



Explanation of Significant Differences

South Valley Superfund Site Former Air Force Plant 83/General Electric Operable Unit Albuquerque, Bernalillo County, New Mexico

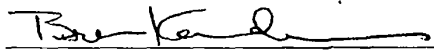
**United States
Environmental Protection Agency
Region 6
Superfund Division**

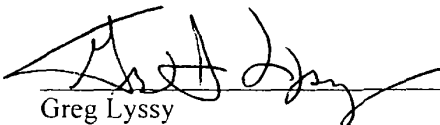
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**EXPLANATION OF SIGNIFICAN DIFFERENCES
SOUTH VALLEY SUPERFUND SITE
FORMER AIR FORCE PLANT 83/GENERAL ELECTRIC OPERABLE UNIT
CONCURRENCE LIST**

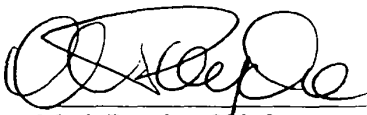
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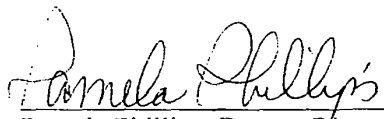
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**SOUTH VALLEY SUPERFUND SITE
FORMER AIR FORCE PLANT 83/GENERAL ELECTRIC OPERABLE UNIT
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
EXPLANATION OF SIGNIFICANT DIFFERENCES**

I. Introduction

Site Name: South Valley Superfund Site
Former Air Force Plant 83/General Electric Operable Unit
Site Location: Albuquerque, Bernalillo County, New Mexico
Lead Agency: U.S. Environmental Protection Agency, Region 6 (EPA)
Support Agency: New Mexico Environment Department (NMED)

This decision document presents the Explanation of Significant Differences (ESD) for the Former Air Force Plant 83/General Electric Operable Unit of the South Valley Superfund Site, located in Albuquerque, Bernalillo County, New Mexico. The ESD is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601 *et seq.*, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Pollution Contingency (NCP), Section 300.435(c)(2)(i). The Director of the Superfund Division has been delegated the authority to sign this ESD.

II. Statement of Purpose

The EPA is issuing this ESD for the Former Air Force Plant 83/General Electric Operable Unit of the South Valley Superfund Site to document and confirm cleanup levels as directed in the Record of Decision (ROD), signed on September 30, 1988. The cleanup goals for ground water were determined through an analysis of applicable or relevant and appropriate requirements (ARARs). As a result, the cleanup goals were based primarily on two criteria, maximum contaminant levels (MCLs) developed under the Safe Drinking Water Act and the State of New Mexico Water Quality Control Commission (NMWQCC) Regulations for discharges onto or below the surface of the ground, whichever of the two was more stringent.

Tetrachloroethylene (PCE) was identified in the ROD as a Contaminant of Concern (COC). Because no MCL for PCE was promulgated at the time the ROD was signed, the cleanup goal for PCE would have been based on the NMWQCC Regulations ground water standard of 20 $\mu\text{g}/\ell$.

An MCL of 5.0 $\mu\text{g}/\ell$ for PCE was promulgated and made effective in 1992 and was adopted at the site as a cleanup level. This ESD documents the formal adoption of MCL as the site cleanup goal and as such the selected remedy is protective of human health and the environment and complies with the most stringent ARAR.

This ESD will not change the design and operation of the remediation systems.

Site History

The South Valley Superfund Site is an industrial site that borders residential areas and surrounds the City of Albuquerque's former municipal water well known as San José 6 (SJ-6), near the intersection of Broadway and Woodward Road in southern Albuquerque, Bernalillo County, New Mexico. The Former Air Force Plant 83/General Electric Operable Unit property is a portion of the South Valley Superfund Site located at 336 Woodward Road, S.E.

The Former Air Force Plant 83 is located at the intersection of South Broadway and Woodward Road. It consisted of two facilities; the North Plant 83 and the South Plant 83. The North Plant 83 was located north of Woodward Road and was demolished in October 1997. The South Plant 83 is located south of Woodward Road and is in use today.

Both facilities have been used for manufacturing purposes since the late 1940s. From late 1948 to 1951, Eidel Manufacturing was the occupant of the site. Eidel manufactured trailers and other types of heavy equipment. The industrial process consisted primarily of welding.

In 1951, the site was purchased by the Atomic Energy Commission and operated by American Car and Foundry (ACF) as the Atomic Energy Commission contractor. The manufacturing operations included framing, welding, plating, and machining metal parts and structures, as well as welding and machining plastics.

Until 1954, liquid industrial wastes were typically discharged into the San Jose Drain. In 1954, under Atomic Energy Commission ownership, new operations were linked to the Albuquerque sewer system. Neutralized corrosive wastes were discharged to the City's sewer system and used oil was disposed either by burning in an off-site burn pit or sprayed over adjacent roads for dust control. The majority of spent solvents was collected in drums and stored until a contract for sale or disposal was warranted. However, trace amounts of solvents were reportedly introduced into the used oil due to manufacturing operations and either burned or sprayed with the oil.

In 1967, the U.S. Air Force acquired ownership of the plant and contracted with General Electric (GE). GE manufactured engine parts, subassemblies, and spare parts from 1967 till 1984 when GE purchased the site. At this time, GE expanded operations to the manufacture of commercial jet engine subassemblies. Types of operations conducted at the site include machining, fiber laminate composition, investment casting, and shrouds and seals manufacturing.

From 1967 to 1975, waste disposal practices remained unchanged with the exception of used oil. Used oil was no longer burned in an off-site burn pit. All used oil generated at the site was sprayed on roads for dust control. Beginning in 1975, used oils in addition to hazardous wastes generated at the site were picked up and disposed by contractors.

In 1978, The City of Albuquerque analyzed samples from its San José and Miles municipal well fields. Low levels of contaminants were detected in samples collected from wells SJ-3 and SJ-6 (in the San José well field).

In 1981, EPA and NMED designated a one-square mile area around municipal well SJ-6 as a Superfund site. EPA published a proposed rule on July 23, 1982 to add the South Valley Site to the National Priorities List (NPL) of Superfund Sites. The South Valley Superfund Site was added to the NPL in a final rule published on September 8, 1983.

IV. Summary of Site Characterization Activities

Site characterization investigations have been conducted for the South Valley area and for the Site. In 1967, 1978, and 1979, the United States Geological Survey (USGS) and the United States Army Corps of Engineers (USACE) published studies of the area's water resources. These studies included measured and projected water-table maps.

In 1978, the City of Albuquerque analyzed samples from the San José and Miles Municipal Well Fields. As a result, Well SJ-6 in the San José Well Field was taken out of service in late 1980 following the detection of VOCs in the water.

In 1981, NMED (formerly the New Mexico Health and Environment Department) conducted a regional study entitled "Organic Ground-Water Pollutants in the South Valley of Albuquerque, New Mexico, December 1982." During this study, NMED installed monitoring wells and collected ground water samples in an attempt to identify potential sources of ground water contamination. To build on the study conducted by NMED, EPA conducted a more detailed investigation of the South Valley ground water contamination. The investigation included soil gas sampling and field gas chromatography analysis, supplemental monitoring well installation, and several rounds of ground water sampling. In addition, a long-term pumping test of municipal well SJ-6 was conducted. The resulting investigation report was completed in 1984 and was entitled "Field Investigation Report, Offsite Remedial Investigation, South Valley Site, Albuquerque, New Mexico." Based on the results of these two studies, EPA identified six potentially responsible parties (PRPs).

GE conducted investigations in 1984-1985 and again in 1987-1988 at the site. At the time the ROD was signed (September 30, 1988), these investigations detected VOCs:

- In the unsaturated portion of the Shallow Zone Aquifer at the north end of North Plant 83 and at the south end of South Plant 83;
- In the Shallow Zone Aquifer at the north end of North Plant 83, and north of North Plant 83 beneath a residential neighborhood;
- In the ground water proximate to the south end of South Plant 83; and
- In the Intermediate Zone (140 to 160 feet below ground surface) in well DMW-2 located west of the intersection of Broadway and Woodward Road.

No free-phase solvents [i.e., dense non-aqueous phase liquids (DNAPLs) or light non-aqueous phase liquids (LNAPLs)] were discovered during these investigations.

In 1986, the USGS developed a three-dimensional model simulation of steady-state ground water flow in the Albuquerque-Belen Basin of New Mexico. In 1987, the USGS developed a three-dimensional model simulation of transient flow. The steady-state model simulated flow conditions assumed to have existed prior to 1960 while the transient flow model simulated hydraulic heads and changes in hydraulic heads from 1907 to 1979.

V. Selected Ground Water Remedy

The selected ground water remedy for the Site consists of the following parts:

- Containment and collection of the contaminated ground water through the use of an extraction well system;
- Treatment of the recovered ground water through packed tower aeration followed by carbon adsorption; and
- Return of the treated water to the aquifer through injection wells.

The “No Action” remedial alternative was rejected, as it did nothing to mitigate the potential impacts of the contaminated ground water. Of the collection options, pumping alone was selected since a system of pumping wells is capable of containing and recovering the contaminated ground water. This eliminates the need for the construction of slurry walls with the associated risks of exposure during the construction and implementation process. Packed tower aeration was selected for the treatment method due to greater ease of operation and maintenance costs over carbon adsorption alone. Re-injection of the treated water was chosen over surface discharge due to a desire to preserve the water that could be lost through evaporation during surface discharge and the beneficial effects of recycling the treated water through the contaminated area of the aquifer. Additional benefits include the flushing action of the recycled water and the containment and re-treatment of any water exiting the treatment system above standards for cleanup.

Construction of the Shallow Zone Aquifer remedial system was completed in May 1994 and the construction of the Intermediate Zone Aquifer remedial system was completed in March 1996. The remedial systems have been in constant operation with the exception of times needed to conduct normal repairs and maintenance procedures. This change will not require any modifications in the design and operation of the remediation systems.

VI. Basis for the Document

The EPA is issuing this ESD for the Site to document and confirm that the cleanup level for PCE is $5.0 \mu\text{g}/\text{l}$, which is consistent with the MCL as an ARAR identified in the 1988 ROD. As required under Section 121 of CERCLA, the ROD must establish cleanup goals that are protective of human health and the environment and meet Federal, State, and local ARARs. The cleanup goals for COCs identified in the ROD were based primarily on two criteria, MCLs developed under the Safe Drinking Water Act and the NMWQCC Regulations for discharges onto or below the surface of the ground. In cases where an MCL value and an NMWQCC value

existed for a specific COC, the more stringent (lower value) of the two was selected as corresponding the cleanup goal.

In 1992, a promulgated MCL value of 5.0 $\mu\text{g}/\ell$ for PCE became effective. Because the MCL value for PCE is more stringent than the NMWQCC ground water standard of 20 $\mu\text{g}/\ell$, the MCL value of 5.0 $\mu\text{g}/\ell$ should be considered the cleanup goal for ground water under the selected remedy. The use of the MCL as the cleanup value for PCE ensures the selected remedy remains protective of human health and the environment and satisfies the ARARs as required under Section 121 of CERCLA. This ESD will not require a change in the design or operation of the remediation systems.

VII. Description of Significant Differences

The EPA is issuing this ESD to document the formal adoption of the MCL of 5.0 $\mu\text{g}/\ell$ as the site cleanup goal for PCE in ground water. Prior to promulgation of the MCL value for PCE in 1992, the cleanup goal for PCE would have been based on the NMWQCC Regulations ground water standard of 20 $\mu\text{g}/\ell$. No other significant differences exist for the remedy selected in the September 30, 1988 ROD. This ESD will not require a change in the design or operation of the remediation systems as the existing remediation systems were designed to remediate PCE in ground water to 5.0 $\mu\text{g}/\ell$.

VIII. Support Agency Comments

The support agency, NMED, has been consulted and provided the opportunity to comment on this ESD in accordance with the NCP §§ 300.435(c)(2) and 300.435(c)(2)(i) and CERCLA § 121(f). Its concurrence is presented in an attachment to this ESD.

IX. Statutory Determinations

The EPA has determined that these significant changes comply with the statutory requirements of CERCLA § 121, 42 U.S.C. § 9621, are protective of human health and the environment, comply with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, are cost-effective, and utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. This remedy also satisfies the statutory preference for treatment as a principal element of the remedy (i.e., reduces the toxicity, mobility, or volume of hazardous substances, pollutants, or contaminants as a principal element through treatment).

X. Public Participation

This ESD will become part of the Administrative Record (NCP § 300.825(a)(2)), which has been developed in accordance with Section 113(k) of CERCLA, 42 U.S.C. § 9613(k), and which is available for review at the Zimmerman Library, Government Information Department, University of New Mexico, Albuquerque, New Mexico 87131, Monday – Friday, 8:00 a.m. to 4:30 p.m., Saturday – Sunday, 12:00 p.m. to 4:00 p.m.; New Mexico Environment Department, Superfund Oversight Section, 1190 St. Francis Drive, Suite N2300, Santa Fe, New Mexico,

87505, Monday – Friday, 8:00 a.m. to 4:30 p.m.; and the United States Environmental Protection Agency, Region 6, 12th Floor Library, 1445 Ross Avenue, Dallas, Texas, 75202, Monday – Friday, 8:00 a.m. to 4:30 p.m. As required by NCP § 300.435(c)(2)(i)(B), a Notice of Availability and a brief description of the ESD has been published in a local newspaper.

XI. Authorizing Signatures

This ESD documents the significant changes related to the remedy at the Former Air Force Plant 83/General Electric Operable Unit of the South Valley Superfund Site. These changes were selected by EPA with the concurrence of the New Mexico Environment Department.

U.S. Environmental Protection Agency

By: Amela Phillips, Acting
Samuel Coleman, P.E.
Director
Superfund Division

Date: 10/16/06