

**THIRD FIVE-YEAR REVIEW REPORT**  
**for**  
**SOUTHERN CALIFORNIA EDISON COMPANY**  
**VISALIA POLE YARD SUPERFUND SITE**  
**Visalia, Tulare County, California**

**Prepared by:**

**U.S. Environmental Protection Agency Region 9**  
**San Francisco, California**



**September 2015**

Approved by:

Date:

  
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# Executive Summary

This is the third Five-Year Review for the Southern California Edison Company Visalia Pole Yard Superfund Site (Site) located at 432 North Ben Maddox Way in Visalia, Tulare County, California. The purpose of this Five-Year Review is to determine if the Site remedy is and will continue to be protective of human health and the environment. The triggering action for this Five-Year Review is EPA's approval of the second Five-Year Review report on July 21, 2010.

The Site was formerly used for utility pole treatment operations. Between 1925 and 1968, creosote was used as a wood preservative, and in 1968, the woodtreating fluid was changed to a 5 percent by weight solution of pentachlorophenol (PCP) dissolved in a diesel oil carrier fluid. The primary contaminants of concern (COCs) at the Site are creosote compounds and PCP.

Cleanup activities were first initiated in 1975 with the installation of extraction wells to remove contaminated groundwater and then discharge it to a publicly owned treatment works sanitary sewer system. This action was followed by the construction of a slurry wall to contain the contaminated groundwater and prevent further migration of COCs in groundwater. The Site was listed on the National Priorities List in 1989. In 1994 the U.S. Environmental Protection Agency (EPA) selected the soil and groundwater remedy in the Record of Decision (ROD) for the Site, which included:

- 1) Bioremediation technologies, with capping, if necessary;
- 2) Ex-situ treatment of groundwater using the existing pump and treat system;
- 3) Enhanced in-situ bioremediation;
- 4) Recharge of treated groundwater to the vadose zone soils using infiltration galleries;
- 5) Continued hydraulic control of impacted groundwater using a series of extraction wells; and
- 6) Institutional controls to restrict access and Site use; signs warning against unauthorized entry onto the Site; Site use restrictions to prevent unauthorized borings, earthwork and well construction; and deed restrictions to limit on-Site activities to commercial or industrial use only with California Department of Toxic Substances Control (DTSC) approval for implementation of any cap destruction or construction activities.

Groundwater and soil remedial actions were completed in 2008 and the Site was de-listed from the NPL in 2009.

According to the data reviewed and the site inspection, the remedy is functioning as intended and there have been no changes in the physical conditions of the Site that would affect the protectiveness of the remedy. Toxicity values for the three primary Site COCs (PCP, benzo(a)pyrene, and 2,3,7,8-TCDD or dioxin) have changed; however, there are institutional controls in place that prevent human exposure to potential residual soil and groundwater contamination. The groundwater remedial action objectives have been achieved and groundwater is no longer being treated or monitored.

The remedy at the Southern California Edison, Visalia Pole Yard Superfund Site is protective of human health and the environment because there are institutional controls in the form of restrictive covenants, as well as fencing and signage that prevent human exposure to potential residual soil contamination.

## Five-Year Review Summary Form

Site Identification		
<b>Site Name:</b> Southern California Edison Company Visalia Pole Yard Superfund Site		
<b>EPA ID:</b> CAD980816466		
<b>Region:</b> 9	<b>State:</b> CA	<b>City/County:</b> Visalia/Tulare County
Site Status		
<b>NPL Status:</b> Deleted		
<b>Multiple OUs?</b> No	<b>Has the site achieved construction completion?</b> Yes	
Review Status		
<b>Lead agency:</b> EPA		
<b>Author name (Federal or State Project Manager):</b> Alana Lee		
<b>Author affiliation:</b> EPA Region 9		
<b>Review period:</b> September 22, 2014 – September 9, 2015		
<b>Date of site inspection:</b> April 7, 2015		
<b>Type of review:</b> Statutory		
<b>Review number:</b> 3		
<b>Triggering action date:</b> July 21, 2010		
<b>Due date:</b> September 30, 2015		
Site-wide Protectiveness Statement		
<b>Protectiveness Determination:</b> Protective		
The remedy at the Southern California Edison, Visalia Pole Yard Superfund Site is protective of human health and the environment because there are institutional controls in the form of restrictive covenants, as well as fencing and signage that prevent human exposure to potential residual soil contamination.		

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Appendix A: References and List of Documents Reviewed

Appendix B: Site Inspection Checklist and Photographs

# List of Acronyms and Abbreviations

ARAR	Applicable or Relevant and Appropriate Requirement
bgs	Below Ground Surface
COC	Chemical of Concern
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DTSC	California Department of Toxic Substances Control
EPA	United States Environmental Protection Agency
ft	feet or foot
HQ	Hazard Quotient
IRIS	Integrated Risk Information System
MCL	Maximum Contaminant Level
µg/L	Micrograms per Liter
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
ng/L	Nanograms per Liter
NCP	National Contingency Plan
NPL	National Priorities List
NPDES	National Pollution Discharge Elimination System
O&M	Operation and Maintenance
PCP	Pentachlorophenol
RA	Remedial Action
RACR	Remedial Action Completion Report
RAO	Remedial Action Objective
RAP	Remedial Action Plan
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RSL	Regional Screening Level
SCE	Southern California Edison
2,3,7,8-TCDD	Tetrachlorodibenzo-p-dioxin



# Third Five-Year Review Report for Southern California Edison Company Visalia Pole Yard Superfund Site

## 1. Introduction

The purpose of a Five-Year Review is to determine whether the remedy implemented at the Site is protective of human health and the environment. The methods, findings, and conclusions of Five-Year Reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) prepared this Five-Year Review report pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Contingency Plan (NCP). CERCLA Section 121 states:

*“If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.”*

EPA interpreted this requirement further in the NCP; 40 Code of Federal Regulations Section 300.430(f)(4)(ii), which states:

*“If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such actions no less often than every five years after the initiation of the selected remedial action.”*

The U.S. Environmental Protection Agency Region 9 (EPA) with support from the U.S. Army Corps of Engineers conducted the Five-Year Review and prepared this report for the Southern California Edison (SCE) Company, Visalia Pole Yard Superfund Site in Visalia, Tulare County, California (hereinafter referred to as “the SCE Visalia Pole Yard Site” or “the Site”). The EPA is the lead agency for developing and implementing the remedy for the Site. The California Department of Toxic Substances Control (DTSC), as the support regulatory agency representing the State of California, has reviewed all supporting documentation and provided input to the EPA during the Five-Year Review process.

This is the third Five-Year Review for the SCE Visalia Pole Yard Site. The triggering action for this statutory review is the completion date of the Second Five-Year Review in July 2010. The Five-Year

Review is required due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure.

## 2. Site Chronology

Table 1 lists the dates of milestone events for the SCE Visalia Pole Yard Site.

**Table 1. Chronology of Site Events**

<b>Site Event</b>	<b>Date</b>
SCE operated Visalia Pole Yard facility	1925 - 1980
Groundwater contamination first discovered at SCE Visalia Pole Yard Site	1966
Subsurface investigations conducted to determine the nature and extent of contamination	1966 - 1975
Groundwater extraction and treatment initiated under a State Cleanup and Abatement Order	1976
Subsurface Slurry Wall Constructed	1976 - 1977
All wood treating facility buildings demolished and approximately 2,300 cubic yards of contaminated soil removed to an off-site facility	1981
Phase 1 Groundwater Treatment Plant Implemented	1985
Phase 2 Groundwater Treatment Plant Implemented	1987
SCE Visalia Pole Yard Site listed on the National Priorities List (NPL)	1989
Remedial Investigation/Feasibility Study (RI/FS) Completed	1992
Remedial Action Plan (RAP)/Record of Decision (ROD) Signed	1994
Regulatory Approval for Pilot Study Steam Remediation	1995
Design and Construction of Steam Remediation System	1996
Full-Scale Pilot Test of Remedial Action (RA) Initiated	1997
DTSC Approved Certification of the RA Completion	2003
DTSC Approved Certification of the RA Monitoring Program	2004
Groundwater extraction completed	2004
First Five-Year Review Completed	2005

<b>Site Event</b>	<b>Date</b>
Covenant to Restrict Use of Property Recorded	2007
Remedial Action Completion Report (RACR) Completed	2009
Final Close Out Report Completed	2009
SCE Visalia Pole Yard Site delisted From the NPL	2009
Second Five-Year Review Completed	2010
SCE Visalia Pole Yard property sold to the City of Visalia	2013
Third Five-Year Review Completed	2015

### 3. Background

#### 3.1. *Site Location*

The SCE Visalia Pole Yard Site is located at 432 North Ben Maddox Way in northeastern Visalia, in Tulare County, California (Figure 1). The city of Visalia has an estimated population of 128,000 people and is located approximately halfway between the cities of Fresno and Bakersfield in the Central Valley. Agricultural use is the primary land use in the Visalia area, with walnuts, olives, and citrus as the primary crops.

#### 3.2. *Land and Resource Use*

The Site and surrounding properties are owned by the City of Visalia and operated by the Public Works Department. The Public Works Department is using the Site for office space, parking and storage of vehicles, public works equipment, and stockpiling of sand and rock, consistent with the use restrictions on the property. No prohibited uses, such as residences, hospitals, schools, daycare facilities, or drinking water wells, have been observed at the Site.

Land use in the immediate vicinity and on properties neighboring the Site include a mix of industrial, commercial, and residential uses.

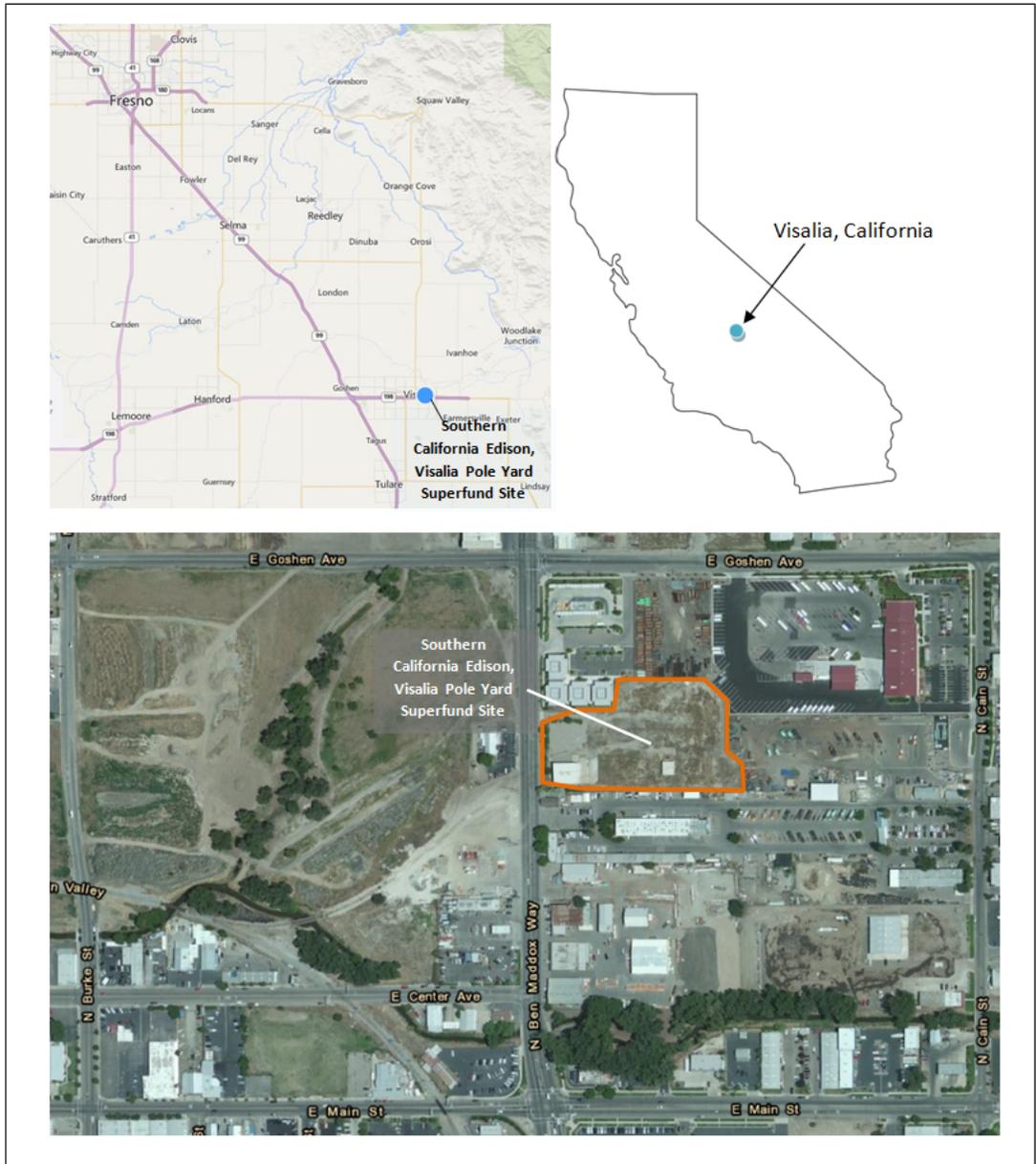


Figure 1. Location Map for the SCE Visalia Pole Yard Site

3.3. Hydrogeology

The geologic strata underlying the VPY Site are composed of alluvial fan deposits from the Kaweah River and its distributaries. The three hydrostratigraphic units beneath the Site include: a shallow aquifer (30 to 50 feet below ground surface [bgs]), a shallow aquitard (50 to 70 feet bgs), an intermediate aquifer (75 to 100 feet bgs), an intermediate aquitard (100 to 125 feet bgs), and a deep aquifer (124 feet bgs to about 180 feet bgs). Both aquitards consist of silty sand and clay materials, whereas the aquifers are composed primarily of fine-grained and coarse-grained sands. When saturated, the shallow aquitard restricts vertical groundwater movement. Aquifer testing of the intermediate hydrostratigraphic unit

indicated a transmissivity of approximately 50,000 gallons per day per foot. Short-term pumping from the deeper aquifer affected hydrostatic water elevation levels in the intermediate aquifer, indicating connection between the intermediate and deep aquifers. The general gradient for groundwater is southwest and there are no known streams or receptors downgradient of the Site.

Historical water table levels were about 30 feet bgs; in 2009 they were reported at 80 feet bgs. Depression of the regional water table levels initially occurred during the state-wide drought in the 1980s, and continues to decline from increased regional groundwater pumping for residential, agricultural, and industrial uses.

### *3.4. History of Contamination*

From 1925 to 1980, SCE operated the Visalia Pole Yard facility and produced wooden poles for use in the distribution of electricity throughout the utility's service territory. Western red cedar trees were logged and transported to the yard, debarked, sized, shaped, and chemically preserved to resist attack from fungi and insects. The chemical preservation treatment process consisted of immersion of the wooden poles in heated tanks of preservative fluid. The treatment system consisted of two above-grade dip tanks, one in-ground full treatment tank, a fluid heating system, hot and cold fluid storage tanks, and underground product transfer lines. From 1925 to 1968, SCE primarily used creosote to treat its utility poles. However, in 1968, SCE began using pentachlorophenol (PCP), since PCP-treated poles looked "cleaner" and, therefore, more suitable for use in an urban environment. A solution of PCP and diesel (petroleum hydrocarbons) was substituted as the preservative used in the wood preservation process. This preservative contained low levels of dioxins and furans, byproduct impurities of the PCP manufacturing process. Approximately 275,000 poles were treated at the Site. Wood preservatives, including 2,500,000 gallons of creosote and 900,000 gallons of PCP, were used and stored on Site during Visalia Pole Yard facility operations and significant volumes of these chemical preservatives were released into subsurface soils and groundwater, primarily through leaking tanks and cracks in the piping.

Groundwater contamination was first discovered in an on-site well in 1966. Subsurface investigations were conducted between 1966 and 1975 to determine the nature and extent of contamination. The types of chemicals found at the Site include creosote compounds, PCP, and its associated impurities including 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). During the 1992 Remedial Investigation, the wood-treating chemicals were found to be distributed in both the vadose zone and saturated zone at the SCE Visalia Pole Yard Site. Additionally, at that time, the non-aqueous phase diesel hydrocarbon plume covered a horizontal area approximately 2.1 acres in size and extended vertically to the lower boundary of the intermediate aquifer zone at approximately 125 feet bgs.

### *3.5. Initial Response*

In 1976, the State of California issued a Cleanup and Abatement Order requiring SCE to mitigate discharge of wood-treatment fluids into the soil; contain contaminated soil and groundwater on the property; construct an underground slurry wall around the Site property; and pump and clean up the shallow groundwater contamination at the Site.

In 1977, a 60-foot deep slurry wall keyed into the shallow aquitard was built to restrict further lateral contaminant migration in the shallow aquifer. Groundwater extraction wells were installed to remove contaminated groundwater.

In 1981, all wood treating facilities were demolished and approximately 2,300 cubic yards of contaminated soil were removed and disposed of into an off-site Class 1 hazardous waste disposal facility.

In 1985, an on-site water treatment plant using filtration and adsorption was constructed.

In 1987, SCE and the State of California signed an agreement requiring SCE to perform a remedial investigation and feasibility study to determine the nature and extent of Site contamination and to evaluate and recommend cleanup alternatives for final cleanup action.

### *3.6. Basis for Taking Action*

Hazardous substances released at the Site included PCP, benzo(a)pyrene, and dioxin (2,3,7,8-TCDD). Without remedial action, exposure to these contaminants of concerns in soils and groundwater contaminated soil and groundwater could have resulted in significant human health risks and provided the basis for taking action under CERCLA. A baseline Public Health Evaluation provided the basis for selecting remedial action objectives and developing Site-specific cleanup goals. The total Site reasonable maximum exposures for multiple scenarios of ingesting contaminated groundwater exceeded  $1 \times 10^{-4}$  excess cancer risk. In 1989, EPA listed the SCE Visalia Pole Yard Site on the NPL.

## 4. Remedial Actions

### *4.1. Remedy Selection*

The RAP/ROD for the SCE Visalia Pole Yard was signed in 1994. The Remedial Action Objectives (RAOs) for the Site were to:

- prevent the migration of pole treating chemicals, present in unsaturated soil, to groundwater;
- prevent occupational exposure to soil with constituent concentrations exceeding health-based concentrations;
- prevent residential and occupational exposure to groundwater with chemical concentrations above remediation goals; and
- prevent dermal occupational exposure to groundwater with chemical concentrations above remediation goals.

The soil and groundwater cleanup levels for the SCE Visalia Pole Yard Site are provided in Table 2.

**Table 2. Soil and Groundwater Cleanup Levels for the SCE Visalia Pole Yard Site**

<b>Chemical of Concern</b>	<b>Soil Cleanup Level<sup>1</sup> (mg/kg)</b>	<b>Groundwater Cleanup Level<sup>2</sup> (µg/L)</b>
Pentachlorophenol (PCP)	17	1
Benzo[ <i>a</i> ]pyrene	0.39	0.2
2,3,7,8-TCDD	0.001	0.00003

- 1) Soil cleanup goals are based on a  $1 \times 10^{-4}$  through  $1 \times 10^{-6}$  Site-wide target risk and identified in the 1994 Remedial Action Plan
- 2) Groundwater cleanup goals are based on federal maximum contaminant levels (MCLs) and identified in the 1994 Record of Decision

The major components of the soil and groundwater remedy selected to achieve the RAOs and cleanup levels included the following:

- 1) Bioremediation technologies, with capping, if necessary;
- 2) Ex-situ treatment of groundwater using the existing pump and treat system;
- 3) Enhanced in-situ bioremediation;
- 4) Recharge of treated groundwater to the vadose zone soils using infiltration galleries;
- 5) Continued hydraulic control of impacted groundwater using a series of extraction wells; and
- 6) Institutional controls to restrict access and Site use; signs warning against unauthorized entry onto the Site; Site use restrictions to prevent unauthorized borings, earthwork and well construction; and deed restrictions to limit on-Site activities to commercial or industrial use only with DTSC approval for implementation of any cap destruction or construction activities.

#### **4.2. Remedy Implementation**

In 1997, a pilot study, the Visalia Steam Remediation Project, was initiated which used steam injection technique called Dynamic Underground Stripping to mobilize Site COCs. The pilot study operated in two phases between May 1997 and June 2000. Phase 1 operations focused on the intermediate aquifer, with injection and extraction wells screened between 80 and 100 ft bgs. The Visalia Steam Remediation Project system consisted of a steam injection system (four 50,000 pound per hour steam boilers connected to 11 injection wells placed around the periphery of the Site contamination plume), a vacuum extraction system (four vapor and liquid extraction wells with follow-on liquid and vapor separation, liquid cooling, and vapor and liquid treatment) and an electrical resistance tomography and thermocouple-based thermal monitoring array completely surrounding the steam injection-vacuum extraction systems. Phase 2 operations began in November 1998 and included steam injection and extraction below the intermediate aquitard, with injection wells screened between 125 and 145 feet bgs. Phase 2 operations included vadose zone bioventing and saturated zone biosparging, coupled with continued groundwater extraction and treatment. Operations continued until June 2000, when the rate of COC removal declined significantly.

Following the completion of the pilot study, the enhanced biological degradation system was implemented to augment existing physical processes that were initiated by Dynamic Underground Stripping and enhancing natural biological processes.

In November 2004, a post-remediation surface soil investigation (0-10 ft bgs) was conducted at the Site. Twenty-two borings were drilled and samples were collected from 1-foot, 5-foot, and 10-foot intervals. Preliminary results indicated that 2,3,7,8-TCDD was detected in all samples, but only four of the 66 samples (all four samples collected at 1 foot bgs) were at or above the soil cleanup level of 1 µg/kg. Trace levels of other chemicals of concern were detected in three samples – a 1 ft bgs sample and two 10 ft bgs samples; these concentrations were all below Site soil cleanup levels. In July 2006, as a follow-up action to the recommendations identified in the 2005 First Five-Year Review, contaminated surface soils between 0 and 10 feet bgs were removed and confirmatory soil sampling results verified remaining soils were below the ROD soil cleanup standards.

A “Covenant to Restrict Use of Property, Environmental Restriction” between SCE and DTSC was recorded in Tulare County, California on May 23, 2007. The covenant outlines use restrictions and Site operation and maintenance (O&M) activities. Remedial action objectives are based on soil and groundwater cleanup standards for industrial land uses; therefore, prohibited land uses at the Site include: residences, human hospitals, schools, and daycare centers for children. The covenant requires the owner of the property to submit an annual inspection report to DTSC for its approval by June 15th of each year.

#### *4.3. Operation and Maintenance (O&M)*

The groundwater extraction and treatment system cleaned up between an average of 360,000 – 500,000 gallons of water per day from 1985 to 2004. The average annual operation & maintenance (O&M) costs of the groundwater extraction and treatment system were approximately \$1,000,000 per year. The groundwater extraction and treatment system ceased operating and was shut down in 2004.

The Visalia Steam Remediation Project operated in two phases between May 1997 and March 2004 and included vadose zone bioventing and saturated zone biosparging coupled with continued groundwater extraction and treatment. The total costs of the design, operation, and maintenance of the Visalia Steam Remediation Project and Dynamic Underground Stripping were approximately \$21,300,000.

#### *4.4. Remedial Action Completion*

The implemented groundwater remedy has met all remedial action objectives and groundwater and soil monitoring is no longer required. In 2008, DTSC approved the Remedial Action Completion Report (RACR) and EPA prepared the federal equivalent CERCLA reports - the Remedial Action Report, the Final Close Out Report, and the Site NPL De-listing package. The Federal Register Notices for Site

delisting were published in July 2009, and no adverse comments were received. The SCE Visalia Pole Yard Site was de-listed from the NPL on September 25, 2009.

## 5. Progress Since the Last Five-Year Review

### 5.1. *Previous Five-Year Review Protectiveness Statement and Issues*

There were no issues or recommendations identified in the 2010 Second Five-Year Review for the SCE Visalia Pole Yard Site.

The protectiveness statement from the Second Five-Year Review is as follows:

*“The remedy at the Southern California Edison, Visalia Pole Yard (VPY) Superfund Site is protective of human health and the environment. The ROD soil and groundwater remedial goals and objectives have been achieved; all immediate threats at the Site have been addressed through restrictive covenants (e.g., land use and soil disturbance restrictions and groundwater use prohibitions) and security measures (e.g., fencing, warning signs); and, the Site has been deleted from National Priorities List (NPL). The restrictive covenants have been in place since May 23, 2007.”*

### 5.2. *Work Completed at the Site During this Five-Year Review Period*

No active remediation work has taken place at Site since the Site was deleted from the NPL in September 2009. During this Five-Year Review Period (2010-2015), the last two remaining groundwater monitoring wells were abandoned in 2011 because they were no longer necessary.

On May 17, 2013, SCE filed a Notice of Conveyance with the DTSC to provide notification of the sale of the SCE Visalia Pole Yard property to the City of Visalia. Site inspections and operations at the Site property are now under the City of Visalia Public Works Department. The Site property is currently used by the Public Works Department for a small office building, storage of vehicles and public works equipment and materials, and parking.

## 6. Five-Year Review Process

### 6.1. *Administrative Components*

EPA Region 9 initiated the Five-Year Review in September 2014 and scheduled its completion for September 2015. The EPA Region 9 review team was led by Alana Lee, EPA Superfund Project Manager, and the Technical Support team for the Site. In September 2014, EPA held a scoping call with the review team to discuss the Site and items of interest as they related to the protectiveness of the remedy currently in place.

### 6.2. *Community Involvement*

The Five-Year Review report will be made available to the public once it has been finalized. A copy of the Five-Year Review report will be available online at EPA's website and DTSC's Envirostor website. No community inquiries regarding the Site were made to EPA during the Five-Year Review period. The Tulare County – Visalia branch public library no longer serves as a designated public repository as it does not retain Site documents.

### 6.3. *Document Review*

This Five-Year Review included a review of relevant, Site-related documents including the ROD, remedial action and close-out reports, and previous Five-Year Review reports. Appendix A includes a list of the references and documents reviewed.

#### ARARs Review

Section 121 (d)(2)(A) of CERCLA specifies that Superfund remedial actions must meet any federal standards, requirements, criteria, or limitations that are determined to be legally Applicable or Relevant and Appropriate Requirements (ARARs). ARARs are those standards, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site.

The ROD did not specify chemical-specific or action-specific ARARs with respect to soil. The chemical-specific ARARs identified in the ROD (MCLs) have been met and the action-specific ARARs identified in the selected remedy for groundwater are no longer applicable because groundwater is no longer being treated or monitored.

Chemical-specific ARARs identified in the 1994 ROD for the groundwater COCs at this Site have not changed and are listed in Table 3.

**Table 3. Summary of Groundwater Chemical-Specific ARAR Changes**

<b>Groundwater Chemical of Concern</b>	<b>1994 ROD Groundwater Cleanup Level (µg/L)</b>	<b>Current 2015 MCL (µg/L)</b>	<b>ARARs Changed?</b>
Pentachlorophenol (PCP)	1	1	No
Benzo[a]pyrene	0.2	0.2	No
2,3,7,8-TCDD	0.00003	0.00003	No

Toxicity Values:

EPA’s Integrated Risk Information System (IRIS) has a program to update toxicity values used by the Agency in risk assessments when newer scientific information becomes available. In the past five years, there have been a number of changes to the toxicity values for three COCs at the Site. Soil and groundwater concentration results are compared to EPA’s Regional Screening Levels (RSLs) as a first step in determining whether response actions may be needed to address potential human health exposures. The RSLs are chemical-specific concentrations for individual contaminants that correspond to an excess cancer risk level of  $1 \times 10^{-6}$  (or a Hazard Quotient [HQ] of 1 for non-carcinogens) and they have been developed for a variety of exposures scenarios (e.g., residential and commercial/ industrial). RSLs are not de facto cleanup standards for a Superfund site, but they do provide a good indication of whether actions may be needed.

Toxicity values for PCP, benzo[a] pyrene, and 2,3,7,8-TCDD have changed since the 1994 ROD. Comparing the ROD soil cleanup levels to EPA’s RSLs can be helpful in determining whether response actions may be needed to address potential human health exposures. RSLs are determined using the most updated toxicity values.

EPA uses a health protective risk management range between  $10^{-6}$  (one in one million excess cancer risk) and  $10^{-4}$  (one in ten thousand excess cancer risk) for assessing potential exposures to carcinogens. Table 4 provides a comparison of the EPA health protective risk range for carcinogens and the EPA RSLs for non-carcinogens for the Site-specific cleanup levels for the Site COCs in the 1994 ROD. All of the COCs have Site cleanup levels that are still within EPA’s health protective excess cancer risk range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$  and therefore are considered protective. The Industrial Soil and Residential Tapwater RSLs for non-cancer hazard are less than the selected Site-specific cleanup level for 2,3,7,8-TCDD. Concentrations significantly above the non-cancer RSL may indicate an increased potential of non-cancer effects.

Although the soil cleanup levels are above the non-cancer industrial soil RSL for 2,3,7,8-TCDD, there are institutional controls and access restrictions in place preventing exposure, and therefore, the Site soil cleanup level is considered protective.

**Table 4. Comparison of EPA RSLs to Site-specific Cleanup Levels for Industrial Soil Chemicals of Concern**

Chemical of Concern	EPA Health Protective Risk Range for excess cancer risk (mg/kg)	EPA RSL for non-cancer hazard (mg/kg)	Site-specific Cleanup Level (mg/kg)	Is Site-specific Cleanup Level > EPA RSL?
Pentachlorophenol (PCP)	4 - 400	2900	17	Cancer: No Non-cancer: No
Benzo[a]pyrene	0.29 - 29	None	0.39	Cancer: No
2,3,7,8-TCDD	0.000022 - 0.0022	0.00073	0.001	Cancer: No Non-cancer: Yes

#### Ecological Review

An ecological risk assessment was not conducted at the time of the ROD. The area of this Site is mostly industrial, and soil and groundwater have both met their respective Site cleanup goals. This Site is of low wildlife value and does not pose risks to ecological resources.

#### Vapor Intrusion:

An additional potential pathway that was not addressed in the 1994 ROD is the subsurface vapor intrusion pathway, that is, vapor-forming compounds migrating from Site-contaminated soil or groundwater to indoor air of buildings. Vapor intrusion is not a concern at this Site because the soil and groundwater COCs at the Site were not contaminated with vapor-forming chemicals that could pose an unacceptable vapor intrusion risk.

### **6.4. Data Review**

#### Soil

No remediation or monitoring activities have taken place since the Second Five-Year Review in 2010. A 2004 post-remediation soil investigation (from 0 to 10 feet bgs) indicated that the Site-wide 95% upper confidence limit for each of the three COCs (PCP, benzo[a]pyrene, and 2,3,7,8-TCDD) was well below its corresponding soil remediation cleanup standard. However, in 2006, DTSC instructed SCE to remove one PCP "hot spot" area where the investigation had shown one sample at the one-foot depth interval where the PCP soil concentration exceeded the Site soil cleanup level. After the excavation, confirmation soil sample results for PCP were all non-detect below the Site cleanup level of for PCP. The excavation was backfilled to grade with clean fill material. No further investigative or remedial actions have taken place since that time.

## Groundwater

No groundwater monitoring or remediation activities have taken place since the Second Five-Year Review in 2010 because the remedial action objectives of the ROD have been met. The last and most recent groundwater sampling data were collected and analyzed from June 2004 through June 2007. In April 2008, SCE submitted a data review report presenting and analyzing the post-remediation monitoring program. SCE used the data from this submittal to calculate the upper 95% confidence level for concentrations of PCP, benzo[*a*]pyrene, and 2,3,7,8-TCDD in the intermediate and deep aquifers, as shown in Table 5.

**Table 5. Upper 95% Confidence Level for Post-Remediation Groundwater Data (2004 - 2007)**

	<b>PCP</b>	<b>Benzo[<i>a</i>]pyrene</b>	<b>2,3,7,8-TCDD</b>
<b>Site Groundwater Cleanup Level</b>	1.0 µg/L	0.20 µg/L	0.03 ng/L
<b>UCL<sub>95</sub> Intermediate Aquifer</b>	0.075 0 µg/L	0.055 0 µg/L	0.019 ng/L
<b>UCL<sub>95</sub> Deep Aquifer</b>	0.054 0 µg/L	0.03 0 µg/L	0.0053 ng/L

Statistical analysis of the groundwater data was reported in the 2010 Second Five-Year Review report and confirm that the Site cleanup levels have been met in both the intermediate and deep aquifer monitoring zones at the Site, except for two outliers that were found during a period with low water table elevations.

### **6.5. Site Inspection**

A site inspection was conducted on April 7, 2015 by Alana Lee, EPA Project Manager, Deena Stanley, DTSC Project Manager, and Bridget Floyd of the U.S. Army Corps of Engineers. Norm Goldstrom, City of Visalia Public Works Manager, also participated in the site inspection.

The purpose of the inspection was to assess the protectiveness of the remedy. During the inspection, it was confirmed that the property continues to be used in a manner consistent with the terms of the Environmental Covenant recorded on the property. The Site is currently being used for small office meeting space, parking of employee vehicles, work equipment, and salvage, as well as for storage of stockpiles of sand and rock. There was no evidence of prohibited site usages, including residences, hospitals, schools, or daycare facilities. There was no evidence of soil disturbance or water wells.

The Site Inspection Checklist and photographs are included in Appendix B.

### **6.6. Institutional Controls**

A “Covenant to Restrict Use of Property, Environmental Restriction” between SCE and the DTSC was recorded in Tulare County, California on May 23, 2007. The covenant outlines use restrictions, and Site O&M activities. Prohibited site uses include: residences, human hospitals, schools, and day care centers for children. Prohibited activities include: soil disturbance greater than ten feet below grade and the

installation of water wells for any purpose. The covenant also prohibits the disturbance of soil greater than 10 feet in depth without prior approval from DTSC and prohibits the installation of water wells for any purpose. The covenant requires the owner of the property to submit an annual inspection report to the DTSC for its approval by June 15th of each year.

During the site inspection conducted at the Site on April 7, 2015 by the City of Visalia Public Works Department, DTSC, and EPA, it was confirmed that the institutional controls continue to be effective.

## 7. Technical Assessment

### *7.1. Question A: Is the remedy functioning as intended by the decision documents?*

Yes. A review of site decision documents, including the 1994 ROD and the most recent site inspection as required to be performed by the site owner per the Environmental Covenant, indicate that the remedial measures are successful in meeting the Site cleanup goals and objectives (i.e., RAOs), and the remedy is functioning as intended.

The ROD/RAP soil and groundwater remediation goals and remedial action objectives have been achieved. Soil confirmation sampling in 2006 confirmed that the “hot spots” had been removed and that the soil cleanup levels have been met. Statistical analysis of the groundwater monitoring data collected from June 2004 through June 2007 indicate that the groundwater cleanup levels have been met in both the intermediate and deep aquifer zones at the Site.

### *7.2. Question B: Are the exposure assumptions, Toxicity Data, Cleanup Levels, and Remedial Action Objectives (RAOs) Used at the Time of Remedy Selection Still Valid?*

Yes. The exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of the remedy selection are still valid.

There have been no changes in exposure pathways since the ROD was issued.

Toxicity values for PCP, benzo[*a*]pyrene, and 2,3,7,8-TCDD have changed since the ROD. A comparison of cleanup goals to EPA’s RSLs determined that the cleanup values are within EPA’s health protective risk management excess cancer risk range of  $1 \times 10^{-6}$  to  $1 \times 10^{-4}$ . Non-cancer RSLs for 2,3,7,8-TCDD were lower than cleanup goals specified in the 1994 ROD; however, institutional controls in place prevent exposure to potentially contaminated residual soil and groundwater.

### *7.3. Question C: Has Any Other Information Come to Light That Could Call Into Question the Protectiveness of the Remedy?*

No. There is no other information that that has come to light which question the protectiveness of the remedy. There have been no natural disasters or changes in the physical conditions of the Site that would affect the protectiveness of the remedy. The site was sold to the City of Visalia and is used by the Public Works Department for office meeting space, a parking area for vehicles, and storage area of equipment and materials.

### *7.4. Technical Assessment Summary*

According to the data reviewed and the site inspection, the remedial actions have been completed and the soil and groundwater remediation goals and remedial action objectives have been achieved. There have been no changes in the physical conditions of the Site that would affect the protectiveness of the remedy, and, to the extent that there remains residual soil and groundwater contamination, restrictive covenants have been placed on the deed and recorded with Tulare County. Toxicity values for the three COCs at this Site have changed; however, there are institutional controls and access restrictions in place that prevent exposure to potentially contaminated soil and groundwater.

## **8. Issues**

No issues have been identified during this Five-Year Review that affect the protectiveness of the remedy.

## **9. Recommendations and Follow-up Actions**

No recommendations or follow-up actions have been identified during this Five-Year Review.

## **10. Protectiveness Statement**

The remedy at the Southern California Edison, Visalia Pole Yard Superfund Site is protective of human health and the environment because there are institutional controls in the form of restrictive covenants, as well as fencing and signage that prevent human exposure to potential residual soil contamination.

## **11. Next Review**

This is a statutory Site that requires ongoing Five-Year Reviews as long as waste is left on site that does not allow for unlimited use and unrestricted exposure. The next Five-Year Review will be due within five years of the signature date of this Five-Year Review report.

## **Appendix A: References and List of Documents Reviewed**

California Department of Toxic Substances Control, 2011, Letter to Southern California Edison regarding Final Monitoring Well Demolition, Visalia Pole Yard, Visalia, California, September 9, 2011.

City of Visalia, 2014, Visalia Pole Yard Annual Inspection Report, Visalia, California, June 16, 2014.

Southern California Edison, 2013, Notice of Property Conveyance, Southern California Edison Visalia Pole Yard, Visalia, California, May 17, 2013.

Tulare County, 2007, Covenant to Restrict Use of Property Environmental Restriction, Visalia Pole Yard, Visalia, California, Recorded May 23, 2007.

EPA, 1994, Record of Decision for Southern California Edison, Visalia Pole Yard Superfund Site, Visalia, California.

EPA, 2009, Remedial Action Report for Soil and Groundwater, Southern California Edison, Visalia Pole Yard Superfund Site, Visalia, California. May 14, 2009.

EPA, 2009, Final Close Out Report, Southern California Edison, Visalia Pole Yard Superfund Site, Visalia, California. May 19, 2009.

EPA, 2010, Second Five Year Review Report for Southern California Edison, Visalia Pole Yard Superfund Site, Visalia, California. July 21, 2010.

## **Appendix B: Site Inspection Checklist and Photographs**

# Five-Year Review Site Inspection Checklist

I. SITE INFORMATION													
<b>Site name:</b> Southern California Edison Visalia Pole Yard	<b>Date of inspection:</b> April 7, 2015												
<b>Location:</b> Visalia, California	<b>EPA ID:</b> CAD980816466												
<b>Agency Leading the Five-year Review</b> U.S. EPA Region 9	<b>Weather/temperature:</b> Cool and rainy. 52 degrees.												
<b>Remedy Includes:</b> (Check all that apply) <table style="width: 100%; border: none;"> <tr> <td><input checked="" type="checkbox"/> Access controls</td> <td><input type="checkbox"/> Groundwater containment</td> </tr> <tr> <td><input checked="" type="checkbox"/> Institutional controls</td> <td><input type="checkbox"/> Vertical barrier walls</td> </tr> <tr> <td><input type="checkbox"/> Groundwater pump and treatment</td> <td><input type="checkbox"/> Landfill cover/containment</td> </tr> <tr> <td><input type="checkbox"/> Surface water collection and treatment</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Monitored natural attenuation</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other: <i>e.g. Groundwater monitoring</i></td> <td></td> </tr> </table>		<input checked="" type="checkbox"/> Access controls	<input type="checkbox"/> Groundwater containment	<input checked="" type="checkbox"/> Institutional controls	<input type="checkbox"/> Vertical barrier walls	<input type="checkbox"/> Groundwater pump and treatment	<input type="checkbox"/> Landfill cover/containment	<input type="checkbox"/> Surface water collection and treatment		<input type="checkbox"/> Monitored natural attenuation		<input type="checkbox"/> Other: <i>e.g. Groundwater monitoring</i>	
<input checked="" type="checkbox"/> Access controls	<input type="checkbox"/> Groundwater containment												
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<input type="checkbox"/> Surface water collection and treatment													
<input type="checkbox"/> Monitored natural attenuation													
<input type="checkbox"/> Other: <i>e.g. Groundwater monitoring</i>													
<b>Attachments:</b> Site Visit Photographs													
II. SITE INSPECTION TEAM													
Alana Lee	EPA Region 9 Project Manager	415.972.3141	<a href="mailto:Lee.Alana@epa.gov">Lee.Alana@epa.gov</a>										
Deena Stanley	DTSC Project Manager	916.255.6583	<a href="mailto:Deena.Stanley@dtsc.gov">Deena.Stanley@dtsc.gov</a>										
Norm Goldstrom	City of Visalia Public Works Dept Manager	559.713.4186	<a href="mailto:Ngoldstrom@ci.visalia.ca.us">Ngoldstrom@ci.visalia.ca.us</a>										
Bridget Floyd	U.S. Army Corps of Engineers Sacramento	916.557.7328	<a href="mailto:Bridget.m.floyd@usace.army.mil">Bridget.m.floyd@usace.army.mil</a>										
<input type="checkbox"/>													

# Five-Year Review Site Inspection Checklist

3. **Local regulatory authorities and response agencies.**

Agency Department of Toxic Substances Control

Contact Deena Stanley Project Manager 916.255.6853  
 Title Phone no.

E-mail: [Deena.Stanley@dtsc.gov](mailto:Deena.Stanley@dtsc.gov)

Agency \_\_\_\_\_  
 Contact \_\_\_\_\_  
 Name Title Date Phone no.

Problems; suggestions;  Report attached \_\_\_\_\_

Agency \_\_\_\_\_  
 Contact \_\_\_\_\_  
 Name Title Date Phone no.

Problems; suggestions;  Report attached \_\_\_\_\_

Agency \_\_\_\_\_  
 Contact \_\_\_\_\_  
 Name Title Date Phone no.

Problems; suggestions;  Report attached \_\_\_\_\_

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4. **Other interviews** (optional)  Report attached.

---

**III. ON-SITE DOCUMENTS & RECORDS VERIFIED** (Check all that apply)

1. **O&M Documents**

O&M manual  Readily available  Up to date  N/A

As-built drawings  Readily available  Up to date  N/A

Maintenance logs  Readily available  Up to date  N/A

Remarks \_\_\_\_\_

---

2. **Site-Specific Health and Safety Plan**  Readily available  Up to date  N/A

Contingency plan/emergency response plan  Readily available  Up to date  N/A

Remarks \_\_\_\_\_

# Five-Year Review Site Inspection Checklist

3.	<b>Groundwater Monitoring Records</b>	<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks				
4.	<b>Permits and Service Agreements</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input type="checkbox"/> Effluent discharge	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Waste disposal, POTW	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Other permits _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks				
5.	<b>Gas Generation Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks				
6.	<b>Settlement Monument Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks				
7.	<b>O&amp;M and OSHA Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks				
8.	<b>Leachate Extraction Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks				
9.	<b>Discharge Compliance Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks				
10.	<b>Daily Access/Security Logs</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks				

# Five-Year Review Site Inspection Checklist

<b>IV. O&amp;M COSTS</b>																																																	
1.	<p><b>O&amp;M Organization</b></p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> State in-house  <input type="checkbox"/> PRP in-house  <input type="checkbox"/> Federal Facility in-house  <input checked="" type="checkbox"/> Other                 </div> <div style="width: 45%;"> <input type="checkbox"/> Contractor for State  <input type="checkbox"/> Contractor for PRP  <input type="checkbox"/> Contractor for Federal Facility                 </div> </div> <p>The property owner, City of Visalia, conducts an annual site inspection and maintains the access restrictions. Monitoring costs are minimal.</p>																																																
2.	<p><b>O&amp;M Cost Records</b></p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> Readily available                      Original O&amp;M cost estimate _____                 </div> <div style="width: 30%;"> <input type="checkbox"/> Up to date                 </div> <div style="width: 30%;"> <input type="checkbox"/> Funding mechanism/agreement in place  <input type="checkbox"/> Breakdown attached                 </div> </div> <p style="text-align: center;">Total annual cost by year for review period if available</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">From _____</td> <td style="width: 20%;">To _____</td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">Total cost</td> <td style="text-align: center;">_____</td> <td style="text-align: center;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td></td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">Total cost</td> <td style="text-align: center;">_____</td> <td style="text-align: center;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td></td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">Total cost</td> <td style="text-align: center;">_____</td> <td style="text-align: center;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td></td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">Total cost</td> <td style="text-align: center;">_____</td> <td style="text-align: center;"><input type="checkbox"/> Breakdown attached</td> </tr> </table>	From _____	To _____					Date	Date	_____	Total cost	_____	<input type="checkbox"/> Breakdown attached	From _____	To _____				<input type="checkbox"/> Breakdown attached	Date	Date	_____	Total cost	_____	<input type="checkbox"/> Breakdown attached	From _____	To _____				<input type="checkbox"/> Breakdown attached	Date	Date	_____	Total cost	_____	<input type="checkbox"/> Breakdown attached	From _____	To _____				<input type="checkbox"/> Breakdown attached	Date	Date	_____	Total cost	_____	<input type="checkbox"/> Breakdown attached
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From _____	To _____				<input type="checkbox"/> Breakdown attached																																												
Date	Date	_____	Total cost	_____	<input type="checkbox"/> Breakdown attached																																												
3.	<p><b>Unanticipated or Unusually High O&amp;M Costs During Review Period</b></p> <p>Describe costs and reasons:</p>     																																																
<p><b>V. ACCESS AND INSTITUTIONAL CONTROLS</b>    <input type="checkbox"/> N/A    <input checked="" type="checkbox"/> Applicable</p>																																																	
<b>A. Fencing</b>																																																	
1.	<p><b>Fencing damaged</b>    <input type="checkbox"/> Location shown on site map    <input type="checkbox"/> Gates secured    <input type="checkbox"/> N/A</p> <p>Remarks Fencing in good repair.</p>																																																
<b>B. Other Access Restrictions</b>																																																	
1.	<p><b>Signs and other security measures</b>    <input type="checkbox"/> Location shown on site map    <input checked="" type="checkbox"/> N/A</p> <p>Remarks</p>																																																

# Five-Year Review Site Inspection Checklist

<b>C. Institutional Controls (ICs)</b>															
1.	<b>Implementation and enforcement</b> Site conditions imply ICs not properly implemented <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Site conditions imply ICs not being fully enforced <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A  Type of monitoring (e.g., self-reporting, drive by) <u>City of Visalia Public Works on Site during normal business hours.</u> Frequency: <u>Business work days</u> Responsible party/agency: <u>City of Visalia Public Works Department</u> Contact: <u>Norm Goldstrom</u> <u>Public Works Manager</u> <u>4/7/2015</u> <u>559.713.4186</u>														
	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Name</td> <td style="text-align: center;">Title</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Phone no.</td> </tr> <tr> <td>Reporting is up-to-date</td> <td></td> <td><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</td> <td></td> </tr> <tr> <td>Reports are verified by the lead agency</td> <td></td> <td><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</td> <td></td> </tr> </table>	Name	Title	Date	Phone no.	Reporting is up-to-date		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		Reports are verified by the lead agency		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Name	Title	Date	Phone no.												
Reporting is up-to-date		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A													
Reports are verified by the lead agency		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A													
	Specific requirements in deed or decision documents have been met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Violations have been reported <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other problems or suggestions: <input type="checkbox"/> Report attached  <u>The City of Visalia plans to pave the Site.</u>														
2.	<b>Adequacy</b>	<input checked="" type="checkbox"/> ICs are adequate	<input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A												
Remarks															
<b>D. General</b>															
1.	<b>Vandalism/trespassing</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident during inspection												
Remarks <u>Vandalism at the Site by transients occurs occasionally. Immediately fixed by City of Visalia Public Works Department.</u>															
2.	<b>Land use changes on site</b>	<input type="checkbox"/> N/A													
Remarks <u>Small new office building for City of Visalia Public Works. Used as meeting space.</u>															
3.	<b>Land use changes off site</b>	<input type="checkbox"/> N/A													
Remarks <u>New vacant building adjacent to site.</u>															
<b>VI. GENERAL SITE CONDITIONS</b>															
<b>A. Roads</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A															
1.	<b>Roads damaged</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Roads adequate <input checked="" type="checkbox"/> N/A												
Remarks															

# Five-Year Review Site Inspection Checklist

<b>B. Other Site Conditions</b>		
Remarks		
<b>VII. LANDFILL COVERS</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
<b>A. Landfill Surface</b>		
1.	<b>Settlement</b> (Low spots) Areal extent _____ Depth _____ Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident <input type="checkbox"/>
2.	<b>Cracks</b> Lengths _____    Widths _____    Depths _____ Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Cracking not evident <input type="checkbox"/>
3.	<b>Erosion</b> Areal extent _____ Depth _____ Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident <input type="checkbox"/>
4.	<b>Holes</b> Areal extent _____ Depth _____ Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Holes not evident <input type="checkbox"/>
5.	<b>Vegetative Cover</b> _____ Remarks	<input type="checkbox"/> Grass <input type="checkbox"/> Cover properly established <input type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram)
6.	<b>Alternative Cover (armored rock, concrete, etc.)</b> Remarks	<input type="checkbox"/> N/A
7.	<b>Bulges</b> Areal extent _____ Height _____ Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Bulges not evident <input type="checkbox"/>

# Five-Year Review Site Inspection Checklist

8.	<b>Wet Areas/Water Damage</b> <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade Remarks	<input type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Location shown on site map      Areal extent _____ <input type="checkbox"/> Location shown on site map      Areal extent _____ <input type="checkbox"/> Location shown on site map      Areal extent _____ <input type="checkbox"/> Location shown on site map      Areal extent _____	
9.	<b>Slope Instability</b> <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks		
<b>B. Benches</b> <input type="checkbox"/> N/A <input type="checkbox"/> Applicable (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)			
1.	<b>Flows Bypass Bench</b> Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay	
2.	<b>Bench Breached</b> Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay	
3.	<b>Bench Overtopped</b> Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay	
<b>C. Letdown Channels</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)			
1.	<b>Settlement</b> Areal extent _____      Depth _____ Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of settlement	
2.	<b>Material Degradation</b> Material type _____      Areal extent _____ Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of degradation	
3.	<b>Erosion</b> Areal extent _____      Depth _____ Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of erosion	

# Five-Year Review Site Inspection Checklist

4.	<b>Undercutting</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
	Areal extent _____	Depth _____	
	Remarks		
5.	<b>Obstructions</b>	Type _____	<input type="checkbox"/> No obstructions <input type="checkbox"/> Location shown on site map
	Areal extent _____	Size _____	
	Remarks		
6.	<b>Excessive Vegetative Growth</b>	Type _____	
	<input type="checkbox"/> No evidence of excessive growth		
	<input type="checkbox"/> Vegetation in channels does not obstruct flow		
	<input type="checkbox"/> Location shown on site map	Areal extent _____	
	Remarks		
<b>D. Cover Penetrations</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	<b>Gas Vents</b>	<input type="checkbox"/> N/A <input type="checkbox"/> Active <input type="checkbox"/> Passive <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning	
		<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration	
	Remarks		
2.	<b>Gas Monitoring Probes</b>	<input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition	
		<input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A	
	Remarks		
3.	<b>Monitoring Wells</b> (within surface area of landfill)	<input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition	
		<input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A	
	Remarks		
4.	<b>Leachate Extraction Wells</b>	<input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition	
		<input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A	
	Remarks		
5.	<b>Settlement Monuments</b>	<input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A	
	Remarks		

# Five-Year Review Site Inspection Checklist

<b>E. Gas Collection and Treatment</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Gas Treatment Facilities</b>	<input type="checkbox"/> Flaring <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks	
2.	<b>Gas Collection Wells, Manifolds and Piping</b>	<input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks	
3.	<b>Gas Monitoring Facilities</b> ( <i>e.g.</i> , gas monitoring of adjacent homes or buildings)	<input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks	
<b>F. Cover Drainage Layer</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Outlet Pipes Inspected</b>	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks			
2.	<b>Outlet Rock Inspected</b>	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks			
<b>G. Detention/Sedimentation Ponds</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Siltation</b>	<input type="checkbox"/> N/A <input type="checkbox"/> Siltation not evident Areal extent _____ Depth _____ Remarks	
2.	<b>Erosion</b>	Areal extent _____ Depth _____ <input type="checkbox"/> Erosion not evident Remarks	
3.	<b>Outlet Works</b>	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks			
4.	<b>Dam</b>	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks			

# Five-Year Review Site Inspection Checklist

<b>H. Retaining Walls</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Deformations</b> Horizontal displacement _____ Rotational displacement _____ Remarks	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident Vertical displacement _____
2.	<b>Degradation</b> Remarks	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
<b>I. Perimeter Ditches/Off-Site Discharge</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Siltation</b> Areal extent _____ Remarks	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Siltation not evident
2.	<b>Vegetative Growth</b> Areal extent _____ Remarks	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Vegetation does not impede flow Type _____	<input type="checkbox"/> N/A
3.	<b>Erosion</b> Areal extent _____ Remarks	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Erosion not evident
4.	<b>Discharge Structure</b> Remarks	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
<b>VIII. VERTICAL BARRIER WALLS</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Settlement</b> Areal extent _____ Remarks	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Settlement not evident
2.	<b>Performance Monitoring</b> Type of monitoring _____ <input type="checkbox"/> Performance not monitored Frequency _____ Remarks	Evidence of breaching <input type="checkbox"/>	Head differential _____
<b>IX. GROUNDWATER/SURFACE WATER REMEDIES</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
<b>A. Groundwater Extraction Wells, Pumps, and Pipelines</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Pumps, Wellhead Plumbing, and Electrical</b> Remarks	<input type="checkbox"/> Good condition	<input type="checkbox"/> All required wells properly operating <input type="checkbox"/> Needs Maintenance <input checked="" type="checkbox"/> N/A

# Five-Year Review Site Inspection Checklist

2.	<b>Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances</b> <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks
3.	<b>Spare Parts and Equipment</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks
<b>B. Surface Water Collection Structures, Pumps, and Pipelines</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	<b>Collection Structures, Pumps, and Electrical</b> <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks
2.	<b>Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances</b> <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks
3.	<b>Spare Parts and Equipment</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks
<b>C. Treatment System</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	<b>Treatment Train</b> (Check components that apply) <input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters _____ <input type="checkbox"/> Additive ( <i>e.g.</i> , chelation agent, flocculent) _____ <input type="checkbox"/> Others _____ <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ Remarks
2.	<b>Electrical Enclosures and Panels</b> (properly rated and functional) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks

# Five-Year Review Site Inspection Checklist

3.	<p><b>Tanks, Vaults, Storage Vessels</b></p> <p> <input type="checkbox"/> N/A                <input type="checkbox"/> Good condition                <input type="checkbox"/> Proper secondary containment                <input type="checkbox"/> Needs Maintenance         </p> <p>Remarks</p>
4.	<p><b>Discharge Structure and Appurtenances</b></p> <p> <input type="checkbox"/> N/A                <input type="checkbox"/> Good condition                <input type="checkbox"/> Needs Maintenance         </p> <p>Remarks</p>
5.	<p><b>Treatment Building(s)</b></p> <p> <input type="checkbox"/> N/A                <input type="checkbox"/> Good condition (esp. roof and doorways)                <input type="checkbox"/> Needs repair         </p> <p> <input type="checkbox"/> Chemicals and equipment properly stored         </p> <p>Remarks</p>
6.	<p><b>Monitoring Wells</b> (pump and treatment remedy)</p> <p> <input type="checkbox"/> Properly secured/locked                <input type="checkbox"/> Functioning                <input type="checkbox"/> Routinely sampled                <input type="checkbox"/> Good condition         </p> <p> <input type="checkbox"/> All required wells located                <input type="checkbox"/> Needs Maintenance                <input checked="" type="checkbox"/> N/A         </p> <p>Remarks</p>
<b>D. Monitoring Data – Not Applicable</b>	
1.	<p>Monitoring Data</p> <p> <input type="checkbox"/> Is routinely submitted on time                <input type="checkbox"/> Is of acceptable quality         </p>
2.	<p>Monitoring data suggests:</p> <p> <input type="checkbox"/> Groundwater plume is effectively contained                <input type="checkbox"/> Contaminant concentrations are declining         </p>
<b>D. Monitored Natural Attenuation – Not Applicable</b>	
1.	<p><b>Monitoring Wells</b> (natural attenuation remedy)</p> <p> <input type="checkbox"/> Properly secured/locked                <input type="checkbox"/> Functioning                <input type="checkbox"/> Routinely sampled                <input type="checkbox"/> Good condition         </p> <p> <input type="checkbox"/> All required wells located                <input type="checkbox"/> Needs Maintenance                <input checked="" type="checkbox"/> N/A         </p> <p>Remarks</p>
<b>X. OTHER REMEDIES</b>	
<p>If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.</p>	

# Five-Year Review Site Inspection Checklist

<b>XI. OVERALL OBSERVATIONS</b>	
<b>A. Implementation of the Remedy</b>	<p>Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).</p> <p>The Site property is mostly vacant except for a small office building located in the center of the property used by the City of Visalia Public Works Department/. Access controls and institutional controls, which include deed restrictions and restrictions on water wells in the vicinity of the Site, are effective. The Site cleanup levels have been achieved and the Site was de-listed from the National Priorities List in September 2009. Remedial actions have been completed and included groundwater pumping and treatment, excavation, bioremediation, steam remediation, and a slurry wall. The slurry wall is still in place but is not inspected or maintained. There is no groundwater monitoring and the monitoring wells have been properly destroyed.</p>
<b>B. Adequacy of O&amp;M</b>	<p>Describe issues and observations related to the implementation and scope of O&amp;M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.</p> <p>The O&amp;M is adequate. The O&amp;M schedule consists of an annual site inspection and repairs due to minor incidents of vandalism are addressed by the Public Works Department immediately.</p>
<b>C. Early Indicators of Potential Remedy Problems</b>	<p>Describe issues and observations such as unexpected changes in the cost or scope of O&amp;M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.</p> <p>No indicators of potential remedy problems were observed that affect long-term protectiveness.</p>
<b>D. Opportunities for Optimization</b>	<p>Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.</p> <p>No opportunities for optimization identified. The remedial actions are completed. This Site does not require active regulatory agency oversight.</p>

**Southern California Edison Visalia Pole Yard – Site Visit Photographs – April 7, 2015**



**View from the Office Building to the Northeast**



**View from the Office Building to the North**



**View from the Office Building to the Northwest**



**View from the Office Building to the East**

**Southern California Edison Visalia Pole Yard – Site Visit Photographs – April 7, 2015**



**Interior of the Office Building**



**Gate on the East side of the property**



**Lock on the East gate fence**

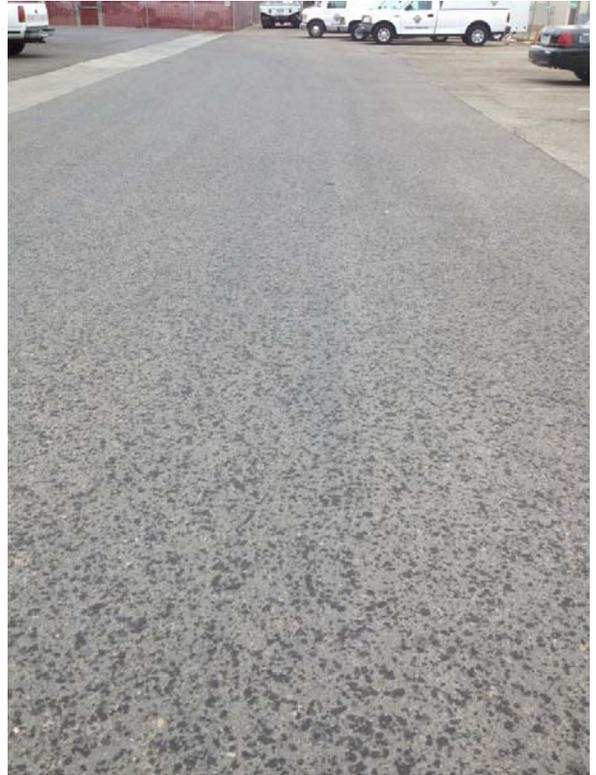


**Fence around the perimeter of the site. Leaning but effective.**

**Southern California Edison Visalia Pole Yard – Site Visit Photographs – April 7, 2015**



**Location of a destroyed monitoring well**



**Location of former monitoring wells. Recently repaved.**



**Location of former extraction well (1).**



**Location of former extraction well (2).**

**Southern California Edison Visalia Pole Yard – Site Visit Photographs – April 7, 2015**



**Location of former off site extraction well. (3)**



**Aerial view of location of new office building.  
(Google Maps)**

Photos taken by Bridget Floyd, U.S. Army Corps of Engineers