United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Monday, September 14, 2009
From: Diedre Lloyd, OSC

Subject: Removal Site Evaluation
Vantran
1600 Georgia Highway 17 South, Louisville, GA
Latitude: 32.9905724
Longitude: -82.3805024

POLREP No.:	1	**Site #:**	A4YG
Reporting Period:		**D.O. #:**	
Start Date:	11/7/2008	**Response Authority:**	CERCLA
Mob Date:	11/3/2008	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Assessment
CERCLIS ID #:	GAD051041424	**Contract #**	
RCRIS ID #:			

Site Description

On August 11, 2008, the Georgia Department of Natural Resources (GA DNR) requested that the Emergency Response and Removal Branch (ERRB) of the Environmental Protection Agency (EPA) conduct a removal assessment for the Vantran Electric Site to determine if an ERRB removal action is warranted. Previous investigations conducted by the GA DNR and EPA have documented PCB contamination; however, recent investigations conducted on behalf of a prospective purchaser led to suspicions that transformers may be buried onsite. The suspected burial location is behind the building where transformers were manufactured and later refurbished by Vantran Electric Corporation.

The 11.36 acre Vantran Site (the site) is located at the southwest corner of the intersection of Georgia Highway 17 and Airport Road, Louisville, Jefferson County, Georgia. The site, along with the surrounding area, is predominately used for commercial and industrial purposes, although there are private residences within a quarter mile. The site is located less than 2,000 feet from the single airway that comprises the Louisville Municipal Airport. The site is bounded to the south by the airport and is bounded to the north by Georgia Highway 17, to the east by Airport Road, and to the west by wooded property.

In 1970, the property was purchased from the City of Louisville, by Vantran Electric Corporation of Waco, Texas. From 1970 to 1973, Vantran manufactured transformers containing polychlorinated biphenyls (PCBs) onsite. Various onsite processes related to transformer manufacturing included: painting, baking and annealing in ovens, welding, winding of core, coils and assembly. Transformer manufacturing ceased in 1973; although, Vantran continued to refurbish and repair transformers onsite until sometime prior to 1987 and eventually, ceased onsite operations during the mid to late 1990s. The site is currently vacant and the property listed for sale by owner.

Previous Investigations:
Numerous investigations have been conducted at this site by GA DNR and EPA. Previous investigations have documented PCB contamination along with the presence of leaking and open transformers onsite from 1980 to the present. In 1980, this site was referred by GA DNR for potential Toxic Substances Control Act (TSCA) violations to the EPA Toxic Substances Section which conducted an inspection of the facility along with the collection and analysis of soil samples. Two soil samples indicated elevated levels of PCB contamination with the maximum PCB concentration of 660 ppm. On May 25, 1983, GA DNR conducted a facility inspection and observed that two ASTs located behind the building were being used to contain waste transformer oil as part of the transformer refurbishment process. GA DNR also noted that 2,000 open and leaking transformers were being stored onsite along with stained soil and stressed vegetation behind the main facility building. It was further noted that surface water runoff from the storage area drained to a constructed ditch located on contiguous property to the west. Vantran's personnel would not allow GA DNR to take any samples during this inspection. Additional sampling events by EPA in 1984 and a Preliminary Assessment (1987) and a Site Investigation (July 2002) by the GA DNR also identified elevated levels of total PCBs in surface and subsurface soils. On July 15, 2002, GA EPD performed additional investigation which included surface soil samples and sediment samples

from nearby creek and drainage ditches. PCB contamination was identified in soil samples and also in sediment samples collected from a drainage ditch located on the contiguous private property immediately west and topographically down gradient from Vantran. The most recent investigation was performed by the Development Authority of Jefferson County of Louisville, Georgia as part of due diligence information gathering as a prospective purchaser. During this investigation two separate ground penetrating radar (GPR) surveys were conducted and each identified buried metallic objects beneath the ground surface. This investigation also identified PCB contaminated soils. Based on previously reported analytical results from the above mentioned reports/investigation, there is substantial reason to suspect that prior activities on the property have demonstrated the strong probability of buried transformers along with the release of hazardous substances onsite that have also migrated offsite to nearby waterways.

Current Activities

Removal Site Evaluation:

On November 3-6, 2008, OSC Francendese mobilized the Superfund Technical Assessment and Response Team (START) contractor to conduct a geophysical survey using a magnetometer to locate potentially buried transformers along with collection and analysis of soil samples in order to determine if the further investigation or immediate action by ERRB was warranted. The primary contaminants of concern during this investigation were polychlorinated biphenyls although additional analysis for total metals, VOCs, SVOCs, pesticides, dioxins and furans were also requested. PCB immunoassays were also used onsite in conjunction with a magnetometer survey to determine soil sampling locations that would capture potential onsite contamination. During the site investigative activities, three full, unlabeled 55 gallon drums containing soil were discovered, sampled and analyzed for waste characterization and disposal.

Magnetometer Survey:

Before the magnetometer survey was initiated, a rectangular grid was established with references to site features so that any detected magnetic anomalies indicative of buried metallic objects could be relocated following the survey. The survey was divided into four discrete areas labeled surveys 1-4; magnetometer readings were collected on a continual basis along transects spaced 2 meters apart. The four magnetometer survey areas were located behind and along the west side of the main facility building. The survey identified 76 separate anomalies. The anomalies result from variations within the magnetic field near buried metallic objects and are indicative of large ferrous metallic objects beneath the ground surface. The majority of the magnetic anomalies were located behind the building thereby confirming the previous GPR investigations which also indicated the presence of a large number of buried objects below the ground surface (bgs) behind the building.

Soil Samples:

Direct Push Technology using a 4 foot MacroCore sampler was used to collect discrete soil cores to a depth of 12 feet bgs from 45 soil boring locations across the site. A total of 26 grab samples (6 surface soil and 20 subsurface) were collected for VOC analysis directly from the MacroCore from the one foot depth interval indicating the highest screening results as measured by an Organic Vapor Analyzer. A total of 177 soil composite samples (43 surface and 134 subsurface) from 45 soil borings were collected for analysis to determine if hazardous substances were present onsite. Of the 177 composite soil samples, 170 were screened in the field using PCB immunoassay kits to determine which samples to send for further analyses to an EPA contracted laboratory (CLP) and the remaining 7 samples were sent to a non-CLP laboratory for quick turnaround of PCB Aroclor analysis only. Of the 170 samples, 43 were analyzed for SVOC, pesticide, and PCB Aroclor, metals and PCB congener analysis, 9 were analyzed for dioxin/furans, and 8 were analyzed for PCB Aroclors. No soil analyses for dioxins/furans indicated levels above ERRB RALs.

Surface Soil Sampling by Results Summary:

With the exception of one sample (VTRI –B30-A_0-2), PCBs were detected in all surface soil samples taken from 0-6 inches bgs. Total PCB concentrations ranged from 1,400 to 110,000 µg/kg for surface soil samples, exceeding the RAL for total PCB in six samples (VTRI –B06-A_0-2, 86,000 µg/kg; VTRI –B05-A_0-2, 33,000 µg/kg, VTRI –B13-A_0-2, 110,000 µg/kg; VTRI –B19-A_0-2, 46,000 µg/kg; VTRI –B38-A_0-2, 38,000 µg/kg; VTRI –B21-A_0-2, 68,000 µg/kg).

Subsurface Soil Sampling Results Summary:

In general, PCBs were detected in the subsurface soils along the surface water run-off pathway from the SW portion of the site and PCBs were also detected at elevated concentrations in samples collected from the 8-12 feet bgs depth interval. Total PCB concentrations were detected in 28 subsurface soil samples at concentrations ranging from 2 to 92,000 µg/kg exceeding the RAL in five samples (VTRI –B42-A_2-4, 91,000 µg/kg; VTRI –B13-A_2-4, 92,000 µg/kg; VTRI –B12-A_2-4, 61,000 µg/kg; VTRI –B15-A_4-8, 38,200 µg/kg; VTRI –B05-A_2-4, 50,000 µg/kg).

Planned Removal Actions

The RSE was conducted to identify conditions that would trigger a removal action by the EPA ERRB to remove or minimize potential threats to human health and/or the environment. Polychlorinated biphenyls are hazardous substances as defined by §101 (14) of the Comprehensive Environmental, Response, and Compensation and Liability Act (CERCLA) definition and pose a threat to the human population with the possibility of exposure to humans which may potentially include any one who may work on the site in the future along with persons who may frequent the municipal airport which bounds the site along the southern boundary or nearby residents. Direct contact, ingestion, and inhalation of PCBs are the primary pathways of exposure. Continued exposure of PCBs in surface soils may cause chronic health effects to the surrounding populations along with anyone who may work in or near the site in the future. Site conditions meet the requirements for initiating a time-critical removal action according to criteria listed in §300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP):

§300.415 (b)(2)(i): "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants". As stated above, PCB is a hazardous substance and poses a threat to the human population with the possibility of exposure to humans which may include any one who may work on the site in the future along with persons who may frequent the municipal airport which bounds the site along the southern boundary or nearby residents. Direct contact, ingestion, and inhalation of PCBs are the primary pathways of exposure. Continued exposure of PCBs in surface soils may cause chronic health effects to the surrounding populations along with anyone who may work in or near the site in the future. Since the area surrounding the site is predominately rural and is surrounded by large wooded areas there is the potential of hazardous substances to adversely affect nearby animal life. This area may contain the following threatened and endangered species: bald eagle, red cockaded woodpecker, wood stork, Gopher tortoise, Flatwoods salamander, Atlantic pigtoe mussel and two plants which include the Indian olive and the sweet pitcher plant. The most likely species to be near the site is the woodpecker and based on limited risk assessment data, birdlife and aquatic life could be adversely affected by the PCB migration found in the southwest corner of the site. Since PCBs do bioaccumulate, this may also potentially adversely affect mammals up the food chain.

§300.415 (b)(2)(iii): "Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release" The Vantran Electric Corporation was located on the Vantran site and has historically manufactured, refurbished and repaired PCB containing transformers throughout it's operations from 1970 until the business was closed during the mid to late 1990's. On May 25, 1983, GA DNR conducted an inspection and noted that 2,000 open and leaking transformers were being stored onsite along with stained soil and stressed vegetation behind the main facility building. Additionally, two GPR surveys and one magnetometer survey have been conducted and all surveys identified buried metallic objects which are most likely buried transformers as reported by the GA DNR. The magnetometer survey conducted as part of the EPA investigation identified up to 76 buried metallic objects beneath the ground surface.

§300.415 (b)(2)(iv): "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate". High levels PCB contamination above the ERRBs RALs have been identified through the analyses of multiple soil samples. A topographic ridge roughly bisects the site along a north/south axis; as a result, surface runoff flows in both a northeasterly and southwesterly direction from the ridge. Surface runoff from ridge that flows in a northeasterly direction eventually leads to the perennial Manson Branch River and surface runoff that flows from the ridge in a southwesterly direction ultimately leads to the perennial Ogeechee River, thereby posing a strong threat for contaminant migration into two nearby waterways. Sediment samples in nearby stream indicated PCB contamination has migrated to the southwestern portion of the site; as a result posing a threat to nearby waterways, aquatic life and mammalian wildlife in the area since PCBs bioaccumulate up the food chain.

§300.415 (b)(2)(v): "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released". A topographic ridge roughly bisects the site along a north/south axis; as a result, surface runoff flows in both a northeasterly and southwesterly direction from the ridge. Surface runoff from ridge that flows in a northeasterly direction eventually leads to the perennial Manson Branch River and surface runoff that flows from the ridge in a southwesterly direction ultimately leads to the perennial Ogeechee River, thereby posing a strong threat for contaminant migration into two nearby waterways. Sediment samples in nearby stream indicated PCB contamination has migrated to the southwestern portion of the site; as a result posing a threat to nearby waterways, aquatic life and mammalian wildlife in the area since PCBs bioaccumulate up the food chain.

§300.415 (b)(2)(vii): "The availability of other appropriate federal or state response mechanisms to respond to the release". There is no viable responsible federal or state party and the State funds of Tennessee are insufficient to conduct a removal action at this time.

Due to the threat and/or future threat to human health from the hazardous substance, the Site achieves the removal eligibility based on the above mentioned removal criteria.

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