under or over the County roads and highways, all in accordance with County ordinances and general laws.

Signature: Stephen D Wright | Date Signed: 2-4-09

LOCATION

Road affected: Kelly Ridge Road and Minor's Ranch Road

Time and Duration of Encroachment: ☑ Permanent Encroachment ☐ Temporary: From _____ To _____

Type of Encroachment: ☐ Driveway ☐ Roadway ☐ Culvert ☐ Fence ☐ Pipe/Pipeline ☐ Sign/Billboard ☑ Other Signalize intersection

Site Plans Attached: ☑ Yes ☐ No

PERMIT CONDITIONS

(To be filled in by County)

PERMIT IS: ☒ GRANTED ☐ DENIED

Conditions: In compliance with the above request, and subject to all terms, conditions (including those on page 2 of this permit form) and special conditions written below, permission is hereby granted.

1. ☒ Underground Service Alert (U.S.A.) must be notified two working days prior to any excavation. 800-227-2600
2. ☒ All work shall conform to accompanying: ☐ Detail ☒ Plans ☐ Special Conditions
3. ☐ Other Conditions:

Date Issued: 2-12-10		Expiration Date: 2-12-11		Surety:
Date Paid:	Amount Paid: N/A	Paid By:	Check No:	Receipt No.:

Mike Crumb, Director of Public Works By: Todd Eds

For County Use Only

Road District:	Inspected By:	Inspection Results:	☐ Completed - OK ☐ Completed – Not OK ☐ Additional Comments Attached
Comments:			

Note: If permits are faxed to any number besides (530) 538-4356, they can be delayed up to one week. Form: 200506EP

U S Army Corps of Engineers
Sacramento District

Nationwide Permit Summary

33 CFR Part 330; Issuance of Nationwide Permits – March 19, 2007 includes corrections of May 8, 2007 and addition of regional conditions December 2007

14. Linear Transportation Projects. Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10 acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 27.) (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4)

A. Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

☐ **1. Navigation.**

☐ (a) No activity may cause more than a minimal adverse effect on navigation.

☐ (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

☐ (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

☐ **2. Aquatic Life Movements**. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

☐ **3 Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized**.**

☐ **4. Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

☐ **5. Shellfish Beds**. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

☐ **6. Suitable Material**. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

☐ **7. Water Supply Intakes**. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

☐ **8. Adverse Effects From Impoundments**. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or

restricting its flow must be minimized to the maximum extent practicable.

☐ **9. Management of Water Flows**. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

☐ **10. Fills Within 100-Year Floodplains**. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

☐ **11. Equipment**. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

☐ **12. Soil Erosion and Sediment Controls**. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

☐ **13. Removal of Temporary Fills**. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

☐ **14. Proper Maintenance**. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

☐ **15. Wild and Scenic Rivers**. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

☐ **16. Tribal Rights**. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

☐ **17. Endangered Species**.

☐ (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

☐ (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

☐ (c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

☐ (d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

☐ (e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.

☐ **18. Historic Properties**.

☐ (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

☐ (b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

☐ (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

☐ (d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

☐ (e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

☐ **19. Designated Critical Resource Waters.** Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

☐ (a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

☐ (b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

☐ **20 Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

☐ (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

☐ (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

☐ (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the

aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

☐ (d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

☐ (e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

☐ (f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

☐ (g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

☐ (h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

☐ **21. Water Quality.** Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

☐ **22. Coastal Zone Management**. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

☐ **23. Regional and Case-By-Case Conditions**. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

☐ **24. Use of Multiple Nationwide Permits**. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

☐ **25. Transfer of Nationwide Permit Verifications**. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

☐ **26. Compliance Certification**. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

☐ (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

☐ (b) A statement that any required mitigation was completed in accordance with the permit conditions; and

☐ (c) The signature of the permittee certifying the completion of the work and mitigation.

☐ **27. Pre-Construction Notification.**

☐ (a) **Timing**.. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

☐ (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

☐ (2) Forty-five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

☐ (b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

☐ (1) Name, address and telephone numbers of the prospective permittee;

☐ (2) Location of the proposed project;

☐ (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

☐ (4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

☐ (5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

☐ (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

☐ (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic

property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

☐ (c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

☐ (d) Agency Coordination:

☐ (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

☐ (2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

☐ (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

☐ (4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

☐ (5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

☐ (e) In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant

submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

☐ **(a) 28. Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

B. Regional Conditions:

I. Sacramento District (All States, except Colorado)

1. When pre-construction notification (PCN) is required, the prospective permittee shall notify the Sacramento District in accordance with General Condition 27 using either the South Pacific Division Preconstruction Notification (PCN) Checklist or a completed application form (ENG Form 4345). In addition, the PCN shall include:

a. A written statement explaining how the activity has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States;

b. Drawings, including plan and cross-section views, clearly depicting the location, size and dimensions of the proposed activity. The drawings shall contain a title block, legend and scale, amount (in cubic yards) and size (in acreage) of fill in Corps jurisdiction, including both permanent and temporary fills/structures. The ordinary high water mark or, if tidal waters, the high tide line should be shown (in feet), based on National Geodetic Vertical Datum (NGVD) or other appropriate referenced elevation; and

c. Pre-project color photographs of the project site taken from designatedlocations documented on the plan drawing.

2. The permittee shall complete compensatory mitigation required by special conditions of the NWP verification before or concurrent with construction of the authorized activity, except when specifically determined to be impracticable by the Sacramento District. When project mitigation involves use of a mitigation bank or in-lieu fee program, payment shall be made before commencing construction.

3. The permittee shall record the NWP verification with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property against areas (1) designated to be preserved as part of mitigation for authorized impacts, including any associated covenants or restrictions, or (2) where structures such as boat ramps or docks, marinas, piers, and permanently moored vessels will be constructed in or adjacent to navigable waters (Section 10 and Section 404). The recordation shall also include a map showing the surveyed location of the authorized structure and any associated areas preserved to minimize or compensate for project impacts.

4. The permittee shall place wetlands, other aquatic areas, and any vegetative buffers preserved as part of mitigation for impacts into a separate “preserve” parcel prior to discharging dredged or fill material into waters of the United States, except where specifically determined to be impracticable by the Sacramento District. Permanent legal protection shall be established for all preserve parcels, following Sacramento District approval of the legal instrument.

5. The permittee shall allow Corps representatives to inspect the authorized activity and any mitigation areas at any time deemed necessary to determine compliance with the terms and conditions of the NWP verification. The permittee will be notified in advance of an inspection.

6. For NWPs 29, 39, 40, 42, 43, 44, and 46, requests to waive the 300 linear foot limitation for intermittent or ephemeral waters of the U.S. shall include an evaluation of functions and services provided by the waterbody taking into account the watershed, measures to be implemented to avoid and minimize impacts, other measures to avoid and minimize that were found to be impracticable, and a mitigation plan for offsetting impacts.

7. Road crossings shall be designed to ensure fish passage, especially for anadromous fisheries. Permittees shall employ bridge designs that span the stream or river, utilize pier or pile supported structures, or involve large bottomless culverts with a natural streambed, where the substrate and streamflow conditions approximate existing channel conditions. Approach fills in waters of the United States below the ordinary high water mark are not authorized under the NWPs, except where avoidance has specifically been determined to be impracticable by the Sacramento District.

8. For NWP 12, clay blocks, bentonite, or other suitable material shall be used to seal the trench to prevent the utility line from draining waters of the United States, including wetlands.

9. For NWP 13, bank stabilization shall include the use of vegetation or other biotechnical design to the maximum extent practicable. Activities involving hard-armoring of the bank toe or slope requires submission of a PCN per General Condition 27.

10. For NWP 23, the PCN shall include a copy of the signed Categorical Exclusion document and final agency determinations regarding compliance with Section 7 of the Endangered Species Act, Essential Fish Habitat under the Magnussen-Stevens Act, and Section 106 of the National Historic Preservation Act.

11. For NWP 44, the discharge shall not cause the loss of more than 300 linear feet of streambed. For intermittent and ephemeral streams, the 300 linear foot limit may be waived in writing by the Sacramento District. This NWP does not authorize discharges in waters of the United States supporting anadromous fisheries.

12. For NWPs 29 and 39, channelization or relocation of intermittent or perennial drainage, is not authorized, except when, as determined by the Sacramento District, the relocation would result in a net increase in functions of the aquatic ecosystem within the watershed.

13. For NWP 33, temporary fills for construction access in waters of the United States supporting fisheries shall be accomplished with clean, washed spawning quality gravels where practicable as determined by the Sacramento District, in consultation with appropriate federal and state wildlife agencies.

14. For NWP 46, the discharge shall not cause the loss of greater than 0.5 acres of waters of the United States or the loss of more than 300 linear feet of ditch, unless this 300 foot linear foot limit is waived in writing by the Sacramento District.

15. For NWPs 29, 39, 40, 42, and 43, upland vegetated buffers shall be established and maintained in perpetuity, to the maximum extent practicable, next to all preserved open waters, streams and wetlands including created, restored, enhanced or preserved waters of the U.S., consistent with General Condition 20. Except in unusual circumstances, vegetated buffers shall be at least 50 feet in width.

16. All NWPs except 3, 6, 20, 27, 32, 38, and 47, are revoked for activities in histosols and fens and in wetlands contiguous with fens. Fens are defined as slope wetlands with a histic epipedon that are hydrologically supported by groundwater. Fens are normally saturated throughout the growing season, although they may not be during drought conditions. For NWPs 3, 6, 20, 27, 32, and 38, prospective permittees shall submit a PCN to the Sacramento District in accordance with General Condition 27.

17. For all NWPs, when activities are proposed within 100 feet of the point of groundwater discharge of a natural spring, prospective permittees shall submit a PCN to the Sacramento District in accordance with General Condition 27. A spring source is defined as any location where ground water emanates from a point in the ground. For purposes of this condition, springs do not include seeps or other discharges which lack a defined channel.

II. California Only

1. In the Lake Tahoe Basin, all NWPs are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.

2. In the Primary and Secondary Zones of the Legal Delta, NWPs 29 and 39 are revoked. New development activities in the Legal Delta will be reviewed through the Corps' standard permit process.

III. Nevada Only

1. In the Lake Tahoe Basin, all NWPs are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.

IV. Utah Only

1. For all NWPs, except NWP 47, prospective permittees shall submit a PCN in accordance with General Condition 27 for any activity, in waters of the United States, below 4217 feet mean sea level (msl) adjacent to the Great Salt Lake and below 4500 feet msl adjacent to Utah Lake.

2. A PCN is required for all bank stabilization activities in a perennial stream that would affect more than 100 linear feet of stream

3. For NWP 27, facilities for controlling stormwater runoff, construction of water parks such as kayak courses, and use of grout or concrete to construct in-stream structures are not authorized. A PCN is required for all projects exceeding 1500 linear feet as measured on the stream thalweg, using in stream structures exceeding 50 cubic yards per structure and/or incorporating grade control structures exceeding 1 foot vertical drop. For any stream restoration project, the post project stream sinuosity shall be appropriate to the geomorphology of the surrounding area and shall be equal to, or greater than, pre project sinuosity. Sinuosity is defined as the ratio of stream length to project reach length. Structures shall allow the passage of aquatic organisms, recreational water craft or other navigational activities unless specifically waived in writing by the District Engineer.

V. Colorado Only

1. Final Regional Conditions Applicable to Specific Nationwide Permits within Colorado.

a. Nationwide Permit Nos. 12 and 14, Utility Line Activities and Linear Transportation Projects. In the Colorado River Basin, utility line and road activities crossing perennial water or special aquatic sites require notification to the District Engineer in accordance with General Condition 27 (Pre-Construction Notification).

b. Nationwide Permit No. 13 Bank Stabilization. In Colorado, bank stabilization activities necessary for erosion prevention in streams that average less than 20 feet in width (measured between the ordinary high water marks) are limited to the placement of no more than 1/4 cubic yard of suitable fill* material per running foot below the plane of the ordinary high water mark. Activities greater than 1/4 cubic yard may be authorized if the permittee notifies the District Engineer in accordance with General Condition 27 (Pre-Construction Notification) and the Corps determines the adverse environmental effects are minimal. [* See (g) for definition of Suitable Fill]

c. Nationwide Permit No. 27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities.

(1) For activities that include a fishery enhancement component, the Corps will send the Pre-Construction Notification to the Colorado Division of Wildlife (CDOW) for review. In accordance with General Condition 27 (Pre-Construction Notification), CDOW will have 10 days from the receipt of Corps notification to indicate that they will be commenting on the proposed project. CDOW will then have an additional 15 days after the initial 10-day period to provide those comments. If CDOW raises concerns, the applicant may either modify their plan, in coordination with CDOW, or apply for a standard individual permit.

(2) For activities involving the length of a stream, the post-project stream sinuosity will not be significantly reduced, unless it is demonstrated that the reduction in sinuosity is consistent with the natural morphological evolution of the stream (sinuosity is the ratio of stream length to project reach length).

(3) Structures will allow the upstream and downstream passage of aquatic organisms, including fish native to the reach, as well as recreational water craft or other navigational activities, unless specifically waived in writing by the District Engineer. The use of grout and/or concrete in

building structures is not authorized by this nationwide permit.

(4) The construction of water parks (i.e., kayak courses) and flood control projects are not authorized by this nationwide permit.

d. Nationwide Permits Nos. 29 and 39; Residential Developments and Commercial and Institutional Developments. A copy of the existing FEMA/locally-approved floodplain map must be submitted with the Pre-Construction Notification. When reviewing proposed developments, the Corps will utilize the most accurate and reliable FEMA/locally-approved pre-project floodplain mapping, not post-project floodplain mapping based on a CLOMR or LOMR. However, the Corps will accept revisions to existing floodplain mapping if the revisions resolve inaccuracies in the original floodplain mapping and if the revisions accurately reflect pre-project conditions.

2. Final Regional Conditions Applicable to All Nationwide Permits within Colorado

e. Removal of Temporary Fills. General Condition 13 (Removal of Temporary Fills) is amended by adding the following: When temporary fills are placed in wetlands in Colorado, a horizontal marker (i.e. fabric, certified weed-free straw, etc.) must be used to delineate the existing ground elevation of wetlands that will be temporarily filled during construction.

f. Spawning Areas. General Condition 3 (Spawning Areas) is amended by adding the following: In Colorado, all Designated Critical Resource Waters (see enclosure 1) are considered important spawning areas. Therefore, In accordance with General Condition 19 (Designated Critical Resource Waters), the discharge of dredged or fill material in not authorized by the following nationwide permits in these waters: NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50. In addition, in accordance with General Condition 27 (Pre-Construction Notification), notification to the District Engineer is required for use of the following nationwide permits in these waters: NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37 and 38".

g. Suitable Fill. In Colorado, use of broken concrete as fill material requires notification to the District Engineer in accordance with General Condition 27 (Pre-Construction Notification). Permittees must demonstrate that soft engineering methods utilizing native or non-manmade materials are not practicable (with respect to cost, existing technology, and logistics), before broken concrete is allowed as suitable fill. Use of broken concrete with exposed rebar is prohibited in perennial waters and special aquatic sites.

h. Invasive Aquatic Species. General Condition 11 is amended by adding the following condition for work in perennial or intermittent waters of the United States: If heavy equipment is used for the subject project that was previously working in another stream, river, lake, pond, or wetland within 10 days of initiating work, one the following procedures is necessary to prevent the spread of New Zealand Mud Snails and other aquatic hitchhikers:

(1) Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and keep the equipment dry for 10 days. OR

(2) Remove all mud and debris from Equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with either a 1:1 solution of Formula 409 Household Cleaner and water, or a solution of Sparquat 256 (5 ounces Sparquat per gallon of water). Treated equipment must be kept moist for at least 10 minutes. OR

(3) Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with water greater than 120 degrees F for at least 10 minutes.

3. Final Regional Conditions for Revocation/Special Notification Specific to Certain Geographic Areas

i. Fens: All Nationwide permits, except permit Nos. 3, 6, 20, 27, 32, 38 and 47, are revoked in fens and wetlands adjacent to fens. Use of nationwide permit Nos. 3, 20, 27 and 38, requires notification to the District Engineer, in accordance with General Condition 27 (Pre-Construction Notification), and the permittee may not begin the activity until the Corps determines the adverse environmental effects are minimal. The following defines a fen:

Fen soils (histosols) are normally saturated throughout the growing season, although they may not be during drought conditions. The primary source of hydrology for fens is groundwater. Histosols are defined in accordance with the U.S. Department of Agriculture, Natural Resources Conservation Service publications on Keys to Soil Taxonomy and Field Indicators of Hydric Soils in the United States (http://soils.usda.gov/technical/classification/taxonomy).

j. Springs: Within the state of Colorado, all NWPs, except permit 47 (original 'C'), require preconstruction notification pursuant to General Condition 27 for discharges of dredged or fill material within 100 feet of the point of groundwater discharge of natural springs. A spring source is defined as any location where groundwater emanates from a point in the ground. For purposes of this regional condition, springs do not include seeps or other discharges which do not have a defined channel.

4. Additional Information

The following provides additional information regarding minimization of impacts and compliance with existing general Conditions:

a. Permittees are reminded of the existing General Condition No. 6 which prohibits the use of unsuitable material. Organic debris, building waste, asphalt, car bodies, and trash are not suitable material. Also, General Condition 12 requires appropriate erosion and sediment controls (i.e. all fills must be permanently stabilized to

prevent erosion and siltation into waters and wetlands at the earliest practicable date). Streambed material or other small aggregate material placed along a bank as stabilization will not meet General Condition 12. Also, use of erosion control mates that contain plastic netting may not meet General Condition 12 if deemed harmful to wildlife.

b. Designated Critical Resource Waters in Colorado. In Colorado, a list of designated Critical Resource Waters has been published in accordance with General Condition 19 (Designated Critical Resource Waters). This list will be published on the Albuquerque District Regulatory home page (http://www.spa.usace.army.mil/reg/)

c. Federally-Listed Threatened and Endangered Species. General condition 17 requires that nod-federal permittees notify the District Engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project. Information on such species, to include occurrence by county in Colorado, may be found at the following U.S. Fish and Wildlife Service website: http://www.fws.gov/mountain%2Dprairie/endspp/name_county_search.htm

C. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

D. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration, establishment (creation), enhancement, or preservation of aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Discharge: The term "discharge" means any discharge of dredged or fill material.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands

contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects waterbodies with their adjacent uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 20.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete project: The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete project must have independent utility (see definition). For linear projects, a "single and complete project" is all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal

interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States that, during a year with normal patterns of precipitation, has water flowing or standing above ground to the extent that an ordinary high water mark (OHWM) or other indicators of jurisdiction can be determined, as well as any wetland area (see 33 CFR 328.3(b)). If a jurisdictional wetland is adjacent--meaning bordering, contiguous, or neighboring--to a jurisdictional waterbody displaying an OHWM or other indicators of jurisdiction, that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of “waterbodies” include streams, rivers, lakes, ponds, and wetlands.

AERIALLY DEPOSITED LEAD, TRAFFIC STRIPE PAINT AND NATURALLY OCCURRING ASBESTOS SITE INVESTIGATION REPORT

State Route 162 Post Mile 22.7 to 23.1
Butte County, California

PREPARED FOR:

CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 3
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GEOCON

GEOCON PROJECT NO. S9300-06-107
TASK ORDER NO. 107, EA NO. 03-0F6401

NOVEMBER 2009

GEOCON
CONSULTANTS, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. S9300-06-107
November 30, 2009

Ms. Alicia Beyer
California Department of Transportation - District 3
Environmental Engineering Office
P.O. Box 911
Marysville, California 95901

Subject: SR-162, PM 22.7 TO 23.1
BUTTE COUNTY, CA
CONTRACT NO. 03A1368, TO NO. 107, EA 03-0F6401
ADL, TRAFFIC STRIPE PAINT AND NOA SI REPORT

Dear Ms. Beyer:

In accordance with California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order Number 107, and Expense Authorization 03-0F6401, Geocon Consultants, Inc. has performed environmental engineering services for the subject project. The Site consists of Caltrans right-of-way along State Route 162 (SR-162) from Post Mile (PM) 22.7 to 23.1 in Butte County, California. The accompanying report summarizes the services performed including the advancement of 16 direct-push and 4 hand-auger borings for aerially deposited lead (ADL) analysis, yellow traffic stripe paint sampling for lead analysis and surface weathered bedrock sampling for naturally occurring asbestos (NOA) analysis.

The contents of this report reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

Please contact us if there are any questions concerning the contents of this report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.

Gemma G. Reblando
Project Geologist

John E. Juhrend, PE, CEG
Project Manager

GGR:JEJ:krh

(4 + 2 CDs) Addressee

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AERIALLY DEPOSITED LEAD, TRAFFIC STRIPE PAINT AND NATURALLY OCCURRING ASBESTOS SITE INVESTIGATION REPORT

1.0 INTRODUCTION

This Aerially Deposited Lead (ADL), Traffic Stripe Paint and Naturally Occurring Asbestos (NOA) Site Investigation (SI) report for the State Route 162 (SR-162) Post Mile (PM) 22.7 to 23.1 project was prepared by Geocon Consultants, Inc. under California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order (TO) Number 107, and Expense Authorization (EA) 03-0F6401.

1.1 Project Description and Proposed Improvements

The project area consists of Caltrans right-of-way along the eastbound (EB) and westbound (WB) shoulder areas of SR-162 from 0.2 mile west of Kelley Ridge Road to 0.2 mile east of Kelley Ridge Road, approximate PM 22.7 to 23.1 (the Site) in Butte County, California. Caltrans proposes to widen the roadway that will generate approximately 500 cubic yards of excess soil. The approximate project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

1.2 General Objectives

The purpose of the scope of work outlined in TO No. 107 was to evaluate whether impacts due to ADL from motor vehicle exhaust exist in the surface and near surface soils within the project boundaries, to determine whether the yellow traffic stripe paint on the roadway contains lead and to assess the potential presence of naturally occurring asbestos within designated "Excess Material" areas at the Site. The investigative results will be used by Caltrans to inform the construction contractor(s) if lead-impacted soil and/or traffic stripe paint and NOA-impacted bedrock materials are present within the project boundaries for health, safety, and soil management/disposal purposes.

2.0 BACKGROUND

Regulatory criteria to classify a waste as "California hazardous" for handling and disposal purposes are contained in the *CCR*, Title 22, Division 4.5, Chapter 11, Article 3, § 66261.24. Criteria to classify a waste as "Resource, Conservation, and Recovery Act (RCRA) hazardous" are contained in Chapter 40 of the Code of Federal Regulations (40 CFR), Section 261.

2.1 Potential Lead Soil Impacts

Ongoing testing by Caltrans throughout California has indicated that ADL exists along major freeway routes due to emissions from vehicles powered by leaded gasoline.

For waste containing metals, the waste is classified as California hazardous when: 1) the total metal content exceeds the respective Total Threshold Limit Concentration (TTLC); or 2) the soluble metal

content exceeds the respective Soluble Threshold Limit Concentration (STLC) based on the standard Waste Extraction Test (WET). A waste may have the potential of exceeding the STLC when the waste's total metal content is greater than or equal to ten times the respective STLC value, since the WET uses a 1:10 dilution ratio. Hence, when a total metal is detected at a concentration greater than or equal to ten times the respective STLC, and assuming that 100 percent of the total metals are soluble, soluble metal analysis is required. A material is classified as RCRA hazardous, or Federal hazardous, when the soluble metal content exceeds the Federal regulatory level based on the Toxicity Characteristic Leaching Procedure (TCLP). The TTLC value for lead is 1,000 milligrams per kilogram (mg/kg). The STLC and TCLP values for lead are both 5.0 milligrams per liter (mg/l).

The above regulatory criteria are based on chemical concentrations. Wastes may also be classified as hazardous based on other criteria such as ignitability and corrosivity; however, for the purposes of this investigation, toxicity (i.e., lead concentrations) is the primary factor considered for waste classification since waste generated during the construction activities would not likely warrant testing for ignitability or corrosivity. Waste that is classified as either California hazardous or RCRA hazardous requires management as a hazardous waste.

The Department of Toxic Substances Control (DTSC) regulates and interprets hazardous waste laws in California. DTSC generally considers excavated or transported materials that exhibit "hazardous waste" characteristics to be a "waste" requiring proper management, treatment and disposal. Soil that contains lead above hazardous waste thresholds and is left in-place would not be necessarily classified by DTSC as a "waste." The DTSC has provided site-specific determinations that "movement of wastes within an area of contamination does not constitute "land disposal" and, thus, does not trigger hazardous waste disposal requirements." Therefore, lead-impacted soil that is scarified in-place, moisture-conditioned, and recompacted during roadway improvement activities might not be considered a "waste." DTSC should be consulted to confirm waste classification. It is noted that in addition to DTSC regulations, health and safety requirements and other local agency requirements may also apply to the handling and disposal of lead-impacted soil.

2.2 Potential Lead-containing Traffic Stripe Paint

Traffic stripe paint used by Caltrans may contain lead-chromate. The presence of elevated levels of metals requires sampling and analytical testing of the paint stripe materials to determine appropriate health and safety procedures and proper management and disposal practices. Disposal of removed traffic stripe paint materials is dependent on the method utilized to remove these materials (i.e. focused stripe removal vs. pavement grinding).

2.3 Naturally Occurring Asbestos

The construction activities proposed by Caltrans may disturb NOA-containing soil and/or rock units, if present at the Site. The California Air Resources Board (CARB) has mitigation practices for construction, grading, quarrying and surface mining operations that may disturb natural occurrences of asbestos as outlined in Title 17 California Code of Regulations (CCR), Section 93105. NOA potentially possesses a health hazard when it becomes an airborne particulate. Mitigation practices can reduce the risk of exposure to asbestos-containing dust. The primary mitigation practice used for controlling exposure to potentially asbestos-containing dust is the implementation of engineering controls including wetting the materials being disturbed. If engineering controls do not adequately control exposure to potentially asbestos-containing dust, the use of personal protective equipment including wearing air purifying respirators with High Efficiency Particulate Air (HEPA) filters is required during construction activities. Dust control methods similar to those in Title 17 CCR, Section 93105 are outlined in Title 17 CCR, Section 93106 for airborne asbestos in road surfacing applications. Using surfacing material with 0.25% or more asbestos material is not permitted and wetting of the material or the application of a surface sealant is recommended to minimize disturbance of the asbestos material. Onsite reuse or disposal of NOA-containing materials is allowed by 17 CCR 93106 and 17 CCR 93105 if it is buried under at least 3 inches of material that does not contain NOA.

3.0 SCOPE OF SERVICES

We performed the following scope of services as requested by Caltrans in TO No. 107:

3.1 Pre-field Activities

- Conducted an onsite meeting on October 27, 2009, to discuss the TO scope of services. Caltrans representative Alicia Beyer and Geocon representative John Juhrend attended the meeting. The purpose of the TO meeting was to observe the project boundaries and conditions. The project limits and proposed boring locations were further marked out in white paint for subsequent utility clearance.
- Utilized a *Health and Safety Plan* from TO No. 30, Caltrans Contract 03A1368 dated February 20, 2008, to provide guidelines on the use of personal protective equipment during the field activities.
- Provided 48-hour notification to Underground Service Alert (USA) prior to job site mobilization (Ticket No. 336706).
- Retained the services of Advanced Technology Laboratories (ATL) to perform the chemical analysis of soil and traffic stripe paint samples.
- Retained the services of EMSL Analytical, Inc. to perform the asbestos analysis of weathered bedrock samples.

3.2 Field Activities

The field activities consisted of collecting soil samples along the EB and WB shoulder of SR-162 within the project limits. On October 30, 2009, 55 soil samples were collected from 16 direct-push and 4 hand-auger borings (B1 through B20) at the Caltrans designated soil sampling locations. The ADL soil borings were excavated to an approximate maximum sampling depth of 3.0 feet. Soil samples were collected at general depths of 0.0 to 1.0 foot, 1.0 to 2.0 feet and 2.0 to 3.0 feet. At some locations, refusal was encountered in the borings at depths between 0.5 and 2.5 feet. Two samples of yellow centerline traffic paint (YP1 and YP2) were obtained for lead analysis. Five weathered bedrock samples (NOA1 through NOA5) were obtained from existing slopes for NOA Analysis.

4.0 INVESTIGATIVE METHODS

4.1 Sampling Location Rationale

The boring locations were designated by Caltrans in the vicinity of proposed improvements. Borings B1 through B10 were advanced along the unpaved shoulder of EB SR-162. Borings B11 through B20 were advanced along the unpaved shoulder of WB SR-162. Traffic paint samples YP1 and YP2 were collected from the yellow centerline west and east of the intersection, respectively. Weathered bedrock samples NOA1 through NOA5 collected for NOA analysis were obtained from adjacent slope areas designated as "Area of Possible Excess Material." The approximate soil boring and sampling locations are depicted on Figure 2.

The coordinates of the sampling locations were determined using a differential global positioning system (GPS). The GPS was utilized during the field activities to locate the horizontal position of each location with an error of no more than 3.3 feet. The latitude and longitude of the sampling locations are summarized in Tables 1 and 2.

4.2 ADL Soil Sampling Procedures

A total of 55 soil samples were collected from 16 direct-push and 4 hand-auger borings excavated at the Site. Soil samples obtained from the borings were collected in cellulose thermoplastic (acetate) liners driven by the direct-push rig. The acetate liners were cut to separate the sample by depth, then the sample from a particular interval was opened and the soil sample was transferred to a Ziploc® re-sealable plastic bag. Soil samples collected using a hand-auger were transferred directly into a Ziploc® re-sealable plastic bag. The soil samples were field homogenized within the sample bags and subsequently labeled, placed in an ice chest, and delivered to ATL for analytical testing under chain-of-custody (COC) documentation.

Quality assurance/quality control (QA/QC) procedures were performed during the field exploration activities. These procedures included decontamination of sampling equipment before each boring was advanced and providing COC documentation for each sample submitted to the laboratory. The soil sampling equipment was cleansed between each boring by washing the equipment with an Alconox™ solution followed by a double rinse with deionized water. The field sampling activities were performed under the supervision of Geocon's field manager.

The borings were backfilled with the excess soil cuttings generated at each boring. The decontamination water was discharged to the ground surface away from surface water bodies or storm drain inlets.

4.3 Traffic Stripe Paint Sampling Procedures

The traffic stripe paint samples were collected using a hammer to break a chip off the traffic stripe paint. The paint samples were placed in Ziploc® re-sealable plastic bags, subsequently labeled, and delivered to ATL under standard COC documentation.

4.4 Weathered Bedrock NOA Sampling Procedures

Surface weathered bedrock samples were obtained from adjacent slope areas using a rock pick. The samples were placed in Ziploc® re-sealable plastic bags, subsequently labeled, and delivered to EMSL under standard COC documentation.

4.5 Traffic Control

We utilized traffic control including the use of "SHOULDER WORK AHEAD" advanced warning signs and orange traffic cones based on the proximity of the work zone with respect to active traffic lanes during the field work.

4.6 Laboratory Analyses

The soil and paint samples collected within the project boundaries were submitted to ATL and EMSL for laboratory analyses under five working-day turn-around-time (TAT).

4.6.1 Lead

The soil and traffic stripe paint samples were submitted to ATL for the following analyses. The laboratory was instructed to homogenize the soil samples prior to analysis for lead in accordance with Contract 03A1368 requirements.

- Fifty-five soil samples and two traffic stripe paint samples were analyzed for total lead following United States Environmental Protection Agency (EPA) Test Method 6010B.

- Ten soil samples and two traffic stripe paint samples were further analyzed for WET soluble lead following EPA Test Method 7420.
- Six randomly selected soil samples were analyzed for soil pH following EPA Test Method 9045.

4.6.2 Asbestos

Weathered bedrock samples NOA1 through NOA5 were submitted to EMSL for asbestos analysis by polarized light microscopy (PLM) using California Air Resources Board (CARB) Method 435 (CARB 435 PLM Method A) under standard TAT. The analytical sensitivity of the PLM analysis was 0.25%.

4.7 Quality Assurance/Quality Control

QA/QC procedures were performed for each method of analysis with specificity for each analyte listed in the test method's QA/QC. The laboratory QA/QC procedures included the following:

- One method blank for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix, whichever was more frequent, with the spike made at ten times the reporting limit or at the analyte level.

Prior to submitting the soil samples to the laboratories, the COC documentation was reviewed for accuracy and completeness. Reproductions of the laboratory reports and COC documentation are presented in Appendix A.

5.0 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

5.1 Site Conditions

Soil encountered during the excavation of borings was generally comprised of brown to gray clayey silt with gravel to a depth of 3.0 feet. The weathered bedrock materials consist of volcanics. Groundwater was not encountered in the soil borings.

5.2 ADL Soil Analytical Results

A summary of the soil analytical results are presented in Table 1. The laboratory reports and COC documentation are presented in Appendix A.

Total lead was detected in 27 of the 55 soil samples analyzed at concentrations ranging from 5.4 to 260 mg/kg. Ten of the 55 soil samples had reported total lead concentrations greater than 50 mg/kg (ten times the STLC value for lead of 5.0 mg/l).

WET soluble lead was reported for each of the ten soil samples analyzed at concentrations ranging from 2.6 to 17 mg/l. Six of the ten soil samples had WET soluble lead concentrations greater than the STLC value for lead of 5.0 mg/l.

Soil pH values ranged from 5.6 to 6.5.

5.3 Traffic Stripe Paint Analytical Results

A summary of the traffic paint sample analytical results are presented in Table 1. The laboratory reports and COC documentation are presented in Appendix A.

Total lead was detected in traffic stripe paint samples YP1 and YP2 analyzed at concentrations of 420 and 510 mg/kg, respectively, greater than 50 mg/kg (ten times the STLC value for lead of 5.0 mg/l).

WET soluble lead was reported for the two traffic stripe paint samples at concentrations of 0.89 and 1.4 mg/l, less than the STLC value for lead of 5.0 mg/l.

5.4 Asbestos Analytical Results

A summary of the asbestos analytical results are presented in Table 2. The laboratory report and COC documentation are presented in Appendix A.

Five weathered bedrock samples were analyzed by EMSL for asbestos by the PLM method using the CARB 435 sample preparation method. None of the samples were reported to contain asbestos at or greater than the PLM laboratory reporting limit of 0.25%. The analytical laboratory reported each of the samples as 100% non-fibrous.

5.5 Laboratory QA/QC

We reviewed the laboratory QA/QC provided with the laboratory reports. Relative percent difference for Duplicate (DUP) was outside criteria for samples 108424-452ADUP, 108446-013ADUP, 108446-024ADUP and 108446-035ADUP. However, the laboratory control sample validated the analytical batch. Based on this limited data review, no additional qualifications of the soil data are necessary, and the data are of sufficient quality for the purposes of this report.

5.6 Statistical Evaluation for Lead Detected in Soil Samples

Statistical methods were applied to the total lead data to evaluate the upper confidence limits (UCLs) of the arithmetic means of the total lead concentrations for each sampling depth. The statistical methods used are discussed in a book entitled *Statistical Methods for Environmental Pollution*

Monitoring, by Richard Gilbert; in an EPA *Technology Support Center Issue* document entitled, *The Lognormal Distribution in Environmental Applications,* by Ashok Singh et. al., dated December 1997; and in a book entitled *An Introduction to the Bootstrap,* by Bradley Efron and Robert J. Tibshirani.

5.6.1 Calculating the UCLs for the Arithmetic Mean

The upper one-sided 90% and 95% UCLs of the arithmetic mean are defined as the values that, when calculated repeatedly for randomly drawn subsets of site data, equal or exceed the true mean 90% and 95% of the time, respectively. Statistical confidence limits are the classical tool for addressing uncertainties of a distribution mean. The UCLs of the arithmetic mean concentration are used as the mean concentrations because it is not possible to know the true mean due to the essentially infinite number of soil samples that could be collected from a site. The UCLs therefore account for uncertainties due to limited sampling data. As data become less limited at a site, uncertainties decrease, and the UCLs move closer to the true mean.

Non-parametric bootstrap techniques used to calculate the UCLs are discussed in the previously referenced EPA document and in *An Introduction to the Bootstrap.* For those samples in which total lead was not detected at concentrations exceeding the laboratory reporting limit, a value equal to one-half of the reporting limit was used in the UCL calculation. The bootstrap results are included in Appendix B. The calculated UCLs and statistical results are summarized in the table below:

SAMPLE INTERVAL (feet)	90% TOTAL LEAD UCL (mg/kg)	95% TOTAL LEAD UCL (mg/kg)	TOTAL LEAD MEAN (mg/kg)	MINIMUM VALUE (mg/kg)	MAXIMUM VALUE (mg/kg)
0.0 to 1.0	88.5	94.4	66.6	2.5	260
1.0 to 2.0	43.3	48.1	25.6	2.5	260
2.0 to 3.0	3.8	3.9	3.2	2.5	8.9

5.6.2 Correlation of Total and Soluble Lead

Total and corresponding WET soluble lead concentrations are bivariate data with a linear structure. This linear structure should allow for the prediction of WET soluble lead concentrations based on the UCLs calculated above in Section 5.6.1.

To estimate the degree of interrelation between total and corresponding WET soluble lead values (x and y, respectively), the *correlation coefficient [r]* is used. The correlation coefficient is a ratio that ranges from +1 to –1. A *correlation coefficient* of +1 indicates a perfect direct relationship between two variables; a *correlation coefficient* of –1 indicates that one variable changes inversely with relation to the other. Between the two extremes is a spectrum of less-than-perfect relationships,

including zero, which indicates the lack of any sort of linear relationship at all. The *correlation coefficient* was calculated for the ten (x, y) data points (i.e., soil samples analyzed for both total lead [x] and WET soluble lead [y]) and equaled 0.9142. A *correlation coefficient* greater than or equal to 0.8 is an acceptable indicator that a correlation exists. Consequently, an acceptable correlation between total and WET soluble lead concentrations was established for the data points since the *correlation coefficient* is greater than 0.8.

For the *correlation coefficient* that indicates a linear relationship between total and WET soluble lead concentrations, it is possible to compute the line of dependence or a best-fit line between the two variables. A least squares method was used to find the equation of a best-fit line (regression line) by forcing the y-intercept equal to zero since that is a known point. The equation of the regression line was determined to be $y = 0.0507(x)$, where x represents total lead concentrations and y represents predicted WET soluble lead concentrations.

This equation was used to estimate the expected WET soluble lead concentrations for the UCLs calculated in Section 5.6.1. Regression analysis results and a scatter plot depicting the (x, y) data points along with the regression line are presented in Appendix B. The 90% and 95 % UCL-predicted WET soluble lead concentrations are summarized in Section 6.0.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 ADL Soil Waste Classifications

Hazardous waste classification based on the 90% UCL is considered sufficient to satisfy a good faith effort as discussed in SW-846. Risk assessment characterization is typically based on the 95% UCL in accordance with the Risk Assessment Guidance for Superfund (RAGS) Volume 1 Documentation for Exposure Assessment. Per Caltrans, 90% UCLs are to be used to evaluate onsite reuse and 95% UCLs are to be used to evaluate offsite reuse or disposal.

If soil within the project limits is scarified in-place, moisture-conditioned, and recompacted during roadway improvement activities, it may not be considered a "waste."

The table below summarizes the UCL-predicted WET soluble lead concentrations and the waste classification for excavated soil within the Site based on the calculated total lead UCLs and the relationship between total and WET soluble lead.

Excavation Depth	90% UCL Total Lead (mg/kg)	90% UCL Predicted WET Lead (mg/l)	95% UCL Total Lead (mg/kg)	95% UCL Predicted WET Lead (mg/l)	Waste Classification
0.0 to 1.0 foot	88.5	4.5	94.4	4.8	Non-hazardous
Underlying soil (1.0 to 3.0 feet)	*23.6*	*1.2*	*26.0*	*1.3*	*Non-hazardous*
0.0 to 2.0 feet	65.9	3.3	71.3	3.6	Non-hazardous
Underlying soil (2.0 to 3.0 feet)	*3.8*	*0.2*	*3.9*	*0.2*	*Non-hazardous*
0.0 to 3.0 feet	45.2	2.3	48.8	2.5	Non-hazardous

90% UCL applicable for waste classification and onsite reuse; 95% UCL applicable for risk assessment and offsite disposal
Predicted WET soluble lead concentrations were calculated using the equation of the regression line: $y = 0.0507x$

Based on the above table, soil generated from the top 3.0 feet would not be classified as a California hazardous waste since the 90% UCL-predicted soluble (WET) lead concentrations are less than the STLC value for lead of 5.0 mg/l. Consequently, the top 3.0 feet of excavated soil could be reused or disposed of as non-hazardous soil with respect to lead content.

6.2 Traffic Stripe Paint Waste Classification/Disposal

The yellow traffic stripe paint was sampled per Caltrans' request since it may be removed from the underlying asphalt concrete by grinding or sand blasting, which would create a paint waste stream. The analytical results of the traffic stripe paint will be used by Caltrans to provide contractors with preliminary analytical data of the traffic stripe paint.

Total lead was detected in yellow traffic stripe paint samples YP1 and YP2 collected at the Site at concentrations of 420 and 510 mg/kg, respectively. WET soluble lead was detected in traffic stripe paint samples YP1 and YP2 at concentrations of 0.89 and 1.4 mg/l, respectively, less than the STLC value for lead of 5.0 mg/l. Thus, removed yellow traffic stripe paint should not require disposal as a California hazardous waste.

6.3 Naturally Occurring Asbestos

The weathered bedrock samples submitted for asbestos analysis were not reported to contain asbestos at or greater than the laboratory reporting limit of 0.25% by the PLM method. Based on the lack of reported asbestos in soil at the Site, engineering controls to minimize the aerial dispersion of asbestos should not be required.

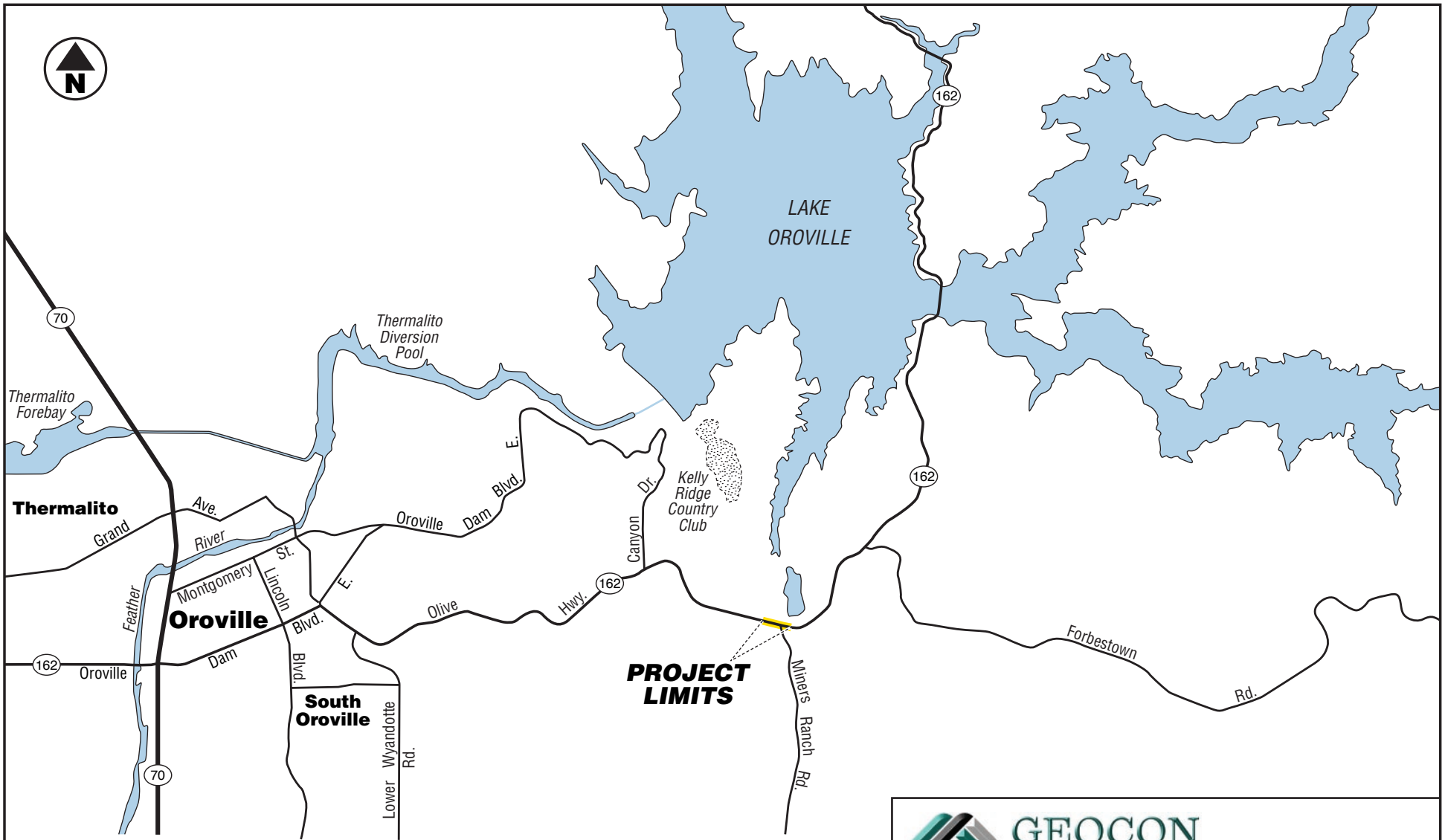
6.4 Worker Protection

Per Caltrans' requirements, the contractor(s) should prepare a project-specific Lead Compliance Plan (CCR Title 8, Section 1532.1, the "Lead in Construction" standard) to minimize worker exposure to lead-impacted soil. The plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

7.0 REPORT LIMITATIONS

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

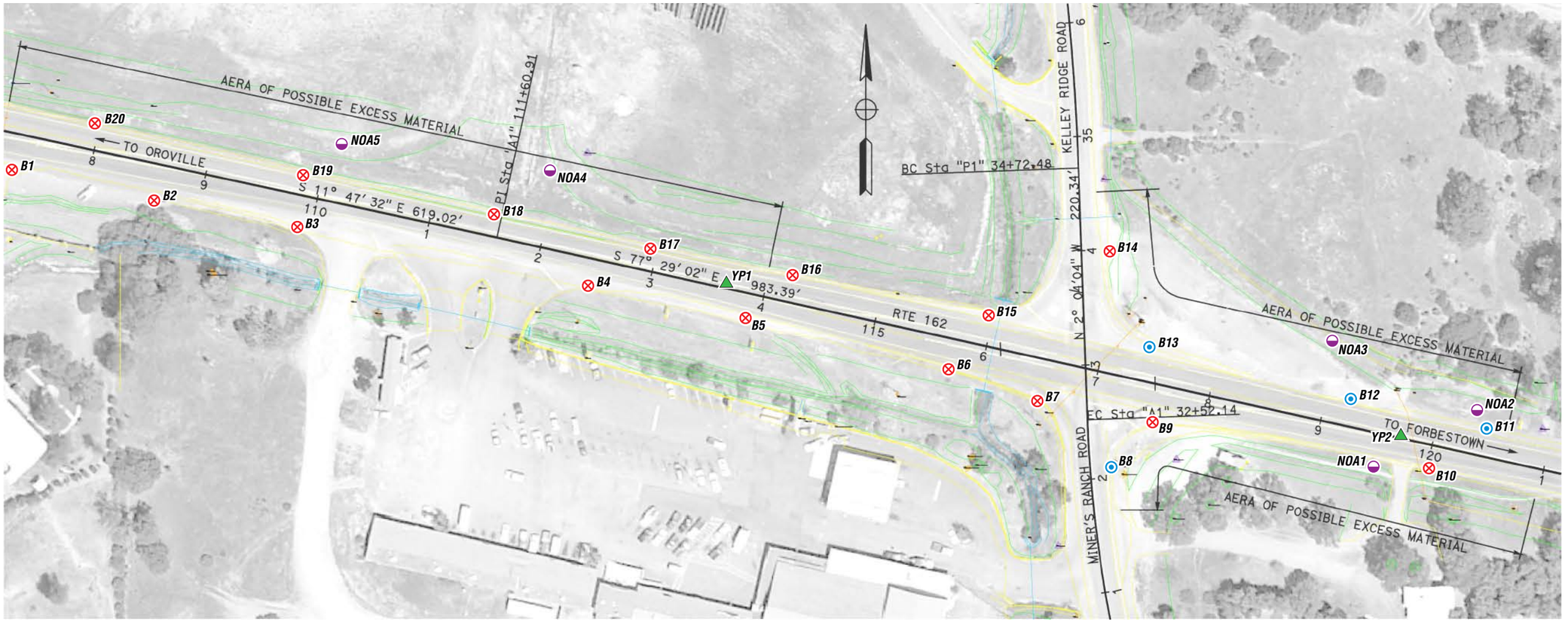
This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. We strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.



GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

State Route 162 Post Mile 22.7 to 23.1

Oroville, Butte County, California	**VICINITY MAP**	
GEOCON Proj. No. S9300-06-107		
Task Order No. 107	November 2009	Figure 1



LEGEND:

- B1 ⊗ Approximate Direct-Push Boring Location
- B8 ⊙ Approximate Hand-Auger Boring Location
- YP1 ▲ Approximate Traffic Stripe Paint Sample Location
- NOA1 ◒ Approximate Surface Slope Sample for NOA Analysis

0 100
Scale in Feet

GEOCON CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

State Route 162 Post Mile 22.7 to 23.1

Oroville, Butte County, California	**SITE PLAN**	
GEOCON Proj. No. S9300-06-107		
Task Order No. 107	November 2009	Figure 2

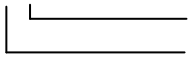
TABLE 1
SUMMARY OF BORING COORDINATES AND SOIL AND PAINT SAMPLE ANALYTICAL RESULTS
STATE ROUTE 162 POST MILE 22.7 to 23.1
BUTTE COUNTY, CALIFORNIA

BORING ID	SAMPLE DATE	LATITUDE	LONGITUDE	TOTAL LEAD (mg/kg)	WET LEAD (mg/l)	SOIL pH
B1-0	10/30/2009	39.504160365	-121.463034719	24	---	---
B1-1	10/30/2009			<5.0	---	---
B1-2	10/30/2009			<5.0	---	---
B2-0	10/30/2009	39.504079080	-121.462550158	65	3.0	---
B2-1	10/30/2009			<5.0	---	---
B2-2	10/30/2009			<5.0	---	---
B3-0	10/30/2009	39.504018975	-121.462237261	<5.0	---	---
B3-1	10/30/2009			<5.0	---	---
B3-2	10/30/2009			<5.0	---	---
B4-0	10/30/2009	39.503853605	-121.461271158	93	2.6	---
B4-1	10/30/2009			<5.0	---	---
B4-2	10/30/2009			<5.0	---	---
B5-0	10/30/2009	39.503783573	-121.460778455	35	---	---
B5-1	10/30/2009			6.8	---	---
B5-2	10/30/2009			<5.0	---	---
B6-0	10/30/2009	39.503666687	-121.460216970	240	12	5.8
B6-1	10/30/2009			<5.0	---	---
B6-2	10/30/2009			<5.0	---	---
B7-0	10/30/2009	39.503569514	-121.459874628	23	---	---
B7-1	10/30/2009			15	---	---
B7-2	10/30/2009			<5.0	---	---
B8-0	10/30/2009	39.503421437	-121.459620162	25	---	---
B8-1	10/30/2009			18	---	---
B8-2	10/30/2009			8.9	---	---
B9-0	10/30/2009	39.503485560	-121.459266546	<5.0	---	---
B9-1	10/30/2009			<5.0	---	---
B9-2	10/30/2009			<5.0	---	---
B10-0	10/30/2009	39.503407313	-121.458629436	79	3.2	---
B10-1	10/30/2009			<5.0	---	---
B10-2	10/30/2009			<5.0	---	---
B11-0	10/30/2009	39.503496485	-121.458473297	96	4.5	6.4
B11-1	10/30/2009			9.6	---	---
B12-0	10/30/2009	39.503604628	-121.458897826	<5.0	---	---
B13-0	10/30/2009	39.503731728	-121.459446889	33	---	---
B14-0	10/30/2009	39.503948938	-121.459682294	5.4	---	---
B14-1	10/30/2009			<5.0	---	---
B14-2	10/30/2009			<5.0	---	---

TABLE 1
SUMMARY OF BORING COORDINATES AND SOIL AND PAINT SAMPLE ANALYTICAL RESULTS
STATE ROUTE 162 POST MILE 22.7 to 23.1
BUTTE COUNTY, CALIFORNIA

BORING ID	SAMPLE DATE	LATITUDE	LONGITUDE	TOTAL LEAD (mg/kg)	WET LEAD (mg/l)	SOIL pH
B15-0	10/30/2009	39.503828999	-121.460108165	260	17	5.6
B15-1	10/30/2009			73	6.2	---
B15-2	10/30/2009			<5.0	---	---
B16-0	10/30/2009	39.503888029	-121.460550605	18	---	---
B16-1	10/30/2009			<5.0	---	---
B16-2	10/30/2009			<5.0	---	---
B17-0	10/30/2009	39.503974785	-121.461102828	160	7.5	6.2
B17-1	10/30/2009			32	---	---
B17-2	10/30/2009			<5.0	---	---
B18-0	10/30/2009	39.504058895	-121.461582245	140	6.0	6.1
B18-1	10/30/2009			<5.0	---	---
B18-2	10/30/2009			<5.0	---	---
B19-0	10/30/2009	39.504170257	-121.462186522	16	---	---
B19-1	10/30/2009			260	11	6.5
B19-2	10/30/2009			7.7	---	---
B20-0	10/30/2009	39.504278090	-121.462792865	13	---	---
B20-1	10/30/2009			21	---	---
B20-2	10/30/2009			<5.0	---	---
TRAFFIC STRIPE PAINT SAMPLES						
YP1	10/30/2009	NA	NA	420	0.89	---
YP2	10/30/2009	NA	NA	510	1.4	---

Notes: B1-0



mg/kg = Milligrams per kilogram
mg/l = Milligrams per liter
WET = Waste Extraction Test
< = Less than the laboratory reporting limits
--- = Not analyzed

TABLE 2
SUMMARY OF ASBESTOS ANALYTICAL RESULTS
STATE ROUTE 162 POST MILE 22.7 to 23.1
BUTTE COUNTY, CALIFORNIA

SAMPLE I.D.	SAMPLE LOCATION	LATITUDE	LONGITUDE	ANALYTICAL METHOD	ASBESTOS %	ASBESTOS TYPE
NOA1	SOUTH SLOPE - EAST OF KELLEY	39.503423812	-121.458866634	CARB 435 - PLM	<0.25	None Detected
NOA2	NORTH SLOPE - EAST OF KELLEY	39.503597768	-121.458517930	CARB 435 - PLM	<0.25	None Detected
NOA3	NORTH SLOPE - EAST OF KELLEY	39.503711670	-121.458964138	CARB 435 - PLM	<0.25	None Detected
NOA4	NORTH SLOPE - WEST OF KELLEY	39.504190758	-121.461354775	CARB 435 - PLM	<0.25	None Detected
NOA5	NORTH SLOPE - WEST OF KELLEY	39.504193850	-121.462057785	CARB 435 - PLM	<0.25	None Detected

Notes: CARB 435 = Polarized light microscopy by California Air Resources Board Method 435
< = Less than the indicated laboratory reporting limit

APPENDIX A

November 09, 2009

John Juhrend
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742

TEL: (916) 852-9118
FAX: (916) 852-9132

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
CSDLAC No.: 10196

Workorder No.: 108446

RE: Butte 162 ADL, S9300-06-107

Attention: John Juhrend

Enclosed are the results for sample(s) received on October 31, 2009 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

CLIENT: Geocon Consultants, Inc.
Project: Butte 162 ADL, S9300-06-107
Lab Order: 108446

CASE NARRATIVE

Analytical Comments for Method 6010

RPD for Duplicate (DUP) is outside criteria for samples 108424-452ADUP, 108446-013ADUP, 108446-024ADUP and 108446-035ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 11/9/2009

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	108446
Project:	Butte 162 ADL, S9300-06-107	**Date Received**	10/31/2009 10:35:00 AM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
108446-001A	B1-0	24	mg/Kg	59545	5.0	1	10/30/2009	11/7/2009
108446-002A	B1-1	ND	mg/Kg	59545	5.0	1	10/30/2009	11/7/2009
108446-003A	B1-2	ND	mg/Kg	59545	5.0	1	10/30/2009	11/7/2009
108446-004A	B2-0	65	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-005A	B2-1	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-006A	B2-2	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-007A	B3-0	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-008A	B3-1	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-009A	B3-2	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-010A	B4-0	93	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-011A	B4-1	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-012A	B4-2	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-013A	B5-0	35	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-014A	B5-1	6.8	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-015A	B5-2	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-017A	B6-0	240	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-018A	B6-1	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-019A	B6-2	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 11/9/2009

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	108446
Project:	Butte 162 ADL, S9300-06-107	**Date Received**	10/31/2009 10:35:00 AM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
108446-020A	B7-0	23	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-021A	B7-1	15	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-022A	B7-2	ND	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-023A	B8-0	25	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-024A	B8-1	18	mg/Kg	59546	5.0	1	10/30/2009	11/7/2009
108446-025A	B8-2	8.9	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-026A	B9-0	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-027A	B9-1	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-028A	B9-2	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-029A	B10-0	79	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-030A	B10-1	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-031A	B10-2	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-033A	B11-0	96	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-034A	B11-1	9.6	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-035A	B12-0	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-036A	B13-0	33	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-037A	B14-0	5.4	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-038A	B14-1	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

Date: 11/9/2009

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	108446
Project:	Butte 162 ADL, S9300-06-107	**Date Received**	10/31/2009 10:35:00 AM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
108446-039A	B14-2	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-040A	B15-0	260	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-041A	B15-1	73	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-042A	B15-2	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-043A	B16-0	18	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-044A	B16-1	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-045A	B16-2	ND	mg/Kg	59547	5.0	1	10/30/2009	11/7/2009
108446-046A	B17-0	160	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-047A	B17-1	32	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-048A	B17-2	ND	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-049A	B18-0	140	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-050A	B18-1	ND	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-051A	B18-2	ND	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-052A	B19-0	16	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-053A	B19-1	260	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-054A	B19-2	7.7	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-055A	B20-0	13	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009
108446-056A	B20-1	21	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

Date: 11/9/2009

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	108446
Project:	Butte 162 ADL, S9300-06-107	**Date Received**	10/31/2009 10:35:00 AM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
108446-057A	B20-2	ND	mg/Kg	59548	5.0	1	10/30/2009	11/7/2009

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: Geocon Consultants, Inc. **Lab Order:** 108446
Project: Butte 162 ADL, S9300-06-107

Lab ID: 108446-016 **Collection Date:** 10/30/2009
Client Sample ID: YP1 **Matrix:** PAINT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_091106G	QC Batch: 59584			PrepDate: 11/5/2009	Analyst: **CL**	
Lead	420	4.0		mg/Kg	1	11/6/2009 06:20 PM

Lab ID: 108446-032 **Collection Date:** 10/30/2009
Client Sample ID: YP2 **Matrix:** PAINT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_091106G	QC Batch: 59584			PrepDate: 11/5/2009	Analyst: **CL**	
Lead	510	4.0		mg/Kg	1	11/6/2009 06:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-59584** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/5/2009** RunNo: **114838**
Client ID: **LCSS** Batch ID: **59584** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/6/2009** SeqNo: **1819977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	47.597	1.0	50.00	0.4459	94.3	80	120				

Sample ID: **MB-59584** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/5/2009** RunNo: **114838**
Client ID: **PBS** Batch ID: **59584** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/6/2009** SeqNo: **1819979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.446	1.0									

Sample ID: **108514-001ADUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/5/2009** RunNo: **114838**
Client ID: **ZZZZZZ** Batch ID: **59584** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/6/2009** SeqNo: **1819980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	103.641	1.0						122.6	16.8	20	

Sample ID: **108514-001AMS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/5/2009** RunNo: **114838**
Client ID: **ZZZZZZ** Batch ID: **59584** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/6/2009** SeqNo: **1819981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	192.600	1.0	125.0	122.6	56.0	33	120				

Sample ID: **108514-001AMSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/5/2009** RunNo: **114838**
Client ID: **ZZZZZZ** Batch ID: **59584** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/6/2009** SeqNo: **1819982**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	193.545	1.0	125.0	122.6	56.7	33	120	192.6	0.490	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-59545A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114819**
Client ID: **PBS**	Batch ID: **59545**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/5/2009**	SeqNo: **1819660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-59545**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114819**
Client ID: **LCSS**	Batch ID: **59545**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/5/2009**	SeqNo: **1819661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	253.282	5.0	250.0	0	101	80	120				

Sample ID: **108424-452A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114819**
Client ID: **ZZZZZZ**	Batch ID: **59545**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/5/2009**	SeqNo: **1819672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	23.212	5.0						8.889	89.2	20	R

Sample ID: **108424-452A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114819**
Client ID: **ZZZZZZ**	Batch ID: **59545**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/5/2009**	SeqNo: **1819673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	175.547	5.0	250.0	8.889	66.7	33	120				

Sample ID: **MB-59545B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114819**
Client ID: **PBS**	Batch ID: **59545**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/5/2009**	SeqNo: **1819674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **108446-003ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114841**
Client ID: **B1-2**	Batch ID: **59545**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820038**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.328	5.0						0.1321	0	20	

Sample ID: **108446-003AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114841**
Client ID: **B1-2**	Batch ID: **59545**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	205.106	5.0	250.0	0.1321	82.0	33	120				

Sample ID: **108446-003AMSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114841**
Client ID: **B1-2**	Batch ID: **59545**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820040**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	194.516	5.0	250.0	0.1321	77.8	33	120	205.1	5.30	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-59546A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114842**
Client ID: **PBS**	Batch ID: **59546**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820041**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.283	5.0									

Sample ID: **LCS-59546**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114842**
Client ID: **LCSS**	Batch ID: **59546**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820042**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	274.291	5.0	250.0	0.2830	110	80	120				

Sample ID: **108446-013ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114842**
Client ID: **B5-0**	Batch ID: **59546**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	46.522	5.0						34.73	29.0	20	R

Sample ID: **108446-013AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114842**
Client ID: **B5-0**	Batch ID: **59546**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	238.184	5.0	250.0	34.73	81.4	33	120				

Sample ID: **MB-59546B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114842**
Client ID: **PBS**	Batch ID: **59546**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.123	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **108446-024ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114842**
Client ID: **B8-1**	Batch ID: **59546**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820066**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	22.680	5.0						17.58	25.3	20	R

Sample ID: **108446-024AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114842**
Client ID: **B8-1**	Batch ID: **59546**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	218.796	5.0	250.0	17.58	80.5	33	120				

Sample ID: **108446-024AMSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114842**
Client ID: **B8-1**	Batch ID: **59546**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820068**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	211.702	5.0	250.0	17.58	77.6	33	120	218.8	3.30	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-59547A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114843**
Client ID: **PBS**	Batch ID: **59547**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820069**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-59547**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114843**
Client ID: **LCSS**	Batch ID: **59547**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820070**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	276.726	5.0	250.0	0	111	80	120				

Sample ID: **108446-035ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114843**
Client ID: **B12-0**	Batch ID: **59547**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820081**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.077	5.0						4.485	30.1	20	R

Sample ID: **108446-035AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114843**
Client ID: **B12-0**	Batch ID: **59547**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	203.961	5.0	250.0	4.485	79.8	33	120				

Sample ID: **MB-59547B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114843**
Client ID: **PBS**	Batch ID: **59547**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **108446-045ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114843**
Client ID: **B16-2**	Batch ID: **59547**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.328	5.0						0.3306	0	20	

Sample ID: **108446-045AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114843**
Client ID: **B16-2**	Batch ID: **59547**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	164.119	5.0	250.0	0.3306	65.5	33	120				

Sample ID: **108446-045AMSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114843**
Client ID: **B16-2**	Batch ID: **59547**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	166.650	5.0	250.0	0.3306	66.5	33	120	164.1	1.53	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-59548A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114844**
Client ID: **PBS**	Batch ID: **59548**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-59548**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114844**
Client ID: **LCSS**	Batch ID: **59548**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	276.272	5.0	250.0	0	111	80	120				

Sample ID: **108446-055ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114844**
Client ID: **B20-0**	Batch ID: **59548**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820109**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	14.882	5.0						13.35	10.9	20	

Sample ID: **108446-055AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114844**
Client ID: **B20-0**	Batch ID: **59548**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820110**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	218.199	5.0	250.0	13.35	81.9	33	120				

Sample ID: **MB-59548B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114844**
Client ID: **PBS**	Batch ID: **59548**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820111**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **108446-057ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114844**
Client ID: **B20-2**	Batch ID: **59548**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0						0.2137	0	20	

Sample ID: **108446-057AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114844**
Client ID: **B20-2**	Batch ID: **59548**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820115**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	169.378	5.0	250.0	0.2137	67.7	33	120				

Sample ID: **108446-057AMSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **11/4/2009**	RunNo: **114844**
Client ID: **B20-2**	Batch ID: **59548**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **11/7/2009**	SeqNo: **1820116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	174.770	5.0	250.0	0.2137	69.8	33	120	169.4	3.13	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CHAIN OF CUSTODY RECORD

PS 1 of 6

Advanced Technology Laboratories

3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #:

Logged By: _____ Date: 10/31/09

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: GSO

Sample Condition Upon Receipt: 18.4

1. CHILLED Y ☐ N ☑ 4. SEALED Y ☐ N ☑
2. HEADSPACE (VOA) Y ☐ N ☐ 5. # OF SPLS MATCH COC Y ☑ N ☐
3. CONTAINER INTACT Y ☑ N ☐ 6. PRESERVED Y ☐ N ☑

Client: GEOCON Consultants, Inc
Attention: J. Juhrend
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
Tel: 916.852.9118
Fax: 916.852.9132

Project Name: Butte 162 ADL
Project #: S9300-06-107
Sampler: (Printed Name) J. Juhrend (Signature)

Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) CAL OVERNIGHT Date: 10/30/09 Time: 1700

Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Marg Date: 10/31/09 Time: 1035

Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
J. Juhrend 10/30/2009
Print Name Date
Signature

Send Report To:
Attn:
Co: SAME AS ABOVE
Addr:
City: State: Zip:

Bill To:
Attn:
Co: SAME AS ABOVE
Addr:
City: State: Zip:

Special Instructions/Comments:
Homogenize per CalTrans contract, 03A1368.
Please send excel to cook@geoconinc.com

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

PRESERVATION

QA/QC
RTNE ☐
CT ☑
SWRCB ☐ Logcode_____
OTHER _____

ITEM	LAB USE ONLY: Batch # / Lab No.	Sample Description: Sample ID / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal)	8015B (GRO) / 8020 (BTEX)	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	Total Lead	pH	SOIL	WATER	GROUND WATER	WASTEWATER	CARBON	TAT	Container(s) #	Container(s) Type	REMARKS
	108446-001	B1-0	10/30/09	0800									X			X					E	1	Zip	
	2	B1-1		0801									X			X								
	3	B1-2		0802									X			X								
	4	B2-0		0805									X			X								
	5	B2-1		0806									X			X								
	6	B2-2		0807									X			X								
	7	B3-0		0825									X			X								
	8	B3-1		0826									X			X								
	9	B3-2		0827									X			X								
	10	B4-0		0835									X			X								

- TAT starts 8AM the following day if samples received after 3 PM

TAT: A = Overnight ≤ 24 hrs B = Emergency Next Workday C = Critical 2 Workdays D = Urgent 3 Workdays E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives:
H=HCl $N=HNO_3$ $S=H_2SO_4$ C=4°C
$Z=Zn(AC)_2$ O=NaOH $T=Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Pg 2 of 6

Advanced Technology Laboratories

3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____

Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: _____

Sample Condition Upon Receipt:
1. CHILLED Y ☐ N ☐ 4. SEALED Y ☐ N ☐
2. HEADSPACE (VOA) Y ☐ N ☐ 5. # OF SPLS MATCH COC Y ☐ N ☐
3. CONTAINER INTACT Y ☐ N ☐ 6. PRESERVED Y ☐ N ☐

Client: GEOCON Consultants, Inc	Address: 3160 Gold Valley Drive, Suite 800		Tel: 916.852.9118
Attention: J. Juhrend	City: Rancho Cordova	State: CA	Zip Code: 95742	Fax: 916.852.9132

Project Name:	Project #:	Sampler: (Printed Name)	(Signature)
Butte 162 ADL	S9300-06-107	J. Juhrend	

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name) CA OVERNIGHT	Date: 10/30/09	Time: 1700
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
J. Juhrend — 10/30/2009
Print Name — Date
Signature

Send Report To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: _____ State: _____ Zip: _____

Bill To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: _____ State: _____ Zip: _____

Special Instructions/Comments:
Homogenize per CalTrans contract, 03A1368.
Please send excel to cook@geoconinc.com

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode _____ OTHER _____

PRESERVATION

ITEM	LAB USE ONLY: Batch # / Lab No.	Sample Description: Sample ID / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal)	8015B (GRO) / 8020 (BTEX)	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	Total Lead	pH	SOIL	WATER	GROUND WATER	WASTEWATER	CARBON	Phase I	TAT	Container(s) #	Container(s) Type	REMARKS
	1084446-11	B4-1	10/30/09	0836									X			X						E	1	Zip	
	12	B4-2		0837									X			X									
	13	B5-0		0840									X			X									
	14	B5-1		0841									X			X									
	15	B5-2		0842									X			X									
	16	WP1		0849									X								X				
	17	B6-0		0900									X			X									
	18	B6-1		0901									X			X									
	19	B6-2		0902									X			X									
	20	B7-0		0910									X			X									

- TAT starts 8AM the following day if samples received after 3 PM

TAT: A = Overnight ≤ 24 hrs; B = Emergency Next Workday; C = Critical 2 Workdays; D = Urgent 3 Workdays; E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives:
H=HCl $N=HNO_3$ $S=H_2SO_4$ C=4°C
$Z=Zn(AC)_2$ O=NaOH $T=Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Pg 3 of 6

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: _____

Sample Condition Upon Receipt:
1. CHILLED Y ☐ N ☐ 4. SEALED Y ☐ N ☐
2. HEADSPACE (VOA) Y ☐ N ☐ 5. # OF SPLS MATCH COC Y ☐ N ☐
3. CONTAINER INTACT Y ☐ N ☐ 6. PRESERVED Y ☐ N ☐

Client: GEOCON Consultants, Inc	Address: 3160 Gold Valley Drive, Suite 800		Tel: 916.852.9118
Attention: J. Juhrend	City: Rancho Cordova	State: CA Zip Code: 95742	Fax: 916.852.9132

Project Name:	Project #:	Sampler: (Printed Name) / (Signature)
Butte 162 ADL	S9300-06-107	J. Juhrend/ M. O'Brien

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
			CA DUTRIMONT	10/30/09	1700
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
J. Juhrend 10/30/2009
Print Name Date
Signature

Send Report To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: State: Zip:

Bill To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: State: Zip:

Special Instructions/Comments:
Homogenize per CalTrans contract, 03A1368.
Please send excel to cook@geoconinc.com

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

PRESERVATION

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode _____ OTHER _____

ITEM	LAB USE ONLY: Batch # / Lab No.	Sample Description: Sample ID / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal)	8015B (GRO) / 8020 (BTEX)	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	Total Lead	pH	SOIL	WATER	GROUND WATER	WASTEWATER	CARBON	TAT	Container(s) #	Container(s) Type	REMARKS
	1084446-21	B7-1	10/30/09	0911									X			X					E	1	Zip	
	22	B7-2		0912									X			X								
	23	B8-0		1100									X			X								
	24	B8-1		1101									X			X								
	25	B8-2		1102									X			X								
	26	B9-0		0925									X			X								
	27	B9-1		0926									X			X								
	28	B9-2		0927									X			X								
	29	B10-0		0935									X			X								
	30	B10-1		0936									X			X								

- TAT starts 8AM the following day if samples received after 3 PM

TAT: A = Overnight ≤ 24 hrs; B = Emergency Next Workday; C = Critical 2 Workdays; D = Urgent 3 Workdays; E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl $N=HNO_3$ $S=H_2SO_4$ C=4°C $Z=Zn(AC)_2$ O=NaOH $T=Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: _____

Sample Condition Upon Receipt:
1. CHILLED Y ☐ N ☐ 4. SEALED Y ☐ N ☐
2. HEADSPACE (VOA) Y ☐ N ☐ 5. # OF SPLS MATCH COC Y ☐ N ☐
3. CONTAINER INTACT Y ☐ N ☐ 6. PRESERVED Y ☐ N ☐

Client: GEOCON Consultants, Inc	Address: 3160 Gold Valley Drive, Suite 800		Tel: 916.852.9118
Attention: J. Juhrend	City: Rancho Cordova	State: CA Zip Code: 95742	Fax: 916.852.9132

Project Name:	Project #:	Sampler: (Printed Name) / (Signature)
Butte 162 ADL	S9300-06-107	J. Juhrend

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date: 10/30/09	Time: 1700
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
J. Juhrend 10/30/2009
Print Name Date
Signature

Send Report To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: State: Zip:

Bill To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: State: Zip:

Special Instructions/Comments:
Homogenize per CalTrans contract, 03A1368.
Please send excel to cook@geoconinc.com

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

PRESERVATION

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode _____ OTHER _____

ITEM	LAB USE ONLY: Batch # / Lab No.	Sample Description: Sample ID / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal)	8015B (GRO) / 8020 (BTEX)	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	Total Lead	pH	SOIL	WATER	GROUND WATER	WASTEWATER	CARBON	VAULT	TAT	Container(s) #	Container(s) Type	REMARKS
	184446-31	B10-2	10/30/09	0937									X			X						E	1	Zip	
	32	4P2		0940									X							X					
	33	B11-0		1105									X			X									
	34	B11-1		1106									X			X									
	35	B12-0		1115									X			X									
	36	B13-0		1125									X			X									
	37	B14-0		0955									X			X									
	38	B14-1		0956									X			X									
	39	B14-2		0957									X			X									
	40	B15-0		1000									X			X									

- TAT starts 8AM the following day if samples received after 3 PM

TAT: A = Overnight ≤ 24 hrs; B = Emergency Next Workday; C = Critical 2 Workdays; D = Urgent 3 Workdays; E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl $N=HNO_3$ $S=H_2SO_4$ C=4°C $Z=Zn(AC)_2$ O=NaOH $T=Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

pg 5 of 6

Advanced Technology Laboratories

3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____

Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: _____

Sample Condition Upon Receipt: 1. CHILLED Y ☐ N ☐ 2. HEADSPACE (VOA) Y ☐ N ☐ 3. CONTAINER INTACT Y ☐ N ☐ 4. SEALED Y ☐ N ☐ 5. # OF SPLS MATCH COC Y ☐ N ☐ 6. PRESERVED Y ☐ N ☐

Client: GEOCON Consultants, Inc	Address: 3160 Gold Valley Drive, Suite 800		Tel: 916.852.9118
Attention: J. Juhrend	City: Rancho Cordova	State: CA Zip Code: 95742	Fax: 916.852.9132
Project Name: Butte 162 ADL	Project #: S9300-06-107	Sampler: (Printed Name) J. Juhrend	(Signature)

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date: 10/30/09	Time: 1700
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
J. Juhrend 10/30/2009
Print Name Date
Signature

Send Report To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: State: Zip:

Bill To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: State: Zip:

Special Instructions/Comments:
Homogenize per CalTrans contract, 03A1368.
Please send excel to cook@geoconinc.com

Sample/Records - Archival & Disposal
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Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

PRESERVATION

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode _____ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample ID / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal)	8015B (GRO) / 8020 (BTEX)	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	Total Lead	pH	SOIL	WATER	GROUND WATER	WASTEWATER	CARBON	TAT	Container(s) #	Container(s) Type	REMARKS
	10344-41 •	B15-1	10/30/09	1001									X			X					E	1	Zip	
	42 •	B15-2		1002									X			X								
	43 •	B16-0		1010									X			X								
	44 •	B16-1		1011									X			X								
	45 •	B16-2		1012									X			X								
	46 •	B17-0		1015									X			X								
	47 •	B17-1		1016									X			X								
	48 •	B17-2		1017									X			X								
	49 •	B18-0		1025									X			X								
	50 •	B18-1		1026									X			X								

- TAT starts 8AM the following day if samples received after 3 PM

TAT: A = Overnight ≤ 24 hrs B = Emergency Next Workday C = Critical 2 Workdays D = Urgent 3 Workdays E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl $N=HNO_3$ $S=H_2SO_4$ C=4°C $Z=Zn(AC)_2$ O=NaOH $T=Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

pg 6 of 6

Advanced Technology Laboratories

3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____

Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: _____

Sample Condition Upon Receipt:
1. CHILLED Y ☐ N ☐ 4. SEALED Y ☐ N ☐
2. HEADSPACE (VOA) Y ☐ N ☐ 5. # OF SPLS MATCH COC Y ☐ N ☐
3. CONTAINER INTACT Y ☐ N ☐ 6. PRESERVED Y ☐ N ☐

Client: GEOCON Consultants, Inc
Attention: J. Juhrend
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
Tel: 916.852.9118
Fax: 916.852.9132

Project Name: Butte 162 ADL
Project #: S9300-06-107
Sampler: (Printed Name) J. Juhrend (Signature)

Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: 10/30/09 Time: 1700

Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: Time:

Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
J. Juhrend 10/30/2009
Print Name Date
Signature

Send Report To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: State: Zip:

Bill To:
Attn: _____
Co: SAME AS ABOVE
Addr: _____
City: State: Zip:

Special Instructions/Comments:
Homogenize per CalTrans contract, 03A1368.
Please send excel to cook@geoconinc.com

Sample/Records - Archival & Disposal
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Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
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Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

PRESERVATION

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode _____ OTHER _____

ITEM	LAB USE ONLY: Batch # / Lab No.	Sample Description: Sample ID / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal)	8015B (GRO) / 8020 (BTEX)	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	Total Lead	pH	SOIL	WATER	GROUND WATER	WASTEWATER	CARBON	TAT	Container(s) #	Container(s) Type	REMARKS
	1094446-51	B18-2	10/30/09	1027									X			X					E	1	Zip	
	52	B19-0		1035									X			X								
	53	B19-1		1036									X			X								
	54	B19-2		1037									X			X								
	55	B20-0		1045									X			X								
	56	B20-1		1046									X			X								
	57	B20-2		1047									X			X								

- TAT starts 8AM the following day if samples received after 3 PM

TAT: A = Overnight ≤ 24 hrs; B = Emergency Next Workday; C = Critical 2 Workdays; D = Urgent 3 Workdays; E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl $N=HNO_3$ $S=H_2SO_4$ C=4°C $Z=Zn(AC)_2$ O=NaOH $T=Na_2S_2O_3$

November 17, 2009

John Juhrend
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742

TEL: (916) 852-9118
FAX: (916) 852-9132

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
CSDLAC No.: 10196

Workorder No.: 108446

RE: Butte 162 ADL, S9300-06-107

Attention: John Juhrend

Enclosed are the results for sample(s) received on October 31, 2009 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

CLIENT: Geocon Consultants, Inc.
Project: Butte 162 ADL, S9300-06-107
Lab Order: 108446

CASE NARRATIVE

Analytical Comments for Method 7420

Dilution was necessary for samples 108446-017A, 108446-040A and 108446-053A, due to sample matrix.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 11/17/2009

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	108446
Project:	Butte 162 ADL, S9300-06-107	**Date Received**	10/31/2009 10:35:00 AM
Project No:		**Matrix:**	Paint
Analyte:	Lead	**Analyst:**	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
108446-004A	B2-0	3.0	mg/L	59698	0.25	1	10/30/2009	11/13/2009
108446-010A	B4-0	2.6	mg/L	R115080	0.25	1	10/30/2009	11/13/2009
108446-016A	YP1	0.89	mg/L	59698	0.25	1	10/30/2009	11/13/2009
108446-017A	B6-0	12	mg/L	59698	0.50	2	10/30/2009	11/13/2009
108446-029A	B10-0	3.2	mg/L	59698	0.25	1	10/30/2009	11/13/2009
108446-032A	YP2	1.4	mg/L	59698	0.25	1	10/30/2009	11/13/2009
108446-033A	B11-0	4.5	mg/L	59698	0.25	1	10/30/2009	11/13/2009
108446-040A	B15-0	17	mg/L	59698	0.50	2	10/30/2009	11/13/2009
108446-041A	B15-1	6.2	mg/L	59698	0.25	1	10/30/2009	11/13/2009
108446-046A	B17-0	7.5	mg/L	59698	0.25	1	10/30/2009	11/13/2009
108446-049A	B18-0	6.0	mg/L	59698	0.25	1	10/30/2009	11/13/2009
108446-053A	B19-1	11	mg/L	59698	0.50	2	10/30/2009	11/13/2009

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

Date: 11/17/2009

ANALYTICAL RESULTS

pH
EPA 9045C

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	108446
Project:	Butte 162 ADL, S9300-06-107	**Date Received**	10/31/2009 10:35:00 AM
Project No:		**Matrix:**	Soil
Analyte:	pH	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
108446-017A	B6-0	5.8	pH Units	R115116	0.10	1	10/30/2009	11/13/2009
108446-033A	B11-0	6.4	pH Units	R115116	0.10	1	10/30/2009	11/13/2009
108446-040A	B15-0	5.6	pH Units	R115116	0.10	1	10/30/2009	11/13/2009
108446-046A	B17-0	6.2	pH Units	R115116	0.10	1	10/30/2009	11/13/2009
108446-049A	B18-0	6.1	pH Units	R115116	0.10	1	10/30/2009	11/13/2009
108446-053A	B19-1	6.5	pH Units	R115116	0.10	1	10/30/2009	11/13/2009

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-59698A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **11/11/2009**	RunNo: **115080**
Client ID: **PBS**	Batch ID: **59698**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **11/13/2009**	SeqNo: **1824872**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-59698**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **11/11/2009**	RunNo: **115080**
Client ID: **LCSS**	Batch ID: **59698**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **11/13/2009**	SeqNo: **1824873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.332	0.25	5.000	0	107	80	120				

Sample ID: **108446-046A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **11/11/2009**	RunNo: **115080**
Client ID: **B17-0**	Batch ID: **59698**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **11/13/2009**	SeqNo: **1824884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.383	0.25						7.549	2.23	20	

Sample ID: **108446-046A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **11/11/2009**	RunNo: **115080**
Client ID: **B17-0**	Batch ID: **59698**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **11/13/2009**	SeqNo: **1824885**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	12.802	0.50	5.000	7.549	105	80	120				

Sample ID: **MB-59698B**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **11/11/2009**	RunNo: **115080**
Client ID: **PBS**	Batch ID: **59698**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **11/13/2009**	SeqNo: **1824886**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **108446-053A-DUP** SampType: **DUP** TestCode: **7420_ST** Units: **mg/L** Prep Date: **11/11/2009** RunNo: **115080**
Client ID: **B19-1** Batch ID: **59698** TestNo: **WET/ EPA 74 WET** Analysis Date: **11/13/2009** SeqNo: **1824889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.133	0.50						11.36	2.00	20	

Sample ID: **108446-053A-MS** SampType: **MS** TestCode: **7420_ST** Units: **mg/L** Prep Date: **11/11/2009** RunNo: **115080**
Client ID: **B19-1** Batch ID: **59698** TestNo: **WET/ EPA 74 WET** Analysis Date: **11/13/2009** SeqNo: **1824890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	16.109	0.50	5.000	11.36	95.0	80	120				

Sample ID: **108446-053A-MSD** SampType: **MSD** TestCode: **7420_ST** Units: **mg/L** Prep Date: **11/11/2009** RunNo: **115080**
Client ID: **B19-1** Batch ID: **59698** TestNo: **WET/ EPA 74 WET** Analysis Date: **11/13/2009** SeqNo: **1824891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	16.065	0.50	5.000	11.36	94.1	80	120	16.11	0.271	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 108446
Project: Butte 162 ADL, S9300-06-107

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **108446-017ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **115116**
Client ID: **B6-0** Batch ID: **R115116** TestNo: **EPA 9045C** Analysis Date: **11/13/2009** SeqNo: **1825344**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	5.410	0.10						5.810	7.13	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Diane Galvan

From: John Juhrend [juhrend@geoconinc.com]
Sent: Tuesday, November 10, 2009 9:33 AM
To: Diane Galvan
Cc: cook@geoconinc.com; 'Alicia Beyer'
Subject: RE: Results/EDD - Butte 162 ADL (108446)

Hi Diane – please analyze the following soil and paint samples for WET soluble lead (and soil pH where indicated) under standard TAT:

ATL 108446:

004A
010A
017A & soil pH
029A
033A & soil pH
040A & soil pH
041A
046A & soil pH
049A & soil pH
053A & soil pH
016 (paint chip YP1)
032 (paint chip YP2)

Please reply and confirm – thanks!

John

John Juhrend, PE, CEG
Principal

Please visit our new website at http://www.geoconinc.com

Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742
916.852.9118 Tel
916.852.9132 Fax
juhrend@geoconinc.com

EMSL Analytical, Inc
2235 Polvorosa Ave , Suite 230, San Leandro, CA 94577
Phone: (510) 895-3675 Fax: (510) 895-3680 Email: milpitaslab@emsl.com

Attn: **John Juhrend**
Geocon Consultants
3160 Gold Valley Drive
Suite 800
Rancho Cordova, CA 95742

Fax: (916) 852-9132 Phone: (916) 852-9118
Project: **Butte 162 / S9300-06-107**

Customer ID: GECN80
Customer PO: S9300-06-107
Received: 11/02/09 9:30 AM
EMSL Order: 090908897

EMSL Proj: S9300-06-**
Analysis Date: 11/10/2009

Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling) Level A for 0.25% Target Analytical Sensitivity

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
NOA1 *090908897-0001*	South slope - east of Kelley	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
NOA2 *090908897-0002*	North slope - east of Kelley	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
NOA3 *090908897-0003*	North slope - east of Kelley	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
NOA4 *090908897-0004*	North slope - west of Kelley	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
NOA5 *090908897-0005*	North slope - west of Kelley	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**

Analyst(s)

Adam C. Fink (5)

Baojia Ke, Laboratory Manager
or other approved signatory

This report relates only to the samples listed above and may not be reproduced except in full, without EMSL's written approval. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. EMSL is not responsible for sample collection activities or method limitations. Some samples may contain asbestos fibers below the resolution limit of PLM. EMSL recommends that samples reported as none detected or less than the limit of detection undergo additional analysis via TEM.Samples received in good condition unless otherwise noted.
Samples analyzed by EMSL Analytical, Inc San Leandro 2235 Polvorosa Ave , Suite 230, San Leandro CA

THIS IS THE LAST PAGE OF THE REPORT.

090908897

Chain of Custody

Asbestos Lab Services

EMSL Analytical, Inc.
Suite 230
2235 Polvorosa Ave
San Leandro,
CA 94577
Phone: (510) 895-3675 (888) 455-3675
Fax: (510) 895-3680
http://www.emsl.com

Please print all information legibly.

Company:	Geocon Consultants, Inc.	*Bill To:*	Geocon Consultants, Inc.
Address1:	3160 Gold Valley Drive	*Address1:*	3160 Gold Valley Drive
Address2:	Suite 800	*Address2:*	Suite 800
City, State:	Rancho Cordova, CA	*City, State:*	Rancho Cordova, CA
Zip Post Code:	95742	*Zip Post Code:*	95742
Country:	USA	*Country:*	USA
Contact Name:	John Juhrend	*Attn:*	John Juhrend
Phone:	916-852-9118	*Phone:*	916-852-9118
Fax:	916-852-9132	*Fax:*	916-852-9132
Email:	juhrend@geocomnc.com	*Email:*	juhrend@geoconinc.com
EMSL Rep:	Daniel Kocher	*P.O. Number:*	S9300-06-107
Project Name/Number:	Butte 162 / S9300-06-107		

MATRIX			TURNAROUND			
☐ Air	☒ Soil	☐ Micro-Vac	☐ 3 Hours	☐ 6 Hours		☐ 24 Hours (1 day)
☐ Bulk	☐ Drinking Water		☐ 48 Hours (2 days)	☐ 72 Hours (3 days)	☐ 96 Hours (4 days)	☐ 120 Hours (5 days)
☐ Wipe	☐ Wastewater		☒ 144+ hours (6-10 days)			

TEM AIR, 3 hours, 6 hours. Please call ahead to schedule. There is a premium charge for 3-hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.

PCM - Air	TEM Air	TEM WATER
☐ NIOSH 7400(A) Issue 2: August 1994	☐ AHERA 40 CFR, Part 763 Subpart E	☐ EPA 100.1
☐ OSHA w TWA	☐ NIOSH 7402	☐ EPA 100.2
☐ Other:	☐ EPA Level II	☐ NYS 198.2
PLM - Bulk	**TEM BULK**	**TEM Microvac/Wipe**
☐ EPA 600 R-93/116	☐ Drop Mount (Qualitative)	☐ ASTM D 5755-95 (quantative method)
☐ EPA Point Count	☐ Chatfield SOP - 1988-02	☐ Wipe Qualitative
☐ NY Stratified Point Count	☐ TEM NOB (Gravimetric) NYS 198.4	
☐ PLM NOB (Gravimetric) NYS 198.1	☐ EMSL Standard Addition:	**XRD**
☐ NIOSH 9002:		☐ Asbestos
☐ EMSL Standard Addition:	**PLM Soil**	☐ Silica NIOSH 7500
SEM Air or Bulk	☐ EPA Protocol Qualitative	
☐ Qualitative	☐ EPA Protocol Quantitative	**OTHER**
☐ Quantitative	☐ EMSL MSD 9000 Method fibers gram	☒ ARB425 0.25%DL

Received at EMSL Analytical, Inc.
San Leandro, CA (888) 455-3675
By (EMSL)
Date / / @ : am pm

Chain of Custody

EMSL Analytical, Inc.
Suite 230
2235 Polvorosa Ave

090908897

Asbestos Lab Services

San Leandro,
CA 94577
Phone: (510) 895-3675 (888) 455-3675
Fax: (510) 895-3680
http://www.emsl.com

090908897

Please print all information legibly.

Client Sample # (s) NOA1 - NOA5 **Total Samples #:** 5

Relinquished: [signature] **Date:** 10/30/09 **Time:** 1500

Received: [signature] **Date:** 11/2/2009 **Time:** 0930 VRS

Relinquished: _____ **Date:** _____ **Time:** _____

Received: _____ **Date:** _____ **Time:** _____

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)
NOA1	SOUTH SLOPE - EAST OF KELLEY	10/30/09 1135
NOA2	NORTH SLOPE - " "	1140
NOA3	NORTH SLOPE " "	1145
NOA4	NORTH SLOPE WEST OF KELLEY	1150
NOA5	NORTH SLOPE " "	1155

APPENDIX B

DESCRIPTION OF DATA SET

Project Name:	State Route 162 Post Mile 22.7 to 23.1
Project No.:	S9300-06-107
Sample Interval:	0.0 to 1.0 ft

DATA SET STATISTICS

Number of Valid Samples	20
Number of Distinct Samples	18
Minimum	2.5
Maximum	260
Mean	66.645
Median	29
Standard Deviation	77.7109318
Variance	6038.988921
Coefficient of Variation	1.166042941
Skewness	1.49143124
Mean of log data	3.397319004
Standard Deviation of log data	1.475008238
90% Non-parametric UCLs	
Standard Bootstrap UCL	88.48869616
95% Non-parametric UCLs	
Standard Bootstrap UCL	94.38100553

DESCRIPTION OF DATA SET

Project Name:	State Route 162 Post Mile 22.7 to 23.1
Project No.:	S9300-06-107
Sample Interval:	1.0 to 2.0 ft

DATA SET STATISTICS

Number of Valid Samples	18
Number of Distinct Samples	9
Minimum	2.5
Maximum	260
Mean	25.57777778
Median	2.5
Standard Deviation	61.053444
Variance	3727.523007
Coefficient of Variation	2.386972
Skewness	3.737753
Mean of log data	1.961190
Standard Deviation of log data	1.419419
90% Non-parametric UCLs	
Standard Bootstrap UCL	43.30130097
95% Non-parametric UCLs	
Standard Bootstrap UCL	48.08331352

DESCRIPTION OF DATA SET

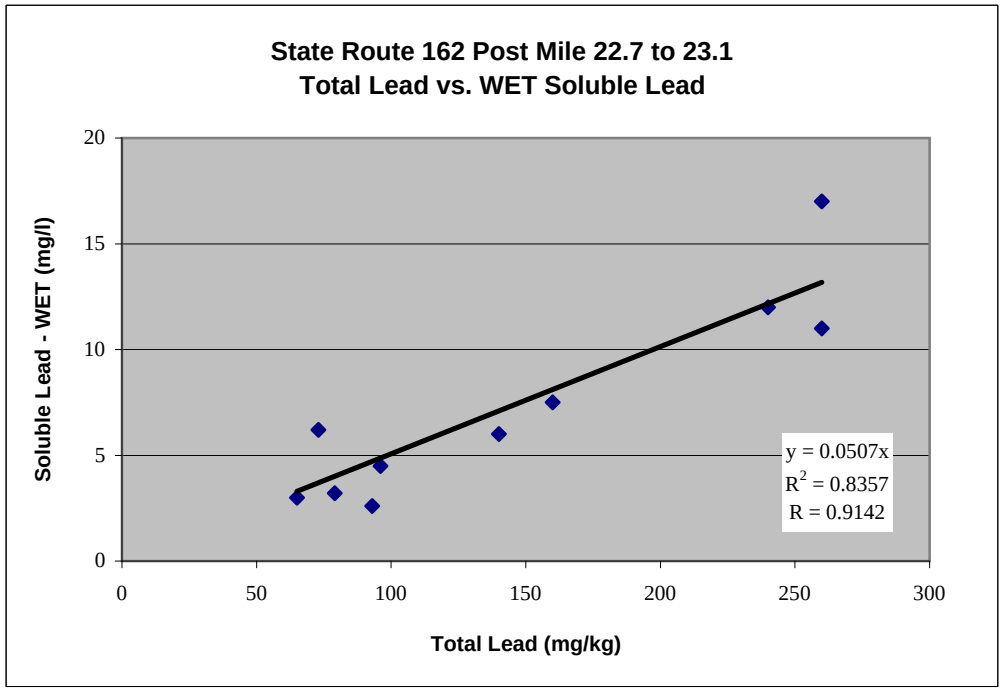
Project Name:	State Route 162 Post Mile 22.7 to 23.1
Project No.:	S9300-06-107
Sample Interval:	2.0 to 3.0 ft

DATA SET STATISTICS

Number of Valid Samples	17
Number of Distinct Samples	3
Minimum	2.5
Maximum	8.9
Mean	3.182352941
Median	2.5
Standard Deviation	1.937858
Variance	3.755294
Coefficient of Variation	0.608939
Skewness	2.670442
Mean of log data	1.057155
Standard Deviation of log data	0.398468
90% Non-parametric UCLs	
Standard Bootstrap UCL	3.774950656
95% Non-parametric UCLs	
Standard Bootstrap UCL	3.925913054

State Route 162 Post Mile 22.7 to 23.1
S9300-06-107

Sample ID	Total Lead	WET Lead
B4-0	93	2.6
B2-0	65	3.0
B10-0	79	3.2
B11-0	96	4.5
B18-0	140	6.0
B15-1	73	6.2
B17-0	160	7.5
B19-1	260	11
B6-0	240	12
B15-0	260	17



SUMMARY OF STATISTICAL ANALYSIS
STATE ROUTE 162 POST MILE 22.7 TO 23.1
BUTTE COUNTY, CALIFORNIA

Total Lead UCLs (mg/kg)

Sample Interval (feet)	90% UCL	95% UCL
0.0 to 1.0	88.5	94.4
1.0 to 2.0	43.3	48.1
2.0 to 3.0	3.8	3.9

Excavation Scenarios

	90% UCL		95% UCL	
Excavation Depth	Total Lead (mg/kg)	Soluble (WET) Lead * (mg/l)	Total Lead (mg/kg)	Soluble (WET) Lead * (mg/l)
0.0 to 1.0 foot	88.5	4.5	94.4	4.8
Underlying Soil (1.0 to 3.0 feet)	*23.6*	*1.2*	*26.0*	*1.3*
0.0 to 2.0 feet	65.9	3.3	71.3	3.6
Underlying Soil (2.0 to 3.0 feet)	*3.8*	*0.2*	*3.9*	*0.2*
0.0 to 3.0 feet	45.2	2.3	48.8	2.5

Notes:

UCL = Upper Confidence Level

90% UCL applicable for waste classification and onsite reuse

95% UCL applicable for risk assessment and offsite disposal

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

* = Soluble (WET) lead concentrations were predicted using slope of the regression line, where y = predicted soluble (WET) lead and x = total lead

Regression Line Slope: $y = 0.0507\ x$