BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of San Diego Gas & Electric Company (U 902 E) for a Certificate of Public Convenience and Necessity for the Silvergate Substation Project	)))))	Application 05-03-024

SUPPLEMENT TO THE APPLICATION OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E)

KELLY M. MORTON
Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY
101 Ash Street, HQ13
San Diego, California 92101-3017
Telephone: (619) 696-4287
Facsimile: (619) 699-5027
kmorton@sempra.com

Dated: July 5, 2005

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of San Diego Gas & Electric Company (U 902 E) for a Certificate of Public Convenience and Necessity for the Silvergate Substation Project	)))))	Application 05-03-024

SUPPLEMENT TO THE APPLICATION
OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E)

In accord with Section IX.A.2 of the Commission's General Order ("GO") 131-D and Rules of Practice and Procedure, San Diego Gas & Electric Company ("SDG&E") hereby files its Supplemental Application in the above-captioned docket. SDG&E responds herein to the May 5, 2005 request from the Commission's Energy Division for additional information regarding alleged deficiencies in the Proponent's Environmental Assessment ("PEA") for the proposed Silvergate Substation. Appendix A to this filing includes detailed responses to the Energy Division requests, along with supporting attachments. Wherefore, SDG&E respectfully requests that the Commission find the PEA complete with the filing of this Supplemental Application, and issue a determination of completeness.

Respectfully Submitted,

By: Kelly M. Morton

KELLY M. MORTON
Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY
101 Ash Street, HQ13
San Diego, California 92101-3017
Telephone: (619) 696-4287
Facsimile: (619) 699-5027
kmorton@sempra.com

Dated: July 5, 2005

APPENDIX A

APPENDIX A

SAN DIEGO GAS & ELECTRIC (SDG&E)
RESPONSE TO CPUC DEFICIENCY LETTER (DATED 5/5/05)
ON THE SILVERGATE SUBSTATION CPCN APPLICATION
A.05-03-024

1.0 PROJECT DESCRIPTION

1.2 Location. The location of the proposed project is illustrated in various aerial and regional maps. However, the PEA does not contain a map that describes the topography of the Old Town to South Bay project area. The PEA should:

- **CPUC Question 1.2:** Include a map that describes the topographical features of the project site and entire San Diego waterfront area.

SDG&E Response 1.2: See Attachment 1A & 1B – Topographical Maps.

1.3 Environmental Setting. This section states that the Silvergate Substation will be located on property currently owned by SDG&E and private owners. The private property site is currently occupied by a machine shop and a parking lot. However, the PEA does not disclose the number of parking spaces that will be lost due to the acquisition and redevelopment of the land. The PEA should:

- **CPUC Question 1.3.1:** Identify the number of parking spaces that will be lost due to construction of the substation and the impact it will have on parking congestion in the area.

SDG&E Response 1.3.1: The existing parking lot at the proposed Silvergate Substation site is a private lot designated for use primarily by employees and customers of the adjacent machine shop. Approximately 15 private parking spaces and no public spaces would be lost. In any event, the demand for these private spaces would be eliminated due to the removal of the machine shop from that location. Therefore, removing these parking spaces will have no effect on parking congestion in the area.

This section states that additional right of way (ROW) will be acquired from the Metropolitan Transit District Board---which operates the San Diego Trolley Service. In site of the close proximity of the trolley tracks, the PEA does not discuss the possible impacts the project may have on the trolley line. The PEA should:

- **CPUC Question 1.3.2:** Provide a full description of the possible impacts the project may have on the operations of the San Diego Trolley Service.

SDG&E Response 1.3.2: No impact to the service of the San Diego Trolley will be encountered as part of construction or operation of this project. SDG&E has constructed previous jack and bore projects underneath MTDB tracks that led to no impacts to the service, safety or operations of the trolley. The location of the jack and bore equipment will be located outside of the operational area of the trolley resulting in no disruption to trolley service along the tracks. Furthermore, the jack and bore depth will be such that there will be no safety issues with the continued operation of the trolleys during boring activities. SDG&E will coordinate with MTDB to avoid or mitigate impacts to the operations of the San Diego Trolley service along the project route. SDG&E shall follow standard company protocols to obtain right of entry permits and to coordinate with MTDB in preparing Transportation Management Plans (TMPs).

1.4 Project Components/Silvergate Substation Construction. This section contains various maps and photos that illustrate the overhead views of the proposed substation. However, the PEA does not contain simulations of the profiles of the possible types of substation that may be built. The PEA should:

- **CPUC Question 1.4.1:** Include scale simulations that indicate the height and the visual profile of the proposed substation (air insulated and gas insulated substation alternatives) from all four sides.

SDG&E Response 1.4.1: The renderings that were submitted with the initial PEA (Figures 3-2, 3-3, 3-4, 5-1, 5-2, and 5-3) were scaled representations simulating the height and visual profile of the proposed AIS and GIS substation layouts. These renderings were done from the view that SDG&E believed would be seen by the majority of viewers in the area. The other two sides of the property consist of a shipyard on the waterfront and Kelco's generation plant. A rendering could not be accurately portrayed due to the lack of visual access to the substation property.

In order to do an accurate scaled profile drawing of the proposed substation layout, the complete structural design of the substation must be completed. The complete structural design of the substation is still in process and will be finalized within the next several months.

The section states that once the Silvergate Substation is energized, the "above-grade equipment on the Main Street substation site will be removed. The PEA does not address the possibility that "below-grade" equipment may be present on the site. The PEA should:

- **CPUC Question 1.4.2:** Identify any "below-grade" equipment (underground storage tanks, etc.) that may exist on the Main Street Substation site and whether they will be removed or abandoned in place.

SDG&E Response 1.4.2: At the present time, the known 'below grade' equipment at the Main Street Substation site are the foundations and cable trench/ducts corresponding to the existing substation equipment. A preliminary site plan done in 2001 also indicates the presence of a water line (abandoned) and a sanitary sewer line (believed to be abandoned). There are no known underground storage tanks, etc. on the Main Street Substation site.

The section states that the structures on the Main Street Substation site will be demolished. However, the PEA does not indicate whether the property will remain vacant or if another use is planned for the site in the future.

- **CPUC Question 1.4.3:** Identify the use planned for the Main Street Substation after the substation is demolished.

SDG&E Response 1.4.3: On page 1-12 of the filed PEA, it is stated that (once the cutover is complete) the Main Street Substation would be de-energized and the above-grade equipment would be removed. The substructures would remain until such a time that the future use of the property is determined. It is unknown at this time what the future use will be. However, SDG&E will retain easement rights for three transmission lines to cross the Main Street property in order to connect to the Silvergate property. By removing the above grade equipment, the visual impact of the station would be diminished.

The PEA does not indicate whether the "machine shop" on the Silvergate site was evaluated to determine whether the site contained any hazardous materials or wastes. In addition, the "Hazards and Hazardous Materials" chapter is unclear as to whether the machine shop was included in the study. The PEA should:

- **CPUC Question 1.4.4:** Indicate whether the machine shop site was evaluated for any hazardous substances/wastes.

SDG&E Response 1.4.4: A Phase I Environmental Site Assessment (Phase I ESA) was prepared for the entire proposed 5.07-acre Silvergate Substation site to determine whether the site contained any hazardous materials or wastes (RBF Consulting, 18 March 2005). The Phase I ESA includes an assessment of the "machine shop" parcel which is referred to by the business name and address, Propulsion Control Engineering (PCE), 1304 Sampson Street, APN 538-700-02. The Phase I ESA is included as Appendix G of the PEA.

Chapter 10.0 of the PEA entitled "Hazards and Hazardous Materials" contains discussion of conditions at the existing machine shop site on page 10-4 under the heading of "Propulsion Controls Engineering (PCE) (1304 Sampson Street)." Page 10-13, paragraph 2, describes further hazardous materials

assessment and potential mitigation activities that would be undertaken by SDG&E upon acquisition of the PCE property.

Silvergate Substation Getaways. This section states that three 69kV circuits will "cross underneath the San Diego Trolley tracks." However, the section does not discuss the impacts this action may have on the San Diego Trolley Service. The PEA should:

- **CPUC Question 1.4.5:** Describe the effects this action will have on the operations, safety, schedule, etc. of the San Diego Trolley.

SDG&E Response 1.4.5: No impact to the service of the San Diego Trolley will be encountered as part of the construction or operation of this project. SDG&E has constructed previous jack and bore projects underneath MTDB tracks that resulted in no impacts to the service, safety or schedule of the trolley. The location of the jack and bore equipment will be located outside of the operational area of the trolley resulting in no disruption to trolley service along the tracks. Furthermore, the jack and bore depth will be such that there will be no safety issues with the continued operation of the trolleys during boring activities. SDG&E will coordinate with MTDB to avoid or mitigate impacts to the operations of the San Diego Trolley service along the project route. SDG&E shall follow standard company protocols to obtain right of entry permits and to coordinate with MTDB in preparing Transportation Management Plans (TMPs) and right of entry permits for the jack and bores.

- **CPUC Question 1.4.6:** Provide a map that indicates the location of the cable/rail crossing.

SDG&E Response 1.4.6: See Attachment 2 – Silvergate Bores. The attached map includes locations of the jack and bores that coincide with the cable/rail crossings. No open cut trenching will be used to cross the San Diego Trolley routes.

This section also states that several duct banks and vaults will be installed along with three 69kV circuits. However, the section does not disclose the locations or the number of structures SDG&E intends to constrict. The PEA should:

- **CPUC Question 1.4.7:** Include diagrams that illustrate the location of each vault and duct bank needed as part of the getaway system.

SDG&E Response 1.4.7: The underground getaway alignments will contain underground concrete splice vaults that will be spaced inline with the trench packages throughout the routes. Each getaway underground system will have a vault located approximately 400 feet away from the substation. Thereafter, the underground concrete vaults will be spaced out every 1200 to

1500 feet. Please see Attachment 3 that contains the approximate locations of the vaults and the centerline of the getaway duct banks. The typical trench dimensions are shown in Figure 1-10 in SDG&E's PEA application.

See Attachment 3 – Silvergate Vaults.

1.5 Description of Associated Projects

Special Protection System. This section states that if the Independent System Operator (ISO) approves the installation of "Special Protection System" in the South Bay area, the need for upgrades to the South Bay Substation and reconductoring portions of TL 13824 would not be necessary. However, the PEA does not discuss the work that will be necessary if the ISO does not approve the SPS proposal. The PEA should:

- **CPUC Question 1.5.1:** Provide a description of the reconductoring that would be necessary to TL 13824 if the ISO does not approve the SPS proposal.

SDG&E Response 1.5.1: The following is a description of the reconductor of TL 13824 that would be required if the ISO does not approve the SPS proposal. SDG&E's existing South Bay Switchyard to Los Coches Substation (South Bay to Los Coches) 138kV transmission line capacity will need to be increased to 285 MVA. This will require the line to be reconductored with a higher ampacity conductor at various portions throughout the segment. TL13824 is an existing 138kV line on existing supporting steel lattice towers, steel and wood pole structures within SDG&E's existing right-of-way (ROW).

The South Bay to Los Coches segment will involve the installation of bundled 636 ACSR/AW throughout three portions of TL13824. The first portion to be reconductored will be from the South Bay Power Plant Switchyard south approximately four (4) miles. The second portion to be reconductored will be a 0.5 mile segment near SDG&E's existing Miguel Substation. This reconductor will be a total of approximately one half (0.5) mile. In this second segment approximately two existing wood 2-pole structures and approximately one 3-pole structure will be replaced with taller wood pole structures due to vertical clearance issues. Additionally approximately three wood poles will be interest to allow for clearance requirements. The third portion to be reconductored will be from Los Coches Substation south approximately one (1) mile. Throughout the segments, a total of approximately 3 wood pole structures will be replaced due to lack of structural integrity.

All three of the reconductored portions would require the removal of the existing conductor and installation of new bundled (two conductors per phase) 636 ACSR/AW conductor to match the conductor to the rest of the existing line and accessories on existing structures. Additionally, all existing porcelain

insulators will be replaced with polymer insulators to improve reliability and reduce maintenance. There will be no increase in voltage above that originally permitted. This work is scheduled to take approximately 6 months to complete. The segments will be reconductored in no particular order, but rather be based on the ability to obtain outages on the existing overhead lines.

During the construction of the reconductor, all of the approximately 17 pull and stringing sites will be in or near pre-disturbed areas such as existing access roads along existing ROW. The dimensions of each pull site would be approximately 300'x150'.

See Attachment 4 – TL13824 Reconductor.

- **CPUC Question 1.5.2:** Describe the possible environmental impacts that may occur as a result of reconductoring portions of TL 13824.

SDG&E Response 1.5.2: See Attachment 5 – TL13824 Reconductor Project Description and Environmental Assessment.

Underground TL 13815 from South Bay Substation to Sweetwater River Area. This section states that SDG&E will use horizontal directional drill construction techniques (HDD) to install approximately 2,900 feet of conduit to cross Sweetwater Marsh National Wildlife Refuge (SMNWR). The PEA states that the precise entry/exit points will be determined during final engineering design. However, the PEA does not contain any maps or photographs of the Sweetwater River area, nor does it contain any diagrams that illustrate the possible routes of the underground cable. The PEA should include:

- **CPUC Question 1.5.3:** Diagrams that illustrate the possible underground routes and entry/exit points under consideration for the SMNWR segment of the underground cable; and

SDG&E Response 1.5.3: See Attachment 6 showing the proposed routes for the horizontal directional drill (HDD) through the Sweetwater River. Approximately two 3000 foot long horizontal directional drills would be necessary to cross under (approximately 80 feet below grade) the Sweetwater Marsh National Wildlife Refuge. Preliminary engineering has shown that there are approximately three route options for the HDD. The three routes (shown in red) are parallel to and outside of SDG&E's existing ROW. The anticipated entry and exit locations are shown in the conceptual design.

See Attachment 6 – TL13815 Sweetwater River HDD.

- **CPUC Question 1.5.4:** Photographs of the sites being considered as entry/exit points for the cable.

SDG&E Response 1.5.4: See Attachment 6 – TL13815 Sweetwater River HDD.

The PEA states that SDG&E will install approximately 2.5 miles of TL 13815 underground from the South Bay Substation to the SMNWR. However, it does not identify the method (trenching or HDD) that SDG&E will use to install the cable along this segment. If SDG&E intends to install any segment of TL 13815 via open trench or any other method, the PEA should:

- **CPUC Question 1.5.5:** Provide a map of TL 13815 that indicates where different types of installation methods will be used;

SDG&E Response 1.5.5: See Attachment 7 – TL13815 South Bay to Sweetwater River.

- **CPUC Question 1.5.6:** Describe the open trenching process in a presentation similar to Figure 1-15, (HDD Process) ; and

SDG&E Response 1.5.6: The majority of the underground portion of TL13815 will be installed using open-cut trenching techniques. The typical trench dimensions are shown in Figure 1-10 in SDG&E's PEA application. The depth of the trench would be on average approximately six feet deep and approximately 3 feet wide, although depth may vary depending on soil stability and the presence of existing substructures and utilities. The trench would be widened and shored where necessary to meet California Occupational Safety and Health Administration Safety requirements. Wherever trench water is encountered, trenches will be dewatered using a portable pump and disposed of in accordance with all applicable laws and regulations.

Additionally, along the underground route of TL 13815, approximately three jack-and bores (approximately 200 feet) will be needed in locations where open cut trenching is not feasible, such as to cross drainage channels and other obstacles. The jack-and bore sites are expected to be located within the previously disturbed SDG&E right of way. The disturbance at these work areas would be temporary and the land would be restored to near preconstruction conditions once construction activities are complete. No additional impacts to the environment would occur as part of the jack and bores. Please see Attachment 7 to see the approximate locations of the jack-and bores and the locations that open cut trenching and HDD methods will be used.

Trenching operations would be staged in intervals so that only a maximum of 300 to 500 feet of trench would be open at each active work location at any

one time or as allowed by permit requirements. Steel plating would be placed over the trenches to maintain vehicular and pedestrian traffic across areas that are not under active construction. A conceptual depiction of the typical underground construction process is shown in Attachment 8.

See Attachments 7 – TL13815 South Bay to Sweetwater River - and Attachment 8 – Typical Underground Construction Process.

- **CPUC Question 1.5.7:** Describe the possible impacts that may occur as a result of the cable installation method to be used.

SDG&E Response 1.5.7: See Attachment 9 – TL13815 Construction Impacts.

The PEA states that "An underground easement would need to be acquired for a 332-foot segment of property owned by BF Goodrich". However, the PEA does not include any description of the current uses of the property. The PEA should:

- **CPUC Question 1.5.8:** Include a description of the current uses on the BF Goodrich property

SDG&E Response 1.5.8: The Aerostructures Group headquarters houses the group's administrative, customer support, detail part fabrication, engineering, engine buildup, and program management functions.

The facility provides aerostructure products and services for commercial, military and space applications, including:

  - Nacelle design, integration, testing and certification (the structure surrounding an aircraft engine).
  - Engine mounting, testing and certification.
  - Research and development.
  - Aftermarket parts and technical service.

The actual area on the Aerostructures Group (Goodrich) property in which SDG&E with conduct open trenching or horizontal directional drill activities is a parking lot. There are no buildings or structures in the immediate vicinity of the proposed route/SDG&E's existing easement. Therefore, the potential temporary impacts from construction activities are occasional interruption or rerouting of deliveries and access as well as short term relocation of employee parking. SDG&E will coordinate with Goodrich to avoid any conflicts with existing utilities across Goodrich property. SDG&E's existing easement rights (except for one segment without easement rights) allow for the activities proposed with this Project. Therefore, SDG&E's proposed activities are within the scope of its existing easement rights.

- **CPUC Question 1.5.9:** Indicate whether the site was evaluated for any hazardous substances/wastes.

SDG&E Response 1.5.9: A Phase I Environmental Assessment was prepared for the Silvergate project including the associated 138kV undergounding and tower removal project route. This document was included in the PEA as Appendix G and was also summarized in Chapter 10 of the PEA. Specific references and information pertaining to the results of the assessment relative to the Aerostructures Group (Goodrich) property are found on pages 10-5 and 10-15 of the PEA. Also, Appendix I, pages 2 and 3, of the Phase 1 Environmental Assessment, identifies specific areas of potential environmental concern for the Goodrich site. Page 10-15 of the PEA also provided a discussion of potential impacts associated with the Goodrich property and identifies protocols and site specific evaluation techniques to address any potential issues.

Finally, as part of the Otay Mesa PPA project recently approved by the Commission, SDG&E is working cooperatively with Goodrich to further characterize hazardous substance issues on the property. After the release of the Draft EIR, Goodrich shared its confidential site characterization information with SDG&E and, based on this information, trenching is considered to be the most feasible, least cost option for the Otay Mesa PPA project with many available design and construction techniques available to avoid any minimize any potential hazardous substance impacts. Currently, SDG&E is working with Goodrich on completing site specific soil and groundwater testing along the project route to more specifically characterize the type and level of contamination. A Phase II Environmental Assessment is scheduled to commence on July 11, 2005. This information, along with additional site specific testing will be used in the design of the undergrounding of the 138kV line along with similar construction and design techniques proposed for the Otay Mesa PPA project. These techniques are provided in detail in SDG&E's Data Request 10 Responses for the Otay Mesa project if more information is required. Finally, the Commission issued its Decision on the Otay Mesa PPA CPCN on June 30, 2005. The Commission ordered SDG&E to use open trenching techniques unless further investigations determine that horizontal directional drilling (HDD) is required for its work on Goodrich's property. SDG&E's response comments on the Draft Decision stated that if the Phase II investigation supports the open trench method, then SDG&E will use that approach instead of HDD and will implement all Commission-imposed mitigation as well as other reasonable and prudent measures to address Goodrich's concerns.

This section states that "double circuit duct banks" and "underground concrete splice vaults" will be installed as part of the 138kV underground cable system. However, the PEA does not indicate the number banks or vaults that will be

installed. Nor does the PEA identify where these structures will be located. The PEA should:

- **CPUC Question 1.5.10:** Include a map that identifies the locations of each bank and vault site;

SDG&E Response 1.5.10: See Attachment 7 – TL13815 South Bay to Sweetwater River.

- **CPUC Question 1.5.11:** Describe the impacts that may occur as a result of the installation of these structures.

SDG&E Response 1.5.11: From the South Bay Power Plant area, the 138kV underground route runs north and parallel to the west side of I-5 within SDG&E's existing right-of-way. The 138kV underground trench is anticipated to be installed on the west side of the existing 138kV transmission line bridge steel lattice structures. The 138kV underground system will be installed as shown in Figure 1-10, page 1-25 of the original PEA application. The 138kV underground system may utilize two cables per phase to meet the required ampacity requirements of the line. Additionally, the 138kV underground alignment will contain underground concrete splice vaults that will be spaced along the west side of the 138kV bridge steel lattice structures. The concrete vaults will be placed underground flush with existing ground level creating no above ground structures. The first underground concrete vault will be located approximately 400 feet away from the cable riser pole near the South Bay Switchyard. Thereafter, the underground concrete vaults will be spaced out approximately every 1200 feet. No vaults will be installed in areas proposed for jack-and bore or horizontal directional drill construction. Please see Attachment 7 that contains the approximate locations of the 138kV splice vaults and the centerline of trench.

1.6 138kV Lattice Steel Bridge Structure Removal.

The PEA states that 18 lattice steel structures will be removed once the 138 kV circuit is installed underground. The PEA does not include maps that identify the locations of each lattice structure. The PEA should:

- **CPUC Question 1.6.1:** Include a map that identifies the exact locations of each lattice steel bridge structure;

SDG&E Response 1.6.1: See Attachments 10A, 10B & 10C – Bridge Structure Locations.

- **CPUC Question 1.6.2:** Include maps that identify sensitive areas adjacent to each lattice steel bridge structure that will be removed;

SDG&E Response 1.6.2: See Attachments 11A, 11B & 11C – Sensitive Areas Adjacent to Bridge Structures.

- **CPUC Question 1.6.3:** Provide pictures of various lattice steel bridge structures in their current setting to illustrate the before and after effects of removing the structures.

SDG&E Response 1.6.3: See Attachments 12A & 12B – Bridge Structures Pictures.

4.15 Transportation/Traffic

This section does not appear to address the possible impacts the project's construction may have on the railway lines of the San Diego Trolley System that run directly adjacent to the site. The PEA should:

- **CPUC Question 4.15:** Determine the significance of any impacts the project may have on the rail lines of the San Diego Trolley System.

SDG&E Response 4.15: No impact to the service of the San Diego Trolley will be encountered as part of the construction or operation of this project. SDG&E has constructed previous jack and bore projects underneath MTDB tracks that led to no impacts to the service of the trolley. SDG&E will coordinate with MTDB to avoid or mitigate impacts to the operations of the San Diego Trolley service along the project route. The location of the jack and bore equipment will be located outside of the operational area of the trolley resulting in no disruption to trolley service along the tracks. Furthermore, the jack and bore depth will be such that there will be no safety issues with the continued operation of the trolleys during boring activities. SDG&E shall follow standard company protocols to obtain right of entry permits and to coordinate with MTDB in preparing Transportation Management Plans (TMPs).

5.0 AESTHETICS

Operation. This section contains visual simulations of an "Air Insulated Substation". However, the section does not include visual simulations of a "Gas Insulated Substation" alternative. The PEA should include:

- **CPUC Question 5.0.1:** Visual simulations of a Gas Insulated Substation.

SDG&E Response 5.0.1: Visual simulations of a Gas Insulated Substation are included in the PEA as Figures 3-2, 3-3 and 3-4 (after page 3-5 of the PEA) in the Alternatives discussion, which also has a comparative discussion of environmental impacts of this alternative facility.

Landscape Planting. This section describes the landscape planting plan for the substation. However, it does not contain any visual simulations of the plan. The PEA should include:

- **CPUC Question 5.0.2:** Landscape drawings or computer simulations of the landscape plans for the Silvergate Substation.

SDG&E Response 5.0.2: See Attachments 13A & 13B – Landscape Simulations.

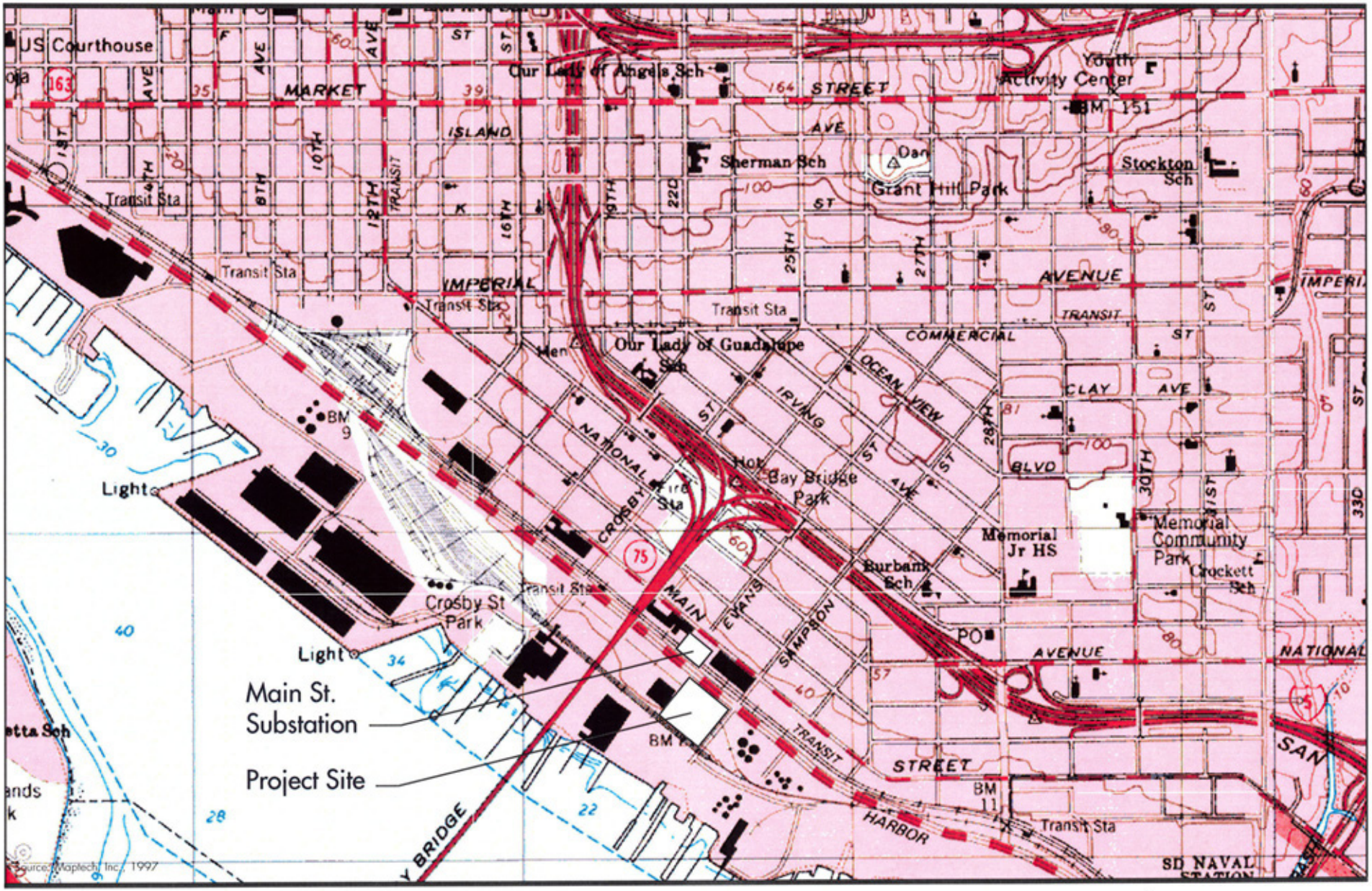
6.0 AIR QUALITY

This section does not appear to address the possibility that fugitive dust may become a problem if helicopters are used to install overhead lines or remove steel lattice bridge structures between South Bay Substation and the SIVINWR. The PEA should:

- **CPUC Question 6.0:** Determine the significance of possible fugitive dust impacts on adjacent land uses if helicopters are used to install overhead lines or remove steel lattice bridge structures.

SDG&E Response 6.0: This potential short-term impact would be less than significant with the implementation of SDG&E standard Protocol 52 (see page 1-54 of the PEA) which emulates compliance controls of existing APCD rules governing the control of dust at construction sites. This includes the application of water and other soil stabilizers on unpaved roads and active construction sites to minimize dust emissions. The application of water and soil stabilizers will reduce dust production by approximately 40 to 60 percent (SCAQMD, 1997). For work in wetland areas adjacent to San Diego Bay, fugitive dust should not be a significant issue and the control of dust will be primarily achieved through coordinating activities to minimize soil disturbance to reduce the potential for wind induced dust impacts.

ATTACHMENTS 1A & 1B

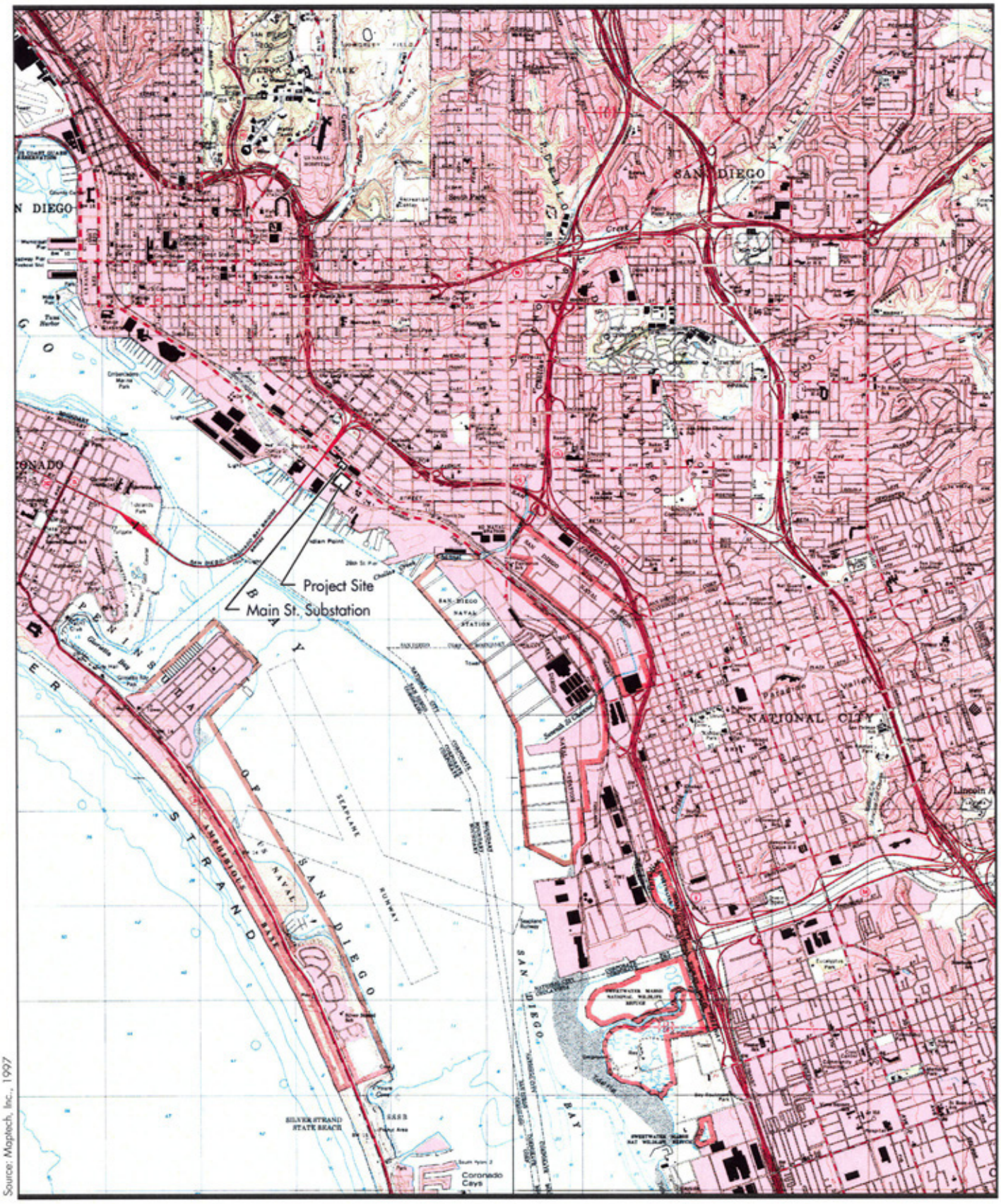


RBF CONSULTING

25101591/supplemental/1591ex00 closeup.ai

Topography of Project Site and Surrounding Area

SDG&E Silvergate Transmission Substation



Source: Maptech, Inc., 1997

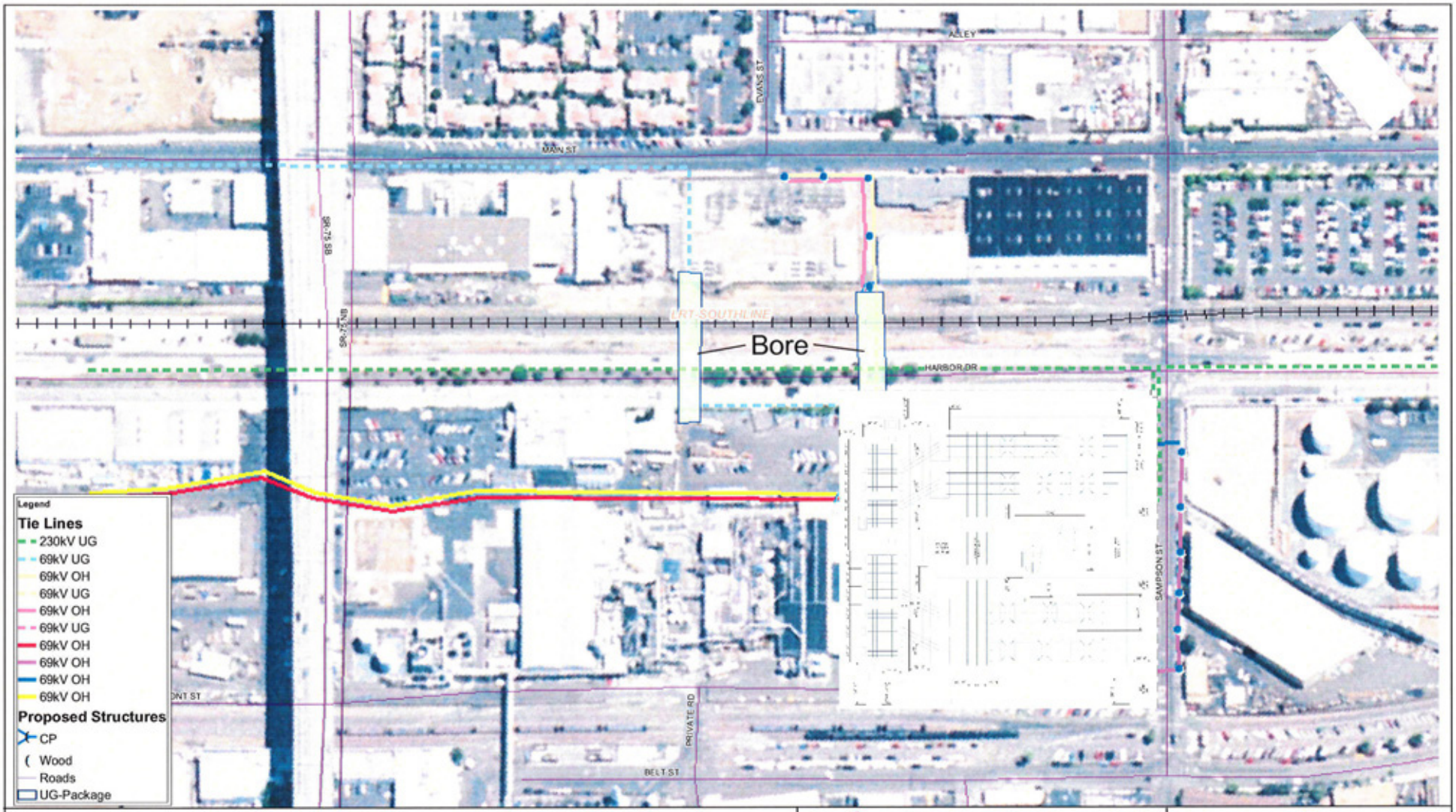
RBF CONSULTING

25101591/supplemental/1591ex00.ai

Topography of Project Site and Surrounding Area

SDG&E Silvergate Transmission Substation

ATTACHMENT 2



San Diego Gas & Electric
Transmission Engineering

Transmission Tie Line Getaways From Silvergate Sub.

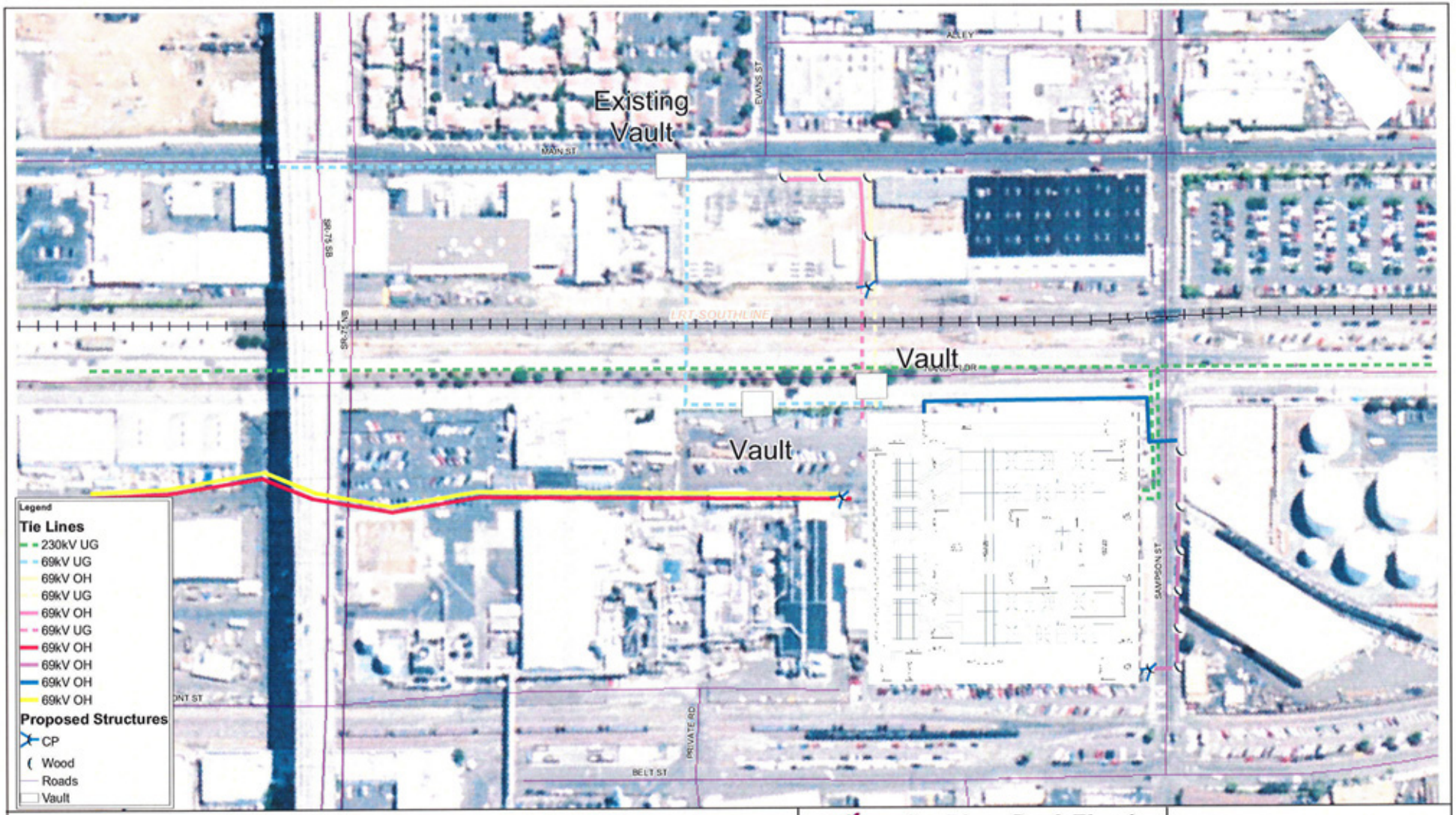
1 inch equals 150 feet

SHEET 1 of 2

LOCATION MAP

SKJL030205-01

ATTACHMENT 3



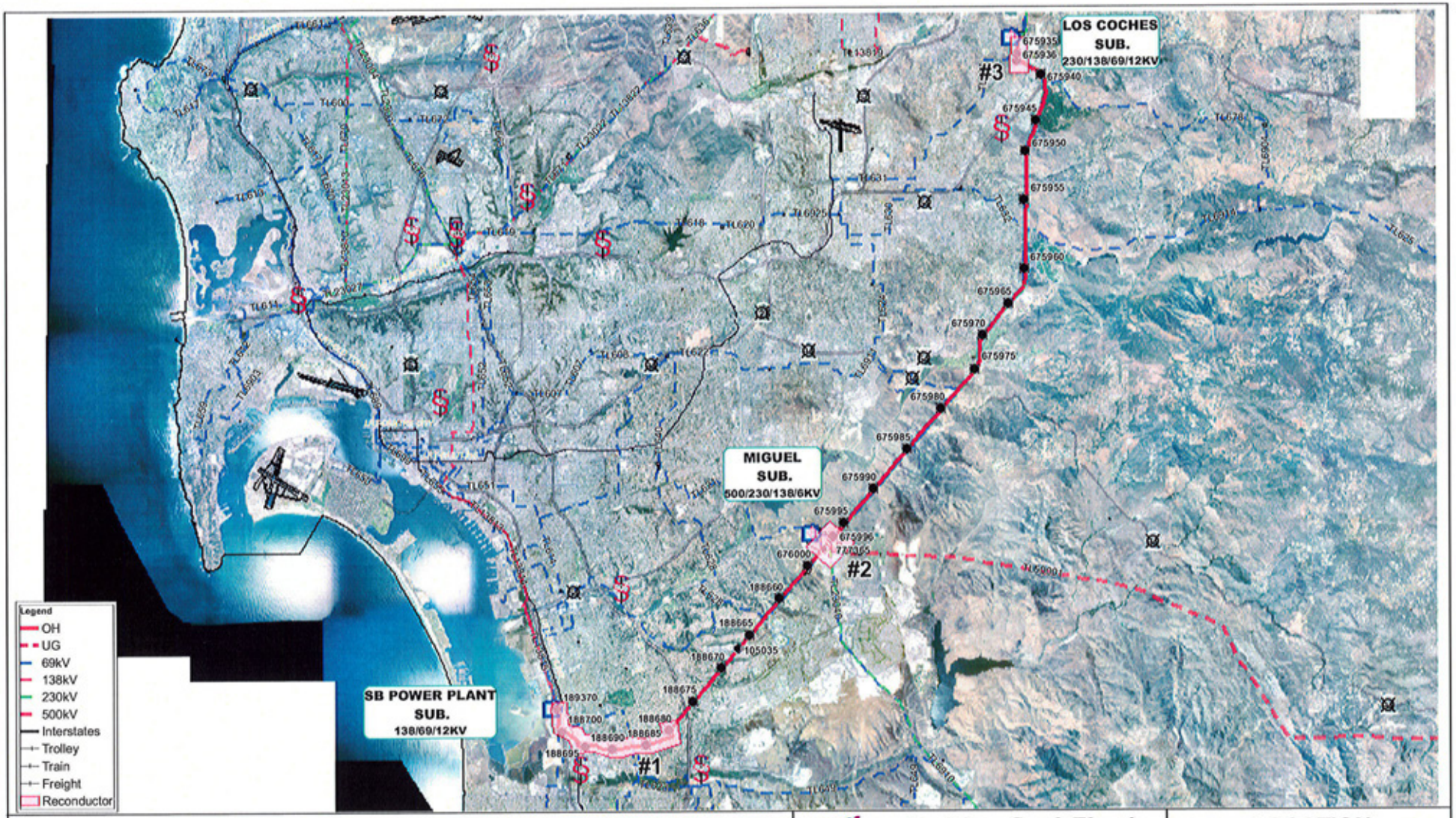
San Diego Gas & Electric
Transmission Engineering

Transmission Tie Line Getaways From Silvergate Sub.

LOCATION MAP

1 inch equals 150.1 feet | **SHEET 2 of 2** | SKJL030205-02

ATTACHMENT 4



San Diego Gas & Electric
Transmission Engineering

TL13824 RECONDUCTOR
SOUTH BAY TO LOS COCHES SUB.

SCALE NONE SHEET 1 of 1

LOCATION MAP

SKJL-13824RECON

ATTACHMENT 5

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

TABLE OF CONTENTS (CONTINUED)

LIST OF TABLES

1.0 Project Description and Environmental Setting

1.1 Project Description

The following is a description of the reconductor of TL 13824 that would be required if the ISO does not approve the SPS proposal. SDG&E's existing South Bay Switchyard to Los Coches Substation (South Bay to Los Coches) 138kV transmission line capacity will need to be increased to 285 MVA. This will require the line to be reconductored with a higher ampacity conductor at various portions throughout the segment. TL13824 is an existing 138kV line on existing supporting steel lattice towers, steel and wood pole structures within SDG&E's existing right-of-way (ROW).

The South Bay to Los Coches reconductor will involve the installation of bundled 636 ACSR/AW throughout three portions of TL13824 as shown on Figure 1. The first portion to be reconductored will be from the South Bay Power Plant Switchyard and travel east a distance of approximately four (4) miles as shown on Figures 2A and 2B. The second portion to be reconductored will be a 0.5-mile segment near SDG&E's existing Miguel Substation (Figure 3). In this second segment approximately two existing wood 2-pole structures and approximately one 3-pole structure will be replaced with taller wood pole structures due to vertical clearance issues. Additionally approximately three wood poles will be interest to allow for clearance requirements. The third portion to be reconductored will be from Los Coches Substation and travel south a distance of approximately one (1) mile (Figure 4). Throughout the segments, a total of approximately 3 wood pole structures will be replaced due to lack of structural integrity.

All three of the reconductored portions would require the removal of the existing conductor and installation of new bundled (two conductors per phase) 636 ACSR/AW conductor to match the conductor to the rest of the existing line and accessories on existing structures. Additionally, all existing porcelain insulators will be replaced with polymer insulators to improve reliability and reduce maintenance. There will be no increase in voltage above that originally permitted. The segments will be reconductured in no particular order, but rather be based on the ability to obtain outages on the existing overhead lines.

During the construction of the reconductor, all of the pull and stringing sites will be in or near pre-disturbed areas such as existing access roads along existing ROW. The dimensions of each pull site would be approximately 300'x150'.

In summary, the following project elements by segment will be implemented:

Los Coches Segment

The Los Coches segment will involve:

- reconductoring of a 1-mile-long segment south of the Los Coches Substation.

Miguel Segment

The Miguel segment will involve:

- reconductoring of a 0.5-mile-long segment near the Miguel Substation,

- replacement of approximately six existing wood structures near the Miguel Substation with taller wood pole structures due to vertical clearance issues, and
- placement of approximately three new interset poles near the Miguel Substation.

South Bay Segment

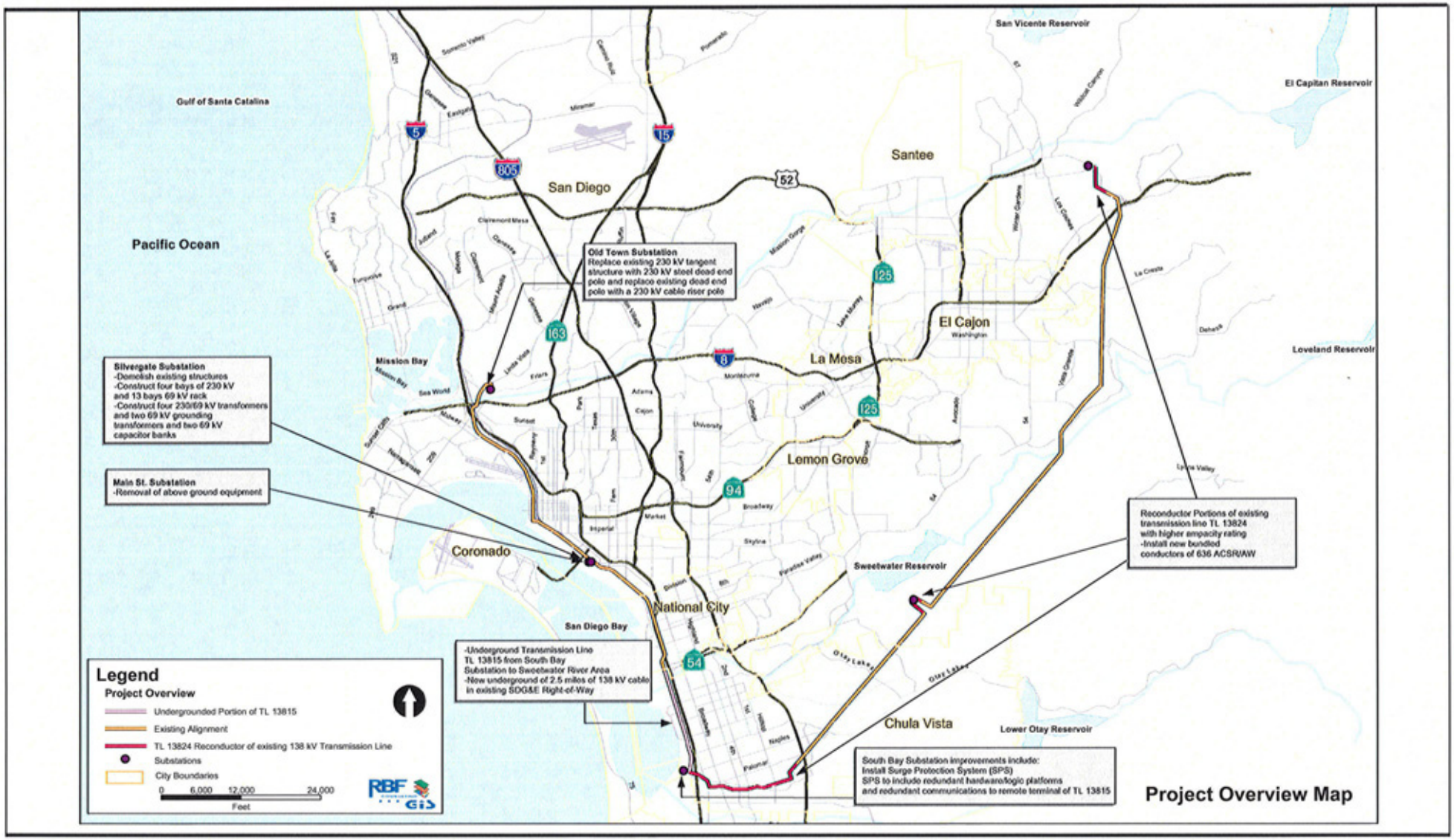
The South Bay segment will involve:

- reconductoring of a 4-mile-long segment south of the South Bay Power Plant switchyard.

1.2 Environmental Setting

The project is located within existing SDG&E Right-or-Way with areas of the unincorporated area of San Diego County as well as the City of Chula Vista. Land uses in the vicinity of the existing power lines are a mix of industrial, commercial, and residential uses within the City of Chula Vista. Land uses within the County of San Diego are more rural and undeveloped.

San Diego County is a biologically diverse region that supports rare and declining native habitats, numerous federally and state-listed plant and animal species, and an increasing amount of federally designated critical habitat for listed species. The project area is within the south coast geographic floristic subdivision, which is dominated by Diegan coastal sage scrub and chaparral vegetation communities. The project segments traverse residential and commercial developments, disturbed habitat, nonnative grasslands, coastal sage scrub, chaparral, maritime succulent scrub, and drainages.

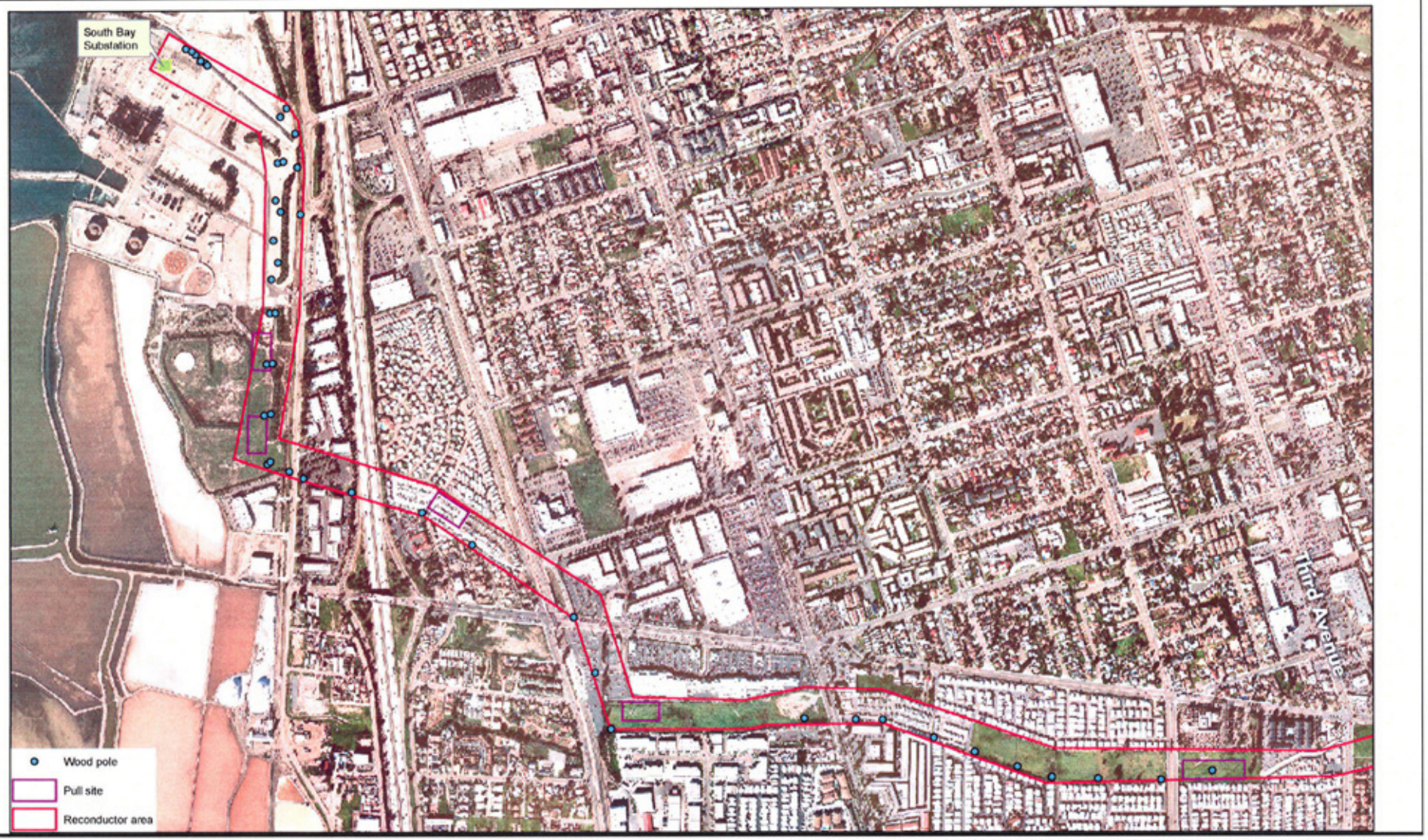


RBF CONSULTING

Project Overview Map

SDG&E Silvergate Transmission Substation

Figure 1



RBF CONSULTING

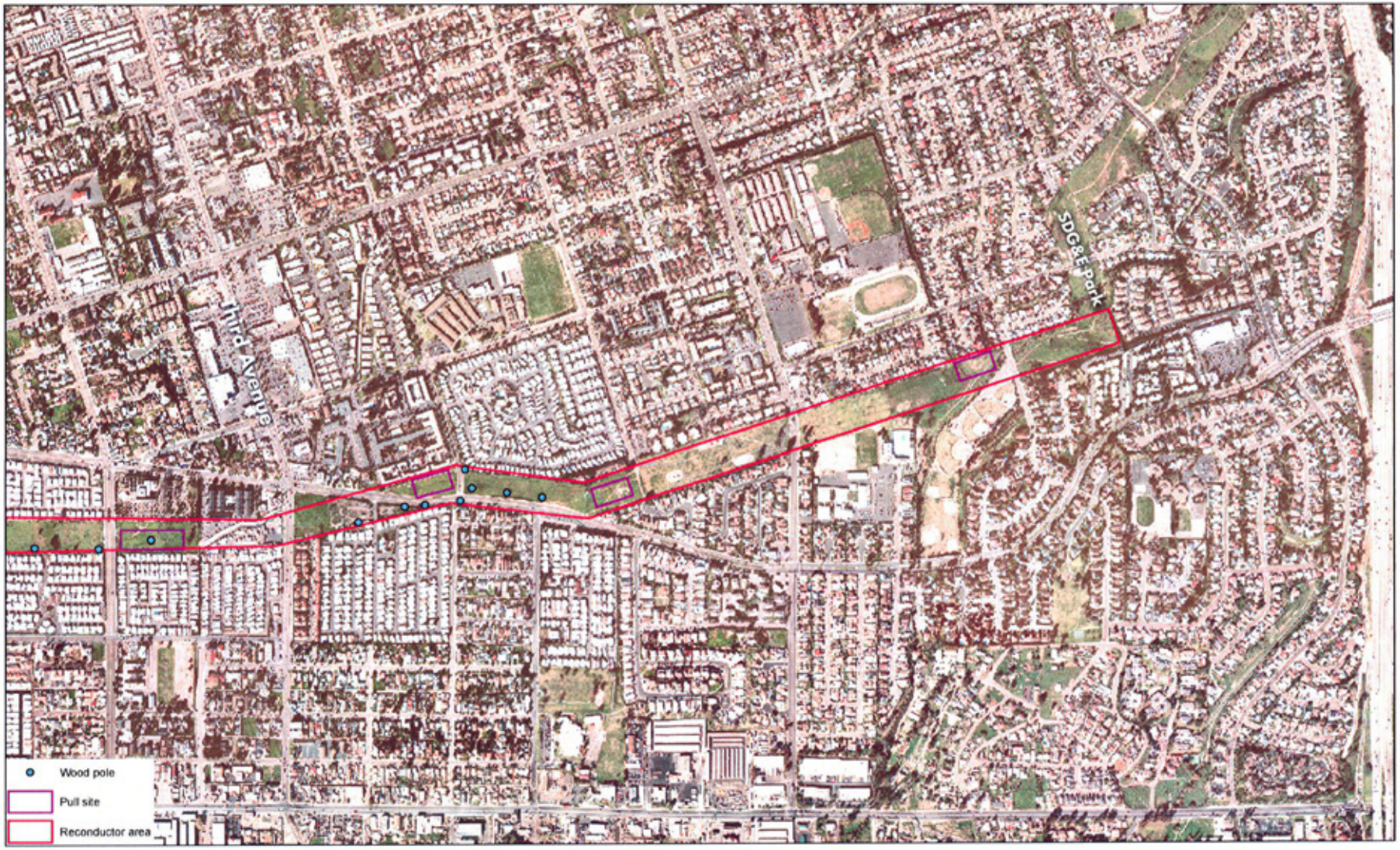
N
Not to Scale

Aerial Imagery: Eagle Aerial Dec. 2004; GIS Data Layers, Essex Environmental and SDG&E 2005

South Bay Segment -
South Bay Substation to Third Avenue
SDG&E Silvergate Transmission Substation

Figure 2A

N
Not to Scale



RBF CONSULTING

N

Not to Scale

Aerial Imagery: Eagle Aerial Dec. 2004; GIS Data Layers, Essex Environmental and SDG&E 2005

South Bay Segment -
Third Avenue to SDG&E Park
SDG&E Silvergate Transmission Substation

Figure 2B

2.0 ENVIRONMENTAL IMPACT ASSESSMENT SUMMARY

2.1 AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
3. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
4. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Explanations

1. The proposed project replaces portions of existing power lines and power poles. The existing lattice towers and overhead conductors are visible as part of the existing landscape setting, which ranges from residential and commercial development in the City of Chula Vista to rural and undeveloped areas of unincorporated San Diego County. Replacing existing power lines with new lines would not have a substantial adverse effect on a scenic vista. As such, there will be no impact.
2. The proposed project replaces portions of existing power lines and power poles. Implementing the project does not require the removal of any trees, rock outcroppings, or historic buildings within a state scenic highway. Therefore, there will be no impact to scenic resources.
3. The proposed project replaces portions of existing power lines and power poles. The project will not alter the visual character of the project area or its surroundings because the project does not propose any new or substantially different facilities. Therefore, there will be no impact to the visual character of the area.
4. Replacing the existing power lines with the proposed project power lines would not create nor necessitate the addition of substantial new lighting or glare that would adversely affect day or nighttime views in the area. Nighttime work is not anticipated with the proposed project. Therefore, there will be no impact.

2.2 AGRICULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
3. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Explanations

1. The proposed project is located within developed areas of the City of Chula Vista and undeveloped areas of the unincorporated areas of San Diego County. The proposed reconductoring of portions of TL 13824 does not result in an expansion of use for the existing facilities. No agricultural lands exist within the alignment of the proposed project. Therefore, there will be no impact.
2. No agricultural lands exist on the proposed project site or in the vicinity of the proposed project. Therefore, there will be no impact.
3. The proposed project is located within developed areas of the City of Chula Vista and undeveloped areas of the unincorporated areas of San Diego County. The proposed reconductoring of portions of TL 13824 does not result in an expansion of use for the existing facilities. No Farmland exists within the alignment of the proposed project. Therefore, there will be no impact.

2.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
4. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
5. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Explanations

1. The proposed project will result in short-term, temporary emissions from construction activities that will not conflict with or obstruct the implementation of any federal, state, or local air quality attainment plans. Post construction activities, the project will implement Project Protocols that will ensure the operation of the project will not result in any air emissions. As a result, potential impacts are less than significant.

2. The San Diego Air Basin is designated by state and federal air quality standards as non-attainment for ozone and particulate matter less than 10 microns and less than 2.5 microns in equivalent diameter. Construction of the project will result in short-term, temporary air emissions of criteria pollutants. Even under worst-case conditions, emissions will not violate any relevant federal, state, or regional air quality standards for the San Diego Air Basin. Implementation of SDG&E's Project Protocols (see Appendix A of this checklist) will reduce potential emissions. After the project is constructed, maintenance vehicles will operate at about the same frequency as before the project. Therefore, the project will not violate any air quality standards or contribute substantially to an existing or projected violation. As a result potential impacts are less than significant.

3. The proposed project region is designated by state and federal air quality standards as nonattainment for ozone and particulate matter less than 10 and less than 2.5 microns in equivalent diameter. Construction and operation of the project, however, will not result in emissions that exceed ambient air quality standards or contribute substantially to any air quality violations because the project does not involve significant amounts of excavation or grading. Table 1 shows the worst-case construction air emission estimates for the project. As shown in Table 1, none of the air quality thresholds are exceeded under worst-case construction scenarios. Furthermore, SDG&E will implement its Project Protocols (listed in Appendix A of this checklist) to minimize impacts. Operation of the project will have no impact on air quality in the area because none of the project facilities will have permanent air emissions. There is no proposed use of gas or diesel-powered generators during the operation of the project. As a result potential impacts are less than significant.

Table 1: Daily Worst-Case Construction Air Emissions

Pollutant	Total Pounds (Pounds/Day)	Threshold (Pounds/Day)	Threshold Exceeded
CO	86.4	550	No
ROG	19.2	250	No
NO_x	217.6	250	No
PM_{10}	17.6	250	No

Sources: California Air Resources Board, 2001; San Diego Air Pollution Control District, 2003

CO Carbon monoxide
ROG Reactive organic gases
NO_x Nitrogen oxides
PM_{10} Fugitive dust

4. There are no schools located within .25 miles of the project site. Emissions from project construction will be minor, localized, and short-term, and will not contain substantial pollutant concentrations. SDG&E will employ Project Protocol 56. After the project is constructed, maintenance vehicles will operate at about the same frequency as before the project. Therefore, operation of the project will not generate pollutant emissions. As a result, there will be no impact.

5. Construction activities may generate some site-specific odors associated with vehicle and equipment exhaust. Because these emissions will be very localized, short-term, periodic, and temporary, they will not adversely impact a substantial number of people in the project area. In addition, there will be limited use of gas or diesel-powered generators during construction and all construction equipment will be encased or otherwise enclosed, thus preventing the escape of internally generated gases, precipitants, or evaporants. As a result, impacts will be less than significant.

2.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Explanations

1. A biological technical report for the TL 13824 Recondutor project was prepared by Essex Environmental, Inc. The report is dated May 2005 and is included in Appendix B. Reconnaissance-level surveys and general habitat assessments were conducted by Essex Environmental (Essex) along the Los Coches segment in February, March, and April 2002 and along the Miguel and South Bay segments in December 2003 and January 2004. Although no sensitive plant species were observed during surveys, several sensitive plant species, which include, but are not limited to, San Diego barrel cactus, California adolphia, Orcutt's brodiaea, Otay manzanita, San Diego ambrosia, Dunn's mariposa lily, Otay tarplant, variegated dudleya, San Diego golden star, salt marsh bird's beak, Orcutt's bird's beak, Palmer's goldenbush, Gander's pitcher sage, snake cholla, and Parry's tetracoccus, are known to occur in the vicinity of SDG&E's existing Right-of-Way (ROW), or have the potential to occur within the existing ROW.

   The potential presence of these plant species is based on their known or recorded occurrence within the region and/or their association with the vegetation communities that occur in the vicinity of the project area. SDG&E will implement Project Protocols 7, 16, 19, 32, 35, 37, 39, 46, 48, 49, and 50 (see Appendix A of this checklist) to protect sensitive plant species and habitats.

   Construction activities could result in potential habitat loss, habitat disturbance, or species mortality to several sensitive wildlife species. These sensitive wildlife species include, but are not limited to, Least Bell's Vireo and Other Riparian-Dependent Migratory Sensitive Wildlife, Coastal Cactus Wren, Coastal California Gnatcatcher, Grasshopper Sparrow, San Diego Black-Tailed Jackrabbit, and Other Sensitive Coastal Sage Scrub and Chaparral Species, Quino Checkerspot Butterfly, Hermes Copper Butterfly. By implementing Project Protocols, impacts would be reduced to less than significant by avoiding and minimizing habitat impacts and preserving species habitat through SDG&E's Natural Community Conservation Plan (NCCP).

   In addition, all construction and operation activities will be conducted in accordance with SDG&E's NCCP. With the implementation of SDG&E's NCCP and the Project Protocols, all project impacts to sensitive species and their habitat will be avoided or reduced to less than significant levels. Protocol-level surveys for the Quino checkerspot butterfly were conducted during the adult flight season in 2002 and 2003 near the Los Coches Substation. RECON reported an incidental sighting of an adult male Quino checkerspot butterfly adjacent to an existing project-associated access road south of Campo Road south of the Miguel Substation during sensitive plant surveys conducted in the Spring of 2003. However, focused surveys were again conducted in 2005 near the Miguel Substation and no Quino checkerspot butterflies were observed. Because of the negative multi-year protocol surveys results for Quino checkerspot, impacts to this species are not anticipated. Further. SDG&E anticipates coverage of the Quino checkerspot butterfly as soon as its pending NCCP amendment is finalized. Therefore, based on all of the above facts, the project will not result in temporary and permanent habitat modification for sensitive species identified by the U.S. Fish and Wildlife Service and the California Department of Fish and Game. As a result, the project will have less than significant impacts.

2. As described in the biological technical report (Appendix B) temporary impacts to Diegan coastal sage scrub, chaparral, non-native grassland, maritime succulent scrub, disturbed habitat, and developed habitat could occur within the project segments. Sensitive vegetation communities that would be impacted include Diegan coastal sage scrub (2.07-acre temporary) and maritime succulent scrub (1.31-acre temporary). These impacts are tabulated in Table 2 below. Permanent impacts to sensitive vegetation communities are shown as 0 in Table 2 because the total impact is less than 0.1

acre. Impacts to sensitive vegetation communities will be minimized by the implementation of the Project Protocols detailed in Appendix A of this environmental checklist.

Table 1: Impacts to Vegetation Communities

Vegetation Community	Pole Replacement – Temporary (acres)*	Pole Interset – Temporary Impacts (acres)*	South Bay Pull Sites – Temporary (acres)	Los Coches and Miguel Pull Sites – Temporary (acres)
Diegan coastal sage scrub	0.56	0.50	0	1.01
Maritime succulent scrub	0	0	0	1.31
Chaparral	0.13	0	0	0.26
Nonnative grassland	0.69	0.25	0	1.03
Disturbed	0	0	7.16	0
Developed	0	0	1.79	0.24
Total Impacts	**1.38**	**0.75**	**8.95**	**3.85**

*Permanent impacts resulting from pole replacements and intersets total less than 0.1 acre

The vegetation communities that occur within the existing ROW will not be impacted by construction of the project. SDG&E will minimize ground disturbance in upland scrub, woodland, annual grassland, coastal salt marsh, wetlands, streams, and riparian areas to the extent feasible by implementing its Project Protocols 1, 4, 7, 10, 32, 33, 34, 35, 37, 38, 39, 40, 41, 48, 49, and 50 (see Appendix A of this environmental checklist). With effective implementation of SDG&E's Project Protocols, and Environmental Standards for NCCP Compliance (also located in Appendix A of this environmental checklist), potential direct and indirect impacts to riparian areas and sensitive natural communities will be avoided or reduced to less than significant.

Biologists will conduct preactivity surveys that evaluate the scope and nature of potential impacts in advance of construction. These preactivity surveys will then be submitted to the USFWS and the CDFG to initiate consultation regarding potential impacts and feasible avoidance, minimization, and/or mitigation measures, as described in the NCCP. As discussed in its NCCP, SDG&E will adhere to habitat enhancement measures as mitigation for potential project impacts that are not sufficiently addressed by the Project Protocols. Where habitat enhancement measures are not successful, SDG&E will provide sufficient mitigation credits, in accordance with the NCCP, to mitigate for impacts. These mitigation credits cover impacts to the following vegetation communities:

- Scrub/Chaparral: includes chaparral and Diegan coastal sage scrub
- Riverine/Wetlands: includes freshwater marsh, coastal salt marsh, southern riparian forest, southern sycamore/alder woodland, southern riparian scrub, and disturbed wetland
- Woodlands/Forests: includes oak woodland and oak forest
- Grass/Herb Communities: includes nonnative grassland, native grassland, and southern

vernal pool

- Ruderal Areas: includes disturbed habitat, eucalyptus woodland, and field cropland

As such, potential impacts are less than significant.

3. Project-related construction activities could result in impacts to small drainages. Existing access roads that cross ephemeral drainages and creeks may contain wetlands. These access roads may be regraded, if necessary, to improve construction access. However, access roads will not be widened as a result of this activity. SDG&E will avoid physical disturbance in coastal salt marsh, wetlands, streams, and riparian areas to the extent feasible by implementing Project Protocols 7, 10, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 48, 49, 50, and 51 (see Appendix A). With effective implementation of SDG&E's Project Protocols, and best management practices, potential direct and indirect impacts to wetlands will be eliminated or reduced to less than significant.

4. Public utility and electric transmission facilities are compatible with sensitive wildlife movement corridors. The project will be located in an existing utility ROW, which is currently occupied by numerous structures and circuits, and does not cross any large bodies of water. The relacement of existing transmission lines and power poles will not significantly impact migrating birds. It is expected that regional wildlife movement will not be significantly impacted by the project through loss of any protective cover, roosts, forage habitat, or movement corridors. The replacement of existing power lines and power poles will not significantly change the existing conditions for wildlife movement. As a result, impacts will be less than significant.

5. Because SDG&E operates under its own NCCP established according to the federal and state endangered species acts and the state's Natural Community Conservation Planning Act, the project is not expected to conflict with any state or local policies or ordinances protecting biological resources included as part of applicable city, community, or general use plans, or with the provisions of an adopted Habitat Conservation Plan (HCP), Multiple Species Conservation Program (MSCP), or other approved local, regional, or state HCPs, such as the San Diego County MSCP. Furthermore, SDG&E's NCCP requires consistency with other applicable plans to the extent feasible. Therefore, potential impacts are less than significant.

6. SDG&E operates under its own NCCP established according to the federal and state endangered species acts and the state's Natural Community Conservation Planning Act. SDG&E's NCCP requires consistency with other applicable plans, including the San Diego County MSCP. As a result, the project will not conflict with the provisions of any conservation plans. Therefore, potential impacts are less than significant.

2.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
4. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Explanations

1. A Historic Resource Evaluation was prepared by Engineering-Environmental Management, Inc. in May 2005. (see Appendix C). The potential for subsurface prehistoric or historic remains within the boundary of the reconductor portions of TL 13824 is low. Although there are no previously recorded sites in the area, archaeological monitoring of all excavation, including vegetation removal and site preparation work that results in subsurface disturbance is recommended for this portion of the proposed project. This is consistent with the environmental standards for cultural, historical, and paleontological resources included in Appendix A of this environmental checklist. As such, potential impacts are less than significant.
2. A Prehistoric Resource Survey was completed by Engineering-Environmental Management, Inc. in May 2005 (see Appendix C). No cultural resources have been previously recorded within this portion of the proposed project area. The potential for impacts to unknown cultural resources during the reconductoring within this portion of the project area is considered to be low. To ensure that any unknown resources that may be found during grading and excavation are properly identified and evaluated, archaeological monitoring has been integrated into the project implementation plan. Therefore, potential impacts are less than significant.
3. No paleontological resources have been previously recorded within this portion of the proposed project area. The potential for impacts to unknown paleontolgoical resources during the reconductoring within this portion of the project area is considered to be low. To ensure that any unknown resources that may be found during grading and excavation are properly identified and evaluated, paleontological monitoring for excavation activity at or below six feet has been integrated into the project implementation plan. With effective implementation of SDG&E's Project Protocols, and Environmental Standards for Cultural Historical, and Paleontological Resources on Privates Lands (also located in Appendix A of this environmental checklist), potential direct and indirect impacts to unique paleontological resources or site or unique geologic feature will be avoided or reduced to less than significant.

4. No cemeteries, isolated Native American, or other human remains have been documented within the project area. Therefore, the potential for impacts to unrecorded Native American or other human remains during project is considered to be low. If Native American or other human remains are inadvertently discovered during the course of project actions, there will be no further excavation or disturbance of the site of the remains or the vicinity until the remains and the vicinity have been evaluated in accordance with CEQA Section 10564.5, California Health and Safety Code (CHSC) Section 7050.5, Public Resources Code (PRC) Section 5097.98, and the Native American Graves Protection and Repatriation Act (NAGPRA), as appropriate. As such, potential impacts are less than significant.

2.6 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
b. Strong seismic ground shaking?	☐	☐	☒	☐
c. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
d. Landslides?	☐	☐	☒	☐
2. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	☐	☐	☒	☐
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Explanations

1. a-d. The proposed reconductor project may require some existing power pole structures to be replaced. Approximately 5 poles would be replaced to ensure structural integrity. The replacement power poles will be located in the same place as existing power poles. As such, the proposed project will not significantly increase the exposure of existing facilities to strong seismic ground shaking, seismic-related ground failure, liquefaction, and landslides. Construction of power poles must meet SDG&E's performance standards for soil type, slope, and type of pole being used. Therefore, potential impacts are less than significant.

2. The project will not result in substantial soil erosion or the loss of topsoil. Although short-term impacts to the existing site soil normally occur during grading and other construction work, deployment of drainage and erosion Best Management Practices (BMP) will be used as part of the design and construction effort on the site. Use of BMP will manage and contain any erosion that may occur as part of normal construction activities. The BMPs will be implemented through Project Protocols 5, 6, 7, 11, 36, 37, and 51. Therefore, potential impacts are less than significant.

3&4. The proposed reconductor project may require some existing power poles to be replaced. The replacement power poles will be constructed in the same location as the existing power poles. The reconductor of portions of the TL 13824 will not increase the exposure of existing facilities to unstable or expansive soils. Construction of the replacement poles will have to meet SDG&E's structural engineering performance standards based on the type and size of the power pole. Therefore, potential impacts are less than significant.

5. The proposed project is unmanned and will not result in new or increased demand for public or private sewer facilities. Therefore, there will be no impact.

2.7 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
4. Lie on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
5. Lie within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
6. Lie within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
8. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Explanations

1. Material that is excavated, transported, stored, or disposed of during project construction has the potential to contain hazardous materials and could present a hazard to construction workers, the public, or the environment if improperly managed. Groundwater encountered during excavation may also contain hazardous materials. Vehicles and equipment used for construction may contain or require the temporary, short-term use of potentially hazardous substances, such as fuels, lubricating oils, and hydraulic fluid. The use of helicopters, if any, to string conductor lines or pull rope is expected to be minimal. If used, the helicopters will be needed on an infrequent basis. The helicopters will contain fuel, and therefore, SDG&E will implement its Project Protocols, and best management practices (included in Appendix A of this environmental checklist) to reduce potential impacts to less than significant levels.
2. The project would be in compliance with state Title 22 and federal Title 40 requirements, including the oil spill control and countermeasure plan (SCCP) required by Title 40 CFR Section 112.7. No significant risk of accidental explosion or the release of hazardous substances is anticipated with the proposed reconductor project. The project does not propose an expansion of use or increase in voltage. Therefore, potential impacts are less than significant.
3. The closest school is located more than 0.25-miles of the proposed project site. Therefore, the proposed project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-miles of a school. As a result, there will be no impacts.
4. The proposed project sites are not located within any identified hazardous material sites and do not create a hazard to the public or environment. Therefore, there are no impacts.
5. The proposed project sites are not located within two miles of a public airport and therefore would not result in a safety hazard. Therefore, there are no impacts.
6. The proposed project sites are not located within two miles of a private airport and therefore would not result in a safety hazard. Therefore, there are no impacts.
7. The proposed project would not interfere with emergency response plan or operation near or within the project vicinity. Due to the project being located within the existing power line right of way, the proposed project would not result in the closure of any streets and would therefore not block any evacuation routes. During construction, some lanes and streets traversed by the ROW may be temporarily restricted relative to traffic movement. A traffic control and detour plan will be prepared as part of the project implementation plan. Therefore, the impacts will be less than significant.
8. The proposed project replaces portions of existing power lines and power poles. The project does not increase the exposure of people or structures to wildland fires. The project does not propose new construction in previously undeveloped areas. Therefore, potential impacts from wildland fires are less than significant.

2.8 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☐	☒
5. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
6. Otherwise substantially degrade water quality?	☐	☐	☐	☒
7. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
8. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒

9.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
10.	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Explanations

1. The project will not violate any water quality standards or waste discharge requirements. The project will implement Project Protocols 5, 6, 7, 10, 11, 15, 36, and 51 to reduce both peak and total runoff from the sites and will also act to trap pollutants on the site, thus minimizing their presence or concentration in runoff leaving the site. As a result, potential impacts will be less than significant.
2. The project would not withdraw any groundwater or discharge into the existing groundwater. No existing water quality conditions would be adversely affected. As a result, there will be no impacts.
3. The proposed pole replacements would not substantially alter the existing drainage pattern of the sites or areas in a manner that would result in substantial erosion or siltation on- or off-site. Erosion and siltation would be controlled and minimized as discussed in the Project Protocols. As a result, potential impacts will be less than significant.
4. The project will not substantially alter the existing drainage pattern of the site or area in a manner that will result in flooding on- or off-site. As a result, there will be no impacts.
5. The project will not contribute runoff water that will exceed the capacity of existing or planned storm water drainage systems. Because potential pollution sources within the project (e.g., oil-filled transformers) have spill-containment structures incorporated into the design, the project will not provide substantial additional sources of polluted runoff. As a result, there will be no impacts.
6. The project will not otherwise substantially degrade water quality. No other aspects of the proposed project not discussed in response 3 above have been identified that will result in a degradation of surface water quality. The project does not propose a substantial conversion of pervious surfaces to impervious surfaces. As a result, there will be no impacts.
7. No housing will be constructed within a 100-year flood hazard area a result of the project. Therefore, there will be no impacts.
8. According to the FEMA Flood Plain Map, the reconductors areas are located outside of the 100-year flood hazard boundary.

   No new structures will be constructed. Therefore, there will be no new structures that would impede or redirect flood flow within a 100-year flood hazard area. As a result, there will be no impacts.
9. The proposed reconductor sites are located out of any FEMA- identified floodplain and are not located in the flood hazard area of any dam or levee. Therefore, there will be no impacts.
10. The areas of the proposed project are not located in areas that are vulnerable to seiche, tsunami, and mudflow. Therefore, there will be no impacts.

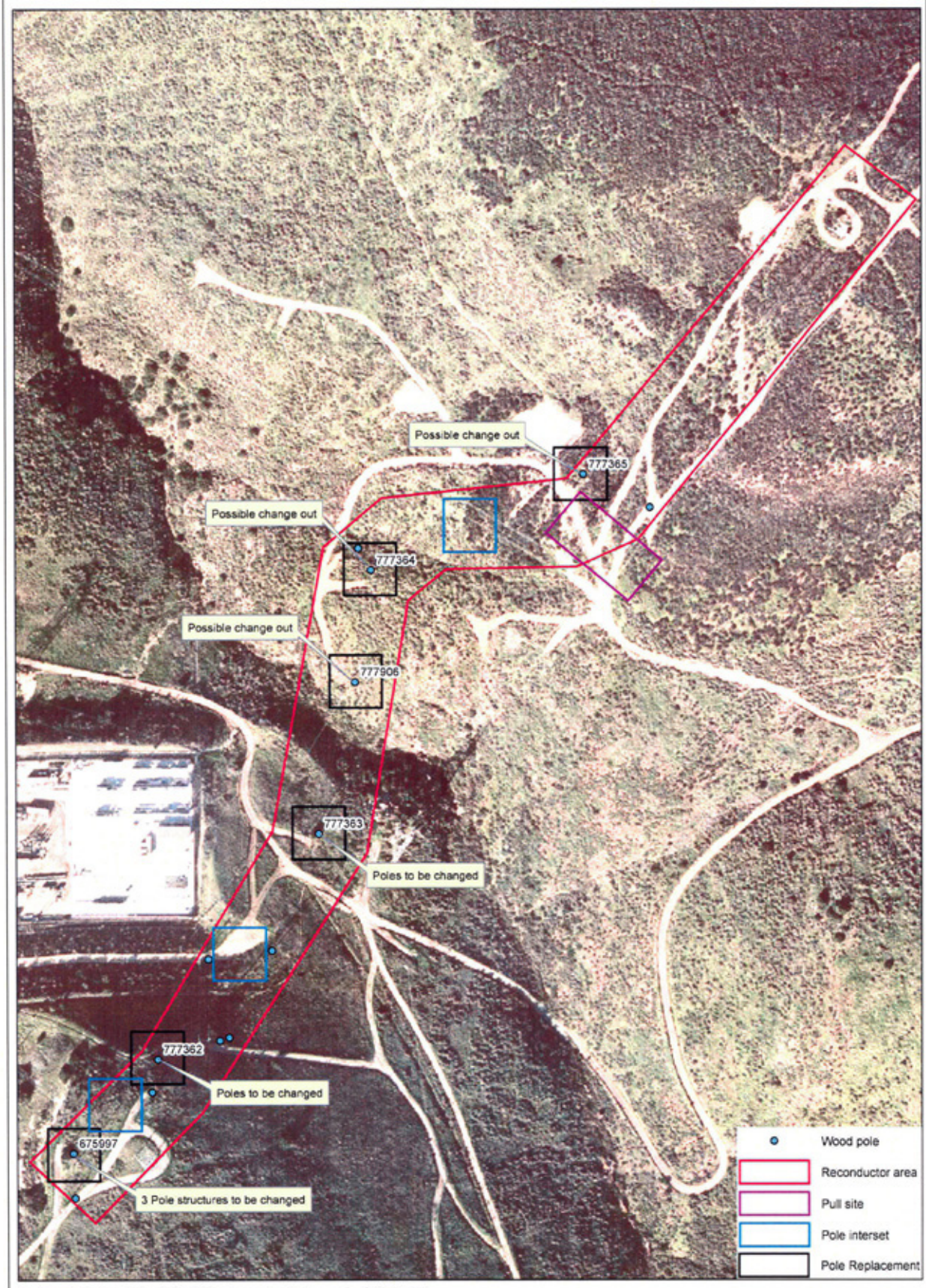
2.9 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Physically divide an established community?	☐	☐	☐	☒
2. Conflict with any applicable land use plan, policy, or regulation or an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
3. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Explanations

1. All replacement transmission poles and transmission lines are to be located within the existing right-of-way site. The existing transmission poles and overhead conductors appear as part of the existing community. Therefore the proposed project will not divide the established community. As a result, there will be no impacts.
2. Because of the Public Utilities Commission's exclusive jurisdiction to regulate this project in relation to local government agencies (California Constitution Article XII, Section 8), the project cannot directly conflict with the County of San Diego General Plan, the City of Chula Vista General Plan, the County of San Diego Multiple Species Conservation Program, or the City of Chula Vista Multiple Species Conservation Program. The project is located within SDG&E right-of way and does not propose any changes to existing land uses.

   Land uses in the vicinity of the existing power lines are a mix of industrial, commercial, and residential uses within the City of Chula Vista. Land uses within the County of San Diego are more rural and undeveloped. Figures 5 through 7 show land uses within 500 feet of the proposed reconductor areas based on SANDAG mapping for the proposed project areas. The project would not result in any change to the land use designations of the community. Therefore, there would be no impact.
3. SDG&E will construct the proposed project in accordance with the County of San Diego MSCP Subarea Plan, City of Chula Vista MSCP, and SDG&E's NCCP. As a result, there will be no impacts.



Aerial Imagery: Eagle Aerial Dec. 2004; GIS Data Layers, Essex Environmental and SDG&E 2005

RBF CONSULTING

N

Not to Scale

Miguel Segment

SDG&E Silvergate Transmission Substation

Figure 3

Aerial Imagery: Eagle Aerial Dec. 2004; GIS Data Layers, Essex Environmental and SDG&E 2005

RBF CONSULTING

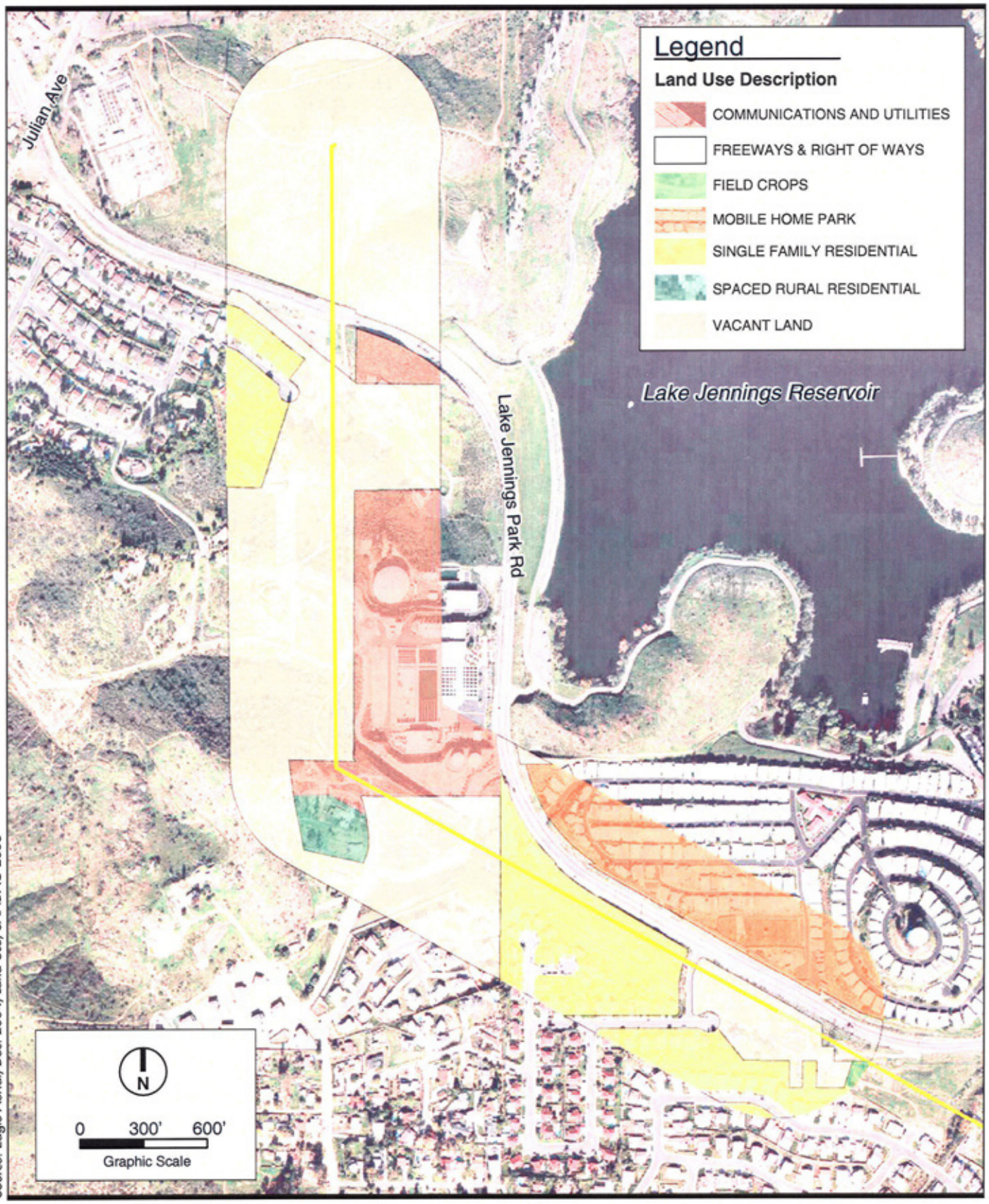
N

Not to Scale

Los Coches Segment

SDG&E Silvergate Transmission Substation

Figure 4



Source: Eagle Aerial, Dec. 2004; Land Use, SANDAG 2003

RBF CONSULTING

25101591/supplemental/1591ex04.ai

Los Coches Reconductor Segment - Surrounding Land Uses

SDG&E Silvergate Transmission Substation

Figure 5

Source: Eagle Aerial, Dec. 2004; Land Use, SANDAG 2003

RBF CONSULTING

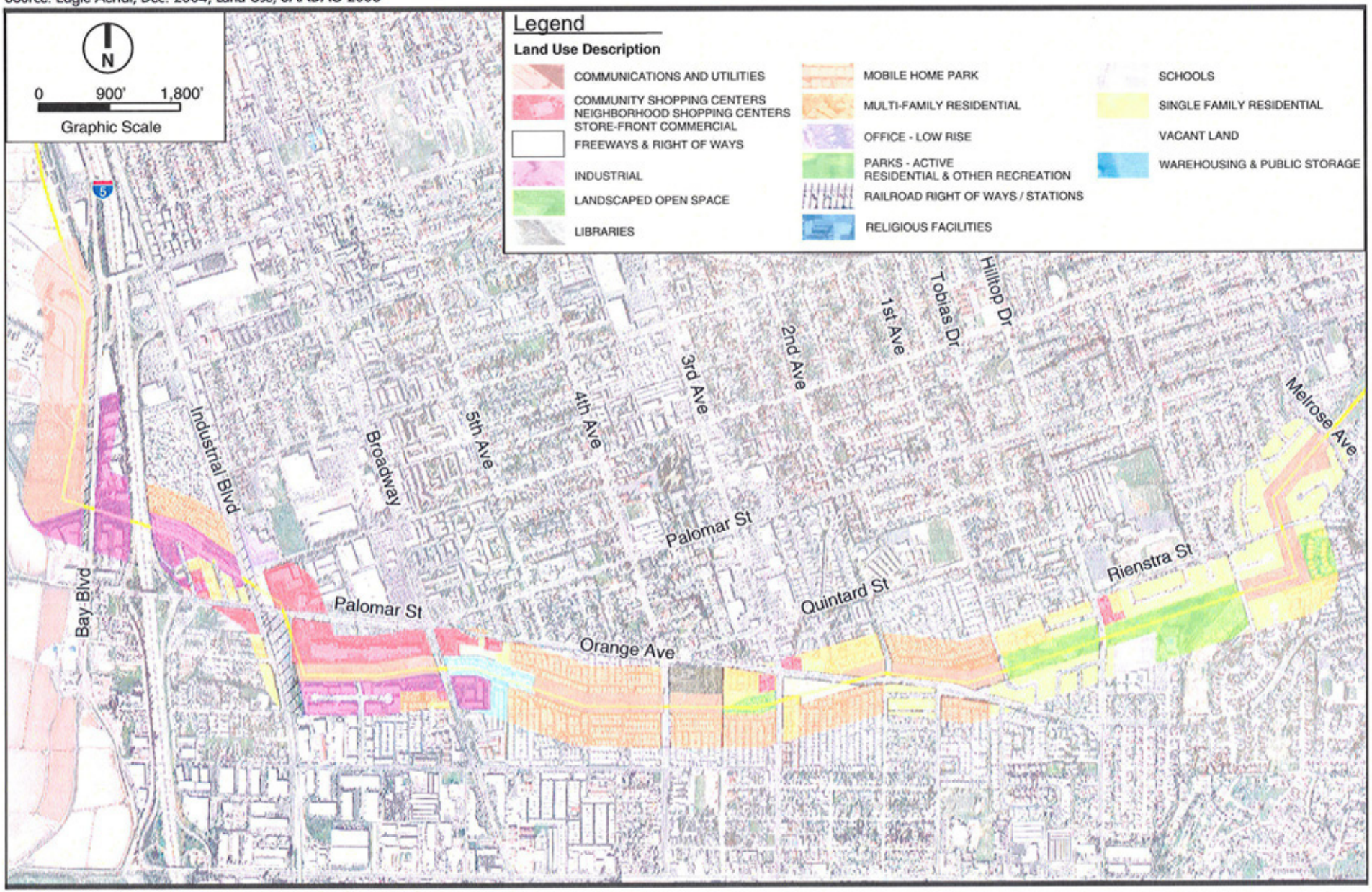
25101591/supplemental/1591ex05.ai

Miguel Reconductor Segment - Surrounding Land Uses

SDG&E Silvergate Transmission Substation

Figure 6

Source: Eagle Aerial, Dec. 2004; Land Use, SANDAG 2003



RBF CONSULTING

25101591/supplemental/1591ex06.ai

Southbay Substation Reconductor Segment - Surrounding Land Uses

SDG&E Silvergate Transmission Substation

Figure 7

2.10 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Explanations

1. Because the proposed project would be replacing the existing power lines and power poles with new power lines and power poles the project will not expand beyond the existing ROW. As such, no loss of the availability of a known mineral source that would be of value to the region or the residents of the state would occur. Therefore, there will be no impacts.
2. There are no mineral resources recovery sites delineated on a local general plan, specific plan, or other land use plan within the project site or in the vicinity of the project areas. Therefore, there will be no impacts.

2.11 NOISE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
5. Lie within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
6. Lie in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Explanations

1. Noise levels from construction will constitute a temporary and short-term impact to nearby residents and businesses. Because construction noise will not exceed established standards and will be in accordance with city noise ordinances, it will not significantly impact nearby residents. The numbers indicated in Table 3, *Typical Construction Equipment Noise Levels*, represents the "worst-case" day, in which all equipment used during a given phase is operating. Because all equipment would not be operating concurrently on most days during construction, actual noise levels would, on many days, be lower than those in Table 3. This information was used in the Proponent's Environmental Assessment (PEA) prepared for the Silvergate Substation to assess potential construction noise impacts. Construction noise impacts associated with the reconductor of TL 13824 would involve less heavy equipment because no excavation, grading, or trenching is required.

   Based on standard noise analysis calculation estimates, noise is reduced by 6 dBA for each doubling of distance. The results of the standard calculation show the distance required to reach 75 dBA, as indicated in Table 4, *Distances Required To Reach 75 dBA for Selected Construction Equipment Noise Levels*. Based on the table calculation, 75dbA would be reached at approximately 200 feet based on 85 dBA, which is three dBA higher than the loudest piece of equipment listed in the Table 3. Noise levels associated with operational activities will not exceed established standards. Therefore, impacts will be less than significant.

Table 3
Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA) Range at Approximately 50 Feet (Leq 12)
Earth-Moving	
Front loader	70
Backhoe	70
Tractor, dozer	82
Scraper, grader	75
Paver	69
Truck	74
Materials-Handling	
Concrete mixer	78
Concrete pump	73
Crane (movable)	65
Crane (derrick)	65
Stationary	
Pump	67
Generator	73
Compressor	72
Impact[1]	
Pneumatic tools	75
Jackhammers and rock drills	82

[1] Noise level ranges for impact equipment are from a distance of 45 feet.

Compactors	77
Source: Acentech, 2004	

Table 4
Distances Required To Reach 75 dBA
for Selected Construction Equipment Noise Levels (@ 50 feet)

dBA (@ 50ft)	100 ft	200 ft	400 ft	800 ft	1,600 ft	3,200 ft	6,400 ft	12,800 ft	25,600 ft
110	104	98	92	86	80	74	68	62	56
105	99	93	87	81	75	69	63	57	51
100	94	88	82	76	70	64	58	52	46
95	89	83	77	71	65	59	53	47	41
90	84	78	72	66	60	54	48	42	36
85	79	73	67	61	55	49	43	37	31
80	74	68	62	56	50	44	38	32	26
75	69	63	57	51	45	39	33	27	21
70	64	58	52	46	40	34	28	22	16
65	59	53	47	41	35	29	23	17	11
60	54	48	42	36	30	24	18	12	6
* Worst-case noise levels based on hard site conditions with no intervening topography.									

2. Construction is likely to result in groundborne vibrations. However, the vibrations will be localized, short-term, and temporary. As a result, impacts will be less than significant.
3. Corona noise created by the operation of the new overhead conductors may result in a minimal increase in existing ambient noise levels, specifically during inclement weather conditions. However, the increase in noise level will be small in comparison to the existing noise levels in the areas. Therefore, impacts will be less than significant.
4. Although construction will result in noise levels above ambient conditions, the impact will be temporary, localized, short-term, and intermittent. In addition, construction in residential areas will take place primarily during daylight hours when most residents are not home. The project will implement Project Protocol 63, which restricts the use of helicopters around sensitive bird habitats. As a result, impacts will be less than significant.
5. The project site is not located within two miles of a public airport. The project would not expose people residing or working in the area to excessive levels of noise. Therefore, there will be no impacts.
6. The project site is not within the vicinity of a private airstrip and would not expose people residing or working in the area to excessive noise levels. Therefore, there will be no impacts.

2.12 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
3. Displace substantial numbers of people, necessitation the construction of replacement housing elsewhere?	☐	☐	☐	☒

Explanations

1. The proposed project would provide reliable electric service for an already built-out urban area and for ongoing planned development approved by the local jurisdictions. Therefore, there will be no impacts.
2. The proposed construction of proposed project proposed project would not remove any residences. Therefore, there will be no impacts.
3. The project will be constructed primarily within existing roadways, parking lots, existing power line ROWs and existing substations. No residences or businesses will be displaced as a result of project construction. Therefore, no people will be displaced and replacement housing will not be necessary. As a result, there will be no impacts.

2.13 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a. Fire protection?	☐	☐	☐	☒
b. Police protection?	☐	☐	☐	☒
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

Explanations

1. The project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or result in the need for new or physically altered governmental facilities.
   a. The project would not require any additional fire service needs beyond what currently exists for the site. Therefore, there will be no impacts.
   b. The project would not require any additional police service needs beyond what currently exists for the sites. Therefore, there will be no impacts.
   c. The project would not have any affect on local education needs because the proposed project does not contribute any additional demand on local schools. Therefore, there will be no impacts.
   d. The project does not increase population or recreational demands because the project sites do not contain any residences. Therefore, there will be no impacts.
   e. The project site does not increase population or public facilities demands because the project sites do not create any additional demand for public services beyond what currently exists for the site. Therefore, there will be no impacts.

2.14 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
2. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Explanations

1. The proposed project would not result in an increase in population and therefore, would not induce or increase the use of parks or other recreational facilities. Therefore, there will be no impacts.
2. The proposed project does not include or require the construction or expansion of recreational facilities since it is an expansion of existing electric utility facilities. Therefore, there will be no impacts.

2.15 TRANSPORTATION AND TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
2. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
5. Result in inadequate emergency access?	☐	☐	☐	☒
6. Result in inadequate parking capacity?	☐	☐	☐	☒
7. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Explanations

1. There is no traffic generated by the proposed project that would affect present patterns of circulation for movement of people or goods. The project would not increase the current level of daily trip generation for the existing project area. Therefore, there will be no impacts.

   During the construction phase of the project, construction vehicles may affect some traffic. Construction activities would be limited to areas that do not disrupt traffic patterns to the maximum extent practicable. However, traffic control plans would be prepared ensuring that only one lane is

closed at a time, thereby ensuring the efficient routing and movement of vehicle traffic around the construction area during this time. Flag persons would be in place to control and direct traffic safely through the single lane areas resulting in only temporary, short duration traffic delays. Because construction traffic will be a temporary effect, organized by a traffic control plan prepared by the project engineer or building contractor, potential construction related traffic impacts are less than significant.

2. The proposed project would generate no more than the average daily trips generated by the existing project sites as part of regular maintenance. Therefore, the impact to traffic volumes and associated levels of service would be the same as current conditions. Therefore, there will be no impacts.

3. Helicopters may be used to facilitate installation of the overhead line. Helicopter use, if any, will be temporary and limited. Helicopter use will be based out of two or three locations, which will be determined before construction, and flight paths will be coordinated with local air traffic control (Federal Aviation Administration) per SDG&E's Environmental Standards (see Appendix A). As a result, potential impacts to air traffic patterns are less than significant.

4. The proposed project would not create or affect any additional circulation routes. Therefore, there will be no impacts.

5. The proposed project would not result in inadequate emergency access to the project site or nearby vicinity. Therefore, there will be no impacts.

6. The proposed project would not result in an increased demand for parking space facilities, on- or off-site. Therefore, there will be no impacts.

7. The proposed project would not generate any significant transportation needs; therefore, it would not conflict with any alternative transportation policies. As a result, there will be no impacts.

2.16 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
3. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
4. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
5. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
6. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
7. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Explanations

1. The project would not result in any sewer discharges nor would any connection to the sewer system be required. Therefore, there will be no impacts.

2. The proposed project would not increase the local demand for water supplies. Therefore, there will be no impacts.

3. There will be no construction of new storm water drainage facilities or expansion of existing facilities. Therefore, there will be no increased runoff from the site. As a result there will be no impacts.
4. The proposed project would not increase the local demand for water supplies. Therefore, there will be no impacts.
5. The proposed project would not require or create any undue or unplanned additional demand for wastewater treatment facilities or require additional capacity. Therefore, there will be no impacts.
6. Demolition and construction debris would be recycled to the greatest extent feasible. Materials not recycled would be disposed of at landfills identified by the City of San Diego that have adequate capacity (City of San Diego Information Bulletin 119). Operation of the project would not result in new or increases undue or unplanned demand for public or private solid waste disposal facilities. Therefore, the impacts will be less than significant.
7. The proposed project has included recycling of all appropriate material and proper disposal during construction. The proposed project would produce minimal amounts of waste associated with maintenance activities during operation. These wastes would be disposed of in accordance with SDG&E guidelines and all applicable regulations. Therefore, the impacts will be less than significant.

2.17 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
2. Does the project have the impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).	☐	☐	☒	☐
3. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Explanations

1. The proposed project would not degrade the quality of the environment by adversely affecting any sensitive biological habitat nor are any historical resources found on the project site. There is a low potential for paleontological, prehistoric or cultural resources to occur in substrates underlying the expansion area. Monitoring during excavation activities is proposed to ensure the scientific characterization and protection through curation of unknown resources uncovered during excavation. Therefore, there will be no impacts.
2. Potential effects of the proposed project are largely associated with short-term construction related activities. Because these potential effects are transitory and would fully cease once construction is completed, they would not add to any adverse long-term incremental impacts when considered in conjunction with the effects of past, present, or probable future projects. Long-term project operation impacts associated with noise and aesthetics are not significant. Therefore, the impacts will be less than significant.

3. The project would not have any substantial adverse impacts on human beings, either directly or indirectly. This is because the level of construction activity is minimal, thus resulting in only minor impacts relative to air quality, noise, traffic, and other related issues. Also, standard measures have been incorporated into the project to further minimize impacts. All construction impacts are therefore less than significant. For operational impact issues such as noise, aesthetics and public health and safety, design measures have been incorporated into the project to minimize any long-term project impacts to less than significant levels. Therefore, the impacts will be less than significant.

Appendix A
Environmental Standards & Project Protocols

ENVIRONMENTAL AND SAFETY STANDARD

FEDERAL AVIATION ADMINISTRATION NOTIFICATION REQUIREMENTS FOR CONSTRUCTION IN THE VICINITY OF AIRPORTS	SOCALGAS: SDGE:

PURPOSE:

To protect navigable airspace from encroachment, either by construction, operations, or facility alterations, the Federal Aviation Administration (FAA) implemented a regulation which defines the airspace in the vicinity of a public airport or heliport that requires a Notice of Proposed Construction or Alteration.

1. REGULATORY OVERVIEW:

In administering Title 14 of the Code of Federal Regulations, Part 77 – "Objects Affecting Navigable Airspace", the prime objectives of the FAA are to promote air safety and the efficient use of the navigable airspace. To accomplish this mission, aeronautical studies, such as Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) are conducted based on information provided by proponents on an FAA Form 7460-1 for **proposed** construction or Form 7460-2 for **actual** construction.

The FAA will send a confirmation that the proponent's notice was received (typically within two weeks after the notice is submitted).

The FAA suggests allowing a minimum of 60 days to complete their analysis and return the results of its DETERMINATION to the proponent. Even though there may be a "Determination of No Hazard to Air Navigation", the Determination may be conditioned on marking or lighting the subject structure or wire conductor in accordance with FAA Advisory Circular 70/7460-1K, "Obstruction Marking and Lighting" (http://www2.faa.gov/ats/ata/ai/circV.pdf) . Unless it is otherwise extended, revised, or terminated, each final Determination of no hazard made expires 18 months after its effective date, regardless of whether the proposed construction or alteration has been started, or on the date the proposed construction or alteration is abandoned, whichever is earlier.

2. DEFINITIONS:

a. Heliport: an area of land, water, or structure used or intended to be used for the landing and takeoff of helicopters.

b. Navigable Airspace: airspace at and above the airspace needed for safe takeoff and landing.

c. Public Airport: an airport that is open to the general public with or without a prior request to use the airport.

3. SCOPE OF APPLICABILITY

Construction or alteration requiring notice includes:

- Any construction or alteration of more than 200 feet in height above the ground level at its site and/or

- Any construction or alteration less than 20,000 feet from a public airport and/or
- Any construction or alteration less than 5,000 feet from a public heliport and/or
- Any construction or alteration on any public or military airport or heliport, including airports or heliports under construction.

4. RESPONSIBILITIES:

Land Planning and Natural Resources (LPNR) provides noticing support for activities requiring the filing of FAA Form 7460. Noticing support will be provided to a variety of internal customers such as Field Environmental Team Leaders, Field Environmental Specialists, Environmental Technical Advisors, Environmental Compliance Specialists, Environmental Technical Advisors, Project Managers, electric and gas engineers and designers, electric, gas, and facilities construction and maintenance foremen and contract administrators.

It is the responsibility of the customers to provide sufficient project baseline information for LPNR to accurately assess the need for noticing. Baseline information shall include:

a. Project Location – Provide project location on USGS quadrangle map

b. Project Description – Detailed description of project actions/work including, estimated construction start and ending dates, type(s) of equipment used and number of personnel and other vehicles.

c. Project Drawings – Drawings indicating the project limits/footprint including:

1.) Plan and profile scales.

2.) Distance from the project location to the nearest public airport or heliport.

3.) Wire heights of all wires from ground elevation at point of greatest clearance

4.) Other elevation measurements (top of pole or tower, cross-arms, telco cable, for example)

5.) Latitude and longitude measurements of poles on each end supporting the subject wires.

It is the responsibility of LPNR to review the project baseline information and determine the need for FAA Noticing. The baseline information review may require a field review of the project site by an LPNR Environmental Specialist-Land Planning.

5. NOTICING

LPNR will send the completed FAA Form 7460-1 (http://forms.faa.gov/forms/faa7460-1.pdf) to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area within which the proposed construction or alteration will be located. For the Western-Pacific Region (which includes Arizona, California, Guam, Hawaii, and Nevada), the Regional mailing address is:

Federal Aviation Administration

Air Traffic Airspace Branch, AWP-520

P.O. Box 92007 WWPC

Los Angeles, CA 90009

Phone: (310) 725-6620

The notice must be submitted:

a. At least 30 days prior to the date the proposed construction or alteration is to begin and

b. On or before the date a related application (if required) for a construction permit is filed with the Federal Communications Commission (FCC).

If required, the FAA will include a FAA Form 7460-2 (http://forms.faa.gov/forms/faa7460-2.pdf) , "Notice of Actual Construction or Alteration", with a determination. FAA Form 7460-2 Part 1 is to be completed and sent to the FAA at least 48 hours prior to starting the actual construction or alteration of a structure. Additionally, Part 2 is to be submitted no later than 5 days after the structure has reached its greatest height. In addition, supplemental notice is to be submitted upon abandonment of construction.

Letters are acceptable in cases where the construction or alteration is temporary or a proposal is abandoned. This notification process is designed to permit the FAA the necessary time to change affected procedures and/or minimum flight altitudes, and to otherwise alert airmen of the structure's presence.

6. CONSTRUCTION

Prior to starting project construction LPNR will make copies of the FAA Determination documents available to the Field Contact Representative (FCR) responsible for complying with the terms and conditions of the Determination during construction. The FCR may be a Field Environmental Team Leader, Field Environmental Specialist, Environmental Technical Advisor, Environmental Compliance Specialist, Environmental Technical Advisor, electric or gas project manager or engineer, electric or gas construction foreman, field biologist/monitor or consultant.

LPNR will review the project terms and conditions with the FCR and engineer/designer prior to start of construction.

7. POST CONSTRUCTION

The FCR shall notify LPNR at the completion of construction. LPNR will provide support to the FCR in filing any required post project notices or reports to the FAA. LPNR will coordinate with the customer or department originating the project to provide the necessary support required to comply with Determination conditions for any long-term monitoring or maintenance of the project facilities..

8. RECORD RETENTION

Noticing documents will be provided to the customers responsible for document retention. A copy of the noticing documents will also be retained by LPNR. Notice documents will be retained permanently in the Environmental Solutions Project Tracking System (ESPTS).

Southern California Gas Company
A Sempra Energy utility

ENVIRONMENTAL STANDARD

SDGE
A Sempra Energy utility

SDG&E NCCP COMPLIANCE	SOCALGAS: SDGE:

PURPOSE

To provide procedures identifying the need for Covered & Endangered species preservation, habitat conservation, and incidental take permitted under San Diego Gas & Electric's (SDG&E) Natural Community Conservation Plan (NCCP) in association with the construction, operation, maintenance, and repair of electric and natural gas facilities.

1. REGULATORY OVERVIEW

The U.S. Fish and Wildlife Service (USFWS) is responsible under Section 7 of the Federal Endangered Species Act for regulating/permitting activities causing impact to or take of Threatened or Endangered species and/or their natural habitat. The California Department of Fish and Game (CDFG) is responsible under Section 2080 of the California Endangered Species Act for regulating/permitting activities, which may impact listed species as identified by the State of California. SDG&E's NCCP allows for localized administration of the Federal and California Endangered Species Acts if specific steps are followed, including the preparation of a habitat conservation plan (HCP).

SDG&E is able to reduce the regulatory process typically involved with the operation, maintenance, and expansion of a gas and electrical system under the implementing agreement and NCCP permit.

Under the NCCP, construction activities, such as soil excavation, mechanical removal of vegetation, temporary modification to vegetation, and take of Covered species, are also regulated.

2. DEFINITIONS

a. Endangered and Threatened Species: Under the Endangered Species Act of 1973 (as amended), "the term 'endangered species' means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man." A threatened species "means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

b. Natural Habitat: Areas that are not paved and do not contain ornamental landscaping or otherwise urbanized uses, which potentially provide conditions for fauna to inhabit.

c. Listed Species: Threatened or endangered plants or wildlife based on four or more criteria that the USFWS establishes as factors in species decline. Briefly, they are: habitat

destruction, overutilization, disease, and inadequate existing regulatory mechanisms. As the first step in assessing the status of a species, the USFWS publishes "notices of review" identifying U.S. species that are believed to meet the definition of threatened or endangered; these are referred to as candidates for listing. Through notices of review, the USFWS seeks biological information that will complete the status reviews for these candidate species. These and all other notices throughout the rule-making process are published in the *Federal Register,* a daily Federal Government publication.

d. Habitat Conservation Plan: Plan designed to offset any harmful effects a proposed activity might have on the species. The HCP process allows development to proceed while promoting listed species conservation, including ensuring that the effects of the permitted action on listed species are adequately minimized and mitigated. The "No Surprises" policy provides assurances to landowners participating in HCP efforts that additional land, water, or financial compensation will not be required if the permittee implements the terms and conditions of the HCP in good faith.

e. Covered Species: Under SDG&E's NCCP, those species agreed upon between SDG&E, the USFWS, and the CDFG to be covered under the NCCP for the preservation and conservation of these species and their habitat, while allowing SDG&E to develop, install, maintain, operate, and repair its facilities, which are or become necessary to provide electric, natural gas, and other services to the customers served by SDG&E within the NCCP area. Covered species are species found within the NCCP area and include, but are not limited to, species that are considered federally or state-endangered, threatened, listed, species of concern, and/or regionally sensitive.

3. SCOPE OF APPLICABILITY

Compliance with Sections 7, 9, and 11 of the Federal Endangered Species Act (as amended) and Sections 2050, 2080, 2081, 2084, 2090, and 2835 of the California Endangered Species Act is required for any electrical or natural gas system, facility construction, operation, maintenance, repair, expansion, relocation, or upgrade that would impact a Covered species and/or its habitat. Company departments having a responsibility to consider the need for compliance with the SDG&E NCCP include those involved in activities such as:

a. providing customer service for individual, developer, or agency/government projects

b. developing plans and designs for construction projects

c. providing engineering support for construction projects

d. obtaining environmental permits

e. constructing projects

f. maintaining, repairing, or inspecting existing facilities

g. supervising the work of company or contract construction or maintenance personnel

4. RESPONSIBILITIES

Land Planning and Natural Resources (LPNR) provides permitting support for activities requiring compliance with the SDG&E NCCP. LPNR will prepare a Pre-Activity Survey Report, which describes the work, impacts, and mitigation. Permitting support will be provided to a variety of internal customers, such as Field Environmental Team Leaders, Field Environmental Specialists, Environmental Technical Advisors, Environmental Compliance Specialists, electric and gas engineering, electric and gas construction, electric and gas maintenance, facilities construction and maintenance, fleet services, and vegetation management.

It is the responsibility of the customers to provide sufficient project baseline information for LPNR to accurately assess the need for permitting. Baseline information shall include:

a. Project Location—Provide project location on U.S. Geological Survey quadrangle map

b. Project Description—Detailed description of project actions/work including, estimated construction start and ending dates, type(s) of equipment used, and number of personnel and other vehicles.

c. Project Drawings—Drawings indicating the project limits/footprint, including:

1.) Anticipated grading/excavation with cross sections

2.) Material laydown or storage areas

3.) Project access

4.) Limits of vegetation clearing if not the same as grading limits

5.) Location of any swales, drainages, streams, creeks, or other bodies of water within the project limits/footprint

It is the responsibility of LPNR to review the project baseline information and determine the need for NCCP permitting. The baseline information review may require a field review of the project site by an LPNR or other qualified biologist. LPNR may also request that the customer and an environmental consultant with experience in San Diego County habitat and fauna types attend the field review.

5. PERMITTING

If review of the baseline project information and conditions of the project site indicate that an impact to a Covered species and/or its habitat is likely, and a change in project scope to avoid impact is not feasible, LPNR will submit the project information to the USFWS and CDFG in the form of:

a. A completed pre-activity survey (PSR) form, including project location, digital images of site conditions, and description of proposed work activity

b. Sensitive species and vegetation-type maps

c. An LPNR-assigned Project ID tracking number

d. Drawings/sketches supporting proposed activity

e. Follow-up call to the agencies receiving project notification

The USFWS and CDFG have five days to respond to the PSR. If they do not respond within that time, the project will be released by LPNR.

6. CONSTRUCTION

Prior to starting project construction, LPNR is to provide copies of the PSR, Environmental Release, and Employee Field Guide to the Field Contact Representative (FCR) responsible for complying with the terms and conditions of the environmental release. The FCR may be a Field Environmental Team Leader, Field Environmental Specialist, Environmental Technical Advisor, Environmental Compliance Specialist, electric or gas Project Manager, electric or gas Construction Foreman, Field Biologist/Monitor, or a consultant.

LPNR will review the environmental release conditions with the FCR prior to start of construction. The FCR will hold a preconstruction meeting or tailgate to review the terms and conditions with all field personnel if the nature and complexity of the project warrants it.

7. POSTCONSTRUCTION

The FCR shall notify LPNR at the completion of construction. LPNR will provide support to the FCR in filing any required post project surveys or reports to the USFWS or CDFG. LPNR will coordinate with the customer or department originating the project to provide the necessary support required to comply with permit conditions for any long-term monitoring or maintenance of the project area after completion of construction.

8. RECORD RETENTION

Permitting documents will be provided to the Field Environmental Team Leader, Field Environmental Specialist, Environmental Technical Advisor, or Environmental Compliance Specialist responsible for document retention. A copy of the permitting documents will also be retained by LPNR. Project details will be retained permanently in the Environmental Solutions Project Tracking System. Essential permit documents will be retained in the appropriate company records storage and filing system.

ENVIRONMENTAL AND SAFETY STANDARD

CULTURAL, HISTORICAL AND PALEONTOLOGICAL RESOURCES ON PRIVATE LANDS	SOCALGAS: SDGE:

PURPOSE:

To provide procedures for the protection of cultural, historical and paleontological resources that could be potentially disturbed by the construction, operation, maintenance and repair of electric and natural gas facilities.

1. REGULATORY OVERVIEW:

Not applicable.

2. DEFINITIONS:

An archaeological monitor is defined as an individual who has expertise in the collection and salvage of cultural resources and who is working under the direction of a qualified archaeologist.

A qualified paleontologist is defined as an individual with a Ph.D. or M.S. degree in paleontology or geology who is a recognized expert in the application of paleontological procedures and techniques such as screen washing of materials and identification of fossil deposits.

A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil material and who is working under the supervision of a qualified paleontologist. A paleontological monitor may be retained to perform on-site monitoring in place of the qualified paleontologist.

3. SCOPE OF APPLICABILITY

These procedures cover construction activities on private lands involving ground disturbance where CEQA, NEPA or resource permit issues would not apply.

5. PERMITTING

Not applicable.

6. CONSTRUCTION

At least 30 days prior to construction, a cultural/historical resource and paleontological resource consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources from major ground disturbing activities such as facility pad grading, trenching or new access road grading. The analysis and assessment will be prepared to meet the requirements of CEQA and any specific local agency requirements. If there is a potential for impacting cultural, historical or paleontological resources but the site is not known to contain resources that require specific testing for significance determination, the construction procedures outlined below should be followed. Project sites that require testing for significance determination will be treated on a case by case basis using all applicable state and local criteria.

CULTURAL, HISTORICAL AND PALEONTOLOGICAL RESOURCES ON PRIVATE LANDS	SOCALGAS: SDGE:

Cultural and Historical Resources

The qualified archaeologist will attend any pre-construction meetings to make comments and/or suggestions concerning the monitoring program and to discuss excavation plans with the excavation contractor. The requirements for archaeological monitoring will be noted on the construction plans. The archaeologist's duties will include monitoring, evaluation, analysis of collected materials, and preparation of a monitoring results report in conformance with the local agency guidelines for the Determination of the Significance of Archaeological Sites. These duties are defined as follows:

Monitoring

The qualified archaeologist or archaeological monitor will be present on-site during construction activity involving grading, excavation or trenching.

Evaluation

In the event that cultural resources are discovered, the archaeologist will have the authority to divert or temporarily halt ground disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The archaeologist will contact SDG&E at the time of discovery. The archaeologist, in consultation with SDG&E, will determine the significance of the discovered resources. SDG&E must concur with the evaluation procedures to be performed before construction activities are allowed to resume. For significant cultural resources, a Research Design and Data Recovery Program will be prepared and carried out to mitigate impacts. Any human bones of Native American origin will be turned over to the appropriate Native American group for reburial.

Analysis

All collected cultural remains will be cleaned, cataloged and permanently curated with an appropriate institution. All artifacts will be analyzed to identify function and chronology as they relate to the history of the area. Faunal material will be identified as to species. Specialty studies will be completed as appropriate.

Paleontological Resources

The qualified paleontologist will attend the preconstruction meeting to consult with the excavation contractor. The paleontologist's duties will include monitoring, salvaging, preparation of collected materials for storage at a scientific institution that houses paleontological collections and preparation of a monitoring results report. These duties are defined as follows:

Monitoring

The paleontologist or paleontological monitor will be on-site to inspect for fossils during all excavation activities. Monitoring will be done full-time in those formations with a high sensitivity rating, and will be half time in those formations with a moderate sensitivity rating. The monitoring time may be increased or decreased at the discretion of the paleontologist in consultation with SDG&E. Monitoring will occur only when excavation activities affect the geologic formation of concern.

Salvaging

In the event that fossils are encountered, the paleontologist will have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely fashion. Because of the potential for recovery of small fossil remains, it may be necessary to set up a screen-washing operation on-site.

Fossil Preparation

Fossil remains will be cleaned, sorted, repaired, cataloged, and then (with the permission of SDG&E) stored in a local scientific institution that houses paleontological collections.

The qualified paleontologist will be responsible for preparation of fossils to a point of identification, and submittal of a letter of acceptance from a local qualified curation facility.

7. POST CONSTRUCTION

Cultural and Historical Resources

A monitoring results report with appropriate graphics, which describes the results, analyses, and conclusions of the above program will be prepared and submitted to SDG&E within three months following termination of the cultural resources program. Also, any sites or features encountered will be recorded with the South Coastal Information Center at San Diego State University and with the San Diego Museum of Man.

Paleontological Resources

A monitoring results report with appropriate graphics summarizing the results (even if negative), analyses, and conclusions of the above monitoring program will be prepared. Any discovered fossil sites would be recorded at the San Diego Natural History Museum.

8. RECORD RETENTION

SDG&E Environmental Solutions Department, Land Planning and Natural Resources Section and the South Coastal Information Center at San Diego State University, the San Diego Museum of Man and the San Diego Natural History Museum as appropriate will retain records.

Southern California Gas Company
A Sempra Energy utility

ENVIRONMENTAL STANDARD

SDGE
A Sempra Energy utility

MANAGEMENT OF CONTAMINATED EQUIPMENT & MATERIAL	SOCALGAS: 104.0155 SDGE: G8737

PURPOSE **This Environmental Standard describes the management process and disposition for equipment and material (i.e., pipes, tanks, compressors, filters/separators, non-PCB transformers, computer monitors, etc.) that have been removed from service and are considered a useable product but may be contaminated with a hazardous material. This standard excludes equipment and material that could contain or previously contained, Polychlorinated Biphenyl (PCB) contaminated liquids. Contact your Field Environmental Specialist or Environmental Services for PCB-suspect material.**

1. PROCEDURE

1.1. Equipment and/or material removed from service is considered contaminated if it:

1.1.1. Contains any free-flowing liquid hazardous material or waste.

1.1.2. Contains more than one inch of solid hazardous material or waste residue, or any quantity of an extremely hazardous solid residue.

1.1.3. Has an asbestos-containing or coal tar coating.

1.1.4. Is a vessel or tank and contains hydrocarbon or natural gas odorant vapors at or above one-tenth of the lower explosive level (LEL) as measured on a gas scope (i.e., flammable vapor detector).

1.1.5. Has the potential to cause an environmental risk in the event the equipment/material was mismanaged.

2. OPERATING ORGANIZATION /FACILITY IS RESPONSIBLE FOR:

2.1. The operating organization or facility removing the equipment and/or material from services is responsible for the following:

2.1.1. Determining whether the equipment or material is a waste (i.e. to be discarded) or a useful product for reuse or sale.

2.1.2. Proper disposition in accordance with company policies, laws and regulations.

2.1.3. Evaluating the equipment or material to determine if it contains a material that if mismanaged could cause an environmental risk.

2.1.4. Providing as requested by Investment Recovery, the operating facility Environmental Representative or Environmental Services any information pertaining to operating knowledge of the equipment/material or documentation to support the identification of potential environmental risk.

2.1.5. Consulting Environmental Services for guidance if there is insufficient data to adequately identify any potential environmental risks.

2.1.6. Consulting Environmental Services to approve the final destination of equipment or material that has the potential to create an environmental risk if mismanaged.

2.1.7. If the material/equipment is contaminated, prior to decontamination, consult with Environmental Services to ensure the process being implemented does not trigger California Permit By Rule or other permitting requirements.

NOTE: Inspection and decontamination may be performed by an approved qualified hazardous material contractor.

2.2. Investment Recovery is responsible for:

2.2.1. Only those items, equipment and/or material that have been determined to be either non hazardous or which are not a waste and can be sold as a useful product to an approved buyer using an approved Sales Agreement.

2.2.2. Consulting Environmental Services to approve the final destination of equipment or material that has the potential to create an environmental risk if mismanaged.

2.2.3. Determining if decontaminated, non-hazardous equipment can be sold as a useful product for revenue or recycling.

2.2.4. If Investment Recovery cannot find a recycler or buyer and the equipment, items and/or materials are determined to be a waste; the operating facility is responsible for disposing of the equipment and /or materials. All materials must be disposed of in accordance with applicable laws and regulations.

2.3. Environmental Services is responsible for:

2.3.1. Assisting in developing specifications for decontamination of equipment and disposal of hazardous residues.

2.3.2. Approving the final destination of any equipment/material that has the potential to create an environmental risk to SDG&E and Southern California Gas Company.

2.3.3. Auditing and approving potential buyers who purchase items that have been designated as useful products.

2.3.4. Determining the appropriate analysis, test methods and/or documentation to identify the potential environmental risk for proper disposition of the equipment or material.

2.3.5. Assisting in final disposal options if the equipment/material cannot be sold or reused.

2.3.6. Collaborating with the operating organization, the Environmental Representative and any other stakeholders to ensure proper disposition of the equipment.

2.4. Safety Services is responsible for:

2.4.1. Providing guidance as to appropriate safety equipment, training, procedures and personal protective clothing used when inspecting equipment.

2.4.2. Providing guidance on appropriate safety measures if Company personnel are used to decontaminate equipment.

2.5. Inspection

2.5.1. If safe to do so, the exterior and interior (including any inner chambers) of the equipment and material are inspected for contaminants by appropriately trained and qualified company personnel or approved contractors. Consult with **Safety Services** for guidance about appropriate safety equipment and personal protective clothing.

> **NOTE:** Do not enter any vessel, pipe, tank, or any confined area without consulting **Safety Services.** SPECIFIC TRAINING IS REQUIRED FOR WORKING IN A CONFINED SPACE.

2.5.2. If **Company personnel** are unable to safely perform the inspection for whatever reason, an approved hazardous material/waste management contractor may be employed to do the inspection. See Sempra Energy Environmental & Safety Compliance intranet web site [http:/home.Sempra.com/es/].

2.5.3. Examples of possible contaminants that may be present on or in equipment, items and/or materials include, but are not limited to; gasoline, oils, solvents, acids, bases, lead or chromated flaking paint, mercury, asbestos containing material (ACM), petroleum hydrocarbons and pipeline condensates. **104.085 /G8724** *Hazardous Waste Management Introduction*, **104.087 /G8725** *Hazardous Waste Stream Specific: A-N,* **104.089 /G8726** *Hazardous Waste Stream Specific: O-Z* provides a list hazardous materials and wastes

commonly used or generated by SDG&E and Southern California Gas Company.

2.5.4. Chemical analysis of samples of liquid and/or solid residues are performed when it is unclear whether or not a substance is hazardous. Contact Environmental Services for guidance on the appropriate sample methods and tests needed to adequately characterize any unknown substances. Contact one of the internal laboratories (Engineering Analysis Center for Southern California Gas Company or the SDG&E Environmental Lab) to perform the actual sampling and testing.

NOTE: Coal tar coatings are considered to be hazardous material due to the presence of polynuclear aromatic hydrocarbons (PAHs). Asphalt and coal tar coatings may also contain asbestos, a hazardous material. Testing for asbestos is conducted according to Safety Standard **104.05** *Asbestos*.

2.6. Decontamination

2.6.1. Prior to performing any type of decontamination consult with Environmental Services to determine whether the decontamination can be done without triggering Permit By Rule Requirements.

2.6.2. The Operating Facility may use an approved hazardous material/waste management contractor or qualified Company personnel to perform the decontamination.

2.6.3. Environmental Services is contacted to assist in developing specifications for decontamination on a case-by-case basis. For asbestos decontamination contact Safety Services and Environmental Services.

2.6.3.1. Equipment or material with an asbestos-containing or coal tar coating is considered a hazardous material. If you are unsure if the material is friable or non-friable (not easily crumbled or pulverized during handling) contact an approved asbestos consultant or Safety or Environmental Services for assistance See Sempra Energy Environmental & Safety Compliance intranet web site [http:/home.Sempra.com/es/] for a list of approved contractors. See also Safety Standard **104.05** *Asbestos* and Safety Lesson Plan *Asbestos Coal-Tar Pipe Wrap*.

2.6.4. A specific type of decontamination is required for vessels that contain liquid or solid odorant residues or have odorant vapors above 1/10 of the LEL. Contact an approved contractor to perform this type of decontamination see Sempra Energy Environmental & Safety Compliance intranet web site [http:/home.Sempra.com/es/].

2.6.5. Liquid and solid residues that are removed as a result of the decontamination process are managed as a hazardous waste, if they are hazardous wastes. See

Environmental Standards **104.085 /G8724** *Hazardous Waste Management Introduction*, **104.087 /G8725** *Hazardous Waste Stream Specific: A-N,* **104.089 /G8726** *Hazardous Waste Stream Specific: O-Z.*

2.7. Disposition

2.7.1. In order of preference, the disposition of contaminated equipment and material is as follows:

2.7.1.1. In the event the equipment, items and/or material are inspected and determined to be hazardous, but still a useful product, and if necessary, decontaminated, the equipment/item may be shipped from the operating facility to the final APPROVED destination. In addition to the proper shipping documentation, a "Certification of Equipment/Material Inspection/Decontamination" form is prepared and sent with the items being shipped (see Appendix A).

2.7.1.2. Investment Recovery assists in developing options for local sale and/or salvage of materials determined to be non-hazardous. They are also tasked with determining the cost effectiveness of returning materials to a company facility or other designated locations. Every attempt should be made to sell or salvage the material from the point of origin. Any such transfer or sale should be documented on a "Certification of Equipment/Material Inspection/Decontamination" and, if applicable, a disclosure letter or "Surplus Useful Product Sale Agreement".

2.7.1.3. If it is not possible or not cost effective to decontaminate the equipment the operating facility, in consultation with Environmental Services, may dispose of it as a hazardous waste in accordance with appropriate laws and regulations.

2.7.1.4. When outside contractors are hired to remove equipment that has hazardous waste or material contamination, Environmental Services will provide guidance in developing specifications to assure proper handling and disposal. Generally, contractors should be required to dispose of hazardous wastes/materials as a part of the project, dependent upon contractual agreements.

Appendix A
Page 1 of 1

CERTIFICATION OF EQUIPMENT/MATERIAL INSPECTION/DECONTAMINATION

REGION:_____ FACILITY:_____

SOLD OR TRANSFERRED TO: BUSINESS:_____

NAME: _____

ADDRESS:_____

EQUIPMENT OR MATERIAL DESCRIPTION:_____

_____

_____

A. EQUIPMENT OR MATERIAL INSPECTED AND FOUND NOT TO BE CONTAMINATED. (Circle all that apply)

1. No free-flowing liquid hazardous material present.
2. One inch or less of solid hazardous material residue present. No extremely hazardous solid material present.
3. For vessels or tanks, gas-scope reading is less than one-tenth of the LEL.
4. For equipment or material that has an asbestos-containing or coal tar coating, the coating is not "friable"; that is, it does not easily crumble or pulverize during handling. (Attached are the Forensic Analytical Reports provided by the Engineering Analysis Center to determine asbestos content.)

B. EQUIPMENT DECONTAMINATED

1. Copy of contractor's invoice for decontamination attached. Yes [ ] No [ ]
2. Describe decontamination process_____

_____

_____

C. REMARKS_____

_____

Supervisor's Signature _____ Date_____ ■

SUMMARY OF DOCUMENT CHANGES & FILING INSTRUCTIONS	
Brief: Overall specifications in document updated to include current requirements.	
Circulation Code	**Filing Instructions**
EP	File numerically behind Tab K - General

sum-2—12/11/02

DOCUMENT PROFILE SUMMARY NOTE: Do not make any changes to this table. Data in this table is automatically posted during publication.	
Primary Document Number:	104.0155
Shared Document Number:	G8737
Document Title:	Management of Contaminated Equipment and Material
Document Type:	SHRD
Category (FCD Only):	System Instruction
Document Status:	Active
If Merged, Merged to:	
Last Revision Date:	10/16/2003
Prior SoCalGas Numbers:	104.32
Prior SDG&E Numbers:	
Company:	SoCalGas/SDG&E
Referenced Documents: SoCalGas: **Referenced Documents: SDGE:**	104.085; 104.087; 104.089; 104.05 G8724; G8725; G8726
Part of SoCalGas O&M Plan (reviewed annually):	No
Part of SDG&E O&M Plan (reviewed annually):	No
O&M Plan CFR49 Code(s)	
SDG&E Misc. CFR49 Code(s):	
Contains OP QUAL Covered Task:	No
Incoming Materials Inspection Required (MSP only):	
Contact Person:	Pat Canney

sum-3—10/03

Southern California Gas Company
A Sempra Energy utility

ENVIRONMENTAL STANDARD

SDGE
A Sempra Energy utility

HAZARDOUS MATERIALS BUSINESS PLAN	SOCALGAS: 104.0145 SDG&E: G8735

PURPOSE **Facilities handling specified quantities of hazardous materials must have a Hazardous Materials Business Plan (HMBP) on site. The plan assists in preventing the release, or the threatened release, of a hazardous material and minimizes any potential harm or damage to human health or the environment. The HMBP includes but is not limited to Owner/Operator Information, Chemical Inventory, Facility Map(s), Emergency Response/Contingency Plan, etc.**

1. SUBJECT FACILITIES

1.1. All facilities must complete a HMBP that handle any individual hazardous material or mixture containing a hazardous material which has a quantity at any time during the reporting year equal to or greater than:

1.1.1. Total volume of 55 gallons of liquid or

1.1.2. Total weight of 500 lbs. for solids or

1.1.3. 200 cubic feet of a compressed gas or

1.1.4. A carcinogen or reproductive toxin in any amount or (Check with your local CUPA)

1.1.5. A hazardous compressed gas in any amount. (Check with your local CUPA)

NOTE: A hazardous material includes, but is not limited to, a hazardous substance, hazardous waste, and any materials which would, if released into the workplace or the environment, pose a threat to human health, safety or harm the environment.

1.2. The plan must also incorporate hazardous materials/wastes and operation's activities for all remote sites (field locations) from which hazardous wastes are generated.

2. REMOTE SITES

2.1. A remote facility is one that is unstaffed and located in an isolated, secured, sparsely populated area. These sites must post warning signs for hazardous materials pursuant to the California Fire Code (i.e. NFPA) but are conditionally exempt from the full business plan and inventory if the type and quantities of materials on-site does not exceed one or more of the following:

2.1.1. 500 cubic feet of compressed inert gases (asphyxiation and pressure hazards), or

2.1.2. 500 gallons of combustible liquids used as a fuel source (odorant, pipeline liquids, diesel fuel), or

2.1.3. 200 gallons of corrosive liquids used as electrolytes in closed containers (batteries), or

2.1.4. 500 gallons of lubricating and hydraulic fluids, or

2.1.5. 1,200 gallons of flammable gas used as a fuel source (propane).

2.1.6. A one-time notification and inventory must be provided to the local agency along with a processing fee. The local agency may still require an unstaffed remote site to submit a business plan if they find that special circumstances warrant it.

2.1.7. The local agency also has the authority to grant an exemption that provides relief from all or part of the HMBP requirements. The facility must be able to demonstrate that the exemption would not pose a significant hazard to human health, safety or the environment, and would not impair emergency response.

NOTE: Check with your local agency for all specific requirements.

3. BUSINESS PLAN ELEMENTS

3.1. The local administering agency provides businesses within its jurisdiction with HMBP forms, preparation instructions, and a date by which and with whom the plan must be submitted. At a minimum, the plan is required to include the following:

3.1.1. Business Activities (Form)

3.1.2. Business Owner/Operator Identification

3.1.3. Facility Contacts/Emergency Contact Personnel including
Names, addresses and 24-hour telephone numbers of the coordinator(s) and/or personnel qualified to act as back-up emergency contacts.

3.1.4. Hazardous Materials Inventory (Chemical Inventory)

3.1.5. Hazardous Wastes Generated

3.1.6. Complete a separate line item or page for each separate hazardous material. Required forms may be different depending upon the local agency requirements. Check with your local agency.

3.1.7. Facility Map(s) - A site map (public document) and Storage Map (confidential document) must be included in your HMBP. Check with your local agency for specific requirements.

3.1.8. Emergency Response/Contingency Plan

3.1.8.1. This site-specific plan is the facility's plan for dealing with emergencies and shall be implemented immediately whenever there is a fire, explosion, or release of hazardous materials that could threaten human health and/or the environment.

3.1.8.2. The plan must describe any arrangements agreed to with local police, fire departments, hospitals, contractors, and/or state or local emergency response teams to coordinate emergency services. Additionally, a copy of the plan may need to be submitted to those parties agreeing to the special arrangements. See your local HMBP instructions for further clarification.

3.1.8.3. The plan must include an evacuation plan for facility personnel. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, alternative evacuation routes and predetermined safe meeting locations.

3.1.8.4. The plan must also include the current telephone numbers of the State Office of Emergency Services and local emergency contacts.

3.1.9. Employee Training Plan

3.1.9.1. All facilities that handle hazardous materials must have a written employee-training plan. To satisfy this requirement, you may either prepare a general statement regarding training provided to employees or include information from the training Environmental Standard **104.0001 /G8704** *Environmental Training* into the HMBP.

3.1.9.2. Facility personnel must be trained on all components of the HMBP, using training materials developed by **Environmental Services**, as well as the site-specific facility plan.

3.1.10. Record keeping

3.1.10.1. All facilities that handle hazardous materials must maintain records associated with their management. Records will differ depending on the facility's operations. A HMBP may be required by the local agency. See local record keeping requirements for further clarification.

3.1.11. Additional Elements

3.1.11.1. Depending upon the nature of storing/handling of hazardous materials at your facility, additional information may be required to be submitted as Appendices to the HMBP. Examples include (not all facilities have all of these items):

- UST Forms, Monitoring and Response Plan see Environmental Standard **104.0160 /G8740,** *Underground Storage Tanks.*
- California Accidental Release Prevention (CalARP) Program Registration Form.
- Toxic Gas Registration Form.
- Storm Water Pollution Prevention Plan (SWPPP) Environmental Standard **104.0200 /G8713**, *Stormwater – State General Industrial Permit.*
- Spill Prevention, Control and Countermeasure Plan (SPCC) see Environmental Standard **104.0003 /G8733**, *Spill Prevention Control & Countermeasure Plans (SPCC).*

NOTE: Check with your local agency (CUPA) for complete requirements.

4. PLAN IMPLEMENTATION

4.1. The provisions of the HMBP shall be carried out immediately whenever there is a fire, explosion or release of hazardous materials, which could threaten human health or the environment.

4.1.1. External Notification if the emergency coordinator (or other designated personnel) determines that an incident could threaten human health or the environment, the emergency coordinator (or other designated personnel) must contact the following agencies:

4.1.1.1. Office of Emergency Services (800) 852-7550.

4.1.1.2. Appropriate local agencies (e.g. fire, police, city or county environmental/health departments, air pollution control district). (911)

4.1.1.3. Other emergency response teams that may be called upon to provide emergency services.

4.2. The notification must include the following:

4.2.1. Name and telephone number of the person reporting the incident.

4.2.2. Name and address of the facility (identify if the release is at a remote facility).

4.2.3. Time and type of incident.

4.2.4. Name and quantity of the materials released, to the extent known.

4.2.5. The extent of any injuries.

4.2.6. Potential hazards to human health or environment outside the facility.

NOTE: For Spill Notification Requirements, Refer to Environmental Standard **104.02 /G8741**, *Notification Requirements For Spill Events.*

4.3. Internal Notification: Notification must also be given to the Southern California Gas Company **Message Center** at (800) 325-4070, or the SDG&E Trouble Department at 619-239-7511. In the event the spill exceeds a Reportable Quantity, also notify Corporate Center at 619-696-2476.

5. RESUMPTION OF FACILITY OPERATIONS

5.1. In the event the incident causes operations to cease the following must be met prior to resuming operation.

5.1.1. All wastes must be contained, treated, stored, or disposed properly.

5.1.2. Actions are taken to clean up the spill area, clean-up equipment is decontaminated and all required emergency equipment is replenished. Please refer to the attached- *Quarterly Spill Response Inspection Log* for details.

5.1.3. CalEPA Department of Toxic Substances Control (DTSC) and/or the appropriate agencies (i.e. those agencies involved in the initial incident notification and response) must be notified that the clean up is complete and the affected area(s) of the facility are ready to resume operation.

6. FOLLOW-UP REPORTING

6.1. Within 15 days after the incident, the owner or operator must submit a written report regarding the incident to the CalEPA DTSC. The report must include the following information:

6.1.1. Name, address, and telephone number of the owner or operator

6.1.2. Name, address, and telephone number of the facility

6.1.3. Date, time, and type of incident (e.g. fire, explosion)

6.1.4. Name and quantity of material(s) involved

6.1.5. The extent of injuries, if any

6.1.6. An assessment of actual or potential hazards to human health or the environment, where this is applicable

6.1.7. Estimated quantity and disposition of recovered material that resulted from the incident

6.1.8. Cause of the incident

6.1.9. Actions taken in response to the incident

6.1.10. Administrative or Engineering Controls designed to prevent such incidents in the future.

7. PLAN SUBMITTAL AND RECORDKEEPING

7.1. A current and complete HMBP must be available at the facility for personnel or agency personnel at all times.

7.2. A copy of the HMBP must be submitted to the local agency and any other required institutions by the locally mandated date.

7.3. Facilities located on leased or rented property shall notify the property owner or owner's agent in writing, that the facility is subject to the HMBP requirements and has complied with those provisions. A copy of the plan must be provided to the owner or owner's agent within 5 working days after receiving request.

8. PLAN REVIEW FREQUENCY AND UPDATES

8.1. The local agency will send out annual HMBP renewal packets, if there are no changes to the current HMBP then the packet is certified by the Responsible Official or **Environmental Representative** designated for that facility and resubmitted per local requirements. The HMBP must be revised and the revisions submitted to the local agency within 30 days of any of the following occurrences:

8.1.1. A 100% or more increase in quantity of a previously disclosed material.

8.1.2. Handling of a reportable quantity of a previously undisclosed hazardous material.

8.1.3. Change of business address, ownership or name.

8.1.4. The plan fails in an emergency.

8.1.5. The facility operations or design changes in a way that materially increases the potential for releases or incidents to occur.

8.1.6. The list of emergency coordinators changes, or

8.1.7. The list of emergency equipment changes. – *Spill Response Equipment Inspection Log* is included in this Environmental Standard.

HAZARDOUS MATERIALS BUSINESS PLAN	SOCALGAS: 104.0145 SDG&E: G8735

QUARTERLY SPILL RESPONSE EQUIPMENT INSPECTION LOG			
EQUIPMENT	**OPERATIONAL**		**COMMENTS/ACTION TAKEN**
	YES	**NO**	
PROTECTIVE CLOTHING			
1. GLOVES			
A. AVAILABLE			
B. PINHOLES OR LEAKS			
C. TEARS OR CRACKS			
D. DISCOLORATION			
E. SEAMS INTACT			
2. GOGGLES/ SAFETY GLASSES			
A. STRAPS INTACT			
B. LENS CRACKED			
3. DISPOSABLE COVERALLS			
A. SUITS AVAILABLE			
B. APPROPRIATE SIZES			
CLEANUP/DECONTAMINATION			
1. 55 GALLON UN SPEC DRUMS			
A. RUSTED			
B. HOLES			
C. EMPTY			
2. ABSORBENT			
A. DRY			
B. ADEQUATE SUPPLY			
C. PLASTIC BAGS			
3. BROOMS			
4. SHOVELS			
ADDITIONAL EQUIPMENT (OPTIONAL)			

INSPECTED BY: _____ DATE _____

RETAIN FOR ONE YEAR

SUMMARY OF DOCUMENT CHANGES & FILING INSTRUCTIONS	
Brief: Overall specifications in document updated to include current requirements and contact name changed.	
Circulation Code	**Filing Instructions**
EP	File behind Tab K - General
EMGM	File numerically behind Emergency Planning Company Tab

DOCUMENT PROFILE SUMMARY NOTE: Do not make any changes to this table. Data in this table is automatically posted during publication.	
Primary Document Number:	104.0145
Shared Document Number:	G8735
Document Title:	Hazardous Materials Business Plan
Document Type:	SHRD
Category (FCD Only):	System Instruction
Document Status:	Active
If Merged, Merged to:	
Last Revision Date:	11/3/2003
Prior SoCalGas Numbers:	104.27, 104.0025 (1004.0502)
Prior SDG&E Numbers:	
Company:	SoCalGas/SDG&E
Referenced Documents: SoCalGas: **Referenced Documents: SDGE:**	104.0160; 104.0200; 104.0003; 104.0001; 104.02 G8740; G8713; G8733; G8704; G8741
Part of SoCalGas O&M Plan (reviewed annually):	No
Part of SDG&E O&M Plan (reviewed annually):	No
O&M Plan CFR49 Code(s)	
SDG&E Misc. CFR49 Code(s):	
Contains OP QUAL Covered Task:	No
Incoming Materials Inspection Required (MSP only):	
Contact Person:	Pat Canney

sum-3—10/03

MANUAL

WATER QUALITY CONSTRUCTION BEST MANAGEMENT PRACTICES MANUAL

Prepared for:

Sempra Energy Utilities
101 Ash Street
San Diego, CA 92101-3017

URS Project No. 27644947.03B00

December 2002

This page intentionally left blank.

Table of Contents

Tables

Appendices

This page intentionally left blank.

BMP PROGRAM OVERVIEW

Water Quality Construction BMP Manual

The purpose of this Manual is to provide standardized best management practices (BMPs) to reduce or eliminate pollutants in runoff from Sempra Energy Utilities[1] (SEU) construction projects for water quality protection. This Manual applies to projects conducted by San Diego Gas and Electric Company (SDG&E), Southern California Gas Company (SCG) (hereon known as Utilities or Utility), and their contractors. The utilities service area encompasses 23,000 square miles of diverse terrain throughout most of Central and Southern California, from Visalia to the Mexican border. Utility projects within the service area are conducted in more than 530 communities and in over 200 municipal jurisdictions. Many of these projects throughout the service area are subject to a variety of National Pollutant Discharge Elimination System (NPDES) permits.

Because of the breadth of jurisdictions and applicable permits that apply to utility projects, this Manual has been developed to provide a consistent approach to water quality management to be applied by the utilities and their contractors throughout their service areas. Most construction projects performed by the utilities and their contractors are linear pipeline or electric installations, which are usually short term, fast moving, and are low impact on narrow corridor sections of land. Many of the BMPs presented in this Manual have used the best and most practical pollution prevention features from several sources such as State of California and Caltrans BMPs that integrate well into our unique utility construction activities.

This Manual is organized into three main sections: BMP Program Overview; BMP Selection and Implementation; and BMP Details. The BMP Details section is divided into four functional BMP categories, 1-Sediment Controls, 2-Waste and Materials Management Controls, 3-Non-Storm Water Discharge Controls and 4-Erosion Control and Soil Stabilization. Within each of these categories, specific information, including "When" and "How" to implement the BMP, plus Maintenance and Inspection information are provided for each BMP. Pictures and diagrams are also provided on several BMPs for easy reference.[2]

The Manual is a tool designed to assist with the identification of BMPs appropriate for use on a specific site or project. The Manual provides guidance to SEU in their support for water quality goals and meeting regulatory requirements. The BMP selection process provides users with guidance for typical BMPs that may apply to standard SEU construction projects. During BMP selection, the users of this Manual should take into account the benefits and limitations of each of the BMPs considered in the context of the site conditions. Finally, BMP success is contingent not only on appropriate design and implementation, but on the coordination and communication between the designers, engineers, and the field construction teams.

Utility Type Projects

Most Utility projects are very different from commercial or residential developments, building sites, and Caltrans projects. Utility projects are smaller, short term, long and thin, impacting narrow corridors of land. Utility projects are constantly moving or progressing along the route

[1] Sempra Energy Utilities is composed of San Diego Gas & Electric Company and Southern California Gas Company.
[2] Photographs provided in this Manual have been obtained from URS Corp., Great Circle Int'l, LLC, and Caltrans.

and thus have minimal exposure of soil or transportable materials to storm water at any one time. Often, utility projects are in the Right-of–Ways of streets or along utility corridors that must be maintained to ensure safe access to electric and gas lines. BMPs usually are only in place for a few days or even hours. Therefore, BMPs will typically be implemented just prior to a forecasted storm event.

BMP Field Guide

The BMP Field Guide is a separate document developed from the Water Quality BMP Manual that contains the condensed BMPs and supporting information. The Field Guide was designed to be a "pocket sized" reference to the BMP Manual. The primary audience for the Field Guide is the SEU Construction and Maintenance crews who perform operations and activities within the utility service territory.

Training Program

The importance of training and of integrating the elements of employee and contractor training for pollution prevention controls into a comprehensive training program is part of the Utilities overall Water Quality Pollution Prevention Program. All applicable company employees and contractors hired by the company have the responsibility to comply with environmental laws, rules, and regulations. Training for the prevention of environmental related incidents is conducted for applicable employees who perform any operation or activity that has the potential to cause a pollutant to be released into the environment. Records are maintained as to when employees have received this training and instruction. Verification of contractor training should also be obtained.

Applicable employees should know and contact their local Environmental Representatives for support and guidance on any aspects of the Training Program.

BMP SELECTION AND IMPLEMENTATION

General Protocol

To select BMPs that are appropriate for a given project, the following steps should be followed:

Step 1 – Identify Activities, Pollutants and Issues of Concern
Step 2 – Evaluate Site Conditions and Select BMPs
Step 3 – Implement, Monitor, and Maintain the BMPs

Step 1 – Identify Activities, Pollutants, and Issues of Concern

The first step in BMP selection is to identify the project activities, the potential pollutants of concern and the local issues of concern. Project activities may include saw cutting, trenching, excavation, stockpiling of soil, grading and grubbing, access road maintenance, paving, or other activities with the potential to impact storm water and non-storm water discharges. Pollutants of concern may include sediment; petroleum products such as fuel, oil, and grease from vehicle and equipment operation; paving materials such as concrete and asphalt components; other materials used or stored on site, such as pesticides, herbicides, fertilizer, detergents, paint, adhesives, and solvents; and project wastes such as litter, debris, hazardous wastes, and liquid wastes. The local issues of concern may include:

- Proximity to sensitive receiving waters (environmentally sensitive areas or Clean Water Act Section 303(d) listed water bodies, examples: Santa Monica Bay, San Diego Bay).
- Local regulatory requirements influencing BMP selection, or timing of BMP implementation.

Step 2 – Evaluate Site Conditions and Select BMPs

To assist in BMP selection, this Water Quality Construction BMP Manual presents BMPs that are anticipated to be most applicable to utility construction projects. Utility projects are unique in that they are typically very short-term and fast moving, have minimal exposure of soil or transportable materials at any one time to storm water. The selector should consider any project-specific requirements or factors such as BMP effectiveness, cost, availability, feasibility, and suitability for the site. For example, important site conditions to consider include the amount of soil disturbance, anticipated weather conditions, soil type and erodibility, flow path length, and slope of exposed soil. Selected BMPs can and should be modified to suit the scope of the project and site conditions. Table 1 presents guidelines for BMP selection and implementation at a construction site. Table 2 presents a BMP selection worksheet for utility activities. These implementation guidelines and selection worksheet can be used to select BMPs for a specific project. Finally, a selector may discover a better BMP for their situation not listed in Tables 1 or 2. Environmental Services encourages creative and practical pollution prevention techniques. These new techniques can be shared with others to support the water quality goals of the region.

Step 3 – Implement, Monitor, and Maintain the BMP System

It is important that selected BMPs be implemented in a sequence that maximizes protection of water quality, be monitored regularly for effectiveness and be maintained as necessary throughout the project. Most BMPs will only be implemented when needed, and/or when a storm

event is forecasted or occurs. Table 1 presents a suggested schedule for BMP implementation and sequencing. Steps in this schedule should be reviewed for each project as applicable. All BMPs should be monitored and inspected regularly and particularly before, and after rain events. BMPs should be maintained during a project in accordance with the procedures outlined in the BMP Details Section.

BMP Installation Contractors

This Water Quality Construction BMP Manual identifies some utility activities and operations that may require outside contractors to install the applicable BMPs. However, the utility crews will implement most BMPs. Most types of BMP materials are readily available from local suppliers.

BMP SELECTION AND IMPLEMENTATION

Table 1
BMP SELECTION AND SEQUENCING GUIDE

Step No.	Description	What to Do	BMP Options
1.	Before Construction	Before construction, evaluate, mark, and protect important trees and associated rooting zones, unique areas (e.g., wetlands), and other areas to be preserved, especially in perimeter areas.	4-01, other user-defined BMPs
2.	Site Access Areas (construction entrances, roadways equipment parking areas)	Stabilize site entrances and access roads if applicable prior to earthwork.	1-07, other user-defined BMPs
3.	Storm Drain Inlet Protection	Install inlet protection at down-gradient inlets that project runoff/tracking might impact.	1-06, other user-defined BMPs
4.	Perimeter Sediment Control	Install perimeter sediment controls (silt fence, fiber rolls, etc.) as applicable prior to land disturbing activities. Install additional runoff control measures during construction as needed.	1-02, 1-03, 1-04, 1-05, other user-defined BMPs
5.	Material and Waste Storage Areas	Prepare staging areas, material storage and disposal areas as applicable. Grade to reduce run-on and runoff, install perimeter controls, obtain clean-up materials, plastic covers for stockpiles, etc. prior to storing materials on site.	2-01 through 2-08, 1-08, other user-defined BMPs
6.	Earthwork (trenching, excavation, grading, surface roughening, grubbing)	Begin excavation, trenching, or grading after installing applicable sediment and runoff control measures. Install additional control measures as work progresses as needed.	through 1-09, other user-defined BMPs
7.	Surface Stabilization (temporary and permanent seeding, mulching)	Apply temporary or permanent soil stabilization measures as applicable on all disturbed areas where work is delayed or completed.	4-01 through 4-08, other user-defined BMPs
8.	Construction and Paving (install utilities, buildings, paving)	Implement applicable control practices as work takes place.	3-01 through 3-10, other user-defined BMPs
9.	Final Stabilization and Landscaping	Stabilize open areas as applicable. Remove temporary control measures and install final stabilization controls appropriately (topsoil, trees and shrubs, permanent seeding, mulching, sodding, riprap)	3-07, 4-03, 4-04, other user-defined BMPs

BMP SELECTION AND IMPLEMENTATION

Table 2
BMP SELECTION WORKSHEET FOR UTILITY ACTIVITIES

Sempra Energy Utility BMP No.	BMP Options	Construction				Maint. And Repair				
		Potholing	Overhead Electric	Underground Electric	Underground Gas	Gen. Maint. and Repair	Inspect and Repair	Tree Trimming	Veg. Control	Insulator Washing
Section 1 Sediment Controls										
Choose from one or more of the following BMP options when applicable:										
BMP-1-01	Scheduling									
BMP-1-02	Silt Fence									
BMP-1-03	Fiber Rolls									
BMP-1-04	Gravel Bag Berm									
BMP-1-05	Sand bag Barrier									
BMP-1-06	Storm Drain Inlet Protection									
BMP-1-07	Tracking Controls									
BMP-1-08	Stockpile Management									
Other-User Defined	BMP Description:									
Section 2 Waste Management and Material Controls										
Choose from one or more of the following BMP options when applicable:										
BMP-2-01	Material Delivery and Storage									
BMP-2-02	Material Use									
BMP-2-03	Spill Control									
BMP-2-04	Solid Waste Management									
BMP-2-05	Hazardous Materials/Waste Management									
BMP-2-06	Contaminated Soil Management									
BMP-2-07	Sanitary/Septic Waste Management									
BMP-2-08	Liquid Waste Management									
Other-User Defined	BMP Description:									
Section 3 Non-Storm Water Discharge Controls										
Choose from one or more of the following BMP options when applicable:										
BMP-3-01	Dewatering Operations									
BMP-3-02	Paving Operations									

Table 2 (continued)
BMP SELECTION WORKSHEET FOR UTILITY ACTIVITIES

Sempra Energy Utility BMP No.	BMP Options	Construction				Maint. And Repair				
		Potholing	Overhead Electric	Underground Electric	Underground Gas	Gen. Maint. and Repair	Inspect and Repair	Tree Trimming	Veg. Control	Insulator Washing
Section 3 Non-Storm Water Discharge Controls (Continued)										
BMP-3-03	Vehicle and Equipment Washing									
BMP-3-04	Vehicle and Equipment Fueling									
BMP-3-05	Concrete/Coring/Sawcutting and Drilling Waste Management									
BMP-3-06	Dewatering Utility Substructures and Vaults									
BMP-3-07	Vegetation Management including Mechanical and Chemical Weed Control									
BMP-3-08	Over-Water Protection									
BMP-3-09	Removal of Utility Location/Mark-Out Paint									
Other-User Defined	BMP Description:									
Section 4 Erosion Control and Soil Stabilization										
Choose from one or more of the following BMP options when applicable:										
BMP-4-01	Preservation of Existing Vegetation									
BMP-4-02	Temporary Soil Stabilization									
BMP-4-03	Hydraulic Mulch									
BMP-4-04	Hydroseeding									
BMP-4-05	Soil Binders									
BMP-4-06	Straw Mulch									
BMP-4-07	Geotextiles, Plastic Covers and Erosion Control Blankets/Mats									
BMP-4-08	Dust (Wind Erosion) Control									
Other-User Defined	BMP Description:									

This page intentionally left blank.

BMP DETAILS

This Section provides details for the selection and implementation of BMPs for the most common utility construction activities. Once the BMP objectives are defined, it is necessary to identify the category or categories of BMPs that are best suited to meet each objective. A category is a grouping of BMPs related in how they prevent pollution. The four categories are:

- Section 1 – Sediment Controls
- Section 2 – Waste Management and Material Controls
- Section 3 – Non-Storm Water Discharge Controls
- Section 4 – Erosion Control and Soil Stabilization

This page intentionally left blank.

BMP DETAILS

Section 1 – Sediment Controls

Sediment particles (soil/dust) from utility activities can be transported to a different location by wind or water flow. Once these particles have become detached, they are considered a pollutant. Sediment Controls include any method that traps the soil particles after they have been detached and moved by wind or water. Sediment Controls are usually passive systems that rely on filtering or settling the particles out of the water or wind that is transporting them. The sediment that has accumulated by the BMPs can be disposed of as excess soil on the construction site. Sediment Controls presented in this Manual include the following:

- BMP 1-01 Scheduling
- BMP 1-02 Silt Fence
- BMP 1 03 Fiber Rolls
- BMP 1-04 Gravel Bag Berm
- BMP 1-05 Sand bag Barrier
- BMP 1-06 Storm Drain Inlet Protection
- BMP 1-07 Tracking Controls
- BMP 1-08 Stockpile Management

This page intentionally left blank.

When

Scheduling must be considered for applicable projects year-round.

How

Use the following measures as applicable:

- Consider scheduling major soil disturbing activities or activities near environmentally sensitive areas (e.g., adjacent to water bodies) during the non-rainy season.
- Monitor the weather forecast for seasonable and unseasonable rain events. Weather information is available from the following sources:
  - San Diego: www.wrh.noaa.gov/sandiego/index.shtml or (619) 289-1212
  - Los Angeles/Oxnard: www.nwsla.noaa.gov or (805) 988-6610
  - AccuWeather: www.accuweather.com
- Always be prepared to deploy erosion and sediment control and soil stabilization BMPs. Off site sediment discharges can occur during the non-rainy season because of unseasonable rainfall, wind, non-storm water discharges, and vehicle tracking and must be prevented.

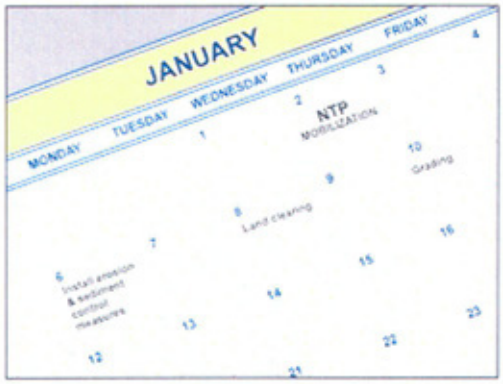
PLUS, DURING THE RAINY SEASON (October 1–May 1, Desert regions differ August 1- May 30)

- Sequence work to minimize soil-disturbing activities during forecasted rain events.
- Limit disturbed soil area to the amount of acreage that can be protected prior to a forecasted rain event.
- Stabilize disturbed soil areas as soon as practical, and, at a minimum, prior to a forecasted rain event.
- Protect environmentally sensitive areas, such as drainage channels, streams, and natural watercourses.
- When rainfall is forecast, adjust the construction schedule to implement soil stabilization and sediment controls on all disturbed areas prior to the onset of rain.

Maintenance and Inspection

- Review applicable scheduling and sequencing of construction activities throughout the project to minimize the amount or time that soil is exposed and the total area of exposed soil.
- Inspect erosion and sediment controls prior and after each storm event, and routinely throughout the rainy season (to be consistent with all the other BMPs).

Pictures



When

Silt fences are temporary linear sediment barriers made of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences allow sediment to settle from runoff before water leaves the construction site.

Silt fences are placed:

- Below the toe of exposed and erodible slopes.
- Down-slope of exposed soil areas.
- Around temporary stockpiles.
- Along streams and channels.
- Along the perimeter of a project.

How

- Construct silt fences with a setback of at least 3 feet from the toe of a slope in areas suitable for temporary ponding or deposition of sediment. Where a 3-foot setback is not practicable, construct as far from the toe of the slope as practicable.
- Generally, silt fences shall be used in conjunction with soil stabilization source controls up slope to provide effective control, particularly for slopes adjacent to water bodies or Environmentally Sensitive Areas.
- Construct the length of each reach (length of fence) so that the change in base elevation along the reach does not exceed 1/3 the height of the barrier; each reach should not exceed 500 feet. The last 6 feet of the reach should be turned upslope.
- The maximum length of slope draining to the silt fence should be 200 ft or less.
- Excavate a trench to place the bottom of the silt fence into that is not wider or deeper than necessary.
- Key-in, or bury the bottom of silt fence fabric in trench and tamp into place. If it is not feasible to trench along the slope contour, use sand bags or backfilling to key in the bottom of the fabric.
- Install fence post at least 12 inches below grade on down slope side of trench.

- **Silt fences should not be considered for installation below slopes steeper than 1:1 (vertical : horizontal) or that contain a high number of rocks or loose dirt clods.**

Maintenance and Inspection

- Repair or replace split, torn, slumping, undercut or weathered fabric.
- Inspect silt fences prior and after each storm event, and routinely throughout the rainy season.
- Remove accumulated sediment when it reaches one third (1/3) of the barrier height. Removed sediment shall be incorporated in the project at appropriate locations or disposed of at an SCG/SDG&E-approved site
- Silt fences that are damaged and become unsuitable for the intended purpose shall be removed and disposed of and replaced with new silt fence barriers.
- Remove silt fence when no longer needed. Fill and compact post-holes and anchorage trench, remove sediment accumulation, and grade fence alignment to blend with adjacent ground.

Pictures

Silt fence installed at the toe of an erodible slope. Note use is combined with fiber rolls and serves as perimeter control.

When

A fiber roll consists of straw, flax or other similar materials that are rolled and bound into a tight roll that is generally placed on the face of slopes at regular intervals to intercept runoff, reduce flow velocity, release the runoff as sheet flow and provide the removal of sediment.

- May be used along the top, face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- Fiber rolls may be used as check dams.
- Fiber Rolls can also be used where flows are moderately concentrated, such as ditches, swales, and storm drain inlets (Storm Drain Inlet Protection to divert and/or detain flows.).
- Fiber rolls are appropriate for perimeter site control or along streams, channels, storm drain inlets, or around stockpiles to intercept sediment laden storm water and non-storm water runoff.

How

Installation

- Locate fiber rolls on level contours spaced 8 to 20 feet apart along the face of the slope.
- Its best to stake fiber rolls into a 2 to 4 inch deep trench.
- Drive stakes into fiber rolls at a minimum of 4-foot intervals
- If more then one fiber roll is placed in a row, fiber rolls should be butted together and not overlapped.

Removal

- If used on slopes, fiber rolls are typically left in place.
- If used as Storm Drain Inlet Protection, stockpile control, or other temporary control measures, the fiber rolls should be removed at the completion of the construction project.
- If fiber rolls are removed, collect and dispose of fiber roll and sediment accumulation as appropriate. Fill and compact holes, trenches, depressions, or any other ground disturbance to blend with adjacent ground.

Maintenance and Inspection

- Repair or replace spilt, torn, unraveling, or slumping fiber rolls.
- Inspect fiber rolls if rain is forecasted, perform maintenance as needed.
- Inspect fiber rolls prior and after each storm event, and routinely throughout the rainy season.

Pictures

Fiber rolls as perimeter control

Fiber roll installation on the face of a slope.

When

A gravel bag berm consists of a single row of gravel bags that are installed end-to-end to form a barrier across a slope to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide some sediment removal. Gravel bags can also be used where flows are moderately concentrated, such as ditches, swales, and storm drain inlets (Storm Drain Inlet Protection to divert and/or detain flows). Gravel bag berms are appropriate for perimeter site control or along streams, channels, storm drain inlets, or around stockpiles to intercept sediment laden storm water and non-storm water runoff. Use gravel bag berms:

- Where it is desirable to filter sediment in runoff. Note that gravel bag berms are generally more permeable than sand bags. Sand bag barriers should be used in cases where it is desirable to block and pond flows (e.g., for containment of non-storm water flows).
- Along the face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- On a project-by-project basis to maximize effectiveness.
- Gravel bags may be implemented with other BMPs to maximize sediment containment.

How

- When used as a linear control for sediment removal:
  - Install along a level contour.
  - Turn ends of gravel bag row up slope to prevent flow around the ends.
  - Generally, gravel bag barriers are used in conjunction with temporary soil stabilization controls up slope to provide effective control.
- When used for concentrated flows:
  - Stack gravel bags to required height. When the height requires 3 rows or more, use a pyramid approach.
  - Upper rows of gravel bags shall overlap joints in lower rows.
- Construct gravel bag barriers with a setback of at least 3 feet from the toe of a slope. Where a 3-foot setback is not practicable, construct as far from the toe of the slope as practicable.

Maintenance and Inspection

- Inspect gravel bag berms prior and after each storm event, and routinely throughout the rainy season.
- Reshape or replace gravel bags as needed.
- Repair washouts or other damages as needed.
- Inspect gravel bag berms for sediment accumulations and remove sediments when accumulation reaches one-third of the berm height. Removed sediment shall be incorporated in the project at appropriate locations or disposed of at an SCG/SDG&E-approved site.
- Remove gravel bag berms when no longer needed. Remove sediment accumulation, and clean, re-grade, and stabilize the area. Removed sediment shall be incorporated in the project at appropriate locations or disposed of at an SCG/SDG&E-approved site.

Pictures

Gravel bags and fiber rolls used as a perimeter sediment control system.

Gravel bags used as perimeter control.

When

A sand bag barrier is a temporary linear sediment barrier consisting of stacked sand bags, designed to intercept and slow sediment-laden storm water and non-storm water runoff. Sand bag barriers allow sediment to settle from runoff before water leaves the construction site.

- Sand bags can be used where flows are moderately concentrated, such as ditches, swales, and storm drain inlets to divert and/or detain flows. See BMP on Storm Drain Inlet Protection.
- To divert or direct flow away from disturbed slopes or create a temporary sediment basin.
- During construction activities in streambeds when the contributing drainage area is 1 to 5 acres.
- To capture and detain non-storm water flows until proper cleaning operations occur.
- When site conditions or construction sequencing require adjustments or relocation of the barrier to meet changing field conditions and needs during construction.
- To temporarily close or continue broken, damaged or incomplete curbs.

Sand bag barriers are used:

- Where it is desirable to block and pond flow (e.g., for containment of non-storm water flows). Use caution when using sand bag barriers in traffic areas or other areas where potential flooding is not desirable.
- Along the perimeter of a site, vehicle and equipment fueling and maintenance areas, chemical storage areas, or stockpiles.
- Below the toe or down slope of exposed and erodible slopes.
- Parallel to streams, channels, and roadways.
- Across channels to serve as a barrier for utility trenches or provide a temporary channel crossing for construction equipment, or to reduce stream impacts.

How

- When used as a linear control for sediment removal:
  - Install along a level contour.
  - Turn ends of sand bag row up slope to prevent flow around the ends.
  - Generally, sand bag barriers shall be used in conjunction with temporary soil stabilization controls up slope to provide effective control.
- When used for concentrated flows:
  - Stack sand bags to required height. When the required height is three rows or more, use a pyramid approach. Upper rows of sand bags shall overlap joints in lower rows.
  - Construct sand bag barriers with a setback of at least 3 feet from the toe of a slope. Where a 3-foot setback is not practicable, construct as far from the toe of the slope as practicable.

Maintenance and Inspection

- Inspect sand bag barriers prior and after each storm event, and routinely throughout the rainy season.
- Repair washouts or other damages as needed, or as directed by the projects Environmental Representative.
- Inspect sand bag barriers for sediment accumulations and remove sediments when accumulation reaches one-third the barrier height.
- Remove sand bags when no longer needed. Remove sediment accumulation, and clean, re-grade, and stabilized the area. Incorporate removed sediment at appropriate project locations or dispose of at an SCG/SDG&E-approved site.

Pictures

Sand bags used as perimeter control.

When

A device used at storm drain inlets to protect against the discharge of sediment-laden storm water and non-storm water runoff from construction activities. The device develops a pond behind it giving the sediment time to settle out before discharge to the storm drain. Do not construct such that runoff will result in:

- Ponding into road traffic or onto erodible surfaces or slopes, or
- Overflowing onto the sidewalk

This BMP is required on all construction projects where sediment laden surface runoff may enter a storm drain inlet and watercourses.

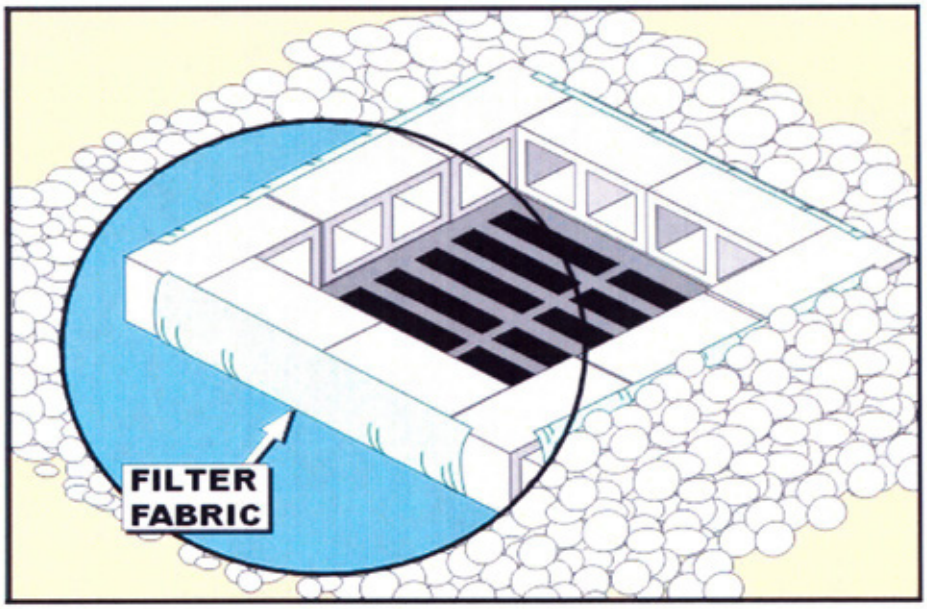
How

- Identify downstream storm drain inlets that have the potential to runoff from construction activities.
- Where a storm drain inlet is on or at the bottom of a slope, a series of small check dams (i.e., gravel bags) constructed at intervals along the slope may be required to slow the runoff.
- Select appropriate protection and construct inlet protection based on the configuration of inlets at the site.

Maintenance and Inspection

- Inspect inlet protection devices prior and after storm event, and routinely throughout the rainy season.
- Remove inlet protection devices at the end of the construction period, or when the inlet can no longer be impacted by the project.
- During inspections:
  - Inspect bags, silt fence, or filter fabric for holes, gashes, and snags.
  - Check gravel bags for proper arrangement and displacement; and
  - Remove the sediment behind the barrier when it reaches one-third the height of the barrier. Removed sediment should be incorporated in the project or disposed of at an approved Utility disposal site.

Pictures



Block and gravel-type inlet protection.

Inlet protection that blocks flow is good for preventing non-storm water discharges from entering the drain.

Pictures (continued)

Gravel bag inlet protection.

Inlet protection using fiber rolls and filter fabric.

When

Tracking controls reduce offsite tracking of sediment and other pollutants by providing a stabilized entrance at defined construction site entrances and exits and/or providing methods to clean-up sediment or other materials to prevent them from entering a storm drain by sweeping or vacuuming.

- Stabilize entrances should be implemented on a project-by-project basis in addition to other BMPs.
- Sweeping or vacuuming should be implemented when sediment is tracked from the project site onto public or private paved roads, typically at points of site exit.
- Use stabilized entrances and/or sweeping at construction sites:
  - where dirt or mud is tracked onto public roads
  - adjacent to water bodies
  - where poor soils are encountered, such as soils containing clay.
  - where dust is a problem during dry weather conditions.

How

Stabilized Construction Entrances

- Limit the points of entrance/exit to the construction site by designating combination or single purpose entrances and exits. Require all employees, subcontractors and others to use them. Limit speed of vehicles to control dust.
- Grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment-trapping device before discharge.
- Design stabilized entrance/exit to support heaviest vehicles and equipment that will use it.
- Select construction access stabilization (aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions.
- Use of constructed or constructed/manufactured steel plates with ribs for entrance/exit access is allowed.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 12 inches deep, or place aggregate to a depth recommended by a geotechnical engineer. A crushed aggregate greater than 3 inches but smaller than 6 inches shall be used.

Street Sweeping and Vacuuming

- Inspect potential sediment tracking locations routinely.
- Visible sediment tracking should be swept or vacuumed as needed. Manual sweeping is appropriate for small jobs.
- Manual sweeping is appropriate for small projects. For larger projects, it is preferred to use sweeping methods that collect removed sediment and material.

If not mixed with debris or trash, incorporate the removed sediment back into the project or depose of it at an approved disposal site.

Maintenance and Inspection

Stabilized Construction Entrance

- Inspect routinely for damage and assess effectiveness. Repair if access is clogged with sediment.
- Where tracking has occurred on roadways sweeping should be conducted the same day. Preferably water should not be used to wash sediment off the streets. If water is used, it should be captured preventing sediment-laden water from running off the site.
- Keep all temporary roadway ditches clear.

Street Sweeping and Vacuuming

Inspect inlet and outlet access points routinely and sweep tracked sediment as needed.

Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.

- After sweeping is finished, properly dispose of sweeper wastes.

Pictures

Manufactured metal plates knock dirt off vehicles before exiting a site.

When

Use this BMP when projects require stockpiled soil and paving materials. The stockpile management practices used differ based on forecasted weather or terrain.

- Protection of stockpiles must be implemented whenever there is a potential for transport of materials by a water source (forecast precipitation or any non-storm water runoff).

How

- One or more of the following options may be used to manage stockpiles and prevent stockpile erosion and sediment discharges for stormwater and non-storm water runoff/run-on.
  - Stockpile may be returned to the excavation if precipitation is forecast.
  - Protect stockpiles from stormwater run-on using a temporary perimeter sediment barrier such as berms, silt fences, fiber rolls, covers, sand/gravel bags, or straw bale barriers, as appropriate.
  - Stockpiles may be hauled off or temporarily stored in a protected location off site.
- Keep stockpiles organized and surrounding areas clean.
- Protect storm drain inlets, watercourses, and waterbodies from stockpiles, as appropriate.
- Implement dust control practices as appropriate on all stockpiled material.

- **Stockpiles should be covered, stabilized, or protected with a perimeter sediment barrier prior to the onset of precipitation.**

Maintenance and Inspection

Repair and/or replace covers, and perimeter containment structures as needed.

Pictures

Stockpile covered with plastic and secured with large rocks.

Silt fence used for stockpile perimeter control.

Section 2 – Waste Management and Material Controls

Federal, state and local laws, regulations, ordinances and permits prohibit the discharge of contaminated stormwater to storm drains and surface waters. Transport of sediment, and other pollutants, such as litter, paint, solvents, fuel, lubricants and demolition wastes, can be carried away from a construction site in stormwater. Therefore, BMPs are to be used for those construction activities that could cause pollution to ensure that pollutants are properly managed and are not discharged to storm drains and surface waters.

Waste Management and Materials Controls are source control BMPs that reduce or prevent contact between wastes and/or materials and storm water. Waste Management and Materials Controls presented in this Manual include the following:

- BMP 2-01 Material Delivery and Storage
- BMP 2-02 Material Use
- BMP 2-03 Spill Control
- BMP 2-04 Solid Waste Management
- BMP 2-05 Hazardous Materials/Waste Management
- BMP 2-06 Contaminated Soil Management
- BMP 2-07 Sanitary/Septic Waste Management
- BMP 2-08 Liquid Waste Management

This page intentionally left blank.

When

If it is necessary to store materials at a construction site. This BMP does not apply to materials and supplies stored on trucks that are driven on site and off site daily.

How

Use the following measures as appropriate:

- Only store the minimum amount of material that is needed for the job.
- Locate storage areas away from storm drain inlets, drainage systems, and watercourses to prevent storm water run-on from reaching the materials.
- If practical, store materials in enclosed storage containers such as cargo containers.
- Store materials on impervious surfaces or use plastic groundcovers to prevent any spills or leakage from contaminating the ground.
- For known hazardous materials, keep materials covered using plastic of other waterproof materials.
- If necessary provide secondary containment systems around material storage areas to prevent contaminated run-off/run-on from leaving storage area(s).
- Keep adequate supply of spill kit materials nearby.
- Ensure that qualified personnel are available when hazardous materials are delivered to ensure proper delivery and storage in designated area.
- When storage area is no longer needed, return it to original condition.
- Bagged materials such as cold patch, concrete mix, and other materials with the potential to pollute runoff should be placed on pallets and under cover.

Maintenance and Inspection

Repair or replace covers, containment structures, or perimeter controls as needed to ensure proper functioning. Perform routine inspections of designated delivery and storage areas.

Pictures

Materials are covered and neatly stored with a curbed area.

When

Apply this BMP when the following materials are used or prepared on site:

- Pesticides and herbicides.
- Fertilizers and soil amendments.
- Detergents.
- Petroleum products such as fuel, oil, and grease.
- Asphalt and other concrete components.
- Hazardous chemicals such as acids, lime, glues, adhesives, paints, solvents, and curing compounds.
- Mastic, pipe wrap, primers, and paint.
- Concrete compounds.
- Welding material.
- Other materials that may be detrimental if released to the environment.

How

- Reduce or eliminate use of hazardous materials on site when practical. Contact your Environmental Representative for additional information.
- Empty latex paint and paint cans, used brushes, paint rags, absorbent materials, and drop cloths. When these items are thoroughly dry and are no longer hazardous, may be disposed of with other construction debris.
- Do not remove the original product label; it contains important safety and disposal information. Use the entire product before disposing of the container.
- When possible, mix paint indoors, otherwise use secondary containment structures. Do not clean paintbrushes or rinse paint containers into a street, gutter, storm drain, sanitary sewer or watercourse.
- Dispose of any paint thinners, residue and sludge(s), that cannot be recycled, as hazardous waste. For water-based paint, clean brushes to the extent practical, and rinse into a concrete washout pit or temporary sediment trap. For oil-based paints, clean brushes to the extent practical and filter and reuse thinners and solvents.
- If possible, recycle residual paints, solvents, non-treated lumber, and other materials.

- **Do not over-apply fertilizers, pesticides, and soil amendments. Prepare only the amount needed. Strictly follow the recommended usage instructions.**
- Keep an ample supply of spill clean up material near use areas. Instruct employees in spill clean up procedures.
- Avoid exposing applied materials to rainfall unless sufficient time has been allowed for them to dry or cure.
- Hazardous materials use shall also be managed in accordance with the BMP on "Hazardous Materials/Waste Management."

Maintenance and Inspection

- Spot-check employees and contractors regularly throughout the job's duration to ensure appropriate practices are being employed.

When

This best management practice (BMP) applies to all construction sites at all times. Spill control procedures are implemented anytime chemicals and/or hazardous substances are stored. Substances may include, but are not limited to fuels, lubricants, solvents, fertilizers, pesticides, herbicides, soil binders, coolants, paints, and sewage.

To the extent that work can be accomplished safely, spills of materials or chemicals shall be contained and cleaned up immediately.

How

Stop the spillage of material if it can be done safely. Clean the contaminated area, and properly dispose of contaminated materials. For all spills notify the project foreman and/or the Environmental Representative. Use the following spill prevention and controls when applicable.

- To the extent that it doesn't compromise clean up activities, spills shall be covered and protected from storm water run-on during rainfall.
- Spills shall not be buried or diluted with wash water.
- Used clean up materials, contaminated materials, and recovered spill material shall be stored and disposed of in accordance with federal, state and local regulations Refer to BMP on "Hazardous Materials/Waste Management").
- Use absorbent materials on spills rather than using water to hose down the spill.
- When water is used for cleaning and decontamination of a spill, the water shall not be allowed to enter storm drain inlets or watercourses, and shall be collected and disposed of properly. Coordinate disposal of these wastes with the Environmental Representative.
- Keep spill cleanup kits in areas where any materials are used and stored.

Maintenance and Inspection

- Perform routine inspections to verify that spill control clean up materials are near material storage, unloading, and use areas.

When

These BMPs should be used on all construction projects that generate solid waste. Solid wastes may include, but are not limited to concrete, cement, asphalt rubble, masonry brick/block, vegetation debris, steel and scrap metals, pipe and electrical cuttings, non-hazardous equipment parts, Styrofoam, general trash and other materials used to transport and package construction materials.

How

- Practice good housekeeping and keep site clean.
- Use "dry" methods for site clean up such as sweeping, vacuuming and hand pick-up.
- Designate a waste storage area on site. If a designated waste storage area is not feasible, remove wastes from the site regularly.
- Prohibit littering by employees, contractors and visitors.
- Trash receptacles should be available on site and/or on construction vehicles.
- Protect wastes from being washed away by rainfall, storm water run-on, or other waters (irrigation, water line breaks, etc.).
- To prevent storm water run-on from contacting stored solid waste (stockpiled materials) use berms, secondary containment, covered dumpsters/roll-offs or other temporary diversion structure or measures.
- For materials with the potential for spills or leaks, stockpile on impervious surfaces or use plastic groundcovers to prevent spills or leaks from infiltrating the ground.
- Do not hose out or clean out dumpsters or containers at the construction site.
- Prevent solid waste and trash from entering and clogging storm drain inlets.
- As practical, incorporate any removed clean sediment and soil back into the project.
- Reference BMP on Stockpile Management.

Maintenance and Inspection

- Collect site trash regularly, especially before rainy or windy conditions.
- Perform routine inspections of site, including storage areas, dumpsters, stockpiles and other areas where trash and debris are collected.
- Close trashcan lids and dumpster covers before rainy or windy conditions.

When

Use this BMP when projects involve the storage and use of hazardous materials, and the generation of waste byproducts, from the following:

- Petroleum products such as oils, fuels, greases, cold mix, and tars
- Glues, adhesives, and solvents
- Herbicides, pesticides, and fertilizers
- Paints, stains, and curing compounds
- Other hazardous or toxic substances

How

Hazardous materials and wastes shall be managed in accordance with the following procedures:

- Minimize the amount of hazardous materials stored at the construction site and the production and generation of hazardous waste at the construction site.
- Cover or containerize and protect from vandalism any hazardous materials and wastes.
- Clearly mark all hazardous materials and wastes. Place hazardous waste containers in secondary containment systems if stored at the construction site.
- Stockpiled cold mix should be placed on and covered with plastic.
- Do not mix waste materials, because this complicates or inhibits disposal and recycling options and can result in dangerous chemical reactions.
- Storm water that collects within secondary containment structures must be inspected prior to being discharged to ensure no pollutants are present. Contaminated storm water must be managed per Utility Environmental Practices (EPs)
- Spills cannot be discharged from a secondary containment system. See BMP on Spill Control.
- Hazardous waste must be segregated from other solid waste and disposed of properly.
- In addition to following this BMP, employees or contractors are responsible for compliance with federal, state, and local laws regarding storage, handling, transportation, and disposal of hazardous waste.

Maintenance and Inspection

- Routinely inspect the covers on hazardous material storage areas for tears or flaws and repair as necessary.
- All secondary containment systems must be able to hold the volume of the largest container in the storage area, plus provide sufficient additional capacity for storm events.
- Perform routine inspections to ensure that no hazardous materials or waste are improperly left exposed to storm water.

When

This contaminated soil management BMP should be used whenever soil contamination is suspect or contaminated soil is encountered. Construction crews should be extra vigilant on projects located in highly urbanized or industrial areas where soil contamination may have occurred because of spills, illicit discharges, and leaks from underground storage tanks.

Contaminated soils may also be encountered during digging and trenching activities on highways and roadways.

How

Contaminated soil wastes should be managed in accordance with the following procedures:

- Identify contaminated soil; look for the following:
  - Soil that is discolored, black, gray, white; or
  - Soil that has an unusual odor, such as, petroleum, acid, alkaline, sewage, solvent, or any other chemical smell.
- If any potentially contaminated soil is detected, discontinue the activity and contact the projects Environmental Representative.
- Contaminated soils must be managed properly per Utility Environmental Practices (EPs).

Maintenance and Inspection

- Perform routine inspections of digging and trenching operations looking for contaminated soils.
- All contaminated soils must be managed as hazardous substances, if applicable, in accordance with applicable federal, state, and local laws.

When

Use this BMP on all construction sites that use temporary or portable sanitary/septic waste systems.

How

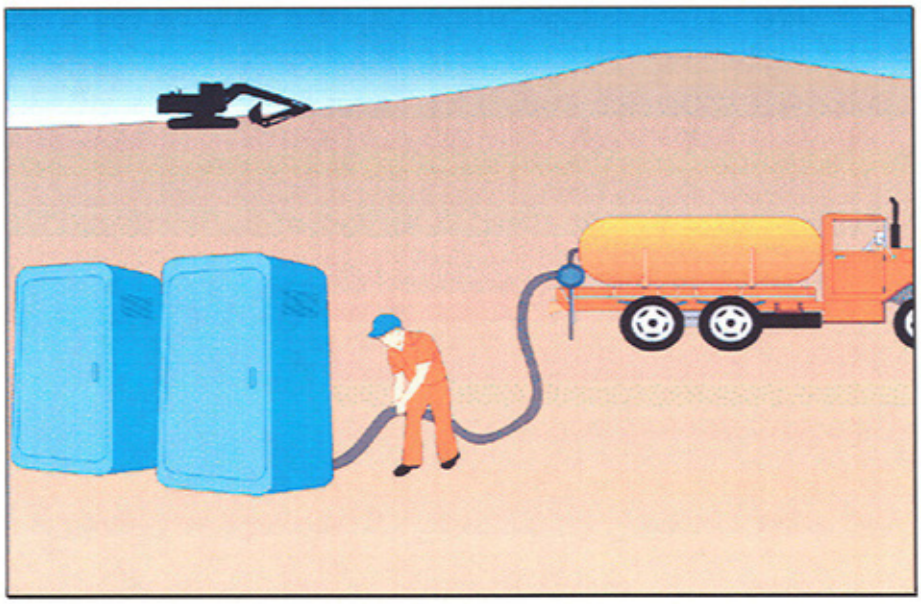
Sanitary/septic wastes shall be managed in accordance with the following procedures:

- Incorporate into regular safety meetings, education of employees, contractors, and suppliers on:
  - potential dangers to humans and the environment from sanitary/septic wastes
  - approved sanitary/septic waste storage and disposal procedures.
- Temporary sanitary facilities should be located away from drainage facilities, watercourses, and from traffic circulation. When subjected to high winds or risk of high winds, temporary sanitary facilities shall be secured to prevent overturning.
- Sanitary wastewater should not be buried or discharged, except to a properly permitted sanitary sewer discharge facility. A permit may be required from the local Sanitation District.
- Use only reputable, licensed sanitary/septic waste haulers.
- Temporary sanitary facility's holding tanks shall be emptied prior to transport.

Maintenance and Inspection

- Onsite sanitary/septic waste storage and disposal should be routinely inspected.
- Ensure that sanitary/septic facilities are maintained in good working order routinely serviced by a licensed service.

Pictures



Good septic waste management.

When

- Liquid waste management is applicable to construction projects that generate any of the following non-hazardous byproducts, residuals, or wastes, such as:
  - Drilling slurries and drilling fluids
  - Grease-free and oil-free wastewater and rinse water
  - Dredging spoils
  - Other non-storm water liquid discharges not permitted by separate permits.
- Separate BMPs should also be referenced for the following onsite liquid wastes:
  - Dewatering operations
  - Liquid hazardous wastes, or
  - Concrete slurry residue

How

- Vehicle and equipment cleaning using water is discouraged on site.
- Drilling residue and drilling fluids should be disposed of in accordance with Sempra Energy Utilities procedures at an approved disposal site. Coordinate the disposal of these wastes with your Environmental Representative.
- Wastes generated as part of an operational procedure, such as waterladen dredged material and drilling mud, should be contained and not allowed to flow into drainage channels or receiving waters.
- Contain non-hazardous liquid wastes in a controlled area, such as a lined holding pit, lined sediment basin, roll-off bin, or portable tank.
- Containment devices must be of sufficient quantity or volume to completely contain the liquid wastes generated and any addition volume based on anticipated rainfall.

- **Do not locate containment areas or devices where accidental release of the contained liquid can threaten health or safety, or discharge to watercourses, storm drain system, or to a receiving water.**
- Capture all liquid wastes running off a surface that has the potential to affect the storm drainage system. Examples are: wash water and rinse water from cleaning walls or pavement.
- If the liquid waste is sediment laden, use a sediment trap or capture in a containment device and allow sediment to settle.
- Disposal of liquid wastes are subject to specific laws and regulations, or to requirements of other permits secured for the construction project. Contact your Environmental Representative for further information.

Maintenance and Inspection

- Remove deposited solids from containment areas and containment systems as needed, and at the completion of the project.
- Inspect containment areas and containment systems routinely for damage, and repair as needed.

Section 3 – Non-Storm Water Discharge Controls

Non-Storm Water Discharge Controls include general site and operations BMP measures that minimize pollution of water. Non-Storm Water Discharge Controls presented in this Manual include the following:

- BMP 3-01 Dewatering Operations
- BMP 3-02 Paving Operations
- BMP 3-03 Vehicle and Equipment Washing
- BMP 3-04 Vehicle and Equipment Fueling
- BMP 3-05 Concrete/Coring/Sawcutting and Drilling Waste Management
- BMP 3-06 Dewatering Utility Substructures and Vaults
- BMP 3-07 Vegetation Management including Mechanical and Chemical Weed Control
- BMP 3-08 Over-Water Protection
- BMP 3-09 Removal of Underground Utility Location/Mark-Out Paint

This page intentionally left blank.

NON-STORM WATER DISCHARGE CONTROLS
Dewatering Operations

BMP 3-01

When

- This BMP is applicable to trench or excavation dewatering.
- Discharges of non-storm water from a trench or excavation that contain sediments or other pollutants to the sanitary sewer, storm drain systems, creek bed (even if dry), or receiving waters is prohibited. Water from dewatering activities is generally allowed to be discharged if the water does not contain any sediment or other pollutants. Verify with your local jurisdiction.
- Generally, non-contaminated discharges of non-storm water to lands (such as infiltration) are allowed. Some areas may require a permit or other regulatory approval. Verify with your local jurisdiction.

- **This BMP is not applicable to utility vault or sub-structure dewatering. For these applications, refer to the BMP on Dewatering Utility Substructures and Vaults.**
- **This BMP is not applicable if the water is known, or suspected to be, contaminated. Under these conditions, contact your Environmental Representative.**

How

Water generated by dewatering activities may be managed in accordance with the following procedures:

- Use water where possible for construction activities such as compaction and dust control. If used for these applications, ensure that the water will infiltrate and not run-off from the land to storm drain systems, to creek beds (even if dry) or to receiving waters.
- If allowed, infiltrate to an appropriate landscaped, vegetated or soil area. Note: Infiltration may be prohibited in accordance with local requirements. See "When" above.
- If water is to be discharged to land for infiltration:
  - The water may contain sediments, but must not be contaminated with other pollutants.
  - The water must not run-off from the land to storm drain systems, to creek beds (even if dry) or other surface waters.
  - Permission may be needed from the property owner on which the infiltration will occur.
- Water from dewatering, that contains only sediment, may be discharged if the sediment is allowed to settle out or the sediment is filtered out first. Alternatively, a vacuum truck may be used to remove the water and haul it to an authorized discharge location.
- If a permit is required, provide temporary onsite storage (Baker tanks, etc.) of water removed from trenches, excavations, etc., until a permit to discharge is obtained.
- If a permit is obtained for discharge to a storm water or sanitary sewer system, conduct all dewatering discharge activities in accordance with permit requirements.

Maintenance and Inspection

- Inspect pumps, hoses and all equipment before use. Monitor dewatering operations to ensure it does not cause offsite discharge or erosion.
- Inspect routinely, when applicable activities are under way.

When

Use this BMP for projects that involve pavement surfacing, resurfacing, removal, or patching applications of the following:

- Cold mix
- Asphalt
- Chip seal, seal coat, tack coat, slurry seal, or fog seal
- Portland cement concrete

For pavement grinding, sawcutting, coring or drilling, refer to BMP Concrete/Coring/ Sawcutting and Drilling Waste Management.

How

Use the following methods as applicable:

- Protect storm drain inlets near work and downgradient of the area to be paved.
- If onsite mixing is planned then an area must be designed for conducting the mixing. This area should be paved or made impervious (e.g., plastic or wood sheeting) and be located away from storm drain inlets or watercourses.
- Minimize overspray of tackifying emulsions or placement of other paving materials beyond the limits of the area to be paved.
- Use dry methods to clean equipment and conduct cleaning in accordance with the BMP on Vehicle and Equipment Washing.
- Material use and stockpiles to be managed in accordance with BMPs on material Use and Stockpile Management.
- Collect and remove all broken asphalt and concrete, recycle when feasible and dispose of materials in accordance with local, state, and federal requirements.

- **Do not apply asphalt, concrete paving, seal coat, tack coat, slurry seal or fog seal if rain is expected during the application or curing period.**
- **Avoid if possible, transferring, loading, or unloading paving materials near storm drain inlets or watercourses. If not possible, use BMP on Storm Drain Inlet Protection.**

Maintenance and Inspection

- Inspect and maintain equipment and machinery routinely to minimize leaks and drips.
- Inspect inlet protection measures routinely.

When

Use these procedures on all construction sites where vehicle and equipment cleaning is performed. Note that onsite vehicle and equipment washing is not typically performed on utility type construction projects and requires specific approval of a Utility Environmental Representative.

How

Use the following methods as applicable:

- Use "dry" cleaning methods such as wiping down, rather than water washing vehicles or equipment.
- Whenever possible washing should not be conducted at the construction site
- If onsite vehicle washing is authorized by the Environmental Representative, use the following general methods:
  - Vehicle and equipment washing must be located away from storm drain inlets, drainage systems, or watercourses.
  - Place sand bags or another type of berm around storm drain inlets and drainage systems to prevent wash water from entering a storm inlet, drainage system or watercourse.
  - Never discharge wash water to the storm drain system.
  - Use as little water as possible. High-pressure sprayers may use less water than a hose.
  - Use a positive shutoff valve to minimize water usage.

Maintenance and Inspection

Monitor employees and contractors through the duration of the construction project to ensure appropriate practices are being implemented.

When

Use this BMP for projects where onsite fueling of vehicles and equipment, including handheld equipment, is planned.

Vehicle and equipment fueling, except for handheld equipment, is typically not done on the construction site. Onsite fueling of vehicles and equipment may be planned if it is impractical to send vehicles and equipment off site for fueling.

Handheld equipment is treated separately from other equipment. Handheld equipment includes those smaller, manually operated pieces of equipment such as trenchers, mowers, chainsaws, generators, and other equipment that need fueling during regular daily operation.

How

Use the following measures as applicable:

Fueling Vehicles and Handheld Equipment

- If practical, fuel vehicles and equipment off site.
- Mobile fueling equipment is the preferred equipment used for onsite fueling.
- Fuel storage and fueling areas should be located away from storm drain inlets, drainage systems, and watercourses.
- All fueling will be conducted with the fueling operator in attendance at all times regardless if fuel nozzles are equipped with automatic shutoff features.
- Fuel tanks should not be "topped off."
- All fueling operators should have readily available spill containment and cleanup equipment and materials.
- Clean up any spills immediately and properly dispose of contaminated materials.
- Properly store and dispose of rags and absorbent material used to clean up any spilled fuel.
- Mobile fueling trucks and operators must have all necessary permits, licenses and training.

Maintenance and Inspection

- Check to ensure adequate supply of spill cleanup materials are available.
- Perform routine inspections of designated fueling areas.
- Report all spills immediately to the project Supervisor or the Environmental Representative

When

Projects where concrete and asphalt are used or where slurry or pavement/concrete wastes are generated by construction activities, including:

- Sawcutting
- Coring/drilling
- Grinding, re-paving or patching
- Encasing conduit in concrete
- Tower footings

For managing any concrete curing compounds, use the BMP on Hazardous Materials/Hazardous Waste Management. For managing paving operations, use BMP Paving Operations.

How

- Install storm drain protection at any down-gradient inlets that may be impacted by the activity. See the BMP on Storm Drain Inlet Protection.
- Minimize the amount of water used during coring/drilling or sawcutting. During wet coring or sawcutting, use shovel or wet vacuum to lift the slurry from the pavement. Additionally, if wet vacuuming is not adequate to capture wastewater from the activity, sand bag barriers or other containment should be used.
- If concrete residue remains after drying, the area should be swept up and residue removed to avoid contact with storm water or entering a storm drain or waterbody via the wind.

- **Do not wash residue or particulate matter into a storm drain inlet or watercourse.**
- The following options should be used for concrete truck chute and/or pump and hose washout:
  - If available, arrange to use an existing concrete washout station. Upon entering site, concrete truck drivers should be instructed about practices being used on site.
  - **Concrete Washouts:** Washout stations can be a plastic lined temporary pit or bermed areas designed with sufficient volume to completely contain all liquid and waste concrete materials plus enough capacity for rainwater. The designated area must be located away from storm drain inlets, or watercourses.
  - **Washout in Trench:** Manually rinsing the concrete truck chute into the trench itself.
  - **Bucket Washout:** Manually rinsing the chute into a wheelbarrow, plastic bucket or pail, and then empty the bucket into the concrete truck barrel or on top of the placed concrete.

Maintenance and Inspection

- Responsible personnel should ensure that all concrete truck drivers are instructed about project practices when the trucks arrive onsite.
- Clean out designated washout areas as needed or at a minimum when the washout is 75 percent full to maintain sufficient capacity throughout the project duration.
- Any designated onsite washout areas must be cleaned out and all debris removed upon project completion. Dispose of concrete waste according to the BMP on Solid Waste Management.
- Inspect routinely, when applicable activities are underway to ensure that concrete washout does not overflow.

When

This BMP is applicable to utility substructure (vault) dewatering. This BMP does not apply to trench, excavation or other general dewatering associated with construction activities.

How

The discharge of water from dewatering of vaults and substructures to the storm drain is allowed under an existing NPDES permit (General Permit CAG990002, Order No. 2001-11-DWQ). General requirements for discharge under this permit are listed below:

- All dewatering discharges conducted by utility crews, including contractors, shall follow the latest versions of SCG/SDG&E Environmental Practice (EP) on Vault and Substructure Dewatering.
- Discharges to land require prior approval from the landowner.
- If the water to be discharged conforms to the practices within the EP, the discharge is allowed.

- **During discharge, do not allow pollutants (e.g., sediment) to come in contact with the discharge. For example, if there is pre-existing soil in the path of the discharge (i.e., gutter), it must be swept up or avoided before discharging the substructure water.**

Maintenance and Inspection

- Implement applicable provisions of the Environmental Practice.
- Inspect pumps, hoses and equipment before use and routinely when applicable activities are underway.
- Observe dewatering activities to ensure they do not cause erosion or discharge of potential pollutants.

NON-STORM WATER DISCHARGE CONTROLS
Vegetation Management Including Mechanical and Chemical Weed Control

BMP 3-07

When

Use this BMP whenever vegetation control is used. Vegetation control may consist of manual or mechanical removal of vegetation and/or chemical treatment.

How

General Vegetation Management Procedures:

- Do not allow vegetation debris to enter storm drain inlets and watercourses.
- Identify drain inlets and watercourses, both upstream and downstream of the work site(s).
- Pre-plan the work to protect stormwater drainage systems and watercourses from discharge of potential pollutants, maintain equipment in good operating condition.
- Set up the work area to minimize the tracking of material by vehicles and equipment in or out of the work area.

Practice Good Housekeeping at the Work Site(s):

- Litter and debris should be collected and disposed of properly.
- Containers of liquids should be secured with lids until needed.
- Transport collected non-hazardous materials for proper disposal. If the material is a hazardous waste, follow the BMP on Hazardous Materials & Hazardous Waste Management. Contact your Environmental Representative.
- If a leak or spill occurs, protect drainage systems and watercourses from spilled material; follow the BMP on Storm Drain Inlet Protection.

Mechanical Weed Control Procedures

Mechanical weed control is the physical removal of weeds or unwanted vegetation growing around electric utility poles and electric distribution or transmission structures for fire control.

- **Do not stack or leave removed weeds or vegetation or other debris on or near drain inlets or in the storm water drainage system or watercourses.**
- **Do not fuel equipment next to drain inlets or place fuel or oil cans near or in watercourses, the storm drainage system or next to a drain inlet.**
- **Because of fire control requirements, do not leave cut vegetation around structures.**

Chemical Weed Control Procedures

This method of weed and vegetation control uses herbicides to eliminate and prevent weed growth. The purpose is to control vegetation growth year-round as needed for effective fire control.

To achieve effective vegetation control through chemical means and protect the environment, application personnel should:

- Use the correct herbicide for the application.
- Consider the seasonal timing of the application as applicable.
- **Do not use chemical vegetation control prior to a forecasted rain event.**

The applicators shall follow the following procedures:

- Only use those herbicides approved by SDG&E/SCG.
- Application of herbicides must conform to the SDG&E/SCG herbicide application protocol in addition to any Contractor owned protocols and label instructions. Contact your Environmental Representative for additional information.

How (continued)

- Apply pesticides only as specified on the "Pesticide Use Recommendation" on the label. The pesticide label is considered the law, and use of an herbicide inconsistent with the label is considered a violation. Follow safety and application methods as specified in the Annual Pesticide Safety Training.
- Follow the herbicide/pesticide application protocol when near storm water drainage system or watercourses.
- Calibrate the spray rig as needed, to ensure accurate application of herbicides.
- Record the use of all herbicides.
- Avoid using overhead irrigation for as long as recommended by the chemical manufacturer after applying pesticides or post-emergents.
- Avoid applying post-emergents prior to a predicted rain event.

Maintenance and Inspection

- Ensure that spraying equipment is maintained to prevent malfunctions.
- Inspect to confirm that mechanical and chemical weed control procedures have not created an erosion problem.

When

Prior to conducting over water activities, confirm the need for permits with appropriate local and state agencies.

This BMP applies to projects where:

- Construction, maintenance or repair activities will be conducted above surface waters. These activities include, but are not limited to, chipping, grinding, scraping, welding/burning, painting, wrapping and coating of pipes and conduits.
- Surface waters (dry or running) include creeks, streams, rivers, lakes and wetlands, bays, estuaries and oceans.

How

Use the following measures as applicable:

- Containment systems must be properly designed and installed prior to the beginning of any operation that may impact a water body to prevent discharge of pollutants to surface waters.
- The work area should be kept clean of all trash and potential pollutants.
- Containment booms should be placed around the area of work as necessary to contain the discharge of potential contaminants such as oil and hydraulic fluid.
- Special attention should be given to existing and forecasted wind and weather conditions to prevent pollutant discharges to surface waters.
- Shrouds should be used to prevent paint overspray, welding slag, and other pollutants from entering surface waters and being dispersed into the air. Shrouding may not be effective during periods of high wind.
- Shrouds should be large enough to adequately enclose or segregate the working area from surface waters. This may include a plywood barrier, visqueen, and scaffolding to help prevent fugitive material from entering surface waters.
- Support structures such as scaffolding shall be used in conjunction with shrouding to withstand potential wind stress.
- Contaminated shrouding material and equipment shall be thoroughly cleaned or disposed of properly.

Maintenance and Inspection

- Inspect the containment systems and shrouds routinely during work activities to ensure their integrity.

When

Use this BMP when utility projects involve mark-out by painting surfaces where underground utilities are located and where paint is required to be removed by local jurisdictions or another authority.

How

Use the following methods and options to remove Utility Mark-Out Paint:

- Use non-toxic, light degradable mark-out paint when possible
- Hydro Pressure wash
- Dry abrasive blast/grinding
- Wet abrasive blast/grinding
- Wet/Dry Vacuum
- Dry Sweep
- Install storm drain inlet protection at adjacent down gradient inlets during wet hydro pressure washing and wet abrasive blasting and grinding.
- Minimize the amount of water used during hydro washing.
- Use shovel or wet vacuum to lift the paint slurry from the pavement or surface.
- If wet vacuuming is not adequate to capture all wastewater from these activities, use additional containment (sand bags, booms, or other containment devices) methods near the work area to prevent the discharge to a storm drain inlet or watercourse.
- If paint residue remains after drying, the area should be swept up and residue removed to avoid contact with storm water.
- If paint residue remains after sweeping, the area can be water washed, as long as the water containing the paint residue is not allowed to enter storm drain inlets or watercourses.
- All waste should be disposed of using the BMPs for Liquid Waste Disposal.

Maintenance and Inspection

- Inspect all containment systems to ensure proper placement prior to starting utility paint removal operations
- Inspect and adjust equipment frequently; and maximize efficiency of the paint removal operations.

Section 4 – Erosion Control and Soil Stabilization

Erosion is the detachment of soil by water or wind. Erosion is a natural process that can be accelerated by construction activities such as grading and trenching. For example, when a site is cleared and grubbed, protective vegetation is removed and the disturbed soil is directly exposed to wind and water. Erosion Controls protect the soil surface and prevent the soil particles from being detached by rainfall or wind. Preservation of Existing Vegetation is an example of an Erosion Control BMP.

Soil Stabilization is a form of erosion control. It protects the exposed soil surface from rain and wind thereby preventing erosion. Hydroseeding is an example of a Soil Stabilization BMP. Erosion Control and Soil Stabilization BMPs in this Manual include:

- BMP 4-01 Preservation of Existing Vegetation
- BMP 4-02 Temporary Soil Stabilization (General)
- BMP 4-03 Hydraulic Mulch
- BMP 4-04 Hydroseeding
- BMP 4-05 Soil Binders
- BMP 4-06 Straw Mulch
- BMP 4-07 Geotextiles, Plastic Covers and Erosion Control Blankets/Mats
- BMP 4-08 Dust (Wind Erosion) Control

This page intentionally left blank.

When

This BMP is applicable to projects when:

- There are areas on site where no construction activity is planned or will occur later.
- Identify areas to be preserved in the immediate vicinity of the construction site, and mark as appropriate before clearing and grubbing or other soil disturbance activities begin.
- Areas with vegetation that can be preserved to protect against soil erosion, such as on steep slopes, watercourses, and building sites in wooded areas.
- Areas designated as Environmentally Sensitive Areas (ESAs), or where federal, state, or local government regulations require preservation, such as wetlands, vernal pools, marshes, etc. These areas are typically flagged by a qualified biologist.

How

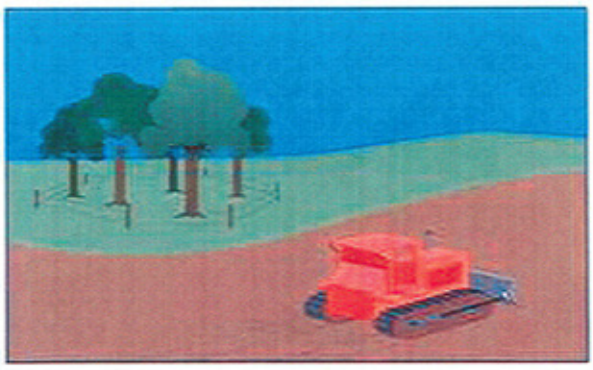
Use the following measures as applicable:

- Preserve existing vegetation whenever possible.
- If necessary, contact the project Environmental Representative for any clarification regarding areas to be preserved.
- Whenever possible minimize disturbed areas by locating temporary roadways to avoid stands of trees and shrubs and follow existing contours to reduce cutting and filling.
- Construction materials, equipment storage and parking areas should be located outside the drip line of any tree to be retained.
- Consider the impact of grade changes to existing vegetation and the root zone.
- Remove any markings, barriers, or fencing after project is completed.

Maintenance and Inspection

- Maintain the clearly marked limits of disturbance during construction as appropriate to preserve vegetation.
- Inspect barriers regularly during construction.

Pictures



Vegetation to be preserved is marked and outside the work area.

When

This BMP is applicable to major projects when steep slopes are disturbed.

- For surface protection methods to prepare or protect the soil surface from the combined erosive effects of wind, rain, and storm water runoff.
- On slopes where the soil has been exposed because of construction activities, one or more Soil Stabilization BMPs may be required to be implemented.

How

- Use one or more of the below temporary soil stabilization practices when applicable as described above:
  - Hydraulic Mulch.
  - Hydro seeding.
  - Soil Binders.
  - Straw Mulch.
  - Geotextiles, Plastic Covers and Erosion Control Blankets/Mats.
- Implement prior to the onset of precipitation.
- Implement BMPs such as fiber rolls or gravel bag berms to break up the slope lengths as follows:
  - On steep slopes, BMPs should be placed on slopes 100 feet and greater at intervals no greater than 50 feet.
  - On very steep slopes, BMPs should be placed on slopes 50 feet and greater at intervals no greater than 25 feet.
- Permanent erosion control shall be applied to areas deemed substantially complete during the project's defined seeding window.
- Refer to individual Soil Stabilization BMPs for specific instructions for use.

Maintenance and Inspection

- Refer to individual temporary soil stabilization BMPs for maintenance and inspection requirements.

Pictures

Applying a tackifier using a trailer mounted pump and hose.

Applying soil stabilization manually in harder to reach areas.

When

- Hydraulic mulch is typically applied to disturbed areas requiring temporary protection until permanent vegetation is established or disturbed areas that must be re-disturbed following an extended period of inactivity.
- Avoid use in areas where the mulch would be incompatible with immediate earthwork activities and would have to be removed.

How

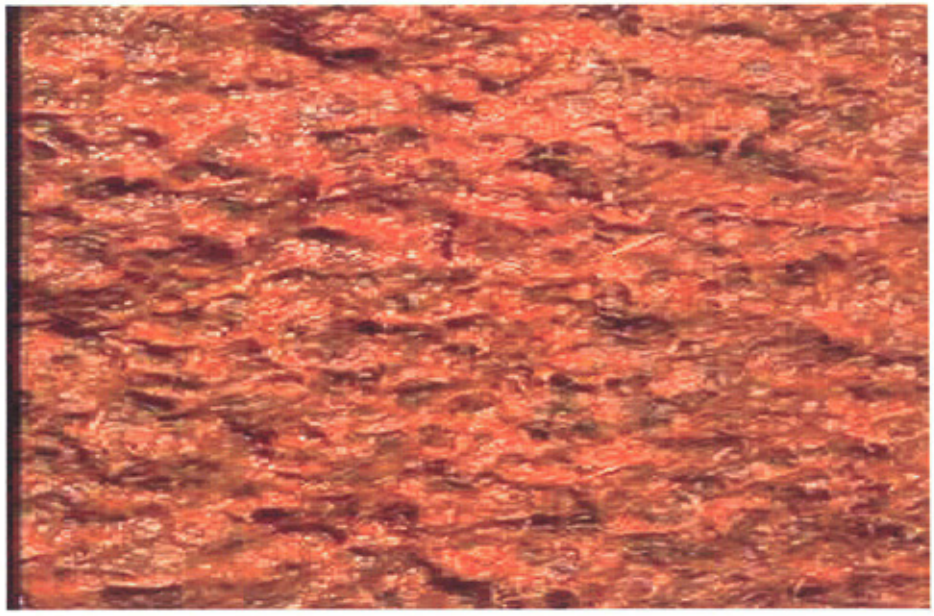
- Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking. Track walking shall only be used where other methods are impractical.
- Avoid mulch over-spray onto the traveled way, sidewalks, lined drainage channels, and existing vegetation.
- Hydraulic Mulches:
  - Apply as a liquid slurry using a hydraulic application machine (i.e., hydroseeder) at rates of mulch and stabilizing emulsion recommended by the manufacturer. Wood fiber hydraulic mulches are generally short-lived (only last a part of a growing season) and must be applied 24 hrs before rainfall to dry and become effective.
- Hydraulic Matrices:
  - Apply a combination of wood fiber and/or paper fiber mixed with acrylic polymers as binders. Apply as a liquid slurry using a hydraulic application machine (i.e., hydroseeder) at rates recommended by the manufacturer. Hydraulic matrices must be applied 24 hours before rainfall to dry and become effective.
- Bonded Fiber Matrix (BFM)
  - Apply BFM using a hydraulic application machine (mulch and tackifier are pre-mixed in a single bag) in accordance with manufacturers instructions. Do not apply immediately before, during, or after a rainfall.

Maintenance and Inspection

- Maintain an unbroken, temporary mulched ground cover throughout the period of construction when the soils are not being reworked. Inspect before expected rainstorms and repair any damaged ground cover and re-mulch exposed areas of bare soil.
- After any rainfall event, maintain all slopes to prevent erosion.

Pictures

Applying hydraulic mulch.



Close-up of bonded fiber matrix

When

Hydroseeding typically consists of applying a mixture of fiber, seed, fertilizer, and stabilizing emulsion with hydro-mulch equipment, which temporarily protects disturbed soil areas from erosion. It is applied on:

- Disturbed Soil Areas (DSAs) requiring temporary protection until permanent vegetation is established, or
- DSAs that must be redisturbed following an extended period of inactivity.

How

- Avoid use of hydroseeding in areas where the best management practice (BMP) would be incompatible with future earthwork activities and would have to be removed such as:
  - Steep slopes are difficult to protect with temporary seeding.
  - Temporary seeding may not be appropriate in dry periods without supplemental irrigation.
  - Temporary vegetation may have to be removed before permanent vegetation is applied.
  - Temporary vegetation is not appropriate for short-term inactivity.
- Hydroseeding can be accomplished using a multiple-step (with straw mulch) or a one-step process (mixed with hydraulic mulch, hydraulic matrix, or bonded fiber matrix). When the one-step process is used to apply the mixture of fiber, seed, etc., the seed rate shall be increased to compensate for all seed not having direct contact with the soil.
- Prior to application, roughen the slope, fill area, or area to be seeded with the furrows trending along the contours.
- Apply a straw mulch as necessary to keep seeds in place and to moderate soil moisture and temperature until the seeds germinate and grow.
- Follow-up applications shall be made as needed to cover weak spots, and to maintain adequate soil protection.
- Avoid over-spray onto the travel way, sidewalks, drainage channels and existing vegetation.

Maintenance and Inspection

- All seeded areas shall be inspected for failures and re-seeded, fertilized, and mulched within the planting season, using not less than half the original application rates. Any temporary revegetation efforts that do not provide adequate cover must be revegetated.
- After any rainfall event, maintain all slopes to prevent erosion.

Pictures

Applying hydroseed.

When

Soil binders are typically applied to disturbed soil areas requiring short-term temporary protection. Because soil binders can often be incorporated into the work, they may be a good choice for areas where grading activities will soon resume.

How

- Selection of soil binders should be approved by the projects Environmental Representative after an evaluation of site-specific factors. Binders have the following limitations:
  - Soil binders generally experience spot failures during heavy rainfall and may need reapplication after a storm and do not hold up to pedestrian or vehicular traffic.
  - Soil binders may not penetrate soil surfaces made up primarily of silt and clay, particularly when compacted.
  - Some soil binders may not perform well with low relative humidity. Under rainy conditions, some agents may become slippery or leach out of the soil.
  - May not cure if low temperatures occur within 24 hours of application.
- Follow manufacturer's recommendations for application procedures and cleaning of equipment after use. Any onsite cleaning must use appropriate BMPs for pollution prevention plans.
- Prior to application, roughen embankment and fill areas. Track walking shall only be used where rolling is impractical.
- Soil binders should not be applied during or immediately before rainfall, as they require a minimum curing time of 24 hours before they are fully effective.

- Avoid over-spray onto the traveled way, sidewalks, lined drainage channels, sound walls, and existing vegetation.
- **Do not apply soil binders to frozen soil, areas with standing water, under freezing conditions, or when the temperature is below 4°C (40°F) during the curing period.**
- More than one treatment is often necessary, although the second treatment may be diluted or have a lower application rate.
- For liquid agents:
  - Crown or slope ground to avoid ponding.
  - Uniformly pre-wet ground according to manufacturer's recommendations.
  - Apply solution under pressure. Overlap solution 150 to 300 mm (6 to 12 in).
  - Allow treated area to cure for the time recommended by the manufacturer; typically, at least 24 hours.
  - Apply second treatment before first treatment becomes ineffective, using 50 percent application rate.
  - In low humidities, reactivate chemicals by re-wetting according to manufacturer's recommendations.

Maintenance and Inspection

- Reapplying the selected soil binder may be needed for proper maintenance. Traffic areas should be inspected routinely.
- After any rainfall event, maintain all slopes to prevent erosion.

When

Straw mulch is used when:

- Temporary soil stabilization surface cover is needed on disturbed areas until soils can be prepared for re-vegetation and permanent vegetation is established.
- In combination with temporary and/or permanent seeding strategies to enhance plant establishment.
- Note, there is a potential for introduction of weed-seed and unwanted plant material with straw.

How

- A tackifier is the preferred method for anchoring straw mulch to the soil on slopes. Tackifiers act to glue the straw fibers together and to the soil surface, and the tackifier shall be selected based on longevity and ability to hold the fibers in place. Soil binders (tackifier) will generally experience spot failures during heavy rainfall events.
- A tackifier is typically applied at a rate of 125 pounds per acre. In windy conditions, the rates are typically 150 pounds per acre.
- Crimping, punch roller-type rollers, or track-walking may also be used to incorporate straw mulch into the soil on slopes. Track walking shall only be used where other methods are impractical.
- Avoid placing straw onto the traveled way, sidewalks, lined drainage channels, sound walls, and existing vegetation.
- Straw mulch with tackifier shall not be applied during or immediately before rainfall.
- Apply loose straw at a minimum rate of 4,000 pounds per acre, either by machine using a straw blower or by hand distribution.
- The straw mulch must be evenly distributed on the soil surface.
- Anchor the mulch in place by using a tackifier or by "punching" it into the soil mechanically. "Punching" of straw does not work in sandy soils.
- Methods for holding the straw mulch in place depend on the slope steepness, accessibility, soil conditions and longevity. If the selected method is incorporation of straw mulch into the soil, then do as follows:
  - On small areas, a spade or shovel can be used.
  - On slopes with soils, which are stable enough, and of sufficient gradient to safely support construction equipment without contributing to compaction and instability problems, straw can be "punched" into the ground using a knife-blade roller or a straight bladed coulter, known commercially as a "crimper."
  - On small areas and/or steep slopes, straw can also be held in place using plastic netting or jute. The netting shall be held in place using 11 gauge wire staples, geotextile pins or wooden stakes (as described in BMP on "Geotextiles, Plastic Covers and Erosion Control Blankets/Mats").
- Remove straw as necessary prior to permanent seeding or soil stabilization.

Maintenance and Inspection

- The key consideration in maintenance and inspection is that the straw needs to last long enough to achieve erosion control objectives.
- Reapplication of straw mulch and tackifier may be required to maintain effective soil stabilization over disturbed areas and slopes.
- After any rainfall event, maintain all slopes to prevent erosion.

Pictures

Straw mulch.

When

- The following methods are used when disturbed soils may be particularly difficult to stabilize or access, including the following situations:
  - Steep slopes, generally steeper than 1:3 (V:H).
  - Slopes where the erosion hazard is high.
  - Slopes and disturbed soils where mulch must be anchored.
  - Disturbed areas where plants are slow to develop adequate protective cover.
  - Channels with high flows.
  - Channels intended to be vegetated.
  - Slopes adjacent to water bodies of Environmentally Sensitive Areas (ESAs).
- Blankets and mats are generally not suitable for excessively rocky sites, or areas where the final vegetation will be mowed (because staples and netting can catch in mowers).
- Plastic results in 100 percent runoff, therefore, their use is limited to:
  - Covering stockpiles.
  - Covering small graded areas for short periods, such as through an imminent storm event, until alternative measures may be installed.

How

- Proper site preparation is essential to ensure complete contact of the blanket or matting with the soil.
- Grade and shape the area of installation.
- Remove all rocks, clods, vegetation or other obstructions so that the installed blankets or mats will have complete, direct contact with the soil.
- Prepare seedbed by loosening of topsoil.
- Seed the area before blanket installation for erosion control and revegetation. Seeding after mat installation is often specified for turf reinforcement application. When seeding prior to blanket installation, all check slots and other areas disturbed during installation must be re-seeded. Where soil filling is specified, seed the matting and the entire disturbed area after installation and prior to filling the mat with soil.
- U-shaped wire staples, metal geotextile stake pins or triangular wooden stakes can be used to anchor mats and blankets to the ground surface.
- Wire staples and metal stakes should be driven flush to the soil surface.
- All anchors should be 6 in to 18 in long and have sufficient ground penetration to resist pullout. Longer anchors may be required for loose soils.
- Installation on slopes – Consult the manufacturer's recommendations for installation. In general, these will be as follows:
  - Begin at the top of the slope and anchor the blanket in a 6 in deep by 6 in wide trench. Backfill trench and tamp earth firmly.
  - Unroll blanket downslope in the direction of water flow.
  - Overlap the edges of adjacent parallel rolls 2 in to 3 in and staple every 3 ft.
  - When blankets must be spliced, place blankets end over end (shingle style) with 6 in overlap. Staple through overlapped area, approximately 12 in apart.
  - Lay blankets loosely and maintain direct contact with the soil. Do not stretch.
  - Staple blankets sufficiently to anchor blanket and maintain contact with the soil. Staples shall be placed down the center and staggered with the staples placed along the edges.
- Blankets and mats must be removed and disposed of prior to application of permanent soil stabilization measures.

Maintenance and Inspection

- Areas treated with temporary soil stabilization should be inspected routinely and before and after significant forecasted storm events. Any failures should be repaired immediately. Areas treated with temporary soil stabilization should be maintained to provide adequate erosion control. Temporary soil stabilization should be reapplied or replaced on exposed soils when greater than 10 percent of the previously treated area becomes exposed or exhibits visible erosion.
- If washout or breakage occurs, re-install the material after repairing the damage to the slope or channel.

Pictures

Several types of Erosion Control Blankets.

When

This practice is implemented on exposed soils or materials subject to wind erosion.

How

Use the following measures as applicable:

- Water applied for dust control should be applied evenly and in a manner that does not generate runoff.
- Appropriate methods of applying dust control (covers or water and the means to apply it) should be available for projects with the potential to create dust.
- Dust control must be implemented in accordance with local air quality requirements.
- Dust control methods should be approved by an Environmental Representative.
- Obtain prior approval to use any chemical dust suppressant from the projects Environmental Representative.

(dry or running)

- Non-potable water should not be conveyed in tanks or drainpipes that will be used to convey potable water and there should be no connection between potable and nonpotable supplies. Non-potable tanks, pipes and other conveyances should be marked **"NON-POTABLE WATER – DO NOT DRINK."**
- If reclaimed wastewater is used for dust control, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board (RWQCB) requirements. Approval for use of reclaimed wastewater must be obtained from the projects Environmental Representative.

Maintenance and Inspection

- Check areas protected to ensure coverage.
- Reapply water or maintain covers, as necessary to maintain their effectiveness.

Pictures

Water being applied for dust control.

This page intentionally left blank.

APPENDIX A DEFINITIONS AND ACRONYMS

BMP	Best Management Practice
BASE	Construction and Operations Center (The Gas Company)
C&O Center	Construction and Operations Center (SDG&E)
Caltrans	California Department of Transportation
Discharger	Any person who discharges waste that could affect the quality of California waters.
DSA	Disturbed Soil Area
EP	Environmental Practice
FCD	Formal Communication Document
Non-rainy Season	May 1 to October 1, except for Southern California Desert Area where the non-rainy season ends August 1.
Rainy Season	October 1 through May 1, except for Southern California Desert Area where the rainy season starts on August 1.
RWQCB	Regional Water Quality Control Boards (RWQCB) – nine Water Boards located throughout California that are responsible for enforcing water quality standards within their boundaries.
Runoff	Rainfall or snow melt that is not absorbed by soil, evaporated, or transpired by plants, but finds its way into streams as surface flow.
ROW	Right of Way
SCG	Southern California Gas Company (The Gas Company)
SDG&E	San Diego Gas and Electric Company
SWRCB	State Water Resources Control Board (SWRCB) – The State Board responsible for protecting and preserving water quality and water rights in California.
SEU	Sempra Energy Utilities
SWPPP	Storm Water Pollution Prevention Plan
Watershed	The total land area that contributes water to a river, stream, lake, or other body of water. Synonymous with drainage area, drainage basin.

APPENDIX A DEFINITIONS AND ACRONYMS

This page intentionally left blank.