

City of Rochester

Environmental Cleanup Project

Case Study

Site Name:

Former Photech Imaging Systems, Inc.
Environmental Cleanup Project

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City of Rochester Case Study Summary

Former Photech Imaging Systems, Inc. Environmental Cleanup Project

Site History:

The Site was developed in 1948 for manufacturing of photographic film and photographic paper. The Site formerly contained 17 buildings totaling approximately 120,000 sq. ft. and underground utility and pedestrian tunnels connecting the buildings. The Site also contained various underground and aboveground storage tanks, as well as several underground vault systems designed to recover silver associated with the facility's wastewater discharge. The last property owner, Photech Imaging Systems, Inc., ceased operations and abandoned the facility in mid-production without a proper decommissioning in 1991, leaving large amounts of chemicals, raw materials, and wastes on-site and within the facility buildings. In 1994, the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA) performed a bulk waste and chemical removal actions at the Site and the facility; however, residual chemicals remained. The Site remained unoccupied for decades during which time extensive vandalism took place which resulted in releases of asbestos and other regulated building material debris throughout the buildings. The City of Rochester acquired the Site in 1998 via tax foreclosure. In The City applied for and secured a New York State Department of Environmental Conservation (NYSDEC) Environmental Restoration Program (ERP) Cleanup Grant totally approximately \$3.4 million.

Type of Environmental Cleanup and Redevelopment Project:

The 12.5 acre former Photech Imaging Systems, Inc. (Photech) facility was decommissioned and the Site was remediated with the objective of redeveloping the Site as a future industrial park. Approximately 120,000 square feet of Site buildings, basements, and tunnels were abated, decontaminated, and demolished.

All petroleum and chemical storage tanks and wastewater and silver recovery vaults were excavated and disposed off off-site. Extensive soil contamination in multiple locations was fully delineated, excavated and disposed of off-site, and all below-grade utilities including on-site sewers were excavated and disposed of off-site. Contaminated bedrock and groundwater were remediated and the Site was successfully remediated such that all post-excavation confirmatory soil samples meet NYSDEC Part 375 Restricted Commercial Soil Cleanup Objectives. Excavated areas were backfilled and compacted.

Demographic Information:

The Former Photech Site is located at 1000 Driving Park Avenue in the City of Rochester. The Site is located in an M-1 Industrial District. The Site is bounded by the Monroe Service Corporation and the LeGrange Avenue recreational center to the north, Driving Park Avenue to the south, a local union hall to the west, and several small businesses to the east. Directly to the south of Driving Park Avenue is a General Motors manufacturing facility, former Delphi Auto Systems.

Type of Contamination:

Contaminants detected at the Site included heavy metals including silver and cadmium which was associated with the photographic fill manufacturing process and wastewater discharges, semi-volatile organic compounds including Polyaromatic Hydrocarbons (PAHs), and a minor amount of petroleum products and solvent-related volatile organic compounds. Silver and cadmium were present at hazardous levels within former process piping, in the silver recovery system, on concrete walls and floor surfaces, in secondary containment systems, above and below grade process structures, in wastewater sewer piping, and in subsurface soil and groundwater. A former pond and waste burn pit contained PAHs and laboratory waste. The petroleum contamination was primarily in subsurface soil near former transformers and the former powerhouse building. The solvent-related volatile compounds have been detected at low levels in Site groundwater and appear to be associated with an off-site source originated at the General Motors manufacturing facility located south of the Site. Additionally, asbestos, regulated solid waste and hazardous waste, and other building materials were removed prior to demolition of Site structures.

Scope of Remediation:

Remediation at the Site was accomplished in several phases which included the development of eight (8) separate Remedial Action Work Plans with the main objectives of eliminating human exposure to site contaminants, eliminating further releases to the environment, and removing contaminated groundwater and soil to facilitate future commercial or industrial development. Initially significant amounts of asbestos-containing materials were abated from all buildings and minor structures. Environmental cleaning and building decontamination was performed which included the removal and disposal of all regulated building materials and miscellaneous suspect contents of the buildings related to the past uses of the Site. Building decontamination included the innovative use of a portable X-Ray Florescence (XRF) meter to analyze interior building surfaces and materials including concrete floors, walls, and secondary containment areas for suspect heavy metal contamination including silver and cadmium, the two most common Site contaminants. Those areas of interior building surfaces that contained elevated concentrations of metals were delineated and then physically removed via scarification of the concrete until concentrations of metals were attenuated based on post-scarification confirmatory sampling and analysis. Subsequent to building cleaning and decontamination, all buildings were demolished and clean masonry and concrete was crushed into usable fill material which was subsequently used to backfill excavations throughout the project which greatly reduced costs associated with the project.

In order to fully delineate the nature and extent of subsurface contamination prior to further remedial activities, a Design Phase Investigation was conducted in each AOC to supplement existing data. The investigation delineated soil contamination both vertically and laterally within multiple Areas of Concern (AOCs). Data was entered into Geographical Information System (GIS) database and Interpolation modeling was performed to illustrate the areal and vertical limits of excavation proposed for each AOC and to assist with the selection of the appropriate remedial actions. A Remedial Action Work Plan was developed and implemented which resulted in the closure of three underground storage tanks and two silver recovery wastewater vaults, the excavation and off-site disposal of approximately 6,076 tons of contaminated soil and weathered bedrock, the collection and disposal of approximately 60,000 gallons

of groundwater, and the removal of several thousand linear feet of abandoned underground utilities from the Site. All confirmatory samples collected during the cleanup of the Site were determined to be below NYSDEC Soil Cleanup Objectives for a Commercial Site. In addition Daramend was utilized in the base of two large excavations that reached bedrock in order to immobilize residual cadmium contamination.

Post-remediation groundwater monitoring is being conducted to evaluate the effectiveness of the remedial activities and to document the post-remedy groundwater characteristics.

An Environmental Easement has been filed for the Site that includes land use Institutional and Engineering Controls including a requirement to evaluate and mitigate as warranted soil vapor intrusion for new buildings. A Soil Management Plan that includes an Excavation Work Plan has been developed that ensures the continual and proper operation, maintenance, and monitoring required at the Site during future development and use.

Costs and Sources of Funding:

Total cleanup project costs, including building demolition and all phases of remediation, was approximately \$4.1 million. The project was funded by a NYSDEC ERP Grant of \$3.4, and a US Environmental Protection Agency Grant of \$200,000. The City provided \$1.74 million in funding for the project. Due to the use of innovative remedial measures, computer modeling and precise contract specifications, the project was completed approximately \$1 million below the contract value.

Project Benefits and Amenities:

Prior to this Brownfield cleanup project, the Site structures represented a local security and human health hazard that resulted in multiple fires, vandalism and releases of asbestos within the former buildings. The safety and overall appearance of the Site and surrounding area has been improved by this project. Adjacent businesses no longer have the security and safety issues associated with an unsecure abandoned facility being nearby. The Site is pad ready for redevelopment, and is an attractive location for any prospective businesses looking to build new facilities with good access to expressways and local streets. Development at the Site will result in new private sector investment, job creation, and new economic development opportunities in the City.



Figure 1. View of Former Photech Imaging Site Prior to Demolition and Environmental Cleanup.

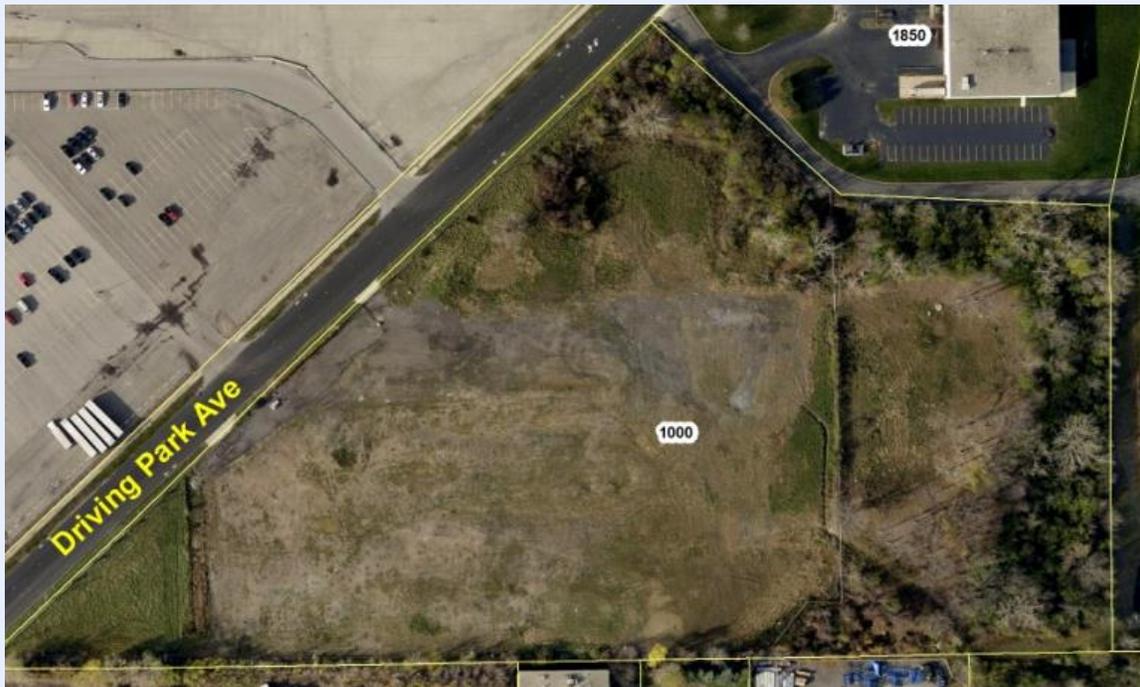


Figure 2. View of Former Photech Imaging Site Following Completion of Demolition and Environmental Cleanup.