

August 10, 2026

A. 24-11-005

Moraga-Oakland X 115 kV Rebuild Project

Notice to Proceed (NTP)-1

Mitigation Measure (MM) HH-1a: *Prepare and Implement a Soil Management Plan*

This memo transmits information to fulfill pre-construction requirements within the Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) of the Moraga-Oakland X 115 kV Rebuild Project (A. 24-11-005) for the California Public Utilities Commission (CPUC)'s review and approval of Pacific Gas and Electric Company (PG&E) compliance with Mitigation Measure (MM) HH-1a, *Prepare and Implement a Soil Management Plan*. This Construction Soil Management Plan (plan) supports the request for Notice to Proceed (NTP)-1.

In the unlikely event that unanticipated contaminated soil is encountered, this memo provides the Soil Management Plan for implementation. Based upon a review of information available of the State Water Resource Control Board's (SWRCB) GeoTracker and Department of Toxic Substances Control (DTSC) Envirostor online databases; contaminated soil is not anticipated to be encountered at the NTP-1 work areas excavation or soil disturbance. Refer to page 373 of the *Environmental Impact Report for the PG&E Moraga-Oakland X 115 Kilovolt Rebuild Project* (EIR).

The objective of the Soil Management Plan will be achieved by implementing relevant procedures from PG&E's *Safety and Health Tailboard Topic: Working in Soil That May Be Contaminated* (Attachment A) and from PG&E's *Activity Specific Erosion and Sediment Control Plan* (A-ESCP) (Attachment B). The text of MM HH-1a is followed by a discussion of how this Soil Management Plan meets the requirements of MM HH-1a.

MM HH-1a. Prepare and Implement a Soil Management Plan.

A Soil Management Plan shall be developed and implemented for construction of the proposed Project. The objective of the Soil Management Plan is to provide procedures PG&E shall undertake in the event unanticipated contaminated soil is encountered.

The Soil Management Plan shall also include requirements for documenting and reporting incidents of encountered contaminants, such as documenting locations of occurrence, sampling results, and reporting actions taken to dispose of contaminated materials.

The Soil Management Plan shall be submitted to the CPUC 30 days prior to the start of construction for review and approval.

The Soil Management Plan shall provide detailed processes for the following:

- *Procedures for when unanticipated contaminated soil is encountered.*
- *Reporting and notification for contaminated soil.*
- *Description of soil testing, which shall include the collection of shallow soil samples and analyses for contamination to verify presence or absence of unknown soil contamination and the collection of soil samples at locations at and near areas of known contamination.*
- *Procedures and protocols for safe storage, stockpiling, and disposal of any contaminated soils.*
- *If contaminants are encountered, PG&E shall notify all schools, daycare facilities, elderly housing, and residences within 250 feet of the contaminated soil within 24 hours of discovery and immediately remove the contaminated soil.*

Unanticipated Contaminated Soil Procedure, Reporting, and Notification

During excavation at the two locations with no known contamination, crews will use visual screening for unanticipated contaminated soil. Spoils that are not useable and/or are identified as contaminated through appearance would be tested to characterize before appropriate transportation to a licensed landfill facility (EIR at page 2-37). If, during excavation, any soils exhibit contamination (chemical/petroleum odor, discoloration, or oily appearance) or contain visible hazardous materials

(paint, lampblack, metal waste, or slag), work will cease at that location when safe to do so. The crew will notify their supervisor, the PG&E Environmental Field Specialist (EFS), and their safety specialist.

If unanticipated contaminated soil is encountered, the crew will implement safe soil procedures. Refer to Procedures and Protocol for Safe Soil Storage, Stockpiling, and Disposal section of this memo. This will include collection of shallow soil samples for laboratory analysis at direction of the EFS to determine the concentration(s) of contaminant(s), if present. Refer to Soil Sampling Procedures section of this memo. If the EFS determines that the soil does not present any significant or unusual hazard, then the work may resume with these precautions: A qualified person, such as an environmental health and safety professional, will tailboard the crew on the findings of the laboratory analysis and the requirements and responsibilities for safely proceeding with the work, including recognition of signs and symptoms of exposure to chemical contaminants.

If contaminants are confirmed by the PG&E EFS or delegate by using a photoionisation detector (PID), PG&E will notify all schools, daycare facilities, elderly housing, and residences within 250 feet of the contaminated soil within 24 hours of discovery that there is contaminated soil. Refer to Procedures and Protocol for Safe Soil Storage, Stockpiling, and Disposal section of this memo for disposal procedures. The PG&E EFS will notify appropriate agencies within 24 hours of confirming contaminants by using a PID in the field.

Soil Sampling Procedures

If unanticipated contaminated soil is encountered, the EFS will collect soil samples for laboratory analysis to determine the concentration(s) of contaminant(s), if present. Shallow samples will be collected from the stockpiled unanticipated contaminated soil or excavation as appropriate to assess the potential hazard, direct appropriate control measures, and develop disposal profiles if necessary. Spoils from this project will be sampled and analyzed for no less than the following constituents: TPHg+BTEX (Total Petroleum Hydrocarbons as gasoline [TPH-g] with the specific volatile aromatic compounds benzene, toluene, ethylbenzene, and xylenes [BTEX]), TPHd (Total Petroleum Hydrocarbons in the Diesel Range), TPHmo (Total Petroleum Hydrocarbons as motor oil in soil, water, or waste), and CAM17 (sampling for a specific group of 17 toxic heavy metals under California's Title 22 regulations: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc). Typically, sample results are provided within approximately 2 to 5 business days. The sampling results will serve as documentation of the chemical condition of the soil.

A safety, health and environment professional, such as the PG&E EFS, a safety specialist, or an industrial hygienist, will evaluate available information to determine appropriate control measures. Control measures may include air monitoring, dust control, safety training, personal protective equipment, or development of a site safety plan.

Procedures and Protocol for Safe Soil Storage, Stockpiling, and Disposal

If during excavation unanticipated evidence of contamination is identified, work at the location will cease when safe to do so and the excavation will be covered with steel plate(s). As needed, Applicant Proposed Measure HAZ-2, Emergency Spill Supplies and Equipment, emergency spill supplies and equipment will be available for use on site during construction to contain, collect, and dispose of any minor spills. Emergency spill equipment includes oil-absorbent material, tarps, and storage drums, and the implementation of lined bermed areas for excess water or liquid concrete to pool before collection.

The crew will stockpile the unanticipated contaminated soil and keep it separated from other soil. The unanticipated contaminated soil will be placed on and covered by a polyethylene sheet (at least 4 millimeters), or the soil will be placed in lined covered container(s). PG&E's A-ESCP (Attachment B) details protocol for safe storage and stockpiling to be implemented during safe storage and stockpiling while soil sampling analysis is occurring.

The PG&E EFS will arrange for removal of contaminated soil disturbed by activities within 3 business days when within 250 feet of the sensitive receptors described.

The EFS will determine and direct next steps for transport and disposal including safety precautions based on the findings of the laboratory analysis. Unanticipated contaminated soil will be disposed of at the appropriate landfills. Contaminated soil is expected to be taken to Kettleman Hills or Clean Harbors Buttonwillow. Refer to Table 3.17-1, Landfills and Recycling Facilities, on page 562 of the project EIR.

Enclosure(s):

Attachment A: PG&E *Safety and Health Tailboard Topic: Working in Soil That May Be Contaminated*

Attachment B: PG&E's A-ESCP with BMP fact sheet: *WM-7 Contaminated Soil Management*



Topic Overview / Key Message:

Contamination may be present when there is a strong chemical odor, unusual discoloration, oily appearance of the soil or any standing water, suspicious areas of dead vegetation or dead animals; or when historical data indicates past heavy industrial use.

Having advance information that an area to be excavated is contaminated allows for alternatives to be considered, such as avoiding the area altogether or selecting techniques to minimize soil disturbance.

Advance information provides extra time to plan for managing contaminated soil and minimizing exposures to workers.

Preventative Steps and Actions to Take:

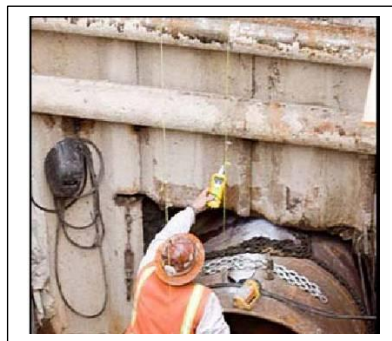
If soil contamination is unexpectedly encountered during excavation activities, the field crew should stop the work and notify their Supervisor, the local Environmental Field Specialist (EFS) and their Safety Specialist. The EFS may collect soil or water samples for laboratory analysis to determine the concentration(s) of contaminant(s), if present. This is done to document the chemical condition of the soil, assess the hazard, develop mitigation measures, and develop disposal profiles, if necessary. A designated Safety, Health and Environment (SH&E) professional, such as an EFS, Safety Specialist or Industrial Hygienist (IH), will evaluate available information to determine appropriate control measures. These may include additional air monitoring, dust mitigation measures, safety training, additional personal protective equipment (PPE) or development of a site safety plan. Typical contaminants detected in the field include volatile organic compounds (VOCs) and other hydrocarbons (including gasoline, diesel, oil and natural gas condensate), metals, solvents, naturally occurring asbestos (NOA), hydrogen sulfide (H_2S), pesticides and herbicides; many of these are Prop 65 carcinogens or reproductive hazards. In addition, carbon monoxide may accumulate in areas where there is heavy traffic or equipment with combustion engines operating nearby.

If the designated SH&E professional determines that the soil does not present any significant or unusual hazard, then the work may resume with these precautions:

- A qualified person, such as a SH&E professional, shall tailboard the crew on the findings of the laboratory analysis and the requirements and responsibilities for safely proceeding with the work, including recognition of signs and symptoms of exposure to chemical contaminants.
 - Most VOCs can be smelled at concentrations well below their permissible exposure limit (PEL), and can cause symptoms including nausea, light-headedness and headache. Long term exposure can cause damage to the liver, kidneys and other organs.
 - Many VOCs are skin absorbable or can cause defatting and cracking of the skin.
 - Metals usually don't have an odor and short-term, acute symptoms are rare; long-term exposure can cause damage to the liver, kidneys and central nervous system.
 - NOA occurs where ultramafic rock is present and has no odor and no short-term health effects. Long term exposure can cause asbestosis, mesothelioma and lung cancer.
 - H_2S is common in Bay Mud and areas with decaying organic matter; it has a characteristic rotten egg odor and is toxic, corrosive and flammable. It is heavier than air and can accumulate in low-lying areas. At high concentrations, it can sensitize the nose so it can no longer be smelled, and can cause death. At lower concentrations, it can cause headache, nausea, fatigue and shortness of breath.
 - Both pesticides and solvents often have characteristic odors and may cause irritation of the skin, throat and mucus membranes. Long term exposure may cause damage to the liver, kidneys and nervous system.

- Carbon monoxide is a colorless, odorless, tasteless gas produced by incomplete combustion. Exposure to low concentrations can cause headaches, nausea, fatigue and fainting; high concentration can cause death by asphyxiation.
- Establish a regulated area around the active excavation using cones, barricade tape or other demarcation and limit access to workers required to be in the area to perform their work.
- Prohibit storing items intended for consumption and eating, drinking, chewing and application of cosmetics (including sunscreen) inside the regulated area.
- If heavy equipment is being used to dig the excavation perform air monitoring for at least combustible gases at the edge of the excavation near the equipment. If the monitor indicates an LEL of 10% or more, stop work and consult with the designated SH&E professional.
- If work is conducted inside any excavation more than four feet deep, perform air monitoring for at least oxygen, the LEL and carbon monoxide inside the excavation at approximate breathing zone height. If an action level is exceeded, often indicated by an alarm on the monitor, immediately evacuate the excavation and consult with an SH&E professional for further safety instructions.
- Install ventilation equipment to provide fresh air into the excavation if needed. Consider using both supply and exhaust ventilation.
- Position yourself upwind of the excavation whenever possible.
- Wear chemical resistant gloves if handling the soil or contacting liquids. Nitrile gloves are recommended, and may be worn under leather gloves (but the leather gloves should be disposed of after the job is done).
- If the possibility of contact with contaminated water is likely, wear coated disposable coveralls or rain gear, impermeable booties or rubber boots and appropriate eye protection.
- Wash your hands with soap and water at the end of the shift and prior to eating, drinking, chewing gum, etc.
- Wipe excess dust and dirt from clothing and boot treads when leaving the regulated area.

Air Quality and Soil Handling Concerns:





Excavation of soils that are heavily contaminated may generate emissions of substances that are subject to regulatory controls. Local air districts set rules, operating conditions and conduct compliance inspections to limit emissions, including semi-volatile organic compounds, VOCs, visible dust and asbestos, from contaminated soils. Requirements vary from air district to air district, so confirm with the EFS.

- If contaminated soil is found during excavation, stop work immediately and notify the designated or local SH&E professional. They will work with other departments to determine if a site safety plan and agency notifications are required.
- If there is historical contamination at the excavation site, for example at a former manufactured gas plant (MGP) site, the project manager or foreman shall notify the EFS and Safety Specialist at least 15 days prior to the excavation start date. Excavation shall not commence without authorization from Environmental Management and Safety.
- Contaminated soil shall be either placed in soil bins or stockpiled as follows:
 - Place soil upon and covered by heavy duty plastic sheeting or tarp, secured with tires, sandbags or other weights on approximately 10 foot centers, with seams either taped or completely covered.
 - Inspect and monitor daily to ensure soil remains covered.
 - Keep exposed soil visibly moist with water spray during excavation and removal. Minimize water usage to prevent runoff.
 - Place soil in a secure area away from drainages and other environmentally sensitive features.

Resources of Topics and Links:

The local EFS is responsible for providing you with the required training and support necessary for you to properly manage contaminated soils. If there is ever any question about this requirement, give him or her call. Additional resources include:

- For environmental support after hours and on weekends and holidays, call the **Environmental Emergency Hotline at 1-800-874-4043**.
- Report any non-life threatening work-related illness or injury, including potential exposure to chemicals, to your supervisor and the **24/7 WorkCare Nurse Line at 1-888-449-7787**.
- For serious work-related employee illnesses or injuries, get emergency medical attention and then notify the employee's supervisor and the **Safety Helpline at 1-415-973-8700, Option 1**.
- Report any non-PG&E employee injuries, illnesses or property damage that occurs as a result of PG&E work activities to the **Law Claims Helpline at 1-415-973-8000**.
- Direct any external inquiries about potential contamination to the **Media Relations Department at 415-973-5930**.

Environmental Safety

Safety & Health

EPA's Envirostor Site (to research a specific location)

*

Attendance Sheet

[illegible]

*Safety briefings meet **Cal OSHA §1509 . Injury and Illness Prevention Program**; (e) Supervisory employees shall conduct "toolbox" or "tailgate" safety meetings, or equivalent, with their crews at least every 10 working days to emphasize safety. A department may have more stringent requirements through their Standards or Procedures. Tailboard *documents* provide the facilitator with facts about topics to use during daily briefings. Tailboards may be created as a result of identifying a hazard by conducting a Job Safety Analysis (JSA)/Job Hazard Analysis (JHA).

Stockpile Management

Activity Specific Erosion and Sediment Control Plan (A-ESCP)



For questions or concerns, please contact your assigned PG&E Environmental Field Specialist (EFS)

Prepared by:
PG&E Construction Stormwater Group

March 2017



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Attachments

Attachment A	Activity Specific Installation Details
SP-01	Typical Stockpile Placement
SP-02	Hydraulic Stabilization
SP-03	Typical Plastic or Fabric Cover Restraints

References

Referenced BMP Fact Sheets

EC-3	Temporary Hydraulic Mulch
EC-5	Soil Binders
EC-6	Straw Mulch
EC-7	Geotextiles, Plastic Covers, and Erosion Control Blankets/Mats
EC-9	Earth Dikes and Drainage Swales
SE-1	Silt Fence
SE-5	Fiber Rolls
SE-6	Gravel Bag Berm
TC-1	Stabilized Construction Entrance/Exit
TC-2	Stabilized Construction Roadway
WE-1	Wind Erosion Control
WM-3	Stockpile Management
WM-5	Solid Waste Management
WM-7	Contaminated Soil Management
WM-8	Concrete Waste Management

1.0 WHAT IS STOCKPILE MANAGEMENT?

1.1 Introduction

Stockpile management includes Best Management Practices (BMPs) to minimize erosion and sediment transport originating from stockpiles.

All PG&E Project Teams, Crews, and Subcontractors are **required** to be familiar with the information contained within this A-ESCP

Stockpiles may include, but are not limited to, the following materials: soil, aggregate base, construction debris, demolition debris, any metal debris, or a combination thereof.

GOAL: Prevent rainfall from contacting stockpile materials and transporting sediment and other pollutants offsite or to surface waters.

Sediment in stormwater is pollution!

1.2 Requirements for All Stockpiles

- Have BMP materials on site **before** rain events!
- Stockpile protection must take place year-round
- Perimeter controls must be installed around stockpiles (may include earthen berms, straw wattles, or silt fence)
- Cover soil stockpiles with soil binders (such as Gorillasnot) or plastic sheeting
- Locate stockpile away from drainage systems such as swales and drainage inlets

1.3 Planning for Work Involving Stockpiles

- If using soil binders, ensure binders and a water source are present on site at all times during the project including a water truck or water buffalo used to spray the stockpiles.
- If using plastic sheeting, ensure plastic sheeting and associated tie down materials are available on site at all times.

1.4 Definitions

High Risk Stockpiles Specific types of stockpiles that require additional protection because they contain any of the following materials: contaminated soil (TPH, PCBs, etc.), Portland cement, concrete rubble, fly ash, stucco, hydrated lime, and cut back or cold mix asphalt. Specific management for these and similar materials are located in Section 2.2.

Active Stockpiles Active stockpiles are defined as scheduled to be used or accessed within 14 days.

Inactive Stockpiles If a pile is not scheduled to be used within 14 days, it immediately becomes inactive and must be stabilized.

Soil Binders Soil binders are glue-like products sprayed onto soil stockpiles and is the preferred

method to stabilize stockpiles. Soil binders may be combined with hydromulch per the manufacturer's specifications. Many soil binders require a minimum curing time to be fully effective and typically need at least 24 hours to cure prior to a rain event. Do not use soil binders within 100' of any surface water source, including ditches and storm drain inlets without contacting your assigned EFS.

Plastic Sheeting Plastic sheeting is a rolled product held down using ropes or other means to cover stockpiles. Plastic sheeting should be avoided when possible as it is hard to manage, increases runoff, breaks down quickly in sunlight, and can become airborne during high winds causing damage to power lines and other substation equipment.

2.0 STOCKPILE MANAGEMENT PROCEDURES

The following procedures are intended to address activities related to most stockpile management situations. Although your project may not include all such activities, the project shall follow the procedures contained within this section that apply to your project.

2.1 Active and Inactive Stockpiles

Requirements:

- Inactive stockpiles must be stabilized **at all times**.
- All active stockpiles must be stabilized prior to and during a rain event

Protect From Rain

- Stockpiles must be stabilized to protect from rainfall (splash) erosion, and surface flow erosion.
- Stabilization materials include:
 - Soil Binders (EC-5), or combined with Temporary Hydraulic Mulch (EC-3) if necessary
 - Plastic Covers (EC-7)
 - Erosion Control Blankets (EC-7)

Stockpile Perimeter Controls

- All stockpiles should be protected with perimeter controls such as:
 - Silt Fences (SE-1)
 - Fiber Rolls (SE-5), commonly called Straw Wattle
 - Gravel Bag Berms (SE-6)
 - Earth Dikes and Drainage Swales (EC-9)
- Provide a minimum 50' separation from concentrated flows of stormwater, drainage courses, and storm drain inlets. If space is limited to less than 50', provide additional diversion or protection adjacent to the concentrated flow.

Protect From Wind

- In windy areas for stockpiles susceptible to wind erosion, stockpiles should be securely and temporarily stabilized at the end of every day, and kept wet during working hours to minimize wind erosion. **Do not apply so much water that runoff occurs.**
- Consider if plastic sheeting may come into contact with electrical equipment if it dislodges from the stockpile, and use alternatives if necessary.

Example Photos



Figure 1. Cover pulled back for access during use



Figure 2. Soil binder and mulch application prior to rain



Figure 3. Stockpile stabilized with soil binder and temporary hydraulic mulch



Figure 4. Stockpile stabilized with erosion control blanket

2.2 High Risk Stockpiles

Description:

High risk stockpiles may include visible and non-visible pollutants including, but not limited to:

- Concrete (pH and metals) and asphalt (petroleum) rubble
- Contaminated soil (TPH, PCBs, etc.)
- Cold mix asphalt, aka “cut-back” (petroleum based contaminants)
- Hazardous construction materials
 - Construction waste such as retired transformers
 - New construction materials waiting for installation such as liming agents or gypsum
- Treated wood waste (TWW)
- Soil amendments
 - Fly ash or Hydrated lime
- Fertilizers (ammonium nitrate, urea, anhydrous ammonia, etc.)

Requirements:

High risk stockpiles require additional considerations, some of which include:

- Placing stockpiles in areas that will not have any run-on. If such a location is unavailable, protect from run-on using a diversion ditch or gravel bag berm;
- Containing any possible run-off from the pile by creating a berm or basin to collect stormwater runoff downslope of the stockpile;
- Containing any runoff from piles likely to include non-visible pollutants prior to leaving the project site. If run-off cannot be contained, contact the EFS and collect samples of the runoff for laboratory analysis;
- Bagging and placing contaminated materials on pallets to be stored under cover until they can be moved to a legal collection facility, if possible; and
- Place stockpile on an impervious surface such as pavement, trench plate, or plastic sheeting.

Example Photos



Figure 5. Contaminated stockpile under cover



Figure 6. Concrete rubble stockpile in need of cover

2.3 Where to Obtain BMP Materials

BMP products should be obtained through PG&E materials warehouses using project order numbers and established materials codes. Should the materials be unavailable from PG&E warehouses, BMP materials and products shown below can be obtained from sources shown, but may be obtained elsewhere depending on location and urgency of need.

TABLE 1
BMP PRODUCTS INFORMATION

Category	Product Name	Units
Hydraulic Mulch (EC-3)	Flexterra FGM	Bales
Soil Binders (EC-5)	Soiltac, Gorillasnot	5 gallon buckets
Straw Mulch (EC-6)	Certified Weed-Free Straw	Bales
Geotextiles and Mats (EC-7) Geotextile Fabric	Mirafi 600	Rolls: 12.5' x 360' 17.5' x 238'
Geotextiles and Mats (EC-7) Jute Mat	Eco-Jute	Rolls: 4' x 225'
Geotextiles and Mats (EC-7) Plastic Sheeting	Visqueen	Rolls: 20 or 40'x 100'; 10ml thick
Silt Fence (SE-1)	Caltrans Grade Silt Fence	100 feet with 36-inch wood posts at 6 foot spacing
Fiber Roll (SE-5)	Curlex Sediment Log Type II	25 foot rolls x 6" or 9" diameter
Gravel Bags (SE-6)	Roc Soc or Monofilament Bags	Each
3/8" Nylon Rope	3/8" Nylon Rope	100' or 500'

Example suppliers include Reed & Graham, White Cap, and Curlex. Other options may include feed stores, retail building supply stores, or hardware stores. If you are still having trouble contact your project EFS for assistance.

3.0 INSPECTION AND MAINTENANCE REQUIREMENTS

- It is required that at a minimum, active stockpiles be inspected weekly, prior to forecast rain events, daily during extended rain events, and after the conclusion of rain events.
- During certain conditions it may be necessary to inspect stockpiles covered with plastic sheeting or rolled product more frequently (for example, high winds or extreme heat).

- Repair, re-apply, and/or replace linear sediment barriers, stabilization, and/or covers as needed to keep them functioning properly.
- Sediment shall be removed when it reaches one-third of the perimeter control height.
- Contaminated soil stockpiles or stockpiles with the potential to discharge visible and/or non-visible pollutants offsite should be inspected for signs of potential contaminate or pollutant discharge.
 - Should a discharge be observed that is likely to contain pollutants, notify the EFS for sampling requirements.
- If spilled or leaking hazardous materials contact soil stockpiles, implement appropriate spill control equipment and procedures to completely clean up the pollutant to prohibit additional soil contamination or pollutant discharge from the site. If the extent of the impact of the pollutant is unknown, contact your EFS as soil testing may be necessary.

4.0 TROUBLESHOOTING

Contact your local EFS if any of the following conditions occur:

- Visually cloudy/muddy water is observed leaving the work area;
- Observed sheen, discoloration, foam, odor, or other pollutant indicator;
- Hazardous substance(s) is/are discharged or spilled; or
- There is potential for a non-visible or any other pollutant discharge.

After hours, call: **(800) 874-4043**.

If the project receives a written notice or order from any regulatory agency, immediately contact your local EFS for further direction.

Troubleshooting Guide	
Field Condition – Stockpile Management	Common Solutions Are:
Soil stockpile erodes	Cover stockpile with plastic sheeting or spray with a soil stabilizer. Protect with a temporary perimeter sediment barrier around the stockpile
Stockpile is in flow line	Remove stockpile from drainage path or protect with a berm, dike, or temporary diversion device
Storm water run-on impacts the stockpile	Protect the stockpile by using temporary perimeter sediment barriers such as berms, dikes, silt fencing, or sandbags
Wind causes erosion and or blowing dust	Cover stockpile or spray with a soil stabilizer. Use a water application to suppress dust
Field Condition – Soil Binders	Common Solutions Are:
Slope was improperly dressed before application	Roughen embankment and fill areas by rolling with a crimping or punching type roller or track walking where rolling is impractical. Pre-wet the areas of application.

Troubleshooting Guide	
Coverage is inadequate	Follow recommended application rates. Count the number of bags of the product to ensure the correct amount of material is implemented. Reapply to the areas
Sprayed areas degrade or become ineffective	Follow recommended application rates. Consider other or additional BMPs. Reapply binder as necessary
Sprayed slope has spot failures	Repair slopes and re-spray damaged areas
Portions of the sprayed area have been disturbed	Keep workers and equipment off sprayed areas. Repair and re-spray areas that have been damaged
Binder fails to penetrate soil	Roughen soil and pre-wet to manufacturer's recommendations. Reapply to areas where necessary
Soil binder is washed off slope	Allow at least 24 hours for the materials to dry before a rain event. Follow manufacturer's recommendations. Reapply as necessary
Excessive water flows across stabilized surface.	Use other BMPs to limit flow onto stabilized area. Use other BMPs to reduce slope lengths. Do not use to stabilize areas with swift moving concentrated flows
Field Condition – Erosion control blankets	Common Solutions Are:
Improper anchoring	Dig trench along the top and bury the blankets. Use staples to anchor according to manufacturer's recommendations
Undercutting due to inadequate preparation	Prepare the soil surface. Remove rocks, clods and other obstructions. Fill in rills in uneven areas to promote good contact between mat and soil
Excessive water flow across stabilized surface	Use other BMPs to limit flow onto stabilized area. Use other BMPs to reduce slope lengths. Do not use to stabilize areas with swift moving concentrated flows
Field Condition – Straw wattle	Common Solutions Are:
Runoff flows under the fiber roll or daylight shows under fiber roll	Trench-in rolls to a depth of 4 in and stake. Place compacted soil along the uphill side of the fiber roll
Runoff flows between fiber rolls	Ensure that fiber rolls are butted tightly together and staked
There is excessive sediment accumulation	Remove accumulated sediment. Apply soil stabilization measures to contributing areas
Field Condition – Wind Erosion	Common Solutions Are:
Excessive dust leaves the site	Increase frequency of water application. Consider using a palliative or binder on inactive areas
Watering for dust control causes erosion	Reduce water pressure on the water truck. Check watering equipment to ensure that it has a positive shutoff. Water less frequently
Sprayed areas are ineffective at limiting dust	Re-spray areas and ensure that the application rate is proper

5.0 POST-CONSTRUCTION

Upon completion of construction within the project area:

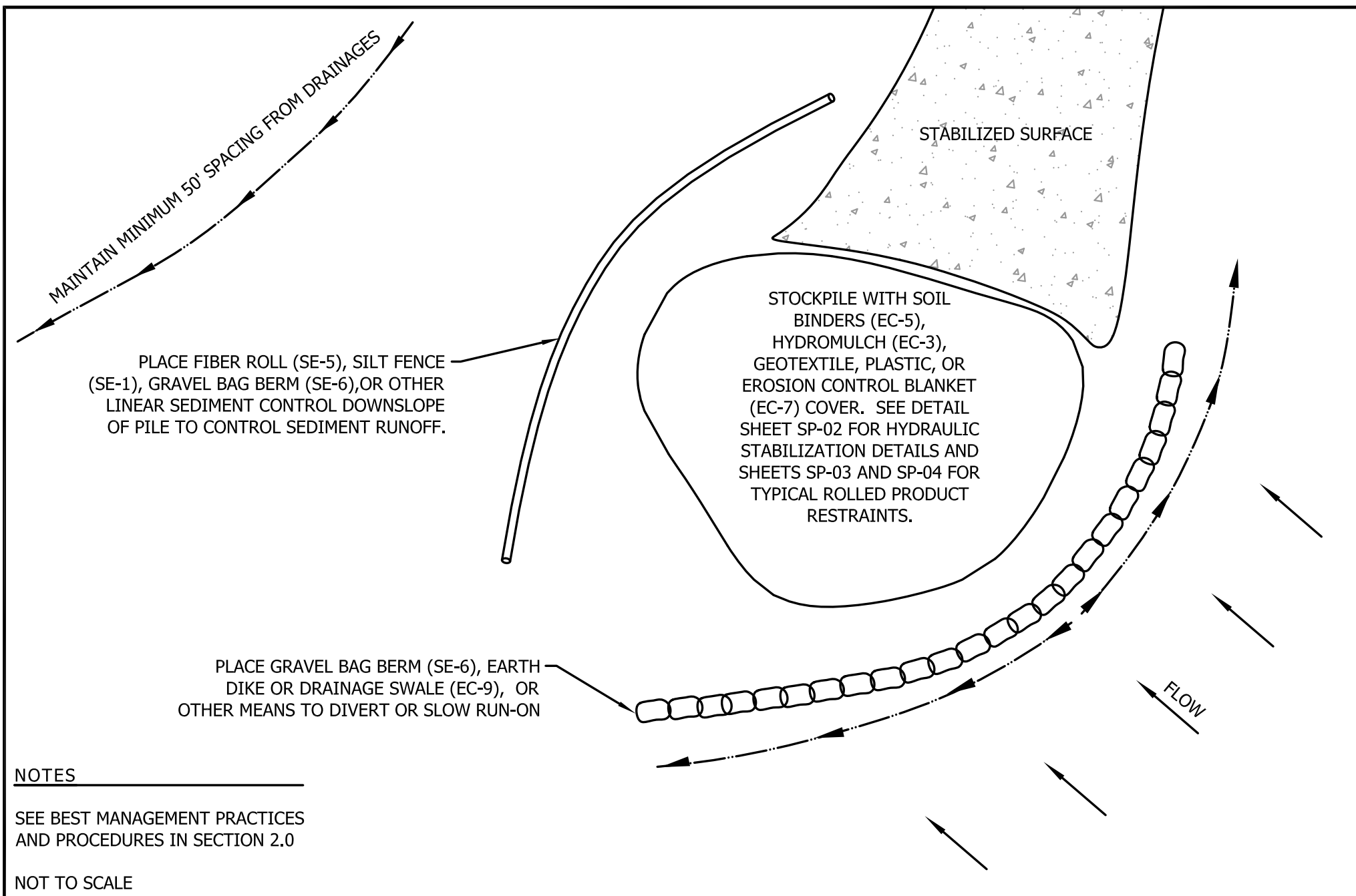
- Remove all temporary, non-biodegradable BMPs;
- Remove all construction equipment from the site;
- Clear all staging areas of any debris, construction materials, and contaminants;
- Return all drainage ways affected by any stockpiles or stockpile to their pre-construction line and grade; and
- Cover disturbed soil areas with temporary and/or permanent stabilization.

Attachment A Activity Specific Installation Details

The following installation details are included to illustrate installation techniques. It is noted that specific installation of any facility must consider the restrictions of the installation site, and that modifications to the following may be required given local conditions.

The following details are included in this Plan

SP-01	Typical Stockpile Placement
SP-02	Hydraulic Stabilization
SP-03	Typical Plastic or Fabric Cover Restraints



*Pacific Gas and
Electric Company*

TYPICAL STOCKPILE PLACEMENT

A-ESCP - STOCKPILE MANAGEMENT

SP-01

PRODUCT

SOILTAC

FLEXTERRA FGM

DURATION

6 MONTHS

6 MONTHS

APPLICATION RATE

1 GAL / 220 S.F.

1 BALE / 800 S.F.

DILUTION RATE

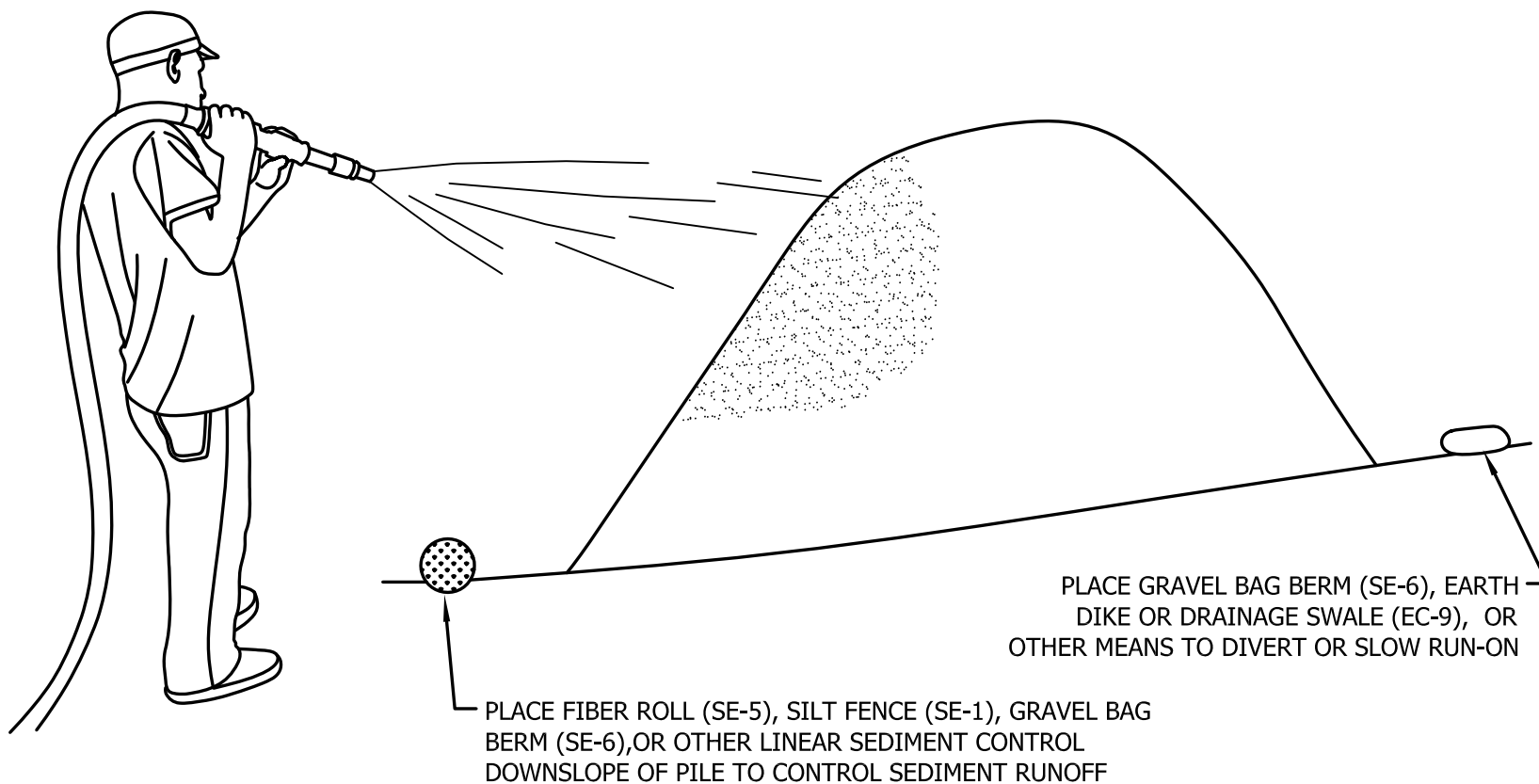
9 PARTS WATER TO 1 PART PRODUCT

1 BALE TO 125 GAL WATER

NOTES

APPLY IN 2 PASSES

SPECIAL EQUIPMENT / VENDOR REQUIRED

**NOTES**

1. SEE BEST MANAGEMENT PRACTICES AND PROCEDURES IN SECTION 2.0.
2. SPRAY FROM MULTIPLE DIRECTIONS TO AVOID SHADOWING.
3. FOLLOW MANUFACTURERS MIXING AND APPLICATION GUIDES.
4. ENSURE THE PRODUCT IS APPLIED WITH ADEQUATE TIME TO CURE.
5. IF SOIL BINDERS ARE USED IN ON-SITE WATER TRUCKS OR TRAILERS, MAKE SURE TO CLEAN ALL BINDER RESIDUE FROM EQUIPMENT AFTER SPRAYING.

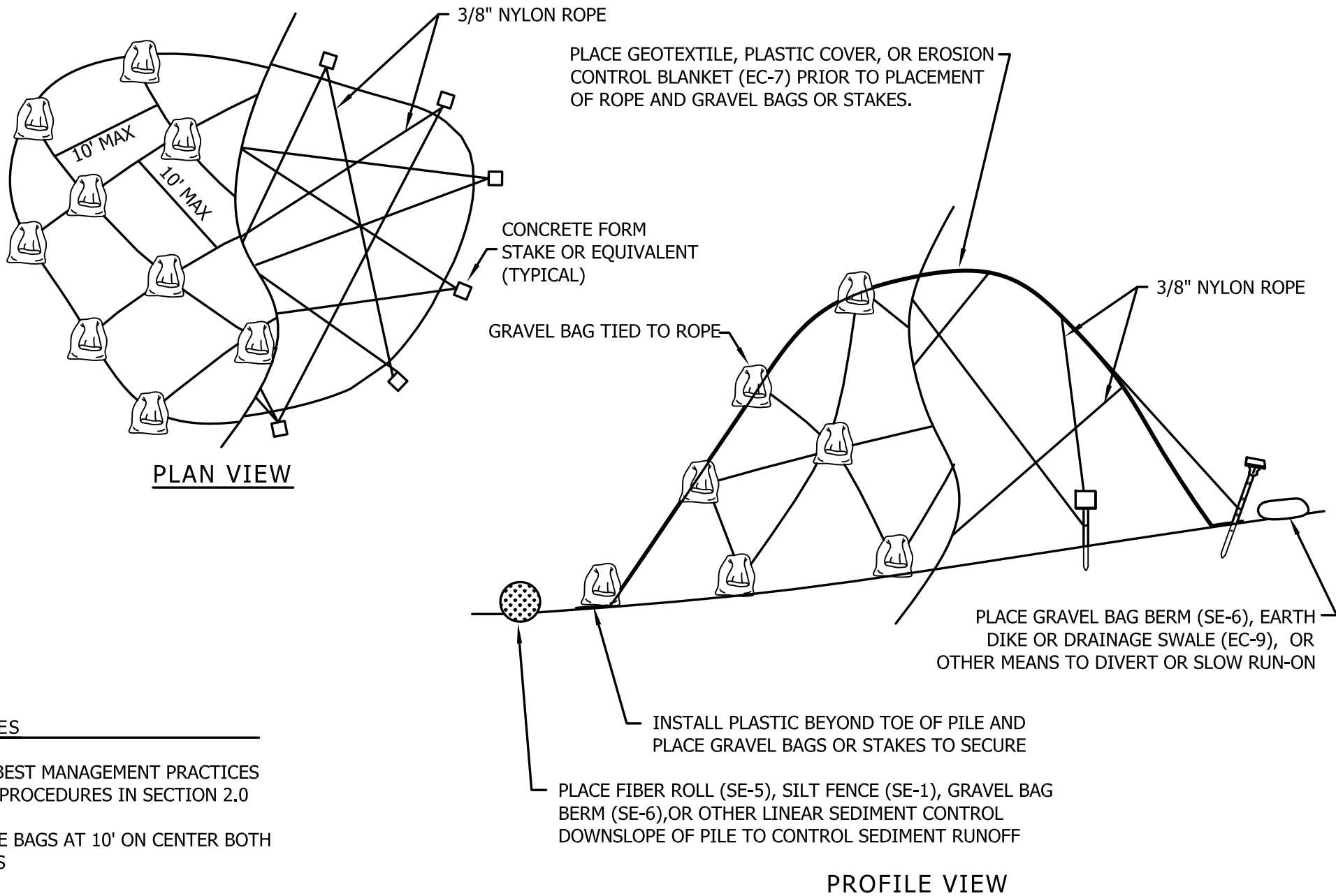


*Pacific Gas and
Electric Company*

HYDRAULIC STABILIZATION

SOIL BINDER OR HYDROMULCH
A-ESCP - STOCKPILE MANAGEMENT

SP-02



NOTES

SEE BEST MANAGEMENT PRACTICES
AND PROCEDURES IN SECTION 2.0

PLACE BAGS AT 10' ON CENTER BOTH
WAYS

NOT TO SCALE



**Pacific Gas and
Electric Company**

PLASTIC OR FABRIC COVER
GRAVEL BAG OR CONCRETE FOR STAKES AND ROPE
A-ESCP - STOCKPILE MANAGEMENT

SP-03

WASTE MANAGEMENT AND MATERIALS CONTROLS

Contaminated Soil Management

WM-7



When

This contaminated soil management BMP should be used whenever soil contamination is suspected 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:
 - o Soil that is discolored, black, gray, white
 - o Soil that has an unusual odor, such as petroleum, acid, alkaline, sewage, solvent, or any other chemical smell
- If potentially contaminated soil is detected, discontinue the activity and contact the project's Environmental Representative
- Manage contaminated soils properly, according to PG&E Environmental Practices (EPs)

Maintenance and Inspection

Perform routine inspections of digging and trenching operations to look for contaminated soils.

- Manage all contaminated soils as hazardous substances, if applicable, in accordance with applicable federal, state, and local laws

If potentially contaminated soils are encountered:

- **Stop work!**
- Contact the project's Environmental Representative.

