Five Year Review Report

Second Five Year Review Report
For
Southern California Edison Company,
Visalia Pole Yard Superfund Site, Visalia
Tulare County, California

Five Year Review

July 2010

Prepared By:

United States Environmental Protection Agency
Region 9
San Francisco, California

Approved By:

Kathleen Salyer,
Assistant Director,
Superfund Division,
California Site Cleanup Branch

7/21/10 Date
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<td>ARAR</td>
<td>Applicable or Relevant and Appropriate Requirement</td>
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<tr>
<td>C&amp;AO</td>
<td>Cleanup and Abatement Order</td>
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<td>Chemicals of Concern</td>
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<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
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<td>Explanation of Significant Differences</td>
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<td>EPA</td>
<td>United States Environmental Protection Agency</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
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<td>DTSC</td>
<td>California Department of Toxic Substances Control</td>
</tr>
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<td>MCL</td>
<td>Maximum Contaminant Level</td>
</tr>
<tr>
<td>NAS</td>
<td>National Academy of Sciences</td>
</tr>
<tr>
<td>NCP</td>
<td>National Contingency Plan</td>
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<td>NPL</td>
<td>National Priorities List</td>
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<tr>
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<td>Operation and Maintenance</td>
</tr>
<tr>
<td>PCP</td>
<td>Pentachlorophenol</td>
</tr>
<tr>
<td>RA</td>
<td>Remedial Action</td>
</tr>
<tr>
<td>RAO</td>
<td>Remedial Action Objective</td>
</tr>
<tr>
<td>RAP</td>
<td>Remedial Action Plan</td>
</tr>
<tr>
<td>RD</td>
<td>Remedial Design</td>
</tr>
<tr>
<td>RI/FS</td>
<td>Remedial Investigation/Feasibility Study</td>
</tr>
<tr>
<td>ROD</td>
<td>Record of Decision</td>
</tr>
<tr>
<td>RPM</td>
<td>Remedial Project Manager</td>
</tr>
<tr>
<td>SCE</td>
<td>Southern California Edison</td>
</tr>
<tr>
<td>WTC</td>
<td>Wood Treating Chemicals</td>
</tr>
<tr>
<td>WTP</td>
<td>Wood Treating Plant</td>
</tr>
</tbody>
</table>
Executive Summary

The Southern California Edison, Visalia Pole Yard (VPY) Superfund Site in Visalia, California employed several different cleanup technologies and practices over its thirty-five year remediation history including: groundwater pump and treat systems, in-situ bioremediation, steam remediation, and soils excavation. Collectively, these technologies and practices were effective in meeting the Site’s soil and groundwater remedial goals and objectives specified in the ROD. Additionally, a land use covenant and security measures (e.g., fencing, warning signs) are in place, which prohibit certain uses (e.g., residences, human hospitals, schools, and day care centers for children) and activities (e.g., soil disturbance greater than ten feet below grade, and the installation of water wells for any purpose), and access, respectively. The Site has been deleted from National Priority List (NPL).

The trigger for this Five-Year Review was the last Five-Year Review report completed in September 2005. The assessment of this Five-Year Review found that the remedy is protective of human health and the environment.
# Five-Year Review Summary Form

## SITE IDENTIFICATION

<table>
<thead>
<tr>
<th>Site name:</th>
<th>Southern California Edison, Visalia Pole Yard (VPY) Superfund Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA ID:</td>
<td>CAD980816466</td>
</tr>
<tr>
<td>Region:</td>
<td>9</td>
</tr>
<tr>
<td>State:</td>
<td>CA</td>
</tr>
<tr>
<td>City/County:</td>
<td>Visalia/Tulare County</td>
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</table>

## SITE STATUS

<table>
<thead>
<tr>
<th>NPL status:</th>
<th>X Deleted ( ) Other (specify)</th>
</tr>
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<tbody>
<tr>
<td>Remediation status</td>
<td>( ) Under Construction ( ) Operating (X) Complete</td>
</tr>
<tr>
<td>Multiple OUs?:</td>
<td>( ) YES (X) NO</td>
</tr>
<tr>
<td>Construction completion date:</td>
<td>09/25/2001</td>
</tr>
<tr>
<td>Has site been put into reuse?:</td>
<td>( ) YES (X) NO</td>
</tr>
</tbody>
</table>

## REVIEW STATUS

<table>
<thead>
<tr>
<th>Lead agency:</th>
<th>(X) EPA ( ) State ( ) Tribe ( ) Other Federal Agency ______________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author name:</td>
<td>Charnjit Bhullar</td>
</tr>
<tr>
<td>Author title:</td>
<td>Remedial Project Manger</td>
</tr>
<tr>
<td>Author affiliation:</td>
<td>USEPA</td>
</tr>
<tr>
<td>Review period:</td>
<td>** 1/10/2010 to 04/01/2010 **</td>
</tr>
<tr>
<td>Date(s) of site inspection:</td>
<td>2/25/10</td>
</tr>
<tr>
<td>Type of review:</td>
<td>( ) Post-SARA ( ) Pre-SARA ( ) NPL-Removal only</td>
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<tr>
<td></td>
<td>( ) Non-NPL Remedial Action Site (X) NPL State/Tribe-lead</td>
</tr>
<tr>
<td></td>
<td>( ) Regional Discretion</td>
</tr>
<tr>
<td>Review number:</td>
<td>( ) (first) ( X ) (second) ( ) (third) ( ) Other (specify) __________</td>
</tr>
<tr>
<td>Triggering action:</td>
<td>( ) Actual RA Onsite Construction ( X ) Actual RA Start at OU#____</td>
</tr>
<tr>
<td></td>
<td>( ) Construction Completion ( X ) Previous Five-Year Review Report</td>
</tr>
<tr>
<td></td>
<td>( ) Other (specify)</td>
</tr>
<tr>
<td>Triggering action date:</td>
<td>09/30/ 2005</td>
</tr>
<tr>
<td>Due date:</td>
<td>09/30/ 2010</td>
</tr>
</tbody>
</table>

* [OU* refers to operable unit.]
** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]
**Five-Year Review Summary Form, cont’d.**

**Issues:** There are no issues that affect protectiveness.

**Protectiveness Statement(s):**

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 Priority List (NPL). The restrictive covenants have been in place since May 23, 2007.
I. Introduction

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

The Agency is preparing this Five-Year Review Report pursuant to CERCLA §121 and the National Contingency Plan (NCP). CERCLA §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 judgement 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.

The Agency interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) 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 action no less often than every five years after the initiation of the selected remedial action.

This is the second Five-Year Review for the VPY Superfund Site (hereinafter VPY or Site). The triggering action for this statutory review is the date of the first Five-Year Review, which was completed in September 2005. 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.

II. Site Chronology

- 1925 – 1980 – VPY Operational History
- 1976 – Ground Water Pumping and Treatment Initiated as a Cleanup & Abatement Order (CAO)
- 1977 – Grout Wall Completed
- 1985 – Phase 1 Groundwater Treatment Plant Implemented
- 1987 – DTSC Superfund Site, Enforceable Agreement
- 1987 – Phase 2 Water Treatment Plant Implemented
- 1989 – VPY Listed on the NPL as a Superfund Site
• 1992 – Remedial Investigation/Feasibility Study (RI/FS) Completed
• 1994 – Remedial Action Plan/Record of Decision (RAP/ROD) Signed
• 1995 – Regulatory Approval for Thermal Remediation
• 1996 – Design and Construction of Thermal Remediation System
• 1997 – Full-Scale Pilot Test of Remedial Action Initiated
• 2003 – DTSC Approved Certification of the Remedial Action Completion
• 2004 – DTSC Approved Certification of the RA Monitoring Program
• 2004 – Groundwater Pumping Concluded
• 2005 – First Five Year Review Completed
• 2007 – Covenant to Restrict Use of Property recorded
• 2009 – Remedial Action Report Completed
• 2009 – Final Close Out Report Completed
• 2009 – Site De-listed From the National Priority List

III. Background

Physical Characteristics

The Site is located at 432 North Ben Maddox Way in northeastern Visalia, Tulare County, California. Visalia is approximately halfway between Fresno and Bakersfield in the Central Valley. Agriculture is the primary industry in the Visalia area.

Land and Resource Use

Since the submittal of the Remedial Investigation (RI) report, the demographic land usage around the immediate site vicinity remains largely designated for industrial, commercial, and residential uses. Southern California Edison (SCE) currently owns and maintains the site and the property is vacant. Currently, there are no specific redevelopment plans for the Site. The City of Visalia, which has purchased all of the surrounding property, formerly owned by SCE, has indicated an interest in purchasing the property. It is understood the City would expand their current General Services operations and use the property for vehicle storage and other associated operations consistent with the use restrictions on the property.

History of Contamination

From 1925 to 1980, SCE operated the VPY 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 1980, 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 pentachlorophenol and diesel (petroleum hydrocarbons) was substituted as the preservative used in the wood preservation process; this preservative contained low levels of dioxin and furan; byproduct impurities of the PCP manufacturing process. During the service life of the VPY, significant volumes of chemical preservatives were released into subsurface soils and groundwater. Groundwater contamination was first discovered in an on-site well in 1966. Hydrogeologic investigations were conducted between 1966 and 1975 to determine the nature and extent of contamination.

The types of chemicals found at the VPY include creosote compounds, PCP, and its associated impurities including tetrachlorodibenzo-p-dioxin (TCDD_{eqv}). The sources of chemical releases of creosote and PCP were primarily leakage from piping between the storage tanks and treatment tanks and cracks in the treatment tanks.

Basis for Taking Action

Hazardous substances released at the Site included pentachlorophenol (PCP), Benzo(a)Pyrene and dioxin (TCDD_{eqv}). Without remediation, exposure to contaminated soil and groundwater could result in significant human health risks.

IV. Remedial Actions

Remedial Action Objectives/Remedy Selection

The RAP/ROD for the VPY was signed in 1994. The Remedial Action Objectives (RAOs) for the Site are: 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 VPY soil and groundwater cleanup levels needed to achieve these objectives are given in the table below.

### VPHY Soil and Groundwater Cleanup Levels

<table>
<thead>
<tr>
<th>Chemical of Concern</th>
<th>Soil Clean Up Levels</th>
<th>Groundwater Clean Up Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentachlorophenol (PCP)</td>
<td>17 mg/kg</td>
<td>1 µg/L</td>
</tr>
<tr>
<td>Benzo(a)Pyrene</td>
<td>0.39 mg/kg</td>
<td>0.2 µg/L</td>
</tr>
<tr>
<td>TCDD_{eqv}</td>
<td>1 µg/kg</td>
<td>30 pg/L</td>
</tr>
</tbody>
</table>
The major components of the remedy selected to achieve the RAOs and cleanup levels included the following:

1. Bioremediation technologies to remedy the soil contamination, with soil capping, if necessary;
2. Continued use of the existing physical and chemical groundwater treatment system and implementing in-situ bioremediation as an additional treatment system;
3. Institutional Controls to prevent unauthorized borings, earthwork and well construction; limit site activities to commercial or industrial uses only; and make future buyers aware of the site’s environmental history;
4. Restrict property access with engineering controls such as controlled access, fencing, and signage;
5. Enhanced in-situ biological technology;
6. Controls such as fencing and signage;
7. Deed restrictions to limit exposure;
8. Restriction of well installation around the Site which may have adverse effect on groundwater remediation; and,
9. Continued operation of the already in place groundwater extraction and treatment system.

Remedy Implementation

Cleanup activities were first initiated in 1975 with the installation of extraction wells to remove and discharge contaminated groundwater to the local Publicly Owned Treatment Works. This action was followed by construction of the slurry wall in 1976-77 to prevent further downgradient migration of wood-treating chemicals (“WTCs”) in groundwater. Additionally, an on-site water treatment plant (WTP) consisting of filtration and adsorption system was built in 1985 and was successful in removing the chemicals of concern (COCs) from the extracted groundwater. The WTP was modified with additional filtration and gravity separation in 1987, which optimized plant performance by minimizing hazardous waste generation.

In 1997, a pilot study, the Visalia Steam Remediation Project (VSRP), was initiated which used steam injection to mobilize COCs. The VSRP system consisted of a steam injection system (four 50,000 lb/hr steam boilers connected to eleven injection wells placed around the periphery of the WTC 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. Following cessation of the VSRP, an enhanced biological degradation system was installed and operated (SCE, 2001) to augment existing physical processes that were initiated by Dynamic Underground Stripping (DUS) and to encourage natural biological processes to flourish.

A “Covenant to Restrict Use of Property, Environmental Restriction”, between Southern
California Edison and the Department of Toxic Substances Control (DTSC), was recorded in Tulare County, California on May 23, 2007. The Covenant outlines use restrictions, and Site operation and maintenance (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 below 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.

System Operation and Maintenance (O&M) Costs

The WTP pumped, treated, and discharged an average of 0.36 million gallons of water per day between 1985 until March of 1997, when the volume of water was treated increased to approximately 0.5 million gallons per day. When the groundwater treatment plant was in operation from 1984 to 2004, the annual O&M costs were approximately $1,000,000 per year. The groundwater treatment plant ceased operation in 2004.

The VSRP 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 feet below ground surface (bgs). 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 continued until June 2000, when a precipitous drop in the rate of removal of WTCs was observed.

The DUS system was in operation from June 2000 until March 2004. It included vadose zone bio-venting and saturated zone bio-sparging, coupled with continued groundwater pump-and-treat operation.

 Approximately $21,300,000 was spent on the development, operation, and maintenance of the VSRP and DUS systems from 1996 to 2004.

V. Progress Since the Last Review

Since the last Five Year Review in 2005, issues identified in that Review as well the completion of site closure and site delisting activities have been completed.

The previous Five Year Review identified two issues: a residual “hot spot” of TCDD contaminated soil and a lack of institutional controls. On July 20, 2006, the residual TCDD soil “hot spot” was removed, verified with confirmation soil sample analytical results, and the hole was backfilled to grade with clean material. As described previously, a restrictive covenant was placed on the Site property and recorded with Tulare County.

In 2008, SCE submitted a Remedial Action Completion Report (RACR), to DTSC and EPA and requested that the Site be delisted from the NPL. After DTSC approved the
RACR report, EPA prepared its federal equivalent reports, a Remedial Action Report, a Final Close Out Report, and the site delisting package (which included Federal Register (FR) Notices). The FR Notices were published in July 2009, and the Site was delisted 60 days after the publishing date since no adverse comments were received. The NPL site deletion date for the VPY Site was September 25, 2009.

VI. Five-Year Review Process

The Five Year Review team included project managers from EPA, Charnjit Bhullar, DTSC, Sam Martinez, and SCE, Craig Eaker. The team established the schedule for Community Notification, Document Review, Data Review, Site Inspection, and the development and review schedule for the Five-Year Review Report.

Community Notification

Community involvement included a public notice in Visalia Times-Delta on April 29, 2010, notifying the community of the initiation of this Five Year Review and informed the community that the Five Year Review document will be available in Tulare County Library, 200 West Oak Street, Visalia, CA 93291.

Document Review


Data Review

Groundwater

Groundwater monitoring 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, shown below, to calculate the upper 95% confidence level for concentrations of PCP, benzo(a)pyrene, and TCDD_{eqv.} in the intermediate and deep aquifers.
Site-Wide Average Groundwater Concentrations
Three - Year Compliance Demonstration Period

<table>
<thead>
<tr>
<th></th>
<th>PCP</th>
<th>Benzo(a)pyrene</th>
<th>TCDD eqv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Up Levels</td>
<td>1.0 ug/L</td>
<td>0.2 ug/L</td>
<td>0.03 ng/L</td>
</tr>
<tr>
<td>UCL_{95} Int. Aquifer</td>
<td>0.075 ug/L</td>
<td>0.055 ug/L</td>
<td>0.019 ng/L</td>
</tr>
<tr>
<td>UCL_{95} Deep Aquifer</td>
<td>0.054 ug/L</td>
<td>0.03 ug/L</td>
<td>0.0053 ng/L</td>
</tr>
</tbody>
</table>

The statistical analysis of the groundwater data demonstrated that the cleanup levels had been met in both the intermediate and deep monitoring zones at the Site, except for two outliers, which were found during a period with low water table elevations.

Soil

The 1992 RI revealed a “patchy” distribution of detectable concentrations of contaminants within the first ten feet of the soil column. These contaminants were thought to be removed or remediated to acceptable concentrations with the application of the thermal treatment. A post-remediation soil investigation (0-10 ft.) was conducted at Visalia in November 2004. Twenty-two borings were drilled and samples were collected from 1-foot, 5-foot and 10-foot intervals. As reported in the November 8, 2005, Soil Investigation Report of the Visalia Pole Yard, all of the soils data were subjected to analysis to determine the site-wide average concentration of the three chemicals of concern: PCP, benzo(a)pyrene, and TCDD_{eqv}.

The data were evaluated using standard statistical methods and it was determined that the site-wide 95% upper confidence limit for each compound was well below its corresponding remediation standard. However, DTSC instructed SCE to remove a pentachlorophenol "hot spot" where the 2005 investigation showed one sample at the one foot depth interval that exceed the PCP soil standard. Further samples were collected around the PCP exceedance soil sample location to determine the extent of contamination. On July 20, 2006, a 3.5 ft. by 3.5 ft. by 1.5 ft. excavation was made, and analytical results for confirmation soil samples were all non-detect for PCP. The excavation was backfilled to grade with clean fill material.

Site Inspection

An inspection was conducted at the Site for this Five Year Review on February 25, 2010. This site inspection, performed by DTSC and EPA project managers, found that several security measures, including an eight-foot high chain link fence, and an electronic, gated fence, enclose the perimeter of the Site; all sensitive controls, equipment, and materials,
were secured in a locked control room or warehouse; the former pump and treat system had been dismantled and all of the extraction wells and monitoring wells had been removed; and, hazardous waste signs were posted, and the Site appeared to be well maintained. Additionally, the SCE project manager informed the team that he performs routine site visits to ensure the security and safety of the Site property.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

Yes; review of site decision documents, including the ROD, and the most recent site inspection, 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.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

Yes; the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection are still valid and the risk from any site related COCs still remains within EPA’s acceptable risk range (10^-4 to 10^-6). However, provided below, is a brief discussion of changes in toxicity values (Regional Screening Levels) and carcinogenicity assessment since the RAP/ROD was finalized for site related COCs; and, EPA/OSWER’s proposed changes to preliminary remediation goals (PRGs) for dioxin and dioxin-like compounds.

The toxicity values and carcinogenicity assessment for benzo(a)pyrene, TCDD$_{eqv}$ and pentachlorophenol have changed since the risk assessment was completed. In 2009, EPA harmonized Region’s 3, 6 and 9 similar risk-based screening levels into a single table: "Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites." The RSLs are developed using risk assessment guidance from the EPA Superfund program. They are risk-based concentrations derived from standardized equations combining exposure information assumptions with EPA toxicity data. Below are two tables comparing the clean up levels selected in the ROD/RAP and the associated RSLs.

Comparison of Soil Clean Up Level to Regional Screening Levels

<table>
<thead>
<tr>
<th>Chemical of Concern</th>
<th>Soil Clean Up Level</th>
<th>2009 RSL - Industrial Soil</th>
<th>Risk associated with Soil Clean Up Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentachlorophenol (PCP)</td>
<td>17 mg/kg</td>
<td>9 mg/kg</td>
<td>$1.9 \times 10^{-6}$</td>
</tr>
<tr>
<td>Benzo(a)Pyrene</td>
<td>0.39 mg/kg</td>
<td>0.21 mg/kg</td>
<td>$1.8 \times 10^{-6}$</td>
</tr>
<tr>
<td>TCDD$_{eqv}$</td>
<td>1 µg/kg</td>
<td>0.018 µg/kg</td>
<td>$5.5 \times 10^{-5}$</td>
</tr>
</tbody>
</table>
Comparison of Groundwater Clean Up Level Standard to Regional Screening Levels

<table>
<thead>
<tr>
<th>Chemical of Concern</th>
<th>Groundwater Clean Up Level</th>
<th>2009 RSL - drinking water</th>
<th>Risk associated with Groundwater Clean Up Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentachlorophenol (PCP)</td>
<td>1 µg/L</td>
<td>0.56 µg/L</td>
<td>1.8 x 10^{-6}</td>
</tr>
<tr>
<td>Benzo(a)Pyrene</td>
<td>0.2 µg/L</td>
<td>0.0029 µg/L</td>
<td>6.9 x 10^{-5}</td>
</tr>
<tr>
<td>TCDD_{eqv}</td>
<td>30 pg/L</td>
<td>0.52 pg/L</td>
<td>5.8 x 10^{-3}</td>
</tr>
</tbody>
</table>

Based on the new RSLs, a new risk was calculated for each chemical of concern. The risk remains within EPA’s acceptable risk range (10^{-4} to 10^{-6}).

EPA’s dioxin reassessment has been developed and undergone review over many years with the participation of scientific experts in EPA and other federal agencies, as well as scientific experts in the private sector and academia. The Agency followed current cancer guidelines and incorporated the latest data and physiological/biochemical research into the assessment. The results of the assessment have currently not been finalized and have not been adopted into state or federal standards. EPA anticipates that a final revision to the dioxin toxicity numbers may be released by the end of 2010. In addition, EPA/OSWER has proposed to revise the interim preliminary remediation goals (PRGs) for dioxin and dioxin-like compounds, based on technical assessment of scientific and environmental data. However, EPA has not made any final decisions on interim PRGs at this time. Therefore, the dioxin toxicity reassessment for this Site will be updated during the next Five Year Review.

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 has come to light which question the protectiveness of the remedy.

Technical Assessment Summary

According to the data reviewed and the site inspection, the remedy is functioning as intended by the ROD. 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. Additionally, the property is fenced, signs are posted, and Site access is restricted.
VIII. Issues

There are no issues that affect protectiveness.

IX. Recommendations and Follow-Up Actions

There are no recommendations or follow-up actions.

X. Protectiveness Statement

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 Priority List (NPL). The restrictive covenants have been in place since May 23, 2007.

XI. Next Review

The next Five Year Review for the VPY is required by September 2015, five years from the date of this review.
Attachment A- Groundwater Figures
Introduction: A covenant exists between the Southern California Edison Company and the California Department of Toxic Substances Control (DTSC) to protect the present or future human health or safety or the environment as a result of the presence on the land of hazardous material as defined in the Health and Safety Code section 25260.

Obligation: The Southern California Edison Company must conduct an annual inspection of the Visalia Pole Yard at 432 North Ben Maddox Blvd., Visalia, CA 93277 and complete the following report to certify the property is being used in a manner consistent with the Land Use Covenant.

Inspection Observations:

A. The property uses were either vacant or commercial or industrial.
   Yes √ No ___

B. Is there any evidence of a residence, including any mobile home or factory built housing for use as residential habitation?
   Yes ____ No √

C. Is there any evidence of a hospital for humans?
   Yes ____ No √
<table>
<thead>
<tr>
<th>Inspection Observations (Cont.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. Is there any evidence of a public or private school for persons under 21 years of age?</td>
</tr>
<tr>
<td>E. Is there any evidence of a children's day care center?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restriction on Activities (See LUC Section 4.02)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. No activities or evidence of activities, which disturb soils at a depth greater than 10 feet were noted (e.g. excavation, grading, removal, trenching, filing, earth movement, or mining) were noted?</td>
</tr>
<tr>
<td>A.1 If yes, the DTSC was notified of the activity prior to the occurrence, and approval was received on Date:</td>
</tr>
<tr>
<td>Approved By:</td>
</tr>
<tr>
<td>B. Is there evidence of the installation of a water well for any purpose, including human consumption and irrigation.</td>
</tr>
</tbody>
</table>
Reporting Requirements:

If violations are noted, the following actions were taken to return the Visalia Pole Yard to compliance with the conditions specified in the Land Use Covenant.

NA

Southern California Edison must, within 10 days of identifying a violation, determine the identity of the party in violation and send a letter advising the party of the LUC violation and demand the cessation of the violation. Copies of any correspondence related to the enforcement of this LUC shall be sent to DTSC within ten days. Annual Inspection Report must document the violations and action taken to restore compliance.

NA

Signatory:

This annual report is submitted under penalty of perjury by the current owner(s), or their duly authorized agent. This report include the findings of the annual inspection. During the inspection it was determined (check one):

- The property is being used in a manner consistent with the terms of this covenant.
- Conditions at the Property were not in compliance with the Covenant, corrective action was taken as specified in the LUC and now conditions are in compliance with the Covenant; or
- Conditions at the Property were not in compliance with the Covenant, notification and corrective actions were implemented as specified in the LUC.

Craig L. Eaker
Project Manager

City, 2244 Walnut Grove Ave.
Rosemead, CA 91770

Signature of Inspector: Craig L. Eaker
Date: 3/17/10

Southern California Edison
Company

Page - 3 of 3
Appendix C – Covenant to Restrict Use of Property

RECORDING REQUESTED BY:
Southern California Edison
2244 Walnut Grove Avenue
Rosemead, California 91770

WHEN RECORDED, MAIL TO:
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826
Attention: James L. Tjosvold, P.E., Chief,
Northern California-Central
Cleanup Operations Branch

SPACE ABOVE THIS LINE RESERVED FOR RECORER’S USE

COVENANT TO RESTRICT USE OF PROPERTY
ENVIRONMENTAL RESTRICTION

Tulare Assessor’s Parcel Number 098 142 050, Visalia Pole Yard

This Covenant and Agreement (“Covenant”) is made by and between Southern California Edison Company (SCE) (the “Covenantor”), the current owner of property situated in Visalia, County of Tulare County, State of California, described in Exhibit “A”, attached hereto and incorporated herein by this reference (the “Property”), and the Department of Toxic Substances Control (the “Department”). Pursuant to Civil Code section 1471, the Department has determined that this Covenant is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials as defined in Health and Safety Code section 25360. The Covenantor and the Department, collectively referred to as the “Parties”, hereby agree,
pursuant to Civil Code section 1471, and Health and Safety Code section 25355.5 that the use of the Property be restricted as set forth in this Covenant and that the Covenant shall conform with the requirements of California Code of Regulations, title 22, section 67391.1.

ARTICLE I
STATEMENT OF FACTS

1.01. The Property, totaling approximately 3.74 acres, is more particularly described and depicted in Exhibit "A", attached hereto and incorporated herein by this reference. The Property is located in the area now generally bounded on the west by North Ben Maddox Way, on the south and east by City of Visalia General Services Department Yard, City of Visalia, County of Tulare, State of California. This property is also generally described as County Assessor's Parcel No. 098 142 050.

1.02. Covenantor is remediating the Property under the supervision and authority of the Department. The Property is being remediated pursuant to a Remedial Action Plan pursuant to Chapter 6.8 of Division 20 of the Health and Safety Code. Because hazardous substances, as defined in Health and Safety Code section 25316, which are also hazardous materials as defined in Health and Safety Code section 25260, including Pentachlorophenol, Dioxins, and Benzo(a)pyrene, remain in the soil and groundwater in and under portions of the Property, the Remedial Action Plan provided that a deed restriction be required as part of the site remediation. The Department circulated the Remedial Action Plan for public review and comment. The Remedial Action Plan was approved by the Department on April 18, 1994. Remediation includes removal of affected soil, in-situ or onsite bioremediation of soil on and below the surface, and groundwater extraction and treatment which included steam injection into the soil and groundwater to mobilize the contaminants of concern (COCs) to the center of the plume, where they were extracted from the subsurface through a vapor (vacuum) and liquid (groundwater pumps) extraction system. The steam injection and liquid/vapor extraction process was completed in June, 2000. The response action also included operation of the Groundwater Capture
System ("GCS") and a monitoring well network, which was designed to capture of contaminated groundwater until the remedial systems achieved cleanup levels established for COCs. After groundwater cleanup objectives for COCs were achieved, the GCS was shut down in March, 2004. The GCS, steam injection/vacuum extraction systems, and all ancillary equipment is scheduled for complete demolition during 2007.

**ARTICLE II**

**DEFINITIONS**

2.01. **Department.** "Department" means the California Department of Toxic Substances Control and includes its successor agencies, if any.

2.02. **Environmental Restrictions.** "Environmental Restrictions" means all protective provisions, covenants, restrictions, prohibitions, and terms and conditions as set forth in any section of this Covenant.

2.03. **Improvements.** "Improvements" includes, but is not limited to: buildings, structures, roads, driveways, improved parking areas, wells, pipelines, or other utilities.

2.04. **Lease.** "Lease" means lease, rental agreement, or any other document that creates a right to use or occupy any portion of the Property.

2.05. **Occupant.** "Occupant" means Owners and any person or entity entitled by ownership, leasehold, or other legal relationship to the right to occupy any portion of the Property.

2.06. **Owner.** "Owner" means the Covenantor, its successors in interest, and their successors in interest, including heirs and assigns, who at any time hold title to all or any portion of the Property.
ARTICLE III
GENERAL PROVISIONS

3.01. Run with the Land. This Covenant sets forth Environmental Restrictions that apply to and encumber the Property and every portion thereof no matter how it is improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. This Covenant: (a) runs with the land pursuant to Health and Safety Code section 25355.5 and Civil Code section 1471; (b) inures to the benefit of and passes with each and every portion of the Property; (c) is for the benefit of, and is enforceable by the Department; and (d) is imposed upon the entire Property unless expressly stated as applicable only to a specific portion thereof.

3.02. Binding upon Owners/Occupants. Pursuant to the Health and Safety Code, this Covenant binds all owners of the Property, their heirs, successors, and assignees, and the agents, employees, and lessees of the owners, heirs, successors, and assignees. Pursuant to Civil Code section 1471, all successive owners of the Property are expressly bound hereby for the benefit of the Department.

3.03. Written Notice of the Presence of Hazardous Substances. Prior to the sale, lease or sublease of the Property, or any portion thereof, the owner, lessor, or sublessor shall give the buyer, lessee, or sublessee notice of the existence of this Covenant and its Environmental Restrictions.

3.04. Incorporation into Deeds and Leases. This Covenant and its Environmental Restrictions set forth herein shall be incorporated by reference in each and all deeds and leases for any portion of the Property.

3.05. Conveyance of Property. The Owner shall provide notice to the Department not later than thirty (30) days after any conveyance of any ownership interest in the Property (excluding mortgages, liens, and other non-possessory encumbrances). The written notice shall include the name and mailing address of the new owner of the
Property and shall reference the site name (Visalia Pole Yard) and site code (160136) as listed on page one of this Covenant. The notice shall also include the Assessor’s Parcel Number (APN 068 142 050) noted on page one. If the new owner’s property has been assigned a different APN, each such APN that covers the Property must be provided. The Department shall not, by reason of this Covenant, have authority to approve, disapprove, or otherwise affect proposed conveyance, except as otherwise provided by law, by administrative order, or by a specific provision of this Covenant.

3.06: Costs of Administering the Covenant to be paid by Owner. The Department has already incurred and will in the future incur costs associated with the administration of this Covenant. Therefore, the Owner hereby covenants for himself and for all subsequent Owners that, pursuant to Title 22 California Code of Regulations section 87391.1(h), the Owner agrees to pay the Department's costs in administering the Covenant.

ARTICLE IV
RESTRICTIONS

4.01. Prohibited Uses. The Property shall not be used for any of the following purposes:

(a) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation.

(b) A hospital for humans.

(c) A public or private school for persons under 21 years of age.

(d) A day care center for children.

4.02. Prohibited Activities.

(a) Activities that may disturb soil greater than ten (10) feet below the current ground surface (e.g. excavation, grading, soil removal, trenching, filling, earth
movement, or mining) shall not be permitted on the Property without prior review and approval by the Department.

(b) Installation of a water well for any purpose, including drinking water and irrigation.

4.03. Right of Entry. The Department shall have reasonable right of entry and access to the Property for inspection, monitoring, and other activities consistent with the purposes of this Covenant as deemed necessary by the Department in order to protect the public health or safety, or the environment. Nothing in this instrument shall limit or otherwise affect the Department’s right of entry and access, or authority to take response actions, under CERCLA, the NCP, Chapter 8.8, Division 20 of the California Health and Safety Code, the California Civil Code, or other applicable state law.

ARTICLE V
ENFORCEMENT

5.01. Enforcement. Failure of the Owner or Occupant to comply with this Covenant shall be grounds for the Department to require modification or removal of any Improvements constructed or placed upon any portion of the Property in violation of this Covenant. Violation of this Covenant, including but not limited to, failure to submit, or the submission of any false statement, record, or report to the Department shall be grounds for the Department to pursue administrative, civil or criminal actions as provided by law.

ARTICLE VI
VARIANCE, TERMINATION, AND TERM

6.01. Variance. Covenantor, or any other aggrieved person, may apply to the Department for a written variance from the provisions of this Covenant. Such application shall be made in accordance with Health and Safety Code section 25233. Any approved variance shall be recorded in the land records by the person or entity granted the variance.
6.02 Termination or Modification. Owner, or any other aggrieved person, may apply to the Department for a termination of the Restrictions or other terms of this Covenant as they apply to all or any portion of the Property. Such application shall be made in accordance with Health and Safety Code section 25234.

6.03 Term. This Covenant shall continue in effect in perpetuity unless it is terminated in accordance with paragraph 6.02, by law, or by the Department in the exercise of its discretion.

ARTICLE VII
MISCELLANEOUS

7.01. No Dedication Intended. Nothing set forth in this Covenant shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property, or any portion thereof to the general public or anyone else for any purpose whatsoever.

7.02. Recordation. The Covenantor shall record this Covenant, with all referenced Exhibits, in the County of Tulare, within ten (10) days of the Covenantor's receipt of a fully executed original.

7.03. Notices. Whenever any person gives or serves any Notice ("Notice" as used herein includes any demand or other communication with respect to this Covenant), each such Notice shall be in writing and shall be deemed effective: (1) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served; or (2) three (3) business days after deposit in the mail, if mailed by United States mail, postage paid, certified, return receipt requested:

To Owner:
Southern California Edison Company
Attn: Craig Eaker, Environment, Health & Safety Department
2244 Walnut Grove Avenue
Rosemead, California 91770
Appendix C – Covenant to Restrict Use of Property

To Department:
Department of Toxic Substances Control
Northern California-Central Cleanup Operation Branch
8800 Cal Center Drive 3rd Floor
Sacramento CA 95826-3200
Attn: James L. Tjovold, P.E., Chief

Any party may change its address or the individual to whose attention a Notice is to be sent by giving written Notice in compliance with this paragraph.

7.04 Partial Invalidity. If any portion of the Restrictions or other term set forth herein is determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions of this Covenant shall remain in full force and effect as if such portion found invalid had not been included herein.

7.05 Statutory References. All statutory references include successor provisions.

7.06 Inspection and Reporting Requirements. The Owner shall conduct an annual inspection and submit an Annual Inspection Report to the Department for its approval by June 15th of each year. The annual report shall describe how all the requirements outlined in this Covenant have been met. The annual report shall certify that the Property is being used in a manner consistent with this Covenant. The annual report must include the dates, times, and names of those who conducted and reviewed the annual inspection report. It also shall describe how the observations were performed that were the basis for the statements and conclusions in the annual report (e.g., drive by, fly over, walk in, etc.) If violations are noted, the annual report must detail the steps taken to return to compliance. If the Owner identifies any violations of this Covenant during the annual inspections or at any other time, the Owner must within ten (10) days of identifying the violation: determine the identity of the party in violation, send a letter advising the party of the violation of this Covenant and demand that the violation cease immediately. Additionally, copies of any correspondence related to the
enforcement of this Covenant shall be sent to the Department within ten (10) days of its original transmission.

IN WITNESS WHEREOF, the Parties execute this Covenant.

Covenantor: Southern California Edison Company

By: [Signature]
Name/Title: Cecil R. House
Senior Vice President

Date: 3/26/07

Department of Toxic Substances Control

By: [Signature]
Name/Title: James L. Tjepkema, P.E., Chief
Northern California-Central
Cleanup Operations Branch

Date: 4/16/07

Page 9 of 10
STATE OF CALIFORNIA

COUNTY OF Los Angeles

On this 21st day of March, in the year 2007,

before me, Joy Ridenour, a Notary Public, personally appeared

Cecil R. House

personally known to me (or proved to me on the basis of satisfactory evidence) to be the
person(s) whose name(s) is are subscribed to the within instrument and acknowledged to
me that he/she/they executed the same in his/her/their authorized capacity(ies), and that
by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of
which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature

Joy Ridenour

Notary Public - California

Los Angeles County

My Comm. Expires September 23, 2010
ACKNOWLEDGMENT

State of California,

County of Sacramento

On April 16, 2007 before me, Kathleen Duncan a Notary Public
personally appeared

☑ Personally known to me
☐ Proved to me on the basis of satisfactory evidence

To be the person whose name is subscribed to the within instrument
and acknowledged to me that he executed the same in his authorized
capacity, and that by his signature on the instrument the person, or the
entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature Kathleen B. Duncan

[Stamp with Notary Public information]
Appendix C – Covenant to Restrict Use of Property
Appendix C – Covenant to Restrict Use of Property