United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Thursday, January 26, 2006
From: Tom Cook

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Subject: Initial POLREP
Ingersoll Removal
1000 W 120th street, Chicago, IL
Latitude: 41.6764000
Longitude: -87.6469000

POLREP No.:	1	**Site #:**	B5CW
Reporting Period:	1/18/06 TO 1/27/06	**D.O. #:**	0057
Start Date:	1/18/2006	**Response Authority:**	CERCLA
Mob Date:	1/18/2006	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:		**Contract #**	68S50306
RCRIS ID #:			

Site Description

The Ingersoll site is located in an industrial area at 1000 West 120th Street in Chicago, Cook County, Illinois. The site is bordered by 119th Street to the north, South Morgan Street to the east, 120th Street to the south, and vacant industrial properties to the west. The geographic coordinates for the site are latitude 41°40'35" north and longitude 87°38'49" west. The site property measures approximately 12 acres and includes several interconnected, vacant buildings. A fire in the summer of 2004 destroyed a portion of the former administration areas located in the southeast portion of the site. The fence surrounding the site contains several large gaps.

An environmental justice analysis has been prepared for the area surrounding the site. According to the Region 5 Superfund Environmental Justice Analysis, the group of residents closest to the site fall within census block group 1, with a population of 1511 persons. Demographics for the residents in this census group indicate 38% have a low- income status, and 98% have a minority status. In the state of Illinois, 27% of the population is considered low-income, and 32% of the population is considered minority. To meet the Environmental Justice (EJ) concern criteria, the area within 1 mile of the site must have a population that is twice the state low-income percentage and/or twice the state minority percentage. That is, the area must be at lease 54% low-income and/or 64 % minority. Therefore, the site does meet the Region's EJ criteria based on demographics, as defined in "Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case", June 1998.

SITE HISTORY:

The Ingersoll site has a history of industrial machining and oil use for 90 years. Borg-Warner purchased the property in 1929, and in that same period, acquired Ingersoll Steel Disc Division, manufacturer of agricultural accessories including disc blades. According to former Borg-Warner employees, electronic enclosures, hospital beds, bathtubs and sinks were also manufactured on site. During the Korean conflict, wing tanks were built, and during the Vietnam war bomb shell casings were made on the site. According to a 1975 Sanborn Fire Insurance map, an electromelt foundry was operating in the building where steel was manufactured. The former foundry building is now used as storage space.

The 1911 Sanborn Map indicates that the eastern portion of Study Area No. 7 was operated by Whitman & Barnes Manufacturing Company for the production of lawn mowers and haymaking tools. Included on the 1911 map was a machine shop, an oil house, a gas machine room, an underground gas oil tank, fuel oil tanks, four heater rooms, two engines, and two dynamos. The 1939 Sanborn Map indicates that the site was operated by the Ingersoll Steel Disk Division of Borg-Warner Corporation. The 1939 Sanborn Map shows many additions to the site including four transformer rooms, a Commonwealth Edison electrical

substation, an enameling room, an above ground (AST) oil tank, three oil houses, and a pickling area. The 1950 Sanborn Map shows additions to the site including a sulfuric acid tank, additional enameling rooms, and a cleaning room. The 1975 Sanborn Map indicates additions to the site including a dipping room, an oven, and an annealing room.

In July 1992, Weston completed a Phase I Environmental Site Assessment (ESA) report for the Ingersoll site. The purpose of this report was to identify possible areas of environmental concern in comparison with past and present site uses. The Phase I ESA identifies these areas of concern: Contaminated soils from oils stored and used during the manufacturing process; Petroleum contamination in areas where underground storage tanks (UST) were located; Contamination due to the presence of uncontrolled oil containing PCBs in areas where older transformers were located; and Soil contamination from foundry sands that likely contain oil, PCBs, and heavy metals, where steel was manufactured.

Following the Phase I ESA, Weston recommended the collection of soil samples for benzene, toluene, ethylbenzene, and xylene (BTEX), and PCB analysis, a geophysical survey in order to identify any additional USTs, a Phase I asbestos survey to identify any asbestos present at the site, and the collection of foundry soils for phenol and metals analysis.

In August through October 1994, VSC was contracted by Ingersoll to conduct a Phase II ESA to further evaluate areas of concern (AOC) identified in the Weston Phase I ESA. The Phase II ESA was conducted in three stages: headspace screenings of site soils were conducted during the first phase, eight groundwater monitoring wells were installed in the second phase, additional monitoring wells and soil borings were completed to investigate areas with high contaminant concentrations.

During the first stage of the Phase II ESA, VSC conducted headspace soil screenings for BTEX at multiple depths at 30 different soil sampling locations. The sampling locations were designated SS-1 to SS-30. In addition to the headspace readings, VSC collected 10 soil samples from sample locations SS-1 to SS-10 for analysis of solvents, PCBs, petroleum, volatile organic compounds (VOC), semivolatile organic compounds (SVOC), and heavy metals. Soil samples for all analytes except PCBs were collected at shallow depths; samples collected for PCBs were collected from approximately one foot below the saturated soil zone. According to VSC, the stage one soil analysis and headspace readings indicated no significant contamination due to VOCs, SVOCs, PCBs or metals.

Eight permanent groundwater monitoring wells, designated MW-1 to MW-8, were installed during stage two of the Phase II ESA. The primary purpose of wells MW-1 through MW-8 was to collect water elevation and groundwater flow data.

Five additional groundwater monitoring wells were installed, MW-9 through MW-13, and five additional soil borings were advanced at sample locations SS-11 through SS-15 during Stage three of the Phase II ESA. Groundwater samples were collected at MW-1, MW-6, and MW-9 through MW-13, and analyzed for VOCs, SVOCs, polynuclear aromatic hydrocarbons (PAH) and metals. Composite soil samples were collected from the 0-4 feet below ground surface (bgs) interval at MW-9 through MW-13 and SS-11 through SS-15 for metals analysis. Groundwater and soil samples were not analyzed for PCBs due to sample results from stage one activity.

According to the VSC Phase II ESA, soil analytical results during the stage three activities indicated that only lead, at a concentration of 0.150 milligrams per kilogram (mg/kg), exceeded 0.100 mg/kg, the Illinois Pollution Control Board (IPCB) Class II criteria for metals in soil.. Groundwater samples collected by VSC indicated no SVOCs or PAHs in the groundwater and all results for metals analysis were either below detection limits or below IPCB regulatory standards. One VOC, 1,1-Dichloroethane (1,1-DCA), was detected in groundwater from MW-1 at a concentration of 0.150 milligrams per liter (mg/L), exceeded 0.025 mg/L, the IPCB Class II groundwater standard. . Based on these results, VSC recommended no further action at the site.

In May 1996, Harza submitted a multi-site Phase I ESA to the Chicago Department of the Environment (CDOE). A Phase I ESA was included in that report for the abandoned railroad bed on the northern portion of Study Area No. 7. The objective of the Harza Phase I ESA was to evaluate the potential to redevelop brownfield sites in WIRA. The report was intended to identify two types of information; planning data to identify areas of interest for brownfield redevelopment, and site-specific data intended to identify areas of potential environmental concern.

On January 26 and 27, 2004, Tetra Tech performed a limited Phase II ESA at the Ingersoll site. Tetra Tech advanced a total of nine Geoprobe soil borings at the site and collected 18 soil samples, two groundwater samples, and 13 wipe samples. All of the soil borings were advanced to 10 feet bgs except SB-07, which was advanced to 11 feet bgs. Soil samples were collected from each boring from the 0- to

3-foot bgs interval and from the 3- to 10-foot bgs interval for laboratory analysis. Soil borings SB-02 and SB-09 were converted into temporary groundwater monitoring wells. The wipe samples were collected from the floors of the 13 transformer rooms on site.

The results from the Tetra Tech Phase II ESA indicated that concentrations of SVOCs, metals, and PCBs exceeded the Illinois Tiered Approach to Corrective Action (TACO) Tier 1 remediation objectives for soil based on the ingestion exposure route for industrial-commercial properties. PCB contamination was found in site soils at concentrations ranging from 2 parts per million (ppm) to 3.5 ppm. Furthermore, wipe sampling results indicated that oil containing PCBs at concentrations high enough to be regulated by the Toxic Substances Control Act (TSCA) have impacted the concrete floors in six of the 13 transformer rooms.

U.S. EPA approved an action memorandum on November 23, 2005 requesting a CERCLA Time-Critical Removal Action at the Ingersoll Site to mitigate an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the site.

Current Activities

January 18, 2006 through January 27, 2006:

On January 16, 2006, U.S. EPA OSC Thomas Cook, Emergency and Rapid Response Services (ERRS) contractor, Environmental Quality Management(EQM) Response Manager(RM) Bob Armstrong, and EQM Transfer and Disposal (T&D) coordinator Mark Douglas performed a walk-through of the former Ingersoll facility in preparation for the removal.

On January 17 and 18, 2006, ERRS removal crew mobilized to the site and began site preparation. On January 19, 2006, one Superfund Technical Assessment and Response Team (START) personnel with Weston Solutions Inc. arrive onsite to conduct oversight, documentation, sampling and air monitoring. In addition, CBS, a security company was subcontracted by ERRS to conduct site security at the site during non-working hours for the duration of the removal.

ERRS crew began by consolidated spent automobile tires from throughout the site into stockpile located south of the southwest corner of building 912 for off-site disposal at a date to be determined later. ERRS also began general debris consolidation within Buildings 1014, 1017, 1013, and 1012. However, areas containing suspect asbestos containing materials (ACM) were avoided. ERRS maintains a buffer area of approximately six feet from any suspect ACM while working on site. ERRS stockpiled debris and floor scrapings near a centrally located bay adjacent to Morgan Street. This work allows for safe access to areas with suspected contamination and will continue throughout the removal on an as-needed basis. ERRS constructed the temporary barriers around open holes in work areas and areas of egress. In addition, ERRS has reinforced the perimeter site security fence in areas where it has either been compromised or did not exist. ERRS transferred approximately 14,000 gallons of liquid from sub-surface space PT001 located in building 515 to the approximately 40,000-gallon AST located off the southwest corner of building 914 for temporary storage.

On January 24, 2006, ERRS procured a certified structural engineer (S.E.) to assess on-site buildings that have questionable structural integrity, particularly buildings affected by the fire in the summer of 2004. These Buildings are 111, 112, 113, 114, 615, 711, 712, 713, 811, and 812.

The ERRS S.E. evaluated the structural integrity of on-site buildings to determine the safety of crew members working inside. The S.E. stated that numerous areas in the majority of site buildings have roof failures. Areas where this is apparent should be addressed by removing any portions of roofing material, duct work, conduit, or pipe that present a hazard to workers below. Although these areas present a hazard, the supporting structures such as trusses and joists are in good condition and do not pose structural stability issues. The S.E. referenced these specific areas for the prohibition of work due to lacking structural integrity:

- No work should be conducted near the outer wall along west 120th street;
- No work should be conducted near or under building 114;
- No work should be conducted in the northern portion of building 511;

Air Sampling and Monitoring:

START collected 8-hour air samples for lead and asbestos from the breathing zones of ERRS crew members working in Buildings 1014, 1012, 1013, 1017, and 515. An evaluation of the analytical results will assist in determining the need for sustained level C personal protective equipment (PPE).

Background air monitoring was performed by START using a personal data RAM (PDR). The PDR was set up along the perimeter fence where the ERRS crew was scheduled to work. Due to freezing temperatures, the PDR provided results for two short runs. As a result, results from the air monitoring were use in combination with visual observations to determine the need for engineering controls to eliminate the offsite migration of potentially hazardous particulates. Currently, conditions ranging from damp to wet within the buildings do not cater to the need for engineering controls. As conditions change, this will be readdressed.

Water Sampling:

START and the ERRS RM evaluated the contents of on-site sumps, pits, vaults, and manholes. Those spaces not containing liquid or any evidence of liquid were disregarded; the spaces containing liquid were evaluated for the purpose of sampling. The location, physical description of content including an estimation of liquid quantity, and potential connectivity to other on- or off-site spaces was documented.

START collected five liquid samples from pits in Buildings 1014 and 515 and analyzed the samples for metals, VOCs, SVOCs, and PCBs.

Wipe Samples:

START collected two wipe samples from areas formally containing transformers in Buildings 1014 and 112 to determine the presence of PCB's that may have leaked.

Planned Removal Actions

To mitigate the threats to human health and the environment posed by conditions at the Former Ingersoll Site, the U.S. EPA plans to:

- Fortify and maintain site security to prohibit the public from entering the site;
- Evaluate the nature of liquid in on-site sumps, pits, vaults, and manholes, and remove and dispose of contaminated liquid and sediment from those areas;
- Evaluate transformer pads for PCB contamination and remove those pads that are contaminated; and
- Evaluate the exposure of nearby populations to asbestos fibers that may migrate from the site property.

Next Steps

- Continue stockpiling debris and floor scrapings from within facility buildings;
- Continue the extent of contamination survey of on-site sumps, pits, vaults, and manholes containing liquid;
- Continue collecting air samples for lead and asbestos from worker breathing zones;
- Continue to document site activity and conditions; and
- Evaluate analytical results from samples collected on-site as they become available.

Key Issues

- Meeting transfer and disposal analytical requirements for debris and floor scrapings that have been stockpiled;
- Getting approval from structural engineer to perform work in the on-site buildings; and
- Handling contents of on-site sumps, pits, vaults, and manholes that may contain standing or running liquid with potentially elevated levels of toxic and hazardous constituents.

response.epa.gov/IngersollRemoval