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## Mandatory Worker Environmental Awareness Training

for *PG&E employees, consultants, contractors, and subcontractors who are involved with construction or ground disturbing activities for the Topock Groundwater and Soil Remediation Project*

JANUARY 13, 2026 REFRESHER

**JACOBS** **ch2m**

# Purpose

- Provides an overview of the project rules/requirements for conducting work onsite
  - *Additional info may be specified in the approved Environmental Release to Construct (ERTC)/Environmental Release to Operate (ERTO) for individual work sites*
- Fulfils training requirements of the SEIR, PBA, BIAMP, CDFW AMMs, C/RAWP, and PA

# MANDATORY Worker Environmental Awareness Training

## Topics Covered:

- Environmental Release to Construction (ERTC)/Environmental Release to Operate (ERTO)
- Compliance Oversight Team
- Biology Resources
- Cultural/Paleontological Resources
- Air/Noise/Soil/Stormwater Requirements
- Tribal Video

# PG&E's Environmental Release to Construct (ERTC)/ Environmental Release to Operate (ERTO)

- Always check for site-specific rules/requirements in the ERTC/ERTO
- Ensures contractors have the information they need to comply with protection measures and project requirements
- Applies across all PG&E construction projects
- No construction work without approved ERTC
- ERTC is in Remedy construction contract documents



## Compliance & Regulations

# JANUARY 2026 UPDATE

## TOPOCK REMEDIATION COMPLIANCE OVERSIGHT TEAM

### PG&E

**David Diaz**, Site Operations Manager for Remediation, Principal

**Colton Garrard**, Site Operations Manager for Remediation

**Jennifer Darcangelo**, Lead Archaeologist and Primary Point of Contact for BLM and Tribes

**Virginia Strohl**, Lead Biologist and Primary Point of Contact for Resource Agencies

### Non-PG&E

**Aundrea Romero**, Lead Onsite Biologist, Eocene

**Caroline Killian**, Onsite Biologist, Eocene

**Marjorie Eisert**, Biologist, Jacobs

**Leeann McDougall**, Biologist, Jacobs

**Juan Cervantes**, Lead Onsite Archaeologist, Applied Earthworks

**Lance Nielson**, Onsite Archaeologist, Applied Earthworks

**Joan George**, Archaeologist, Applied Earthworks

**Christina Hong**, ERTC/ERTO and General Compliance Lead, Jacobs

**Paul Gamarra**, SWPPP QSP, Jacobs

**Compliance Staff on Rotation** - Various, Jacobs

# JANUARY 2026 UPDATE

As of January 13, 2026, the Topock Groundwater and Soil Remediation Project has issued:

- 125 ERTCs for remedy construction and well drilling
- 4 ERTCs for soil NTCRA
- 10 ERTOs for remedy O&M



# Biology

Avoidance and Mitigation  
Measures during  
Construction and  
O&M

# Objective

Outline the required Avoidance and Minimization Measures (AMMs) designed to protect the natural resources at the Topock Project site including:

- Wildlife
- Plants
- Special Status Species
- Jurisdictional Waters



# Biological Site Surveys

- A biologist will conduct biological clearance prior to construction crews mobilizing to a site for any of the bulleted items below:
  - Mondays, or the first day after construction resumes when there has been no construction activity on site for four or more days.
  - Major precipitation storm events that create ponding concerns.
  - Any construction site located within 250' of a southwestern willow flycatcher habitat. A biologist will determine if a construction site falls under this category and inform the crew and/or site personnel ahead of time.

Exceptions: SPY, CHQ, Route 66, and any fenced sites.

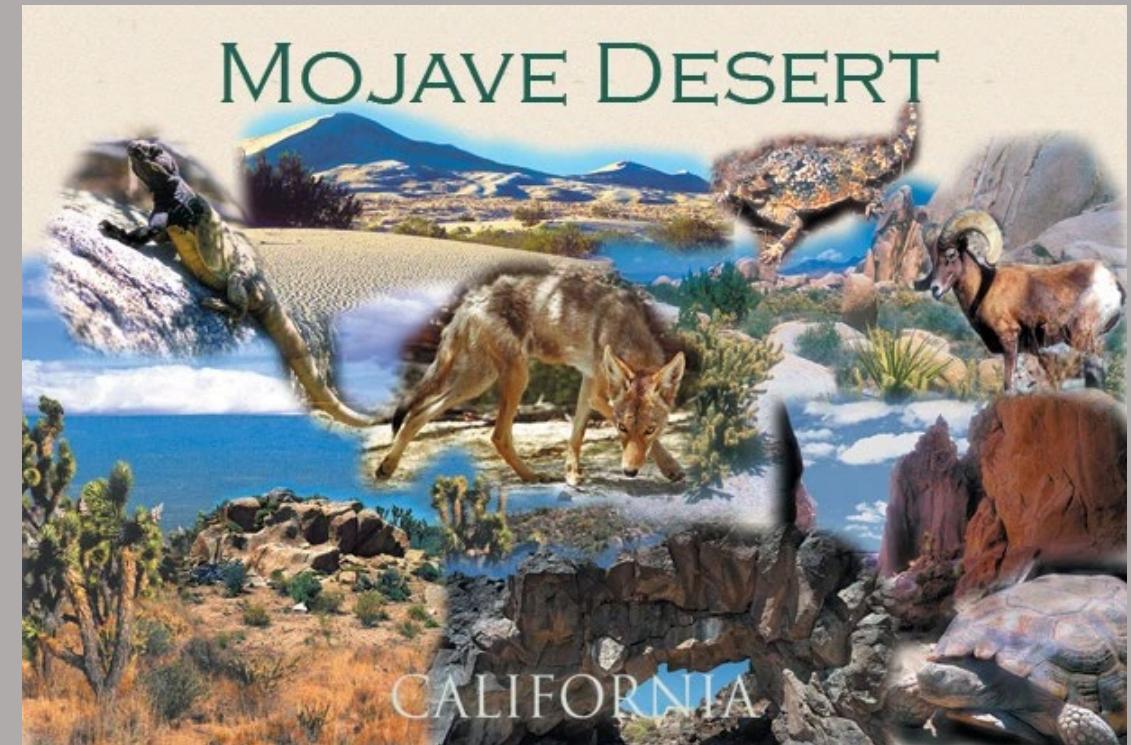
If you see a **red** stake, the site has **not** been cleared by a biologist.

If you see a **green** stake, the site has been cleared by a biologist.



# Wildlife on Site

- Any and all impacts to any **listed species** are strictly prohibited and punishable by law
- Intentional harassment, killing, handling, or collection of **any wildlife** at construction sites and surrounding areas are prohibited
- Report all sensitive species sightings to the FCR or biologist
- Report any dead or injured wildlife to the FCR or biologist



# Endangered Species – Penalties

- Different degrees of violation with the law.
- The most punishable offenses are trafficking and any act of knowingly “**taking**” an endangered species.
- Under the Endangered Species Act, “take” of listed species is prohibited. Take is defined as **harmed, harassed, pursued, hunted, wounded, killed, trapped, or collected**.
- **Civil penalties:** up to \$25,000 per violation.
- **Criminal penalties:** up to \$50,000 and one year imprisonment per violation.



# Sensitive Species within Project Area



**Mojave Desert Tortoise**



**Ridgeway Rail**



**Yellow-billed Cuckoo**



**Southwestern Willow Flycatcher**

# Sensitive Species within Project Area



Bats



Nelson's Bighorn Sheep



Mexican Garter Snake



Ring-tailed Cat

<https://www.tumblr.com/search/Ringtail-Cat>

# Sensitive Plant Species

- Several **protected, rare, or culturally sensitive** plant species are known to occur on site. Some of these are locally common.
- **No shrubs or trees shall be trimmed or removed unless under the supervision or approval of the biologist.**
- The ERTC may designate avoidance zones for sensitive plant populations.



Blue Palo Verde



Mouse-tail Sun Cup



Spiny-hair Blazing Star

# Jurisdictional Waters

- What are Jurisdictional Waters (JWs)?
  - Navigable waters
  - All interstate waters including wetlands
  - The territorial seas
  - Tributaries of the above waters
  - Impoundments of the above waters or a tributary including dry washes
  - All waters, including wetlands, ponds, lakes, oxbows, and similar waters
- In our project area this includes:
  - Colorado River and tributaries
  - Bat Cave Wash and mouth of Bat Cave Wash
  - Topock Marsh
  - Includes other ephemeral drainages



# How do we protect Jurisdictional Waters?

Through Implementation and Inspection of Construction Stormwater Pollution Prevention (SWPPP) Best Management Practices (BMPs)/Remedy O&M Industrial SWPPP BMPs

# WHAT IS SWPPP?

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- Prevention of stormwater or contaminant from leaving work site.
- Erosion and dust control
- Sediment control
- Run-on Run-off control
- Non-Stormwater Management
- Housekeeping- vehicle storage and maintenance, waste management, construction material, and landscape materials

# Topock SWPPP Requirements

- Implement SWPPP BMPs per approved ERTCs/ERTOs
- Initiate repairs of BMPs within 72 hours
- Track-Out needs to be addressed daily
- If spills (of any kind) occur, notify your supervisor, David Diaz, Colton Garrard, and Christina Hong. All four must be notified immediately.



# CONTAINMENT

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- Concrete washout
- Bins covered
- Leaks or spills
- Hazardous storage containment



# CONTAINMENT

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# Review

- Make sure biological clearance has happened according to approved measures
- Conduct 360 walk around of all vehicles and equipment
- Do not trim or remove plants unless under the supervision or approval of the biologist.
- Each site must have a trash can with a lid, and trash must be removed each day
- Must notify Compliance and Biology prior to first refueling at each location



# Topock Remediation Project

## Cultural Resources Regulatory Compliance

June 2018 (Updated Oct 2019)



# What are Cultural Resources?

- Archaeological Sites (Prehistoric and Historic)
- Native American Cultural Sites
  - Sacred Landscape Features
  - Traditional Plants and Sediments (e.g. arrowweed, mesquite, palo verde, and clays)
  - Prehistoric Archaeological Sites
  - Current Ceremonial Sites
- Paleontological Resources (fossils and fossil imprints)



# What are Paleontological Resources?

- Fossilized remains or imprints of plants and/or animals that lived in past geologic times
- Provides information on the evolution and extinction of species that lived millions to thousands of years ago

# Why Protect Cultural and Paleontological Resources?

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Cultural and Paleontological resources cannot be replaced once they are destroyed. As such, these resources are considered nonrenewable and are protected under various federal, state, and local laws and regulations

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Due to the sensitivity of these resources within the Topock Remediation Project Area, all workers must receive training to understand protocols for protecting them



## Examples at Topock Project Site

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Topock Maze

# Historic Archaeological Artifacts



# Trail Segment

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Flagstone gutters



# Segments of Historic Route 66

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Route 66 with Old Trails Arch Bridge

# How Are We Protecting Cultural and Paleontological Resources?

- All workers must receive training to understand avoidance and protection protocols
- Compliance and respectful behavior are expected and required
- Ground disturbing activities on site will be monitored by a Qualified Archaeologist
- Archaeological Monitors are also trained and qualified to recognize Paleontological Resources
- Tribal Representatives are invited to monitor site activities.
- Archaeological Monitors will ensure all staging and work on site is conducted within the approved work areas

# What Can You Do?

- Stay within designated work areas
- Limit ground disturbance to the greatest extent feasible
- Comply with requests from Archaeological Monitors to temporarily pause work.
- Be respectful of Tribal and Archaeological Monitors who will be observing work.
- Remember that non-compliance can result in removal from the Project

## Potential Archaeological Discovery

Archaeologists, Tribal Monitors, or Construction encounters previously unidentified potential archaeological materials (PA Stipulation IX, CHPMP Section 8, CHPMP Appendix C). **If human remains or funerary objects are discovered, follow Plan of Action (CHPMP Appendix D)**

PG&E's Qualified Cultural Resource Consultant will stop work at discovery location, creating an EZ/ESA of 5-50m and immediately contact PG&E Onsite Manager and PG&E Archaeologist.

See Page 2 for order of notifications and contact information

PG&E Archaeologist or PG&E Onsite Manager will immediately notify BLM Archaeologist or Field Office Manager and Tribal Representatives

Stabilization measures such as a protective covering or fencing may be placed over or around the discovery area. BLM Archaeologist will visit site to explore and verify discovery. The BLM, in consultation with PG&E and the Tribes, may reduce the EZ/ESA if determined appropriate by parties in the field

BLM, in consultation with PG&E and Tribal Monitors, determines the discovery is NOT a cultural resource

OR

BLM, in consultation with PG&E and Tribal Monitors, determines the discovery IS a cultural resource

BLM will notify all Signatories of the PA, Tribes and Invited Signatories of the nature and general location of the discovery

BLM notifies Agencies and Tribal Representatives of potential discovery and non-cultural findings, work may resume

PG&E's Qualified Cultural Resource Consultant will use visual observation to record structure, stratigraphic integrity, approximate age and range of materials present in order to fully document.

AFTER consultation with BLM it may be necessary to expose, take samples, photograph and map.

BLM will assess the deposit's significance and eligibility for the NRHP. PG&E will consult with BLM and BLM will consult with Tribal representatives if the resource is Native American in nature, to define the nature and extent of further studies.

Features in highly disturbed contexts or less than 50 years old may be dismissed by BLM without further investigation and construction may resume upon approval by BLM after consultation with PG&E and Tribes

OR

If, after consultation among BLM, PG&E and Tribes, it is determined that additional work is warranted to identify and assess the integrity, BLM will determine if the volume of additional work proposed falls within the volume allowed under BLM CA Protocol for testing as a means of identification. Additional consultation with CA or AZ SHPO may be warranted.

Standard archaeological hand-excavated sampling units will be employed, depending on the nature of the discovery. Decisions on methods will be made by the PG&E and Qualified Cultural Resource Consultant archaeologists in consultation with BLM, Project representatives and Tribal representative (if warranted)

If, after additional work the BLM, in consultation with PG&E and Tribes (if warranted) determines that the deposit either does not meet eligibility thresholds or does not retain necessary integrity, BLM will document this resolution and work in the area can proceed. BLM will notify the CA and AZ SHPO of the discovery and resolution.

OR

If the discovery is significant (eligible for NRHP), Tribes, BLM and PG&E can resolve treatment of the discovery in a manner that does not result in adverse effects, BLM documents resolution and work can proceed. BLM will notify the CA and AZ SHPO of the discovery and resolution

If there is failure to resolve treatment of the discovery in consultation with the Tribes and PG&E, the BLM shall consult with AZ or CA SHPO to develop a treatment plan. Within 15 days of discovery BLM shall provide email to SHPO with recommendation for resolving the discovery

If the CA or AZ SHPO does not object to the BLM's recommendations within 15 days, BLM will implement the recommendations. If the consulted SHPO objects to the recommendations, BLM will utilize the dispute resolution process in Stipulation XV of the PA to resolve any objections.

AE Archaeologists and/or Tribal Monitors will determine if there is a potential resource discovery

Work shall pause while PG&E and BLM are notified

If work is paused, work with your leads to find alternative work areas

Exclusion fencing or other measures may be placed around a discovery

# Hazardous Material Business Plan (HMBP)

The Hazardous Material Business Plan is a Health and Safety Code requirement for places with hazardous materials in quantities over listed thresholds.

Four key sections:

- Hazardous Materials Inventory
- **Emergency Response Plan** with Site Map
- Employee Training Description
- Emergency Equipment Inventory

There are two HMBPs for Topock Remedy:  
1) At the SPY  
2) At the MW-20 Bench (ethanol storage tank)

# JANUARY 2026 HMBP UPDATE

## CLARIFICATION ON THE USE OF PORTABLE FUEL SLIP TANKS ON VEHICLES

- **If the vehicle is registered and travels on/offsite**, then it (and the fuel slip tank) is excluded as a transportation-related facility of oil. If the vehicle is onsite for more than 30 days, then the fuel (i.e., hazardous material) is deemed stored onsite (HSC 25503.7).
- **If the vehicle is used exclusively onsite** (non-transportation related facility) and the capacity of the tank is 55 gallons or more, it would be regulated under 40 CFR 112.1 as a facility and would be part of CUPA permit.
- Regarding **heavy construction equipment with large fuel tank** (e.g., large excavator), the EPA excludes motive power containers and the fuel tank is considered one since it is used primarily to power movement of the equipment (40 CFR 112.1(d)(7)).

# Safe Fueling and Fuel Handling Policy

## (Remedy-SOP-02, Rev 0)

- All contractors must obtain **approval from PG&E** for:
  - planned fueling and re-fueling methods
  - commercial fuel supplier(s) prior to first use
- Follow **approved methods** procedures during fueling/refueling activities in order to avoid spills and incidents
- If a spill occurs, notify your supervisor, PG&E, and Compliance immediately. Clean-up as directed.
- If directed, you will modify the fueling procedures or conduct equipment repairs to minimize the potential for future spills.
- **Use designated smoking areas.**



**NEW - MUST NOTIFY COMPLIANCE AND BIOLOGY  
BEFORE FIRST REFUELING AT EACH LOCATION**

# Topock Air Requirements

- Control of **fugitive dust**
- Reduce construction-related **air pollution**  
(primarily NOx and diesel PM)



## JANUARY 2026 - MEASURE AIR-1A REMAINS UNCHANGE

### SUMMARY OF TOPOCK SEIR MITIGATION MEASURE AIR-1A (CONSTRUCTION-RELATED EMISSIONS OF CRITERIA AIR POLLUTANTS AND PRECURSORS)

- All off-road equipment with a horsepower greater than 50 horsepower have U.S. Environmental Protection Agency (USEPA) certified Tier 4 interim engines or engines that are certified to meet or exceed the nitrogen oxides (NOx) emission ratings for USEPA Tier 4 engines.
- Excludes specialty construction equipment where Tier 4 interim engines cannot currently be obtained within the industry, or older equipment cannot be retrofitted to meet Tier 4 emissions standards.
- During construction and decommissioning, the construction contractor shall maintain a list of all operating equipment in use on the Project site. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site. For specialty equipment where Tier 4 interim engines are not available, documentation supporting this conclusion shall be included in the equipment files. Once Tier 4 equipment is available for a piece of specialty equipment, it shall be incorporated into the construction fleet, replacing the existing non-Tier 4 piece of equipment. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations.
- Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board's Rule 2449.

# JANURY 2026 UNCHANGE FOR EN- GINE OPERATOR

## KEY APPLICABLE PROVISIONS OF CALIFORNIA AIR RESOURCES BOARD's RULE 2449 (13 CCR § 2449) - In-Use Off- Road Diesel-Fuel Fleets Regulation

- Rule 2449 aims to reduce emissions from off-road diesel-fueled vehicles in California. Also known as the In-Use Off-Road Diesel-Fueled Fleets Regulation.
- Applies to any off-road vehicle (rental, lease, or own) with a diesel engine that has a maximum power of 25 horsepower or more, or that cannot be safely driven on-road.
- Requires the procurement and use of renewable diesel (R99 or R100) starting January 1, 2024, with limited exceptions.
- Imposes limit on idling, requires written policy and informs operators

# CALIFORNIA ARB IDLING RULE

- *Written Idling Policy – Medium and large fleets must have a written idling policy that is made available to operators of the vehicles and informs them that idling is limited to 5 consecutive minutes or less.*
- *Idling limits in Section 2449(d)(2)*
  - *Idling Limit – No vehicle or engines subject to this regulation may idle for more than **5 consecutive minutes**. Idling of a vehicle that is owned by a rental company is the responsibility of the renter or lessee. The idling limit does not apply to:*
    - *idling when queuing,*
    - *idling to verify that the vehicle is in safe operating condition,*
    - *idling for testing, servicing, repairing or diagnostic purposes,*
    - *idling necessary to accomplish work for which the vehicle was designed (such as operating a crane),*
    - *idling required to bring the machine system to operating temperature, and*
    - *idling necessary to ensure safe operation of the vehicle.*

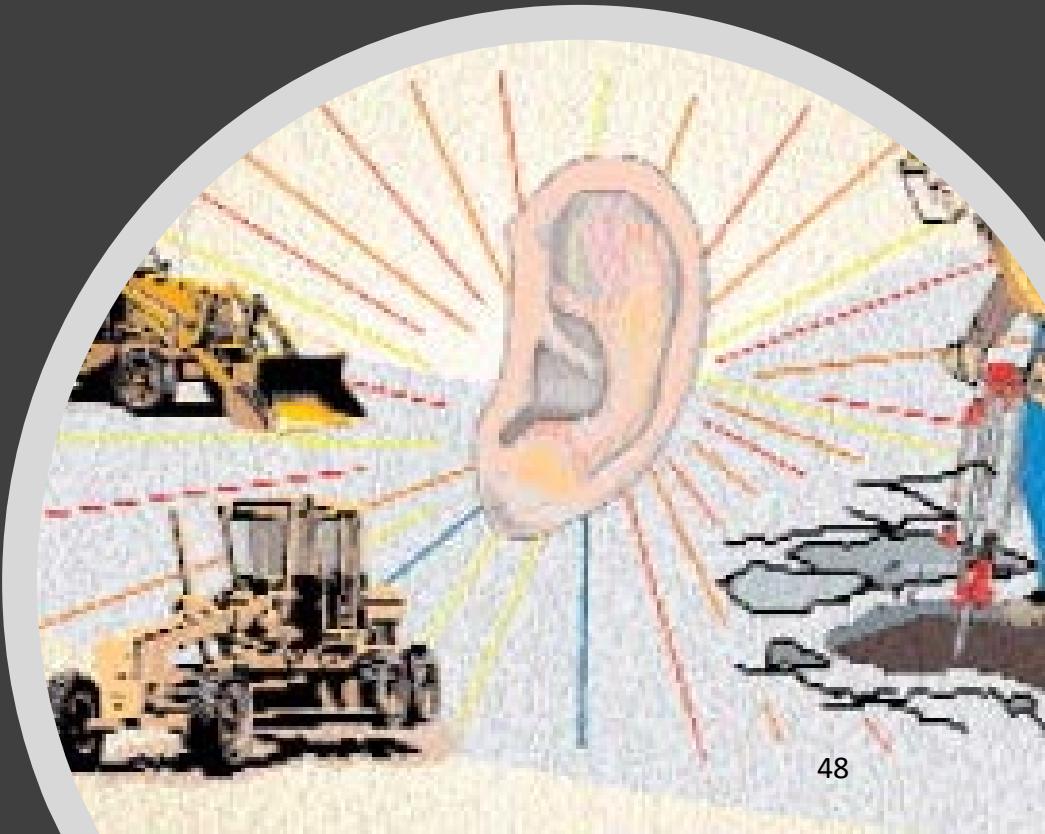


**Who is responsible for idling violation?**

- If own, the owner is responsible
- If rent/lease, the renter or lessee is responsible

# Topock Noise Requirements

- Three Take-Aways:
  - Minimize noise from construction activities
  - If directed, erect and use acoustical barriers
  - If anyone approaches you with a noise complaint, let your supervisor and PG&E know immediately



# Soil Management Requirements

- PG&E is required to have a **Soil Management Plan** which describes the management of soil onsite include reuse of soil.
- Goal is to maximize onsite reuse of soil and minimize shipping soil offsite.
- **By completing today's training, you are providing a written acknowledge of the Soil Management Plan.**



Soil Management Plan

Final (100%) Design Submittal for the  
Final Groundwater Remedy

PG&E Topock Compressor Station  
Needles, California

Prepared for  
Pacific Gas & Electric Company

November 2015

**CH2MHILL®**  
155 Grand Avenue  
Suite 800  
Oakland, CA 94612

# Work in Areas with Known or Potential Soil Contamination

- Construction activities may cross areas with known or potential soil contamination (called Areas of Concern or AOCs)
- Follow Health and Safety Plan and handle soil per the Soil Management Plan.
- If you encounter contaminated soil (e.g., noxious odors, discolored soil, debris), pause work and notify immediately:
  - PG&E (David Diaz, 760-903-3013/Colton Garrard, 760-422-7067) AND
  - Compliance (Christina Hong, 626-297-5292)

