

US EPA ARCHIVE DOCUMENT

**STATEMENT OF BASIS/FINAL DECISION AND
RESPONSE TO COMMENTS SUMMARY**

REGION II
ID# 2109

Caribe General Electric Products Plant

Patillas, PR
(signed in July 1990)

Facility/Unit Type: Former electrochemical products manufacturing and assembling
Contaminants: VOCs, heavy metals
Media: Soil, ground water
Remedy: Stabilization and excavation of contaminated soil with off-site disposal, regrading and filling with clean fill and seed

FACILITY DESCRIPTION

On December 30, 1988, EPA and Caribe General Electric Products Plant of Patillas, PR (GE, Patillas) entered into an Administrative Order on Consent (Consent Order) pursuant to RCRA Section 3008(h). Under the terms of the Consent Order, GE, Patillas was required to conduct the following studies: 1) an RFI to determine the nature and extent of on-site and off-site contamination from its Patillas facility; 2) a CMS to evaluate appropriate remediation procedures and technologies to address the contamination; and, 3) a CMI to implement the selected remedy. To date, an RFI for soil and ground-water contamination has been completed. EPA has approved the RFI report and requested that source control be applied. A revised draft CMS Workplan is due in January 1993. The Statement of Basis applies to on-going source controls for contaminated soils at the site.

From 1974 to 1987, the GE, Patillas facility manufactured and assembled electrochemical products in a building that General Electric (GE) leased from PRIDCO. Since 1987, the building has remained empty except for storage of bulk materials by GE. During its occupancy, GE constructed a French Sump unit, which consisted of a rubble-filled hole twelve feet deep and ten feet in diameter. Until

1980, waste streams generated at the facility were discharged to the unit.

The RFA lists six SWMUs and two Areas of Concern (AOCs) at the facility. The two SWMUs (sludge drying beds) are regulated units and are currently in their last quarter of ground-water monitoring in an attempt to clean close the units. The two (2) hazardous waste storage area SWMUs, formally regulated units, have been closed subject to clean closure requirements.

The French Sump unit is the main area of environmental concern at the site and is the only SWMU that has required further investigation. Although soil contamination has been remediated, a contaminated ground-water plume emanates from the French Sump. During the RFI, sediment and surface water samples taken from March 1989 to November 1990 indicated that the plume had not affected these media. However, a secondary drinking water well located 300 yards down-gradient of the facility has been closed because of chlorinated solvent contamination, wastes that are believed to have been placed in the French Sump. To date, GE has investigated the full extent of the plume.

CONTAMINATION DETECTED AND CLEANUP GOALS

Media	Estimated Volume	Contaminant	Remediation Level (ppm)	Action Level (ppm)	Cleanup Goal	Point of Compliance
soil	Not given	1,1-Dichloroethane	ND			N/A
		1,1-Dichloroethene	ND			
		1,1,1-Trichloroethane	ND	700	700	
		Tetrachloroethane	ND	30	30	
		Toluene	38	2,000	2,000	
		Xylenes	29	20,000	20,000	
		Phenol	ND	5,000	5,000	
		Arsenic	ND	8	8	
		Cadmium	ND	4	4	
		Chromium	ND			
		Chromium (VI)	ND	40	40	
		Copper	ND			
		Lead	ND			
		Nickel	ND	200	200	
		Zinc	ND			
Cyanide	ND	200	200			

ND Indicates concentration was in the non-detectable range.

* Maximum Concentration after Remediation

Aquifer tests indicate that the uppermost aquifer behaves uniformly and has no laterally continuous unit which restricts the flow and contaminant migration to deeper zones of the aquifer. As a result, chlorinated organic contamination is present throughout the aquifer, but is more concentrated in the upper zones. One permanent stream is located about .5 miles down-gradient of the facility and an intermittent stream is located directly across PR Route 3 from the facility. Both streams flow south into the Caribbean Sea.

EXPOSURE PATHWAYS

To date, monitoring indicates that drinking water supplies down-gradient of the site remain safe for human consumption. However, workers at a Puerto Rico Aqueduct and Sewer Authority (PRASA) plant located directly across PR Route 3 may be exposed to chlorinated organic constituents through volatilization of ground water migrating underneath the plant. Therefore, potential exposure

pathways of contamination are ingestion of ground water and inhalation of volatized contaminants in ground water.

SELECTED REMEDY

In August 1990, EPA approved GE/ Patillas' plan to remove and stabilize the source of contamination and any contaminated soils adjacent to the French Sump. In October 1990, GE successfully excavated, stabilized, drummed, transported, and properly disposed of the wastes and contaminated soils that remained within and adjacent to the French Sump. Soil sampling data taken after the remediation efforts revealed that soil contamination no longer was present within or near the French Sump. Once this was determined, the area was regraded with clean fill and seeded. The capital cost of this remedy is approximately \$100,000.

**INNOVATIVE TECHNOLOGIES
CONSIDERED**

None.

PUBLIC PARTICIPATION

Public participation was not addressed because the plan was considered initially to be an interim corrective measure.

NEXT STEPS

By January 1993, GE will submit a revision to the draft CMS Workplan which will evaluate alternatives for remediating the contaminated ground water migrating from the site. Once this CMS Workplan is completed, another remedy will be selected and implemented with an additional SB, subject to public notice and participation.

KEY WORDS

soil, ground water; ingestion, inhalation; VOCs, heavy metals; stabilization, excavation, off-site disposal, filling

CONTACT

Joe Kane
U. S. EPA, Region II
26 Federal Plaza
New York, NY 10278