STATEMENT OF BASIS/FINAL DECISION AND RESPONSE TO COMMENTS SUMMARY

REGION V
ID # 3854

United Musical Instrument U.S.A. Incorporated

Eastlake, Ohio
(Signed July 20, 1995)

Facility/Unit Type:	**Brass-plated musical instrument manufacturer**
Contaminants:	**1,1-dichloroethane (DCA), 1,1-dichloroethene (DCE), trans-1,2-DCE, 1,1,1-trichloroethane (1,1,1-TCA), 1,1,2-TCA, trichloroethene (TCE), and vinyl chloride**
Media:	**Groundwater, Soil**
Remedy:	**Excavate contaminated soil, treat via ex-situ soil vapor extraction (SVE), and *monitor groundwater.***

FACILITY DESCRIPTION

EPA issued an Administrative Consent Order which required the United Musical Instrument U.S.A. Inc. (UMI) to perform a RCRA Facility Investigation (RFI), Corrective Measures Study (CMS), and implement the selected Corrective Measures. An RFI was completed in 1992 and the CMS report was approved in 1994. Contamination was found in the soil and groundwater within the UMI property boundary. No contamination was found outside of the property boundary.

UMI facility's primary operation is the manufacture of brass-plated musical instruments. The manufacturing process involves all phases of production from the initial metal cutting and grinding to plating and assembly operations. Chemicals used at UMI include 1,1,1,-trichloroethane (1,1,1-TCA) and trichloroethene (TCE), which are used to remove oil and grease from metal parts prior to processing.

The UMI facility is located in the southwestern portion of Lake County approximately two miles south of Lake Erie, in Eastlake Ohio. The facility is located in an area currently zoned for general industrial use. Properties located to the east, west, and south of the UMI facility are also zoned for industrial use; however, residential areas are located between 0.2 and 0.5 miles west, north, and northwest of the facility.

EXPOSURE PATHWAYS

The potential exposure pathways for soil are via direct contact, inhalation, and ingestion. The potential exposure pathways for groundwater are via direct dermal contact and ingestion. The contamination is believed to be the result of discharges to the environment through routine spills and leaks from the uncontained outdoor TCE storage tanks located on the west side of the building.

SELECTED REMEDY

The contaminants of concern include: 1,1-DCA, 1,1-DCE, trans-1,2-DCE, 1,1,1-TCA, 1,1,2-TCA, TCE, and vinyl chloride. The selected remedy requires that the facility:

- Excavate 3,240 cubic yards of contaminated soil;
- Treat excavated soils by means of ex-situ soil vapor extraction (SVE) to capture the highly mobile volatile organic compounds (VOCs);
- Manage acceptably treated soils in a manner that complies with applicable state and Federal hazardous waste regulation; and
- Monitor groundwater using 5 on-site monitoring wells on a quarterly basis for four years.

The total estimated cost for implementation of the selected remedy is between $500,000 and $650,000.

CONTAMINATION DETECTED AND CLEANUP GOALS

Media	Estimated Volume	Contaminant	Maximum Concentration (ppb)	MCL Action Level (mg/l)	MCL Cleanup Goal (mg/l)	Point of Compliance
Groundwater	Not given	1,1-Dichloroethane (DCA) 1,1-Dichloroethene (DCE) Trans-1,2-Dichlorothene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Vinyl Chloride	Not given	Not given	N/A 0.007 0.1 0.2 0.005 0.005 0.002	Buffer zone
Soil	Not given	Not given	Not given	Not given	Not given	Not given

*N/A = Not Available. Standards have not yet been developed

PUBLIC PARTICIPATION

A 45-day public comment period began on March 30, 1995 and ended on May 15, 1995. No comments were received.

INNOVATIVE TECHNOLOGIES

The selected remedy, ex-situ SVE is considered an innovative treatment. This remedy consists of placing excavated soils in an on-site treatment tank using slotted vacuum piping at the bottom with a slit sock. The atmospheric air enters the treatment tank through the injection piping and becomes laden in volatile vapor as it passes through the soil pile. The air and vapor mixture is treated with activated carbon before air is discharged back to the atmosphere.

Other innovative technologies considered but not chosen include in-situ SVE, mechanical agitation, and thermal desorption. In-situ SVE would be performed using between 14 and 35 extraction wells installed around the area of contamination. The wells would extract air and some water from the soil by the means of a vacuum. The air and water would be separated and treated on-site by carbon absorption before the air is discharged into the atmosphere. Mechanical agitation consists of an ex-situ process to separate volatile contaminants form the soil. An auger soil mixing system would process the contaminated area. The released vapors would be collected by a hood above the auger and treated by activated carbon. Thermal desorption would be conducted using a mobile, low temperature thermal desorption unit. Volatiles would be removed and burned in an afterburner and collected by activated carbon or recovered in condensation equipment.

NEXT STEPS

Submittal, approval, and implementation of Corrective Measure Implementation (CMI) workplan.

KEYWORDS:

soil, groundwater; direct contact, dermal contact, inhalation, ingestion; VOCs, 1,1-dichloroethane, 1,1-dichloroethene, trans-1,2-dichloroethene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, and vinyl chloride; excavation, on-site treatment, groundwater monitoring, innovative technology considered: thermal desorption, in-situ SVE, and mechanical agitation, innovative technology selected: ex-situ SVE

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