

INFORMATION HANDOUT

WATER QUALITY

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION**

WDID NO.1B10018WNME

PERMITS

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

AGREEMENTS

**CALIFORNIA DEPARTMENT OF FISH AND GAME
NOTIFICATION NO. 1600-2010-0038-R1**

MATERIALS INFORMATION

NATURALLY OCCURRING ASBESTOS SURVEY REPORT



**California Regional Water Quality Control Board
North Coast Region**

Geoffrey M. Hales, Chairman



Linda S. Adams
Secretary for
Environmental Protection

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**Arnold
Schwarzenegger**
Governor

April 7, 2010

In the Matter of

Water Quality Certification

for the

**California Department of Transportation
Highway 162 – Sand Bank Grind and Replace, Storm Damage Repair Project:
WDID No. 1B10018WNME**

APPLICANT: California Department of Transportation
RECEIVING WATER: Unnamed tributaries the Eel River
HYDROLOGIC AREA: Eel River Hydrologic Unit (HU) No.111.00
COUNTY: Mendocino
FILE NAME: CDOT - Hwy 162, Sand Bank Grind and Replace - Storm
Damage Repair Project

BY THE EXECUTIVE OFFICER:

1. On February 24, 2010, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from the California Department of Transportation (Caltrans), requesting Federal Clean Water Act (CWA), section 401, Water Quality Certification for activities related to the proposed Highway 162 Sand Bank Grind and Replace Storm Damage Repair Project (project). The proposed project will cause disturbances to waters of the United States (U.S.) and waters of the State associated with the Eel River Unit No.111.00. The Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 on March 10, 2010, and posted information describing the project on the Regional Water Board's website. No comments were received. Regional Water Board staff are proposing to regulate this project pursuant to Section 401 of the CWA (33 USC 1341) and/or Porter-Cologne Water Quality Control Act authority.

California Environmental Protection Agency

Recycled Paper

2. The project consists of three locations along Highway 162 at post mile (PM) 14.44, PM 16.69, and PM 19.80, in Mendocino County. During the winter of 2005/2006, several storm events contributed to the failure of these highway facilities. The purpose of the project is to restore the roadway to pre-storm conditions and improve the facility to prevent further highway deterioration. The proposed construction activities will consist of: replacing culverts; installing drop inlet vaults; grading drainage ditches and slopes adjacent to drainages; installing underdrains; replacing culverts; installing outlet down-drains; replacing asphalt and road base; re-establishing drainage flows; installing rock slope protection (RSP); and conducting slope revegetation and erosion control.
3. The project will result in temporary and permanent impacts to unnamed ephemeral tributaries of the Eel River and Middle Fork Eel River. Caltrans has determined the temporary impacts to waters of the U.S. and State would total approximately 0.03 acres (876 linear feet). However, permanent impacts are only 0.005 acres (107 linear feet). Caltrans will utilize Best Management Practices (BMPs) to provide erosion control and pollution prevention throughout the project area during construction. All graded areas within the project affected by the construction activities will be appropriately stabilized and/or replanted with appropriate native vegetation. In addition, the proposed project will restore the former drainage flow at the culvert located at PM 16.69 and reduce the amount of water that flows to the culvert at PM 16.65. These actions are likely to improve water quality by reducing the velocity of water, the sediment delivery potential, and the water temperature. Additionally, Caltrans proposes to lay back steep erodible slopes at PM 14.44 to reduce the sediment delivery potential to the Eel River.
4. The proposed project will be conducted in summer months during low flow conditions; however, a water diversion may be required. The majority of proposed project activity is scheduled to be conducted between July 31, 2010 and October 15, 2010. The entire project is expected to take 60 days to complete. The proposed in-channel work will only be conducted between June 15th and October 15th.
5. Caltrans has applied for authorization from the United States Army Corps of Engineers to perform the project under their Nationwide Permits No. 14 (linear transportation projects) pursuant to Clean Water Act, section 404. In addition, Caltrans has applied to the California Department of Fish and Game (CDFG) for a 1602 Lake and Streambed Alteration Agreement. Caltrans has determined that this project is exempt by statute from California Environmental Quality Act (CEQA) review (Class Statutory Exemption 15269 (b)(c)). In addition, Regional Water Board staff also determined that this project is categorically exempt from CEQA review (Class 2 Categorical Exemption) and anticipates filing a Notice of Exemption.

Receiving Water: Unnamed ephemeral streams located within the Eel River Hydrologic Unit No.111.00.

Filled or Excavated Area: Permanent stream impacts: 0.005 acres new permanent impacts to waters of U.S
Temporary stream impacts: 0.03 acres of temporary construction impacts

Total Linear Impact: Permanent stream impacts: 107 linear feet of new permanent impacts to water of U.S.
Temporary stream impacts: 876 linear feet of temporary construction impacts to waters of U.S.

Dredge Volume: 76 cubic yards

Fill Volume : 20 cubic yards

Latitude/Longitude: 39.70833 N / 123.3528 W to 39.7152 N / 123.29722

Expiration: April 8, 2015

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE REGIONAL WATER BOARD CERTIFIES THAT THE CALTRANS – HIGHWAY 162 – SAND BANK GRIND AND REPLACE STORM DAMAGE REPAIR PROJECT, WDID NO. 1B10018WNME, AS DESCRIBED IN THE APPLICATION WILL COMPLY WITH SECTIONS 301, 302, 303, 306 AND 307 OF THE CLEAN WATER ACT, AND WITH APPLICABLE PROVISIONS OF STATE LAW, PROVIDED THAT CALTRANS COMPLIES WITH THE FOLLOWING TERMS AND CONDITIONS:

1. This certification action is subject to modification or revocation upon administrative or judicial review; including review and amendment pursuant to Water Code section 13330 and title 23, California Code of Regulations, section 3867.
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 title 23, California Code of Regulations, section 3855, subdivision (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 nondenial certification action (actions 1 and 2) shall be conditioned upon total payment of the full fee required under title 23, California Code of Regulations, section 3833, unless otherwise stated in writing by the certifying agency.

4. The Regional Water Board shall be notified in writing each year at least five working days (working days are Monday – Friday) prior to the commencement of ground disturbing activities, water diversions, and significant concrete pours, with details regarding the construction schedule, in order to allow staff to be present onsite during installation and removal activities, and to answer any public inquiries that may arise regarding the project.
5. Except as may be modified by any preceding conditions, all certification actions are contingent on: a) the discharge being limited and all proposed revegetation being completed in strict compliance with the Applicant's project description, and b) compliance with all applicable requirements of the Basin Plan.
6. Caltrans shall construct the project in accordance with the project described in the application and the findings above, and shall comply with all applicable water quality standards.
7. Any change in the implementation of the project that would have a significant or material effect on the findings, conclusions, or conditions of this Order must be submitted to the Executive Officer of the Regional Water Board for prior review and written approval.
8. Caltrans shall provide Regional Water Board staff access to the project site to document compliance with this order.
9. Caltrans shall provide a copy of this order and State Water Resources Control Board (SWRCB) Order No. 2003-0017-DWQ (web link referenced below) to the contractor and all subcontractors conducting the work, and require that copies remain in their possession at the work site. Caltrans shall be responsible for work conducted by its contractor or subcontractors.
10. All activities and BMPs shall be implemented according to the submitted application and the conditions in this certification.
11. All conditions required by this Order shall be included in the Plans and Specifications prepared by Caltrans for the Contractor. In addition, Caltrans shall require compliance with all conditions included in this Order in the bid contract for this project.
12. BMPs for erosion, sediment and turbidity control shall be implemented and in place at commencement of, during and after any ground clearing activities, construction activities, or any other project activities that could result in erosion or sediment discharges to surface water. The BMPs shall be implemented in accordance with the Caltrans Construction Site Best Manage Practices Manual (CCSBMPM) and all contractors and subcontractors shall comply with the CCSBMPM.

13. Caltrans shall submit, subject to approval by the Regional Water Board staff, a dewatering and/or diversion plan that appropriately describe the dewatered or diverted areas and how those areas will be handled during construction. The diversion/dewatering plans shall be submitted no later than 30 days prior to conducting the proposed activity. Information submitted shall include the area or work to be diverted or dewatered and method of the proposed activity. All diversion or dewatering activities shall be designed as to minimize the impact to waters of the State and maintain natural flows upstream and downstream. All dewatering or diversion structures shall be installed in a manner that does not cause sedimentation, siltation or erosion upstream or downstream. All dewatering or diversion structures shall be removed immediately upon completion of project activities. The in-channel work within streams will only be conducted between June 15th and October 15th.
14. Caltrans shall take photos of all areas disturbed by project activities, including all excess materials disposal areas, after rainfall events that generate visible runoff from these areas in order to demonstrate that erosion control and revegetation measures are present and have been installed appropriately and successfully in accordance with the CCSBMPM. A brief report containing these photos shall be submitted within 60 days of the rainfall event that generated runoff from the disturbed areas. In addition, Caltrans shall provide photos of the completed work to the appropriate Regional Water Board staff person, in order to document compliance.
15. Caltrans shall utilize wildlife-friendly 100% biodegradable erosion control products. Photodegradable synthetic products are not considered biodegradable. Caltrans shall not use or allow the use of permanent erosion control products that contain synthetic (e.g., plastic or nylon) netting or materials. Permanent erosion control products are considered to be products left in place for two years or more or after the project is completed. If Caltrans finds that erosion control netting or products have entrapped or harmed wildlife at the site, the product shall be removed and replaced with wildlife-friendly biodegradable products. Caltrans shall not use or allow the use of soil stabilization products that contain synthetic materials within waters of the United States or waters of the State at any time.
16. The Resident Engineer shall hold on-site water quality permit compliance meetings (similar to tailgate safety meetings) to discuss permit compliance, including instructions on how to avoid violations and procedures for reporting violations. The meetings shall be held at least every other week, and particularly before forecasted storm events and when a new contractor or subcontractor arrives to begin work at the site. The contractors, subcontractors and their employees, as well as any inspectors or biological monitors assigned to the project, shall be present at the meetings. Caltrans shall maintain dated sign-in sheets for attendees at these meetings, and shall make them available to the Regional Water Board on request.

17. If, at any time, an unauthorized discharge to surface water (including wetlands, rivers or streams) occurs, or any water quality problem arises, the associated project activities shall cease immediately until adequate BMPs are implemented. The Regional Water Board shall be notified promptly and in no case more than 24 hours after the unauthorized discharge or water quality problem arises.
18. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or concrete washings, welding slag, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this Order, shall be allowed to enter into or be placed where it may be washed by rainfall into waters of the State.
19. Water which has come into contact with wet concrete during construction shall be captured and disposed of in appropriate locations at least 100 linear feet beyond waters of the State. No excess concrete or concrete washings shall be allowed to contact waters of the State. In addition, all concrete contact water disposal locations as well as concrete washout basins shall have adequate BMPs in accordance with the CCSBMPM.
20. All materials used for cleaning concrete from tools and equipment, and any wastes generated by this activity, shall be adequately contained to prevent contact with soil and surface water and shall be disposed of properly within a clearly designated area at least 100 linear feet beyond waters of the State
21. When operations are complete, any excess material or debris shall be removed from the work area and disposed of properly and in accordance with the Special Provisions for the project and/or Standard Specification 7-1.13, Disposal of Material Outside the Highway Right of Way. Caltrans shall submit to the Regional Water Board the satisfactory evidence provided to the Caltrans engineer by the Contractor referenced in Standard Specification 7-1.13.
22. Work in flowing or standing surface waters, unless otherwise proposed in the project description and approved by the Regional Water Board, is prohibited. If construction dewatering of groundwater is found to be necessary, Caltrans shall use a method of water disposal other than disposal to surface waters (such as land disposal) or the Caltrans shall apply for coverage under the Low Threat Discharge Permit or an individual National Pollutant Discharge Elimination System (NPDES) Permit and receive notification of coverage to discharge to surface waters, prior to the discharge.
23. Surface water monitoring shall be conducted whenever a project activity is conducted within waters of the State. Surface water monitoring shall be conducted when any project activity has the potential to or has mobilized sediment and/or alter background conditions within waters of the State. In order to demonstrate

compliance with receiving water limitations, field measurements shall be collected whenever a project activity may alter background conditions.

24. All in stream activities during construction shall conduct the following water quality monitoring as follows. Caltrans shall establish effluent, upstream (background) and downstream monitoring locations to demonstrate compliance with all applicable water quality objectives. The downstream location shall be no more than 50 feet from the effluent location. Field measurements shall be taken from each location four times daily for flow, pH, temperature, dissolved oxygen, total dissolved solids, turbidity and specific conductance. In addition, visual observations shall be made four times daily and include the appearance of the discharge including color, turbidity, floating or suspended matter or debris, appearance of the receiving water at the point of discharge (occurrence of erosion and scouring, turbidity, solids deposition, unusual aquatic growth, etc), and observations about the receiving water, such as the presence of aquatic life. Measurements shall be collected from each sampling location four times daily while the diversion is being utilized.

25. Whenever, as a result of project activities, downstream measurements exceed the following water quality objectives:

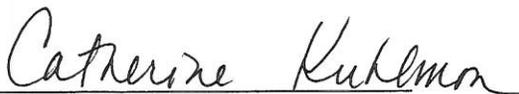
pH	<6.5 or >8.5 (any changes >0.5 units)
temperature	1°F above natural background
dissolved oxygen	<7 milligrams per liter (mg/L)
total dissolved solids	>130 mg/L
turbidity	20% above natural background
specific conductance	>200 micromhos @ 77°F

Appropriate measurements shall be collected from all monitoring locations every hour during the period of increase, and shall continue until measurements demonstrate compliance with receiving water limitations and the water quality parameters are no longer increasing as a result of project activities. If any measurements are beyond the water quality objectives 50 feet downstream of the source(s), all necessary steps shall be taken to install, repair, and/or modify BMPs to control the source(s). In addition, the overall distance from the source(s) to the downstream extent of the exceedance shall be measured.

26. Monitoring results shall be reported to appropriate Regional Water Board staff person by telephone within one hour of taking any measurements that exceed the limits in condition 23 (turbidity only if it is higher than 20 NTU as well). Pictures of the tributary upstream, downstream and within the working and/or disturbed area shall be taken and submitted to the appropriate Regional Water Board staff via e-mail or fax within 24 hours of the incident. All other monitoring data shall be reported on a monthly basis and is due to the Regional Water Board by the 15th of the following month.

27. Calibration logs for all field monitoring equipment shall be maintained and be available to the Regional Water Board on request.
28. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall be outside of waters of the United States and the State. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall not result in a discharge or a threatened discharge to any waters of the State or the United States. At no time shall the Applicant use any vehicle or equipment which leaks any substance that may impact water quality.
29. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 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 Order. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this Order to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this Order, the Regional Water Board may add to or modify the conditions of this Order as appropriate to ensure compliance.
30. The Regional Water Board may add to or modify the conditions of this Order, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.
31. The Eel River watershed is listed on the State of California Clean Water Act Section 303(d) list as impaired for sediment and temperature. Given that roads are a responsible source of sediment in the watershed (directly, from surface erosion, and, indirectly, by triggering landslides) a good first step can be made by focusing on reducing sediment from roads in the watershed. Reducing road-related sediment should be made a high priority. In addition, activities that impact the riparian zone and riparian vegetation are identified as sources contributing to increased stream temperatures. At present, there are no watershed-specific Total Daily Maximum Load (TMDL) implementation plans for this watershed. If a TMDL implementation plan is adopted prior to the expiration date of this Order, the Regional Water Board may revise the provisions of this Order to address actions identified in such action plan.

32. This Order is not transferable. In the event of any change in control of ownership of land presently owned or controlled by the Applicant, the Applicant shall notify the successor-in-interest of the existence of this Order by letter and shall forward a copy of the letter to the Regional Water Board. The successor-in-interest must send to the Regional Water Board Executive Officer a written request for transfer of this Order to discharge dredged or fill material under this Order. The request must contain the following:
- a. requesting entity's full legal name
 - b. the state of incorporation, if a corporation
 - c. address and phone number of contact person
 - d. description of any changes to the project or confirmation that the successor-in-interest intends to implement the project as described in this Order.
33. The authorization of this certification for any dredge and fill activities expires on April 08, 2015. Conditions and monitoring requirements outlined in this Order are not subject to the expiration date outlined above, and remain in full effect and are enforceable.
34. Please contact Jeremiah Puget of our staff at (707) 576-2835 or jpuget@waterboards.ca.gov if you have any questions.



Catherine Kuhlman
Executive Officer

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Web link: State Water Resources Control Board Order No. 2003-0017 -DWQ, General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification can be found at:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0017.pdf

Original sent to: Mr. Dana York, Caltrans, P.O. Box 3700, Eureka, CA 95501-3700

Copies sent to: Ms. Jane Hicks, U.S. Army Corps of Engineers, Regulatory Functions, 1455 Market Street, San Francisco, CA 94103-1398
U.S. Army Corps of Engineers, District Engineer, 601 Startare Drive, Box 14, Eureka, CA 95501
Ms. Carol Wilson, Caltrans, P.O. Box 3700, Eureka, CA 95501-3700



U S Army Corps of
Engineers
Sacramento District

Nationwide Permit Summary

33 CFR Part 330; Issuance of Nationwide
Permits – March 19, 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 NWP. 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:

(1) Until 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) If 45 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 be 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 NWP 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) District Engineer's Decision: 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: (None at this time, will be available May 2007.)

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 and any activity that causes or results in such a discharge.

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.

CALIFORNIA DEPARTMENT OF FISH AND GAME
NORTHERN REGION
601 LOCUST STREET
REDDING, CALIFORNIA 96001



LAKE OR STREAMBED ALTERATION AGREEMENT

NOTIFICATION No. 1600-2010-0038-R1

Unnamed Tributaries in the Sand Bank Creek, Middle Fork Eel and Eel River Watersheds

3 Encroachments

Mr. Frank Demling representing Caltrans
STATE HIGHWAY 162 DRAINAGE STRUCTURE REPAIRS

This Lake or Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Game (DFG) and Mr. Frank Demling (Permittee) representing the California Department of Transportation (Caltrans).

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified DFG on February 23, 2010 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1602, DFG has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project sites are located on three Unnamed Tributaries in the Middle Fork Eel River and Eel River watersheds in the County of Mendocino, State of California; Section 6, Township 21N, Range 14W, Section 5, Township 22N, Range 13W and unknown Section, Township 22N, Range 13W ; Mount Diablo Base and Meridian, in the Dos Rios 7.5-minute quadrangle, U.S. Geological Survey (USGS) map. The latitude/longitude coordinates for the project sites are; 39° 42' 30"/123° 21' 10", 39° 42' 45"/123° 19' 25" and 39° 42' 55"/123° 17' 50".

PROJECT DESCRIPTION

The projects include three encroachments: a) PM 14.44, remove existing headwall and install "L" headwall at culvert inlet and install headwall and rock slope protection at outlet, b) PM 16.69, install perforated plastic pipe under-drain, two drop inlets and replace down-drain at outlet, c) PM 19.64, install rock slope protection at existing culvert inlet. All three sites will be dry during in-channel construction. Few trees will be removed or otherwise impacted by this project.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: foothill yellow-legged frog (*Rana boylei*) and downstream populations of Chinook salmon (*Oncorhynchus tshawytscha*), steelhead (*O. mykiss*), and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include: direct and/or incidental take, impede up- and/or down-stream migration, damage to spawning and/or rearing habitat and potential cumulative impacts.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to DFG personnel, or personnel from another state, federal, or local agency upon request.
- 1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Notification of Conflicting Provisions. Permittee shall notify DFG if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, DFG shall contact Permittee to resolve any conflict.
- 1.4 Project Site Entry. Permittee agrees that DFG personnel may enter the project site at any time to verify compliance with the Agreement.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

- 2.1 Except where otherwise stipulated in this Agreement, all work shall be in accordance with the forms, work plans, maps and drawings submitted with Notification No. 1600-2010-00038, as modified or amended as of February 23, 2010.
- 2.2 This agreement pertains to three encroachments (highway drainage repairs) at Post Mile (PM) 14.44, PM 16.69 and PM 19.64 along State Route 162 near Dos Rios in Mendocino County, California.
- 2.3 All work within the bed, bank and channel shall be confined to the period June 15 through October 15 of each year and when the affected channel reach is void of surface water. Work may be conducted in or near the stream during the late season work period October 15 through November 1, provided adherence to all conditions in this Agreement and a) – e) below.
 - a) The affected channel reach is void of surface water.
 - b) The Permittee shall complete any unfinished encroachment work, including erosion control measures, within 24 hours of DFG directing the Permittee to do so.
 - c) Prior to any work at a site, the Permittee shall stock-pile erosion control materials at the site. All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair or removal shall be treated for erosion immediately upon completion of work on the crossing, and prior to the onset of precipitation capable of generating runoff.
 - d) Road construction leading directly into or out of a proposed stream crossing shall only be performed when soils are sufficiently dry so that sediment is not discharged into streams.
 - e) When a 7-day National Weather Service forecast of rain includes a minimum of 5 consecutive days with any chance of precipitation, 3 consecutive days with a 30% or greater chance of precipitation, or 2 consecutive days of 50% or greater chance of precipitation, the Permittee shall finish work underway at encroachment and refrain from starting any new work at encroachment prior to the rain event.
- 2.4 No fill material shall be placed within a stream except as specified in this Agreement.

- 2.5 Any equipment or vehicles driven and/or operated within or adjacent to the stream channel shall be checked and maintained in a manner which prevents materials that, if introduced to water, could be deleterious to aquatic life, wildlife, or riparian habitat.
- 2.6 Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portions of any stream channel within the high water mark of the stream be restored to as near their original condition as possible. Restoration shall include re-vegetation of areas stripped or exposed by project activities. Slash pack, rock, or other erosion protection suitable to DFG shall be placed in areas where vegetation cannot reasonably be expected to become reestablished.
- 2.7 Adequate and effective erosion and siltation control measures shall be used to prevent sediment or turbid or silt-laden water from entering streams. Where needed, the Permittee shall use native vegetation or other treatments including native slash, jute netting, straw wattles, and geotextiles to protect and stabilize soils.
- 2.8 All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair, shall be treated for erosion prior to the onset of precipitation capable of generating run-off or the end of the yearly work period, whichever comes first. Restoration shall include using native slash or seeding and mulching of all bare mineral soil exposed in conjunction with encroachment work. Erosion control shall consist of at least 2 to 4 inches of certified weed-free straw mulch and 100 lbs/acre equivalent barley seed. No annual (Italian) ryegrass (*Lolium multiflorum*) shall be used.
- 2.9 Encroachments and associated structures, fills, and other exposed soils shall be armored as needed to protect fill, abutments, and the stream channel and banks from erosion.
- 2.10 The Permittee shall provide site maintenance including, but not limited to, re-applying erosion control to minimize surface erosion and ensuring drainage structures, streambeds and banks remain sufficiently armored and/or stable.
- 2.11 Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the ordinary high water mark before such flows occur or the end of the yearly work period, whichever comes first.
- 2.12 Refueling of equipment and vehicles and storing, adding or draining lubricants, coolants or hydraulic fluids shall not take place within or adjacent to any stream. All such fluids and containers shall be disposed of properly. Heavy equipment parked within or adjacent to the stream shall use drip pans or other devices (i.e.,

absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.

- 2.13 All activities performed in the field which involve the use of petroleum or oil based substances shall employ absorbent material designated for spill containment and clean up activity on site for use in case of accidental spill. Clean-up of all spills shall begin immediately. The Permittee shall immediately notify the State Office of Emergency Services at 1-800-852-7550. DFG shall be notified by the Permittee and consulted regarding clean-up procedures.
- 2.14 No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from construction work, or associated activity of whatever nature shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into Waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. (Not applicable to material installed permanently or temporarily as part of the project activities).
- 2.15 Upon DFG determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective Department approved control devices are installed, or abatement procedures are initiated.

SITE-SPECIFIC CONDITONS:

- 2.16 In addition to complying with Measure 2.3 above, work will be confined to periods when the channel and adjacent wet areas are void of surface water. This Condition is intended to avoid take and/or disturbance of foothill yellow-legged frog, a Species of Special Concern in California. A sub-adult of this species was identified within the project area at PM 16.69 ("Location 2").
- 2.17 For each tree larger than four inches in diameter at breast height that is removed or damaged during operations, a minimum of five replacement trees of the same species shall be planted and maintained as mitigation along or near the project site. Planted trees shall be monitored post-project for a minimum of three years to ensure rooting and long term success. Dead and/or dying replacement trees shall be replaced. One or more interior live oaks (*Quercus wislizenii*) will be removed at PM 14.44 ("Location 1").

3. Reporting Measures

Permittee shall meet each reporting requirement described below.

- 3.1 Permittee shall notify the Department, in writing, at least five (5) days prior to initiation of construction (project) activities and at least five (5) days prior to

completion of construction (project) activities. Notification shall be faxed to the Department at (707) 441-2021, Attn: Rick Macedo, Staff Environmental Scientist, or via e-mail at rmacedo@dfg.ca.gov.

- 3.2 To comply with measure 2.17, above, the Permittee shall contact DFG: a) after the trees have been planted and b) at the end of the three year monitoring period.

CONTACT INFORMATION

Any communication that Permittee or DFG submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or DFG specifies by written notice to the other.

To Permittee:

Mr. Frank Demling
Caltrans, Northern Region Environmental Services
Post Office Box 3700
Eureka, California 95502-3700
Office Phone: 707-445-6554
Fax: 707-441-5733

To DFG:

Department of Fish and Game
Region 1
619 Second Street
Eureka, California 95501
Attn: Lake and Streambed Alteration Program – Laurie Harnsberger
Notification #1600-2010-0038-R1
Fax: 441-2021
Email: lharnsberger@dfg.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute DFG's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

DFG may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before DFG suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before DFG suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused DFG to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes DFG from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects DFG's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

DFG may amend the Agreement at any time during its term if DFG determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by DFG and Permittee. To request an amendment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter DFG approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to DFG a completed DFG "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). DFG shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code, § 1605, subd. (f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of DFG's signature, which shall be: 1) after Permittee's signature; 2) after DFG complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the

applicable FGC section 711.4 filing fee listed at
http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall expire on May 16, 2015, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

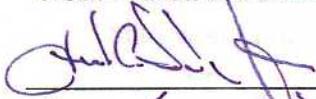
AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify DFG in accordance with FGC section 1602.

CONCURRENCE

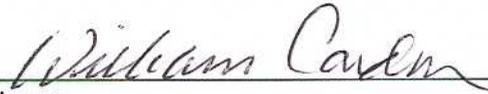
The undersigned accepts and agrees to comply with all provisions contained herein.

FOR FRANK DEMLING



Name FRANK C. DEMLING Date 17 MAY 2010
Title PROJECT MANAGER

FOR DEPARTMENT OF FISH AND GAME



Name _____ Date 5/17/10
 Acting Environmental Program Manager

Prepared by: Rick Macedo
Staff Environmental Scientist
5-13-10

NATURALLY OCCURRING ASBESTOS SURVEY REPORT



State Routes 1, 20, 101,
128, 162, 175, 253 and 271
Mendocino County, California

PREPARED FOR:

CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 3
ENVIRONMENTAL ENGINEERING OFFICE
703 B STREET, P.O. BOX 911
MARYSVILLE, CALIFORNIA 95901



PREPARED BY:

GEOCON CONSULTANTS, INC.
3160 GOLD VALLEY DRIVE, SUITE 800
RANCHO CORDOVA, CALIFORNIA 95742



GEOCON PROJECT NO. S9300-06-93
TASK ORDER NO. 93, CONTRACT NO. 03A1368

JANUARY 2010



Project No. S9300-06-93
January 29, 2010

Mr. Mark Melani
California Department of Transportation – District 3
Environmental Engineering Office
P.O. Box 911
Marysville, California 95901

Subject: STATE ROUTES 1, 20, 101, 128, 162, 175, 253 AND 271
MENDOCINO COUNTY, CALIFORNIA
CONTRACT NO. 03A1368, TASK ORDER NO. 93
NATURALLY OCCURRING ASBESTOS SURVEY REPORT

Dear Mr. Melani:

In accordance with California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order No. 93 we have performed naturally occurring asbestos (NOA) survey services within the Caltrans right-of-way along State Routes 1, 20, 101, 128, 162, 175, 253 and 271 in Mendocino County, California. The accompanying report summarizes the services performed including the collection of 43 samples for asbestos analysis and the incorporation of asbestos data generated from 18 previous NOA surveys performed by Geocon, Shaw Environmental Inc. and IT Corporation.

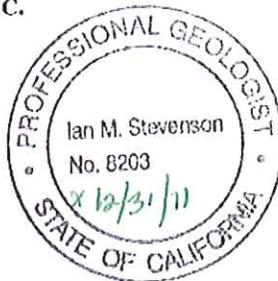
The contents of this report reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute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

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

Sincerely,

GEOCON CONSULTANTS, INC.


Ian M. Stevenson, PG
Project Geologist




David W. Bieber, CEG
Senior Geologist

IMS:DWB:krh

(6 + 10 CD) Addressee

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NATURALLY OCCURRING ASBESTOS SURVEY REPORT

1.0 INTRODUCTION

This Naturally Occurring Asbestos (NOA) Survey Report was prepared under California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order (TO) No. 93. A summary of Expense Authorizations (EAs) evaluated under this TO and their project limits are presented in Table 1. The survey services were performed in Mendocino County, California, along State Routes (SR) 1, 162, 175 and 271 (Mendocino County Highway Corridors). NOA data collected by Geocon, Shaw Environmental Inc. (Shaw) and IT Corporation (IT) under previous Caltrans Contract Nos. 03A0937, 43A0078, 43A0012 and 43A0199 along SR 20, 101, 128, 162, 175, 253 and 271 have been incorporated into this report. A summary of previous NOA surveys performed along Mendocino County Highway Corridors is presented in Table 2. The route and Post Mile (PM) extents covered by this report are as follows:

- SR 1 – PM 0.0 to 105.49
- SR 20 – PM 0.0 to 44.0
- SR 101 – PM 0.0 to 106.8
- SR 128 – PM 0.0 to 50.1
- SR 162 – PM 0.0 to 34.0
- SR 175 – PM 0.0 to 9.0
- SR 253 – PM 0.0 to 17.15
- SR 271 – PM 0.0 to 23.0

1.1 Project Description and Proposed Improvements

The survey area consists of the Caltrans right-of-way for the length of SR 1, 20, 101, 128, 162, 175, 253 and 271 in Mendocino County, California. The approximate survey area is depicted on the attached Vicinity Map, Figure 1. For the purposes of providing one document characterizing NOA within the Mendocino County highway corridors, NOA data collected by Geocon, Shaw and IT from 18 previous NOA surveys under separate Caltrans contracts and TOs have been incorporated into this report. Proposed projects for which the data will be used include culvert replacements, pavement and shoulder widening, roadway realignment, ongoing landslide removal and mitigation, and the performance of other maintenance, repair, and roadway improvement activities along the highway corridors.

1.2 General Objectives

Geologic mapping by the California Geologic Survey (CGS) depicts ultramafic rock formations within portions of the Mendocino County highway corridors, the alteration of which can lead to the formation of NOA minerals. The purpose of the scope of services outlined in TO No. 93 was to determine the

general distribution of potentially NOA-containing soil and rock within the Mendocino County Highway Corridors. Future construction or some maintenance activities may require the disturbance of possible NOA-containing soil or rock. If not managed, disturbance of NOA during construction and maintenance activities may potentially pose an inhalation risk to the health of construction personnel.

Information regarding NOA content will be used to determine where Caltrans construction and maintenance activities should comply with California Air Resources Board (CARB) and Mendocino County Air Quality Management District (MCAQMD) regulations governing activities with the potential to disturb NOA-containing soil and/or rock. The investigative results will also be used by Caltrans for regulatory compliance, health, safety and disposal purposes. Accordingly, Caltrans has requested this survey to provide data regarding the presence of NOA-containing soil or rock within Mendocino County Highway Corridors.

2.0 BACKGROUND

Caltrans requested geologic assessment and sampling of geologic materials in the Mendocino County Highway Corridors to characterize them with regards to the likelihood that NOA is present.

2.1 Previous Caltrans Assessments in the Highway Corridor

We identified 18 previous NOA surveys performed by Geocon, IT and Shaw under various Caltrans contracts and TOs within the Mendocino County Highway Corridors. The results of the NOA investigations are presented in the following reports:

1. *Naturally Occurring Asbestos and Aerial Lead Site Investigation Report, State Route 128 Landslide Repair Project, Mendocino County, California, Post Mile 39.6/39.9, Geocon Consultants, Inc., Project No. S8225-06-99, June 9, 2000.*
2. *Naturally Occurring Asbestos Site Investigation Report, Boonville Smoot Sink, 1-Men-128-PM (35.0/35.2F), EA:35940K, Mendocino County, California, Geocon Consultants, Inc., Project No. S8225-06-119, October 9, 2000.*
3. *Naturally Occurring Asbestos Survey Report, State Route 175 at East Side Road, KP 1.8/1.9 (PM 1.1/1.2), Mendocino County, California, Geocon Consultants, Inc., Project No. S8875-06-37, May 24, 2005.*
4. *Naturally Occurring Asbestos Survey Report, Highway 253 (Remove Slide), 01-Men-253-PM 1.1/1.3, Mendocino County, California, Geocon Consultants, Inc., Project No. S8875-06-39, May 26, 2005.*
5. *Naturally Occurring Asbestos and Aerial Deposited Lead Site Investigation Report, State Route 20, 01-Men-20 KP 53.6 to 61.0 (Post Mile 33.3 to 37.9), Mendocino County, California, Geocon Consultants Inc., Project No. S8875-06-46, June 30, 2005.*
6. *Naturally Occurring Asbestos Survey Report, Highway 271 Culverts, Mendocino County, California, Geocon Consultants, Inc., Project No. S8875-06-65, January 3, 2006.*

7. *Naturally Occurring Asbestos Survey Report, Anderson Creek Bridge, Boonville, Mendocino County, California*, Geocon Consultants, Inc., Project No. S8875-06-142, January 17, 2007.
8. *Naturally Occurring Asbestos and Aerial Lead Site Investigation Report, Hopland Unit 3, Men-101-KP 9.3/14.8 (PM 5.8/9.2), Mendocino County, California*, Geocon Consultants, Inc., Project No. S8225-06-114, August 11, 2000, revised September 18, 2000.
9. *Naturally Occurring Asbestos Survey Letter Report, State Route 162, Post Mile 10.7 to 11.1, Mendocino County, California*, Geocon Consultants, Inc., Project No. S8875-06-120, October 16, 2006.
10. *Naturally Occurring Asbestos Survey Report, Storm Damage Repair Projects, State Routes 20, 128, 162, and US Route 101, Mendocino County, California*, Geocon Consultants, Inc., Project No. S8875-06-138, January 30, 2007.
11. *Naturally Occurring Asbestos Survey Report, State Route 101, Post Mile 5.0 to 5.4, Mendocino County, California*, Geocon Consultants, Inc., Project No. S9230-06-03, May 4, 2007.
12. *Naturally Occurring Asbestos Survey Report, State Route 128 and 253, Post Mile 0.0/50.1 and 0.0/17.15, Mendocino County, California*, Geocon Consultants, Inc., Project No. S8875-06-140, June 29, 2007.
13. *Naturally Occurring Asbestos Survey Report, State Route 20, Post Mile 0.0 to 44.0, Mendocino County, California*, Geocon Consultants, Inc., Project No. S8875-06-141, September 26, 2007.
14. *Naturally Occurring Asbestos Survey Report, State Route 101, Post Mile 0.0 to 106.8, Mendocino County, California*, Geocon Consultants, Inc., Project No. S8875-06-141, September 28, 2007.
15. *Naturally Occurring Asbestos Survey Test Results, Bridge Upgrade and Improvement Project, Anderson Creek Bridge, Men-253, PM 0.54, Mendocino County, California*, Geocon Consultants, Inc., Project No. S9230-06-10, November 18, 2008.
16. *Preliminary Site Investigation Of Naturally Occurring Asbestos, State Route 128 Post Miles 24.55 to 50.99 and State Route 253 Postmiles 0.99 to 17.15, Mendocino County, California*, IT Corporation, Project No. 833550/01010000, January 28, 2002.
17. *Site Investigation Report, Aerially Deposited Lead and Naturally Occurring Asbestos Investigation, Highway 101 Between Kiloposts 60.2 and 62.4, Willits, Mendocino County, California*, Shaw Environmental, Inc., Project No. 103094.0101, June 16, 2004.
18. *Site Investigation Report, Aerially Deposited Lead and Naturally Occurring Asbestos Investigation, Highway 101 Between Kiloposts 63.4 and 65.8, Willits, Mendocino County, California*, Shaw Environmental, Inc., Project No. 103096.0101, June 16, 2004.

Consultant names, route numbers, PMs, project numbers, Caltrans Contract Nos. and TO Nos. for the site investigation reports listed above are presented in Table 2. Laboratory data for the current and previous NOA surveys are presented in Table 3.

2.2 Regulatory Framework

The CARB has mitigation practices for construction, grading, quarrying, and surface mining operations that may disturb natural occurrences of asbestos outlined in the Airborne Toxic Control Measure

(ATCM) in Title 17 California Code of Regulations (CCR), Section 93105 (ATCM 93105). NOA potentially poses a health hazard when it becomes an airborne particulate. Maintenance and construction activities within the roadway corridor could disturb NOA-containing rock and soil where present, thereby potentially creating an airborne asbestos hazard. 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; primarily 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 approved high-efficiency particulate air filter-equipped respirators is required during construction activities. Asbestos dust control methods similar to those in ATCM 93105 are outlined in Title 17 CCR, Section 93106 (ATCM 93106) governing the control of airborne asbestos resulting from the use of NOA-containing material for 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 ATCMs 93106 and 93105 if it is covered with at least 0.25 foot of material that contains less than 0.25% asbestos.

The MCAQMD requires all construction activities to follow recommendations given in Rule 1-430, Fugitive Dust Emissions. MCAQMD Rule 1-430 is presented in Appendix A. Mandatory notification to MCAQMD is required if a project will potentially disturb NOA-containing materials.

3.0 SCOPE OF SERVICES

The scope of services as requested by Caltrans in TO No. 93 included a geologic assessment of the SR 1, 162, 175 and 271 corridors for potentially asbestos-bearing soils and rocks, the collection of 43 soil and rock samples for asbestos analysis, review of 18 previous NOA surveys performed within the SR 20, 101, 128 and 253 corridors, and the preparation of this report.

3.1 Pre-field Activities

- Conducted a Task Order Meeting and preliminary geologic reconnaissance on August 10 and 11, 2009, to discuss the TO scope of services and review general geologic conditions. Caltrans Quality Assurance Manager Mark Melani, Geocon Task Order Manager David Bieber, and Geocon Field Supervisor Ian Stevenson were present at the meeting. The purpose of the Task Order Meeting was to identify and discuss the project boundaries and conditions.
- Reviewed readily available published geological maps and studies of the Mendocino County Highway Corridors and surrounding areas for information on the potential presence of NOA.
- Reviewed reports that were prepared for previous NOA surveys by Geocon, IT, and Shaw within and adjacent to the Mendocino County Highway Corridors.
- Retained the services of EMSL Analytical, Inc. (EMSL), a Caltrans-approved and California-certified analytical laboratory, to perform asbestos analyses of samples.

- Prepared a *Health and Safety Plan* dated August 20, 2009, to provide guidelines on the use of personal protective equipment and the health and safety procedures implemented during the field activities.
- Prepared a *Workplan* dated September 3, 2009, which describes the requested scope of services and quality assurance/quality control (QA/QC) sampling and laboratory procedures.

3.2 Field Activities

A preliminary geological reconnaissance was performed on August 10 and 11, 2009, by David Bieber, a California Certified Engineering Geologist (CEG No. 2092), and Ian Stevenson, a California Professional Geologist (PG No. 8203), each of whom have specialized experience in the assessment of NOA.

The NOA survey was performed in general accordance with the procedures outlined Title 17 CCR, Sections 93105 and 93106, from August 31, 2009, to October 28, 2009, by Ian Stevenson. The NOA survey included additional geological reconnaissance and the collection of 43 soil and rock samples for asbestos analysis. The sample locations were selected in the field by the Geocon Field Supervisor and were determined using a global positioning system (GPS) capable of providing a horizontal position with a minimum error of 3.3 feet. The approximate sample locations are depicted on the Site Plans. Details of the field activities are presented in the following sections.

4.0 INVESTIGATIVE METHODS

We performed a preliminary geological reconnaissance of the Mendocino County Highway Corridors to identify areas where NOA minerals may occur. Additional NOA assessment was conducted during the collection of 43 soil and rock samples for laboratory analysis. Samples were collected from areas not evaluated for the presence of NOA under previous TOs and where the observed geology did not allow us to conclusively assess the location for the presence of NOA, from areas where conditions were conducive to the formation of or likely to contain NOA-containing materials, and from areas with geology not conducive to the formation of NOA. The approximate sample locations are presented on the Site Plans.

The soil samples were collected from hand-auger borings, as rock chip samples, or as surface samples. Hand-auger borings were advanced to depths of 0.75 to 1.5 feet to collect soil samples. Samples for asbestos analysis were collected from the bottom 6 inches of soil excavated so as to minimize the potential for asbestos contamination from anthropogenic sources such as motor vehicle brakes. Rock chip samples were collected using a rock hammer to remove approximately one quart of material. Surface samples were collected using a sampling pick or hand-auger to collect approximately one quart of loose soil and rock debris.

Each sample was placed into a one quart resealable plastic bag. Loose samples were homogenized within their sample bags after collection. Each sample bag was marked with an identification number, the date, and the time collected. Identification numbers of samples collected consisted of route, county abbreviation, and number (e.g. 162M-2). Sample numbers and associated Post Miles are presented in Table 3. The samples were delivered to EMSL for asbestos analysis under chain-of-custody (COC) protocol.

NOA samples were collected as follows:

- SR 1 – Two samples for asbestos analysis were collected from the north and south side of the Greenwood Creek Bridge at PM 33 in Elk.
- SR 162 – Thirty samples were collected for asbestos analysis between PM 10.55 and PM 36.49.
- SR 175 – Nine samples were collected for asbestos analysis between PM 1.0 and PM 9.84.
- SR 271 – Two samples were collected for asbestos analysis between PM 0.44 and PM 0.5.

SR 20, 101, 128 and 253 corridors were evaluated for the presence of NOA under separate Caltrans Contracts and TOs. A summary of previous NOA surveys is presented in Table 2. Asbestos data from previous NOA surveys is included in Table 3.

4.1 Traffic Control

Sample locations were generally occupied for less than ten minutes. We provided “SHOULDER WORK AHEAD” advanced warning signs and orange traffic cones during the field work.

4.2 Quality Assurance/Quality Control Procedures

QA/QC procedures were performed during the field exploration activities. These procedures included decontamination of sampling equipment before each sample was collected and providing COC documentation for each sample submitted to EMSL. Sampling equipment was cleansed between each sample by washing the equipment with an Alconox[®] solution followed by a rinse with de-ionized water. The decontamination water was disposed of in the Caltrans right-of-way away from storm drains and more than 50 feet from surface water bodies.

4.3 Laboratory Analyses

Samples were submitted to EMSL for asbestos fiber analysis by CARB 435 under a five-day or six- to ten-day turn-around-time (TAT) basis. The CARB 435 preparation includes milling the sample to a -200 mesh size which also homogenizes the sample. Forty-three samples were analyzed by EMSL using CARB 435 with polarized light microscopy (PLM). The analytical sensitivity of the PLM analysis was 0.25% by area. Prior to submitting the samples to the EMSL, the COC documentation was

reviewed for accuracy and completeness. Reproductions of the laboratory reports and COC documentation are presented in Appendix B.

5.0 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

5.1 Geology

We reviewed the following geologic maps prior to beginning the field work to gather information regarding the potential presence of NOA within the Mendocino County Highway Corridors:

- CGS 1982 *Geologic Map of the Santa Rosa Quadrangle* (Santa Rosa Sheet);
- CGS 1960 *Geologic Map of California, Ukiah Sheet* (Ukiah Sheet);
- CGS 2000 *General Location Guide for Ultramafic Rocks in California, Areas More Likely to Contain Naturally Occurring Asbestos* (Ultramafic Map); and
- MCAQMD mapping of *Areas That May Contain Naturally Occurring Asbestos* (MCAQMD NOA Map).

The depicted geologic materials within the Mendocino County Highway Corridors, as shown on the Santa Rosa and Ukiah Sheets, consists of Quaternary dune sands, Quaternary alluvium, Quaternary nonmarine terrace deposits, Pleistocene marine and marine terrace deposits, Pleistocene nonmarine, Plio-Pleistocene nonmarine, middle and lower Miocene marine, Eocene marine, Paleocene marine, Tertiary volcanic, undivided Cretaceous marine, upper Cretaceous marine, Cretaceous Franciscan Formation and Mesozoic ultrabasic intrusive rocks. The areas more likely to contain NOA depicted on the Ultramafic Map and the MCAQMD NOA Map generally correspond with areas on the Santa Rosa and Ukiah Sheets mapped as Mesozoic ultrabasic intrusive rock.

Ian Stevenson and David Bieber performed the NOA assessment of the lithology of outcrops visible within the Caltrans right-of-way. The observed geology is consistent with that depicted on the Santa Rosa and Ukiah Sheets.

5.2 Laboratory Results

Thirty-six of the forty-three samples collected and analyzed for asbestos under this TO were reported as non-detect. Six of the forty-three samples analyzed were reported to contain <0.25% chrysotile by the PLM method, five from along SR 162 and one from SR 271. One sample collected along SR 162 for this TO was reported to contain 16% chrysotile asbestos by the PLM method. The NOA analytical results from samples analyzed for this TO are included and summarized in Table 3.

5.3 Summary of Geology by Corridor

The following sections provide geologic descriptions specific to each corridor.

5.3.1 SR 1

Soils within the SR 1 corridor are generally comprised of fill, and colluvial and alluvial soils apparently derived from local sources. Geologic units observed in the vicinity of the Caltrans right-of-way include slide debris, Quaternary dune sands, Quaternary alluvium, Pleistocene marine terrace deposits, Eocene and Paleocene marine sedimentary deposits, Tertiary basalts, Cretaceous marine deposits and the Franciscan Formation. Serpentinized ultramafic rocks were not observed during our geologic reconnaissance of the corridor and are not depicted on the geologic maps reviewed. However, Greenwood Creek drains in an area east of SR 1 where ultramafic rock may be present. Therefore, we evaluated the alluvial materials present in that area for the presence of detrital material that might contain NOA, including the collection of two samples for asbestos analysis.

5.3.2 SR 20

Soils within the SR 20 corridor are generally comprised of fill, colluvial and alluvial soils apparently derived from local sources. Geologic units observed in the vicinity of the Caltrans right-of-way include Quaternary alluvium, Quaternary terrace deposits, Pleistocene marine and terrace deposits, Plio-Pleistocene non marine deposits, undivided Cretaceous marine deposits, Jurassic-Cretaceous Franciscan Formation metavolcanics, Jurassic-Cretaceous Franciscan Formation and Mesozoic ultramafic intrusive rocks. Mesozoic ultramafic intrusive rocks are only mapped along the SR 20 corridor as a small outcrop in the vicinity of Willits on the Ukiah Sheet and are not depicted on the Ultramafic Map. The MCAQMD NOA Map depicts areas of concern for NOA in the vicinity of Calpella and Willits. Those portions of SR 20 where potentially asbestos-bearing materials may be present were evaluated under previous TOs.

5.3.3 SR 101

Soils within the SR 101 corridor are generally comprised of fill, colluvial and alluvial soils apparently derived from local sources. Geologic units observed in the vicinity of the Caltrans right-of-way include slide debris, Quaternary alluvium, Quaternary terrace, Pleistocene Huichica and Glen Ellen formations, Plio-Pleistocene non-marine, Cretaceous Tertiary Coastal Belt Franciscan Formation, undivided Cretaceous marine, Jurassic-Cretaceous Franciscan Formation and Mesozoic ultramafic intrusive rocks. Ultramafic rocks are mapped on the Ukiah Sheet in the vicinity of Hopland, Ridgewood Grade and Cummings. The MCAQMD NOA Map depicts areas of concern for NOA for the majority of the corridor from the Sonoma County line to Laytonville and in the Cummings area. Those portions of SR 101 where potentially asbestos-bearing materials may be present were evaluated under previous TOs.

5.3.4 SR 128

Soils within the SR 128 corridor are generally comprised of fill, colluvial, and alluvial soils apparently derived from local sources. Geologic units observed in the vicinity of the Caltrans right-of-way include

slide debris, Quaternary alluvium, Quaternary terrace, Plio-Pliocene non-marine, undivided Cretaceous marine, Jurassic-Cretaceous Franciscan Formation and Mesozoic ultramafic intrusive rocks. Mesozoic ultramafic rocks are mapped on the Ukiah sheet in the southern end of Anderson Valley. Mesozoic ultrabasic rocks are also mapped as small scattered outcrops between the southern end of Anderson Valley and the Sonoma County line. The MCAQMD NOA Map depicts areas of concern for NOA in the vicinity of Boonville and between Boonville and the Sonoma County line. Those portions of SR 128 where potentially asbestos-bearing materials may be present were evaluated under previous TOs.

5.3.5 SR 162

Soils within the SR 162 corridor are generally comprised of fill, colluvium, slide debris and alluvial soils apparently derived from local sources. Geologic units observed in the vicinity of the Caltrans right-of-way include slide debris, Quaternary alluvium, Pliocene-Pleistocene non-marine, middle Miocene marine, Eocene marine, Paleocene marine, upper Cretaceous marine, Jurassic-Cretaceous Franciscan Formation, and Mesozoic ultramafic intrusive rocks. Ultramafic rocks are depicted on the Ukiah Sheet at the south end of Round Valley and west of Inspiration Point. The MCAQMD NOA Map depicts areas of concern for NOA along the SR 162 corridor from the southern end of Round Valley to the vicinity of Tatu, south of Dos Rios. Portions of SR 162 were evaluated for NOA under previous TOs. However, we identified areas where data gaps in coverage existed between previous evaluations. We collected 30 additional samples for analysis along SR 162 to fill in the gaps in coverage.

5.3.6 SR 175

Soils within the SR 175 corridor are generally comprised of fill, colluvium, slide debris and alluvial soils apparently derived from local sources. Geologic units observed in the vicinity of the Caltrans right-of-way include slide debris, Quaternary alluvium, Pleistocene non-marine, Pliocene-Pleistocene non-marine, undivided Cretaceous marine and the Jurassic-Cretaceous Franciscan Formation. Serpentinized ultramafic rocks are not mapped within the SR 175 corridor on the Ukiah Sheet or Ultramafic Map. The MCAQMD NOA Map depicts areas of concern for NOA along the SR 175 corridor in the vicinity of Hopland and the Lake County line. Portions of SR 175 were evaluated for NOA under previous TOs. However, we identified areas where data gaps in coverage existed between previous evaluations. We collected nine additional samples for analysis along SR 175 to fill in the gaps in coverage.

5.3.7 SR 253

Soils within the SR 253 corridor are generally comprised of fill, colluvial, and alluvial soils apparently derived from local sources. Geologic units observed in the vicinity of the Caltrans right-of-way include slide debris, Quaternary alluvium, Quaternary terrace, undivided Cretaceous marine, Jurassic-Cretaceous Franciscan Formation and Mesozoic ultrabasic rocks. Mesozoic ultrabasic rocks are

mapped on the Ukiah sheet near the summit of SR 253 and in the vicinity of the SR 128/253 junction on the Ukiah and Santa Rosa sheets. The MCAQMD NOA Map depicts areas of concern for NOA in the vicinity of Boonville, the summit of SR 253 and the junction of SR 253 and South State Street. Those portions of SR 253 where potentially asbestos-bearing materials may be present were evaluated under previous TOs.

5.3.8 SR 271

Soils within the SR 271 corridor are generally comprised of fill and colluvial soils apparently derived from local sources. Geologic units observed in the vicinity of the Caltrans right-of-way include slide debris, upper Cretaceous marine deposits and Mesozoic ultrabasic rocks. Mesozoic ultrabasic rocks are mapped on the Ukiah sheet in the vicinity of Cummings. The MCAQMD NOA Map also depicts areas of concern for NOA in the vicinity of Cummings. Portions of SR 271 were evaluated for NOA under previous TOs. However we identified areas where data gaps in coverage existed between previous evaluations. We collected two additional samples for analysis along SR 271 to fill in the gaps in coverage.

6.0 CONCLUSIONS AND RECOMMENDATIONS

We collected 43 soil and rock samples within the SR 1, 162, 175 and 271 corridors. Six of the 43 samples analyzed for this TO were reported to contain chrysotile asbestos at less than 0.25%, five from the SR 162 corridor and one from the SR 271 corridor. One sample from a serpentine outcrop on SR 162 was reported to contain 16% chrysotile asbestos, above the CARB regulatory action limit of 0.25%.

Based on the 43 soil and rock samples collected within the SR 1, 162, 175 and 271 corridors and analyzed for this TO, and 899 samples analyzed for previous NOA surveys, we have assigned asbestos dust mitigation recommendations to each highway corridor within Mendocino County.

Dust control requirements assigned to corridor segments are as follows:

- Soil disturbing activities are not subject to asbestos dust control measures.
- Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements unless a site-specific NOA survey is conducted that demonstrates that materials likely to contain NOA at regulated levels are not present.
- Soil disturbing activities should comply with ATCM 93105 and/or 93106 dust control requirements including preparation of, and implementation of the measures presented in an asbestos dust mitigation plan (ADMP).

Dust control requirements were assigned to corridor segments based on the soil or rock type present and asbestos analytical results. Corridor segments where “soil disturbing activities are not subject to asbestos dust control measures” is recommended are characterized by soil or rock that is not conducive to the formation of asbestos and were reported to contain asbestos at less than 0.25%. Corridor segments where “soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements unless a site-specific NOA survey is conducted that demonstrates that materials likely to contain NOA at regulated levels are not present” is recommended are characterized by soil or rock that is not derived from or composed of ultramafic materials but asbestos is present at 0.25% to 0.99%. Corridor segments where “soil disturbing activities should comply with ATCMs 93105 and/or 93106 asbestos dust control requirements including preparation of, and implementation of the measures presented in an asbestos dust mitigation plan” is recommended are characterized by the presence of soils derived from ultramafic rock and/or ultramafic bedrock, and/or asbestos is reported to be present at greater than or equal to 1.0%.

Each Mendocino County Highway Corridor has been assigned dust control requirements for their entire length. A summary of asbestos dust mitigation recommendations by route and PM is presented in Table 4.

6.1 Summary of Segment-specific Recommendations

Recommendations pertaining to asbestos dust mitigation for each specific corridor are presented in the following sections and are summarized by PM in Table 4.

6.1.1 SR 1

Areas likely to contain NOA were not identified along SR 1 in Mendocino County. Soil disturbing activities between PM 0.0 and 105.49 are not subject to asbestos dust control measures.

6.1.2 SR 20

Areas likely to contain NOA were not identified along SR 20 in Mendocino County. Soil disturbing activities between PM 0.0 and 44.0 are not subject to asbestos dust control measures.

6.1.3 SR 101

Areas likely to contain NOA were identified along SR 101 in Mendocino County between PMs 0.0 and 20.0, 36.83 and 38.0, and 80.73 to 87.41. Soil disturbing activities in the areas listed above will need to comply with ATCMs 93105 and/or 93106 and may require the preparation and implementation of an ADMP. Soil disturbing activities outside of the PMs listed above are not subject to asbestos dust control measures.

6.1.4 SR 128

Areas likely to contain NOA were identified along SR 128 in Mendocino County between PMs 4.3 and 4.39, 23.13 and 24.08, 29.72 and 31.6, 32.53 and 32.92, 33.04 and 33.16, 33.45 and 33.51, 33.76 and 33.92, 39.5 and 39.9, 41.12 and 41.17, 42.19 and 42.52, 45.6 and 46.00, 46.7 and 47.0, 47.5 and 47.75, 48.21 and 48.56, and 48.89 to 49.23. Soil disturbing activities within these areas will need to comply with ATCMs 93105 and/or 93106 and may require the preparation and implementation of an ADMP. Soil disturbing activities outside of these areas are not subject to asbestos dust control measures.

6.1.5 SR 162

Areas likely to contain NOA were identified along SR 162 in Mendocino County between PMs 16.5 and 16.54, 21.17 and 21.44, and 23.50 to 26.27. Soil disturbing activities within these areas will need to comply with ATCMs 93105 and/or 93106 and may require the preparation and implementation of an ADMP. Soil disturbing activities outside of these areas are not subject to asbestos dust control measures.

6.1.6 SR 175

Areas likely to contain NOA were not identified along SR 175 in Mendocino County. Soil disturbing activities between PM 0.0 and 9.0 are not subject to asbestos dust control measures.

6.1.7 SR 253

Areas likely to contain NOA were identified along SR 253 in Mendocino County between PMs 0.3 and 2.4, 4.36 and 4.4, 4.63 and 4.67, 8.32 and 8.34, 9.38 and 9.74, 12.72 and 12.92, and 13.93 to 15.76. Soil disturbing activities within these areas will need to comply with ATCMs 93105 and/or 93106 and may require the preparation and implementation of an ADMP. Soil disturbing activities outside of these areas are not subject to asbestos dust control measures.

6.1.8 SR 271

Areas likely to contain NOA were identified along SR 271 in Mendocino County between PM 0.0 and 0.5. Soil disturbing activities between PM 0.0 and 0.5 should comply with ATCMs 93105 and/or 93106 including the preparation of and implementation of the measures presented in an ADMP. Soil disturbing activities between PM 0.5 and 23.00 are not subject to asbestos dust controls.

6.2 NOA-containing Materials Management

NOA is a State of California regulated substance and is reported in areas of the Mendocino County Highway Corridors at levels exceeding the CARB regulatory limit of 0.25%. Though asbestos was reported to be present at or above regulated levels, the asbestos content does not render these materials unsuitable for reuse within the Caltrans right-of-way. However, construction/maintenance activities involving these asbestos-containing materials may fall under regulatory jurisdiction of the California Division of the Occupational Safety and Health Administration (Cal-OSHA) under CCR Title 8 Section 5208. Mitigation measures during construction/maintenance activities should be utilized to minimize releases of NOA to air (dust control) and surface waters (stormwater discharge). If reused within the Caltrans right-of-way, the material from areas where asbestos was reported to be present at regulated levels can not be used in such a way as to fall under the definition of surfacing material as defined in CARB's Title 17, Section 93106. NOA-containing material must be covered by at least 0.25 foot of material that contains less than 0.25% NOA and should ideally be placed at the bottom of the deepest fills for a specific project.

We recommend that soil excavated from areas requiring asbestos dust mitigation measures, as detailed on Table 4, be stockpiled and re-sampled to characterize them with regards to NOA content unless the soil is going to be used onsite as fill and will be covered by hardscape or at least 3 inches of soil that does not contain asbestos at or above 0.25%. Stockpiled soil that does not contain asbestos at or above 0.25% can be used onsite as cover or disposed of offsite without restriction. Under ATCM 93105, offsite disposal of material containing asbestos at or above regulatory limits requires that the landfill facility or property owner must be notified that the soil contains levels of asbestos that exceed regulated levels. Soils removed from areas containing asbestos (see Table 4 for summary of corridor segments requiring asbestos dust control) must be transported in accordance with ATCM 93105, Section E(4)(F), *Control for Off-site Transport*, which states:

"No trucks are allowed to transport (NOA-containing) excavated material off-site unless:

- 1. Trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments; and*
- 2. Loads are adequately wetted and either:*
 - i. Covered with tarps; or*
 - ii. Loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment."*

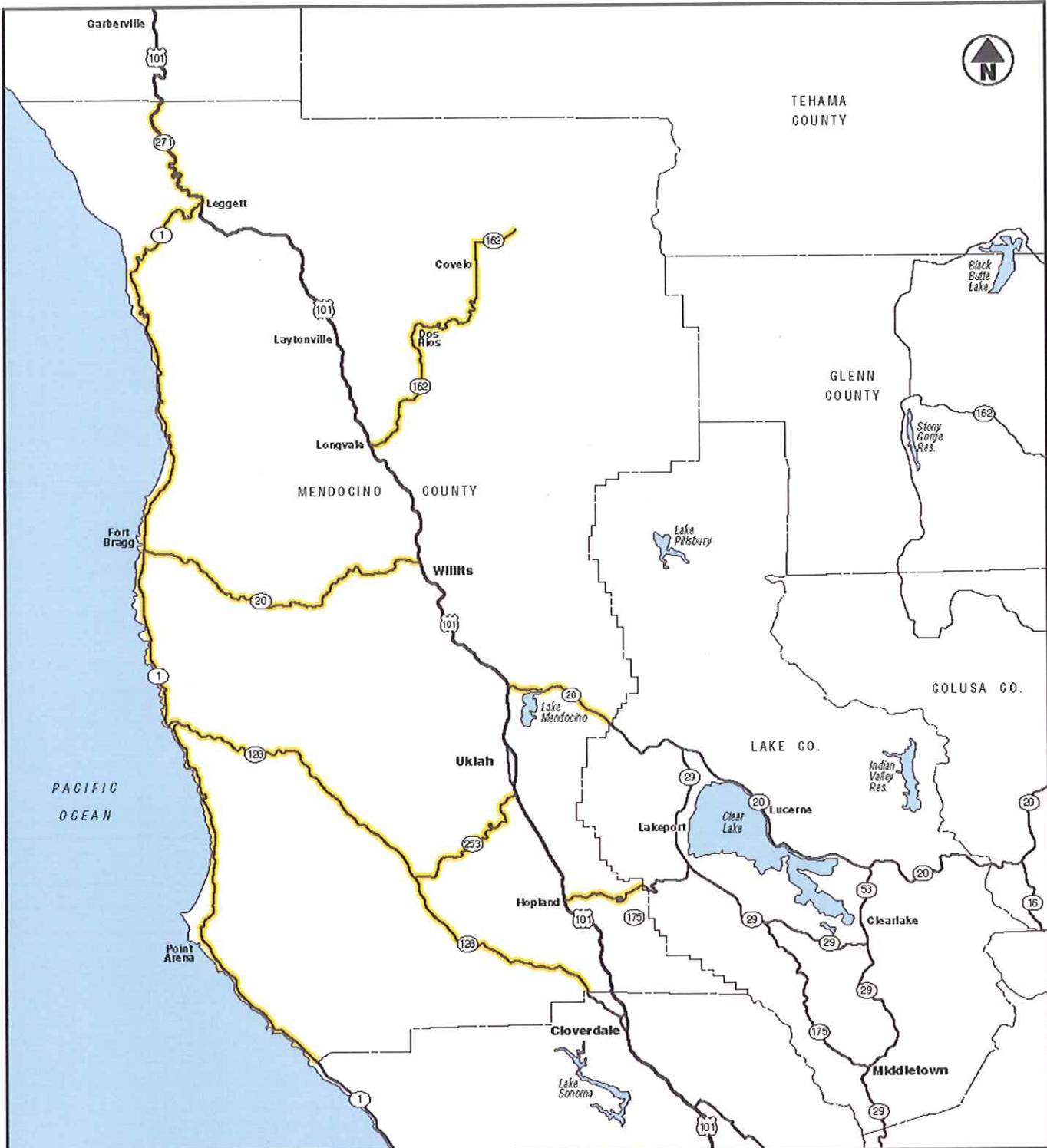
6.3 Asbestos Risk to Human Health

Currently, regulatory exposure limits and health hazard data are not available for NOA in soils. Federal regulations governing asbestos define it as the asbestiform variety of the amphibole minerals actinolite, amosite, anthophyllite, crocidolite, and tremolite, and the asbestiform variety of serpentine, chrysotile. Asbestos fibers occurring in industrial materials are considered by the National Institute for Occupational Safety and Health as potential occupational carcinogens. Prudence is recommended, therefore, in dealing with soils containing NOA. Engineering controls, such as wet methods for dust suppression, should be utilized to minimize aerial dispersion of NOA fibers in planned work areas during excavation and construction activities. Under Title 8 Section 5208 of the CCR, disturbance of asbestos-containing materials requires wet working methods and possible respiratory protection and air monitoring. The CARB has established protocols outlined in Title 17, Section 93105 for the implementation of worker health, safety and monitoring plans for excavation, grading and transport of NOA-containing soils. The excavation contractor should consult Title 17, Section 93105 and contact Cal-OSHA to establish the appropriate regulatory protocol and actions necessary for excavation and/or disturbance of asbestos-containing soils.

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. Geocon 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.



LEGEND:
 Project Sampling Location




GEOCON
 CONSULTANTS, INC.
 3180 GOLD VALLEY DR. - SUITE 800 - RANCHO CORDOVA, CA. 95742
 PHONE 916 862-9118 - FAX 916 862-9132

State Routes 1, 20, 101, 128, 162, 175, 253 and 271

Mendocino County,
 California

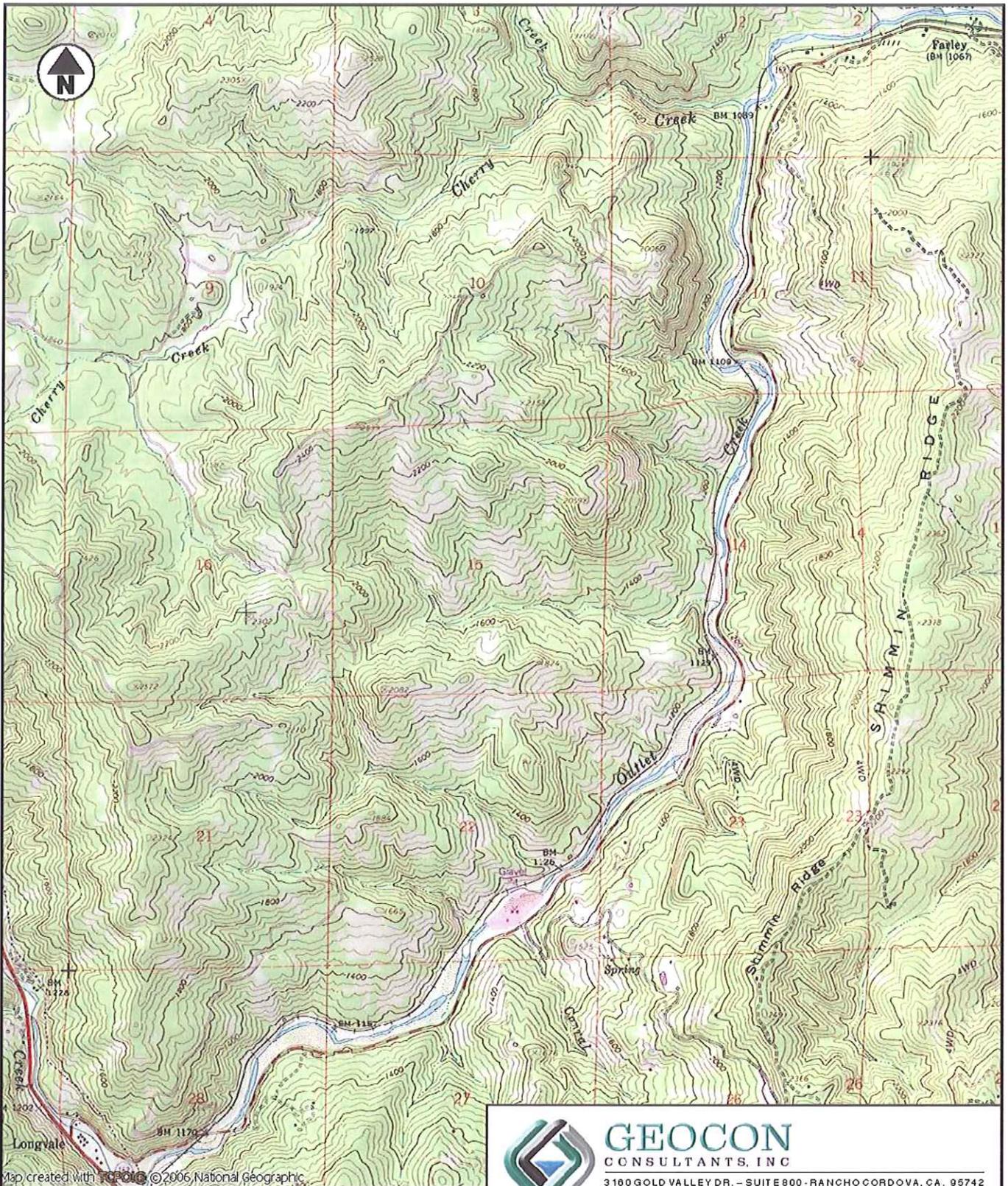
VICINITY MAP

GEOCON Proj. No. S9300-06-93

Task Order No. 93

January 2010

Figure 1



GEOCON
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3100 GOLD VALLEY DR. - SUITE 800 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132

State Routes 1, 20, 101, 128, 162, 175, 253 and 271

Mendocino County,
California

SITE PLAN
MEN 162

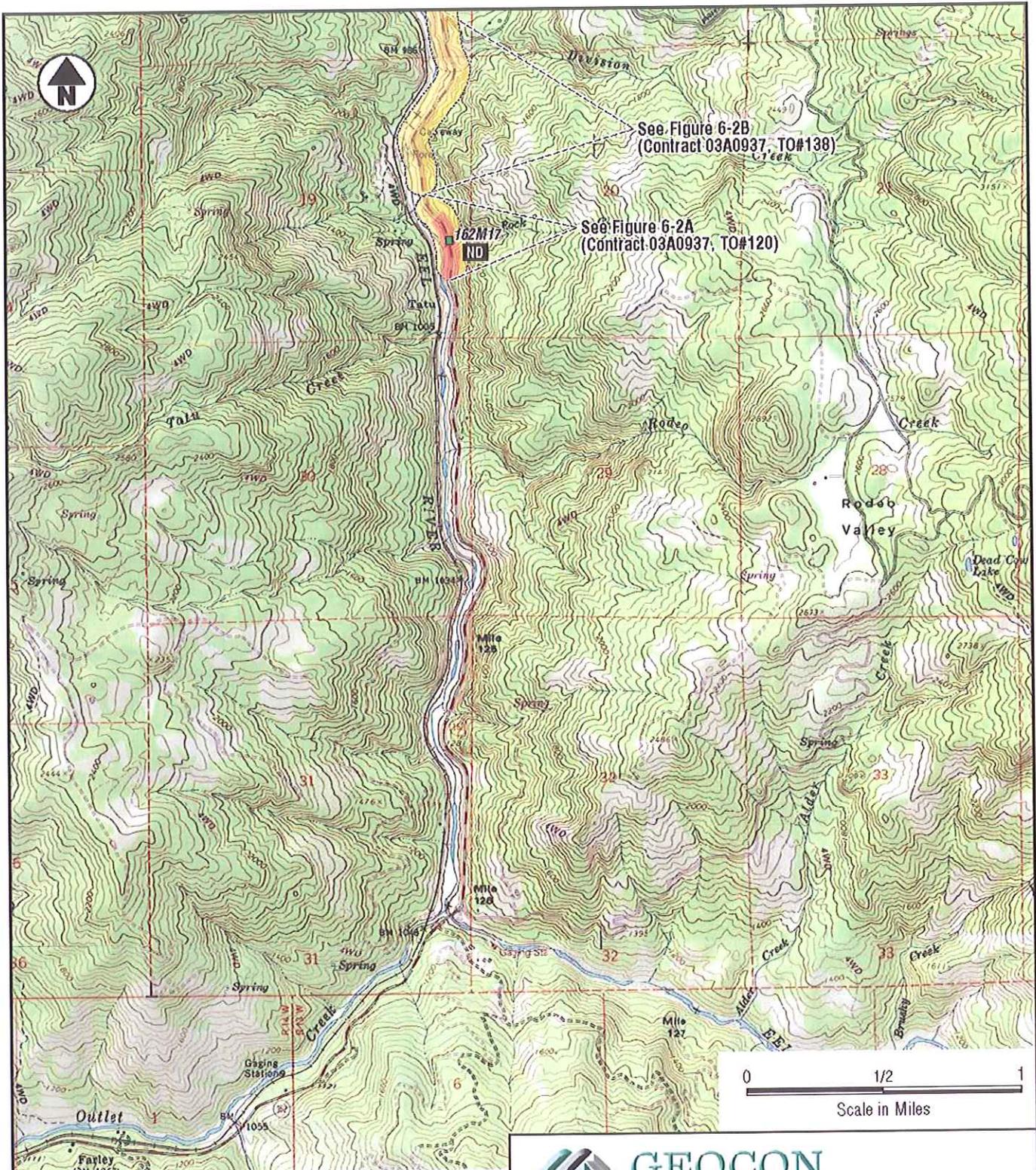
GEOCON Proj. No. S9300-06-93

Task Order No. 93

January 2010

Figure 6-1



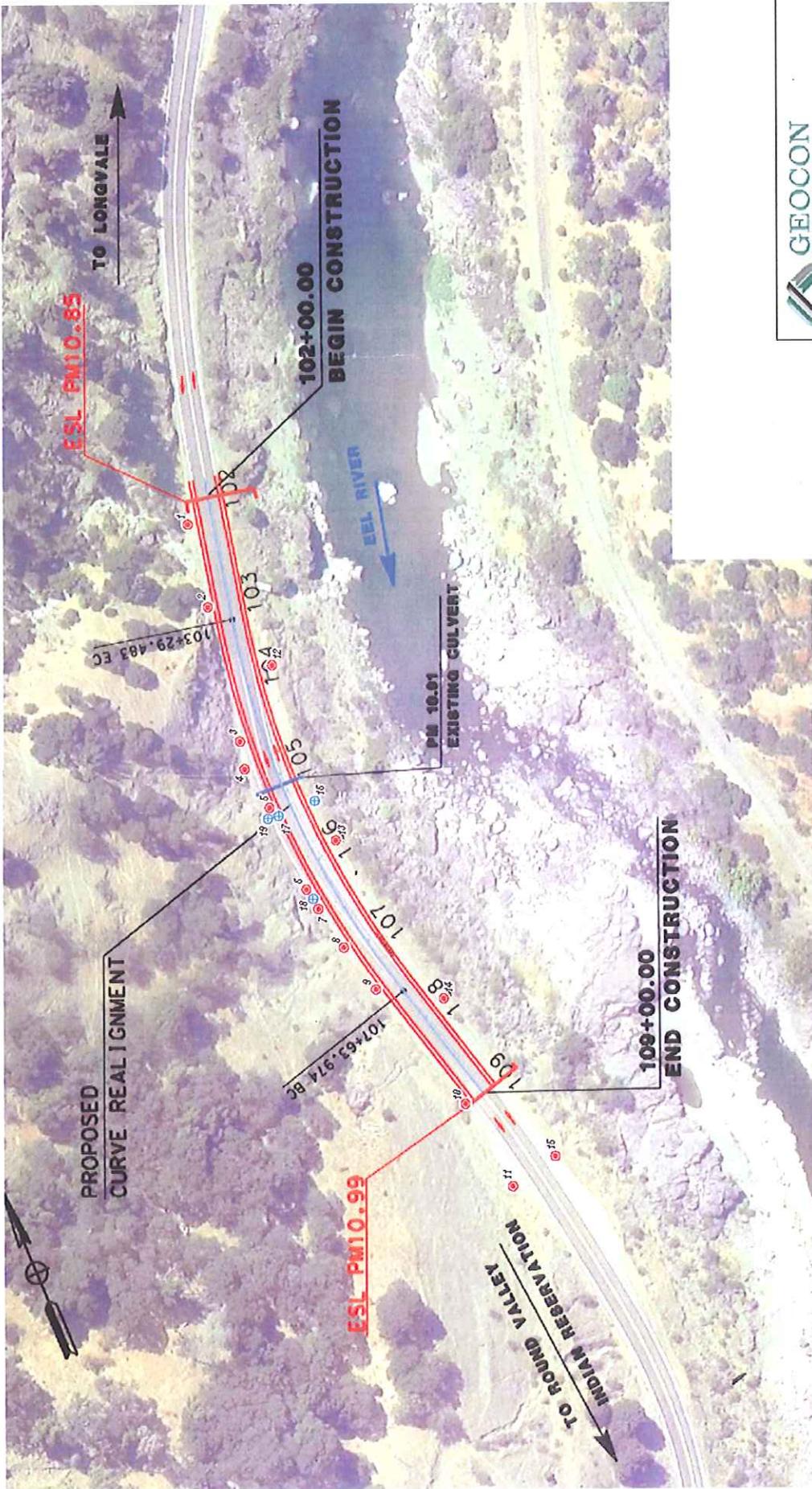


- LEGEND:**
- Approximate Naturally Occurring Asbestos (NOA) Sample Location
 - NO NOA Not Detected
 - Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in Asbestos Dust Mitigation Plan.
 - Previous NOA Investigation Conducted Under Separate Contract and Task Order

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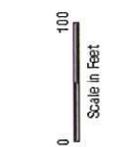
State Routes 1, 20, 101, 128, 162, 175, 253 and 271		
Mendocino County, California		SITE PLAN MEN 162
GEOCON Proj. No. S9300-06-93		January 2010
Task Order No. 93		Figure 6-2



GEOCON
 CONSULTANTS, INC.
 1148 GOLDENVIEW SUITES BANC OCCIDENTAL, CA 94742
 PHONE: 925.251.1113 FAX: 925.251.1132

State Routes 1, 20, 101, 128, 162, 175, 253 and 271
 Mendocino County, California
SITE PLAN
MEN 162

GEOCON Proj. No. 89600-06-98
 Task Order No. 98
 January 2010
 Figure 6-2A



- LEGEND:**
- ① Approximate Naturally Occurring Asbestos (NOA) Distributed Sample Location (Contract 03A0937, TO#120)
 - ② Approximate Naturally Occurring Asbestos (NOA) Targeted Sample Location (Contract 03A0937, TO#120)



LEGEND:

TO138-HWY162NOA1 Approximate Naturally Occurring Asbestos (NOA) Sample Location (Contract 03A0937, TO#138)

< 0.25% Percent Asbestos, California Air Resources Board Test Method 435

ND NOA Not Detected

0 500
Approx. Scale in Feet



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State Routes 1, 20, 101, 128, 162, 175, 253 and 271

Mendocino County,
California

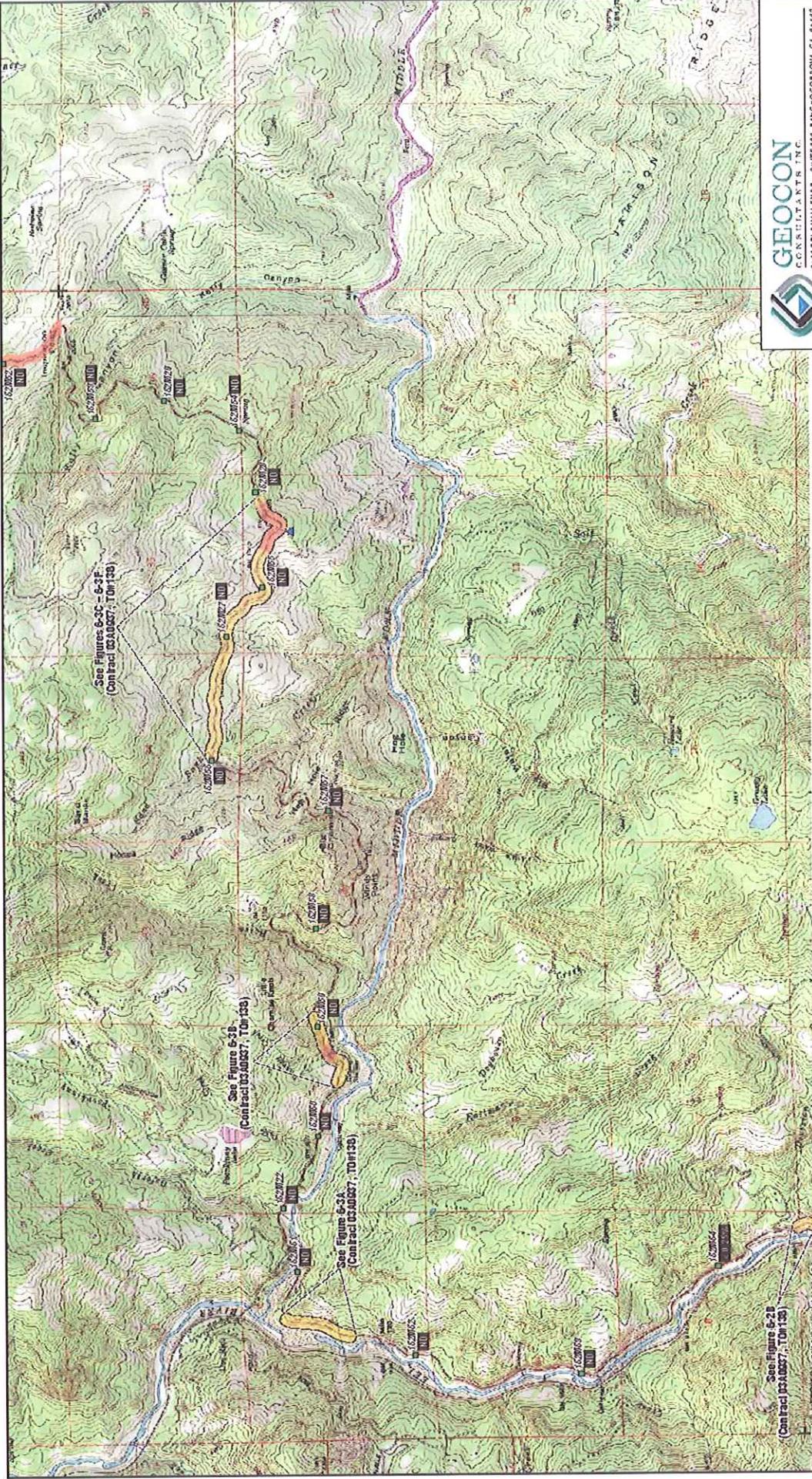
SITE PLAN
MEN 162

GEOCON Proj. No. S9300-06-93

Task Order No. 93

January 2010

Figure 6-2B



LEGEND:

- Approximate Naturally Occurring Asbestos (NOA) Sample Location
- % NOA as PLM (Polarized Light Microscopy)
- NOA Not Detected
- ▲ Previous NOA Investigation Conducted Under Separate Contract and Task Order

Soil disturbing activities should comply with ATCMs 83105 and/or 83106 dust control requirements including preparation of and implementation of the measures presented in Asbestos Dust Mitigation Plan.

▲ Approximate Location of Serpentine Outcrop

Scale in Miles
0 1/2 1

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Mendocino County, California
GEOCON Proj. No. 99000-06-99
Task Order No. 99

SITE PLAN
MEN 162

January 2010 Figure 6-3



LEGEND:

TO138-HWY162NOA13  Approximate Naturally Occurring Asbestos (NOA) Sample Location (Contract 03A0937, TO#138)

ND NOA Not Detected

0 300
 Approx. Scale in Feet



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 CONSULTANTS, INC

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State Routes 1, 20, 101, 128, 162, 175, 253 and 271

Mendocino County,
 California

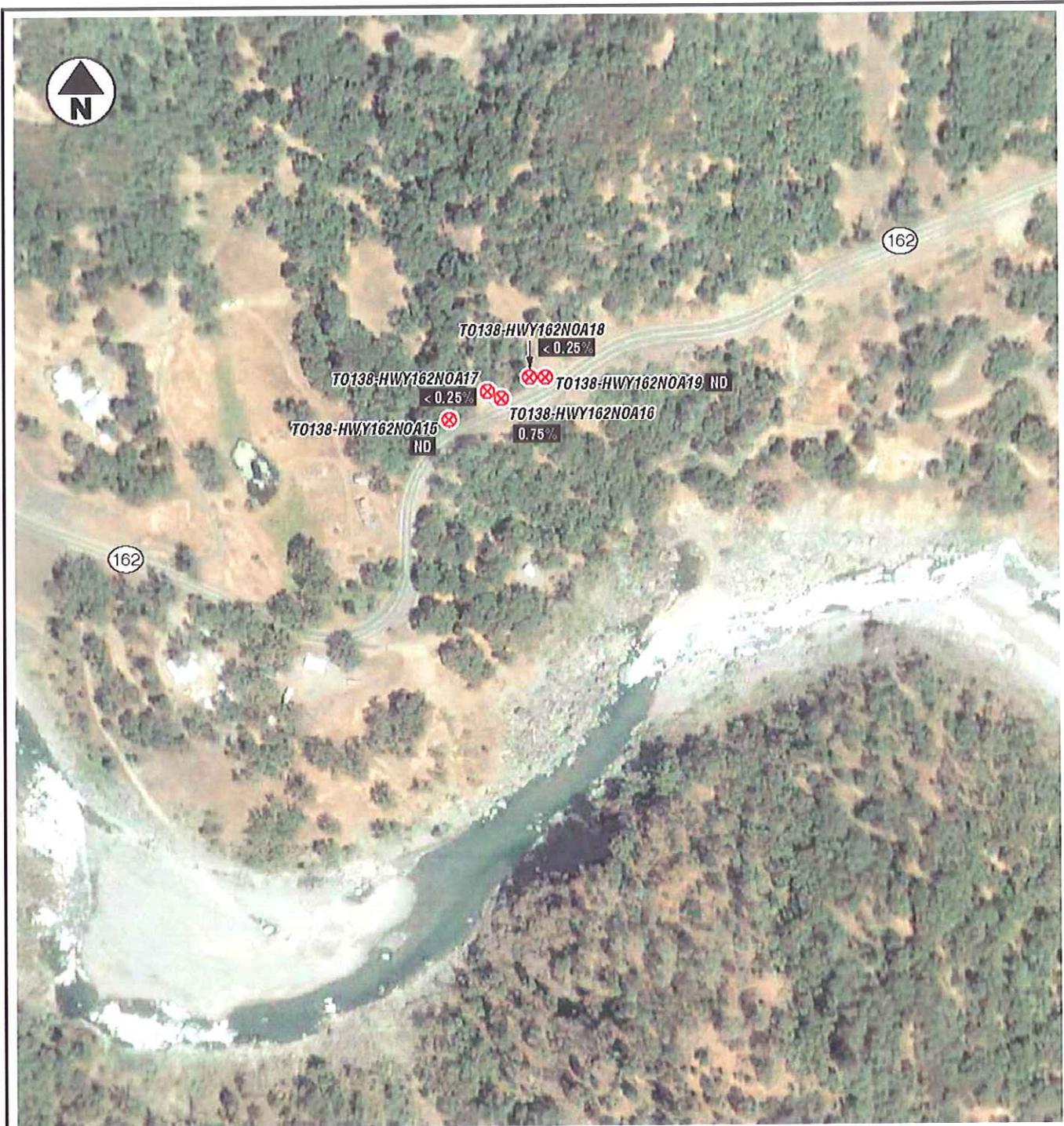
SITE PLAN
MEN 162

GEOCON Proj. No. S9300-06-93

Task Order No. 93

January 2010

Figure 6-3A



LEGEND:

- TO138-HWY162NOA15** Approximate Naturally Occurring Asbestos (NOA) Sample Location (Contract 03A0937, TO#138)
- 0.75%** Percent Asbestos, California Air Resources Board Test Method 435
- ND** NOA Not Detected

0 300
 Approx. Scale in Feet



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 CONSULTANTS, INC

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State Routes 1, 20, 101, 128, 162, 175, 253 and 271

Mendocino County,
 California

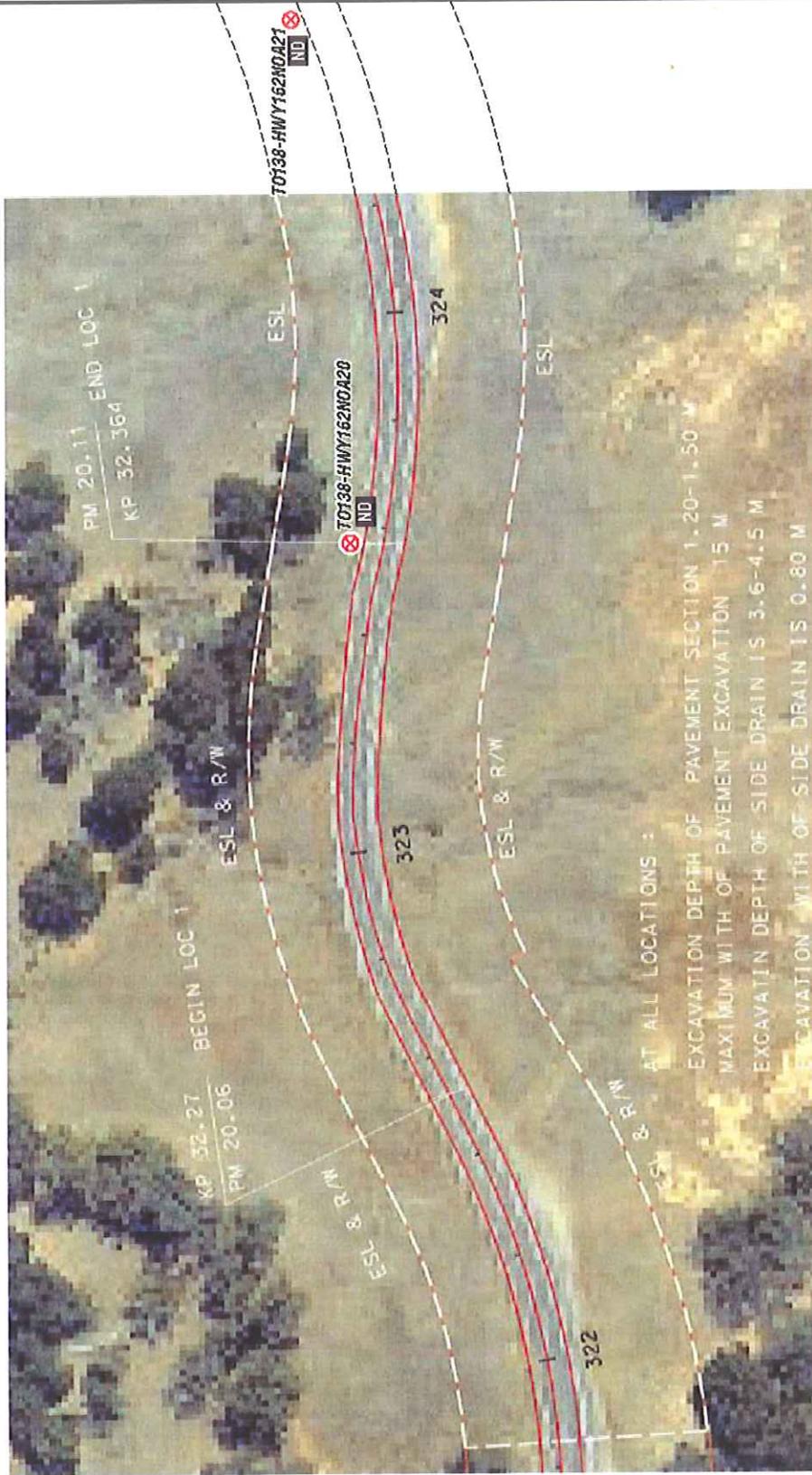
SITE PLAN
MEN 162

GEOCON Proj. No. S9300-06-93

Task Order No. 93

January 2010

Figure 6-3B



3180 GOLD VALLEY DR. - SUITE 800 - RANCHO CORDOVA, CA. 95742
 PHONE 916 852-9118 - FAX 916 852-9132

State Routes 1, 20, 101, 128, 162, 175, 253 and 271

Mendocino County,
 California

SITE PLAN
MEN 162

GEOCON Proj. No. S9300-06-93

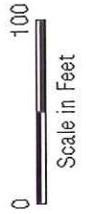
Task Order No. 93

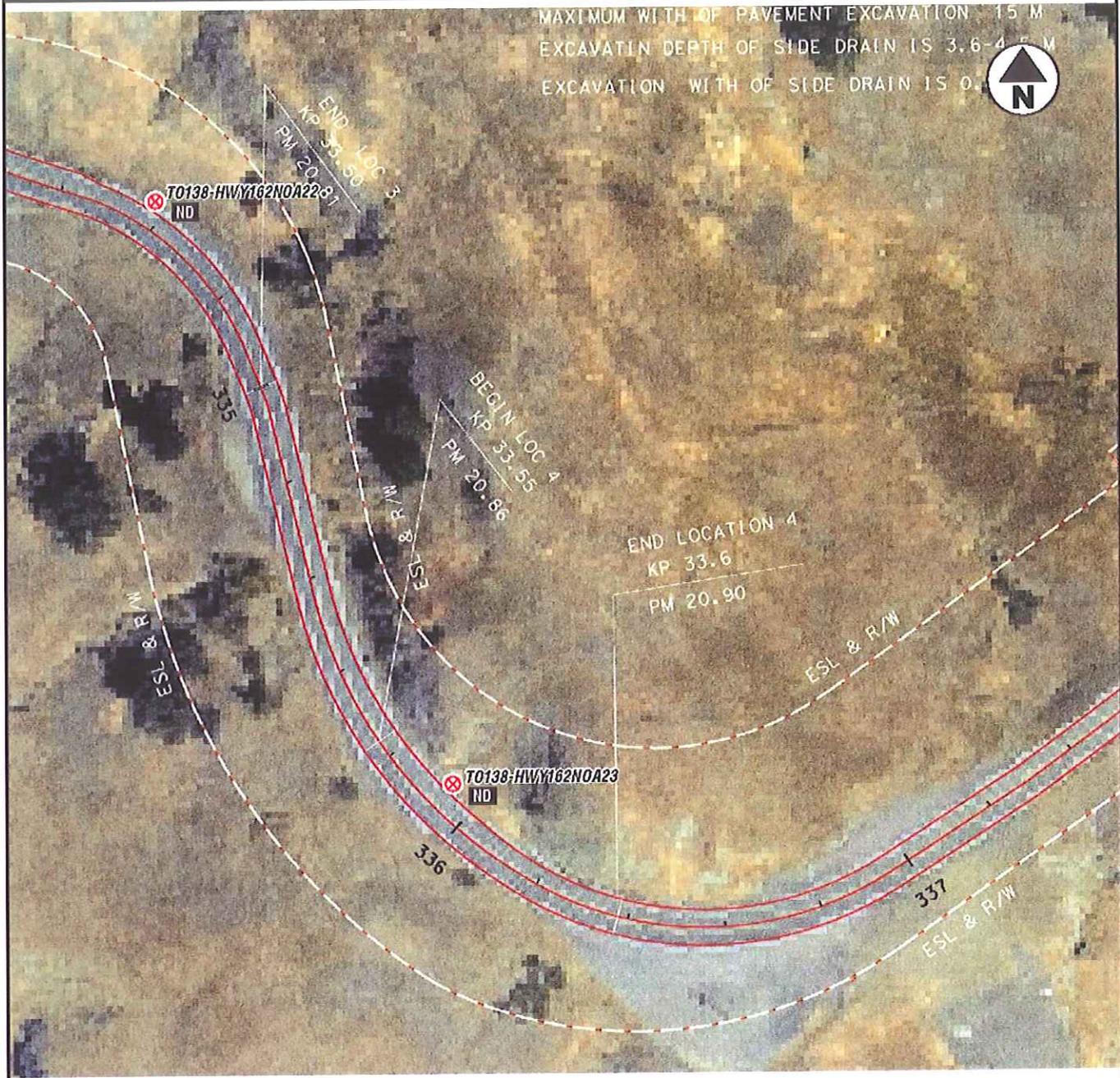
January 2010 Figure 6-3C

LEGEND:

TO138-HWY162NOA20 ⊗ Approximately Naturally Occurring Asbestos (NOA) Sample Location (Contract 03A0937, TO#138)

ND NOA Not Detected





MAXIMUM WITH OF PAVEMENT EXCAVATION 15 M
 EXCAVATION DEPTH OF SIDE DRAIN IS 3.6-4.5 M
 EXCAVATION WITH OF SIDE DRAIN IS 0



LEGEND:

TO138-HWY162NOA23 Approximate Naturally Occurring Asbestos (NOA) Sample Location (Contract 03A0937, TO#138)

ND NOA Not Detected



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State Routes 1, 20, 101, 128, 162, 175, 253 and 271		
Mendocino County, California		SITE PLAN MEN 162
GEOCON Proj. No. S9300-06-93		
Task Order No. 93	January 2010	Figure 6-3D



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 PHONE 916 852-9118 - FAX 916 852-9132

State Routes 1, 20, 101, 128, 162, 175, 253 and 271

Mendocino County,
 California

SITE PLAN
MEN 162

GEOCON Proj. No. S9800-06-93

Task Order No. 93

January 2010

Figure 6-3E

AT ALL LOCATIONS : EXCAVATION DEPTH :

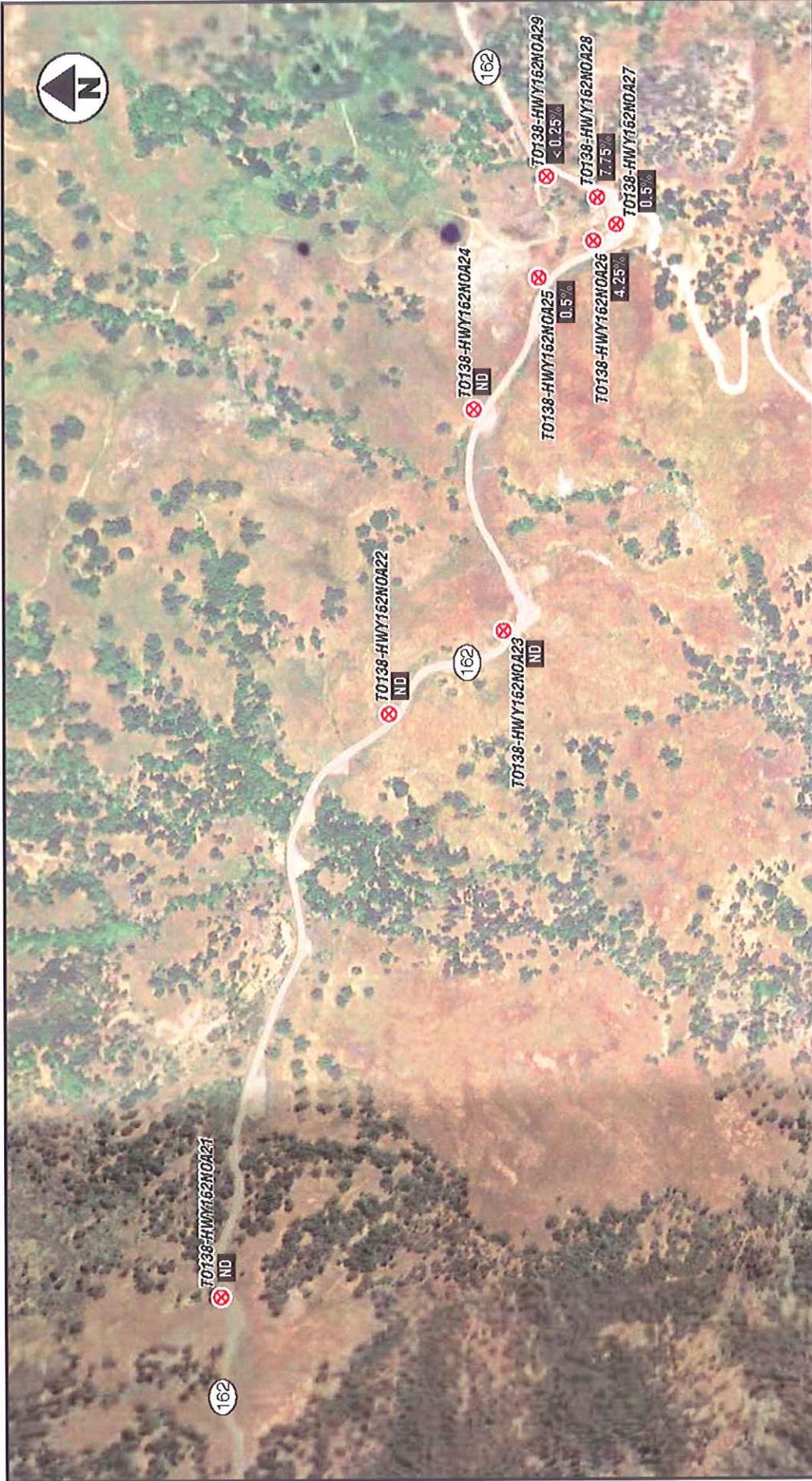
Scale in Feet

0 100

LEGEND:

T0138-HWY162NOA24 ⊗ Approximate Naturally Occurring Asbestos (NOA) Sample Location (Contract 08A0987, TO#138)

ND NOA Not Detected



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 PHONE 916.852.9118 - FAX 916.852.9132

State Routes 1, 20, 101, 128, 162, 175, 253 and 271
 Mendocino County,
 California
 GEOCON Proj. No. S9300-06-93
 Task Order No. 93

SITE PLAN
MEN 162

January 2010 Figure 6-3F

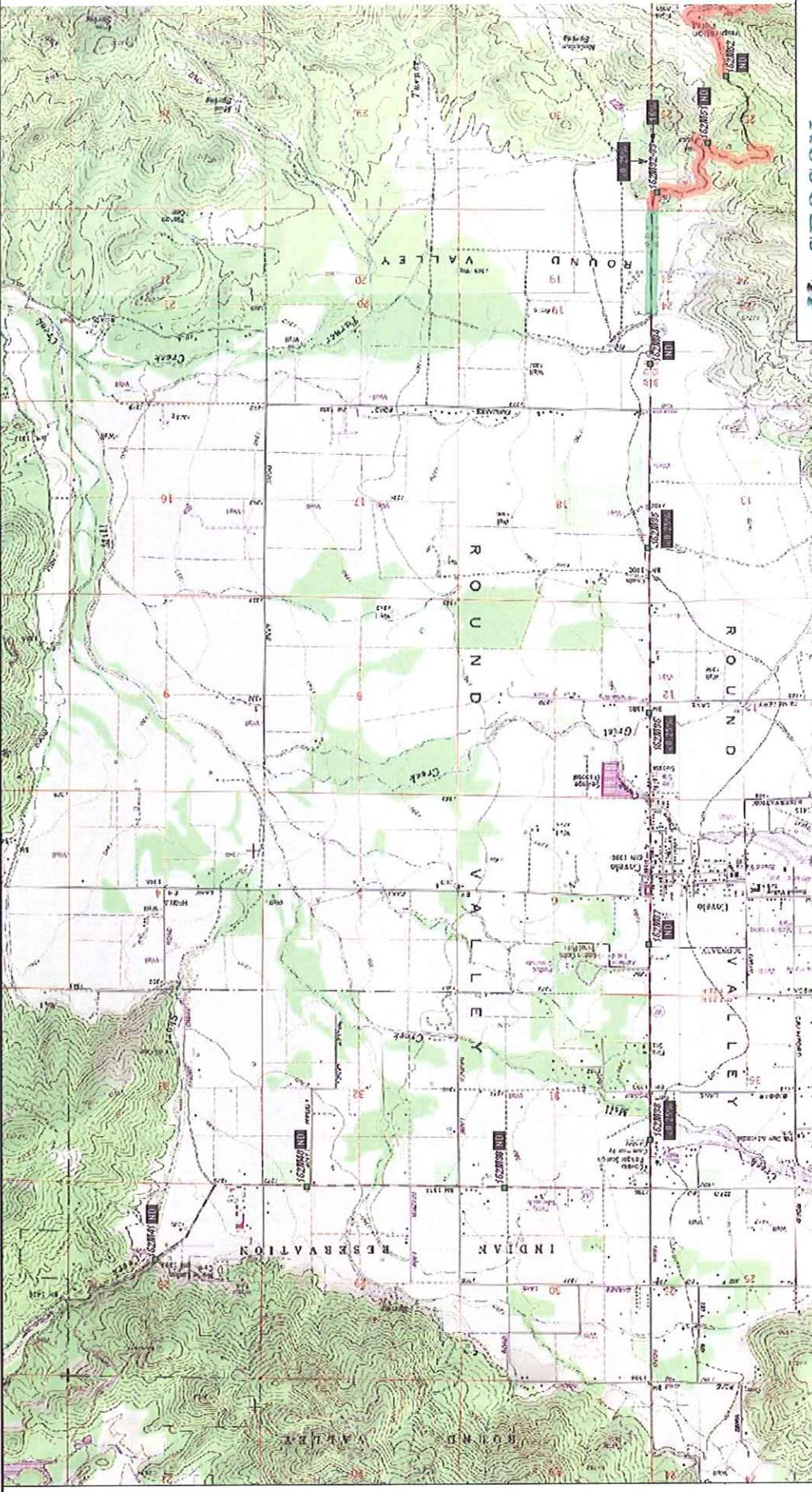
LEGEND:

TO138-HWY162NOA21 X Approximately Naturally Occurring Asbestos (NOA) Sample Location (Contract 03A0937, TO#138)

4.25% Percent Asbestos, California, Air Resources Board Test Method 435

ND NOA Not Detected

Scale in Feet
 0 700



14800 VALLEY AVENUE SUITE 100 RANCHO COCONINO, CA 91142
 P: 0909 933-3112 F: 0909 933-3125

State Routes 1, 20, 101, 128, 162, 175, 253 and 271	
Mendocino County, California	
SITE PLAN	
MEN 162	
GEOCON Proj. No. 99000-06-99	Task Order No. 99
January 2010	
Figure 6-4	



- LEGEND:**
- Approximate Naturally Occurring Asbestos (NOA) Sample Location
 - % NOA as PLM (Polarized Light Microscopy)
 - NOA Not Detected
- Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in Asbestos Dust Mitigation Plan.
- Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements unless a site-specific NOA survey is conducted that demonstrates that materials likely to contain NOA at regulated levels are not present.

TABLE 3

SUMMARY OF ASBESTOS ANALYTICAL RESULTS
 STATE ROUTES 1, 20, 101, 128, 162, 175, 253 AND 271
 MENDOCINO COUNTY, CALIFORNIA

ROUTE	POST MILE	SAMPLE OR BORING IDENTIFICATION	LATITUDE	LONGITUDE	PROJECT NO.	ASBESTOS % (PLM)	ASBESTOS % (TEM)	ASBESTOS TYPE
128	50.00	128-50	---	---	833550/01010000 (IT)	ND	---	ND
128	50.29	128-50.29	---	---	833550/01010000 (IT)	ND	---	ND
128	50.43	TO138 HWY 128 NOA1	---	---	S8875-06-138	ND	---	ND
128	50.43	TO138 HWY 128 NOA2	---	---	S8875-06-138	ND	---	ND
128	50.43	TO138 HWY 128 NOA3	---	---	S8875-06-138	ND	---	ND
128	50.50	TO 140-NOA84	-123.08512	38.86206	S8875-06-140	ND	---	ND
128	50.51	128-50.51	---	---	833550/01010000 (IT)	ND	---	ND
128	50.59	128-50.59	---	---	833550/01010000 (IT)	ND	---	ND
128	50.88	TO138 HWY 128 PM 50.88 NOA1	---	---	S8875-06-138	ND	---	ND
128	50.88	TO138 HWY 128 PM 50.88 NOA2	---	---	S8875-06-138	ND	---	ND
128	50.88	TO138 HWY 128 PM 50.88 NOA3	---	---	S8875-06-138	ND	---	ND
162	10.85	TO120-1	---	---	S8875-06-120	ND	---	ND
162	10.86	162M17-0.75	39.6615285	-123.344318	S9300-06-93	ND	---	ND
162	10.87	TO120-2	---	---	S8875-06-120	ND	---	ND
162	10.88	TO120-12	---	---	S8875-06-120	ND	---	ND
162	10.89	TO120-3	---	---	S8875-06-120	ND	---	ND
162	10.89	TO120-4	---	---	S8875-06-120	<0.25	---	Chrysotile
162	10.91	TO120-5	---	---	S8875-06-120	<0.25	---	Chrysotile
162	10.91	TO120-19	---	---	S8875-06-120	ND	---	ND
162	10.91	TO120-17	---	---	S8875-06-120	<0.25	0.11	Chrysotile

TABLE 3

SUMMARY OF ASBESTOS ANALYTICAL RESULTS
 STATE ROUTES 1, 20, 101, 128, 162, 175, 253 AND 271
 MENDOCINO COUNTY, CALIFORNIA

ROUTE	POST MILE	SAMPLE OR BORING IDENTIFICATION	LATITUDE	LONGITUDE	PROJECT NO.	ASBESTOS % (PLM)	ASBESTOS % (TEM)	ASBESTOS TYPE
162	10.91	TO120-16	---	---	S8875-06-120	ND	ND	ND
162	10.92	TO120-13	---	---	S8875-06-120	<0.25	---	Chrysotile
162	10.93	TO120-6	---	---	S8875-06-120	<0.25	---	Chrysotile
162	10.93	TO120-18	---	---	S8875-06-120	3.50%	---	Chrysotile
162	10.93	TO120-7	---	---	S8875-06-120	ND	---	ND
162	10.94	TO120-8	---	---	S8875-06-120	ND	---	ND
162	10.95	TO120-9	---	---	S8875-06-120	<0.25	---	Chrysotile
162	10.97	TO120-14	---	---	S8875-06-120	ND	---	ND
162	10.99	TO120-10	---	---	S8875-06-120	ND	---	ND
162	11.00	162M65-0.75	---	---	S9300-06-93	ND	---	ND
162	11.01	TO120-11	---	---	S8875-06-120	ND	---	ND
162	11.01	TO120-15	---	---	S8875-06-120	ND	---	ND
162	11.25	TO138 HWY 162 NOA7	---	---	S8875-06-138	ND	<0.1	ND/Chrysotile
162	11.25	TO138 HWY 162 NOA8	---	---	S8875-06-138	ND	---	ND
162	11.42	TO138 HWY 162 NOA4	---	---	S8875-06-138	<0.25	---	Chrysotile
162	11.45	TO138 HWY 162 NOA6	---	---	S8875-06-138	ND	---	ND
162	11.5	TO138 HWY 162 NOA3	---	---	S8875-06-138	ND	---	ND
162	11.5	TO138 HWY 162 NOA5	---	---	S8875-06-138	ND	---	ND
162	11.92	TO138 HWY 162 NOA1	---	---	S8875-06-138	ND	---	ND
162	11.92	TO138 HWY 162 NOA2	---	---	S8875-06-138	ND	---	ND

TABLE 3

SUMMARY OF ASBESTOS ANALYTICAL RESULTS
 STATE ROUTES 1, 20, 101, 128, 162, 175, 253 AND 271
 MENDOCINO COUNTY, CALIFORNIA

ROUTE	POST MILE	SAMPLE OR BORING IDENTIFICATION	LATITUDE	LONGITUDE	PROJECT NO.	ASBESTOS % (PLM)	ASBESTOS % (TEM)	ASBESTOS TYPE
162	11.98	162M64-0.75	---	---	S9300-06-93	<0.25	---	Chrysotile
162	12.99	162M63-0.75	---	---	S9300-06-93	ND	---	ND
162	13.98	162M62-0.75	---	---	S9300-06-93	ND	---	ND
162	14.24	TO138 HWY 162 NOA13	---	---	S8875-06-138	ND	---	ND
162	14.44	TO138 HWY 162 NOA9	---	---	S8875-06-138	ND	---	ND
162	14.44	TO138 HWY 162 NOA12	---	---	S8875-06-138	ND	---	ND
162	14.48	TO138 HWY 162 NOA10	---	---	S8875-06-138	ND	---	ND
162	14.52	TO138 HWY 162 NOA11	---	---	S8875-06-138	ND	---	ND
162	15.0	162M61-0.75	---	---	S9300-06-93	ND	---	ND
162	15.5	162M22-0.75	39.71193295	-123.3420041	S9300-06-93	ND	---	ND
162	16.10	162M60-0.75	---	---	S9300-06-93	ND	---	ND
162	16.5	TO138 HWY 162 NOA15	---	---	S8875-06-138	ND	---	ND
162	16.53	TO138 HWY 162 NOA16	---	---	S8875-06-138	0.75	---	Chrysotile
162	16.53	TO138 HWY 162 NOA17	---	---	S8875-06-138	<0.25	---	Chrysotile
162	16.54	TO138 HWY 162 NOA18	---	---	S8875-06-138	<0.25	---	Chrysotile
162	16.54	TO138 HWY 162 NOA19	---	---	S8875-06-138	ND	---	ND

TABLE 3

SUMMARY OF ASBESTOS ANALYTICAL RESULTS
 STATE ROUTES 1, 20, 101, 128, 162, 175, 253 AND 271
 MENDOCINO COUNTY, CALIFORNIA

ROUTE	POST MILE	SAMPLE OR BORING IDENTIFICATION	LATITUDE	LONGITUDE	PROJECT NO.	ASBESTOS % (PLM)	ASBESTOS % (TEM)	ASBESTOS TYPE
162	16.79	162M59-0.75	---	---	S9300-06-93	ND	---	ND
162	17.96	162M58-0.75	---	---	S9300-06-93	ND	---	ND
162	18.94	162M57-0.75	---	---	S9300-06-93	ND	---	ND
162	19.93	162M56-0.75	---	---	S9300-06-93	ND	---	ND
162	20.11	TO138 HWY 162 NOA20	---	---	S8875-06-138	ND	---	ND
162	20.16	TO138 HWY 162 NOA21	---	---	S8875-06-138	ND	---	ND
162	20.55	162M27-0.75	39.71610318	-123.2837819	S9300-06-93	ND	---	ND
162	20.78	TO138 HWY 162 NOA22	---	---	S8875-06-138	ND	---	ND
162	20.87	TO138 HWY 162 NOA23	---	---	S8875-06-138	ND	---	ND
162	21.0	162M55-0.75	39.71322174	-123.2787764	S9300-06-93	ND	---	ND
162	21.17	TO138 HWY 162 NOA24	---	---	S8875-06-138	ND	---	ND
162	21.25	TO138 HWY 162 NOA25	---	---	S8875-06-138	0.5	---	Chrysotile
162	21.29	TO138 HWY 162 NOA26	---	---	S8875-06-138	4.25	>12 ³	Chrysotile
162	21.31	TO138 HWY 162 NOA27	---	---	S8875-06-138	0.50	---	Chrysotile
162	21.37	TO138 HWY 162 NOA28	---	---	S8875-06-138	7.75	---	Chrysotile
162	21.43	TO138 HWY 162 NOA29	---	---	S8875-06-138	<0.25	---	Chrysotile

TABLE 3

SUMMARY OF ASBESTOS ANALYTICAL RESULTS
 STATE ROUTES 1, 20, 101, 128, 162, 175, 253 AND 271
 MENDOCINO COUNTY, CALIFORNIA

ROUTE	POST MILE	SAMPLE OR BORING IDENTIFICATION	LATITUDE	LONGITUDE	PROJECT NO.	ASBESTOS % (PLM)	ASBESTOS % (TEM)	ASBESTOS TYPE
162	21.52	162M28-0.75	39.71331664	-123.2701974	S9300-06-93	ND	---	ND
162	22	162M54-0.75	39.71504824	-123.2627941	S9300-06-93	ND	---	ND
162	22.48	162M29-0.75	39.7122597	-123.3135653	S9300-06-93	ND	---	ND
162	23.04	162M53-0.75	39.72644153	-123.2614424	S9300-06-93	ND	---	ND
162	24.07	162M52-0.75	39.73367627	-123.2558443	S9300-06-93	ND	---	ND
162	25	162M51-0.75	39.73866721	-123.2539768	S9300-06-93	ND	---	ND
162	25.59	162M32-0.75	39.74231488	-123.2490245	S9300-06-93	<0.25	---	Chrysotile
162	25.59	162M33	39.74231488	-123.2490245	S9300-06-93	16.00	---	Chrysotile
162	26.5	162M34-0.75	39.75523198	-123.2482855	S9300-06-93	ND	---	ND
162	27.5	162M35-0.75	39.76899223	-123.2480857	S9300-06-93	<0.25	---	Chrysotile
162	28.32	162M36-0.75	39.78138781	-123.2481614	S9300-06-93	<0.25	---	Chrysotile
162	29.49	162M37-0.75	39.79859637	-123.248059	S9300-06-93	ND	---	ND
162	30.49	162M38-0.75	39.82205679	-123.2480932	S9300-06-93	<0.25	---	Chrysotile
162	31.5	162M39-0.75	39.81681543	-123.2338366	S9300-06-93	ND	---	ND
162	32.5	162M40-0.75	39.81663976	-123.2145164	S9300-06-93	ND	---	ND
162	33.5	162M41-0.75	39.82207896	-123.1997227	S9300-06-93	ND	---	ND
175	1	175M2-0.75	38.97613555	-123.099968	S9300-06-93	ND	---	ND
175	1.06	TO37-8	---	---	S8875-06-37	ND	---	ND
175	1.08	TO37-7	---	---	S8875-06-37	ND	---	ND
175	1.09	TO37-2	---	---	S8875-06-37	ND	---	ND
175	1.091	TO37-6	---	---	S8875-06-37	ND	---	ND
175	1.093	TO37-5	---	---	S8875-06-37	ND	<0.01	ND/Chrysotile
175	1.1	TO37-4	---	---	S8875-06-37	ND	---	ND
175	1.1	TO37-9	---	---	S8875-06-37	ND	---	ND
175	1.1	TO37-10	---	---	S8875-06-37	ND	---	ND
175	1.11	TO37-1	---	---	S8875-06-37	ND	---	ND
175	1.13	TO37-3	---	---	S8875-06-37	ND	---	ND
175	2	175M3-0.75	38.97330886	-123.0844611	S9300-06-93	ND	---	ND
175	2.36	175M19-0.75	38.97377496	-123.079088	S9300-06-93	ND	---	ND
175	3.97	175M5-0.75	38.97669002	-123.0518034	S9300-06-93	ND	---	ND
175	4.46	175M17-0.75	38.97487385	-123.0433234	S9300-06-93	ND	---	ND
175	5.9	175M7-0.75	38.97121168	-123.0229913	S9300-06-93	ND	---	ND
175	9	175M10-0.75	38.98415056	-122.9971229	S9300-06-93	ND	---	ND
175	9.4	175M12-0.75	38.98781781	-122.9929644	S9300-06-93	ND	---	ND
175	9.84	175M11	38.98870623	-122.9863099	S9300-06-93	ND	---	ND

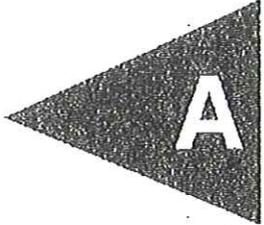
TABLE 4
 SUMMARY OF ASBESTOS DUST MITIGATION RECOMMENDATIONS
 STATE ROUTES 1, 20, 101, 128, 162, 175, 253 AND 271
 MENDOCINO COUNTY, CALIFORNIA

ROUTE	BEG. PM	END PM	ASBESTOS DUST MITIGATION RECOMMENDATIONS
128	42.19	42.52	Soil disturbing activities should comply with ATCMs 93105 and 93106 dust control requirements unless a site-specific NOA survey is conducted that demonstrates that materials likely to contain NOA at regulated levels are not present.
	42.52	45.60	Soil disturbing activities are not subject to asbestos dust control measures.
	45.60	46.00	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	46.00	46.70	Soil disturbing activities are not subject to asbestos dust control measures.
	46.70	47.00	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	47.00	47.50	Soil disturbing activities are not subject to asbestos dust control measures.
	47.50	47.75	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	47.75	48.21	Soil disturbing activities are not subject to asbestos dust control measures.
	48.21	48.56	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	48.56	48.89	Soil disturbing activities are not subject to asbestos dust control measures.
	48.89	49.23	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	49.23	50.10	Soil disturbing activities are not subject to asbestos dust control measures.
162	0.00	10.89	Soil disturbing activities are not subject to asbestos dust control measures.
	10.89	10.93	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	10.93	16.50	Soil disturbing activities are not subject to asbestos dust control measures.

TABLE 4
 SUMMARY OF ASBESTOS DUST MITIGATION RECOMMENDATIONS
 STATE ROUTES 1, 20, 101, 128, 162, 175, 253 AND 271
 MENDOCINO COUNTY, CALIFORNIA

ROUTE	BEG. PM	END PM	ASBESTOS DUST MITIGATION RECOMMENDATIONS
162	16.50	16.54	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	16.54	21.17	Soil disturbing activities are not subject to asbestos dust control measures.
	21.17	21.44	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	21.44	23.50	Soil disturbing activities are not subject to asbestos dust control measures.
	23.50	24.07	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	24.07	24.54	Soil disturbing activities are not subject to asbestos dust control measures.
	24.54	25.76	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	25.76	26.27	Soil disturbing activities should comply with ATCMs 93105 and 93106 dust control requirements unless a site-specific NOA survey is conducted that demonstrates that materials likely to contain NOA at regulated levels are not present.
	26.27	34.00	Soil disturbing activities are not subject to asbestos dust control measures.
175	0.00	9.00	Soil disturbing activities are not subject to asbestos dust control measures.
253	0.0	0.30	Soil disturbing activities are not subject to asbestos dust control measures.
	0.30	2.40	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	2.40	4.36	Soil disturbing activities are not subject to asbestos dust control measures.
	4.36	4.40	Soil disturbing activities should comply with ATCMs 93105 and/or 93106 dust control requirements including preparation of and implementation of the measures presented in an ADMP.
	4.40	4.63	Soil disturbing activities are not subject to asbestos dust control measures.

APPENDIX



A

MENDOCINO COUNTY AIR QUALITY MANAGEMENT DISTRICT
RULE 1-430 - FUGITIVE DUST EMISSIONS

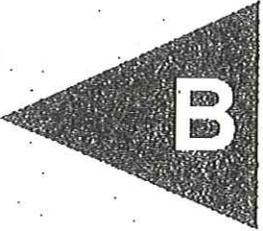
This Rule prohibits the handling, transportation, or open storage of materials, or the conduct of other activities in such a manner that allows or may allow unnecessary amounts of particulate matter to become airborne except under the following circumstances:

- (a) Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:
 - (1) Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.
 - (2) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials.
 - (3) The screening of all open-outdoor sandblasting and similar operations.
 - (4) The use of water or chemicals for the control of dust during the demolition of existing buildings or structures.

- (b) The following airborne dust control measures shall be required during all construction operations, the grading of roads, or the clearing of land
 - (1) All visibly dry disturbed soil road surfaces shall be watered to minimize fugitive dust emissions.
 - (2) All unpaved surfaces, unless otherwise treated with suitable chemicals or oils, shall have a posted speed limit of 10 miles per hour.
 - (3) Earth or other material that has been transported by trucking or earth moving equipment, erosion by water, or other means onto paved streets shall be promptly removed.
 - (4) Asphalt, oil, water or suitable chemicals shall be applied on materials stockpiles, and other surfaces that can give rise to airborne dusts.
 - (5) All earthmoving activities shall cease when sustained winds exceed 15 miles per hour.
 - (6) The operator shall take reasonable precautions to prevent the entry of unauthorized vehicles onto the site during non-work hours.
 - (7) The operator shall keep a daily log of activities to control fugitive dust.

- (c) During recreational activities adequate dust control shall be maintained to prevent dust from migrating off the property where the activity is occurring.

APPENDIX



B



EMSL Analytical, Inc

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Phone: (510) 895-3675 Fax: (510) 895-3680 Email: milpitaslab@emsl.com

Attn: Ian Stevenson
Geocon Consultants
3160 Gold Valley Drive
Suite 800
Rancho Cordova, CA 95742

Customer ID: GECN80
Customer PO: S9300-06-93
Received: 09/21/09 10:00 AM
EMSL Order: 090907697

Fax: (916) 852-9132 Phone: (916) 852-9118
Project: S9300-06-93/03A1368
Mendocino NOA/ADL

EMSL Proj: S9300-06-**
Analysis Date: 10/1/2009

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

Table with columns: Sample, Description, Appearance, % Fibrous, % Non-Fibrous, Asbestos % Type. Contains 11 rows of sample analysis data.

Analyst(s)

Grant Mays (18)
Jorge Leon (12)

Baojia Ke, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro 2235 Polvorosa Ave , Suite 230, San Leandro CA



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: Ian Stevenson
Geocon Consultants
3160 Gold Valley Drive
Suite 800
Rancho Cordova, CA 95742

Customer ID: GECN80
Customer PO: S9300-06-93
Received: 09/21/09 10:00 AM
EMSL Order: 090907697

Fax (916) 852-9132 Phone: (916) 852-9118
Project S9300-06-93/03A1368
Mendocino NOA/ADL

EMSL Proj: S9300-06-**
Analysis Date: 10/1/2009

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

Table with 6 columns: Sample, Description, Appearance, % Fibrous, % Non-Fibrous, % Type. Rows include sample IDs like 162M37-0.75 and their corresponding analysis results.

Analyst(s)

Grant Mays (18)
Jorge Leon (12)

Baojia Ke, Laboratory Manager
or other approved signatory

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Project: S9300-06-93/03A1368
Mendocino NOA/ADL

EMSL Proj: S9300-06-**
Analysis Date: 10/1/2009

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

Table with 6 columns: Sample, Description, Appearance, % Fibrous, % Non-Fibrous, % Type. Rows include sample IDs like 162M55-0.75 and descriptions like PM 21.0 0920 9/16/09.

Analyst(s)

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Project: S9300-06-93/03A1368
Mendocino NOA/ADL

EMSL Proj: S9300-06-**
Analysis Date: 10/1/2009

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

Table with 7 columns: Sample, Description, Appearance, % Fibrous, % Non-Fibrous, Asbestos % Type. Contains 3 rows of sample data.

Analyst(s)

Grant Mays (18)
Jorge Leon (12)

Baojia Ke, Laboratory Manager
or other approved signatory

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