FINAL DECISION AND

RESPONSE TO COMMENTS

For

TDY INDUSTRIES, INC., TELEDYNE

PLANT 1

Hartville, Ohio

OHD 068 901 610

July 2006

FINAL DECISION

TDY INDUSTRIES, INC., TELEDYNE PLANT 1, Hartville, Ohio U.S. EPA ID OHD 068 901 610

Introduction

This Final Decision and Response to Comments is presented by the United States Environmental Protection Agency (U.S. EPA) for the TDY Industries, Inc., Teledyne Plant 1 (TDY), in Hartville, Ohio. It consists of the Final Decision, Response to Comments, updated Index to Administrative Record (Attachment I), and previously issued Statement of Basis (Attachment II).

This Final Decision selects the final remedy to be implemented at the TDY facility, based on the Administrative Record and public comments. The Statement of Basis provides the U.S. EPA proposed remedy and was initially available for public review and comment from August 1, 2005 through August 31, 2005. U.S. EPA received one comment on the Statement of Basis during the public comment period. No public meeting was requested or held by U.S. EPA.

Assessment of the Facility

The response action documented in this Final Decision is necessary to protect human health and the environment.

Selected Remedy

U.S. EPA has selected the following remedial components as the final remedy to address contaminated soil, subsurface soil, and groundwater at the TDY Facility:

1. Groundwater: Continue to operate the high volume dual phase extraction (HVDPE) system to depress groundwater elevations near the storm sewer and collect groundwater from the area around well IM-2. Discharge will be directed to the existing air stripper.

   Construct and operate a HVDPE system in the former hazardous waste storage area, and near the former degreaser and virgin product underground storage tank. The system will be capable of extracting soil vapors, dense non-aqueous phase

liquids (DNAPL) (if encountered), and impacted groundwater. Several wells will be constructed in each area. Discharge will be directed to the existing air stripper. Continue operation of the existing hydraulic control groundwater treatment system in the unconsolidated aquifer. This option was chosen because of its demonstrated long-term effectiveness in maintaining hydraulic control at the site. The HVDPE system will be operated until the mass removal of volatile organic compounds (VOCs) in the soil vapor and extracted groundwater approaches asymptotic levels. Asymptotic levels are achieved when concentration approaches zero or no more can be removed. Once this condition is attained, the system will be shut down or operated in pulse mode, for a monitoring period to determine if residual concentrations in surface and subsurface soils are below the surface soil cleanup standards set forth in Table 1 (Attachment III).

Implement enhanced bioremediation as enhanced reductive dechlorination. The enhanced reductive dechlorination will be implemented in two reactive zones located in zone 1 areas A, B, and C, and zone 2 area D. TDY will implement additional treatments as needed as determined by U.S. EPA. The corrective measure will continue until the U.S. EPA determines that the groundwater cleanup standards set forth in Table 1 and Contaminant Action Objectives, Table 2 (Attachment III) have been met.

2. Surface Soils (0 to 2 feet): Excavate surface soils in the vicinity of soil sample SS-1 until surface soil cleanup standards set forth in Table 1 (Attachment III) are met, as determined by confirmatory sampling. Alternatively, paved over surface soils in this area that exceeds the surface soil cleanup standards. The paved areas will be inspected quarterly and repaired if required. The integrity of the paving must be maintained to prevent infiltration of precipitation into soils. Soils must remain paved so long as surface soil contaminant action objectives (Table 2) are not met.

3. Subsurface Soils (2 feet or greater): Construct and operate a HVDPE system in the former hazardous waste storage area, and near the former degreaser and virgin product underground storage tank to depress groundwater elevations near the storm sewer and collect groundwater from the area. The system will be capable of extracting soil vapors, DNAPL (if encountered), and impacted groundwater. Discharge will be directed to the existing air stripper.

   The HVDPE system will be operated until the mass removal in the soil vapor and extracted groundwater approach asymptotic levels. Once this condition is attained, the system will be shut down or operated in pulse mode, for a monitoring period to determine if residual concentrations in surface and subsurface soils are below the surface soil cleanup standards (Table 1).

4. Institutional Controls: Institutional controls will be placed on the facility, which will run with the land, binding current and future owners. These Institutional controls will afford the following protections from exposure to hazardous substances remaining on site:

    A. Control the potential hazard to construction workers or others that plan to perform excavation activities in areas of the site where subsurface soils contain contaminants of concern at concentrations that exceed the surface soil cleanup standards in Table 1. Such institutional controls on the facility will include the requirement that a Health and Safety Plan and Soil Management Plan be prepared before intrusive activities in these areas are undertaken and that proper personal protective equipment be used to protect site workers from exposure to unacceptable risk. The Soil Management Plan will outline areas of the site where the Health and Safety Plan must be implemented and will describe methods and procedures for soil excavation, handling, and disposal.

    B. Owner/operator must not allow groundwater at the Facility to be used for drinking, bathing, washing, or other human contact purposes or for livestock, farming or irrigation until the groundwater cleanup standards in Table 1 are achieved. Owner/operator must also not allow the installation of any new water wells for drinking, bathing, washing, or other human contact purposes or for livestock, farming or irrigation on this property until the groundwater cleanup standards in Table 1 are achieved.

    C. Owner/operator must not allow any residential activities at the Facility for as long as surface soils at the Facility remain contaminated above the U.S. EPA Region 9 Preliminary Remediation Goals for residential soils (http:www.epa.gov/region09/waste/sfund/prg/index.htm). The term "residential activities" shall include, but not be limited to, the following:

        a. Single and multi-family dwelling and rental units;

        b. Day care centers and preschools;

        c. Hotels and motels;

        d. Educational (except as a part of industrial activities at the Facility) and religious facilities;

        e. Restaurants and other food and beverage services (except as a part of industrial activities at the Facility);

        f. Entertainment and recreational facilities (except as a part of industrial activities at the Facility);

g. Hospitals and other extended care medical facilities (except as a part of industrial activities at the Facility); and

h. Transient or other residential facilities.

The term "industrial activities" shall include manufacturing, processing operations and office and warehouse use including, but not limited to, production, research and development (AR&D@) or other laboratory activities, storage and sales of durable goods and other non-food chain products and parking/driveway use.

The above restrictions shall be implemented by placing a restrictive covenant or equitable servitude on the property that limits the use of the property to industrial use only, and restricts the use of the groundwater within the facility boundaries to industrial use only, with no use as a drinking water source. The covenants, terms, conditions, and restrictions of this instrument shall be binding upon, and inure to the benefit of, the owner/operator, Ohio Environmental Protection Agency and/or the U.S. EPA and their successors in interest and assigns and any Transferee, and shall run in perpetuity with the land, subject to termination or modification.

The selected remedy provides the best balance among the alternatives with respect to the evaluation criteria described in the Statement of Basis, including:

I. Overall Protection of Human Health;

II. Overall Protection of Environment;

III. Attainment of Media Cleanup Standards;

IV. Source Control;

V. Compliance with Applicable Waste Management Standards;

VI. Long-term Reliability

VII. Short-term and Long-term Effectiveness;

VIII. Reduction in Waste Toxicity, Mobility, and Volume;

IX. Implementability; and

X. Cost.

Public Participation Activities and Comments

A public comment period was held from August 1, 2005 through August 31, 2005. U.S. EPA received one comment on the Statement of Basis during the public comment period. No public meeting was requested during this time period.

Comments and the Agency's Response

Response to Comments

Public Comment: *A former worker at the facility stated the south-southeast part of the facility was used to dispose of drums and waste from the facility.*

Response: Comment acknowledged. The area in question is the Former Solid Waste Landfill. Teledyne consultants in the RCRA Facilities Investigation investigated this area in 1993. Geophysical studies were performed and areas with anomalies were investigated. The current interim measures of HVDPE system are remediating this area and the proposed remedies should accelerate the cleanup of both the subsurface soils and groundwater.

Administrative Record

The Administrative Record upon which the final remedy was selected is available at the Lake Community Branch Library, Uniontown, Ohio and the 7th Floor Records Center at the U.S. EPA Region 5 office Chicago, Illinois. Attachment I identify the documents contained within the Administrative Record.

Future Actions

U.S. EPA is required to provide a sixty-day (60) period for negotiation of a new Administrative Order on Consent for implementation of the selected remedy. U.S. EPA will send a draft Administrative Order on Consent to TDY shortly after issuance of this Final Decision. During the remedy implementation period, U.S. EPA will provide further information to the public as deemed appropriate and upon request.

Declarations

Based on the Administrative Record compiled for this corrective action, U.S. EPA has determined that the selected remedy for the TDY facility is appropriate and protective of human health and the environment.

_____ _____

Margaret M. Guerriero, Director
Waste, Pesticides, and Toxics Division
U.S. EPA Region 5

Date

Attachments (3)

IN THE MATTER OF:

TDY INDUSTRIES, INC., TELEDYNE PLANT 1,
Hartville, Ohio
U.S. EPA ID OHD 068 901 610

ATTACHMENT I

Index to Administrative Record

ATTACHMENT II

Statement of Basis

ATTACHMENT III

Tables

Table 1

Summary of the Industrial Media Cleanup Standards Former Monarch Rubber, Plant 1 10 Lincoln Park, Hartville, Ohio		
Contaminants of Concern	**Surface Soils* Mg/kg**	**Groundwater** µg/L**
Trichloroethene	0.11	5
Tetrachloroethene	13	5
1,1,1-Trichloroethane	1,200	200
1,1-Dichloroethane	1,700	810
1,2-Dichloroethylene	1,500	70
1,1-Dichloroethene	410	7
Vinyl Chloride	0.35	2

* United States Environmental Protection Agency Region 9 Preliminary Remediation Goals for industrial soils
** United States Environmental Protection Agency, Safe Drinking Water Act, Maximum Contaminant Levels

Mg/kg = milligrams per kilogram
µg/L = micrograms per liter

Table 2

Contaminant Action Objectives Former Monarch Rubber, Plant 1, 10 Lincoln Park, Hartville, Ohio.		
Media	**Short Term Objectives**	**Long Term Objectives**
Surface Soils	Soils less than two feet below ground surface are to be remediated such that the contaminants of concern (COC) are below United States Environmental Protection Agency (U.S. EPA) Region 9 Preliminary Remediation Goals (PRGs) for industrial soils (http:www.epa.gov/region09/waste/sfund/prg/index.htm) and soil screening levels or the site shall be capped to inhibit migration of contaminates.	Same as short-term objectives.
Subsurface Soils	Subsurface soils (unsaturated soils greater than 2 feet in depth) are to be remediated such that groundwater concentrations in the perched unit at the property boundary are less than or equal to Safe Drinking Water Act Maximum Contaminant Levels (MCLs) or U.S. EPA Region 9 PRGs, which ever are more stringent, under no-pumping conditions.	Same as short-term objectives.
Perched Aquifer	To meet the MCLs in the perched unit at the property boundary and reduce the infiltration of groundwater into the storm sewer.	To reduce the concentrations of volatile organic compounds in the perched unit to a level where they no longer produce an unacceptable impact based on fate and transport modeling and groundwater sampling and analysis, to the upper unconsolidated aquifer under non-pumping conditions, and where infiltration of groundwater into the storm sewer does not pose an unacceptable risk to off-site surface water. An unacceptable risk would occur if a COC in groundwater leaving the site (measured at the site boundary) exceeded the MCL (or tap water U.S. EPA Region 9 PRG) under non-pumping conditions. If the concentration of any COC in groundwater leaving the site exceeds the MCL (or tap water U.S. EPA Region 9 PRGs), groundwater remediation will resume.
Upper and Lower Unconsolidated Aquifer	To control off-site migration of groundwater containing COCs at concentrations above MCLs (or tap water U.S. EPA Region 9 PRGs) through extraction and treatment.	To remediate groundwater such that concentrations of COCs in groundwater leaving the site are below MCLs (or tap water U.S. EPA Region 9 PRGs), which ever are more stringent, under non-pumping conditions.